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DRC-2019-004693

Div of Waste Management
and Radiation Control

May 9, 2019

MAY 17 2019

Sent VIA OVERNIGHT DELIVERY

Mr. Ty L. Howard
Director of Division of Waste Management and Radiation Control
Utah Department of Environmental Quality
195 North 1950 West
P.O. Box 144880
Salt Lake City, UT 84114-4880

**Re: Transmittal of 1st Quarter 2019 Groundwater Monitoring Report
Groundwater Quality Discharge Permit UGW370004 White Mesa Uranium Mill**

Dear Mr. Howard:

Enclosed are two copies of the White Mesa Uranium Mill Groundwater Monitoring Report for the 1st Quarter of 2019 as required by the Groundwater Quality Discharge Permit UGW370004, as well as two CDs each containing a word searchable electronic copy of the report.

If you should have any questions regarding this report please contact me.

Yours very truly,

A handwritten signature in black ink that reads 'Kathy Weinel'.

ENERGY FUELS RESOURCES (USA) INC.
Kathy Weinel
Quality Assurance Manager

cc: William Paul Goranson
David C. Frydenlund
Scott Bakken
Logan Shumway
Terry Slade



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White Mesa Uranium Mill
Groundwater Monitoring Report

State of Utah
Groundwater Discharge Permit No. UGW370004

1st Quarter
(January through March)
2019

Prepared by:



Energy Fuels Resources (USA) Inc.
225 Union Boulevard, Suite 600
Lakewood, CO 80228

May 9, 2019

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	GROUNDWATER MONITORING	1
2.1	Samples and Measurements Taken During the Quarter	1
2.1.1	Groundwater Compliance Monitoring	1
2.1.2	Accelerated Groundwater Monitoring	1
2.1.3	Background Well Monitoring	2
2.1.4	Parameters Analyzed	2
2.1.5	Groundwater Head Monitoring	2
2.2	Field Data	3
2.3	Laboratory Results - Quarterly Sampling	3
2.3.1	Copy of Laboratory Results	3
2.3.2	Regulatory Framework and Groundwater Background	4
2.4	Laboratory Results – Accelerated Monitoring	4
2.4.1	Copy of Laboratory Results	4
2.4.2	Regulatory Framework and Groundwater Background	5
2.4.3	Compliance Status	5
2.5	Depth to Groundwater and Water Table Contour Map	7
3.0	QUALITY ASSURANCE AND DATA VALIDATION	8
3.1	Field QC Samples	8
3.2	Adherence to Mill Sampling SOPs	9
3.3	Analyte Completeness Review	9
3.4	Data Validation	9
3.4.1	Field Data QA/QC Evaluation	9
3.4.2	Holding Time Evaluation	11
3.4.3	Receipt Temperature Evaluation	12
3.4.4	Analytical Method Checklist	12
3.4.5	Reporting Limit Evaluation	12
3.4.6	Trip Blank Evaluation	13
3.4.7	QA/QC Evaluation for Routine Sample Duplicates	13
3.4.8	Radiologics Counting Error and Duplicate Evaluation	13
3.4.9	Other Laboratory QA/QC	14
4.0	CORRECTIVE ACTION REPORT	16
4.1	Assessment of Corrective Actions from Previous Period	16
5.0	TIME CONCENTRATION PLOTS	16
6.0	ELECTRONIC DATA FILES AND FORMAT	16
7.0	SIGNATURE AND CERTIFICATION	17

LIST OF TABLES

Table 1	Summary of Well Sampling for the Period
Table 2	Exceedances and Acceleration Requirements
Table 3	GWCL Exceedances January 2018 to Present

INDEX OF TABS

Tab A Site Plan and Perched Well Locations White Mesa Site

Tab B Field Data Worksheets Quarterly Sampling

Tab C Field Data Worksheets Accelerated Monitoring

Tab D Quarterly Depth to Water

Tab E Laboratory Analytical Reports – Quarterly Sampling

Tab F Laboratory Analytical Reports – Accelerated Monitoring

Tab G Quality Assurance and Data Validation Tables

G-1A/B	Field Data QA/QC Evaluation
G-2A/B	Holding Time Evaluation
G-3A/B	Laboratory Receipt Temperature Check
G-4A/B	Analytical Method Check
G-5A/B	Reporting Limit Evaluation
G-6A/B	Trip Blank Evaluation
G-7A/B	QA/QC Evaluation for Sample Duplicates
G-8A/B	Radiologics Counting Error
G-9A/B	Laboratory Matrix QC

Tab H Kriged Current Quarterly Groundwater Contour Map and Depth Data

Tab I Groundwater Time Concentration Plots

Tab J CSV Transmittal Letter

ACRONYM LIST

AWAL	American West Analytical Laboratory
COC	Chain-of-Custody
DWMRC	Utah Division of Waste Management and Radiation Control
EFRI	Energy Fuels Resources (USA) Inc.
GEL	GEL Laboratories, Inc.
GWCLs	Groundwater Compliance Limits
GWDP	Groundwater Discharge Permit
LCS	Laboratory Control Spike
MS	Matrix Spike
MSD	Matrix Spike Duplicate
QA	Quality Assurance
QAP	Quality Assurance Plan
QC	Quality Control
RPD	Relative Percent Difference
SOPs	Standard Operating Procedures
USEPA	United States Environmental Protection Agency

1.0 INTRODUCTION

This is the Routine Groundwater Monitoring Report, as required under Part I.F.1 of State of Utah Groundwater Discharge Permit No. UGW370004 (the “GWDP”) for the first quarter of 2019 for Energy Fuels Resources (USA) Inc’s. (“EFRI’s”) White Mesa Uranium Mill (the “Mill”). As required under Parts I.E.1, I.E.2, I.E.3, and I.E.5 of the GWDP, this Report includes recorded field measurements and laboratory analyses for well monitoring conducted during the quarter.

2.0 GROUNDWATER MONITORING

2.1 Samples and Measurements Taken During the Quarter

A map showing the location of groundwater monitoring wells, piezometers, existing wells, chloroform contaminant investigation wells and nitrate contaminant investigation wells is attached under Tab A. Groundwater samples and measurements were taken during this reporting period, as discussed in the remainder of this section.

2.1.1 Groundwater Compliance Monitoring

Groundwater samples and field measurements collected during the quarter included both quarterly and accelerated monitoring. Accelerated monitoring is discussed below in Section 2.1.2. In this report, samples classified as being collected quarterly include those wells which are routinely sampled every quarter as well as semi-annual wells which are sampled on an accelerated quarterly schedule due to exceedances reported in previous quarterly reports. Wells which are sampled routinely every quarter were analyzed for the parameters listed in Table 2 and Part I.E.1.d) 2)ii of the GWDP dated January 19, 2018. The semi-annual wells which have been accelerated to quarterly are analyzed only for those parameters which exceeded the Groundwater Compliance Limits (“GWCLs”) in Table 2 and Part I.E.1.d) 2)ii of the GWDP as described in previous reports.

Table 1 of this report provides an overview of wells sampled during the current period, along with the required sampling frequency applicable to each well during the current monitoring period, the date samples were collected from each well, and the date(s) analytical data were received from the contract laboratory(ies). Table 1 also indicates which sample numbers are associated with the required duplicates.

2.1.2 Accelerated Groundwater Monitoring

Accelerated monthly sampling was also performed (quarterly wells accelerated to monthly), and results reported, for the wells indicated in Table 1. The accelerated sampling frequency, analyte list and well list were determined based on the previous analytical results as shown in Table 2 based on the GWDP which was issued January 19, 2018.

As a result of the issuance of a revised GWDP on January 19, 2018, which sets revised GWCLs, requirements to perform accelerated monitoring under Part I.G.1 of the previous GWDP ceased effective on January 19, 2018, and the effect of the issuance of the revised GWDP was to create a “clean slate” for constituents in some wells going forward. The GWCLs for some constituents were not ‘reset’ and continued on an accelerated sampling frequency as shown on Table 2.

Table 1 provides an overview of the wells sampled for the accelerated monthly program along with the routine sampling frequency as well as the accelerated sampling frequency, the date samples were collected from each well, the associated duplicates and the date(s) which analytical data were received from the contract laboratory(ies).

It is important to note that during the first quarter 2019 a revised GWDP was issued on March 19, 2019. This revised GWDP incorporated revisions to GWCLs for certain constituents in certain wells based on the DWMRC approval of previously submitted Source Assessment Reports (“SARs”). The March 19, 2019 GWDP also incorporated the requirement to collect dissolved oxygen (“DO”) during well purging. Since the first quarter 2019 sampling was conducted under the January 19, 2018 GWDP and the first quarter 2019 sampling was completed prior to the issuance of the revised GWDP, this report cites the January 19, 2018 GWDP. The March 19, 2019 GWDP will be incorporated into the second quarter 2019 quarterly report.

2.1.3 Background Well Monitoring

Pursuant to the GWDP Part I.H.2, wells MW-38, MW-39 and MW-40 were installed in the first quarter 2018. The GWDP Part I.H.3 requires the completion of a background report for each of these wells after the completion of 8 quarters of sampling. Quarterly sampling of MW-38, MW-39 and MW-40 is required to commence after Director’s approval of the As-Built for MW-38, MW-39 and MW-40. The As-Built approval letter was received October 10, 2018 and quarterly sampling commenced starting fourth quarter 2018.

2.1.4 Parameters Analyzed

Routine quarterly groundwater monitoring samples were analyzed for the parameters listed in Table 2 and Part I.E.1.d) 2) ii of the GWDP dated January 19, 2018. The accelerated monitoring samples were analyzed for a more limited and specific parameter list as shown in Table 2.

2.1.5 Groundwater Head Monitoring

Depth to groundwater was measured in the following wells and/or piezometers, pursuant to Part I.E.3 of the GWDP dated January 19, 2018:

- The groundwater monitoring wells (including general monitoring wells, quarterly and semi-annual monitoring wells, and (MW-34).
- Existing monitoring well MW-4 and the temporary chloroform investigation wells.
- Piezometers – P-1, P-2, P-3A, P-4 and P-5.
- Nitrate monitoring wells.
- The DR piezometers which were installed during the Southwest Hydrogeologic Investigation.
- In addition to the above, depth to water measurements are routinely observed in conjunction with sampling events for wells sampled during quarterly and accelerated efforts, regardless of the sampling purpose.

Water levels used for groundwater contour mapping were measured and recorded within 5 calendar days of each other as indicated by the measurement dates in the summary sheet under Tab D.

2.2 Field Data

Attached under Tab B are copies of field data sheets recorded in association with the quarterly effort for the groundwater compliance monitoring wells referred to in paragraph 2.1.1, above. Sampling dates are listed in Table 1.

Attached under Tab C are copies of field data sheets recorded in association with the accelerated monthly monitoring sampling efforts, referred to in paragraph 2.1.2, above. Sampling dates are listed in Table 1.

2.3 Laboratory Results - Quarterly Sampling

2.3.1 Copy of Laboratory Results

Analytical results are provided by two contract analytical laboratories: GEL and American West Analytical Laboratories (“AWAL”).

Table 1 lists the dates when analytical results were reported to the Quality Assurance (“QA”) Manager for each well.

Results from analysis of samples collected under the GWDP (i.e., regular quarterly and accelerated semi-annual samples) are provided in Tab E. Also included under Tab E are the results of analyses for duplicate samples as identified in Table 1.

2.3.2 Regulatory Framework and Groundwater Background

Under the GWDP dated January 19, 2018, background groundwater quality has been determined on a well-by-well basis, as defined by the DWMRC-approved flowchart included in the *Revised Background Groundwater Quality Report: Existing Wells for Denison Mines (USA) Corp.'s White Mesa Uranium Mill Site, San Juan County, Utah*. GWCLs that reflect this background groundwater quality have been set for compliance monitoring wells except MW-38, MW-39, and MW-40. As discussed in Section 2.1.3 above, EFRI will submit the background report for MW-38, MW-39, and MW-40 after the collection of 8 quarters of data.

Exceedances of the GWCLs during the preceding quarter determined the accelerated monthly monitoring program implemented during this quarter as noted in Tables 1 and 2 as modified under the renewed GWDP which was issued January 19, 2018.

As a result of the issuance of a revised GWDP on January 19, 2018, which sets revised GWCLs, requirements to perform accelerated monitoring under Part I.G.1 of the previous GWDP ceased effective on January 19, 2018, and the effect of the issuance of the revised GWDP was to create a “clean slate” for constituents in some wells going forward. The GWCLs for some constituents were not “reset” and continued on an accelerated sampling frequency as shown on Table 2.

Exceedances of the GWCLs for this quarter are listed in Table 2 for sampling required under the revised GWDP dated January 19, 2018. Accelerated requirements resulting from this quarter are highlighted for ease of reference. Table 3 documents the accelerated sampling program since the issuance of the GWDP permit renewal.

It should be noted, however, that, because the GWCLs have been set at the mean plus second standard deviation, or the equivalent, un-impacted groundwater would normally be expected to exceed the GWCLs approximately 2.5% of the time. Therefore, exceedances are expected in approximately 2.5% of sample results, and do not necessarily represent impacts to groundwater from Mill operations. In fact, more frequent sampling of a given analyte will increase the number of exceedances due to statistical variation and not due to Mill activity. Additionally, given the slow velocity of groundwater movement, accelerated sampling monthly may result in resampling of the same water and may lead to repeat exceedances for accelerated constituents not due to Mill activities, but due to repeat sampling of the same water.

2.4 Laboratory Results – Accelerated Monitoring

2.4.1 Copy of Laboratory Results

Results from analysis of samples collected for the monthly accelerated sampling (i.e. quarterly accelerated to monthly) are provided in Tab F. Also included under Tab F are the results of analyses for duplicate samples for this sampling effort, as identified in Table 1.

2.4.2 Regulatory Framework and Groundwater Background

As a result of the issuance of a revised GWDP on January 19, 2018, which sets revised GWCLs for some constituents, requirements to perform accelerated monitoring under Part I.G.1 of the previous GWDP for certain constituents ceased effective on January 19, 2018, and the effect of the issuance of the revised GWDP was to create a “clean slate” for certain constituents in a limited list of wells going forward.

This means that accelerated monitoring during this quarter was required under the revised GWDP for constituents which did not have revised GWCLs included in the renewed GWDP.

2.4.3 Compliance Status

Analytes that have exceeded the GWCLs for this quarter set forth in the GWDP are summarized in Table 2. The analytes which exceeded their respective GWCLs during the quarter will be sampled on an accelerated schedule as noted in Table 2. Table 3 summarizes the results of the accelerated sampling program since the January 19, 2018 GWDP.

Part I.G.4 c) of the GWDP states, with respect to exceedances of GWCLs, “The Permittee shall prepare and submit within 30 calendar days to the Executive Secretary a plan and a time schedule for assessment of the sources, extent and potential dispersion of the contamination, and an evaluation of potential remedial action to restore and maintain groundwater quality to insure that Permit limits will not be exceeded at the compliance monitoring point and that DMT or BAT will be reestablished.” EFRI submits an Exceedance Notice quarterly and the summary in the Exceedance Notice includes, for each exceedance, a brief discussion of whether such a plan and schedule is required at this time in light of other actions currently being undertaken by EFRI. The determination of whether a Plan and Time Schedule is required is based on discussions with DWMRC Staff in teleconferences on April 27 and May 2, 2011 and the constituents covered by previously submitted Source Assessment Reports.

2.4.3.1 MW-28

On May 28, 2014 EFRI notified DWMRC personnel of damage to Monitoring Well 28 (“MW-28”). The damage was noted by EFRI Environmental Staff during routine, quarterly sampling activities. Upon arrival at MW-28, EFRI Environmental Staff noticed that there was evidence that a vehicle had struck the outer protective metal casing of MW-28 and it was slightly bent and leaning to the west. Inspection of the inner, 10-inch PVC protective casing and the 4-inch well casing also showed signs of damage. The concrete seal between the 10-inch outer casing and the 4-inch casing was cracked and EFRI Environmental Staff noted that the 2 inner PVC casings were likely cracked and/or broken. Upon discovery of the damage on May 28, 2014, EFRI Environmental Staff contacted the EFRI QAM. The EFRI QAM notified DWMRC personnel in person, while

at the DWMRC offices in Salt Lake City. On June 2, and June 5, 2014 Environmental Staff and Bayles Exploration repaired the well and removed the debris in the bottom of the well resulting from the damage. The Environmental Staff then over pumped the well and removed over 4 casing volumes to redevelop the well. The well was sampled and the routine, second quarter 2014 sample was collected on June 18, 2014.

Three new analytes were reported above the GWCL in the second quarter 2014 data. The analytes are uranium, vanadium and cadmium as shown in Tables 2 and 3. Per the GWDP, EFRI began accelerated monitoring in third quarter 2014 at MW-28 for those three constituents. The fourth quarter 2014 MW-28 results for vanadium and cadmium were below the GWCLs. The uranium result remained above the GWCL in the third quarter 2014. Part I.G.4 c) of the GWDP requires a Plan and Time Schedule for constituents exceeding their GWCL in two consecutive monitoring periods. A Plan and Time Schedule was submitted for uranium in MW-28 on December 4, 2014 as required. The Plan and Time Schedule specified that an assessment of the uranium results would be completed after the first quarter 2015 sampling event. If the uranium results continue to exceed the GWCL, EFRI will perform a video inspection of the interior of MW-28 to investigate the possibility of additional physical damage to the well structure that may be causing the elevated uranium results. The first quarter 2015 MW-28 results for uranium were below the GWCLs. The second quarter 2015 MW-28 uranium result was slightly above the GWCL and within the analytical variability of the method. Per discussions with DWMRC, EFRI was to continue to collect uranium data quarterly in MW-28 and assess the results and determine a path forward after the fourth quarter 2015. Both the third and fourth quarter 2015 and all of the 2016 results for uranium were below the GWCL. The first quarter 2017 MW-28 uranium result was slightly above the GWCL and within the analytical variability of the method. The second quarter 2017 result was below the GWCL, the third quarter 2017 result was slightly above the GWCL but within the analytical variation of the analytical method, and the fourth quarter result was below the GWCL. The first quarter 2018 uranium result was below the GWCL and the second third, and fourth quarter 2018 and the first quarter 2019 results were slightly above the GWCL but within the analytical variation of the analytical method. Per discussions with DWMRC, EFRI will continue to collect uranium data quarterly in MW-28 and assess the results and determine a path forward after additional data are received.

As previously noted, cadmium results exceeded the GWCL in the second quarter 2014, immediately following the damage to the well, but the subsequent cadmium results were below the GWCL. The first quarter 2016 MW-28 cadmium result was slightly above the GWCL and within the analytical variability of the method. The second, third, and fourth quarter 2016 results were below the GWCL. The first quarter 2017 MW-28 cadmium result was slightly above the GWCL and within the analytical variability of the method. The second, third and fourth quarter 2017 and first and second, third, and fourth quarter 2018 and the first quarter 2019 MW-28 cadmium results were below the GWCL. Per discussions with DWMRC, EFRI will continue to collect cadmium data quarterly in MW-28 and assess the results and determine a path forward after additional data are received.

In the fourth quarter the gross alpha minus radon and uranium (“gross alpha”) result in MW-28 exceeded the GWCL. Gross alpha will be accelerated as required by the GWDP.

EFRI will continue accelerated monitoring as required by the GWDP and discuss any additional findings in future reports.

2.4.3.2 MW-05

Uranium in this well first exceeded the GWCL in 2011 and the concentrations have been extremely variable since the first exceedance in 2011. The concentrations have ranged from 0.04 ug/L to 145 ug/L with the 118 of 127 results below the GWCL of 7.5 ug/L. Additionally, the variability of the uranium results in MW-05 appear to be affected by temporal or seasonal conditions as evidenced by concentrations which rise in either the fourth quarter or first quarter followed by substantial decreases beginning in the second quarter. Uranium in MW-05 was addressed in the SAR, dated October 10, 2012, which stated that the exceedance is not caused by Mill activities, but further study was warranted due to the variability issues associated with the uranium data. Further study is currently in progress.

In an effort to address potential physical causes on the uranium variability, EFRI made changes to the casing and surrounding area in May 2017. The top of the casing (“TOC”) for MW-05 was slightly below the ground surface and may have inadvertently allowed dust and dirt to enter the well during sampling activities. To address this issue EFRI extended the TOC several feet and regraded the area surrounding the well. After the TOC was extended, the well was over pumped to remove any dirt which may have been introduced during these field activities. These activities were completed after the second quarter sampling event was conducted. The uranium data in MW-05 have been below the GWCL from the third quarter 2017 through first quarter 2019. EFRI will continue to collect uranium data quarterly in MW-05 and assess the results and determine a path forward after additional data are received.

EFRI will continue accelerated monitoring as required by the GWDP and discuss any additional findings in future reports.

2.5 Depth to Groundwater and Water Table Contour Map

As stated above, a listing of groundwater level readings for the quarter (shown as depth to groundwater in feet) is included under Tab D. The data from Tab D has been interpreted (kriged) and plotted in a water table contour map, provided under Tab H.

The water table contour map provides the location and identity of the wells and piezometers for which depth to groundwater is recorded. The groundwater elevation at each well and piezometer, measured in feet above mean sea level, and isocontour lines to delineate groundwater flow directions observed during the quarter’s sampling event are displayed on the map.

3.0 QUALITY ASSURANCE AND DATA VALIDATION

The Mill QA Manager performed a QA/QC review to confirm compliance of the monitoring program with requirements of the Groundwater Monitoring Quality Assurance Plan (“QAP”). As required in the QAP, data QA includes preparation and analysis of QC samples in the field, review of field procedures, an analyte completeness review, and quality control review of laboratory data methods and data. Identification of field QC samples collected and analyzed is provided in Section 3.1. Discussion of adherence to Mill sampling Standard Operating Procedures (“SOPs”) is provided in Section 3.2. Analytical completeness review results are provided in Section 3.3. The steps and tests applied to check laboratory data QA/QC are discussed in Sections 3.4.4 through 3.4.9 below.

The Analytical Laboratories have provided summary reports of the analytical QA/QC measurements necessary to maintain conformance with National Environmental Laboratory Accreditation Conference certification and reporting protocol. The analytical laboratory QA/QC Summary Reports, including copies of the Mill’s COC and Analytical Request Record forms for each set of Analytical Results, follow the analytical results under Tabs E and F. Review of the laboratory QA/QC information is provided under Tab G.

3.1 Field QC Samples

The following field QC samples were generated by Mill personnel and submitted to the analytical laboratory in order to assess the quality of data resulting from the field sampling program:

One duplicate sample was collected during quarterly sampling as indicated in Table 1. The QC samples were sent blind to the analytical laboratory and analyzed for the same parameters as permit-required samples.

One duplicate sample was collected during each of the monthly sampling events as indicated in Table 1. The QC samples were sent blind to the analytical laboratory and analyzed for the same accelerated parameters as the parent sample.

Two trip blanks were provided by AWAL and returned and analyzed with the quarterly monitoring samples.

One trip blank for each of the monthly accelerated sample events was provided by AWAL and returned and analyzed with the accelerated monthly monitoring samples.

Rinsate samples were not collected during the quarter because equipment used during sample collection was dedicated and did not require decontamination. All wells except MW-37 have dedicated pumps for purging and sampling and as such no rinsate blank samples are required. MW-37 when sampled, is sampled with a disposable bailer and no rinsate blank is required. A deionized field blank was not required because equipment

decontamination was not required and deionized water was not used during this sampling event.

3.2 Adherence to Mill Sampling SOPs

On a review of adherence by Mill personnel to the existing sampling SOPs, the QA Manager observed that QA/QC requirements established in the QAP were met and that the SOP's were implemented as required.

3.3 Analyte Completeness Review

Analyses required by the GWDP for the quarterly and semi-annual wells were performed. The accelerated sampling for the semi-annual wells (semi-annual to quarterly) was completed as required by the GWDP and as shown in Tables 2 and 3. The accelerated quarterly sampling (quarterly to monthly) required for this quarter, as shown in Tables 2 and 3, was performed as required.

The monthly accelerated sampling program shown on Tables 2 and 3 is required as a result of exceedances in quarterly well monitoring results reported in previous quarters.

3.4 Data Validation

The QAP and GWDP identify the data validation steps and data quality control checks required for the groundwater monitoring program. Consistent with these requirements, the QA Manager completed the following evaluations: a field data QA/QC evaluation, a receipt temperature check, a holding time check, an analytical method check, a reporting limit check, a trip blank check, a QA/QC evaluation of routine sample duplicates, a QA/QC evaluation of accelerated sample duplicates, a gross alpha counting error evaluation and a review of each laboratory's reported QA/QC information. Each evaluation is discussed in the following sections. Data check tables indicating the results of each test are provided under Tab G.

3.4.1 Field Data QA/QC Evaluation

The QA Manager performs a review of field recorded parameters to assess their adherence with QAP requirements. The assessment involved review of two sources of information: the Field Data Sheets and the Quarterly Depth to Water summary sheet. Review of the Field Data Sheets addresses well purging volumes and the stability of the following field parameters (based upon the purging method chosen): specific conductance, pH, temperature, redox potential, and turbidity. Stability of field parameters and well sampling techniques are dependent on the purging technique employed. Review of the Depth to Water data confirms that depth measurements were conducted within a five-day period. The results of this quarter's review are provided in Tab G.

There are three purging strategies specified in Revision 7.4 of the QAP that are used to remove stagnant water from the casing during groundwater sampling at the Mill. The three strategies are as follows:

1. Purging three well casing volumes with a single measurement of field parameters
2. Purging two casing volumes with stable field parameters (within 10% [Relative Percent Difference] (“RPD”))
3. Purging a well to dryness and stability (within 10% RPD) of a limited list of field parameters after recovery

During both the quarterly sampling event and the two monthly events, the purging technique used was two casing volumes with stable field parameters (pH, Conductivity, Redox, temperature and turbidity) except for the following wells that were purged to dryness: MW-24 and MW-38.

MW-24 and MW-38 conformed to the QAP, Revision 7.4 requirement for sampling low yield wells which includes the collection of three field parameters (pH, specific conductance [“conductivity”] and temperature) immediately prior to and immediately following sample collection. Stabilization of pH, conductivity and temperature were within the 10% RPD required by QAP, Revision 7.4. MW-24 and MW-38 were purged to dryness after 2 casing volumes were removed and the low yield sampling procedures were used for the collection of field parameters. Stabilization of pH, conductivity and temperature were within the 10% RPD required by QAP, Revision 7.4 for well MW-24 and MW-38.

Additionally, two casing volumes were not purged from MW-26, prior to sampling because MW-26 is a continuously pumped well. If a well is continuously pumped, it is pumped on a set schedule per the remediation plan and is considered sufficiently evacuated to immediately collect a sample; however, if a pumping well has been out of service for 48 hours or more, EFRI follows the purging requirements outlined in Attachment 2-3 of the QAP.

The review of the field sheets for compliance with QAP, Revision 7.4 requirements resulted in the observations noted below. The QAP requirements in Attachment 2-3 specifically state that field parameters must be stabilized to within 10% over at least two consecutive measurements. The QAP Attachment 2-3 states that turbidity should be less than 5 NTU prior to sampling unless the well is characterized by water that has a higher turbidity. The QAP Attachment 2-3 does not require that turbidity measurements be less than 5 NTU prior to sampling. As such, the noted observations regarding turbidity measurements greater than 5 NTU below are included for information purposes only.

- Turbidity measurements were less than 5 NTU for the quarterly and semi-annual wells except MW-11, MW-32, and MW-40. Per the QAP, Revision 7.4, Attachment 2-3, turbidity measurements prior to sampling were within a 10% RPD for the quarterly and semi-annual wells.

- Turbidity measurements were less than 5 NTU for the accelerated sampling wells except MW-25, and MW-56 in both the February and March monthly events. Turbidity measurements prior to sampling were within a 10% RPD for the accelerated sampling wells.

The other field parameters (conductance, pH, redox potential, and temperature) for the wells were within the required RPD for the quarterly, semi-annual and accelerated sampling.

During review of the field data sheets, it was observed that sampling personnel consistently recorded depth to water for the quarterly, semi-annual and accelerated sampling programs to the nearest 0.01 foot.

EFRI's letter to DWMRC of March 26, 2010 discusses further why turbidity does not appear to be an appropriate parameter for assessing well stabilization. In response to DWMRC's subsequent correspondence dated June 1, 2010 and June 24, 2010, EFRI has completed a monitoring well redevelopment program. The redevelopment report was submitted to DWMRC on September 30, 2011. DWMRC responded to the redevelopment report via letter on November 15, 2012. Per the DWMRC letter dated November 15, 2012, the field data generated this quarter are compliant with the turbidity requirements of the approved QAP.

3.4.2 Holding Time Evaluation

QAP Table 1 identifies the method holding times for each suite of parameters. Sample holding time checks are provided under Tab G. The samples were received and analyzed within the required holding time except as noted below.

The holding time for Total Dissolved Solids ("TDS") in MW-11 and MW-31 quarterly samples was exceeded by one day. Field personnel collected the samples on January 15, 2019 and shipped the samples on January 17, 2019 for delivery on January 18, 2019. Severe weather caused the shipment to be delayed; the samples arrived at AWAL on January 21, 2019. The samples were within temperature limits and the laboratory proceeded with the analyses. AWAL was aware of the delay and the limited holding time remaining and rushed the preparation and analysis accordingly. The analytical balance used for TDS malfunctioned and the samples for MW-11 and MW-31 had to be re-prepared and reanalyzed. The reanalysis was completed one day outside of holding time. The QAM contacted the laboratory to try and retrieve the first analysis to compare those to the out of holding time analysis to verify the latter results. Due to a complete malfunction of the analytical balance the original data were unavailable.

The analytical data are usable for the intended purpose and are not affected by the holding time excursion of one day for the following reasons. The QC data associated with the analyses was acceptable, which indicates that the analytical system was operating correctly for the reanalysis. In addition, the measured TDS results were compared to the calculated TDS results for MW-11 and MW-31. The results for the

measured compared to the calculated were within 6.3% for MW-11 and 8.4% for MW-31. These percentages are well within the analytical variability of the method and indicate the data are acceptable. Lastly, MW-31 in accelerated monitoring for TDS and two additional TDS samples were collected during the monthly events during the quarter. The reanalysis data are less than 6% different than the two monthly samples which is within the analytical variation. The monthly sample data indicate that the data are accurate and usable as reported and there are no adverse effects caused by this one holding time exceedance.

Per AWAL the holding time was due to laboratory error and instrument malfunction and the samples were received with limited time left due to unforeseeable weather issues during shipping.

To prevent recurrence the QAM has requested better communications when issues occur in the laboratory. Future issues will be communicated via telephone conversation to assure EFRI can recollect samples when possible.

All accelerated samples were received and analyzed within the required holding time.

3.4.3 Receipt Temperature Evaluation

COC sheets were reviewed to confirm compliance with the QAP requirement in Table 1 that samples be received at 6°C or lower. Sample receipt temperature checks are provided under Tab G. The quarterly, semi-annual and accelerated samples were received within the required temperature limit.

As noted in Tab G, samples for gross alpha analyses were shipped without using ice. Per Table 1 in the approved QAP, samples submitted for gross alpha analyses do not have a sample temperature requirement.

3.4.4 Analytical Method Checklist

The analytical methods reported by both laboratories were checked against the required methods specified in the QAP. Analytical method check results are provided in Tab G. The review indicated that the quarterly, semi-annual and accelerated samples were analyzed in accordance with Table 1 of the QAP.

3.4.5 Reporting Limit Evaluation

The analytical method RLs reported by both laboratories were checked against the RLs specified in the QAP Table 1. RL evaluations are provided in Tab G. The analytes were measured and reported to the required RLs except that several sets of quarterly, semi-annual and accelerated sample results had the RL raised for at least one analyte due to matrix interference and/or sample dilution as noted in Section 3.4.9. In all cases except as noted in Section 4.0 the reported value for the analyte was higher than the increased RL.

3.4.6 Trip Blank Evaluation

Trip blank results were reviewed to identify any VOC contamination resulting from transport of the samples. Trip blank checks are provided in Tab G. Both of the quarterly trip blank samples had reported detections of chloromethane. None of the samples reported detections of chloromethane. The detections in the trip blanks is likely the result of laboratory contamination. In the second quarter, EFRI noted that all of the laboratory method blanks had low level detections of chloromethane. During the investigation into the low-level detections of chloromethane the laboratory noted they had a defective filter in their DI system which had caused volatile contamination (specifically chloromethane). The detections in the trip blanks does not affect the usability of the data because the sample results were nondetect for chloromethane and this indicates that the samples were not contaminated with chloromethane during shipping.

3.4.7 QA/QC Evaluation for Routine Sample Duplicates

Section 9.1.4 a) of the QAP states that RPDs will be calculated for the comparison of duplicate and original field samples. The QAP acceptance limits for RPDs between the duplicate and original field sample is less than or equal to 20% unless the measured results are less than 5 times the detection limit. This standard is based on the EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February 1994, 9240.1-05-01 as cited in the QAP. The RPDs are calculated for the duplicate pairs for all analytes regardless of whether or not the reported concentrations are greater than 5 times the required detection limits; however, data will be considered noncompliant only when the results are greater than 5 times the required detection limit and the RPD is greater than 20%. The additional duplicate information is provided for information purposes.

The duplicate results were within a 20% RPD in the quarterly samples. Results of the RPD test are provided under Tab G.

The duplicate results were within a 20% RPD in the accelerated samples. Results of the RPD test are provided under Tab G.

3.4.8 Radiologics Counting Error and Duplicate Evaluation

Section 9.14 of the QAP require that gross alpha analysis be reported with an activity equal to or greater than the GWCL and shall have a counting variance that is equal to or less than 20% of the reported activity concentration. An error term may be greater than 20% of the reported activity concentration when the sum of the activity concentration and error term is less than or equal to the GWCL. The quarterly and semi-annual radiologic sample results met the counting error requirements specified in the QAP except as noted in Tab G. The results for MW-38 and MW-40 did not meet the requirement that the counting error be equal to or less than 20% of the reported activity concentration, likely because the reported concentrations are very near the RL. As stated above the error term

may be greater than 20% of the reported activity concentration when the sum of the activity concentration and error term is less than or equal to the GWCL; however, these wells do not have GWCLs and this second level check cannot be performed. The results are usable for the intended purpose and there is no adverse effect on the data.

Section 9.4 of the QAP also requires a comparability check between the sample and field duplicate sample results utilizing the formula provided in the text.

Results of quarterly, semi-annual, and accelerated radiologic sample QC are provided under Tab G. The quarterly, semi-annual, and accelerated radiologic sample results met the duplicate counting error requirements specified in the QAP.

3.4.9 Other Laboratory QA/QC

Section 9.2 of the QAP requires that the laboratory's QA/QC Manager check the following items in developing data reports: (1) sample preparation information is correct and complete, (2) analysis information is correct and complete, (3) appropriate analytical laboratory procedures are followed, (4) analytical results are correct and complete, (5) QC samples are within established control limits, (6) blanks are within QC limits, (7) special sample preparation and analytical requirements have been met, and (8) documentation is complete. In addition to other laboratory checks described above, EFRI's QA Manager rechecks QC samples and blanks (items (5) and (6)) to confirm that the percent recovery for spikes and the relative percent difference for spike duplicates are within the method-specific required limits, or that the case narrative sufficiently explains any deviation from these limits. Results of this quantitative check are provided under Tab G. The lab QA/QC results from both GEL and AWAL samples for compounds regulated under the GWDP met these requirements.

The check samples included at least the following: a method blank, a laboratory control spike ("LCS"), a matrix spike ("MS") and a matrix spike duplicate ("MSD"), or the equivalent, where applicable. It should be noted that:

- Laboratory fortified blanks are equivalent to LCSs.
- Laboratory reagent blanks are equivalent to method blanks.
- Post digestion spikes are equivalent to MSs.
- Post digestion spike duplicates are equivalent to MSDs.
- Laboratory Duplicates are equivalent to MSDs.

The qualifiers, and the corresponding explanations reported in the QA/QC Summary Reports for the check samples for the analytical methods were reviewed by the QA Manager.

The QAP, Section 8.1.2 requires that a MS/MSD pair be analyzed with each analytical batch. The QAP does not specify acceptance limits for the MS/MSD pair, and the QAP does not specify that the MS/MSD pair be prepared on EFRI samples only. Acceptance limits for MS/MSDs are set by the laboratories. The review of the information provided

by the laboratories in the data packages verified that the requirements in the QAP to analyze a MS/MSD pair with each analytical batch was met. While the QAP does not require it, the recoveries were reviewed for compliance with the laboratory established acceptance limits. The QAP does not require this level of review and the results of this review are provided for information only.

The information from the Laboratory QA/QC Summary Reports indicates that the MS/MSDs recoveries and the associated RPDs for the quarterly and semi-annual samples were within acceptable laboratory limits for the regulated compounds except as indicated in Tab G. The data recoveries and RPDs which are outside the laboratory established acceptance limits do not affect the quality or usability of the data because the recoveries and RPDs above or below the acceptance limits are indicative of matrix interference most likely caused by other constituents in the samples. Matrix interferences are applicable to the individual sample results only. The requirement in the QAP to analyze a MS/MSD pair with each analytical batch was met and as such the data are compliant with the QAP.

The information from the Laboratory QA/QC Summary Reports indicates that the MS/MSDs recoveries and the associated RPDs for the accelerated samples were within acceptable laboratory limits for the regulated compounds. The requirement in the QAP to analyze a MS/MSD pair with each analytical batch was met and as such the data are compliant with the QAP.

The QAP specifies that surrogate compounds shall be employed for all organic analyses but the QAP does not specify acceptance limits for surrogate recoveries. The information from the Laboratory QA/QC Summary Reports indicates that the surrogate recoveries for the quarterly and accelerated samples were within acceptable laboratory limits for the surrogate compounds.

The information from the Laboratory QA/QC Summary Reports indicates that the LCS recoveries for both the quarterly and accelerated samples were within acceptable laboratory limits for the LCS compounds as noted in Tab G.

The QAP, Section 8.1.2 requires that each analytical batch shall be accompanied by a method blank. The analytical batches routinely contain a blank, which is a blank sample made and carried through all analytical steps. For the Mill samples, a method blank was prepared for the analytical methods. Per the approved QAP, contamination detected in analysis of method blanks will be used to evaluate any analytical laboratory contamination of environmental samples. QAP Revision 7.4 states that non-conformance conditions will exist when contaminant levels in the samples(s) are not an order of magnitude greater than the blank result. The method blanks for the quarterly samples and the accelerated samples reported no detections of any analyte. Method blank results are included in Tab E and Tab F.

Laboratory duplicates are completed by the analytical laboratories as required by the analytical method specifications. Acceptance limits for laboratory duplicates are set by the laboratories. The QAP does not require the completion of laboratory duplicates or the

completion of a QA assessment of them. EFRI reviews the QC data provided by the laboratories for completeness and to assess the overall quality of the data provided. Duplicate results outside of the laboratory established acceptance limits are included in Tab G. The results outside of the laboratory established acceptance limits do not affect the quality or usability of the data because the RPDs above the acceptance limits are indicative of non-homogeneity in the sample matrix. Matrix affects are applicable to the individual sample results only.

4.0 CORRECTIVE ACTION REPORT

There are no corrective actions required during the current monitoring period.

4.1 Assessment of Corrective Actions from Previous Period

No corrective actions were identified in the previous report.

5.0 TIME CONCENTRATION PLOTS

Time concentration plots for each monitoring well for the following constituents: chloride, fluoride, sulfate, and uranium, are included under Tab I. The data points collected to date are reflected on the plots.

Time concentration plots included with quarterly groundwater reports prior to and including first quarter 2012 did not include data that were determined to be outliers using the statistical methods used for the background determinations at the Mill. Based on conversations with DWMRC, all of the data have been included in the quarterly time concentration plots since first quarter 2012.

6.0 ELECTRONIC DATA FILES AND FORMAT

EFRI has provided to the Director electronic copies of the laboratory results from groundwater quality monitoring conducted during the quarter in Comma Separated Values format, from the analytical laboratories. A copy of the transmittal e-mail is included under Tab J.

7.0 SIGNATURE AND CERTIFICATION

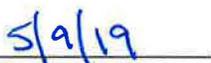
This document was prepared by Energy Fuels Resources (USA) Inc.

Energy Fuels Resources (USA) Inc.

By:



Scott A. Bakken
Senior Director Regulatory Affairs



Date

Certification:

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Scott A. Bakken
Senior Director Regulatory Affairs
Energy Fuels Resources (USA) Inc.

Tables

Table 1: Summary of Well Sampling for Q1 2019

Well	Normal Frequency	Purpose for sampling this quarter	Sample Date	Date of Lab Report
MW-05	Semi-annually	Semi-annually	1/17/19	(2/4/2019)
MW-11	Quarterly	Quarterly	1/15/19	(2/4/2019) [2/18/2019] [2/22/2019]
MW-12	Semi-annually	Semi-annually	1/21/19	(2/13/2019)
MW-14	Quarterly	Quarterly	1/17/19	(2/4/2019) [2/18/2019] [2/22/2019]
MW-24	Semi-annually	Semi-annually	1/23/19	(2/13/2019)
MW-25	Quarterly	Quarterly	1/16/19	(2/4/2019) [2/18/2019] [2/22/2019]
MW-26	Quarterly	Quarterly	1/17/19	(2/4/2019) [2/18/2019] [2/22/2019]
MW-27	Semi-annually	Semi-annually	1/21/19	(2/13/2019)
MW-28	Semi-annually	Semi-annually	1/22/19	(2/13/2019)
MW-30	Quarterly	Quarterly	1/16/19	(2/4/2019) [2/18/2019] [2/22/2019]
MW-31	Quarterly	Quarterly	1/15/19	(2/4/2019) [2/18/2019] [2/22/2019]
MW-32	Semi-annually	Semi-annually	1/22/19	(2/13/2019)
MW-35	Semi-annually	Semi-annually	1/16/19	(2/4/2019)
MW-36	Quarterly	Quarterly	1/23/19	(2/13/2019) [2/22/2019]
MW-38	Quarterly	Background	1/24/19	(2/13/2019) [2/22/2019]
MW-39	Quarterly	Background	1/23/19	(2/13/2019) [2/22/2019]
MW-40	Quarterly	Background	1/23/19	(2/13/2019) [2/22/2019]
MW-65	1 per Batch	Duplicate of MW-36	1/23/19	(2/13/2019) [2/22/2019]
Accelerated February Monthly				
MW-11	Monthly	Accelerated	2/13/19	(02/25/2019)
MW-25	Monthly	Accelerated	2/12/19	(02/25/2019)
MW-26	Monthly	Accelerated	2/13/19	(02/25/2019)
MW-30	Monthly	Accelerated	2/13/19	(02/25/2019)
MW-31	Monthly	Accelerated	2/12/19	(02/25/2019)
MW-65	Monthly	Duplicate of MW-30	2/13/19	(02/25/2019)
Accelerated March Monthly				
MW-11	Monthly	Accelerated	3/6/19	(03/22/2019)
MW-25	Monthly	Accelerated	3/5/19	(03/22/2019)
MW-26	Monthly	Accelerated	3/6/19	(03/22/2019)
MW-30	Monthly	Accelerated	3/6/19	(03/22/2019)
MW-31	Monthly	Accelerated	3/5/19	(03/22/2019)
MW-65	1 per Batch	Duplicate of MW-31	3/5/19	(03/22/2019)

Notes:

When more than 1 date is shown for a certain laboratory, the date(s) in italics are the original laboratory submission dates.

Resubmissions were required to correct reporting errors or to address reanalyses.

Date in parenthesis depicts the date that data were reported from American West Analytical Laboratories (AWAL).

Date in brackets depicts the date the data were reported from GEL Laboratories.

Table 2
Exceedances and Acceleration Requirements

Monitoring Well (Water Class)	Constituent Exceeding GWCL	GWCL in Current GWDP	First Result Exceeding the GWCL	Routine Sample Frequency	Accelerated Frequency	Exceedance Sample Period	Start of Accelerated Monitoring
Quarterly Wells Accelerated to Monthly Sampling							
MW-11 (Class II)	Manganese (ug/L)	164.67	174	Quarterly	Monthly	Q2 2018	Q3 2018 (September)
MW-14 (Class III)	Fluoride (mg/L)	0.2	0.22	Quarterly	Monthly	Q2 2017	September 2017
MW-25 (Class III)	Fluoride (mg/L)	0.42	0.566	Quarterly	Monthly	Q4 2017	March 2018
	Cadmium (ug/L)	1.5	1.51	Quarterly	Monthly	Q1 2016	April 2016
MW-26 (Class III)	Nitrate + Nitrite (as N) (mg/L)	0.62	1.3	Quarterly	Monthly	Q1 2010	May 2010
	Chloroform (ug/L)	70	700	Quarterly	Monthly	Q1 2010	May 2010
	Chloride (mg/L)	58.31	72	Quarterly	Monthly	Q1 2010	May 2010
	Methylene Chloride (ug/L)	5	9.9	Quarterly	Monthly	Q2 2010	June 2010
	Nitrogen, Ammonia as N	0.92	0.938	Quarterly	Monthly	Q1 2019	May 2019
	Field pH (S.U.)	5.61	5.50	Quarterly	Monthly	Q2 2018	July 2018
MW-30 (Class II)	Nitrate + Nitrite (as N) (mg/L)	2.5	16.1	Quarterly	Monthly	Q1 2010	May 2010
	Chloride (mg/L)	128	134	Quarterly	Monthly	Q1 2011	May 2011
	Field pH (S.U.)	6.47	6.33	Quarterly	Monthly	Q2 2018	July 2018
	Selenium (ug/L)	47.2	48.6	Quarterly	Monthly	Q1 2019	May 2019
	Uranium (ug/L)	8.32	8.57	Quarterly	Monthly	Q4 2013	March 2014
MW-31 (Class III)	Nitrate + Nitrite (as N) (mg/L)	5	21.7	Quarterly	Monthly	Q1 2010	May 2010
	TDS (mg/L)	1700	1930	Quarterly	Monthly	Q1 2018	June 2018
	Sulfate (mg/L)	697.6	835	Quarterly	Monthly	Q1 2018	June 2018
	Selenium (ug/L)	86.81	88.7	Quarterly	Monthly	Q1 2018	June 2018
	Uranium (ug/L)	9.1	9.41	Quarterly	Monthly	Q3 2016	December 2016
	Chloride (mg/L)	143	145	Quarterly	Monthly	Q1 2011	May 2011
MW-36 (Class III)	Field pH (S.U.)	6.49	6.35	Quarterly	Monthly	Q1 2019	May 2019
Semi-Annual Wells Accelerated to Quarterly Sampling							
Monitoring Well (Water Class)	Constituent Exceeding GWCL	GWCL in Current GWDP	First Result Exceeding the GWCL	Sample Frequency	Accelerated Frequency	Exceedance Sample Period	Start of Accelerated Monitoring
MW-5 (Class II)	Uranium (ug/L)	7.5	11.6	Semi-Annually	Quarterly	Q4 2010	Q1 2011
MW-12 (Class III)	Uranium (ug/L)	23.5	23.7	Semi-Annually	Quarterly	Q2 2017	Q3 2017
MW-24 (Class III)	Cadmium (ug/L)	6.43	6.97	Semi-Annually	Quarterly	Q2 2018	Q3 2018 (September)
	Beryllium (ug/L)	2	2.42	Semi-Annually	Quarterly	Q4 2017	Q1 2018
	Thallium (ug/L)	2.01	2.44	Semi-Annually	Quarterly	Q2 2018	Q3 2018 (September)
	Nickel (ug/L)	50	57.7	Semi-Annually	Quarterly	Q4 2018	Q3 2019
	Fluoride (mg/L)	0.47	0.797	Semi-Annually	Quarterly	Q4 2018	Q3 2019
	Field pH (S.U.)	5.03	4.45	Semi-Annually	Quarterly	Q2 2018	Q3 2018 (September)
MW-27 (Class III)	Nitrate + Nitrite (as N) (mg/L)	5.6	5.8	Semi-Annually	Quarterly	Q2 2010	Q3 2010
	Chloride (mg/L)	38	42	Semi-Annually	Quarterly	Q2 2010	Q3 2010
MW-28 (Class III)	Chloride (mg/L)	105	108	Semi-Annually	Quarterly	Q2 2010	Q3 2010
	Gross Alpha (pCi/L)	2.42	2.55	Semi-Annually	Quarterly	Q4 2018	Q3 2019
	Cadmium (ug/L)	5.2	5.41	Semi-Annually	Quarterly	Q2 2014	Q4 2014
	Uranium (ug/L)	4.9	61.3	Semi-Annually	Quarterly	Q2 2014	Q4 2014
MW-32 (Class III)	Chloride (mg/L)	35.99	36.3	Semi-Annually	Quarterly	Q2 2014 (Q1 2015)	Q2 2014
	Sulfate (mg/L)	2556.7	2590	Semi-Annually	Quarterly	Q4 2016	Q3 2017
MW-35 (Class II)	Nitrogen Ammonia, as N	0.14	0.254	Semi-Annually	Quarterly	Q2 2018	Q3 2018 (September)

Notes:

() Values listed in parentheses are resample results from the same sampling period. Samples were recollected due field or laboratory problems as noted in the specific report for that sample period.

Highlighted text shows accelerated requirements resulting from Q1 2019 sampling event.

Pursuant to the DWMRC letters of February 1, 2019 and March 5, 2019, these constituents will no longer be monitored on an accelerated schedule.

These GWCLs were reset with the issuance of the March 19, 2019 GWDP. These constituents will be dropped from accelerated monitoring after this quarter.

Table 3 – GWCL Exceedances for First Quarter 2019 under the January 19, 2018 GWDP

Monitoring Well (Water Class)	Constituent Exceeding GWCL	GWCL in January 19, 2018 GWDP	Q1 2018 Results						Q2 2018 Results						Q3 2018 Results						Q4 2018 Results													
			January 2018 Monthly Sample Date	January 2018 Monthly Result	Q1 2018 Sample Date	Q1 2018 Result	March 2018 Monthly Sample Date	March 2018 Monthly Result	Q2 2018 Sample Date	Q2 2018 Result	May 2018 Monthly Sample Date	May 2018 Monthly Result	June 2018 Monthly Sample Date	June 2018 Monthly Result	July 2018 Monthly Sample Date	July 2018 Monthly Result	August 2018 Monthly Sample Date	August 2018 Monthly Result	Q3 2018 Sample Date	Q3 2018 Result	Q4 2018 Sample Date	Q4 2018 Result	November 2018 Monthly Sample Date	November 2018 Monthly Result	December 2018 Monthly Sample Date	December 2018 Monthly Result								
Required Quarterly Sampling Wells																																		
MW-11 (Class II)	Manganese (ug/L)	164.67	1/24/2018	169	2/20/2018	117	3/6/2018	NA	4/18/2018	174	5/15/2018	NA	6/19/2018	NA	7/24/2018	NA	8/9/2018	154	9/11/2018	171	10/25/2018	161	11/14/2018	195	12/11/2018	230								
MW-14 (Class III)	Fluoride (mg/L)	0.2	1/23/2018	0.153	2/19/2018	0.100	3/6/2018	0.110	4/12/2018	<0.100	5/14/2018	0.135	6/18/2018	0.146	7/24/2018	0.183	8/9/2018	<0.100	9/11/2018	<0.100	10/25/2018	0.126	11/13/2018	0.142	12/11/2018	0.146								
MW-25 (Class III)	Cadmium (ug/L)	1.5	1/23/2018	1.38	2/19/2018	1.28	3/7/2018	1.45	4/17/2018	1.38	5/14/2018	1.34	6/18/2018	1.38	7/23/2018	1.30	8/9/2018	1.36	9/10/2018	1.35	10/24/2018	1.30	11/13/2018	1.51	12/10/2018	1.49								
	Fluoride (mg/L)	0.42		NA		0.281		0.318		0.360		0.346		0.210		0.128		0.243		0.243		0.313		0.309		0.298								
MW-26 (Class III)	Nitrate + Nitrite (as N) (mg/L)	0.62	1/25/2018	0.862	2/22/2018	0.742	3/8/2018	0.691	4/19/2018	0.816	5/15/2018	0.920	6/19/2018	0.815	7/24/2018	0.704	8/10/2018	1.40	9/13/2018	0.825	10/25/2018	1.25	11/14/2018	1.08	12/10/2018	1.11								
	Chloroform (ug/L)	70		2280		1730		2350		2500		1740		3920		1160		1030		728		1130		2960		1460								
	Chloride (mg/L)	58.31		57.5		64.3		75.2		62.5		62.4		66.9		66.0		68.8		74.5		57.0		57.6		80.3								
	Methylene Chloride (ug/L)	5		5.79		9.80		11.6		17.4		8.55		10.3		3.07		2.47		1.58		2.13		4.99		2.55								
	Nitrogen, Ammonia as N	0.92		NA		0.506		NA		0.396		NA		NA		NA		NA		0.480		NA		NA		NA								
	Field pH (S.U.)	5.61 - 8.5		6.11		6.35		6.73		5.50		6.81		7.00		7.18		6.64		6.57		6.38		6.57		6.87								
MW-30 (Class II)	Nitrate + Nitrite (as N) (mg/L)	2.5	1/23/2018	15.2	2/22/2018	17.6	3/8/2018	17.0	4/12/2018	17.3	5/15/2018	16.9	6/19/2018	17.4	7/24/2018	17.4	8/10/2018	18.7	9/11/2018	18.0	10/22/2018	17.3	11/14/2018	16.9	12/11/2018	17.2								
	Chloride (mg/L)	128		152		158		167		145		174		169		177		170		183		140		166		154								
	Selenium (ug/L)	47.2		43.5		45.5		NA		46.4		NA		NA		NA		NA		42.5		45.6		NA		NA	NA	NA	NA	NA	NA	45.6	8.81	8.20
	Uranium (ug/L)	8.32		8.53		8.23		8.66		7.98		8.44		8.80		7.69		8.34		8.08		6.56		8.20		8.20								
	Field pH (S.U.)	6.47 - 8.5		6.18		6.54		6.87		6.33		6.74		6.84		7.39		6.91		6.94		7.11		7.11										
MW-31 (Class III)	Nitrate + Nitrite (as N) (mg/L)	5	1/24/2018	17.0	2/20/2018	18.8	3/5/2018	19.0	4/17/2018	19.0	5/14/2018	18.8	6/18/2018	18.0	7/23/2018	18.0	8/10/2018	18.3	9/10/2018	20.1	10/24/2018	18.3	11/13/2018	17.9	12/10/2018	18.3								
	TDS (mg/L)	1700		1800		1930		NA		1980		2010		2000		1980		2100		2000		2000		2090										
	Chloride (mg/L)	143		323		292		311		308		326		359		351		336		333		286		302										
	Selenium (ug/L)	86.81		89.3		88.7		NA		90.2		NA		87.5		93.8		86.3		83.0		83.5		90.7		85.6								
	Uranium (ug/L)	9.1		11.4		11.2		11.4		11.5		11.5		12.9		12.3		11.7		11.0		11.6		12.7										
Sulfate (mg/L)	697.60	813	835	NA	857	NA	976	857	841	893	950	905																						
MW - 36 (Class III)	Field pH (S.U.)	6.49 - 8.5	NS	NA	3/7/2018	6.60	NS	NA	4/11/2018	6.99	NS	NA	NS	NA	NS	NA	NS	NA	10/3/2018	6.72	12/6/2018	7.08	NS	NA	NS	NA								
Required Semi-Annual Sampling Wells																																		
MW-05 (Class II)	Uranium (ug/L)	7.5	NS	NA	2/16/2018	0.910	NS	NA	4/10/2018	0.875	NS	NA	NS	NA	NS	NA	NS	NA	9/11/2018	0.631	10/30/2018	0.618	NS	NA	NS	NA								
MW-12 (Class III)	Uranium (ug/L)	23.5	NS	NA	3/2/2018	23.3	NS	NA	4/10/2018	21.1	NS	NA	NS	NA	NS	NA	NS	NA	9/12/2018	21.1	10/31/2018	20.9	NS	NA	NS	NA								
MW-24 (Class III)	Beryllium (ug/L)	2	NS	NA	3/2/2018	1.69	NS	NA	4/19/2018	2.78	NS	NA	NS	NA	NS	NA	NS	NA	9/19/2018	1.68	10/24/2018	2.75	NS	NA	NS	NA								
	Cadmium (ug/L)	6.43		NA		NA		6.97		NA		NA		NA		5.59		7.05		NA		NA		NA										
	Fluoride (mg/L)	0.47		NA		NA		0.324		NA		NA		NA		NA		0.797		NA		NA		NA										
	Nickel (mg/L)	50		NA		NA		49.5		NA		NA		NA		NA		57.7		NA		NA		NA										
	Thallium (ug/L)	2.01		NA		NA		2.44		NA		NA		NA		NA		2.63		NA		NA		NA										
	Field pH (S.U.)	5.03 - 8.5		NA		NA		4.45		NA		NA		NA		NA		5.30		5.09		NA		NA										
MW-27 (Class III)	Nitrate + Nitrite (as N) (mg/L)	5.6	NS	NA	2/21/2018	6.19	NS	NA	4/18/2018	6.09	NS	NA	NS	NA	NS	NA	NS	NA	9/12/2018	6.35	10/29/2018	8.69	NS	NA	NS	NA								
	Chloride (mg/L)	38		NA		32.4		NA		34.7		NA		NA		NA		35.6		28.9		NA		NA										
MW-28 (Class III)	Chloride (mg/L)	105	NS	NA	2/21/2018	121	NS	NA	4/19/2018	138	NS	NA	NS	NA	NS	NA	NS	NA	9/12/2018	148	10/30/2018	119	NS	NA	NS	NA								
	Cadmium (ug/L)	5.2		NA		4.57		NA		4.99		NA		NA		4.84		4.61		NA		NA												
	Gross Alpha (pCi/L)	2.42		NA		NA		1.38		NA		NA		NA		NA		NA		NA		NA		NA										
	Uranium (ug/L)	4.9		NA		3.94		5.06		NA		NA		NA		7.04		6.18		NA		NA												
MW-32 (Class III)	Chloride (mg/L)	35.39	NS	NA	2/16/2018	37.4	NS	NA	4/10/2018	37.2	NS	NA	NS	NA	NS	NA	NS	NA	9/5/2018	41.1	10/29/2018	33.7	NS	NA	NS	NA								
	Sulfate (mg/L)	2556.70		NA		2160		NA		2000		NA		NA		2060		1800		NA		NA												
MW-35 (Class II)	Nitrogen, Ammonia as N	0.14	NS	NA			NS	NA	4/10/2018	0.254	NS	NA	NS	NA	NS	NA	NS	NA	9/10/2018	<0.0500	10/18/2018	0.117	NS	NA	NS	NA								

Notes:
 NS= Not Required and Not Sampled
 NA= Not Applicable
 Exceedances are shown in yellow

NA - Pursuant to the January 19, 2018 GWDP these parameters were no longer in exceedance after January 19, 2018 and accelerated sampling was no longer required. The reset of the GWCLs allowed for the cessation of monthly sampling of these parameters after the issuance of the GWDP including during the March monthly event. The exceedances noted during the first quarter event will begin accelerated monitoring with the June monthly event, as required by the revised GWDP.

These GWCLs were reset with the issuance of the January 19, 2018 GWDP. These parameters were no longer in exceedance and these accelerated samples were not required under the January 19, 2018 GWDP. These data were collected and are reported as required by Part II.F of the GWDP.

Table 3 – GWCL Exceedances for First Quarter 2019 under the January 19, 2018 GWDP

Monitoring Well (Water Class)	Constituent Exceeding GWCL	GWCL in January 19, 2018 GWDP	Q1 2019 Results					
			Q1 2019 Sample Date	Q1 2019 Result	February 2019 Monthly Sample Date	February 2019 Monthly Result	March 2019 Monthly Sample Date	March 2019 Monthly Result
Required Quarterly Sampling Wells								
MW-11 (Class II)	Manganese (ug/L)	164.67	1/15/2019	181	2/13/2019	211	3/6/2019	170
MW-14 (Class III)	Fluoride (mg/L)	0.2	1/17/2019	0.130	NS	NA	NS	NA
MW-25 (Class III)	Cadmium (ug/L)	1.5	1/16/2019	1.32	2/12/2019	1.52	3/5/2019	1.54
	Fluoride (mg/L)	0.42		0.302		NA		NA
MW-26 (Class III)	Nitrate + Nitrite (as N) (mg/L)	0.62	1/17/2019	2.21	2/13/2019	0.967	3/6/2019	3.22
	Chloroform (ug/L)	70		1200		1300		1290
	Chloride (mg/L)	58.31		70.7		57.2		60.4
	Methylene Chloride (ug/L)	5		3.24		1.91		1.45
	Nitrogen, Ammonia as N	0.92		0.938		NA		NA
	Field pH (S.U.)	5.61 - 8.5		6.43		6.25		6.77
MW-30 (Class II)	Nitrate + Nitrite (as N) (mg/L)	2.5	1/16/2019	17.9	2/13/2019	18.2	3/6/2019	16.2
	Chloride (mg/L)	128		157		167		160
	Selenium (ug/L)	47.2		48.6		NA		NA
	Uranium (ug/L)	8.32		9.07		9.09		8.39
	Field pH (S.U.)	6.47 - 8.5		6.60		6.46		6.97
MW-31 (Class III)	Nitrate + Nitrite (as N) (mg/L)	5	1/15/2019	19.0	2/12/2019	18.6	3/5/2019	18.5
	TDS (mg/L)	1700		2030		2090		2160
	Chloride (mg/L)	143		283		296		322
	Selenium (ug/L)	86.81		89.7		88.5		91.1
	Uranium (ug/L)	9.1		13.2		13.6		12.5
	Sulfate (mg/L)	697.60		851		893		953
MW - 36 (Class III)	Field pH (S.U.)	6.49 - 8.5	1/23/2019	6.35	NS	NA	NS	NA
Required Semi-Annual Sampling Wells								
MW-05 (Class II)	Uranium (ug/L)	7.5	1/17/2019	0.557	NS	NA	NS	NA
MW-12 (Class III)	Uranium (ug/L)	23.5	1/21/2019	23.6	NS	NA	NS	NA
MW-24 (Class III)	Beryllium (ug/L)	2	1/23/2019	3.37	NS	NA	NS	NA
	Cadmium (ug/L)	6.43		8.34		NA		NA
	Fluoride (mg/L)	0.47		NA		NA		NA
	Nickel (mg/L)	50		NA		NA		NA
	Thallium (ug/L)	2.01		2.72		NA		NA
	Field pH (S.U.)	5.03 - 8.5		4.63		NA		NA
MW-27 (Class III)	Nitrate + Nitrite (as N) (mg/L)	5.6	1/21/2019	6.40	NS	NA	NS	NA
	Chloride (mg/L)	38		31.0		NA		NA
MW-28 (Class III)	Chloride (mg/L)	105	1/22/2019	127	NS	NA	NS	NA
	Cadmium (ug/L)	5.2		4.76		NA		NA
	Gross Alpha (pCi/L)	2.42		NA		NA		NA
	Uranium (ug/L)	4.9		7.12		NA		NA
MW-32 (Class III)	Chloride (mg/L)	35.39	1/22/2019	35.6	NS	NA	NS	NA
	Sulfate (mg/L)	2556.70		1950		NA		NA
MW-35 (Class II)	Nitrogen, Ammonia as N	0.14	1/16/2019	0.100	NS	NA	NS	NA

Notes:

NS= Not Required and Not Sampled

NA= Not Applicable

Exceedances are shown in yellow

Pursuant to the DWMRC letters of February 1, and March 5, 2019, these constituents will no longer be monitored on an accelerated schedule. These constituents will be dropped from this report after this quarter.

These GWCLs were reset with the issuance of the March 19, 2019 GWDP. These parameters are no longer in exceedance as of March 19, 2019. These constituents will be dropped after this quarter.

INDEX OF TABS

Tab A Site Plan and Perched Well Locations White Mesa Site

Tab B Field Data Worksheets Quarterly Sampling

Tab C Field Data Worksheets Accelerated Monitoring

Tab C1 Field Data Worksheets Accelerated Monitoring, February 2019

Tab C2 Field Data Worksheets Accelerated Monitoring, March 2019

Tab D Quarterly Depth to Water

Tab E Laboratory Analytical Reports – Quarterly Sampling

Tab F Laboratory Analytical Reports – Accelerated Monitoring

Tab F1 Laboratory Analytical Reports – Accelerated Monitoring, February 2019

Tab F2 Laboratory Analytical Reports – Accelerated Monitoring, March 2019

Tab G Quality Assurance and Data Validation Tables

G-1A/B	Field Data QA/QC Evaluation
G-2A/B	Holding Time Evaluation
G-3A/B	Laboratory Temperature Check
G-4A/B	Analytical Method Check
G-5A/B	Reporting Limit Evaluation
G-6A/B	Trip Blank Evaluation
G-7A/B	QA/QC Evaluation for Sample Duplicates
G-8 A/B	Radiologics Counting Error
G-9A/B	Laboratory Matrix QC

Tab H Kriged Current Quarterly Groundwater Contour Map

Tab I Groundwater Time Concentration Plots

Tab J CSV Transmittal Letter

Tab A

Site Plan and Perched Well Locations White Mesa Site

Tab B

Field Data Worksheets Quarterly Sampling



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-05
Field Sample ID	MW-05_01172019
Purge Date & Time	1/17/2019 7:25
Sample Date & Time	1/17/2019 10:45

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	21.45
Calculated Casing Volumes Purge Duration (min)	197.70
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Cloudy
External Ambient Temperature (C)	-1
Previous Well Sampled	MW-14

Well Depth (ft)	141.50
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	108.65

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/17/2019 10:42	42.74	2903	7.26	13.87	263	0	
1/17/2019 10:43	42.96	2904	7.27	13.86	262	0	
1/17/2019 10:44	43.18	2903	7.27	13.83	262	0	
1/17/2019 10:45	43.40	2900	7.27	13.87	261	0	

Volume of water purged (gals)	43.40
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Final Depth to Water (feet)	125.25
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	200.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Heavy Metals - U only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

Comments:
Arrived on site at 0721. Purge began at 0725. Purged well for a total of 200 minutes. Purge ended and sample collected at 1045. Water was clear. Left site at 1049.

Signature of Field Technician

Jamie Holladay



White Mesa Mill

Field Data Worksheet For Groundwater

Location ID	MW-11
Field Sample ID	MW-11_01152019
Purge Date & Time	1/15/2019 7:30
Sample Date & Time	1/15/2019 12:00
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	29.02
Calculated Casing Volumes Purge Duration (min)	267.51
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
---------	-------

Weather Conditions	Snowing
External Ambient Temperature (C)	0
Previous Well Sampled	MW-31

Well Depth (ft)	130.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	85.55

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/15/2019 11:57	57.93	3016	7.45	14.11	418	17.0	
1/15/2019 11:58	58.15	3015	7.40	14.04	381	16.0	
1/15/2019 11:59	58.37	3015	7.38	14.05	362	16.0	
1/15/2019 12:00	58.59	3011	7.36	14.03	350	15.0	

Volume of water purged (gals)	58.59
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Final Depth to Water (feet)	86.98
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	270.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 0725. Purge began at 0730. Purged well for a total of 270 minutes. Purge ended and samples collected at 1200. Water was mostly clear. Left site at 1211.

Signature of Field Technician

Janner Holliday



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-12
Field Sample ID	MW-12_01212019
Purge Date & Time	1/21/2019 12:15
Sample Date & Time	1/21/2019 14:45
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	15.37
Calculated Casing Volumes Purge Duration (min)	141.73
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW
Sampler	TH/DL
Weather Conditions	Cloudy/snowy
External Ambient Temperature (C)	1
Previous Well Sampled	MW-27

Well Depth (ft)	130.40
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	106.85

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/21/2019 14:42	31.89	4227	6.61	13.69	482	1.0	
1/21/2019 14:43	32.11	4216	6.59	13.71	477	1.0	
1/21/2019 14:44	32.33	4214	6.58	13.70	472	1.1	
1/21/2019 14:45	32.55	4221	6.57	13.74	468	1.1	

Volume of water purged (gals)	32.55
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Final Depth to Water (feet)	121.67
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	150.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Heavy Metals - U only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

Comments:

Arrived on site at 1210. Purge began at 1215. Purged well for a total of 150 minutes. Purge ended and sample collected at 1445. Water was clear. Left site at 1450.

Signature of Field Technician

Janner Holliday



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-14
Field Sample ID	MW-14_01172019
Purge Date & Time	1/17/2019 7:15
Sample Date & Time	1/17/2019 10:00
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	17.36
Calculated Casing Volumes Purge Duration (min)	160.09
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW
Sampler	TH/DL
Weather Conditions	Partly cloudy
External Ambient Temperature (C)	-1
Previous Well Sampled	MW-35

Well Depth (ft)	128.70
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	102.10

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/17/2019 9:57	35.15	3950	6.55	13.60	301	0	
1/17/2019 9:58	35.37	3956	6.52	13.61	305	0	
1/17/2019 9:59	35.58	3958	6.51	13.61	311	0	
1/17/2019 10:00	35.80	3968	6.50	13.71	317	0	

Volume of water purged (gals)	35.80
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Final Depth to Water (feet)	102.98
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	165.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 0711. Purge began at 0715. Purged well for a total of 165 minutes. Purge ended and samples collected at 1000. Water was clear. Left site at 1011.
--

Signature of Field Technician

Janner Holladay



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-24
Field Sample ID	MW-24_01232019
Purge Date & Time	1/22/2019 11:35
Sample Date & Time	1/23/2019 8:00

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	5.64
Calculated Casing Volumes Purge Duration (min)	58.83
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Partly cloudy, windy
External Ambient Temperature (C)	-2
Previous Well Sampled	MW-32

Well Depth (ft)	120.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	111.35

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/22/2019 12:34	11.32	4600	4.85	12.69	464	4.5	
1/23/2019 7:59		4554	4.65	13.30			Before
1/23/2019 8:05		4550	4.63	13.39			After

Volume of water purged (gals)	11.52
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Final Depth to Water (feet)	118.20
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.192
Time to evacuate 2 Casing Volumes (min)	60.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Heavy Metals - Be only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
Heavy Metals - Cd only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
Heavy Metals - Tl only	Y	WATER	1	500-mL Poly	Y	HNO3 (pH<2)	Y

Comments:

Arrived on site at 1130. Purge began at 1135. Purged well for a total of 60 minutes. Purged well dry. Purge ended at 1235. Water was clear. Left site at 1238. Arrived on site at 0755. Depth to water was 111.55. Sample collected at 0800. Left site at 0806.

Signature of Field Technician

Janner Holliday



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-25
Field Sample ID	MW-25_01162019
Purge Date & Time	1/16/2019 7:30
Sample Date & Time	1/16/2019 11:10

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	23.34
Calculated Casing Volumes Purge Duration (min)	215.15
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW
Sampler	TH/DL
Weather Conditions	Overcast rain/snow
External Ambient Temperature (C)	0
Previous Well Sampled	MW-30

Well Depth (ft)	115.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	79.25

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/16/2019 11:07	47.08	3209	6.45	14.00	432	1.0	
1/16/2019 11:08	47.30	3205	6.46	13.96	429	1.0	
1/16/2019 11:09	47.52	3209	6.48	14.00	426	1.0	
1/16/2019 11:10	47.74	3209	6.48	13.97	424	1.0	

Volume of water purged (gals)	47.74
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Final Depth to Water (feet)	81.52
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	220.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 0725. Purge began at 0730. Purged well for a total of 220 minutes. Purge ended and samples collected at 1110. Water was mostly clear. Left site at 1123.

Signature of Field Technician

Jaime Holladay



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-26
Field Sample ID	MW-26_01172019
Purge Date & Time	1/17/2019 8:30
Sample Date & Time	1/17/2019 8:30

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	Continuous
Purging Method	2 Casings
Casing Volume (gal)	33.65
Calculated Casing Volumes Purge Duration ()	
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Cloudy
External Ambient Temperature (C)	-1
Previous Well Sampled	MW-05

Well Depth (ft)	121.33
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	69.79

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/17/2019 8:29		3529	6.43	13.77	355	0	

Volume of water purged ()	
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Final Depth to Water (feet)	103.86
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	10.00
Time to evacuate 2 Casing Volumes ()	
Number of casing Volumes	
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 0825. Samples collected at 0830. Water was clear. Left site at 0837.

Signature of Field Technician

Janner Holley



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-27
Field Sample ID	MW-27_01212019
Purge Date & Time	1/21/2019 7:15
Sample Date & Time	1/21/2019 11:20

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	26.23
Calculated Casing Volumes Purge Duration (min)	241.76
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
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Weather Conditions	Cloudy
External Ambient Temperature (C)	-2
Previous Well Sampled	MW-26

Well Depth (ft)	95.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	54.83

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/21/2019 11:17	52.51	1139	7.20	14.47	494	0	
1/21/2019 11:18	52.73	1141	7.18	14.30	494	0	
1/21/2019 11:19	52.94	1143	7.19	14.36	494	0	
1/21/2019 11:20	53.16	1142	7.19	14.40	495	0	

Volume of water purged (gals)	53.16
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Final Depth to Water (feet)	56.95
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Name of Certified Analytical Laboratory	
AWSL	

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Nitrate/nitrite as N	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y

Comments:

Arrived on site at 0712. Purge began at 0715. Purged well for a total of 245 minutes. Purge ended and samples collected at 1120. Water was clear. Left site at 1126.

Signature of Field Technician

Jessie Holliday

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	245.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0



White Mesa Mill

Field Data Worksheet For Groundwater

Location ID	MW-28
Field Sample ID	MW-28_01222019
Purge Date & Time	1/22/2019 7:15
Sample Date & Time	1/22/2019 11:15
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	23.21
Calculated Casing Volumes Purge Duration (min)	213.95
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
Weather Conditions	Cloudy
External Ambient Temperature (C)	-3
Previous Well Sampled	MW-12

Well Depth (ft)	110.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	74.45

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/22/2019 11:12	51.42	4043	6.40	14.10	471	1.0	
1/22/2019 11:13	51.64	4040	6.41	14.08	470	1.0	
1/22/2019 11:14	51.86	4053	6.42	14.05	469	1.0	
1/22/2019 11:15	52.08	4045	6.44	14.04	467	1.1	

Volume of water purged (gals)	52.08
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Final Depth to Water (feet)	77.71
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Name of Certified Analytical Laboratory	
AWSL	

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Heavy Metals - U and Cd only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

Comments:

Arrived on site at 0710. Purge began at 0715. Purged well for a total of 240 minutes. Purge ended and samples collected at 1115. Water was clear. Left site at 1121.
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Signature of Field Technician

Janner Holliday

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	240.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0



White Mesa Mill

Field Data Worksheet For Groundwater

Location ID	MW-30
Field Sample ID	MW-30_01162019
Purge Date & Time	1/16/2019 7:20
Sample Date & Time	1/16/2019 10:55

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
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Weather Conditions	Overcast with rain/snow
External Ambient Temperature (C)	0
Previous Well Sampled	MW-11

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	22.83
Calculated Casing Volumes Purge Duration (min)	210.46
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	110.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	75.03

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/16/2019 10:52	46.00	2180	6.46	14.00	459	0	
1/16/2019 10:53	46.22	2171	6.53	14.01	456	0	
1/16/2019 10:54	46.43	2174	6.57	13.98	453	0	
1/16/2019 10:55	46.65	2173	6.60	14.01	451	0	

Volume of water purged (gals)	46.65
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Final Depth to Water (feet)	76.89
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	215.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 0715. Purge began at 0720. Purged well for 215 minutes. Purge ended & samples collected at 1055. Water was mostly clear. Left site at 1105.

Signature of Field Technician

Janice Holliday



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-31
Field Sample ID	MW-31_01152019
Purge Date & Time	1/15/2019 7:15
Sample Date & Time	1/15/2019 13:30

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
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Weather Conditions	Snowing
External Ambient Temperature (C)	0
Previous Well Sampled	N/A

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	39.76
Calculated Casing Volumes Purge Duration (min)	366.52
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	130.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	69.10

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/15/2019 13:27	80.72	2890	6.84	13.91	441	1.0	
1/15/2019 13:28	80.94	2901	6.86	14.04	440	1.0	
1/15/2019 13:29	81.15	2912	6.88	13.98	439	1.0	
1/15/2019 13:30	81.37	2917	6.89	14.05	438	1.0	

Volume of water purged (gals)	81.37
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Final Depth to Water (feet)	70.35
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	375.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 0710. Purge began at 0715. Purged well for a total of 375 minutes. Purge ended and samples collected at 1330. Water was clear. Left site at 1341.

Signature of Field Technician

Janner Holliday



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-32
Field Sample ID	MW-32_01222019
Purge Date & Time	1/22/2019 8:45
Sample Date & Time	1/22/2019 13:55
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	33.28
Calculated Casing Volumes Purge Duration (min)	306.75
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
Weather Conditions	Cloudy and Windy
External Ambient Temperature (C)	-3
Previous Well Sampled	MW-28

Well Depth (ft)	130.60
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	79.63

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/22/2019 13:52	66.61	3792	6.21	13.70	302	68.0	
1/22/2019 13:53	66.83	3802	6.24	13.70	287	64.2	
1/22/2019 13:54	67.05	3807	6.23	13.69	282	59.0	
1/22/2019 13:55	67.27	3807	6.23	13.70	279	58.0	

Volume of water purged (gals)	67.27
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Final Depth to Water (feet)	85.75
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	310.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Sulfate	Y	WATER	1	250-mL HDPE	U	None	N

Comments:

Arrived on site at 0841. Purge began at 0845. Purged well for a total of 310 minutes. Purge ended and samples collected at 1355. Water was clear but had a bunch of little bubbles in it. Left site at 1400.

Signature of Field Technician

Jeanne Holby



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-35
Field Sample ID	MW-35_01162019
Purge Date & Time	1/16/2019 11:45
Sample Date & Time	1/16/2019 13:00
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	7.86
Calculated Casing Volumes Purge Duration (min)	72.52
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
Weather Conditions	Overcast
External Ambient Temperature (C)	3
Previous Well Sampled	MW-25

Well Depth (ft)	124.50
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	112.45

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/16/2019 12:57	15.62	4209	6.39	13.80	351	0	
1/16/2019 12:58	15.84	4209	6.41	13.65	346	0	
1/16/2019 12:59	16.05	4208	6.43	13.76	341	0	
1/16/2019 13:00	16.27	4209	6.45	13.70	337	0	

Volume of water purged (gals)	16.27
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Final Depth to Water (feet)	113.02
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	75.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Ammonia	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y

Comments:

Arrived on site at 1140. Purge began at 1145. Purged well for a total of 75 minutes. Purge ended and samples collected at 1300. Water was clear. Left site at 1305.

Signature of Field Technician

Jessie Holley



White Mesa Mill

Field Data Worksheet For Groundwater

Location ID	MW-36
Field Sample ID	MW-36_01232019
Purge Date & Time	1/23/2019 8:10
Sample Date & Time	1/23/2019 9:25

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
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Weather Conditions	Partly cloudy
External Ambient Temperature (C)	-5
Previous Well Sampled	MW-40

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	7.16
Calculated Casing Volumes Purge Duration (min)	66.08
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	121.60
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	110.62

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/23/2019 9:22	15.62	4975	6.30	13.50	521	0	
1/23/2019 9:23	15.84	4978	6.32	13.62	517	0	
1/23/2019 9:24	16.05	4980	6.34	13.64	514	0	
1/23/2019 9:25	16.27	4968	6.35	13.67	511	0	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	75.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Volume of water purged (gals)	16.27
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Final Depth to Water (feet)	111.35
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Name of Certified Analytical Laboratory	
AWSL	

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 0806. Purge began at 0810. Purged well for a total of 75 minutes. Purge ended and samples collected at 0925. Water was clear. Left site at 0942.

Signature of Field Technician

Janice Holliday



White Mesa Mill

Field Data Worksheet For Groundwater

Location ID	MW-38
Field Sample ID	MW-38_01242019
Purge Date & Time	1/23/2019 12:40
Sample Date & Time	1/24/2019 9:00
Purging Equipment	Bailer
Pump Type	Grundfos
Purging Method	2 Casings
Casing Volume (gal)	2.50
Calculated Casing Volumes Purge Duration ()	
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW
Sampler	TH/DL
Weather Conditions	Partly cloudy
External Ambient Temperature (C)	1
Previous Well Sampled	MW-39

Well Depth (ft)	74.40
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	70.57

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/23/2019 12:50	5.00	4633	5.60	12.57	531	125.0	
1/24/2019 8:59		4703	7.03	13.50			Before
1/24/2019 9:05		4710	6.95	13.55			After

Volume of water purged (gals)	5.00
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Final Depth to Water (feet)	74.35
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	0
Time to evacuate 2 Casing Volumes ()	
Number of casing Volumes	2.00
Volume, if well evacuated to dryness (gals)	5.00

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 1240. Bailing began at 1245. Bailed a total of 5 gallons. Bailed well dry. Water was murky. Bailing ended at 1257. Left site at 1300.
Arrived on site at 0855. Depth to water was 70.62. Samples bailed and collected at 0900. Left site at 0906

Signature of Field Technician

Janner Holliday



White Mesa Mill

Field Data Worksheet For Groundwater

Location ID	MW-39
Field Sample ID	MW-39_01232019
Purge Date & Time	1/23/2019 9:45
Sample Date & Time	1/23/2019 13:45
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	24.04
Calculated Casing Volumes Purge Duration (min)	221.65
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q1 GW
Sampler	TH/DL
Weather Conditions	Partly cloudy
External Ambient Temperature (C)	-3
Previous Well Sampled	MW-36

Well Depth (ft)	102.50
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	65.67

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/23/2019 13:42	51.42	4894	4.10	14.07	526	2.7	
1/23/2019 13:43	51.64	4810	4.09	13.97	528	2.6	
1/23/2019 13:44	51.86	4810	4.07	14.04	530	2.8	
1/23/2019 13:45	52.08	4805	4.05	14.03	531	2.7	

Volume of water purged (gals)	52.08
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Final Depth to Water (feet)	70.34
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Name of Certified Analytical Laboratory	AWSL
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Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	240.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 0942. Purge began at 0945. Purged well for a total of 240 minutes. Purge ended and samples collected at 1345. Water was clear. Left site at 1355.

Signature of Field Technician

Janner Holbrook



White Mesa Mill

Field Data Worksheet For Groundwater

Location ID	MW-40
Field Sample ID	MW-40_01232019
Purge Date & Time	1/23/2019 7:25
Sample Date & Time	1/23/2019 11:30

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	26.09
Calculated Casing Volumes Purge Duration (min)	240.49
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Partly cloudy
External Ambient Temperature (C)	-6
Previous Well Sampled	MW-24

Well Depth (ft)	120.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	80.04

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
1/23/2019 11:27	52.51	3975	6.18	13.79	510	4.0	
1/23/2019 11:28	52.73	3988	6.20	13.71	507	10.0	
1/23/2019 11:29	52.94	3978	6.26	13.70	505	11.0	
1/23/2019 11:30	53.16	3977	6.30	13.80	503	11.0	

Volume of water purged (gals)	53.16
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Final Depth to Water (feet)	81.05
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Name of Certified Analytical Laboratory	
AWSL	

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Arrived on site at 0720. Purge began at 0725. Purged well for a total of 245 minutes. Purge ended and samples collected at 1130. Water was clear. Left site at 1140.
--

Signature of Field Technician

Janeve Hollister

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	245.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-65
Field Sample ID	MW-65_01232019
Purge Date & Time	
Sample Date & Time	1/23/2019 9:25

Sampling Program	
Sampling Event	2019 Q1 GW

Sampler	TH/DL
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Purging Equipment	
Pump Type	
Purging Method	
Casing Volume ()	
Calculated Casing Volumes Purge Duration ()	
pH Buffer 7.0	
pH Buffer 4.0	
Specific Conductance ()	

Weather Conditions	
External Ambient Temperature ()	
Previous Well Sampled	

Well Depth (ft)	
Well Casing Diameter ()	
Depth to Water Before Purging (ft)	

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
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Volume of water purged ()	
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Final Depth to Water (feet)	
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) ()	
Time to evacuate 2 Casing Volumes ()	
Number of casing Volumes	
Volume, if well evacuated to dryness ()	

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y
Heavy Metals - Full Suite	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

Comments:

Duplicate of MW-36

Signature of Field Technician

Jannve Holliday

Tab C

Field Data Worksheets Accelerated Monitoring

Tab C1

Field Data Worksheets Accelerated Monitoring

February 2019



White Mesa Mill

Field Data Worksheet For Groundwater

Location ID	MW-11
Field Sample ID	MW-11_02132019
Purge Date & Time	2/13/2019 6:55
Sample Date & Time	2/13/2019 11:25

Sampling Program	
Sampling Event	February 2019

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	29.09
Calculated Casing Volumes Purge Duration (min)	268.12
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Cloudy
External Ambient Temperature (C)	-2
Previous Well Sampled	MW-30

Well Depth (ft)	130.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	85.45

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
2/13/2019 11:22	57.93	3053	6.65	13.99	331	0	
2/13/2019 11:23	58.15	3060	6.68	14.00	323	0	
2/13/2019 11:24	58.37	3055	6.74	14.00	317	0	
2/13/2019 11:25	58.59	3054	6.80	14.01	310	0	

Volume of water purged (gals)	58.59
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Final Depth to Water (feet)	85.64
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	270.00
Number of casing Volumes	2
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Heavy Metals - Mn only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

Comments:

Arrived on site at 0650 started purge at 0655 purged well for a total of 270 minutes. Purge ended and samples collected at 1125. Water was clear. Left site at 1129.
--

Signature of Field Technician

Janner Holliday



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-25
Field Sample ID	MW-25_02122019
Purge Date & Time	2/12/2019 7:45
Sample Date & Time	2/12/2019 12:15
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	29.06
Calculated Casing Volumes Purge Duration (min)	267.88
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	February 2019
Sampler	TH/DL
Weather Conditions	Cloudy
External Ambient Temperature (C)	-4
Previous Well Sampled	MW-31

Well Depth (ft)	115.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	70.49

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
2/12/2019 12:12	57.93	3228	6.20	14.07	260	10.00	
2/12/2019 12:13	58.15	3220	6.25	14.10	260	12.00	
2/12/2019 12:14	58.37	3227	6.30	14.07	259	13.00	
2/12/2019 12:15	58.59	3215	6.35	14.09	258	13.00	

Volume of water purged (gals)	58.59
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Final Depth to Water (feet)	81.70
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	270.00
Number of casing Volumes	2
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Heavy Metals - Cd only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

Comments:

Arrived on site at 0740 started purge At 0745 purged well for a total of 270 minutes. purge ended and samples collected at 1215. Water was clear and had a bunch of little air bubbles in it. Left site at 1219.

Signature of Field Technician

Jannice Hollister



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-26
Field Sample ID	MW-26_02132019
Purge Date & Time	2/13/2019 12:10
Sample Date & Time	2/13/2019 13:00

Sampling Program	
Sampling Event	February 2019

Sampler	TH/DL
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Weather Conditions	Partly cloudy
External Ambient Temperature (C)	4
Previous Well Sampled	MW-11

Purging Equipment	Pump
Pump Type	Continuous
Purging Method	2 Casings
Casing Volume (gal)	31.24
Calculated Casing Volumes Purge Duration ()	
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	121.33
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	73.48

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
2/13/2019 12:59		3545	6.25	14.58	295	3.0	

Volume of water purged ()	
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Final Depth to Water (feet)	102.05
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	10.00
Time to evacuate 2 Casing Volumes ()	
Number of casing Volumes	
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Nitrate/nitrite as N	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
VOCs - ChCl3 and MeCl2	Y	WATER	3	4oz glass jar	U	HCl (pH<2), 4 Deg C	Y

Comments:

Arrived on site at 1256. Samples collected at 1300. Water was mostly clear. Left site at 1306.

Signature of Field Technician



White Mesa Mill

Field Data Worksheet For Groundwater

Location ID	MW-30
Field Sample ID	MW-30_02132019
Purge Date & Time	2/13/2019 6:45
Sample Date & Time	2/13/2019 10:20
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	22.87
Calculated Casing Volumes Purge Duration (min)	210.82
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	February 2019
Sampler	TH/DL
Weather Conditions	Cloudy
External Ambient Temperature (C)	-1
Previous Well Sampled	MW-25

Well Depth (ft)	110.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	74.97

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
2/13/2019 10:17	46.00	2178	6.40	14.18	353	0	
2/13/2019 10:18	46.22	2181	6.43	14.20	354	0	
2/13/2019 10:19	46.43	2183	6.45	14.17	354	0	
2/13/2019 10:20	46.65	2177	6.46	14.15	355	0	

Volume of water purged (gals)	46.65
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Final Depth to Water (feet)	77.60
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	215.00
Number of casing Volumes	2
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Nitrate/nitrite as N	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
Heavy Metals - U only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

Comments:

Arrived on site at 0640 started purge at 0645 purged well for a total of 215 minutes. Purge ended and samples collected at 1020. Water was clear. Left site at 1031.

Signature of Field Technician

Janner Hollis



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-31
Field Sample ID	MW-31_02122019
Purge Date & Time	2/12/2019 7:35
Sample Date & Time	2/12/2019 13:00
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	34.70
Calculated Casing Volumes Purge Duration (min)	319.81
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	February 2019
Sampler	TH/DL
Weather Conditions	Cloudy
External Ambient Temperature (C)	-4
Previous Well Sampled	N/A

Well Depth (ft)	130.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	76.86

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
2/12/2019 12:57	69.87	2920	6.10	14.28	335	0	
2/12/2019 12:58	70.09	2926	6.12	14.29	353	0	
2/12/2019 12:59	70.30	2930	6.17	14.30	363	0	
2/12/2019 13:00	70.52	2932	6.24	14.37	370	0	

Volume of water purged (gals)	70.52
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Final Depth to Water (feet)	72.62
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Name of Certified Analytical Laboratory	AWSL
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Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	325.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Nitrate/nitrite as N	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
Sulfate	Y	WATER	1	250-mL HDPE	U	None	N
Heavy Metals - U and Se only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y

Comments:

Arrived on site at 0730 purge started at 0735. Purged well for a total of 325 minutes. Purge ended and samples collected at 1300. Water was clear. Left site at 1310.

Signature of Field Technician

Janner Hallock



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-65
Field Sample ID	MW-65_02132019
Purge Date & Time	
Sample Date & Time	2/13/2019 10:20

Sampling Program	
Sampling Event	February 2019

Sampler	TH/DL
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Purging Equipment	
Pump Type	
Purging Method	
Casing Volume ()	
Calculated Casing Volumes Purge Duration ()	
pH Buffer 7.0	
pH Buffer 4.0	
Specific Conductance ()	

Weather Conditions	
External Ambient Temperature ()	
Previous Well Sampled	

Well Depth (ft)	
Well Casing Diameter ()	
Depth to Water Before Purging (ft)	

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
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Volume of water purged ()	
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Final Depth to Water (feet)	
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) ()	
Time to evacuate 2 Casing Volumes ()	
Number of casing Volumes	
Volume, if well evacuated to dryness ()	

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Heavy Metals - U only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
Nitrate/nitrite as N	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y

Comments:

Duplicate of MW-30

Signature of Field Technician

Juanita Holliday

Tab C2

Field Data Worksheets Accelerated Monitoring

March 2019



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-11
Field Sample ID	MW-11_03062019
Purge Date & Time	3/6/2019 6:55
Sample Date & Time	3/6/2019 11:25
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	29.12
Calculated Casing Volumes Purge Duration (min)	268.42
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	March 2019
Sampler	TH/DL
Weather Conditions	Cloudy
External Ambient Temperature (C)	0
Previous Well Sampled	MW-30

Well Depth (ft)	130.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	85.40

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
3/6/2019 11:22	57.93	2917	7.45	14.02	266	0	
3/6/2019 11:23	58.15	2927	7.46	14.01	262	0	
3/6/2019 11:24	58.37	2925	7.48	14.00	259	0	
3/6/2019 11:25	58.59	2930	7.48	14.01	256	0	

Volume of water purged (gals)	58.59
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Final Depth to Water (feet)	85.60
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	270.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Heavy Metals - Mn only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

Comments:

Arrived on site at 0651. Purge began at 0655. Purged well for a total of 270 minutes. Purge ended and samples collected at 1125. Water water clear. Left site at 1130.
--

Signature of Field Technician

Janner Holby



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-25
Field Sample ID	MW-25_03052019
Purge Date & Time	3/5/2019 7:25
Sample Date & Time	3/5/2019 11:00

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	23.16
Calculated Casing Volumes Purge Duration (min)	213.54
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	March 2019

Sampler	TH/DL
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Weather Conditions	Cloudy
External Ambient Temperature (C)	0
Previous Well Sampled	MW-31

Well Depth (ft)	115.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	79.52

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
3/5/2019 10:57	46.00	3170	6.85	14.43	476	10.2	
3/5/2019 10:58	46.22	3163	6.79	14.42	476	14.0	
3/5/2019 10:59	46.43	3170	6.77	14.43	476	15.0	
3/5/2019 11:00	46.65	3169	6.76	14.44	475	15.2	

Volume of water purged (gals)	46.65
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Final Depth to Water (feet)	81.52
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	215.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Heavy Metals - Cd only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

Comments:

Arrived on site at 0722. Purge began at 0725. Purged well for a total of 215 minutes. Purge ended and sample collected at 1100. Water was mostly clear with a bunch of tiny little air bubbles surfacing. Left site at 1105.

Signature of Field Technician

Janner Holliday



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-26
Field Sample ID	MW-26_03062019
Purge Date & Time	3/6/2019 7:29
Sample Date & Time	3/6/2019 7:30
Purging Equipment	Pump
Pump Type	Continuous
Purging Method	2 Casings
Casing Volume ()	
Calculated Casing Volumes Purge Duration ()	
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	March 2019
Sampler	TH/DL
Weather Conditions	Raining
External Ambient Temperature (C)	0
Previous Well Sampled	MW-11

Well Depth (ft)	121.33
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	74.59

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
3/6/2019 7:29		3481	6.77	14.31	340	0	

Volume of water purged ()	
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Final Depth to Water (feet)	92.43
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	10.00
Time to evacuate 2 Casing Volumes ()	
Number of casing Volumes	
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Nitrate/nitrite as N	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
VOCs - ChCl3 and MeCl2	Y	WATER	3	4oz glass jar	U	HCl (pH<2), 4 Deg C	Y

Comments:

Arrived on site at 0725. Samples collected at 0730. Water was clear. Left site at 0736.

Signature of Field Technician

Janner Holliday



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-30
Field Sample ID	MW-30_03062019
Purge Date & Time	3/6/2019 6:45
Sample Date & Time	3/6/2019 10:20

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	22.90
Calculated Casing Volumes Purge Duration (min)	211.12
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	March 2019

Sampler	TH/DL
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Weather Conditions	Cloudy
External Ambient Temperature (C)	-1
Previous Well Sampled	MW-25

Well Depth (ft)	110.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	74.92

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
3/6/2019 10:17	46.00	2147	7.00	13.80	305	0	
3/6/2019 10:18	46.22	2135	6.97	13.90	313	0	
3/6/2019 10:19	46.43	2142	6.97	14.00	318	0	
3/6/2019 10:20	46.65	2144	6.97	14.01	322	0	

Volume of water purged (gals)	46.65
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Final Depth to Water (feet)	77.13
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	215.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Nitrate/nitrite as N	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
Heavy Metals - U only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

Comments:

Arrived on site at 0642. Purge began at 0645. Purged well for a total of 215 minutes. Purge ended and samples collected at 1020. Water water clear. Left site at 1030.

Signature of Field Technician

Jannor Hollis



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-31
Field Sample ID	MW-31_03052019
Purge Date & Time	3/5/2019 7:10
Sample Date & Time	3/5/2019 13:20
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	39.95
Calculated Casing Volumes Purge Duration (min)	368.26
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	March 2019
Sampler	TH/DL
Weather Conditions	Cloudy
External Ambient Temperature (C)	-1
Previous Well Sampled	N/A

Well Depth (ft)	130.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	68.81

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
3/5/2019 13:17	79.63	2926	7.24	14.67	425	0	
3/5/2019 13:18	79.85	2920	7.20	14.75	427	0	
3/5/2019 13:19	80.06	2917	7.18	14.70	426	0	
3/5/2019 13:20	80.27	2912	7.15	14.65	423	0	

Volume of water purged (gals)	80.29
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Final Depth to Water (feet)	72.51
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Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	370.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ()	0

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Nitrate/nitrite as N	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
Sulfate	Y	WATER	1	250-mL HDPE	U	None	N
Heavy Metals - U and Se only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y

Comments:

Arrived on site at 0705. Purge began at 0710. Purged well for a total of 370 minutes. Purge ended and samples collected at 1320. Water was clear. Left site at 1335.

Signature of Field Technician

Junner Holladay



White Mesa Mill
Field Data Worksheet For Groundwater

Location ID	MW-65
Field Sample ID	MW-65_03052019
Purge Date & Time	
Sample Date & Time	3/5/2019 13:20

Sampling Program	
Sampling Event	March 2019

Sampler	TH/DL
---------	-------

Purging Equipment	
Pump Type	
Purging Method	
Casing Volume ()	
Calculated Casing Volumes Purge Duration ()	
pH Buffer 7.0	
pH Buffer 4.0	
Specific Conductance ()	

Weather Conditions	
External Ambient Temperature ()	
Previous Well Sampled	

Well Depth (ft)	
Well Casing Diameter ()	
Depth to Water Before Purging (ft)	

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Before/After
-----------	----------------	--------------	----	--------------	-------	-----------	--------------

Volume of water purged ()	
---------------------------	--

Final Depth to Water (feet)	
-----------------------------	--

Name of Certified Analytical Laboratory	
AWSL	

Pumping Rate Calculations

Flow Rate (Q = S/60) ()	
Time to evacuate 2 Casing Volumes ()	
Number of casing Volumes	
Volume, if well evacuated to dryness ()	

Analytical Samples Information

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
Chloride	Y	WATER	1	500-mL Poly	U	None	N
Heavy Metals - U and Se only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
Nitrate/nitrite as N	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y
Sulfate	Y	WATER	1	250-mL HDPE	U	None	N
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y

Comments:

--

Signature of Field Technician

James Holley

Tab D

Quarterly Depth to Water

NAME: Deen Lyman, Tanner Holliday

Date: 3/25/2019-3/26/2019

Date	Time	Well	Depth to Water (ft.)	Date	Time	Well	Depth to Water (ft.)	Date	Time	Well	Depth to Water (ft.)
3/26/2019	1039	MW-01	64.55	3/25/2019	920	MW-04	86.23	3/26/2019	1029	PIEZ-01	66.62
3/26/2019	1218	MW-02	109.81	3/25/2019	930	TW4-01	86.76	3/26/2019	1033	PIEZ-02	43.41
3/26/2019	956	MW-03A	84.20	3/25/2019	909	TW4-02	102.02	3/26/2019	912	PIEZ-03A	54.72
3/26/2019	1248	MW-05	108.77	3/25/2019	1436	TW4-03	62.02	3/25/2019	1402	PIEZ-04	64.07
3/26/2019	1015	MW-11	85.54	3/25/2019	937	TW4-04	99.39	3/25/2019	1408	PIEZ-05	63.51
3/26/2019	1225	MW-12	108.03	3/25/2019	1445	TW4-05	69.55	3/26/2019	845	TWN-01	66.60
3/26/2019	1026	MW-14	102.46	3/25/2019	1425	TW4-06	76.15	3/25/2019	808	TWN-02	73.17
3/26/2019	1031	MW-15	105.84	3/25/2019	1428	TW4-07	82.26	3/26/2019	901	TWN-03	42.51
3/26/2019	1321	MW-17	71.94	3/25/2019	1431	TW4-08	85.10	3/26/2019	907	TWN-04	59.64
3/26/2019	1036	MW-18	73.15	3/25/2019	1442	TW4-09	67.43	3/26/2019	1045	TWN-06	79.78
3/26/2019	1031	MW-19	64.50	3/25/2019	1449	TW4-10	66.91	3/26/2019	1041	TWN-07	82.59
3/26/2019	856	MW-20	84.85	3/25/2019	904	TW4-11	90.78	3/26/2019	1026	TWN-14	60.21
3/26/2019	838	MW-22	66.50	3/25/2019	1346	TW4-12	53.46	3/26/2019	1023	TWN-16	47.64
3/26/2019	1231	MW-23	114.08	3/25/2019	1343	TW4-13	55.16	3/26/2019	921	TWN-18	61.73
3/26/2019	1208	MW-24	111.56	3/25/2019	1333	TW4-14	78.06	3/26/2019	1018	TWN-19	53.94
3/26/2019	1011	MW-25	79.58	3/25/2019	1002	TW4-16	80.16	3/26/2019	938	DR-05	83.14
3/25/2019	856	MW-26	79.91	3/26/2019	849	TW4-18	70.42	3/26/2019	934	DR-06	94.05
3/26/2019	854	MW-27	56.48	3/25/2019	1014	TW4-19	83.53	3/26/2019	1237	DR-07	92.09
3/26/2019	1159	MW-28	74.82	3/25/2019	845	TW4-20	75.57	3/26/2019	948	DR-08	51.33
3/26/2019	934	MW-29	107.99	3/25/2019	746	TW4-21	78.43	3/26/2019	945	DR-09	86.60
3/26/2019	941	MW-30	75.08	3/25/2019	827	TW4-22	78.91	3/26/2019	942	DR-10	78.45
3/26/2019	954	MW-31	68.84	3/25/2019	1420	TW4-23	73.14	3/26/2019	1004	DR-11	97.97
3/26/2019	1002	MW-32	80.16	3/25/2019	821	TW4-24	68.31	3/26/2019	1001	DR-12	91.59
3/26/2019	1045	MW-33	DRY	3/25/2019	755	TW4-25	72.45	3/26/2019	959	DR-13	69.71
3/26/2019	1052	MW-34	108.58	3/25/2019	1416	TW4-26	70.20	3/26/2019	901	DR-14	76.25
3/26/2019	1100	MW-35	112.43	3/25/2019	1254	TW4-27	78.98	3/26/2019	852	DR-15	92.86
3/26/2019	1047	MW-36	110.58	3/25/2019	1351	TW4-28	46.35	3/26/2019	906	DR-17	64.72
3/26/2019	1039	MW-37	106.38	3/25/2019	1330	TW4-29	78.05	3/26/2019	909	DR-19	63.10
3/26/2019	843	MW-38	70.50	3/25/2019	1301	TW4-30	75.12	3/26/2019	921	DR-20	55.40
3/26/2019	847	MW-39	65.53	3/25/2019	1258	TW4-31	77.05	3/26/2019	928	DR-21	100.82
3/26/2019	1235	MW-40	80.28	3/25/2019	1354	TW4-32	54.60	3/26/2019	912	DR-22	DRY
MW-26 = TW4-15				3/25/2019	1250	TW4-33	75.59	3/26/2019	925	DR-23	70.45
MW-32 = TW4-17				3/25/2019	1326	TW4-34	74.51	3/26/2019	916	DR-24	44.50
				3/25/2019	1321	TW4-35	74.75				
				3/25/2019	1339	TW4-36	57.16				
				3/25/2019	835	TW4-37	73.61				
				3/25/2019	1439	TW4-38	57.48				
				3/25/2019	850	TW4-39	65.44				
				3/25/2019	1413	TW4-40	68.06				
				3/25/2019	925	TW4-41	93.08				

Comments:

Tab E

Laboratory Analytical Reports – Quarterly Sampling



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-008
Client Sample ID: MW-05_01172019
Collection Date: 1/17/2019 1045h
Received Date: 1/21/2019 1015h

Analytical Results

DISSOLVED METALS

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Uranium	mg/L	1/21/2019 1156h	1/31/2019 1822h	E200.8	0.000300	0.000557	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-001
Client Sample ID: MW-11_01152019
Collection Date: 1/15/2019 1200h
Received Date: 1/21/2019 1015h

Analytical Results

DISSOLVED METALS

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 Laboratory Director

 Jose Rocha
 QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/21/2019 1156h	2/1/2019 1119h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	1/21/2019 1156h	1/30/2019 1624h	E200.7	20.0	97.9	
Chromium	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.0100	< 0.0100	
Copper	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.0100	< 0.0100	
Iron	mg/L	1/21/2019 1156h	1/31/2019 1927h	E200.8	0.0300	< 0.0300	
Lead	mg/L	1/21/2019 1156h	1/31/2019 1927h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/21/2019 1156h	1/30/2019 1657h	E200.7	1.00	30.1	
Manganese	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.0100	0.181	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 801h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	1/21/2019 1156h	1/30/2019 1657h	E200.7	1.00	7.34	
Selenium	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.00500	< 0.00500	
Silver	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/21/2019 1156h	1/30/2019 1624h	E200.7	20.0	658	
Thallium	mg/L	1/21/2019 1156h	1/31/2019 1927h	E200.8	0.000500	< 0.000500	
Tin	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/21/2019 1156h	1/31/2019 1803h	E200.8	0.000300	0.000864	
Vanadium	mg/L	1/21/2019 1156h	1/30/2019 1657h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/21/2019 1156h	1/31/2019 1710h	E200.8	0.0100	< 0.0100	

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-001A
Client Sample ID: MW-11_01152019
Collection Date: 1/15/2019 1200h
Received Date: 1/21/2019 1015h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/21/2019 1256h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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Laboratory Director

Jose Rocha

QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	50.8	50.00	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	54.2	50.00	108	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.4	50.00	98.8	72-135	
Surr: Toluene-d8		2037-26-5	52.2	50.00	104	80-124	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-11_01152019
Sample ID: 469482001
Matrix: Ground Water
Collect Date: 15-JAN-19 12:00
Receive Date: 22-JAN-19
Collector: Client

Project: DNMI00100
Client ID: DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha	U	1.00	+/-0.247	0.968	1.00	pCi/L			JXC9	02/06/19	1426	1843049	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	EPA 903.0	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			81.4	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-001
Client Sample ID: MW-12_01212019
Collection Date: 1/21/2019 1445h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Uranium	mg/L	1/25/2019 1122h	2/7/2019 1911h	E200.8	0.000300	0.0236	

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Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-002
Client Sample ID: MW-14_01172019
Collection Date: 1/17/2019 1000h
Received Date: 1/21/2019 1015h

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/21/2019 1156h	2/1/2019 1122h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.000500	0.00136	
Calcium	mg/L	1/21/2019 1156h	1/30/2019 1633h	E200.7	20.0	584	
Chromium	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.0100	< 0.0100	
Copper	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.0100	< 0.0100	
Iron	mg/L	1/21/2019 1156h	1/31/2019 1930h	E200.8	0.0300	< 0.0300	
Lead	mg/L	1/21/2019 1156h	1/31/2019 1930h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/21/2019 1156h	1/30/2019 1633h	E200.7	20.0	175	
Manganese	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.0100	1.76	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 807h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	1/21/2019 1156h	1/30/2019 1713h	E200.7	1.00	12.8	
Selenium	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.00500	< 0.00500	
Silver	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/21/2019 1156h	1/30/2019 1633h	E200.7	20.0	401	
Thallium	mg/L	1/21/2019 1156h	1/31/2019 1930h	E200.8	0.000500	< 0.000500	
Tin	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/21/2019 1156h	1/31/2019 1806h	E200.8	0.000300	0.0533	
Vanadium	mg/L	1/21/2019 1156h	1/30/2019 1713h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/21/2019 1156h	1/31/2019 1735h	E200.8	0.0100	0.0128	

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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-002
Client Sample ID: MW-14_01172019
Collection Date: 1/17/2019 1000h
Received Date: 1/21/2019 1015h

Contact: Garrin Palmer

Analytical Results

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QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	1/22/2019 1035h	1/22/2019 1443h	E350.1	0.0500	0.0895	
Bicarbonate (as CaCO ₃)	mg/L		1/22/2019 800h	SM2320B	1.00	414	
Carbonate (as CaCO ₃)	mg/L		1/22/2019 800h	SM2320B	1.00	< 1.00	
Chloride	mg/L		1/23/2019 1816h	E300.0	1.00	18.6	
Fluoride	mg/L		1/23/2019 1957h	E300.0	0.100	0.130	
Ion Balance	%		1/30/2019 1753h	Calc.	-100	8.37	
Nitrate/Nitrite (as N)	mg/L		1/21/2019 1220h	E353.2	0.100	< 0.100	
Sulfate	mg/L		1/23/2019 1635h	E300.0	150	2,070	
Total Anions, Measured	meq/L		1/30/2019 1753h	Calc.		51.8	
Total Cations, Measured	meq/L		1/30/2019 1753h	Calc.		61.3	
Total Dissolved Solids	mg/L		1/23/2019 1130h	SM2540C	20.0	3,600	
Total Dissolved Solids Ratio, Measured/Calculated			1/30/2019 1753h	Calc.		1.03	
Total Dissolved Solids, Calculated	mg/L		1/30/2019 1753h	Calc.		3,510	

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-002A
Client Sample ID: MW-14_01172019
Collection Date: 1/17/2019 1000h
Received Date: 1/21/2019 1015h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/21/2019 1315h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.0	50.00	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	53.0	50.00	106	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.3	50.00	98.6	72-135	
Surr: Toluene-d8		2037-26-5	52.3	50.00	105	80-124	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-14_01172019 Project: DNMI00100
Sample ID: 469482002 Client ID: DNMI001
Matrix: Ground Water
Collect Date: 17-JAN-19 10:00
Receive Date: 22-JAN-19
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha	U	1.00	+/-0.268	0.879	1.00	pCi/L			JXC9	02/06/19	1442	1843049	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	EPA 903.0	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			87.4	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-002
Client Sample ID: MW-24_01232019
Collection Date: 1/23/2019 800h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Beryllium	mg/L	1/25/2019 1122h	2/7/2019 120h	E200.8	0.000500	0.00337	
Cadmium	mg/L	1/25/2019 1122h	2/6/2019 1831h	E200.8	0.000500	0.00834	
Thallium	mg/L	1/25/2019 1122h	2/8/2019 1119h	E200.8	0.000500	0.00272	

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web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-003
Client Sample ID: MW-25_01162019
Collection Date: 1/16/2019 1110h
Received Date: 1/21/2019 1015h

Contact: Garrin Palmer

Analytical Results

DISSOLVED METALS

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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/21/2019 1156h	2/1/2019 1125h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.000500	0.00132	
Calcium	mg/L	1/21/2019 1156h	1/30/2019 1636h	E200.7	20.0	365	
Chromium	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.0100	< 0.0100	
Copper	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.0100	< 0.0100	
Iron	mg/L	1/21/2019 1156h	1/31/2019 1933h	E200.8	0.0300	< 0.0300	
Lead	mg/L	1/21/2019 1156h	1/31/2019 1933h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/21/2019 1156h	1/30/2019 1636h	E200.7	20.0	126	
Manganese	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.0100	1.33	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 809h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.0100	0.0150	
Nickel	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	1/21/2019 1156h	1/30/2019 1717h	E200.7	1.00	10.2	
Selenium	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.00500	< 0.00500	
Silver	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/21/2019 1156h	1/30/2019 1636h	E200.7	20.0	317	
Thallium	mg/L	1/21/2019 1156h	1/31/2019 1933h	E200.8	0.000500	0.000842	
Tin	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/21/2019 1156h	1/31/2019 1810h	E200.8	0.000300	0.00576	
Vanadium	mg/L	1/21/2019 1156h	1/30/2019 1717h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/21/2019 1156h	1/31/2019 1738h	E200.8	0.0100	< 0.0100	



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-003
Client Sample ID: MW-25_01162019
Collection Date: 1/16/2019 1110h
Received Date: 1/21/2019 1015h

Analytical Results

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	1/31/2019 1005h	1/31/2019 1424h	E350.1	0.0500	0.522	1
Bicarbonate (as CaCO ₃)	mg/L		1/22/2019 800h	SM2320B	1.00	330	
Carbonate (as CaCO ₃)	mg/L		1/22/2019 800h	SM2320B	1.00	< 1.00	
Chloride	mg/L		1/23/2019 1833h	E300.0	1.00	30.7	
Fluoride	mg/L		1/23/2019 2014h	E300.0	0.100	0.302	
Ion Balance	%		1/30/2019 1753h	Calc.	-100	3.97	
Nitrate/Nitrite (as N)	mg/L		1/21/2019 1222h	E353.2	0.100	< 0.100	
Sulfate	mg/L		1/23/2019 1652h	E300.0	150	1,530	
Total Anions, Measured	meq/L		1/30/2019 1753h	Calc.		39.4	
Total Cations, Measured	meq/L		1/30/2019 1753h	Calc.		42.6	
Total Dissolved Solids	mg/L		1/23/2019 1130h	SM2540C	20.0	2,510	
Total Dissolved Solids Ratio, Measured/Calculated			1/30/2019 1753h	Calc.		0.974	
Total Dissolved Solids, Calculated	mg/L		1/30/2019 1753h	Calc.		2,580	

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-003A
Client Sample ID: MW-25_01162019
Collection Date: 1/16/2019 1110h
Received Date: 1/21/2019 1015h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/21/2019 1335h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	50.6	50.00	101	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	54.3	50.00	109	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.1	50.00	98.1	72-135	
Surr: Toluene-d8		2037-26-5	51.8	50.00	104	80-124	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-25_01162019 Project: DNMI00100
Sample ID: 469482003 Client ID: DNMI001
Matrix: Ground Water
Collect Date: 16-JAN-19 11:10
Receive Date: 22-JAN-19
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha	U	1.00	+/-0.274	0.936	1.00	pCi/L			JXC9	02/06/19	1437	1843049	1

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
	EPA 903.0		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			86	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-004
Client Sample ID: MW-26_01172019
Collection Date: 1/17/2019 830h
Received Date: 1/21/2019 1015h

Analytical Results

DISSOLVED METALS

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 web: www.awal-labs.com

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/21/2019 1156h	2/1/2019 1128h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	1/21/2019 1156h	1/30/2019 1639h	E200.7	20.0	562	
Chromium	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.0100	< 0.0100	
Copper	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.0100	< 0.0100	
Iron	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.100	0.541	
Lead	mg/L	1/21/2019 1156h	1/31/2019 1936h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/21/2019 1156h	1/30/2019 1639h	E200.7	20.0	188	
Manganese	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.0100	0.691	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 815h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	1/21/2019 1156h	1/30/2019 1720h	E200.7	1.00	11.9	
Selenium	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.00500	< 0.00500	
Silver	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/21/2019 1156h	1/30/2019 1639h	E200.7	20.0	211	
Thallium	mg/L	1/21/2019 1156h	1/31/2019 1936h	E200.8	0.000500	< 0.000500	
Tin	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/21/2019 1156h	1/31/2019 1813h	E200.8	0.000300	0.0372	
Vanadium	mg/L	1/21/2019 1156h	1/30/2019 1720h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/21/2019 1156h	1/31/2019 1741h	E200.8	0.0100	< 0.0100	

Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-004
Client Sample ID: MW-26_01172019
Collection Date: 1/17/2019 830h
Received Date: 1/21/2019 1015h

Analytical Results

	Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
3440 South 700 West	Ammonia (as N)	mg/L	1/31/2019 1005h	1/31/2019 1431h	E350.1	0.0500	0.938	
Salt Lake City, UT 84119	Bicarbonate (as CaCO3)	mg/L		1/22/2019 800h	SM2320B	1.00	332	
	Carbonate (as CaCO3)	mg/L		1/22/2019 800h	SM2320B	1.00	< 1.00	
Phone: (801) 263-8686	Chloride	mg/L		1/23/2019 1850h	E300.0	1.00	70.7	
Toll Free: (888) 263-8686	Fluoride	mg/L		1/23/2019 2031h	E300.0	0.100	0.216	
Fax: (801) 263-8687	Ion Balance	%		1/30/2019 1753h	Calc.	-100	8.63	
e-mail: awal@awal-labs.com	Nitrate/Nitrite (as N)	mg/L		1/21/2019 1208h	E353.2	0.100	2.21	
	Sulfate	mg/L		1/23/2019 1709h	E300.0	150	1,720	
web: www.awal-labs.com	Total Anions, Measured	meq/L		1/30/2019 1753h	Calc.		44.6	
	Total Cations, Measured	meq/L		1/30/2019 1753h	Calc.		53.0	
	Total Dissolved Solids	mg/L		1/23/2019 1130h	SM2540C	20.0	3,080	
Kyle F. Gross Laboratory Director	Total Dissolved Solids Ratio, Measured/Calculated			1/30/2019 1753h	Calc.		1.04	
Jose Rocha QA Officer	Total Dissolved Solids, Calculated	mg/L		1/30/2019 1753h	Calc.		2,970	



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-004A
Client Sample ID: MW-26_01172019
Collection Date: 1/17/2019 830h
Received Date: 1/21/2019 1015h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/21/2019 1520h

Units: µg/L **Dilution Factor:** 100 **Method:** SW8260C

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Salt Lake City, UT 84119

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Chloroform	67-66-3	100	1,200	~

Phone: (801) 263-8686

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	5,120	5,000	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	5,320	5,000	106	80-152	
Surr: Dibromofluoromethane		1868-53-7	5,010	5,000	100	72-135	
Surr: Toluene-d8		2037-26-5	5,290	5,000	106	80-124	

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

~ - The reporting limits were raised due to high analyte concentrations.

web: www.awal-labs.com

Analyzed: 1/21/2019 1355h

Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Kyle F. Gross
Laboratory Director

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	3.24	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Jose Rocha
QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	50.6	50.00	101	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	53.6	50.00	107	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.1	50.00	98.2	72-135	
Surr: Toluene-d8		2037-26-5	52.2	50.00	104	80-124	

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-26_01172019
Sample ID: 469482004
Matrix: Ground Water
Collect Date: 17-JAN-19 08:30
Receive Date: 22-JAN-19
Collector: Client

Project: DNMI00100
Client ID: DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha		2.58	+/-0.550	1.09	1.00	pCi/L			JXC9	02/06/19	1437 1843049	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	EPA 903.0	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			89.5	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-003
Client Sample ID: MW-27_01212019
Collection Date: 1/21/2019 1120h
Received Date: 1/25/2019 940h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/5/2019 2251h	E300.0	1.00	31.0	
Nitrate/Nitrite (as N)	mg/L		1/29/2019 1230h	E353.2	0.100	6.40	1

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-004
Client Sample ID: MW-28_01222019
Collection Date: 1/22/2019 1115h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	1/25/2019 1122h	2/7/2019 123h	E200.8	0.000500	0.00476	
Uranium	mg/L	1/25/2019 1122h	2/7/2019 1914h	E200.8	0.000300	0.00712	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-004
Client Sample ID: MW-28_01222019
Collection Date: 1/22/2019 1115h
Received Date: 1/25/2019 940h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/5/2019 2308h	E300.0	2.00	127	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-005
Client Sample ID: MW-30_01162019
Collection Date: 1/16/2019 1055h
Received Date: 1/21/2019 1015h

Analytical Results

DISSOLVED METALS

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 QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/21/2019 1156h	2/1/2019 1131h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	1/21/2019 1156h	1/30/2019 1642h	E200.7	20.0	301	
Chromium	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.0100	< 0.0100	
Copper	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.0100	< 0.0100	
Iron	mg/L	1/21/2019 1156h	1/31/2019 1940h	E200.8	0.0300	< 0.0300	
Lead	mg/L	1/21/2019 1156h	1/31/2019 1940h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/21/2019 1156h	1/30/2019 1642h	E200.7	20.0	80.6	
Manganese	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.0100	0.0101	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 817h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	1/21/2019 1156h	1/30/2019 1723h	E200.7	1.00	7.00	
Selenium	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.00500	0.0486	
Silver	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/21/2019 1156h	1/30/2019 1642h	E200.7	20.0	112	
Thallium	mg/L	1/21/2019 1156h	1/31/2019 1940h	E200.8	0.000500	< 0.000500	
Tin	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/21/2019 1156h	2/1/2019 1131h	E200.8	0.000500	0.00907	
Vanadium	mg/L	1/21/2019 1156h	1/30/2019 1723h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/21/2019 1156h	1/31/2019 1744h	E200.8	0.0100	< 0.0100	



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-005
Client Sample ID: MW-30_01162019
Collection Date: 1/16/2019 1055h
Received Date: 1/21/2019 1015h

Analytical Results

	Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
3440 South 700 West	Ammonia (as N)	mg/L	1/31/2019 1005h	1/31/2019 1431h	E350.1	0.0500	< 0.0500	
Salt Lake City, UT 84119	Bicarbonate (as CaCO3)	mg/L		1/22/2019 800h	SM2320B	1.00	161	
Phone: (801) 263-8686	Carbonate (as CaCO3)	mg/L		1/22/2019 800h	SM2320B	1.00	< 1.00	
Toll Free: (888) 263-8686	Chloride	mg/L		1/23/2019 1437h	E300.0	10.0	157	
Fax: (801) 263-8687	Fluoride	mg/L		1/23/2019 2048h	E300.0	0.100	0.345	
e-mail: awal@awal-labs.com	Ion Balance	%		1/30/2019 1753h	Calc.	-100	8.36	
web: www.awal-labs.com	Nitrate/Nitrite (as N)	mg/L		1/21/2019 1209h	E353.2	0.100	17.9	
	Sulfate	mg/L		1/23/2019 1437h	E300.0	75.0	704	
	Total Anions, Measured	meq/L		1/30/2019 1753h	Calc.		22.6	
	Total Cations, Measured	meq/L		1/30/2019 1753h	Calc.		26.7	
Kyle F. Gross	Total Dissolved Solids	mg/L		1/23/2019 1130h	SM2540C	20.0	1,640	
Laboratory Director	Total Dissolved Solids Ratio, Measured/Calculated			1/30/2019 1753h	Calc.		1.11	
Jose Rocha	Total Dissolved Solids, Calculated	mg/L		1/30/2019 1753h	Calc.		1,480	
QA Officer								



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-005A
Client Sample ID: MW-30_01162019
Collection Date: 1/16/2019 1055h
Received Date: 1/21/2019 1015h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/21/2019 1415h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.4	50.00	103	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	54.7	50.00	109	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.8	50.00	99.6	72-135	
Surr: Toluene-d8		2037-26-5	52.4	50.00	105	80-124	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
 Address : 225 Union Boulevard
 Suite 600
 Lakewood, Colorado 80228
 Contact: Ms. Kathy Weinel
 Project: White Mesa Mill GW

Client Sample ID: MW-30_01162019	Project: DNMI00100
Sample ID: 469482005	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 16-JAN-19 10:55	
Receive Date: 22-JAN-19	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		1.09	+/-0.392	0.973	1.00	pCi/L			JXC9	02/06/19	1426	1843049	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	EPA 903.0	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			101	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-006
Client Sample ID: MW-31_01152019
Collection Date: 1/15/2019 1330h
Received Date: 1/21/2019 1015h

Analytical Results

DISSOLVED METALS

	Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
3440 South 700 West	Arsenic	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.00500	< 0.00500	
Salt Lake City, UT 84119	Beryllium	mg/L	1/21/2019 1156h	2/1/2019 1134h	E200.8	0.000500	< 0.000500	
	Cadmium	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.000500	< 0.000500	
Phone: (801) 263-8686	Calcium	mg/L	1/21/2019 1156h	1/30/2019 1645h	E200.7	20.0	321	
Toll Free: (888) 263-8686	Chromium	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.0250	< 0.0250	
Fax: (801) 263-8687	Cobalt	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.0100	< 0.0100	
e-mail: awal@awal-labs.com	Copper	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.0100	< 0.0100	
	Iron	mg/L	1/21/2019 1156h	1/31/2019 1943h	E200.8	0.0300	< 0.0300	
	Lead	mg/L	1/21/2019 1156h	1/31/2019 1943h	E200.8	0.00100	< 0.00100	
web: www.awal-labs.com	Magnesium	mg/L	1/21/2019 1156h	1/30/2019 1645h	E200.7	20.0	151	
	Manganese	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.0100	< 0.0100	
	Mercury	mg/L	1/25/2019 1600h	1/28/2019 819h	E245.1	0.000500	< 0.000500	
Kyle F. Gross	Molybdenum	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.0100	< 0.0100	
Laboratory Director	Nickel	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.0200	< 0.0200	
	Potassium	mg/L	1/21/2019 1156h	1/30/2019 1726h	E200.7	1.00	7.42	
Jose Rocha	Selenium	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.00500	0.0897	
QA Officer	Silver	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.0100	< 0.0100	
	Sodium	mg/L	1/21/2019 1156h	1/30/2019 1645h	E200.7	20.0	118	
	Thallium	mg/L	1/21/2019 1156h	1/31/2019 1943h	E200.8	0.000500	< 0.000500	
	Tin	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.100	< 0.100	
	Uranium	mg/L	1/21/2019 1156h	2/1/2019 1134h	E200.8	0.000500	0.0132	
	Vanadium	mg/L	1/21/2019 1156h	1/30/2019 1726h	E200.7	0.0150	< 0.0150	
	Zinc	mg/L	1/21/2019 1156h	1/31/2019 1748h	E200.8	0.0100	< 0.0100	



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-006
Client Sample ID: MW-31_01152019
Collection Date: 1/15/2019 1330h
Received Date: 1/21/2019 1015h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	1/31/2019 1005h	1/31/2019 1432h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO ₃)	mg/L		1/22/2019 800h	SM2320B	1.00	190	
Carbonate (as CaCO ₃)	mg/L		1/22/2019 800h	SM2320B	1.00	< 1.00	
Chloride	mg/L		1/23/2019 1601h	E300.0	10.0	283	
Fluoride	mg/L		1/23/2019 2104h	E300.0	0.100	0.697	
Ion Balance	%		1/30/2019 1753h	Calc.	-100	6.22	
Nitrate/Nitrite (as N)	mg/L		1/21/2019 1218h	E353.2	0.100	19.0	
Sulfate	mg/L		1/23/2019 1601h	E300.0	75.0	851	
Total Anions, Measured	meq/L		1/30/2019 1753h	Calc.		29.8	
Total Cations, Measured	meq/L		1/30/2019 1753h	Calc.		33.8	
Total Dissolved Solids	mg/L		1/23/2019 1130h	SM2540C	20.0	2,030	H
Total Dissolved Solids Ratio, Measured/Calculated			1/30/2019 1753h	Calc.		1.09	
Total Dissolved Solids, Calculated	mg/L		1/30/2019 1753h	Calc.		1,860	

H - The initial analysis of this sample was completed within the hold time. Due to quality control issues the sample required re-preparation and reanalysis outside the holding time.

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 Kyle F. Gross
 Laboratory Director

 Jose Rocha
 QA Officer



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-006A
Client Sample ID: MW-31_01152019
Collection Date: 1/15/2019 1330h
Received Date: 1/21/2019 1015h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/21/2019 1435h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.5	50.00	103	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	53.5	50.00	107	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.3	50.00	98.6	72-135	
Surr: Toluene-d8		2037-26-5	52.2	50.00	104	80-124	

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-31_01152019 Project: DNMI00100
Sample ID: 469482006 Client ID: DNMI001
Matrix: Ground Water
Collect Date: 15-JAN-19 13:30
Receive Date: 22-JAN-19
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha	U	1.00	+/-0.314	0.931	1.00	pCi/L			JXC9	02/06/19	1442	1843049	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	EPA 903.0	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			94.7	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-005
Client Sample ID: MW-32_01222019
Collection Date: 1/22/2019 1355h
Received Date: 1/25/2019 940h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/5/2019 2324h	E300.0	1.00	35.6	
Sulfate	mg/L		2/5/2019 1533h	E300.0	750	1,950	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-009
Client Sample ID: MW-35_01162019
Collection Date: 1/16/2019 1300h
Received Date: 1/21/2019 1015h

Analytical Results

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Ammonia (as N)	mg/L	1/31/2019 1005h	1/31/2019 1433h	E350.1	0.0500	0.100	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-009
Client Sample ID: MW-36_01232019
Collection Date: 1/23/2019 925h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/25/2019 1122h	2/7/2019 1933h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/25/2019 1122h	2/7/2019 136h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	1/25/2019 1122h	2/6/2019 1908h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	1/25/2019 1122h	2/6/2019 1749h	E200.7	20.0	503	
Chromium	mg/L	1/25/2019 1122h	2/7/2019 1933h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/25/2019 1122h	2/7/2019 1933h	E200.8	0.0100	< 0.0100	
Copper	mg/L	1/25/2019 1122h	2/7/2019 1933h	E200.8	0.0100	< 0.0100	
Iron	mg/L	1/25/2019 1122h	2/7/2019 136h	E200.8	0.0300	< 0.0300	
Lead	mg/L	1/25/2019 1122h	2/7/2019 1933h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/25/2019 1122h	2/6/2019 1749h	E200.7	20.0	163	
Manganese	mg/L	1/25/2019 1122h	2/7/2019 1933h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 836h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/25/2019 1122h	2/6/2019 1908h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	1/25/2019 1122h	2/7/2019 1933h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	1/25/2019 1122h	2/6/2019 1827h	E200.7	1.00	10.0	
Selenium	mg/L	1/25/2019 1122h	2/8/2019 1104h	E200.8	0.00500	0.220	
Silver	mg/L	1/25/2019 1122h	2/6/2019 1908h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/25/2019 1122h	2/6/2019 1749h	E200.7	20.0	779	
Thallium	mg/L	1/25/2019 1122h	2/8/2019 1131h	E200.8	0.000500	0.000631	
Tin	mg/L	1/25/2019 1122h	2/6/2019 1908h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/25/2019 1122h	2/7/2019 1933h	E200.8	0.000300	0.0236	
Vanadium	mg/L	1/25/2019 1122h	2/6/2019 1827h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/25/2019 1122h	2/8/2019 1104h	E200.8	0.0100	< 0.0100	

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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-009
Client Sample ID: MW-36_01232019
Collection Date: 1/23/2019 925h
Received Date: 1/25/2019 940h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	1/31/2019 1335h	1/31/2019 1531h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	284	
Carbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	< 1.00	
Chloride	mg/L		2/6/2019 032h	E300.0	1.00	56.8	
Fluoride	mg/L		2/6/2019 247h	E300.0	0.100	0.288	
Ion Balance	%		2/7/2019 1043h	Calc.	-100	11.9	
Nitrate/Nitrite (as N)	mg/L		1/29/2019 1242h	E353.2	0.100	0.229	
Sulfate	mg/L		2/5/2019 1747h	E300.0	750	2,400	
Total Anions, Measured	meq/L		2/7/2019 1043h	Calc.		57.2	
Total Cations, Measured	meq/L		2/7/2019 1043h	Calc.		72.7	
Total Dissolved Solids	mg/L		1/25/2019 1240h	SM2540C	20.0	4,220	
Total Dissolved Solids Ratio, Measured/Calculated			2/7/2019 1043h	Calc.		1.04	
Total Dissolved Solids, Calculated	mg/L		2/7/2019 1043h	Calc.		4,080	

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ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-009A
Client Sample ID: MW-36_01232019
Collection Date: 1/23/2019 925h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/25/2019 1250h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	50.9	50.00	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	53.8	50.00	108	80-152	
Surr: Dibromofluoromethane		1868-53-7	48.7	50.00	97.4	72-135	
Surr: Toluene-d8		2037-26-5	52.1	50.00	104	80-124	

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Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-36_01232019 Project: DNMI00100
Sample ID: 469930004 Client ID: DNMI001
Matrix: Ground Water
Collect Date: 23-JAN-19 09:25
Receive Date: 28-JAN-19
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		1.53	+/-0.401	0.912	1.00	pCi/L			JXC9	02/12/19	1228	1845972	1

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
	EPA 903.0		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			97.5	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

INORGANIC ANALYTICAL REPORT



Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-006
Client Sample ID: MW-38_01242019
Collection Date: 1/24/2019 900h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Analytical Results

DISSOLVED METALS

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Jose Rocha
 QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/25/2019 1122h	2/7/2019 1917h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/25/2019 1122h	2/7/2019 127h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	1/25/2019 1122h	2/6/2019 1837h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	1/25/2019 1122h	2/6/2019 1734h	E200.7	20.0	531	2
Chromium	mg/L	1/25/2019 1122h	2/7/2019 1917h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/25/2019 1122h	2/7/2019 1917h	E200.8	0.0100	< 0.0100	
Copper	mg/L	1/25/2019 1122h	2/7/2019 1917h	E200.8	0.0100	< 0.0100	
Iron	mg/L	1/25/2019 1122h	2/7/2019 127h	E200.8	0.0300	< 0.0300	
Lead	mg/L	1/25/2019 1122h	2/7/2019 1917h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/25/2019 1122h	2/6/2019 1734h	E200.7	20.0	210	2
Manganese	mg/L	1/25/2019 1122h	2/7/2019 1917h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 821h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/25/2019 1122h	2/6/2019 1837h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	1/25/2019 1122h	2/7/2019 1917h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	1/25/2019 1122h	2/6/2019 1804h	E200.7	1.00	29.2	
Selenium	mg/L	1/25/2019 1122h	2/8/2019 1049h	E200.8	0.00500	0.165	
Silver	mg/L	1/25/2019 1122h	2/6/2019 1837h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/25/2019 1122h	2/6/2019 1734h	E200.7	20.0	474	2
Thallium	mg/L	1/25/2019 1122h	2/8/2019 1122h	E200.8	0.000500	< 0.000500	
Tin	mg/L	1/25/2019 1122h	2/6/2019 1837h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/25/2019 1122h	2/7/2019 1917h	E200.8	0.000300	0.00678	
Vanadium	mg/L	1/25/2019 1122h	2/6/2019 1804h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/25/2019 1122h	2/8/2019 1049h	E200.8	0.0100	0.0144	



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-006
Client Sample ID: MW-38_01242019
Collection Date: 1/24/2019 900h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Analytical Results

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Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	1/31/2019 1005h	1/31/2019 1439h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	102	
Carbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	< 1.00	
Chloride	mg/L		2/5/2019 2341h	E300.0	1.00	43.1	
Fluoride	mg/L		2/6/2019 156h	E300.0	0.100	0.608	
Ion Balance	%		2/7/2019 1043h	Calc.	-100	7.36	
Nitrate/Nitrite (as N)	mg/L		1/29/2019 1234h	E353.2	0.100	13.7	
Sulfate	mg/L		2/5/2019 1549h	E300.0	750	2,530	
Total Anions, Measured	meq/L		2/7/2019 1043h	Calc.		56.2	
Total Cations, Measured	meq/L		2/7/2019 1043h	Calc.		65.2	
Total Dissolved Solids	mg/L		1/25/2019 1240h	SM2540C	20.0	3,870	
Total Dissolved Solids Ratio, Measured/Calculated			2/7/2019 1043h	Calc.		0.994	
Total Dissolved Solids, Calculated	mg/L		2/7/2019 1043h	Calc.		3,900	



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-006A
Client Sample ID: MW-38_01242019
Collection Date: 1/24/2019 900h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/25/2019 1150h

Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	50.9	50.00	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	55.2	50.00	110	80-152	
Surr: Dibromofluoromethane		1868-53-7	48.6	50.00	97.3	72-135	
Surr: Toluene-d8		2037-26-5	52.6	50.00	105	80-124	

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Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-38_01242019 Project: DNMI00100
Sample ID: 469930001 Client ID: DNMI001
Matrix: Ground Water
Collect Date: 24-JAN-19 09:00
Receive Date: 28-JAN-19
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		1.11	+/-0.337	0.877	1.00	pCi/L			JXC9	02/12/19	1228	1845972	1

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
	EPA 903.0		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			97.5	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-007
Client Sample ID: MW-39_01232019
Collection Date: 1/23/2019 1345h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/25/2019 1122h	2/7/2019 1926h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/25/2019 1122h	2/7/2019 130h	E200.8	0.000500	0.00551	
Cadmium	mg/L	1/25/2019 1122h	2/6/2019 1902h	E200.8	0.000500	0.00282	
Calcium	mg/L	1/25/2019 1122h	2/6/2019 1743h	E200.7	20.0	515	
Chromium	mg/L	1/25/2019 1122h	2/7/2019 1926h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/25/2019 1122h	2/7/2019 1926h	E200.8	0.0100	0.0631	
Copper	mg/L	1/25/2019 1122h	2/7/2019 1926h	E200.8	0.0100	0.0296	
Iron	mg/L	1/25/2019 1122h	2/7/2019 1852h	E200.8	2.50	15.3	
Lead	mg/L	1/25/2019 1122h	2/7/2019 1926h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/25/2019 1122h	2/6/2019 1743h	E200.7	20.0	223	
Manganese	mg/L	1/25/2019 1122h	2/7/2019 1852h	E200.8	0.0500	2.19	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 827h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/25/2019 1122h	2/6/2019 1902h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	1/25/2019 1122h	2/7/2019 1926h	E200.8	0.0200	0.0295	
Potassium	mg/L	1/25/2019 1122h	2/6/2019 1820h	E200.7	1.00	13.4	
Selenium	mg/L	1/25/2019 1122h	2/8/2019 1058h	E200.8	0.00500	< 0.00500	
Silver	mg/L	1/25/2019 1122h	2/6/2019 1902h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/25/2019 1122h	2/6/2019 1743h	E200.7	20.0	604	
Thallium	mg/L	1/25/2019 1122h	2/8/2019 1125h	E200.8	0.000500	0.00347	
Tin	mg/L	1/25/2019 1122h	2/6/2019 1902h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/25/2019 1122h	2/7/2019 1926h	E200.8	0.000300	0.0130	
Vanadium	mg/L	1/25/2019 1122h	2/6/2019 1820h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/25/2019 1122h	2/8/2019 1058h	E200.8	0.0100	0.252	

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 Laboratory Director

Jose Rocha
 QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-007
Client Sample ID: MW-39_01232019
Collection Date: 1/23/2019 1345h
Received Date: 1/25/2019 940h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	1/31/2019 1005h	2/12/2019 1127h	E350.1	0.0500	0.262	
Bicarbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	< 1.00	
Chloride	mg/L		2/5/2019 2358h	E300.0	1.00	36.6	
Fluoride	mg/L		2/6/2019 213h	E300.0	0.100	0.610	
Ion Balance	%		2/7/2019 1043h	Calc.	-100	3.42	
Nitrate/Nitrite (as N)	mg/L		1/29/2019 1235h	E353.2	0.100	0.166	
Sulfate	mg/L		2/5/2019 1640h	E300.0	750	3,120	
Total Anions, Measured	meq/L		2/7/2019 1043h	Calc.		66.0	
Total Cations, Measured	meq/L		2/7/2019 1043h	Calc.		70.6	
Total Dissolved Solids	mg/L		1/25/2019 1240h	SM2540C	20.0	4,280	
Total Dissolved Solids Ratio, Measured/Calculated			2/7/2019 1043h	Calc.		0.949	
Total Dissolved Solids, Calculated	mg/L		2/7/2019 1043h	Calc.		4,510	

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ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-007A
Client Sample ID: MW-39_01232019
Collection Date: 1/23/2019 1345h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/25/2019 1210h

Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.6	50.00	103	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	54.2	50.00	108	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.4	50.00	98.7	72-135	
Surr: Toluene-d8		2037-26-5	52.6	50.00	105	80-124	

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Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-39_01232019
Sample ID: 469930002
Matrix: Ground Water
Collect Date: 23-JAN-19 13:45
Receive Date: 28-JAN-19
Collector: Client

Project: DNMI00100
Client ID: DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		3.09	+/-0.467	0.725	1.00	pCi/L			JXC9	02/12/19	1228	1845972	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
Surrogate/Tracer Recovery	EPA 903.0	
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			93.7	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor
DL: Detection Limit
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Lc/LC: Critical Level
PF: Prep Factor
RL: Reporting Limit
SQL: Sample Quantitation Limit



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-008
Client Sample ID: MW-40_01232019
Collection Date: 1/23/2019 1130h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/25/2019 1122h	2/7/2019 1929h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/25/2019 1122h	2/7/2019 133h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	1/25/2019 1122h	2/6/2019 1905h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	1/25/2019 1122h	2/6/2019 1746h	E200.7	20.0	490	
Chromium	mg/L	1/25/2019 1122h	2/7/2019 1929h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/25/2019 1122h	2/7/2019 1929h	E200.8	0.0100	< 0.0100	
Copper	mg/L	1/25/2019 1122h	2/7/2019 1929h	E200.8	0.0100	< 0.0100	
Iron	mg/L	1/25/2019 1122h	2/7/2019 133h	E200.8	0.0300	< 0.0300	
Lead	mg/L	1/25/2019 1122h	2/7/2019 1929h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/25/2019 1122h	2/6/2019 1746h	E200.7	20.0	210	
Manganese	mg/L	1/25/2019 1122h	2/7/2019 1929h	E200.8	0.0100	0.191	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 834h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/25/2019 1122h	2/6/2019 1905h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	1/25/2019 1122h	2/7/2019 1929h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	1/25/2019 1122h	2/6/2019 1823h	E200.7	1.00	8.95	
Selenium	mg/L	1/25/2019 1122h	2/8/2019 1101h	E200.8	0.00500	0.152	
Silver	mg/L	1/25/2019 1122h	2/6/2019 1905h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/25/2019 1122h	2/6/2019 1746h	E200.7	20.0	383	
Thallium	mg/L	1/25/2019 1122h	2/8/2019 1128h	E200.8	0.000500	0.000603	
Tin	mg/L	1/25/2019 1122h	2/6/2019 1905h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/25/2019 1122h	2/7/2019 1929h	E200.8	0.000300	0.0266	
Vanadium	mg/L	1/25/2019 1122h	2/6/2019 1823h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/25/2019 1122h	2/8/2019 1101h	E200.8	0.0100	< 0.0100	

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 web: www.awal-labs.com

Kyle F. Gross
 Laboratory Director

 Jose Rocha
 QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-008
Client Sample ID: MW-40_01232019
Collection Date: 1/23/2019 1130h
Received Date: 1/25/2019 940h

Analytical Results

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Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	1/31/2019 1005h	1/31/2019 1441h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	258	
Carbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	< 1.00	
Chloride	mg/L		2/6/2019 015h	E300.0	1.00	41.8	
Fluoride	mg/L		2/6/2019 230h	E300.0	0.100	0.639	
Ion Balance	%		2/7/2019 1043h	Calc.	-100	14.9	
Nitrate/Nitrite (as N)	mg/L		1/29/2019 1236h	E353.2	0.100	3.08	
Sulfate	mg/L		2/5/2019 1730h	E300.0	750	1,780	
Total Anions, Measured	meq/L		2/7/2019 1043h	Calc.		43.4	
Total Cations, Measured	meq/L		2/7/2019 1043h	Calc.		58.6	
Total Dissolved Solids	mg/L		1/25/2019 1240h	SM2540C	20.0	3,600	
Total Dissolved Solids Ratio, Measured/Calculated			2/7/2019 1043h	Calc.		1.17	
Total Dissolved Solids, Calculated	mg/L		2/7/2019 1043h	Calc.		3,070	

Kyle F. Gross
 Laboratory Director

 Jose Rocha
 QA Officer



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-008A
Client Sample ID: MW-40_01232019
Collection Date: 1/23/2019 1130h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/25/2019 1230h

Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

3440 South 700 West
Salt Lake City, UT 84119

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	50.9	50.00	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	54.3	50.00	109	80-152	
Surr: Dibromofluoromethane		1868-53-7	48.9	50.00	97.8	72-135	
Surr: Toluene-d8		2037-26-5	52.4	50.00	105	80-124	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-40_01232019 Project: DNMI00100
Sample ID: 469930003 Client ID: DNMI001
Matrix: Ground Water
Collect Date: 23-JAN-19 11:30
Receive Date: 28-JAN-19
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		1.92	+/-0.426	0.765	1.00	pCi/L			JXC9	02/12/19	1228	1845972	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	EPA 903.0	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			96.5	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-010
Client Sample ID: MW-65_01232019
Collection Date: 1/23/2019 925h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Analytical Results

DISSOLVED METALS

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Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	1/25/2019 1122h	2/7/2019 1945h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	1/25/2019 1122h	2/7/2019 139h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	1/25/2019 1122h	2/6/2019 1911h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	1/25/2019 1122h	2/6/2019 1752h	E200.7	20.0	501	
Chromium	mg/L	1/25/2019 1122h	2/7/2019 1945h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	1/25/2019 1122h	2/7/2019 1945h	E200.8	0.0100	< 0.0100	
Copper	mg/L	1/25/2019 1122h	2/7/2019 1945h	E200.8	0.0100	< 0.0100	
Iron	mg/L	1/25/2019 1122h	2/7/2019 139h	E200.8	0.0300	< 0.0300	
Lead	mg/L	1/25/2019 1122h	2/7/2019 1945h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	1/25/2019 1122h	2/6/2019 1752h	E200.7	20.0	159	
Manganese	mg/L	1/25/2019 1122h	2/7/2019 1945h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	1/25/2019 1600h	1/28/2019 838h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	1/25/2019 1122h	2/6/2019 1911h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	1/25/2019 1122h	2/7/2019 1945h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	1/25/2019 1122h	2/6/2019 1830h	E200.7	1.00	10.2	
Selenium	mg/L	1/25/2019 1122h	2/8/2019 1107h	E200.8	0.00500	0.226	
Silver	mg/L	1/25/2019 1122h	2/6/2019 1911h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	1/25/2019 1122h	2/6/2019 1752h	E200.7	20.0	778	
Thallium	mg/L	1/25/2019 1122h	2/8/2019 1134h	E200.8	0.000500	0.000645	
Tin	mg/L	1/25/2019 1122h	2/6/2019 1911h	E200.8	0.100	< 0.100	
Uranium	mg/L	1/25/2019 1122h	2/7/2019 1945h	E200.8	0.000300	0.0243	
Vanadium	mg/L	1/25/2019 1122h	2/6/2019 1830h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	1/25/2019 1122h	2/8/2019 1107h	E200.8	0.0100	< 0.0100	

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-010
Client Sample ID: MW-65_01232019
Collection Date: 1/23/2019 925h
Received Date: 1/25/2019 940h

Analytical Results

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Kyle F. Gross
 Laboratory Director

 Jose Rocha
 QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	1/31/2019 1335h	1/31/2019 1532h	E350.1	0.0500	< 0.0500	1
Bicarbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	284	
Carbonate (as CaCO3)	mg/L		1/28/2019 800h	SM2320B	1.00	< 1.00	
Chloride	mg/L		2/6/2019 049h	E300.0	1.00	56.3	
Fluoride	mg/L		2/6/2019 303h	E300.0	0.100	0.290	
Ion Balance	%		2/7/2019 1043h	Calc.	-100	10.2	
Nitrate/Nitrite (as N)	mg/L		1/29/2019 1243h	E353.2	0.100	0.194	
Sulfate	mg/L		2/5/2019 1804h	E300.0	750	2,180	
Total Anions, Measured	meq/L		2/7/2019 1043h	Calc.		58.9	
Total Cations, Measured	meq/L		2/7/2019 1043h	Calc.		72.2	
Total Dissolved Solids	mg/L		1/25/2019 1240h	SM2540C	20.0	3,860	
Total Dissolved Solids Ratio, Measured/Calculated			2/7/2019 1043h	Calc.		0.929	
Total Dissolved Solids, Calculated	mg/L		2/7/2019 1043h	Calc.		4,150	

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-010A
Client Sample ID: MW-65_01232019
Collection Date: 1/23/2019 925h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/25/2019 1310h

Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

3440 South 700 West
Salt Lake City, UT 84119

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

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 web: www.awal-labs.com

Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.8	50.00	104	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	54.6	50.00	109	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.8	50.00	99.7	72-135	
Surr: Toluene-d8		2037-26-5	52.3	50.00	105	80-124	

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: February 16, 2019

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: White Mesa Mill GW

Client Sample ID: MW-65_01232019 Project: DNMI00100
Sample ID: 469930005 Client ID: DNMI001
Matrix: Ground Water
Collect Date: 23-JAN-19 09:25
Receive Date: 28-JAN-19
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha	U	1.00	+/-0.342	0.989	1.00	pCi/L			JXC9	02/12/19	1228	1845972	1

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
	EPA 903.0		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			96.1	(25%-125%)

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

SRL = Sample Reporting Limit. For metals analysis only. When the sample is U qualified and ND, the SRL column reports the value which is the greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

DF: Dilution Factor Lc/LC: Critical Level
DL: Detection Limit PF: Prep Factor
MDA: Minimum Detectable Activity RL: Reporting Limit
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901434-007A
Client Sample ID: Trip Blank
Collection Date: 1/15/2019 1200h
Received Date: 1/21/2019 1015h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/21/2019 1236h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.2	50.00	103	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	53.6	50.00	107	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.5	50.00	99.1	72-135	
Surr: Toluene-d8		2037-26-5	52.9	50.00	106	80-124	



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Sample ID: 1901565-011A
Client Sample ID: Trip Blank
Collection Date: 1/23/2019 925h
Received Date: 1/25/2019 940h

Contact: Garrin Palmer

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 1/25/2019 1131h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	< 1.00	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	< 1.00	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.3	50.00	103	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	54.5	50.00	109	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.1	50.00	98.3	72-135	
Surr: Toluene-d8		2037-26-5	52.2	50.00	104	80-124	



Garrin Palmer
Energy Fuels Resources, Inc.
6425 S. Hwy 191
Blanding, UT 84511
TEL: (303) 389-4134

RE: 1st Quarter Ground Water 2019

Dear Garrin Palmer:

Lab Set ID: 1901434

3440 South 700 West

Salt Lake City, UT 84119

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: awal@awal-labs.com

web: www.awal-labs.com

American West Analytical Laboratories received sample(s) on 1/21/2019 for the analyses presented in the following report.

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, Wyoming, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Thank You,

Approved by:

Kyle F. Gross	Digitally signed by Kyle F. Gross
	Date: 2019.02.04 13:18:13 -07'00'

Laboratory Director or designee



SAMPLE SUMMARY

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Set ID: 1901434
Date Received: 1/21/2019 1015h

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1901434-001A	MW-11_01152019	1/15/2019 1200h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901434-001B	MW-11_01152019	1/15/2019 1200h	Aqueous	Anions, E300.0
1901434-001B	MW-11_01152019	1/15/2019 1200h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901434-001C	MW-11_01152019	1/15/2019 1200h	Aqueous	Total Dissolved Solids, A2540C
1901434-001D	MW-11_01152019	1/15/2019 1200h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901434-001D	MW-11_01152019	1/15/2019 1200h	Aqueous	Ammonia, Aqueous
1901434-001E	MW-11_01152019	1/15/2019 1200h	Aqueous	Ion Balance
1901434-001E	MW-11_01152019	1/15/2019 1200h	Aqueous	ICP Metals, Dissolved
1901434-001E	MW-11_01152019	1/15/2019 1200h	Aqueous	ICPMS Metals, Dissolved
1901434-001E	MW-11_01152019	1/15/2019 1200h	Aqueous	Mercury, Drinking Water Dissolved
1901434-002A	MW-14_01172019	1/17/2019 1000h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901434-002B	MW-14_01172019	1/17/2019 1000h	Aqueous	Anions, E300.0
1901434-002B	MW-14_01172019	1/17/2019 1000h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901434-002C	MW-14_01172019	1/17/2019 1000h	Aqueous	Total Dissolved Solids, A2540C
1901434-002D	MW-14_01172019	1/17/2019 1000h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901434-002D	MW-14_01172019	1/17/2019 1000h	Aqueous	Ammonia, Aqueous
1901434-002E	MW-14_01172019	1/17/2019 1000h	Aqueous	Ion Balance
1901434-002E	MW-14_01172019	1/17/2019 1000h	Aqueous	ICP Metals, Dissolved
1901434-002E	MW-14_01172019	1/17/2019 1000h	Aqueous	ICPMS Metals, Dissolved
1901434-002E	MW-14_01172019	1/17/2019 1000h	Aqueous	Mercury, Drinking Water Dissolved
1901434-003A	MW-25_01162019	1/16/2019 1110h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901434-003B	MW-25_01162019	1/16/2019 1110h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901434-003B	MW-25_01162019	1/16/2019 1110h	Aqueous	Anions, E300.0
1901434-003C	MW-25_01162019	1/16/2019 1110h	Aqueous	Total Dissolved Solids, A2540C
1901434-003D	MW-25_01162019	1/16/2019 1110h	Aqueous	Ammonia, Aqueous
1901434-003D	MW-25_01162019	1/16/2019 1110h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901434-003E	MW-25_01162019	1/16/2019 1110h	Aqueous	Ion Balance
1901434-003E	MW-25_01162019	1/16/2019 1110h	Aqueous	ICP Metals, Dissolved
1901434-003E	MW-25_01162019	1/16/2019 1110h	Aqueous	ICPMS Metals, Dissolved



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Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1901434-003E	MW-25_01162019	1/16/2019 1110h	Aqueous	Mercury, Drinking Water Dissolved
1901434-004A	MW-26_01172019	1/17/2019 830h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901434-004B	MW-26_01172019	1/17/2019 830h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901434-004B	MW-26_01172019	1/17/2019 830h	Aqueous	Anions, E300.0
1901434-004C	MW-26_01172019	1/17/2019 830h	Aqueous	Total Dissolved Solids, A2540C
1901434-004D	MW-26_01172019	1/17/2019 830h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901434-004D	MW-26_01172019	1/17/2019 830h	Aqueous	Ammonia, Aqueous
1901434-004E	MW-26_01172019	1/17/2019 830h	Aqueous	ICPMS Metals, Dissolved
1901434-004E	MW-26_01172019	1/17/2019 830h	Aqueous	Mercury, Drinking Water Dissolved
1901434-004E	MW-26_01172019	1/17/2019 830h	Aqueous	ICP Metals, Dissolved
1901434-004E	MW-26_01172019	1/17/2019 830h	Aqueous	Ion Balance
1901434-005A	MW-30_01162019	1/16/2019 1055h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901434-005B	MW-30_01162019	1/16/2019 1055h	Aqueous	Anions, E300.0
1901434-005B	MW-30_01162019	1/16/2019 1055h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901434-005C	MW-30_01162019	1/16/2019 1055h	Aqueous	Total Dissolved Solids, A2540C
1901434-005D	MW-30_01162019	1/16/2019 1055h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901434-005D	MW-30_01162019	1/16/2019 1055h	Aqueous	Ammonia, Aqueous
1901434-005E	MW-30_01162019	1/16/2019 1055h	Aqueous	Ion Balance
1901434-005E	MW-30_01162019	1/16/2019 1055h	Aqueous	Mercury, Drinking Water Dissolved
1901434-005E	MW-30_01162019	1/16/2019 1055h	Aqueous	ICP Metals, Dissolved
1901434-005E	MW-30_01162019	1/16/2019 1055h	Aqueous	ICPMS Metals, Dissolved
1901434-006A	MW-31_01152019	1/15/2019 1330h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901434-006B	MW-31_01152019	1/15/2019 1330h	Aqueous	Anions, E300.0
1901434-006B	MW-31_01152019	1/15/2019 1330h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901434-006C	MW-31_01152019	1/15/2019 1330h	Aqueous	Total Dissolved Solids, A2540C
1901434-006D	MW-31_01152019	1/15/2019 1330h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901434-006D	MW-31_01152019	1/15/2019 1330h	Aqueous	Ammonia, Aqueous
1901434-006E	MW-31_01152019	1/15/2019 1330h	Aqueous	Ion Balance
1901434-006E	MW-31_01152019	1/15/2019 1330h	Aqueous	ICP Metals, Dissolved
1901434-006E	MW-31_01152019	1/15/2019 1330h	Aqueous	ICPMS Metals, Dissolved



Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Set ID: 1901434
Date Received: 1/21/2019 1015h

Contact: Garrin Palmer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1901434-006E	MW-31_01152019	1/15/2019 1330h	Aqueous	Mercury, Drinking Water Dissolved
1901434-007A	Trip Blank	1/15/2019 1200h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901434-008A	MW-05_01172019	1/17/2019 1045h	Aqueous	ICPMS Metals, Dissolved
1901434-009A	MW-35_01162019	1/16/2019 1300h	Aqueous	Ammonia, Aqueous

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Inorganic Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Set ID: 1901434

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Sample Receipt Information:

Date of Receipt: 1/21/2019
Date(s) of Collection: 1/15-1/17/2019
Sample Condition: Intact
C-O-C Discrepancies: See Chain of Custody

Holding Time and Preservation Requirements: The analysis and preparation for the samples were performed within the method holding times, with the following exceptions: the analysis for Total Dissolved Solids on samples 1901434-001 and 1901434-006 were originally completed within the holding time. Due to quality control issues, the samples required reanalysis outside of the holding time. The samples were properly preserved.

Preparation and Analysis Requirements: The samples were analyzed following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD, DUP:

Method Blanks (MB): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Samples (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1901434-001D	Ammonia	MS/MSD	Sample matrix interference
1901434-001E	Sodium	MS/MSD	High analyte concentration
1901434-002D	Ammonia	MS/MSD	Sample matrix interference
1901434-003D	Ammonia	MS/MSD	Sample matrix interference

Duplicate (DUP): The parameters that required a duplicate analysis had RPDs within the control limits.

Corrective Action: None required.



Volatile Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Set ID: 1901434

Sample Receipt Information:

Date of Receipt: 1/21/2019
Date(s) of Collection: 1/15-1/17/2019
Sample Condition: Intact
C-O-C Discrepancies: See Chain of Custody
Method: SW-846 8260C/5030C
Analysis: Volatile Organic Compounds

General Set Comments: One or more target analytes were observed above reporting limits.

Holding Time and Preservation Requirements: All samples were received in appropriate containers and properly preserved. The analysis and preparation of all samples were performed within the method holding times following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD, and Surrogates:

Method Blanks (MBs): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Sample (LCSs): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicate (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

Surrogates: All surrogate recoveries were within established limits.

Corrective Action: None required.

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1901434

Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer

Dept: ME

QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-60388		Date Analyzed: 01/30/2019 1621h											
Test Code: 200.7-DIS		Date Prepared: 01/21/2019 1156h											
Calcium	10.1	mg/L	E200.7	0.0729	1.00	10.00	0	101	85 - 115				
Magnesium	10.5	mg/L	E200.7	0.0575	1.00	10.00	0	105	85 - 115				
Potassium	10.5	mg/L	E200.7	0.176	1.00	10.00	0	105	85 - 115				
Sodium	10.5	mg/L	E200.7	0.194	1.00	10.00	0	105	85 - 115				
Vanadium	0.206	mg/L	E200.7	0.00113	0.00500	0.2000	0	103	85 - 115				
Lab Sample ID: LCS-60389		Date Analyzed: 01/31/2019 1707h											
Test Code: 200.8-DIS		Date Prepared: 01/21/2019 1156h											
Arsenic	0.185	mg/L	E200.8	0.000338	0.00200	0.2000	0	92.5	85 - 115				
Beryllium	0.181	mg/L	E200.8	0.000256	0.00200	0.2000	0	90.6	85 - 115				
Cadmium	0.184	mg/L	E200.8	0.0000898	0.000500	0.2000	0	91.9	85 - 115				
Chromium	0.186	mg/L	E200.8	0.00124	0.00200	0.2000	0	93.0	85 - 115				
Cobalt	0.180	mg/L	E200.8	0.000188	0.00400	0.2000	0	90.0	85 - 115				
Copper	0.185	mg/L	E200.8	0.00196	0.00200	0.2000	0	92.5	85 - 115				
Iron	0.936	mg/L	E200.8	0.0324	0.100	1.000	0	93.6	85 - 115				
Lead	0.179	mg/L	E200.8	0.000524	0.00200	0.2000	0	89.4	85 - 115				
Manganese	0.188	mg/L	E200.8	0.00148	0.00200	0.2000	0	94.1	85 - 115				
Molybdenum	0.188	mg/L	E200.8	0.000702	0.00200	0.2000	0	93.8	85 - 115				
Nickel	0.185	mg/L	E200.8	0.000924	0.00200	0.2000	0	92.5	85 - 115				
Selenium	0.195	mg/L	E200.8	0.000296	0.00200	0.2000	0	97.5	85 - 115				
Silver	0.187	mg/L	E200.8	0.000155	0.00200	0.2000	0	93.3	85 - 115				
Thallium	0.179	mg/L	E200.8	0.000288	0.00200	0.2000	0	89.5	85 - 115				
Tin	0.946	mg/L	E200.8	0.00302	0.00400	1.000	0	94.6	85 - 115				
Uranium	0.180	mg/L	E200.8	0.000628	0.00200	0.2000	0	89.8	85 - 115				
Zinc	0.925	mg/L	E200.8	0.00486	0.00500	1.000	0	92.5	85 - 115				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-60487	Date Analyzed:	01/28/2019	755h										
Test Code: HG-DW-DIS-245.1	Date Prepared:	01/25/2019	1600h										
Mercury	0.00328	mg/L	E245.1	0.0000307	0.000150	0.003330	0	98.5	85 - 115				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-60388		Date Analyzed: 01/30/2019 1618h											
Test Code: 200.7-DIS		Date Prepared: 01/21/2019 1156h											
Calcium	< 1.00	mg/L	E200.7	0.0729	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.0575	1.00								
Potassium	< 1.00	mg/L	E200.7	0.176	1.00								
Sodium	< 1.00	mg/L	E200.7	0.194	1.00								
Vanadium	< 0.00500	mg/L	E200.7	0.00113	0.00500								
Lab Sample ID: MB-60389		Date Analyzed: 01/31/2019 1704h											
Test Code: 200.8-DIS		Date Prepared: 01/21/2019 1156h											
Arsenic	< 0.00200	mg/L	E200.8	0.000338	0.00200								
Cadmium	< 0.000500	mg/L	E200.8	0.0000898	0.000500								
Chromium	< 0.00200	mg/L	E200.8	0.00124	0.00200								
Cobalt	< 0.00400	mg/L	E200.8	0.000188	0.00400								
Copper	< 0.00200	mg/L	E200.8	0.00196	0.00200								
Manganese	< 0.00200	mg/L	E200.8	0.00148	0.00200								
Molybdenum	< 0.00200	mg/L	E200.8	0.000702	0.00200								
Nickel	< 0.00200	mg/L	E200.8	0.000924	0.00200								
Selenium	< 0.00200	mg/L	E200.8	0.000296	0.00200								
Silver	< 0.00200	mg/L	E200.8	0.000155	0.00200								
Tin	< 0.00400	mg/L	E200.8	0.00302	0.00400								
Zinc	< 0.00500	mg/L	E200.8	0.00486	0.00500								
Lab Sample ID: MB-60389		Date Analyzed: 01/31/2019 1924h											
Test Code: 200.8-DIS		Date Prepared: 01/21/2019 1156h											
Iron	< 0.0100	mg/L	E200.8	0.00324	0.0100								
Lead	< 0.000200	mg/L	E200.8	0.0000524	0.000200								
Thallium	< 0.000200	mg/L	E200.8	0.0000288	0.000200								



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-60389	Date Analyzed:	02/01/2019	1115h										
Test Code:	200.8-DIS	Date Prepared:	01/21/2019	1156h									
Beryllium	< 0.000500	mg/L	E200.8	0.0000640	0.000500								
Lab Sample ID: MB-60389	Date Analyzed:	01/31/2019	1800h										
Test Code:	200.8-DIS	Date Prepared:	01/21/2019	1156h									
Uranium	< 0.000200	mg/L	E200.8	0.0000628	0.000200								
Lab Sample ID: MB-60487	Date Analyzed:	01/28/2019	753h										
Test Code:	HG-DW-DIS-245.1	Date Prepared:	01/25/2019	1600h									
Mercury	< 0.000150	mg/L	E245.1	0.0000307	0.000150								



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Contact: Garrin Palmer

Lab Set ID: 1901434

Dept: ME

Project: 1st Quarter Ground Water 2019

QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901434-001EMS	Date Analyzed:	01/30/2019	1627h										
Test Code: 200.7-DIS	Date Prepared:	01/21/2019	1156h										
Calcium	107	mg/L	E200.7	1.46	20.0	10.00	97.9	95.8	70 - 130				
Sodium	658	mg/L	E200.7	3.88	20.0	10.00	658	-3.09	70 - 130				2
Lab Sample ID: 1901434-001EMS	Date Analyzed:	01/30/2019	1707h										
Test Code: 200.7-DIS	Date Prepared:	01/21/2019	1156h										
Magnesium	39.9	mg/L	E200.7	0.0575	1.00	10.00	30.1	98.6	70 - 130				
Potassium	17.7	mg/L	E200.7	0.176	1.00	10.00	7.34	103	70 - 130				
Vanadium	0.205	mg/L	E200.7	0.00113	0.00500	0.2000	0	102	70 - 130				
Lab Sample ID: 1901434-001EMS	Date Analyzed:	01/31/2019	1720h										
Test Code: 200.8-DIS	Date Prepared:	01/21/2019	1156h										
Arsenic	0.195	mg/L	E200.8	0.000338	0.00200	0.2000	0.000338	97.4	75 - 125				
Beryllium	0.176	mg/L	E200.8	0.000256	0.00200	0.2000	0	88.0	75 - 125				
Cadmium	0.186	mg/L	E200.8	0.0000898	0.000500	0.2000	0.000096	93.2	75 - 125				
Chromium	0.184	mg/L	E200.8	0.00124	0.00200	0.2000	0	91.9	75 - 125				
Cobalt	0.180	mg/L	E200.8	0.000188	0.00400	0.2000	0.000536	89.9	75 - 125				
Copper	0.182	mg/L	E200.8	0.00196	0.00200	0.2000	0	90.8	75 - 125				
Iron	0.951	mg/L	E200.8	0.0324	0.100	1.000	0	95.1	75 - 125				
Lead	0.176	mg/L	E200.8	0.000524	0.00200	0.2000	0	87.8	75 - 125				
Manganese	0.362	mg/L	E200.8	0.00148	0.00200	0.2000	0.181	90.6	75 - 125				
Molybdenum	0.197	mg/L	E200.8	0.000702	0.00200	0.2000	0.00251	97.3	75 - 125				
Nickel	0.187	mg/L	E200.8	0.000924	0.00200	0.2000	0.00108	92.9	75 - 125				
Selenium	0.204	mg/L	E200.8	0.000296	0.00200	0.2000	0.000315	102	75 - 125				
Silver	0.182	mg/L	E200.8	0.000155	0.00200	0.2000	0	91.0	75 - 125				
Thallium	0.176	mg/L	E200.8	0.000288	0.00200	0.2000	0	88.1	75 - 125				
Tin	0.961	mg/L	E200.8	0.00302	0.00400	1.000	0	96.1	75 - 125				
Uranium	0.180	mg/L	E200.8	0.000628	0.00200	0.2000	0.000864	89.7	75 - 125				
Zinc	0.940	mg/L	E200.8	0.00486	0.00500	1.000	0	94.0	75 - 125				



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901434-001EMS	Date Analyzed:	01/28/2019	803h										
Test Code: HG-DW-DIS-245.1	Date Prepared:	01/25/2019	1600h										
Mercury	0.00333	mg/L	E245.1	0.0000307	0.000150	0.003330	0	100	85 - 115				
Lab Sample ID: 1901565-006EMS	Date Analyzed:	01/28/2019	823h										
Test Code: HG-DW-DIS-245.1	Date Prepared:	01/25/2019	1600h										
Mercury	0.00309	mg/L	E245.1	0.0000307	0.000150	0.003330	0	92.8	85 - 115				

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901434-001EMSD													
Date Analyzed: 01/30/2019 1630h													
Test Code: 200.7-DIS													
Date Prepared: 01/21/2019 1156h													
Calcium	108	mg/L	E200.7	1.46	20.0	10.00	97.9	97.9	70 - 130	107	0.193	20	
Sodium	657	mg/L	E200.7	3.88	20.0	10.00	658	-4.17	70 - 130	658	0.0166	20	2
Lab Sample ID: 1901434-001EMSD													
Date Analyzed: 01/30/2019 1710h													
Test Code: 200.7-DIS													
Date Prepared: 01/21/2019 1156h													
Magnesium	40.4	mg/L	E200.7	0.0575	1.00	10.00	30.1	103	70 - 130	39.9	1.15	20	
Potassium	17.7	mg/L	E200.7	0.176	1.00	10.00	7.34	104	70 - 130	17.7	0.182	20	
Vanadium	0.208	mg/L	E200.7	0.00113	0.00500	0.2000	0	104	70 - 130	0.205	1.78	20	
Lab Sample ID: 1901434-001EMSD													
Date Analyzed: 01/31/2019 1723h													
Test Code: 200.8-DIS													
Date Prepared: 01/21/2019 1156h													
Arsenic	0.190	mg/L	E200.8	0.000338	0.00200	0.2000	0.000338	94.9	75 - 125	0.195	2.58	20	
Beryllium	0.172	mg/L	E200.8	0.000256	0.00200	0.2000	0	85.9	75 - 125	0.176	2.46	20	
Cadmium	0.183	mg/L	E200.8	0.0000898	0.000500	0.2000	0.000096	91.3	75 - 125	0.186	2.07	20	
Chromium	0.182	mg/L	E200.8	0.00124	0.00200	0.2000	0	91.2	75 - 125	0.184	0.818	20	
Cobalt	0.178	mg/L	E200.8	0.000188	0.00400	0.2000	0.000536	88.7	75 - 125	0.18	1.33	20	
Copper	0.180	mg/L	E200.8	0.00196	0.00200	0.2000	0	89.9	75 - 125	0.182	0.984	20	
Iron	0.945	mg/L	E200.8	0.0324	0.100	1.000	0	94.5	75 - 125	0.951	0.642	20	
Lead	0.175	mg/L	E200.8	0.000524	0.00200	0.2000	0	87.7	75 - 125	0.176	0.183	20	
Manganese	0.364	mg/L	E200.8	0.00148	0.00200	0.2000	0.181	91.6	75 - 125	0.362	0.567	20	
Molybdenum	0.197	mg/L	E200.8	0.000702	0.00200	0.2000	0.00251	97.2	75 - 125	0.197	0.142	20	
Nickel	0.184	mg/L	E200.8	0.000924	0.00200	0.2000	0.00108	91.3	75 - 125	0.187	1.65	20	
Selenium	0.203	mg/L	E200.8	0.000296	0.00200	0.2000	0.000315	101	75 - 125	0.204	0.305	20	
Silver	0.181	mg/L	E200.8	0.000155	0.00200	0.2000	0	90.6	75 - 125	0.182	0.404	20	
Thallium	0.175	mg/L	E200.8	0.000288	0.00200	0.2000	0	87.6	75 - 125	0.176	0.544	20	
Tin	0.968	mg/L	E200.8	0.00302	0.00400	1.000	0	96.8	75 - 125	0.961	0.782	20	
Uranium	0.181	mg/L	E200.8	0.000628	0.00200	0.2000	0.000864	89.9	75 - 125	0.18	0.189	20	
Zinc	0.929	mg/L	E200.8	0.00486	0.00500	1.000	0	92.9	75 - 125	0.94	1.26	20	



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901434-001EMSD	Date Analyzed:		01/28/2019 805h										
Test Code:	Date Prepared:		HG-DW-DIS-245.1 01/25/2019 1600h										
Mercury	0.00321	mg/L	E245.1	0.0000307	0.000150	0.003330	0	96.4	85 - 115	0.00333	3.77	20	
Lab Sample ID: 1901565-006EMSD	Date Analyzed:		01/28/2019 825h										
Test Code:	Date Prepared:		HG-DW-DIS-245.1 01/25/2019 1600h										
Mercury	0.00332	mg/L	E245.1	0.0000307	0.000150	0.003330	0	99.7	85 - 115	0.00309	7.23	20	

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1901434

Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer

Dept: WC

QC Type: DUP

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901434-001CDUP	Date Analyzed: 01/23/2019 1130h												
Test Code: TDS-W-2540C													
Total Dissolved Solids	2,020	mg/L	SM2540C	16.0	20.0					2040	0.591	5	H

H - The initial analysis of this sample was completed within the hold time. Due to quality control issues the sample required re-preparation and reanalysis outside the holding time.



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: WC
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R121952 Date Analyzed: 01/23/2019 1038h													
Test Code: 300.0-W													
Chloride	4.87	mg/L	E300.0	0.0581	0.100	5.000	0	97.3	90 - 110				
Fluoride	4.91	mg/L	E300.0	0.0353	0.100	5.000	0	98.2	90 - 110				
Sulfate	5.21	mg/L	E300.0	0.102	0.750	5.000	0	104	90 - 110				
Lab Sample ID: LCS-R121888 Date Analyzed: 01/22/2019 800h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO ₃)	250	mg/L	SM2320B	0.965	1.00	250.0	0	99.8	90 - 110				
Lab Sample ID: LCS-60398 Date Analyzed: 01/22/2019 1415h													
Test Code: NH3-W-350.1 Date Prepared: 01/22/2019 1035h													
Ammonia (as N)	9.41	mg/L	E350.1	0.0492	0.0500	10.00	0	94.1	90 - 110				
Lab Sample ID: LCS-60568 Date Analyzed: 01/31/2019 1422h													
Test Code: NH3-W-350.1 Date Prepared: 01/31/2019 1005h													
Ammonia (as N)	9.20	mg/L	E350.1	0.0492	0.0500	10.00	0	92.0	90 - 110				
Lab Sample ID: LCS-R121866 Date Analyzed: 01/21/2019 1143h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.05	mg/L	E353.2	0.00538	0.0100	1.000	0	105	90 - 110				
Lab Sample ID: LCS-R122016 Date Analyzed: 01/23/2019 1130h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	182	mg/L	SM2540C	8.00	10.0	205.0	0	88.8	80 - 120				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: WC
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R121952													
Date Analyzed: 01/23/2019 1021h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0581	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0353	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.102	0.750								
Lab Sample ID: MB-R121888													
Date Analyzed: 01/22/2019 800h													
Test Code: ALK-W-2320B-LL													
Bicarbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.965	1.00								
Carbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.965	1.00								
Lab Sample ID: MB-60398													
Date Analyzed: 01/22/2019 1414h													
Test Code: NH3-W-350.1													
Date Prepared: 01/22/2019 1035h													
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
Lab Sample ID: MB-60568													
Date Analyzed: 01/31/2019 1421h													
Test Code: NH3-W-350.1													
Date Prepared: 01/31/2019 1005h													
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
Lab Sample ID: MB-R121866													
Date Analyzed: 01/21/2019 1141h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00538	0.0100								
Lab Sample ID: MB-R122016													
Date Analyzed: 01/23/2019 1130h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.00	10.0								



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: WC
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901434-005BMS	Date Analyzed: 01/23/2019 1454h												
Test Code: 300.0-W													
Chloride	1,120	mg/L	E300.0	11.6	20.0	1,000	157	96.2	90 - 110				
Fluoride	959	mg/L	E300.0	7.06	20.0	1,000	0	95.9	90 - 110				
Sulfate	1,720	mg/L	E300.0	20.4	150	1,000	704	102	90 - 110				
Lab Sample ID: 1901434-001BMS	Date Analyzed: 01/22/2019 800h												
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,320	mg/L	SM2320B	0.965	1.00	1,000	322	100	80 - 120				
Lab Sample ID: 1901434-001DMS	Date Analyzed: 01/22/2019 1442h												
Test Code: NH3-W-350.1	Date Prepared: 01/22/2019 1035h												
Ammonia (as N)	17.4	mg/L	E350.1	0.0492	0.0500	10.00	0.805	166	90 - 110				1
Lab Sample ID: 1901434-002DMS	Date Analyzed: 01/22/2019 1444h												
Test Code: NH3-W-350.1	Date Prepared: 01/22/2019 1035h												
Ammonia (as N)	16.4	mg/L	E350.1	0.0492	0.0500	10.00	0.0895	163	90 - 110				1
Lab Sample ID: 1901434-003DMS	Date Analyzed: 01/31/2019 1429h												
Test Code: NH3-W-350.1	Date Prepared: 01/31/2019 1005h												
Ammonia (as N)	13.8	mg/L	E350.1	0.0492	0.0500	10.00	0.522	132	90 - 110				1
Lab Sample ID: 1901434-001DMS	Date Analyzed: 01/21/2019 1203h												
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.6	mg/L	E353.2	0.0538	0.100	10.00	0.0339	106	90 - 110				

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: WC
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901434-005BMSD Date Analyzed: 01/23/2019 1511h													
Test Code: 300.0-W													
Chloride	1,130	mg/L	E300.0	11.6	20.0	1,000	157	97.0	90 - 110	1120	0.699	20	
Fluoride	964	mg/L	E300.0	7.06	20.0	1,000	0	96.4	90 - 110	959	0.565	20	
Sulfate	1,710	mg/L	E300.0	20.4	150	1,000	704	101	90 - 110	1720	0.421	20	
Lab Sample ID: 1901434-001BMSD Date Analyzed: 01/22/2019 800h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,330	mg/L	SM2320B	0.965	1.00	1,000	322	101	80 - 120	1320	0.602	10	
Lab Sample ID: 1901434-001DMSD Date Analyzed: 01/22/2019 1443h													
Test Code: NH3-W-350.1 Date Prepared: 01/22/2019 1035h													
Ammonia (as N)	17.6	mg/L	E350.1	0.0492	0.0500	10.00	0.805	168	90 - 110	17.4	0.800	10	1
Lab Sample ID: 1901434-002DMSD Date Analyzed: 01/22/2019 1445h													
Test Code: NH3-W-350.1 Date Prepared: 01/22/2019 1035h													
Ammonia (as N)	16.5	mg/L	E350.1	0.0492	0.0500	10.00	0.0895	164	90 - 110	16.4	0.547	10	1
Lab Sample ID: 1901434-003DMSD Date Analyzed: 01/31/2019 1430h													
Test Code: NH3-W-350.1 Date Prepared: 01/31/2019 1005h													
Ammonia (as N)	13.5	mg/L	E350.1	0.0492	0.0500	10.00	0.522	130	90 - 110	13.8	1.76	10	1
Lab Sample ID: 1901434-001DMSD Date Analyzed: 01/21/2019 1205h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.8	mg/L	E353.2	0.0538	0.100	10.00	0.0339	108	90 - 110	10.6	1.96	10	

1 - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1901434

Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer

Dept: MSVOA

QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS VOC-2 012119A	Date Analyzed:		01/21/2019 1136h										
Test Code: 8260-W-DEN100													
Benzene	20.3	µg/L	SW8260C	0.0956	1.00	20.00	0	102	82 - 132				
Chloroform	19.8	µg/L	SW8260C	0.0998	1.00	20.00	0	99.0	85 - 124				
Methylene chloride	21.0	µg/L	SW8260C	0.400	1.00	20.00	0	105	65 - 154				
Naphthalene	19.0	µg/L	SW8260C	0.159	1.00	20.00	0	94.8	63 - 129				
Tetrahydrofuran	17.6	µg/L	SW8260C	0.681	1.00	20.00	0	87.9	59 - 125				
Toluene	20.8	µg/L	SW8260C	0.0858	1.00	20.00	0	104	69 - 129				
Xylenes, Total	61.5	µg/L	SW8260C	0.310	1.00	60.00	0	103	66 - 124				
Surr: 1,2-Dichloroethane-d4	50.6	µg/L	SW8260C			50.00		101	80 - 136				
Surr: 4-Bromofluorobenzene	50.7	µg/L	SW8260C			50.00		101	85 - 121				
Surr: Dibromofluoromethane	50.2	µg/L	SW8260C			50.00		100	78 - 132				
Surr: Toluene-d8	51.4	µg/L	SW8260C			50.00		103	81 - 123				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: MSVOA
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB VOC-2 012119A	Date Analyzed:	01/21/2019	1216h										
Test Code: 8260-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260C	0.587	20.0								
Acetone	< 20.0	µg/L	SW8260C	1.13	20.0								
Benzene	< 1.00	µg/L	SW8260C	0.0956	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260C	0.178	1.00								
Chloroform	< 1.00	µg/L	SW8260C	0.0998	1.00								
Chloromethane	< 1.00	µg/L	SW8260C	0.836	1.00								
Methylene chloride	< 1.00	µg/L	SW8260C	0.400	1.00								
Naphthalene	< 1.00	µg/L	SW8260C	0.159	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260C	0.681	1.00								
Toluene	< 1.00	µg/L	SW8260C	0.0858	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260C	0.310	1.00								
Surr: 1,2-Dichloroethane-d4	52.2	µg/L	SW8260C			50.00		104	80 - 136				
Surr: 4-Bromofluorobenzene	54.4	µg/L	SW8260C			50.00		109	85 - 121				
Surr: Dibromofluoromethane	50.2	µg/L	SW8260C			50.00		100	78 - 132				
Surr: Toluene-d8	53.4	µg/L	SW8260C			50.00		107	81 - 123				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901434
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: MSVOA
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901434-004AMS	Date Analyzed: 01/21/2019 1540h												
Test Code: 8260-W-DEN100													
Benzene	2,060	µg/L	SW8260C	9.56	100	2,000	0	103	66 - 145				
Chloroform	3,230	µg/L	SW8260C	9.98	100	2,000	1200	102	50 - 146				
Methylene chloride	2,150	µg/L	SW8260C	40.0	100	2,000	3.24	107	30 - 192				
Naphthalene	1,220	µg/L	SW8260C	15.9	100	2,000	0	60.8	41 - 131				
Tetrahydrofuran	1,620	µg/L	SW8260C	68.1	100	2,000	0	80.9	43 - 146				
Toluene	2,070	µg/L	SW8260C	8.58	100	2,000	0	104	18 - 192				
Xylenes, Total	5,660	µg/L	SW8260C	31.0	100	6,000	0	94.3	42 - 167				
Surr: 1,2-Dichloroethane-d4	4,940	µg/L	SW8260C			5,000		98.9	72 - 151				
Surr: 4-Bromofluorobenzene	5,050	µg/L	SW8260C			5,000		101	80 - 152				
Surr: Dibromofluoromethane	4,950	µg/L	SW8260C			5,000		99.0	72 - 135				
Surr: Toluene-d8	5,180	µg/L	SW8260C			5,000		104	80 - 124				

WORK ORDER Summary

Work Order: **1901434**

Page 1 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/4/2019

Client ID: ENE300

Contact: Garrin Palmer

Project: 1st Quarter Ground Water 2019

QC Level: III

WO Type: Project

Comments: QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com; tholliday@energyfuels.com;

DB

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1901434-001A	MW-11_01152019	1/15/2019 1200h	1/21/2019 1015h	8260-W-DEN100	Aqueous	VOCFridge	3
<i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>							
1901434-001B				300.0-W		df - wc	1
<i>3 SEL Analytes: CL F SO4</i>							
				ALK-W-2320B-LL		df - wc	
<i>2 SEL Analytes: ALKB ALKC</i>							
1901434-001C				TDS-W-2540C		df - tds	
<i>1 SEL Analytes: TDS</i>							
1901434-001D				NH3-W-350.1		df - no2/no3 & nh3	
<i>1 SEL Analytes: NH3N</i>							
				NH3-W-PR		df - no2/no3 & nh3	
				NO2/NO3-W-353.2		df - no2/no3 & nh3	
<i>1 SEL Analytes: NO3NO2N</i>							
1901434-001E				200.7-DIS		df-met	
<i>5 SEL Analytes: CA MG K NA V</i>							
				200.7-DIS-PR		df-met	
				200.8-DIS		df-met	
<i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>							
				200.8-DIS-PR		df-met	
				HG-DW-DIS-245.1		df-met	
<i>1 SEL Analytes: HG</i>							
				HG-DW-DIS-PR		df-met	
				IONBALANCE		df-met	
<i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>							
1901434-002A	MW-14_01172019	1/17/2019 1000h	1/21/2019 1015h	8260-W-DEN100	Aqueous	VOCFridge	3
<i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>							
1901434-002B				300.0-W		df - wc	1
<i>3 SEL Analytes: CL F SO4</i>							
				ALK-W-2320B-LL		df - wc	
<i>2 SEL Analytes: ALKB ALKC</i>							
1901434-002C				TDS-W-2540C		df - tds	
<i>1 SEL Analytes: TDS</i>							

WORK ORDER Summary

Work Order: **1901434** Page 2 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/4/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1901434-002D	MW-14_01172019	1/17/2019 1000h	1/21/2019 1015h	NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>	Aqueous	df - no2/no3 & nh3	1
				NH3-W-PR		df - no2/no3 & nh3	
				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		df - no2/no3 & nh3	
1901434-002E				200.7-DIS <i>5 SEL Analytes: CA MG K NA V</i>		df-met	
				200.7-DIS-PR		df-met	
				200.8-DIS <i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>		df-met	
				200.8-DIS-PR		df-met	
				HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>		df-met	
				HG-DW-DIS-PR		df-met	
				IONBALANCE <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		df-met	
1901434-003A	MW-25_01162019	1/16/2019 1110h	1/21/2019 1015h	8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	VOCFridge	3
1901434-003B				300.0-W <i>3 SEL Analytes: CL F SO4</i>		df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>		df - wc	
1901434-003C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		df - tds	
1901434-003D				NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>		df - no2/no3 & nh3	
				NH3-W-PR		df - no2/no3 & nh3	
				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		df - no2/no3 & nh3	
1901434-003E				200.7-DIS <i>5 SEL Analytes: CA MG K NA V</i>		df-met	
				200.7-DIS-PR		df-met	
				200.8-DIS <i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>		df-met	
				200.8-DIS-PR		df-met	
				HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>		df-met	

WORK ORDER Summary

Work Order: **1901434** Page 3 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/4/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1901434-003E	MW-25_01162019	1/16/2019 1110h	1/21/2019 1015h	HG-DW-DIS-PR	Aqueous	df-met	1
				IONBALANCE		df-met	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc			
1901434-004A	MW-26_01172019	1/17/2019 0830h	1/21/2019 1015h	8260-W-DEN100	Aqueous	VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4			
1901434-004B				300.0-W		df - wc	1
				3 SEL Analytes: CL F SO4			
				ALK-W-2320B-LL		df - wc	
				2 SEL Analytes: ALKB ALKC			
1901434-004C				TDS-W-2540C		df - tds	
				1 SEL Analytes: TDS			
1901434-004D				NH3-W-350.1		df - no2/no3 & nh3	
				1 SEL Analytes: NH3N			
				NH3-W-PR		df - no2/no3 & nh3	
				NO2/NO3-W-353.2		df - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N			
1901434-004E				200.7-DIS		df-met	
				5 SEL Analytes: CA MG K NA V			
				200.7-DIS-PR		df-met	
				200.8-DIS		df-met	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN			
				200.8-DIS-PR		df-met	
				HG-DW-DIS-245.1		df-met	
				1 SEL Analytes: HG			
				HG-DW-DIS-PR		df-met	
				IONBALANCE		df-met	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc			
1901434-005A	MW-30_01162019	1/16/2019 1055h	1/21/2019 1015h	8260-W-DEN100	Aqueous	VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4			
1901434-005B				300.0-W		df - wc	1
				3 SEL Analytes: CL F SO4			
				ALK-W-2320B-LL		df - wc	
				2 SEL Analytes: ALKB ALKC			
1901434-005C				TDS-W-2540C		df - tds	
				1 SEL Analytes: TDS			
1901434-005D				NH3-W-350.1		df - no2/no3 & nh3	
				1 SEL Analytes: NH3N			

WORK ORDER Summary

Work Order: **1901434** Page 4 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/4/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1901434-005D	MW-30_01162019	1/16/2019 1055h	1/21/2019 1015h	NH3-W-PR	Aqueous	df - no2/no3 & nh3	1
				NO2/NO3-W-353.2		df - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N			
1901434-005E				200.7-DIS		df-met	
				5 SEL Analytes: CA MG K NA V			
				200.7-DIS-PR		df-met	
				200.8-DIS		df-met	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN			
				200.8-DIS-PR		df-met	
				HG-DW-DIS-245.1		df-met	
				1 SEL Analytes: HG			
				HG-DW-DIS-PR		df-met	
				IONBALANCE		df-met	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc			
1901434-006A	MW-31_01152019	1/15/2019 1330h	1/21/2019 1015h	8260-W-DEN100	Aqueous	VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4			
1901434-006B				300.0-W		df - wc	1
				3 SEL Analytes: CL F SO4			
				ALK-W-2320B-LL		df - wc	
				2 SEL Analytes: ALKB ALKC			
1901434-006C				TDS-W-2540C		df - tds	
				1 SEL Analytes: TDS			
1901434-006D				NH3-W-350.1		df - no2/no3 & nh3	
				1 SEL Analytes: NH3N			
				NH3-W-PR		df - no2/no3 & nh3	
				NO2/NO3-W-353.2		df - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N			
1901434-006E				200.7-DIS		df-met	
				5 SEL Analytes: CA MG K NA V			
				200.7-DIS-PR		df-met	
				200.8-DIS		df-met	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN			
				200.8-DIS-PR		df-met	
				HG-DW-DIS-245.1		df-met	
				1 SEL Analytes: HG			
				HG-DW-DIS-PR		df-met	

WORK ORDER Summary

Work Order: **1901434** Page 5 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/4/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1901434-006E	MW-31_01152019	1/15/2019 1330h	1/21/2019 1015h	IONBALANCE	Aqueous		df-met	1
<i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>								
1901434-007A	Trip Blank	1/15/2019 1200h	1/21/2019 1015h	8260-W-DEN100	Aqueous		VOCFridge	3
<i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>								
1901434-008A	MW-05_01172019	1/17/2019 1045h	1/21/2019 1015h	200.8-DIS	Aqueous		df - dis met	1
<i>1 SEL Analytes: U</i>								
							df - dis met	
200.8-DIS-PR								
1901434-009A	MW-35_01162019	1/16/2019 1300h	1/21/2019 1015h	NH3-W-350.1	Aqueous		df - nh3	1
<i>1 SEL Analytes: NH3N</i>								
							df - nh3	
NH3-W-PR								

AWAL Use Only - Close Hold Times

Test Code	# Samps	Min. days left
TDS-W-2540C	6	-1.04



**American West
Analytical Laboratories**

463 W. 3600 S. Salt Lake City, UT 84115
 Phone # (801) 263-8686 Toll Free # (888) 263-8686
 Fax # (801) 263-8687 Email awal@awal-labs.com
 www.awal-labs.com

CHAIN OF CUSTODY

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

1901434

AWAL Lab Sample Set #
 Page 1 of 2

QC Level: 3	Turn Around Time: Standard	Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.	Due Date: 2/4/19											
<table border="1"> <tr> <td># of Containers</td> <td>Sample Matrix</td> <td>NO2/NO3 (353.2)</td> <td>NHS (4500G or 350.1)</td> <td>Fl, Cl, SO4 (4500 or 300.0)</td> <td>TDS (2540C)</td> <td>Carb/Bicarb (2320B)</td> <td>Dissolved Metals (200.7/200.8/245.1)</td> <td>As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Mo, Ni, Se, Ag, Ti, Sn, U, V, Zn, Na, K, Mg, Ca</td> <td>Ion Balance</td> <td>VOCs (8260C)</td> </tr> </table>		# of Containers	Sample Matrix	NO2/NO3 (353.2)	NHS (4500G or 350.1)	Fl, Cl, SO4 (4500 or 300.0)	TDS (2540C)	Carb/Bicarb (2320B)	Dissolved Metals (200.7/200.8/245.1)	As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Mo, Ni, Se, Ag, Ti, Sn, U, V, Zn, Na, K, Mg, Ca	Ion Balance	VOCs (8260C)	<input checked="" type="checkbox"/> Include EDD: LOCUS UPLOAD EXCEL <input checked="" type="checkbox"/> Field Filtered For: Dissolved Metals	Laboratory Use Only Samples Were: UPS <input checked="" type="checkbox"/> Shipped or hand delivered 2 Ambient <input checked="" type="checkbox"/> Chilled 3 Temperature 23.3 °C 4 Received Broken/Leaking (Improperly Sealed) Y N 5 Properly Preserved <input checked="" type="checkbox"/> Y N Checked at bench Y N 6 Received Within Holding Times <input checked="" type="checkbox"/> Y N
# of Containers	Sample Matrix	NO2/NO3 (353.2)	NHS (4500G or 350.1)	Fl, Cl, SO4 (4500 or 300.0)	TDS (2540C)	Carb/Bicarb (2320B)	Dissolved Metals (200.7/200.8/245.1)	As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Mo, Ni, Se, Ag, Ti, Sn, U, V, Zn, Na, K, Mg, Ca	Ion Balance	VOCs (8260C)				
		For Compliance With: <input type="checkbox"/> NELAP <input type="checkbox"/> RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/> ELAP / A2LA <input type="checkbox"/> NLLAP <input type="checkbox"/> Non-Compliance <input type="checkbox"/> Other:												
		Known Hazards & Sample Comments												
Sample ID:	Date Sampled	Time Sampled												
1 MW-11_01152019	1/15/2019	1200												
2 MW-14_01172019	1/17/2019	1000												
3 MW-25_01162019	1/16/2019	1110												
4 MW-26_01172019	1/17/2019	830												
5 MW-30_01162019	1/16/2019	1055												
6 MW-31_01152019	1/15/2019	1330												
7 TRIP BLANK	1/15/2019	1200												
8 Comp Blank	1/15/2019													
9														
10														
11														
12														

Client: **Energy Fuels Resources, Inc.**
 Address: **6425 S. Hwy. 191**
Blanding, UT 84511
 Contact: **Tanner Holliday**
 Phone #: **(435) 678-2221** Cell #: _____
 Email: **gpalmer@energyfuels.com; KWeinel@energyfuels.com; tholliday@energyfuels.com**
 Project Name: **1st Quarter Groundwater 2019**
 Project #: _____
 PO #: _____
 Sampler Name: **Tanner Holliday**

COC Tape Was:

1 Present on Outer Package	Y	N	NA
2 Unbroken on Outer Package	Y	N	NA
3 Present on Sample	Y	N	NA
4 Unbroken on Sample	Y	N	NA

Discrepancies Between Sample Labels and COC Record?
 Y N

Relinquished by: Signature <i>Tanner Holliday</i>	Date: 1/17/2019	Received by: Signature	Date:
Print Name: Tanner Holliday	Time: 1130	Print Name:	Time:
Relinquished by: Signature	Date:	Received by: Signature	Date:
Print Name:	Time:	Print Name:	Time:
Relinquished by: Signature	Date:	Received by: Signature	Date:
Print Name:	Time:	Print Name:	Time:
Relinquished by: Signature	Date:	Received by: Signature <i>Denise Bruun</i>	Date: 1/21/19
Print Name:	Time:	Print Name: Denise Bruun	Time: 10:15

Special Instructions:

Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.



**American West
Analytical Laboratories**

463 W. 3600 S. Salt Lake City, UT 84115
Phone # (801) 263-8686 Toll Free # (888) 263-8686
Fax # (801) 263-8687 Email awal@awal-labs.com
www.awal-labs.com

CHAIN OF CUSTODY

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

19014394
AWAL Lab Sample Set # 28
Page 2 of 2 1/21/19

QC Level: 3	Turn Around Time: Standard	Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.	Due Date: 2/4/19
-----------------------	--------------------------------------	--	----------------------------

Client: **Energy Fuels Resources, Inc.**

Address: **6425 S. Hwy. 191
Blanding, UT 84511**

Contact: **Tanner Holliday**

Phone #: **(435) 678-2221** Cell #: _____

Email: **tholliday@energyfuels.com; KWeinel@energyfuels.com**

Project Name: **1st Quarter Ground Water 2019**

Project #: _____

PO #: _____

Sampler Name: **Tanner Holliday**

Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	Cl (4500 or 300.0)	TDS (2540C)	Dissolved Uranium (200.7/200.8)	Dissolved Cadmium (200.7/200.8)	Dissolved Selenium (200.7/200.8)	Dissolved Thallium (200.7/200.8)	SO4 (4500 or 300.0)	F1 (4500 or 300.0)	Dissolved Beryllium (200.7/200.8)	Ammonia (350.1)	Known Hazards & Sample Comments	Laboratory Use Only
MW-05_01172019	1/17/2019	1045	1	W				X									Samples Were: WPS <input checked="" type="checkbox"/> shipped or hand delivered Ambient or Cooled: Cooled Temperature: 2.3 °C Received Broken/Leaking (Improperly Sealed): Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Properly Preserved: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Checked at bench: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Received Within Holding Times: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Present on Outer Package: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA Unbroken on Outer Package: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA Present on Sample: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA Unbroken on Sample: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA Discrepancies Between Sample Labels and COC Record?: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
MW-35_01162019	1/16/2019	1300	1	W											X		Present on Outer Package: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA Unbroken on Outer Package: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA Present on Sample: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA Unbroken on Sample: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA Discrepancies Between Sample Labels and COC Record?: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Relinquished by: Tanner Holliday Signature: _____ Date: 1/17/2019 Time: _____	Received by: _____ Signature: _____ Date: _____ Time: _____	Special Instructions: Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.
Print Name: Tanner Holliday Date: 1/17/2019 Time: _____	Print Name: _____ Date: _____ Time: _____	
Relinquished by: _____ Signature: _____ Date: _____ Time: _____	Received by: _____ Signature: _____ Date: _____ Time: _____	
Print Name: _____ Date: _____ Time: _____	Print Name: _____ Date: _____ Time: _____	
Relinquished by: _____ Signature: _____ Date: _____ Time: _____	Received by: Denise Bruun Signature: _____ Date: 1/21/19 Time: 10:15	
Print Name: _____ Date: _____ Time: _____	Print Name: Denise Bruun Date: 1/21/19 Time: 10:15	



Garrin Palmer
Energy Fuels Resources, Inc.
6425 S. Hwy 191
Blanding, UT 84511
TEL: (303) 389-4134

RE: 1st Quarter Ground Water 2019

Dear Garrin Palmer:

Lab Set ID: 1901565

3440 South 700 West
Salt Lake City, UT 84119

American West Analytical Laboratories received sample(s) on 1/25/2019 for the analyses presented in the following report.

Phone: (801) 263-8686
Toll Free: (888) 263-8686
Fax: (801) 263-8687
e-mail: awal@awal-labs.com
web: www.awal-labs.com

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, Wyoming, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Approved by:

Jose G. Rocha	Digitally signed by Jose G. Rocha
	DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou, email=jose@awal-labs.com, c=US
	Date: 2019.02.13 13:52:05 -07'00'

Laboratory Director or designee



SAMPLE SUMMARY

Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Set ID: 1901565
Date Received: 1/25/2019 940h

Contact: Garrin Palmer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1901565-001A	MW-12_01212019	1/21/2019 1445h	Aqueous	ICPMS Metals, Dissolved
1901565-002A	MW-24_01232019	1/23/2019 800h	Aqueous	ICPMS Metals, Dissolved
1901565-003A	MW-27_01212019	1/21/2019 1120h	Aqueous	Anions, E300.0
1901565-003B	MW-27_01212019	1/21/2019 1120h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901565-004A	MW-28_01222019	1/22/2019 1115h	Aqueous	ICPMS Metals, Dissolved
1901565-004B	MW-28_01222019	1/22/2019 1115h	Aqueous	Anions, E300.0
1901565-005A	MW-32_01222019	1/22/2019 1355h	Aqueous	Anions, E300.0
1901565-006A	MW-38_01242019	1/24/2019 900h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901565-006B	MW-38_01242019	1/24/2019 900h	Aqueous	Anions, E300.0
1901565-006B	MW-38_01242019	1/24/2019 900h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901565-006C	MW-38_01242019	1/24/2019 900h	Aqueous	Total Dissolved Solids, A2540C
1901565-006D	MW-38_01242019	1/24/2019 900h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901565-006D	MW-38_01242019	1/24/2019 900h	Aqueous	Ammonia, Aqueous
1901565-006E	MW-38_01242019	1/24/2019 900h	Aqueous	Ion Balance
1901565-006E	MW-38_01242019	1/24/2019 900h	Aqueous	Mercury, Drinking Water Dissolved
1901565-006E	MW-38_01242019	1/24/2019 900h	Aqueous	ICP Metals, Dissolved
1901565-006E	MW-38_01242019	1/24/2019 900h	Aqueous	ICPMS Metals, Dissolved
1901565-007A	MW-39_01232019	1/23/2019 1345h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901565-007B	MW-39_01232019	1/23/2019 1345h	Aqueous	Anions, E300.0
1901565-007B	MW-39_01232019	1/23/2019 1345h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901565-007C	MW-39_01232019	1/23/2019 1345h	Aqueous	Total Dissolved Solids, A2540C
1901565-007D	MW-39_01232019	1/23/2019 1345h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901565-007D	MW-39_01232019	1/23/2019 1345h	Aqueous	Ammonia, Aqueous
1901565-007E	MW-39_01232019	1/23/2019 1345h	Aqueous	Ion Balance
1901565-007E	MW-39_01232019	1/23/2019 1345h	Aqueous	ICP Metals, Dissolved
1901565-007E	MW-39_01232019	1/23/2019 1345h	Aqueous	ICPMS Metals, Dissolved
1901565-007E	MW-39_01232019	1/23/2019 1345h	Aqueous	Mercury, Drinking Water Dissolved
1901565-008A	MW-40_01232019	1/23/2019 1130h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901565-008B	MW-40_01232019	1/23/2019 1130h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level



Client: Energy Fuels Resources, Inc.
Project: 1st Quarter Ground Water 2019
Lab Set ID: 1901565
Date Received: 1/25/2019 940h

Contact: Garrin Palmer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1901565-008B	MW-40_01232019	1/23/2019 1130h	Aqueous	Anions, E300.0
1901565-008C	MW-40_01232019	1/23/2019 1130h	Aqueous	Total Dissolved Solids, A2540C
1901565-008D	MW-40_01232019	1/23/2019 1130h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901565-008D	MW-40_01232019	1/23/2019 1130h	Aqueous	Ammonia, Aqueous
1901565-008E	MW-40_01232019	1/23/2019 1130h	Aqueous	Mercury, Drinking Water Dissolved
1901565-008E	MW-40_01232019	1/23/2019 1130h	Aqueous	Ion Balance
1901565-008E	MW-40_01232019	1/23/2019 1130h	Aqueous	ICP Metals, Dissolved
1901565-008E	MW-40_01232019	1/23/2019 1130h	Aqueous	ICPMS Metals, Dissolved
1901565-009A	MW-36_01232019	1/23/2019 925h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901565-009B	MW-36_01232019	1/23/2019 925h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901565-009B	MW-36_01232019	1/23/2019 925h	Aqueous	Anions, E300.0
1901565-009C	MW-36_01232019	1/23/2019 925h	Aqueous	Total Dissolved Solids, A2540C
1901565-009D	MW-36_01232019	1/23/2019 925h	Aqueous	Ammonia, Aqueous
1901565-009D	MW-36_01232019	1/23/2019 925h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901565-009E	MW-36_01232019	1/23/2019 925h	Aqueous	Mercury, Drinking Water Dissolved
1901565-009E	MW-36_01232019	1/23/2019 925h	Aqueous	ICPMS Metals, Dissolved
1901565-009E	MW-36_01232019	1/23/2019 925h	Aqueous	Ion Balance
1901565-009E	MW-36_01232019	1/23/2019 925h	Aqueous	ICP Metals, Dissolved
1901565-010A	MW-65_01232019	1/23/2019 925h	Aqueous	VOA by GC/MS Method 8260C/5030C
1901565-010B	MW-65_01232019	1/23/2019 925h	Aqueous	Anions, E300.0
1901565-010B	MW-65_01232019	1/23/2019 925h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1901565-010C	MW-65_01232019	1/23/2019 925h	Aqueous	Total Dissolved Solids, A2540C
1901565-010D	MW-65_01232019	1/23/2019 925h	Aqueous	Nitrite/Nitrate (as N), E353.2
1901565-010D	MW-65_01232019	1/23/2019 925h	Aqueous	Ammonia, Aqueous
1901565-010E	MW-65_01232019	1/23/2019 925h	Aqueous	Ion Balance
1901565-010E	MW-65_01232019	1/23/2019 925h	Aqueous	ICP Metals, Dissolved
1901565-010E	MW-65_01232019	1/23/2019 925h	Aqueous	ICPMS Metals, Dissolved
1901565-010E	MW-65_01232019	1/23/2019 925h	Aqueous	Mercury, Drinking Water Dissolved
1901565-011A	Trip Blank	1/23/2019 925h	Aqueous	VOA by GC/MS Method 8260C/5030C

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Jose Rocha
QA Officer

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report



American West
ANALYTICAL LABORATORIES

Inorganic Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Set ID: 1901565

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Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt: 1/25/2019
Date(s) of Collection: 1/21-1/24/2019
Sample Condition: Intact
C-O-C Discrepancies: See Chain of Custody

Holding Time and Preservation Requirements: The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

Preparation and Analysis Requirements: The samples were analyzed following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD, DUP:

Method Blanks (MB): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Samples (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1901434-001D	Ammonia	MS/MSD	Sample matrix interference
1901565-003B	Nitrate-Nitrite	MS	Sample matrix interference
1901565-006E	Calcium	MSD	High analyte concentration
1901565-006E	Magnesium	MSD	High analyte concentration
1901565-006E	Sodium	MS/MSD	High analyte concentration
1901565-010D	Ammonia	MS/MSD	Sample matrix interference

Duplicate (DUP): The parameters that required a duplicate analysis had RPDs within the control limits.

Corrective Action: None required.



American West
ANALYTICAL LABORATORIES

Volatile Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: 1st Quarter Ground Water 2019
Lab Set ID: 1901565

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Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt: 1/25/2019
Date(s) of Collection: 1/21-1/24/2019
Sample Condition: Intact
C-O-C Discrepancies: See Chain of Custody
Method: SW-846 8260C/5030C
Analysis: Volatile Organic Compounds

General Set Comments: No target analytes were observed above reporting limits.

Holding Time and Preservation Requirements: All samples were received in appropriate containers and properly preserved. The analysis and preparation of all samples were performed within the method holding times following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD, and Surrogates:

Method Blanks (MBs): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Sample (LCSs): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicate (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

Surrogates: All surrogate recoveries were within established limits.

Corrective Action: None required.



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Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-60478													
Date Analyzed:		02/06/2019 1731h											
Test Code:		200.7-DIS											
Date Prepared:		01/25/2019 1122h											
Calcium	10.1	mg/L	E200.7	0.0729	1.00	10.00	0	101	85 - 115				
Magnesium	10.5	mg/L	E200.7	0.0575	1.00	10.00	0	105	85 - 115				
Potassium	10.2	mg/L	E200.7	0.176	1.00	10.00	0	102	85 - 115				
Sodium	10.2	mg/L	E200.7	0.194	1.00	10.00	0	102	85 - 115				
Vanadium	0.202	mg/L	E200.7	0.00113	0.00500	0.2000	0	101	85 - 115				
Lab Sample ID: LCS-60479													
Date Analyzed:		02/06/2019 1825h											
Test Code:		200.8-DIS											
Date Prepared:		01/25/2019 1122h											
Beryllium	0.199	mg/L	E200.8	0.000256	0.00200	0.2000	0	99.3	85 - 115				
Cadmium	0.197	mg/L	E200.8	0.0000898	0.000500	0.2000	0	98.5	85 - 115				
Lead	0.197	mg/L	E200.8	0.000524	0.00200	0.2000	0	98.7	85 - 115				
Silver	0.188	mg/L	E200.8	0.000155	0.00200	0.2000	0	93.8	85 - 115				
Lab Sample ID: LCS-60479													
Date Analyzed:		02/07/2019 1908h											
Test Code:		200.8-DIS											
Date Prepared:		01/25/2019 1122h											
Arsenic	0.189	mg/L	E200.8	0.000338	0.00200	0.2000	0	94.3	85 - 115				
Chromium	0.195	mg/L	E200.8	0.00124	0.00200	0.2000	0	97.4	85 - 115				
Cobalt	0.193	mg/L	E200.8	0.000188	0.00400	0.2000	0	96.5	85 - 115				
Copper	0.194	mg/L	E200.8	0.00196	0.00200	0.2000	0	97.1	85 - 115				
Iron	0.966	mg/L	E200.8	0.0324	0.100	1.000	0	96.6	85 - 115				
Manganese	0.196	mg/L	E200.8	0.00148	0.00200	0.2000	0	97.9	85 - 115				
Molybdenum	0.195	mg/L	E200.8	0.000702	0.00200	0.2000	0	97.4	85 - 115				
Nickel	0.197	mg/L	E200.8	0.000924	0.00200	0.2000	0	98.7	85 - 115				
Tin	1.01	mg/L	E200.8	0.00302	0.00400	1.000	0	101	85 - 115				
Uranium	0.204	mg/L	E200.8	0.000628	0.00200	0.2000	0	102	85 - 115				
Lab Sample ID: LCS-60479													
Date Analyzed:		02/08/2019 1046h											
Test Code:		200.8-DIS											
Date Prepared:		01/25/2019 1122h											
Selenium	0.186	mg/L	E200.8	0.000296	0.00200	0.2000	0	92.9	85 - 115				



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Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-60479	Date Analyzed: 02/08/2019 1046h												
Test Code: 200.8-DIS	Date Prepared: 01/25/2019 1122h												
Thallium	0.185	mg/L	E200.8	0.000288	0.00200	0.2000	0	92.6	85 - 115				
Zinc	0.962	mg/L	E200.8	0.00486	0.00500	1.000	0	96.2	85 - 115				
Lab Sample ID: LCS-60487	Date Analyzed: 01/28/2019 755h												
Test Code: HG-DW-DIS-245.1	Date Prepared: 01/25/2019 1600h												
Mercury	0.00328	mg/L	E245.1	0.0000307	0.000150	0.003330	0	98.5	85 - 115				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-60478	Date Analyzed:	02/06/2019	1728h										
Test Code:	200.7-DIS	Date Prepared:	01/25/2019	1122h									
Calcium	< 1.00	mg/L	E200.7	0.0729	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.0575	1.00								
Potassium	< 1.00	mg/L	E200.7	0.176	1.00								
Sodium	< 1.00	mg/L	E200.7	0.194	1.00								
Vanadium	< 0.00500	mg/L	E200.7	0.00113	0.00500								
Lab Sample ID: MB-60479	Date Analyzed:	02/06/2019	1822h										
Test Code:	200.8-DIS	Date Prepared:	01/25/2019	1122h									
Beryllium	< 0.000200	mg/L	E200.8	0.0000256	0.000200								
Cadmium	< 0.0000500	mg/L	E200.8	0.00000898	0.0000500								
Lead	< 0.000200	mg/L	E200.8	0.0000524	0.000200								
Silver	< 0.000200	mg/L	E200.8	0.0000155	0.000200								
Lab Sample ID: MB-60479	Date Analyzed:	02/07/2019	1905h										
Test Code:	200.8-DIS	Date Prepared:	01/25/2019	1122h									
Arsenic	< 0.000200	mg/L	E200.8	0.0000338	0.000200								
Chromium	< 0.000200	mg/L	E200.8	0.000124	0.000200								
Cobalt	< 0.000400	mg/L	E200.8	0.0000188	0.000400								
Copper	< 0.000200	mg/L	E200.8	0.000196	0.000200								
Iron	< 0.0100	mg/L	E200.8	0.00324	0.0100								
Manganese	< 0.000200	mg/L	E200.8	0.000148	0.000200								
Molybdenum	< 0.000200	mg/L	E200.8	0.0000702	0.000200								
Nickel	< 0.000200	mg/L	E200.8	0.0000924	0.000200								
Tin	< 0.000400	mg/L	E200.8	0.000302	0.000400								
Uranium	< 0.000200	mg/L	E200.8	0.0000628	0.000200								
Lab Sample ID: MB-60479	Date Analyzed:	02/08/2019	1043h										
Test Code:	200.8-DIS	Date Prepared:	01/25/2019	1122h									
Selenium	< 0.000500	mg/L	E200.8	0.0000740	0.000500								



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-60479	Date Analyzed:	02/08/2019	1043h										
Test Code: 200.8-DIS	Date Prepared:	01/25/2019	1122h										
Thallium	< 0.000500	mg/L	E200.8	0.0000720	0.000500								
Zinc	< 0.00125	mg/L	E200.8	0.00122	0.00125								
Lab Sample ID: MB-60487	Date Analyzed:	01/28/2019	753h										
Test Code: HG-DW-DIS-245.1	Date Prepared:	01/25/2019	1600h										
Mercury	< 0.000150	mg/L	E245.1	0.0000307	0.000150								



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1901565

Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer

Dept: ME

QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901565-006EMS		Date Analyzed: 02/06/2019 1737h											
Test Code: 200.7-DIS		Date Prepared: 01/25/2019 1122h											
Calcium	544	mg/L	E200.7	1.46	20.0	10.00	531	129	70 - 130				
Magnesium	222	mg/L	E200.7	1.15	20.0	10.00	210	113	70 - 130				
Sodium	491	mg/L	E200.7	3.88	20.0	10.00	474	163	70 - 130				2
Lab Sample ID: 1901565-006EMS		Date Analyzed: 02/06/2019 1814h											
Test Code: 200.7-DIS		Date Prepared: 01/25/2019 1122h											
Potassium	39.7	mg/L	E200.7	0.176	1.00	10.00	29.2	105	70 - 130				
Vanadium	0.200	mg/L	E200.7	0.00113	0.00500	0.2000	0	99.8	70 - 130				
Lab Sample ID: 1901565-006EMS		Date Analyzed: 02/06/2019 1846h											
Test Code: 200.8-DIS		Date Prepared: 01/25/2019 1122h											
Beryllium	0.187	mg/L	E200.8	0.000256	0.00200	0.2000	0	93.3	75 - 125				
Cadmium	0.196	mg/L	E200.8	0.0000898	0.000500	0.2000	0.0000994	98.0	75 - 125				
Molybdenum	0.216	mg/L	E200.8	0.000702	0.00200	0.2000	0.00909	103	75 - 125				
Silver	0.183	mg/L	E200.8	0.000155	0.00200	0.2000	0	91.6	75 - 125				
Tin	1.05	mg/L	E200.8	0.00302	0.00400	1.000	0	105	75 - 125				
Lab Sample ID: 1901565-006EMS		Date Analyzed: 02/07/2019 1920h											
Test Code: 200.8-DIS		Date Prepared: 01/25/2019 1122h											
Arsenic	0.198	mg/L	E200.8	0.000338	0.00200	0.2000	0.000333	99.1	75 - 125				
Chromium	0.191	mg/L	E200.8	0.00124	0.00200	0.2000	0.000324	95.4	75 - 125				
Cobalt	0.190	mg/L	E200.8	0.000188	0.00400	0.2000	0.0000956	94.9	75 - 125				
Copper	0.185	mg/L	E200.8	0.00196	0.00200	0.2000	0.00023	92.2	75 - 125				
Lead	0.200	mg/L	E200.8	0.000524	0.00200	0.2000	0	99.8	75 - 125				
Manganese	0.197	mg/L	E200.8	0.00148	0.00200	0.2000	0.00135	97.7	75 - 125				
Nickel	0.188	mg/L	E200.8	0.000924	0.00200	0.2000	0.000508	93.8	75 - 125				
Uranium	0.210	mg/L	E200.8	0.000628	0.00200	0.2000	0.00678	102	75 - 125				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1901565

Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer

Dept: ME

QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901565-006EMS		Date Analyzed: 02/08/2019 1052h											
Test Code: 200.8-DIS		Date Prepared: 01/25/2019 1122h											
Iron	0.936	mg/L	E200.8	0.0324	0.100	1.000	0	93.6	75 - 125				
Selenium	0.352	mg/L	E200.8	0.000296	0.00200	0.2000	0.165	93.6	75 - 125				
Thallium	0.176	mg/L	E200.8	0.000288	0.00200	0.2000	0	88.1	75 - 125				
Zinc	0.962	mg/L	E200.8	0.00486	0.00500	1.000	0.0144	94.8	75 - 125				
Lab Sample ID: 1901434-001EMS		Date Analyzed: 01/28/2019 803h											
Test Code: HG-DW-DIS-245.1		Date Prepared: 01/25/2019 1600h											
Mercury	0.00333	mg/L	E245.1	0.0000307	0.000150	0.003330	0	100	85 - 115				
Lab Sample ID: 1901565-006EMS		Date Analyzed: 01/28/2019 823h											
Test Code: HG-DW-DIS-245.1		Date Prepared: 01/25/2019 1600h											
Mercury	0.00309	mg/L	E245.1	0.0000307	0.000150	0.003330	0	92.8	85 - 115				

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901565-006EMSD													
Date Analyzed:		02/06/2019 1740h											
Test Code:		200.7-DIS											
Date Prepared:		01/25/2019 1122h											
Calcium	521	mg/L	E200.7	1.46	20.0	10.00	531	-93.3	70 - 130	544	4.17	20	2
Magnesium	212	mg/L	E200.7	1.15	20.0	10.00	210	19.1	70 - 130	222	4.35	20	2
Sodium	473	mg/L	E200.7	3.88	20.0	10.00	474	-11.6	70 - 130	491	3.62	20	2
Lab Sample ID: 1901565-006EMSD													
Date Analyzed:		02/06/2019 1817h											
Test Code:		200.7-DIS											
Date Prepared:		01/25/2019 1122h											
Potassium	39.2	mg/L	E200.7	0.176	1.00	10.00	29.2	100	70 - 130	39.7	1.34	20	
Vanadium	0.199	mg/L	E200.7	0.00113	0.00500	0.2000	0	99.7	70 - 130	0.2	0.0953	20	
Lab Sample ID: 1901565-006EMSD													
Date Analyzed:		02/06/2019 1859h											
Test Code:		200.8-DIS											
Date Prepared:		01/25/2019 1122h											
Beryllium	0.190	mg/L	E200.8	0.000256	0.00200	0.2000	0	95.0	75 - 125	0.187	1.84	20	
Cadmium	0.195	mg/L	E200.8	0.0000898	0.000500	0.2000	0.0000994	97.4	75 - 125	0.196	0.607	20	
Molybdenum	0.215	mg/L	E200.8	0.000702	0.00200	0.2000	0.00909	103	75 - 125	0.216	0.400	20	
Silver	0.182	mg/L	E200.8	0.000155	0.00200	0.2000	0	91.0	75 - 125	0.183	0.699	20	
Tin	1.05	mg/L	E200.8	0.00302	0.00400	1.000	0	105	75 - 125	1.05	0.895	20	
Lab Sample ID: 1901565-006EMSD													
Date Analyzed:		02/07/2019 1923h											
Test Code:		200.8-DIS											
Date Prepared:		01/25/2019 1122h											
Arsenic	0.190	mg/L	E200.8	0.000338	0.00200	0.2000	0.000333	94.8	75 - 125	0.198	4.38	20	
Chromium	0.194	mg/L	E200.8	0.00124	0.00200	0.2000	0.000324	96.6	75 - 125	0.191	1.24	20	
Cobalt	0.194	mg/L	E200.8	0.000188	0.00400	0.2000	0.0000956	97.0	75 - 125	0.19	2.22	20	
Copper	0.192	mg/L	E200.8	0.00196	0.00200	0.2000	0.00023	95.8	75 - 125	0.185	3.75	20	
Lead	0.201	mg/L	E200.8	0.000524	0.00200	0.2000	0	100	75 - 125	0.2	0.557	20	
Manganese	0.199	mg/L	E200.8	0.00148	0.00200	0.2000	0.00135	98.8	75 - 125	0.197	1.14	20	
Nickel	0.193	mg/L	E200.8	0.000924	0.00200	0.2000	0.000508	96.2	75 - 125	0.188	2.49	20	
Uranium	0.211	mg/L	E200.8	0.000628	0.00200	0.2000	0.00678	102	75 - 125	0.21	0.605	20	



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901565-006EMSD		Date Analyzed: 02/08/2019 1055h											
Test Code: 200.8-DIS		Date Prepared: 01/25/2019 1122h											
Iron	0.950	mg/L	E200.8	0.0324	0.100	1.000	0	95.0	75 - 125	0.936	1.43	20	
Selenium	0.349	mg/L	E200.8	0.000296	0.00200	0.2000	0.165	92.2	75 - 125	0.352	0.794	20	
Thallium	0.177	mg/L	E200.8	0.000288	0.00200	0.2000	0	88.5	75 - 125	0.176	0.367	20	
Zinc	0.966	mg/L	E200.8	0.00486	0.00500	1.000	0.0144	95.2	75 - 125	0.962	0.381	20	
Lab Sample ID: 1901434-001EMSD		Date Analyzed: 01/28/2019 805h											
Test Code: HG-DW-DIS-245.1		Date Prepared: 01/25/2019 1600h											
Mercury	0.00321	mg/L	E245.1	0.0000307	0.000150	0.003330	0	96.4	85 - 115	0.00333	3.77	20	
Lab Sample ID: 1901565-006EMSD		Date Analyzed: 01/28/2019 825h											
Test Code: HG-DW-DIS-245.1		Date Prepared: 01/25/2019 1600h											
Mercury	0.00332	mg/L	E245.1	0.0000307	0.000150	0.003330	0	99.7	85 - 115	0.00309	7.23	20	

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1901565

Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer

Dept: WC

QC Type: DUP

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901565-006CDUP	Date Analyzed: 01/25/2019 1240h												
Test Code: TDS-W-2540C													
Total Dissolved Solids	3,790	mg/L	SM2540C	16.0	20.0					3870	2.19	5	



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: WC
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R122409		Date Analyzed: 02/05/2019 1004h											
Test Code: 300.0-W													
Chloride	4.94	mg/L	E300.0	0.0581	0.100	5.000	0	98.7	90 - 110				
Fluoride	4.95	mg/L	E300.0	0.0353	0.100	5.000	0	99.1	90 - 110				
Sulfate	5.27	mg/L	E300.0	0.102	0.750	5.000	0	105	90 - 110				
Lab Sample ID: LCS-R122083		Date Analyzed: 01/28/2019 800h											
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO ₃)	245	mg/L	SM2320B	0.965	1.00	250.0	0	98.0	90 - 110				
Lab Sample ID: LCS-60568		Date Analyzed: 01/31/2019 1422h											
Test Code: NH3-W-350.1		Date Prepared: 01/31/2019 1005h											
Ammonia (as N)	9.20	mg/L	E350.1	0.0492	0.0500	10.00	0	92.0	90 - 110				
Lab Sample ID: LCS-60576		Date Analyzed: 01/31/2019 1504h											
Test Code: NH3-W-350.1		Date Prepared: 01/31/2019 1335h											
Ammonia (as N)	10.0	mg/L	E350.1	0.0492	0.0500	10.00	0	100	90 - 110				
Lab Sample ID: LCS-R122144		Date Analyzed: 01/29/2019 1210h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.08	mg/L	E353.2	0.00538	0.0100	1.000	0	108	90 - 110				
Lab Sample ID: LCS-R122103		Date Analyzed: 01/25/2019 1240h											
Test Code: TDS-W-2540C													
Total Dissolved Solids	208	mg/L	SM2540C	8.00	10.0	205.0	0	101	80 - 120				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: WC
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R122409		Date Analyzed: 02/05/2019 947h											
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0581	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0353	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.102	0.750								
Lab Sample ID: MB-R122083		Date Analyzed: 01/28/2019 800h											
Test Code: ALK-W-2320B-LL													
Bicarbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.965	1.00								
Carbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.965	1.00								
Lab Sample ID: MB-60568		Date Analyzed: 01/31/2019 1421h											
Test Code: NH3-W-350.1		Date Prepared: 01/31/2019 1005h											
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
Lab Sample ID: MB-60576		Date Analyzed: 01/31/2019 1555h											
Test Code: NH3-W-350.1		Date Prepared: 01/31/2019 1335h											
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
Lab Sample ID: MB-R122144		Date Analyzed: 01/29/2019 1208h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00538	0.0100								
Lab Sample ID: MB-R122103		Date Analyzed: 01/25/2019 1240h											
Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.00	10.0								



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1901565

Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer

Dept: WC

QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901565-007BMS Date Analyzed: 02/05/2019 1657h													
Test Code: 300.0-W													
Chloride	10,100	mg/L	E300.0	116	200	10,000	0	101	90 - 110				
Fluoride	10,100	mg/L	E300.0	70.6	200	10,000	0	101	90 - 110				
Sulfate	13,500	mg/L	E300.0	204	1,500	10,000	3120	104	90 - 110				
Lab Sample ID: 1901565-006BMS Date Analyzed: 01/28/2019 800h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	153	mg/L	SM2320B	0.965	1.00	50.00	102	102	80 - 120				
Lab Sample ID: 1901434-003DMS Date Analyzed: 01/31/2019 1429h													
Test Code: NH3-W-350.1 Date Prepared: 01/31/2019 1005h													
Ammonia (as N)	13.8	mg/L	E350.1	0.0492	0.0500	10.00	0.522	132	90 - 110				1
Lab Sample ID: 1901565-010DMS Date Analyzed: 01/31/2019 1533h													
Test Code: NH3-W-350.1 Date Prepared: 01/31/2019 1335h													
Ammonia (as N)	12.0	mg/L	E350.1	0.0492	0.0500	10.00	0	120	90 - 110				1
Lab Sample ID: 1901565-003BMS Date Analyzed: 01/29/2019 1231h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	17.7	mg/L	E353.2	0.0538	0.100	10.00	6.4	113	90 - 110				1

¹ - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: WC
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901565-007BMSD Date Analyzed: 02/05/2019 1714h													
Test Code: 300.0-W													
Chloride	9,860	mg/L	E300.0	116	200	10,000	0	98.6	90 - 110	10100	1.94	20	
Fluoride	9,850	mg/L	E300.0	70.6	200	10,000	0	98.5	90 - 110	10100	2.58	20	
Sulfate	13,200	mg/L	E300.0	204	1,500	10,000	3120	101	90 - 110	13500	2.45	20	
Lab Sample ID: 1901565-006BMSD Date Analyzed: 01/28/2019 800h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	156	mg/L	SM2320B	0.965	1.00	50.00	102	108	80 - 120	153	1.94	10	
Lab Sample ID: 1901434-003DMSD Date Analyzed: 01/31/2019 1430h													
Test Code: NH3-W-350.1 Date Prepared: 01/31/2019 1005h													
Ammonia (as N)	13.5	mg/L	E350.1	0.0492	0.0500	10.00	0.522	130	90 - 110	13.8	1.76	10	1
Lab Sample ID: 1901565-010DMSD Date Analyzed: 01/31/2019 1533h													
Test Code: NH3-W-350.1 Date Prepared: 01/31/2019 1335h													
Ammonia (as N)	12.0	mg/L	E350.1	0.0492	0.0500	10.00	0	120	90 - 110	12.1	0.249	10	1
Lab Sample ID: 1901565-003BMSD Date Analyzed: 01/29/2019 1232h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	17.0	mg/L	E353.2	0.0538	0.100	10.00	6.4	107	90 - 110	17.7	3.46	10	

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: MSVOA
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS VOC-2 012519A	Date Analyzed: 01/25/2019 1031h												
Test Code: 8260-W-DEN100													
Benzene	20.6	µg/L	SW8260C	0.0956	1.00	20.00	0	103	82 - 132				
Chloroform	20.2	µg/L	SW8260C	0.0998	1.00	20.00	0	101	85 - 124				
Methylene chloride	21.2	µg/L	SW8260C	0.400	1.00	20.00	0	106	65 - 154				
Naphthalene	18.0	µg/L	SW8260C	0.159	1.00	20.00	0	90.0	63 - 129				
Tetrahydrofuran	18.3	µg/L	SW8260C	0.681	1.00	20.00	0	91.7	59 - 125				
Toluene	21.2	µg/L	SW8260C	0.0858	1.00	20.00	0	106	69 - 129				
Xylenes, Total	61.6	µg/L	SW8260C	0.310	1.00	60.00	0	103	66 - 124				
Surr: 1,2-Dichloroethane-d4	49.5	µg/L	SW8260C			50.00		99.0	80 - 136				
Surr: 4-Bromofluorobenzene	50.5	µg/L	SW8260C			50.00		101	85 - 121				
Surr: Dibromofluoromethane	49.8	µg/L	SW8260C			50.00		99.5	78 - 132				
Surr: Toluene-d8	51.2	µg/L	SW8260C			50.00		102	81 - 123				



American West
ANALYTICAL LABORATORIES

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1901565

Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer

Dept: MSVOA

QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB VOC-2 012519A	Date Analyzed:		01/25/2019 1111h										
Test Code: 8260-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260C	0.587	20.0								
Acetone	< 20.0	µg/L	SW8260C	1.13	20.0								
Benzene	< 1.00	µg/L	SW8260C	0.0956	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260C	0.178	1.00								
Chloroform	< 1.00	µg/L	SW8260C	0.0998	1.00								
Chloromethane	< 1.00	µg/L	SW8260C	0.836	1.00								
Methylene chloride	< 1.00	µg/L	SW8260C	0.400	1.00								
Naphthalene	< 1.00	µg/L	SW8260C	0.159	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260C	0.681	1.00								
Toluene	< 1.00	µg/L	SW8260C	0.0858	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260C	0.310	1.00								
Surr: 1,2-Dichloroethane-d4	51.1	µg/L	SW8260C			50.00		102	80 - 136				
Surr: 4-Bromofluorobenzene	53.1	µg/L	SW8260C			50.00		106	85 - 121				
Surr: Dibromofluoromethane	49.3	µg/L	SW8260C			50.00		98.6	78 - 132				
Surr: Toluene-d8	52.1	µg/L	SW8260C			50.00		104	81 - 123				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1901565
Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer
Dept: MSVOA
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901565-006AMS		Date Analyzed: 01/25/2019 1336h											
Test Code: 8260-W-DEN100													
Benzene	20.6	µg/L	SW8260C	0.0956	1.00	20.00	0	103	66 - 145				
Chloroform	20.3	µg/L	SW8260C	0.0998	1.00	20.00	0	102	50 - 146				
Methylene chloride	21.1	µg/L	SW8260C	0.400	1.00	20.00	0	105	30 - 192				
Naphthalene	16.9	µg/L	SW8260C	0.159	1.00	20.00	0	84.6	41 - 131				
Tetrahydrofuran	18.7	µg/L	SW8260C	0.681	1.00	20.00	0	93.6	43 - 146				
Toluene	21.4	µg/L	SW8260C	0.0858	1.00	20.00	0	107	18 - 192				
Xylenes, Total	61.6	µg/L	SW8260C	0.310	1.00	60.00	0	103	42 - 167				
Surr: 1,2-Dichloroethane-d4	51.2	µg/L	SW8260C			50.00		102	72 - 151				
Surr: 4-Bromofluorobenzene	50.5	µg/L	SW8260C			50.00		101	80 - 152				
Surr: Dibromofluoromethane	50.4	µg/L	SW8260C			50.00		101	72 - 135				
Surr: Toluene-d8	51.4	µg/L	SW8260C			50.00		103	80 - 124				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1901565

Project: 1st Quarter Ground Water 2019

Contact: Garrin Palmer

Dept: MSVOA

QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1901565-006AMSD	Date Analyzed: 01/25/2019 1356h												
Test Code: 8260-W-DEN100													
Benzene	20.4	µg/L	SW8260C	0.0956	1.00	20.00	0	102	66 - 145	20.7	1.07	25	
Chloroform	19.9	µg/L	SW8260C	0.0998	1.00	20.00	0	99.4	50 - 146	20.3	2.29	25	
Methylene chloride	20.8	µg/L	SW8260C	0.400	1.00	20.00	0	104	30 - 192	21.1	1.19	25	
Naphthalene	16.0	µg/L	SW8260C	0.159	1.00	20.00	0	80.2	41 - 131	16.9	5.34	25	
Tetrahydrofuran	17.8	µg/L	SW8260C	0.681	1.00	20.00	0	89.2	43 - 146	18.7	4.92	25	
Toluene	21.0	µg/L	SW8260C	0.0858	1.00	20.00	0	105	18 - 192	21.4	1.79	25	
Xylenes, Total	61.0	µg/L	SW8260C	0.310	1.00	60.00	0	102	42 - 167	61.6	0.995	25	
Surr: 1,2-Dichloroethane-d4	50.2	µg/L	SW8260C			50.00		100	72 - 151				
Surr: 4-Bromofluorobenzene	50.4	µg/L	SW8260C			50.00		101	80 - 152				
Surr: Dibromofluoromethane	49.6	µg/L	SW8260C			50.00		99.1	72 - 135				
Surr: Toluene-d8	51.4	µg/L	SW8260C			50.00		103	80 - 124				

WORK ORDER Summary

Work Order: **1901565**

Page 1 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/8/2019

Client ID: ENE300

Contact: Garrin Palmer

Project: 1st Quarter Ground Water 2019

QC Level: III

WO Type: Project

Comments: QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com; and Tanner Holliday;

ef

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1901565-001A	MW-12_01212019	1/21/2019 1445h	1/25/2019 0940h	200.8-DIS <i>1 SEL Analytes: U</i>	Aqueous		df-met	1
				200.8-DIS-PR			df-met	
1901565-002A	MW-24_01232019	1/23/2019 0800h	1/25/2019 0940h	200.8-DIS <i>3 SEL Analytes: BE CD TL</i>	Aqueous		df-met	1
				200.8-DIS-PR			df-met	
1901565-003A	MW-27_01212019	1/21/2019 1120h	1/25/2019 0940h	300.0-W <i>1 SEL Analytes: CL</i>	Aqueous		df-cl	1
1901565-003B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>			DF-NO2/NO3	
1901565-004A	MW-28_01222019	1/22/2019 1115h	1/25/2019 0940h	200.8-DIS <i>2 SEL Analytes: CD U</i>	Aqueous		df-met	1
				200.8-DIS-PR			df-met	
1901565-004B				300.0-W <i>1 SEL Analytes: CL</i>			df-cl	
1901565-005A	MW-32_01222019	1/22/2019 1355h	1/25/2019 0940h	300.0-W <i>2 SEL Analytes: CL SO4</i>	Aqueous		df-cl	1
1901565-006A	MW-38_01242019	1/24/2019 0900h	1/25/2019 0940h	8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous		VOCFridge	3
1901565-006B				300.0-W <i>3 SEL Analytes: CL F SO4</i>			df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>			df - wc	
1901565-006C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>			df - tds	
1901565-006D				NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>			df - no2/no3 & nh3	
				NH3-W-PR			df - no2/no3 & nh3	

WORK ORDER Summary

Work Order: **1901565** Page 2 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1901565-006D	MW-38_01242019	1/24/2019 0900h	1/25/2019 0940h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	df - no2/no3 & nh3	1
1901565-006E				200.7-DIS <i>5 SEL Analytes: CA MG K NA V</i>		df-met	
				200.7-DIS-PR		df-met	
				200.8-DIS <i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>		df-met	
				200.8-DIS-PR		df-met	
				HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>		df-met	
				HG-DW-DIS-PR		df-met	
				IONBALANCE <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		df-met	
1901565-007A	MW-39_01232019	1/23/2019 1345h	1/25/2019 0940h	8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	VOCFridge	3
1901565-007B				300.0-W <i>3 SEL Analytes: CL F SO4</i>		df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>		df - wc	
1901565-007C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		df - tds	
1901565-007D				NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>		df - no2/no3 & nh3	
				NH3-W-PR		df - no2/no3 & nh3	
				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		df - no2/no3 & nh3	
1901565-007E				200.7-DIS <i>5 SEL Analytes: CA MG K NA V</i>		df-met	
				200.7-DIS-PR		df-met	
				200.8-DIS <i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>		df-met	
				200.8-DIS-PR		df-met	
				HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>		df-met	
				HG-DW-DIS-PR		df-met	
				IONBALANCE <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		df-met	

WORK ORDER Summary

Work Order: **1901565** Page 3 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1901565-008A	MW-40_01232019	1/23/2019 1130h	1/25/2019 0940h	8260-W-DEN100	Aqueous		VOCFridge	3
				<i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1901565-008B				300.0-W			df - wc	1
				<i>3 SEL Analytes: CL F SO4</i>				
				ALK-W-2320B-LL			df - wc	
				<i>2 SEL Analytes: ALKB ALKC</i>				
1901565-008C				TDS-W-2540C			df - tds	
				<i>1 SEL Analytes: TDS</i>				
1901565-008D				NH3-W-350.1			df - no2/no3 & nh3	
				<i>1 SEL Analytes: NH3N</i>				
				NH3-W-PR			df - no2/no3 & nh3	
				NO2/NO3-W-353.2			df - no2/no3 & nh3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1901565-008E				200.7-DIS			df-met	
				<i>5 SEL Analytes: CA MG K NA V</i>				
				200.7-DIS-PR			df-met	
				200.8-DIS			df-met	
				<i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>				
				200.8-DIS-PR			df-met	
				HG-DW-DIS-245.1			df-met	
				<i>1 SEL Analytes: HG</i>				
				HG-DW-DIS-PR			df-met	
				IONBALANCE			df-met	
				<i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>				
1901565-009A	MW-36_01232019	1/23/2019 0925h	1/25/2019 0940h	8260-W-DEN100	Aqueous		VOCFridge	3
				<i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1901565-009B				300.0-W			df - wc	1
				<i>3 SEL Analytes: CL F SO4</i>				
				ALK-W-2320B-LL			df - wc	
				<i>2 SEL Analytes: ALKB ALKC</i>				
1901565-009C				TDS-W-2540C			df - tds	
				<i>1 SEL Analytes: TDS</i>				
1901565-009D				NH3-W-350.1			df - no2/no3 & nh3	
				<i>1 SEL Analytes: NH3N</i>				
				NH3-W-PR			df - no2/no3 & nh3	
				NO2/NO3-W-353.2			df - no2/no3 & nh3	
				<i>1 SEL Analytes: NO3NO2N</i>				

WORK ORDER Summary

Work Order: **1901565** Page 4 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1901565-009E	MW-36_01232019	1/23/2019 0925h	1/25/2019 0940h	200.7-DIS <i>5 SEL Analytes: CA MG K NA V</i>	Aqueous		df-met	1
				200.7-DIS-PR			df-met	
				200.8-DIS <i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>			df-met	
				200.8-DIS-PR			df-met	
				HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>			df-met	
				HG-DW-DIS-PR			df-met	
				IONBALANCE <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>			df-met	
1901565-010A	MW-65_01232019	1/23/2019 0925h	1/25/2019 0940h	8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous		VOCFridge	3
1901565-010B				300.0-W <i>3 SEL Analytes: CL F SO4</i>			df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>			df - wc	
1901565-010C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>			df - tds	
1901565-010D				NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>			df - no2/no3 & nh3	
				NH3-W-PR			df - no2/no3 & nh3	
				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>			df - no2/no3 & nh3	
1901565-010E				200.7-DIS <i>5 SEL Analytes: CA MG K NA V</i>			df-met	
				200.7-DIS-PR			df-met	
				200.8-DIS <i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>			df-met	
				200.8-DIS-PR			df-met	
				HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>			df-met	
				HG-DW-DIS-PR			df-met	
				IONBALANCE <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>			df-met	

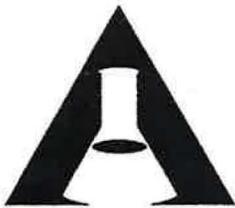
WORK ORDER Summary

Work Order: **1901565** Page 5 of 5

Client: Energy Fuels Resources, Inc.

Due Date: 2/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1901565-011A	Trip Blank	1/23/2019 0925h	1/25/2019 0940h	8260-W-DEN100	Aqueous	VOCFridge	3
<i>Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>							



**American West
Analytical Laboratories**

463 W. 3600 S. Salt Lake City, UT 84115
 Phone # (801) 263-8686 Toll Free # (888) 263-8686
 Fax # (801) 263-8687 Email awal@awal-labs.com
 www.awal-labs.com

CHAIN OF CUSTODY

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

1901565

AWAL Lab Sample Set #
 Page 1 of 2

QC Level: 3	Turn Around Time: Standard	Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.	Due Date:
-----------------------	--------------------------------------	--	------------------

Client: **Energy Fuels Resources, Inc.**

Address: **6425 S. Hwy. 191
Blanding, UT 84511**

Contact: **Tanner Holliday**

Phone #: **(435) 678-2221** Cell #:

Email: **tholliday@energyfuels.com; kweinel@energyfuels.com**

Project Name: **1st Quarter Ground Water 2019**

Project #:

PO #:

Sampler Name: **Tanner Holliday**

X Include EDD:
**LOCUS UPLOAD
EXCEL**

X Field Filtered For:
Dissolved Metals

For Compliance With:

NELAP
 RCRA
 CWA
 SDWA
 ELAP / A2LA
 NLLAP
 Non-Compliance
 Other:

Laboratory Use Only

Samples Were: *WPT*

Shipped or hand delivered

Ambient or (Chilled) *2.1* °C

Temperature

Received Broken/Leaking (Improperly Sealed)
 Y N

Property Preserved
 Y N

Checked at bench
 Y N

Received Within Holding Times
 Y N

Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	Cl (4500 or 300.0)	TDS (2540C)	Dissolved Uranium (200.7/200.8)	Dissolved Cadmium (200.7/200.8)	Dissolved Selenium (200.7/200.8)	Dissolved Thallium (200.7/200.8)	SO4 (4500 or 300.0)	F1 (4500 or 300.0)	Dissolved Beryllium (200.7/200.8)	Ammonia (350.1)	Known Hazards & Sample Comments
MW-12_01212019	1/21/2019	1445	1	W				X								
MW-24_01232019	1/23/2019	800	1	W					X	X				X		
MW-27_01212019	1/21/2019	1120	2	W	X	X										
MW-28_01222019	1/22/2019	1115	2	W		X	X	X								
MW-32_01222019	1/22/2019	1355	1	W		X						X				

Present on Outer Package
 Y N NA

Unbroken on Outer Package
 Y N NA

Present on Sample
 Y N NA

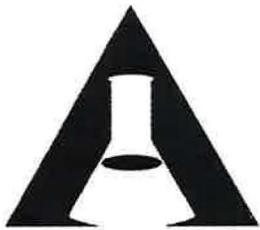
Unbroken on Sample
 Y N NA

Discrepancies Between Sample Labels and COC Record?
 Y N

Relinquished by: <i>Tanner Holliday</i> Signature	Date: 1/24/2019 Time: 1130	Received by: <i>Elmer Halverson</i> Signature	Date: 1/25/19 Time: 940
Print Name: Tanner Holliday		Print Name: Elmer Halverson	
Relinquished by: _____ Signature	Date: _____ Time: _____	Received by: _____ Signature	Date: _____ Time: _____
Print Name: _____		Print Name: _____	
Relinquished by: _____ Signature	Date: _____ Time: _____	Received by: _____ Signature	Date: _____ Time: _____
Print Name: _____		Print Name: _____	
Relinquished by: _____ Signature	Date: _____ Time: _____	Received by: _____ Signature	Date: _____ Time: _____
Print Name: _____		Print Name: _____	

Special Instructions:

Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.



American West Analytical Laboratories

463 W. 3600 S. Salt Lake City, UT 84115
 Phone # (801) 263-8686 Toll Free # (888) 263-8686
 Fax # (801) 263-8687 Email awal@awal-labs.com
 www.awal-labs.com

CHAIN OF CUSTODY

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

1901565

AWAL Lab Sample Set #
 Page 2 of 2

Client: **Energy Fuels Resources, Inc.**
 Address: **6425 S. Hwy. 191**
Blanding, UT 84511
 Contact: **Garrin Palmer**
 Phone #: **(435) 678-2221** Cell #: _____
 Email: **gpalmer@energyfuels.com; KWeinel@energyfuels.com; dturk@energyfuels.com**
 Project Name: **1st Quarter Ground Water 2019**
 Project #: _____
 PO #: _____
 Sampler Name: **Tanner Holliday**

QC Level:	Turn Around Time:	Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.	Due Date:
3	Standard		
		<input checked="" type="checkbox"/> Include EDD: LOCUS UPLOAD EXCEL <input checked="" type="checkbox"/> Field Filtered For: Dissolved Metals	Laboratory Use Only Samples Were: <i>u/s</i> 1 Shipped or hand delivered 2 Ambient or Chilled 3 Temperature <i>21</i> °C 4 Received Broken/Leaking (Improperly Sealed) Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> 5 Properly Preserved Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Checked at bench Y <input type="checkbox"/> N <input type="checkbox"/> 6 Received Within Holding Times Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
		For Compliance With: <input type="checkbox"/> NELAP <input type="checkbox"/> RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/> ELAP / A2LA <input type="checkbox"/> NLLAP <input type="checkbox"/> Non-Compliance <input type="checkbox"/> Other:	
		Known Hazards & Sample Comments	COC Tape Was: 1 Present on Outer Package Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/> 2 Unbroken on Outer Package Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/> 3 Present on Sample Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA <input type="checkbox"/> 4 Unbroken on Sample Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA <input type="checkbox"/>
			Discrepancies Between Sample Labels and COC Record? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	NH3 (4500G or 350.1)	F, Cl, SO4 (4500 or 300.0)	TDS (2540C)	Carb/Bicarb (2320B)	Dissolved Metals (200.7/200.8/245.1)	As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Mo, Ni, Se, Ag, Tl, Sn, U, V, Zn, Na, K, Mg, Ca	Ion Balance	VOCs (8260C)
MW-38_01242019	1/24/2019	900	7	w	x	x	x	x	x	x	x	x	x
MW-39_01232019	1/23/2019	1345	7	w	x	x	x	x	x	x	x	x	x
MW-40_01232019	1/23/2019	1130	7	w	x	x	x	x	x	x	x	x	x
MW-36_01232019	1/23/2019	925	7	w	x	x	x	x	x	x	x	x	x
MW-65_01232019	1/23/2019	925	7	w	x	x	x	x	x	x	x	x	x
Trip Blank	1/23/2019	925	3	w									x

Relinquished by: <i>Tanner Holliday</i> Signature	Date: 1/24/2019	Received by: _____ Signature	Date: _____	Special Instructions: Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.
Print Name: Tanner Holliday	Time: 1130	Print Name: _____	Time: _____	
Relinquished by: _____ Signature	Date: _____	Received by: <i>Elmer Hays</i> Signature	Date: 1/25/19	
Print Name: _____	Time: _____	Print Name: <i>Elmer Hays</i>	Time: 940	
Relinquished by: _____ Signature	Date: _____	Received by: _____ Signature	Date: _____	
Print Name: _____	Time: _____	Print Name: _____	Time: _____	
Relinquished by: _____ Signature	Date: _____	Received by: _____ Signature	Date: _____	
Print Name: _____	Time: _____	Print Name: _____	Time: _____	



February 22, 2019

Ms. Kathy Weinel
Energy Fuels Resources (USA), Inc.
225 Union Boulevard
Suite 600
Lakewood, Colorado 80228

Re: White Mesa Mill GW
Work Order: 469482

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 22, 2019. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. Data was revised to correct the method referenced throughout the data package for Total Alpha Radium.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Joanne Harley for
Julie Robinson
Project Manager

Purchase Order: DW16138
Enclosures



Data was revised to correct the method referenced throughout the data package for Total Alpha Radium.

**Receipt Narrative
for
Energy Fuels Resources (USA), Inc.
SDG: 469482**

February 22, 2019

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on January 22, 2019 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

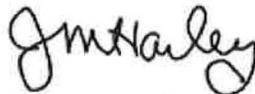
Sample Identification: The laboratory received the following samples:

<u>Laboratory ID</u>	<u>Client ID</u>
469482001	MW-11_01152019
469482002	MW-14_01172019
469482003	MW-25_01162019
469482004	MW-26_01172019
469482005	MW-30_01162019
469482006	MW-31_01152019

Case Narrative:

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.



Joanne Harley for
Julie Robinson
Project Manager



Laboratories

JA

SAMPLE RECEIPT & REVIEW FORM

Client: <u>DNMI</u>		SDG/AR/COC/Work Order: <u>469482</u>	
Received By: <u>Elaina Walter</u>		Date Received: <u>1/22/19</u>	
Carrier and Tracking Number		Circle Applicable: FedEx Express FedEx Ground <input checked="" type="checkbox"/> UPS Field Services Courier Other <u>12 187 444 PW 9067 5661</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?			Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?			<input checked="" type="checkbox"/> COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?			Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3: _____
D) Did the client designate samples are hazardous?			<input checked="" type="checkbox"/> COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?			If D or E is yes, select Hazards below: PCBs Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____
Sample Receipt Criteria		Yes	No
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)	
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Circle Applicable: Client contacted and provided COC COC created upon receipt	
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?* <u>AN 182</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Preservation Method: Wet Ice Ice Packs Dry Ice <input checked="" type="checkbox"/> None Other: _____ *all temperatures are recorded in Celsius TEMP: <u>10°</u>	
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Temperature Device Serial #: <u>TKA-18</u> Secondary Temperature Device Serial #, (if Applicable): _____	
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)	
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Sample ID's and Containers Affected: _____ If Preservation added, Lot#: _____	
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected: _____	
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		ID's and tests affected: _____	
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		ID's and containers affected: _____	
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)	
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Circle Applicable: No container count on COC Other (describe)	
12	Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Circle Applicable: Not relinquished Other (describe)	
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials

Jmc

Date

1/23/19

Page

1 of 1

GL-CHL-SR-001 Rev 6

GEL Laboratories LLC – Login Review Report

Report Date: 22-FEB-19
 Work Order: 469482
 Page 1 of 2

GEL Work Order/SDG: 469482 1st Quarter GW 2019
 Client SDG: 469482
 Project Manager: Julie Robinson
 Project Name: DNMI00100 White Mesa Mill GW
 Purchase Order: DW16138
 Package Level: LEVEL3
 EDD Format: EIM_DNMI

Work Order Due Date: 19-FEB-19
 Package Due Date: 17-FEB-19
 EDD Due Date: 19-FEB-19
 Due Date: 19-FEB-19
 TXC4

Collector: C
 Prelogin #: 20171063498
 Project Workdef ID: 1294356
 SDG Status: Closed
 Logged by:

GEL ID	Client Sample ID	Client Sample Desc.	Collect Date & Time	Receive Date & Time	Time Zone	# of Cont.	Lab Matrix	Fax Due Date	Days to Process	CofC #	Prelog Group	Lab QC	Field QC
469482001	MW-11_01152019		15-JAN-19 12:00	22-JAN-19 09:50	-2	1	GROUND WATER		20		1		
469482002	MW-14_01172019		17-JAN-19 10:00	22-JAN-19 09:50	-2	1	GROUND WATER		20		1		
469482003	MW-25_01162019		16-JAN-19 11:10	22-JAN-19 09:50	-2	1	GROUND WATER		20		1		
469482004	MW-26_01172019		17-JAN-19 08:30	22-JAN-19 09:50	-2	1	GROUND WATER		20		1		
469482005	MW-30_01162019		16-JAN-19 10:55	22-JAN-19 09:50	-2	1	GROUND WATER		20		1		
469482006	MW-31_01152019		15-JAN-19 13:30	22-JAN-19 09:50	-2	1	GROUND WATER		20		1		

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data	Receive Codes
-001 MW-11_01152019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-002 MW-14_01172019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-003 MW-25_01162019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-004 MW-26_01172019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-005 MW-30_01162019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-006 MW-31_01152019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				

Product: GFCTORAL	Workdef ID: 1297250	In Product Group? No	Group Name:	Group Reference:			
Method: EPA 903.0				Path: Standard			
Product Description: GFPC, Total Alpha Radium, Liquid				Product Reference: Gross Alpha			
Samples: 001, 002, 003, 004, 005, 006				Moisture Correction: "As Received"			
Parmname Check: All parmnames scheduled properly							
CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
	Gross Radium Alpha	1	pCi/L	REG	Y	Y	Yes

GEL Laboratories LLC – Login Review Report

Report Date: 22-FEB-19
Work Order: 469482
Page 2 of 2

Action	Product Name	Description	Samples
Contingent Tests			

Login Requirements:

Requirement	Include?	Comments
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Peer Review by: _____ Work Order (SDG#), PO# Checked? _____ C of C signed in receiver location? _____

**Radiochemistry
 Technical Case Narrative
 Energy Fuels Resources (DNMI)
 SDG #: 469482**

Product: GFPC, Total Alpha Radium, Liquid
Analytical Method: EPA 903.0
Analytical Procedure: GL-RAD-A-010 REV# 18
Analytical Batch: 1843049

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
469482001	MW-11_01152019
469482002	MW-14_01172019
469482003	MW-25_01162019
469482004	MW-26_01172019
469482005	MW-30_01162019
469482006	MW-31_01152019
1204204929	Method Blank (MB)
1204204930	469482002(MW-14_01172019) Sample Duplicate (DUP)
1204204931	469482002(MW-14_01172019) Matrix Spike (MS)
1204204932	469482002(MW-14_01172019) Matrix Spike Duplicate (MSD)
1204204933	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Duplication Criteria between MS and MSD

The Matrix Spike and Matrix Spike Duplicate (See Below) do not meet the duplication requirement; however, they both meet the spiked recovery requirement.

Sample	Analyte	Value
1204204931MS and 1204204932MSD (MW-14_01172019)	Gross Radium Alpha	RPD 30.3* (0%-20%) RER 2.32 (0-3)

Technical Information

Recounts

Samples 1204204931 (MW-14_01172019MS) and 1204204933 (LCS) were recounted due to low recovery. The recounts are reported.

Miscellaneous Information

Additional Comments

The matrix spike and matrix spike duplicate, 1204204931 (MW-14_01172019MS) and 1204204932 (MW-14_01172019MSD), aliquots were reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 469482 GEL Work Order: 469482

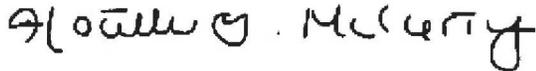
The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the CRDL.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: 

Name: Heather McCarty

Date: 16 FEB 2019

Title: Analyst II

GEL LABORATORIES LLC

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QC Summary

Report Date: February 16, 2019

Page 1 of

Energy Fuels Resources (USA), Inc.
225 Union Boulevard
Suite 600

Lakewood, Colorado

Contact: Ms. Kathy Weinel

Workorder: 469482

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1843049										
QC1204204930	469482002	DUP									
Gross Radium Alpha		U	0.411	U	0.880	pCi/L	N/A		N/A	JXC9	02/06/19 14:2
		Uncertainty	+/-0.268		+/-0.350						
QC1204204933	LCS										
Gross Radium Alpha	555				426	pCi/L	76.8	(75%-125%)			02/07/19 12:1
		Uncertainty			+/-5.83						
QC1204204929	MB										
Gross Radium Alpha				U	0.0327	pCi/L					02/06/19 14:3
		Uncertainty			+/-0.208						
QC1204204931	469482002	MS									
Gross Radium Alpha	4480	U	0.411		3630	pCi/L	81.1	(75%-125%)			02/07/19 12:1
		Uncertainty	+/-0.268		+/-46.3						
QC1204204932	469482002	MSD									
Gross Radium Alpha	4480	U	0.411		4930	pCi/L	30.3*	110	(0%-20%)		02/06/19 14:2
		Uncertainty	+/-0.268		+/-72.6						

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 469482

Page 2 of

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
M		Matrix Related Failure								
N/A		RPD or %Recovery limits do not apply.								
NI		See case narrative								
ND		Analyte concentration is not detected above the detection limit								
NJ		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier								
Q		One or more quality control criteria have not been met. Refer to the applicable narrative or DER.								
R		Sample results are rejected								
U		Analyte was analyzed for, but not detected above the CRDL.								
UI		Gamma Spectroscopy--Uncertain identification								
UJ		Gamma Spectroscopy--Uncertain identification								
UL		Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.								
X		Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier								
Y		QC Samples were not spiked with this compound								
^		RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.								
h		Preparation or preservation holding time was exceeded								

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



February 22, 2019

Ms. Kathy Weinel
Energy Fuels Resources (USA), Inc.
225 Union Boulevard
Suite 600
Lakewood, Colorado 80228

Re: White Mesa Mill GW
Work Order: 469930

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on January 28, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Julie Robinson
Project Manager

Purchase Order: DW16138
Enclosures



**Receipt Narrative
for
Energy Fuels Resources (USA), Inc.
SDG: 469930**

February 22, 2019

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on January 28, 2019 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Sample Identification: The laboratory received the following samples:

<u>Laboratory ID</u>	<u>Client ID</u>
469930001	MW-38_01242019
469930002	MW-39_01232019
469930003	MW-40_01232019
469930004	MW-36_01232019
469930005	MW-65_01232019

Case Narrative:

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.

Julie Robinson

Julie Robinson
Project Manager



Laboratories

JA

SAMPLE RECEIPT & REVIEW FORM

Client: DNMI SDG/AIR/COC/Work Order: 469930

Received By: AJA Date Received: 1/29/19

Carrier and Tracking Number
FedEx Express FedEx Ground UPS Field Services Courier Other
1Z 187 44Y 01 9104 7297

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*			<input checked="" type="checkbox"/>	Preservation Method: Wet Ice Ice Packs Dry Ice <u>None</u> Other: _____ *all temperatures are recorded in Celsius TEMP: <u>18°</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>JH2-18</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's and Containers Affected:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	If Preservation added, Lot#:
				If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___
				Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>			
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

GEL Laboratories LLC – Login Review Report

Report Date: 22-FEB-19

Work Order: 469930

Page 1 of 2

GEL Work Order/SDG: 469930 1st Quarter GW 2019
 Client SDG: 469930
 Project Manager: Julie Robinson
 Project Name: DNMI00100 White Mesa Mill GW
 Purchase Order: DW16138
 Package Level: LEVEL3
 EDD Format: EIM_DNMI

Work Order Due Date: 25-FEB-19
 Package Due Date: 23-FEB-19
 EDD Due Date: 25-FEB-19
 Due Date: 25-FEB-19
 TXC4

Collector: C
 Prelogin #: 20171063498
 Project Workdef ID: 1294356
 SDG Status: Closed
 Logged by:

GEL ID	Client Sample ID	Client Sample Desc.	Collect Date & Time	Receive Date & Time	Time Zone	# of Cont.	Lab Matrix	Fax Due Date	Days to Process	CofC #	Prelog Group	Lab QC	Field QC
469930001	MW-38_01242019		24-JAN-19 09:00	28-JAN-19 09:00	-2	1	GROUND WATER		20		1		
469930002	MW-39_01232019		23-JAN-19 13:45	28-JAN-19 09:00	-2	1	GROUND WATER		20		1		
469930003	MW-40_01232019		23-JAN-19 11:30	28-JAN-19 09:00	-2	1	GROUND WATER		20		1		
469930004	MW-36_01232019		23-JAN-19 09:25	28-JAN-19 09:00	-2	1	GROUND WATER		20		1		
469930005	MW-65_01232019		23-JAN-19 09:25	28-JAN-19 09:00	-2	1	GROUND WATER		20		1		

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data	Receive Codes
-001 MW-38_01242019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-002 MW-39_01232019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-003 MW-40_01232019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-004 MW-36_01232019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-005 MW-65_01232019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				

Product: GFCTORAL	Workdef ID: 1297250	In Product Group? No	Group Name:	Group Reference:			
Method: EPA 903.0				Path: Standard			
Product Description: GFPC, Total Alpha Radium, Liquid				Product Reference: Gross Alpha			
Samples: 001, 002, 003, 004, 005				Moisture Correction: "As Received"			
Parmname Check: All parmnames scheduled properly							
CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
	Gross Radium Alpha	1	pCi/L	REG	Y	Y	Yes

GEL Laboratories LLC – Login Review Report

Report Date: 22-FEB-19

Work Order: 469930

Page 2 of 2

Action	Product Name	Description	Samples
Contingent Tests			

Login Requirements:

Requirement	Include? Comments
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Peer Review by: _____ Work Order (SDG#), PO# Checked? _____ C of C signed in receiver location? _____

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**Radiochemistry
Technical Case Narrative
Energy Fuels Resources (DNMI)
SDG #: 469930**

Product: GFPC, Total Alpha Radium, Liquid

Analytical Method: EPA 903.0

Analytical Procedure: GL-RAD-A-010 REV# 18

Analytical Batch: 1845972

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
469930001	MW-38_01242019
469930002	MW-39_01232019
469930003	MW-40_01232019
469930004	MW-36_01232019
469930005	MW-65_01232019
1204211563	Method Blank (MB)
1204211564	469930005(MW-65_01232019) Sample Duplicate (DUP)
1204211565	469930005(MW-65_01232019) Matrix Spike (MS)
1204211566	469930005(MW-65_01232019) Matrix Spike Duplicate (MSD)
1204211567	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

The matrix spike and matrix spike duplicate, 1204211565 (MW-65_01232019MS) and 1204211566 (MW-65_01232019MSD), aliquots were reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 469930 GEL Work Order: 469930

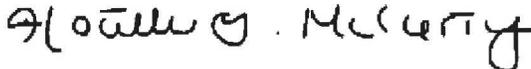
The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the CRDL.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: 

Name: Heather McCarty

Date: 16 FEB 2019

Title: Analyst II

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: February 16, 2019

Page 1 of

Energy Fuels Resources (USA), Inc.

225 Union Boulevard

Suite 600

Lakewood, Colorado

Ms. Kathy Weinel

Contact:

Workorder: 469930

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1845972										
QC1204211564	469930005	DUP									
Gross Radium Alpha	U	0.798	U	0.830	pCi/L	N/A		N/A	JXC9	02/12/19	12:2
	Uncertainty	+/-0.342		+/-0.334							
QC1204211567	LCS										
Gross Radium Alpha	555			483	pCi/L		87.2	(75%-125%)		02/12/19	12:2
	Uncertainty			+/-6.76							
QC1204211563	MB										
Gross Radium Alpha			U	-0.0346	pCi/L					02/12/19	12:2
	Uncertainty			+/-0.144							
QC1204211565	469930005	MS									
Gross Radium Alpha	4480	U	0.798	3820	pCi/L		85.3	(75%-125%)		02/12/19	12:2
	Uncertainty		+/-0.342	+/-51.7							
QC1204211566	469930005	MSD									
Gross Radium Alpha	4480	U	0.798	3870	pCi/L	1.39	86.5	(0%-20%)		02/12/19	12:2
	Uncertainty		+/-0.342	+/-59.2							

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD

GEL LABORATORIES LLC

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QC Summary

Workorder: 469930

Page 2 of

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
M	Matrix Related Failure									
N/A	RPD or %Recovery limits do not apply.									
N1	See case narrative									
ND	Analyte concentration is not detected above the detection limit									
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.									
R	Sample results are rejected									
U	Analyte was analyzed for, but not detected above the CRDL.									
UI	Gamma Spectroscopy--Uncertain identification									
UJ	Gamma Spectroscopy--Uncertain identification									
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.									
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y	QC Samples were not spiked with this compound									
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.									
h	Preparation or preservation holding time was exceeded									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Tab F

Laboratory Analytical Reports – Accelerated Monitoring

Tab F1

Laboratory Analytical Reports – Accelerated Monitoring

February 2019



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-001
Client Sample ID: MW-11_02132019
Collection Date: 2/13/2019 1125h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Manganese	mg/L	2/18/2019 1319h	2/20/2019 1107h	E200.8	0.0100	0.211	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-002
Client Sample ID: MW-25_02122019
Collection Date: 2/12/2019 1215h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	2/18/2019 1319h	2/20/2019 1110h	E200.8	0.000500	0.00152	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-003
Client Sample ID: MW-26_02132019
Collection Date: 2/13/2019 1300h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Analytical Results

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Chloride	mg/L		2/21/2019 1741h	E300.0	1.00	57.2	
Nitrate/Nitrite (as N)	mg/L		2/20/2019 831h	E353.2	0.100	0.967	

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Laboratory Director

Jose Rocha

QA Officer



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-003C
Client Sample ID: MW-26_02132019
Collection Date: 2/13/2019 1300h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 2/19/2019 1332h

Units: µg/L **Dilution Factor:** 100 **Method:** SW8260C

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Chloroform	67-66-3	100	1,300	~

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Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	4,920	5,000	98.4	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	5,280	5,000	106	80-152	
Surr: Dibromofluoromethane		1868-53-7	4,780	5,000	95.6	72-135	
Surr: Toluene-d8		2037-26-5	5,020	5,000	100	80-124	

~ - The reporting limits were raised due to high analyte concentrations.

Analyzed: 2/19/2019 1247h

Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Kyle F. Gross
Laboratory Director

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Methylene chloride	75-09-2	1.00	1.91	

Jose Rocha
QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	49.4	50.00	98.9	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	53.2	50.00	106	80-152	
Surr: Dibromofluoromethane		1868-53-7	50.8	50.00	102	72-135	
Surr: Toluene-d8		2037-26-5	51.0	50.00	102	80-124	



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-004
Client Sample ID: MW-30_02132019
Collection Date: 2/13/2019 1020h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Uranium	mg/L	2/18/2019 1319h	2/20/2019 1211h	E200.8	0.000300	0.00909	

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Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-004
Client Sample ID: MW-30_02132019
Collection Date: 2/13/2019 1020h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Analytical Results

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Chloride	mg/L		2/21/2019 1758h	E300.0	1.00	167	
Nitrate/Nitrite (as N)	mg/L		2/20/2019 838h	E353.2	0.100	18.2	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-005
Client Sample ID: MW-31_02122019
Collection Date: 2/12/2019 1300h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Selenium	mg/L	2/18/2019 1319h	2/20/2019 1142h	E200.8	0.00500	0.0885	
Uranium	mg/L	2/18/2019 1319h	2/20/2019 1214h	E200.8	0.000300	0.0136	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-005
Client Sample ID: MW-31_02122019
Collection Date: 2/12/2019 1300h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/21/2019 1132h	E300.0	10.0	296	
Nitrate/Nitrite (as N)	mg/L		2/20/2019 839h	E353.2	0.100	18.6	
Sulfate	mg/L		2/21/2019 1132h	E300.0	75.0	893	
Total Dissolved Solids	mg/L		2/19/2019 950h	SM2540C	20.0	2,090	@

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

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Laboratory Director

Jose Rocha
QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-006
Client Sample ID: MW-65_02132019
Collection Date: 2/13/2019 1020h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Uranium	mg/L	2/18/2019 1319h	2/20/2019 1218h	E200.8	0.000300	0.00917	

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Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-006
Client Sample ID: MW-65_02132019
Collection Date: 2/13/2019 1020h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		2/21/2019 1815h	E300.0	2.00	157	
Nitrate/Nitrite (as N)	mg/L		2/20/2019 840h	E353.2	0.100	18.0	

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Laboratory Director

Jose Rocha

QA Officer



ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Sample ID: 1902310-007A
Client Sample ID: Trip Blank
Collection Date: 2/13/2019 1300h
Received Date: 2/18/2019 945h

Contact: Tanner Holliday

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 2/19/2019 1228h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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<u>Compound</u>	<u>CAS Number</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Chloroform	67-66-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	

<u>Surrogate</u>	<u>Units: µg/L</u>	<u>CAS</u>	<u>Result</u>	<u>Amount Spiked</u>	<u>% REC</u>	<u>Limits</u>	<u>Qual</u>
Surr: 1,2-Dichloroethane-d4		17060-07-0	49.1	50.00	98.1	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	53.9	50.00	108	80-152	
Surr: Dibromofluoromethane		1868-53-7	47.6	50.00	95.2	72-135	
Surr: Toluene-d8		2037-26-5	50.3	50.00	101	80-124	

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



Tanner Holliday
Energy Fuels Resources, Inc.
6425 South Hwy 191
Blanding, UT 84511
TEL: (435) 678-2221

RE: February Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1902310

3440 South 700 West

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American West Analytical Laboratories received sample(s) on 2/18/2019 for the analyses presented in the following report.

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, Wyoming, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Thank You,

Approved by:

Jose G. Rocha	Digitally signed by Jose G. Rocha
	DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou, email=jose@awal-labs.com, c=US Date: 2019.02.25 15:16:17 -07'00'

Laboratory Director or designee



SAMPLE SUMMARY

Client: Energy Fuels Resources, Inc.
Project: February Ground Water 2019
Lab Set ID: 1902310
Date Received: 2/18/2019 945h

Contact: Tanner Holliday

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1902310-001A	MW-11_02132019	2/13/2019 1125h	Aqueous	ICPMS Metals, Dissolved
1902310-002A	MW-25_02122019	2/12/2019 1215h	Aqueous	ICPMS Metals, Dissolved
1902310-003A	MW-26_02132019	2/13/2019 1300h	Aqueous	Nitrite/Nitrate (as N), E353.2
1902310-003B	MW-26_02132019	2/13/2019 1300h	Aqueous	Anions, E300.0
1902310-003C	MW-26_02132019	2/13/2019 1300h	Aqueous	VOA by GC/MS Method 8260C/5030C
1902310-004A	MW-30_02132019	2/13/2019 1020h	Aqueous	Nitrite/Nitrate (as N), E353.2
1902310-004B	MW-30_02132019	2/13/2019 1020h	Aqueous	Anions, E300.0
1902310-004C	MW-30_02132019	2/13/2019 1020h	Aqueous	ICPMS Metals, Dissolved
1902310-005A	MW-31_02122019	2/12/2019 1300h	Aqueous	Nitrite/Nitrate (as N), E353.2
1902310-005B	MW-31_02122019	2/12/2019 1300h	Aqueous	Anions, E300.0
1902310-005C	MW-31_02122019	2/12/2019 1300h	Aqueous	Total Dissolved Solids, A2540C
1902310-005D	MW-31_02122019	2/12/2019 1300h	Aqueous	ICPMS Metals, Dissolved
1902310-006A	MW-65_02132019	2/13/2019 1020h	Aqueous	Nitrite/Nitrate (as N), E353.2
1902310-006B	MW-65_02132019	2/13/2019 1020h	Aqueous	Anions, E300.0
1902310-006C	MW-65_02132019	2/13/2019 1020h	Aqueous	ICPMS Metals, Dissolved
1902310-007A	Trip Blank	2/13/2019 1300h	Aqueous	VOA by GC/MS Method 8260C/5030C



Inorganic Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: February Ground Water 2019
Lab Set ID: 1902310

3440 South 700 West
Salt Lake City, UT 84119

Sample Receipt Information:

Date of Receipt: 2/18/2019
Date(s) of Collection: 2/12-2/13/2019
Sample Condition: Intact
C-O-C Discrepancies: See Chain of Custody

Phone: (801) 263-8686

Holding Time and Preservation Requirements: The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

Preparation and Analysis Requirements: The samples were analyzed following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD, DUP:

Method Blanks (MB): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Samples (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions:

Sample ID	Analyte	QC	Explanation
1902310-002A	Manganese	MSD	High analyte concentration

Duplicate (DUP): The parameters that required a duplicate analysis had RPDs within the control limits, with the following exceptions: the RPD for Total Dissolved Solids on sample 1902310-005C was outside of the control limits due to suspected sample non-homogeneity or sample matrix interference.

Corrective Action: None required.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



Volatile Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: February Ground Water 2019
Lab Set ID: 1902310

3440 South 700 West
Salt Lake City, UT 84119

Sample Receipt Information:

Date of Receipt: 2/18/2019
Date(s) of Collection: 2/12-2/13/2019
Sample Condition: Intact
C-O-C Discrepancies: See Chain of Custody
Method: SW-846 8260C/5030C
Analysis: Volatile Organic Compounds

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e-mail: awal@awal-labs.com

General Set Comments: One or more target analytes were observed above reporting limits.

web: www.awal-labs.com

Holding Time and Preservation Requirements: All samples were received in appropriate containers and properly preserved. The analysis and preparation of all samples were performed within the method holding times following the methods stated on the analytical reports.

Kyle F. Gross

Laboratory Director

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Jose Rocha

QA Officer

Batch QC Requirements: MB, LCS, MS, MSD, RPD, and Surrogates:

Method Blanks (MBs): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Sample (LCSs): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicate (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

Surrogates: All surrogate recoveries were within established limits.

Corrective Action: None required.



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1902310
Project: February Ground Water 2019

Contact: Tanner Holliday
Dept: ME
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-60851	Date Analyzed:		02/20/2019 1129h										
Test Code: 200.8-DIS	Date Prepared:		02/18/2019 1319h										
Cadmium	0.188	mg/L	E200.8	0.0000898	0.000500	0.2000	0	94.0	85 - 115				
Manganese	0.187	mg/L	E200.8	0.00148	0.00200	0.2000	0	93.7	85 - 115				
Selenium	0.188	mg/L	E200.8	0.000296	0.00200	0.2000	0	94.1	85 - 115				
Uranium	0.204	mg/L	E200.8	0.000628	0.00200	0.2000	0	102	85 - 115				



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1902310

Project: February Ground Water 2019

Contact: Tanner Holliday

Dept: ME

QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-60851	Date Analyzed:	02/20/2019	1101h										
Test Code:	200.8-DIS	Date Prepared:	02/18/2019	1319h									
Cadmium	< 0.0000500	mg/L	E200.8	0.00000898	0.0000500								
Manganese	< 0.000200	mg/L	E200.8	0.000148	0.000200								
Selenium	< 0.000200	mg/L	E200.8	0.0000296	0.000200								
Uranium	< 0.000200	mg/L	E200.8	0.0000628	0.000200								
Lab Sample ID: MB-FILTER-60832	Date Analyzed:	02/20/2019	1126h										
Test Code:	200.8-DIS	Date Prepared:	02/18/2019	1319h									
Cadmium	< 0.0000500	mg/L	E200.8	0.00000898	0.0000500								
Manganese	< 0.000200	mg/L	E200.8	0.000148	0.000200								
Selenium	< 0.000200	mg/L	E200.8	0.0000296	0.000200								
Uranium	< 0.000200	mg/L	E200.8	0.0000628	0.000200								



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1902310

Project: February Ground Water 2019

Contact: Tanner Holliday

Dept: ME

QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1902310-002AMS	Date Analyzed: 02/20/2019 1120h												
Test Code: 200.8-DIS	Date Prepared: 02/18/2019 1319h												
Cadmium	0.190	mg/L	E200.8	0.0000898	0.000500	0.2000	0.00152	94.2	75 - 125				
Manganese	1.58	mg/L	E200.8	0.00148	0.00200	0.2000	1.4	91.9	75 - 125				
Selenium	0.193	mg/L	E200.8	0.000296	0.00200	0.2000	0	96.3	75 - 125				
Uranium	0.214	mg/L	E200.8	0.000628	0.00200	0.2000	0.00685	104	75 - 125				



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1902310
Project: February Ground Water 2019

Contact: Tanner Holliday
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1902310-002AMSD	Date Analyzed: 02/20/2019 1123h												
Test Code: 200.8-DIS	Date Prepared: 02/18/2019 1319h												
Cadmium	0.188	mg/L	E200.8	0.0000898	0.000500	0.2000	0.00152	93.3	75 - 125	0.19	0.881	20	
Manganese	1.55	mg/L	E200.8	0.00148	0.00200	0.2000	1.4	74.8	75 - 125	1.58	2.19	20	2
Selenium	0.190	mg/L	E200.8	0.000296	0.00200	0.2000	0	95.2	75 - 125	0.193	1.17	20	
Uranium	0.215	mg/L	E200.8	0.000628	0.00200	0.2000	0.00685	104	75 - 125	0.214	0.357	20	

² - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1902310
Project: February Ground Water 2019

Contact: Tanner Holliday
Dept: WC
QC Type: DUP

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1902310-005CDUP Date Analyzed: 02/19/2019 950h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	2,200	mg/L	SM2540C	16.0	20.0					2090	5.22	5	@

@ - High RPD due to suspected sample non-homogeneity or matrix interference.



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1902310

Project: February Ground Water 2019

Contact: Tanner Holliday

Dept: WC

QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R122925													
Date Analyzed: 02/21/2019 1115h													
Test Code: 300.0-W													
Chloride	4.59	mg/L	E300.0	0.0581	0.100	5.000	0	91.8	90 - 110				
Sulfate	5.03	mg/L	E300.0	0.102	0.750	5.000	0	101	90 - 110				
Lab Sample ID: LCS-R122829													
Date Analyzed: 02/20/2019 824h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.02	mg/L	E353.2	0.00538	0.0100	1.000	0	102	90 - 110				
Lab Sample ID: LCS-R122842													
Date Analyzed: 02/19/2019 950h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	186	mg/L	SM2540C	8.00	10.0	205.0	0	90.7	80 - 120				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1902310

Project: February Ground Water 2019

Contact: Tanner Holliday

Dept: WC

QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R122925													
Date Analyzed: 02/21/2019 1056h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0581	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.102	0.750								
Lab Sample ID: MB-R122829													
Date Analyzed: 02/20/2019 821h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00538	0.0100								
Lab Sample ID: MB-R122842													
Date Analyzed: 02/19/2019 950h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.00	10.0								



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 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1902310
Project: February Ground Water 2019

Contact: Tanner Holliday
Dept: WC
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1902310-005BMS Date Analyzed: 02/21/2019 1419h													
Test Code: 300.0-W													
Chloride	1,210	mg/L	E300.0	11.6	20.0	1,000	296	91.3	90 - 110				
Sulfate	1,850	mg/L	E300.0	20.4	150	1,000	893	96.1	90 - 110				
Lab Sample ID: 1902310-003AMS Date Analyzed: 02/20/2019 832h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	11.4	mg/L	E353.2	0.0538	0.100	10.00	0.967	104	90 - 110				



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Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1902310
Project: February Ground Water 2019

Contact: Tanner Holliday
Dept: WC
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1902310-005BMSD Date Analyzed: 02/21/2019 1204h													
Test Code: 300.0-W													
Chloride	1,200	mg/L	E300.0	11.6	20.0	1,000	296	90.8	90 - 110	1210	0.456	20	
Sulfate	1,860	mg/L	E300.0	20.4	150	1,000	893	96.4	90 - 110	1850	0.198	20	
Lab Sample ID: 1902310-003AMSD Date Analyzed: 02/20/2019 837h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	11.4	mg/L	E353.2	0.0538	0.100	10.00	0.967	104	90 - 110	11.4	0.0879	10	



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1902310
Project: February Ground Water 2019

Contact: Tanner Holliday
Dept: MSVOA
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS VOC-1 021919A		Date Analyzed: 02/19/2019 1049h											
Test Code: 8260-W-DEN100													
Chloroform	20.6	µg/L	SW8260C	0.0998	1.00	20.00	0	103	85 - 124				
Methylene chloride	20.3	µg/L	SW8260C	0.400	1.00	20.00	0	101	65 - 154				
Surr: 1,2-Dichloroethane-d4	50.0	µg/L	SW8260C			50.00		99.9	80 - 136				
Surr: 4-Bromofluorobenzene	49.3	µg/L	SW8260C			50.00		98.6	85 - 121				
Surr: Dibromofluoromethane	50.2	µg/L	SW8260C			50.00		100	78 - 132				
Surr: Toluene-d8	49.6	µg/L	SW8260C			50.00		99.1	81 - 123				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1902310
Project: February Ground Water 2019

Contact: Tanner Holliday
Dept: MSVOA
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB VOC-1 021919A		Date Analyzed: 02/19/2019 1128h											
Test Code: 8260-W-DEN100													
Chloroform	< 1.00	µg/L	SW8260C	0.0998	1.00								
Methylene chloride	< 1.00	µg/L	SW8260C	0.400	1.00								
Surr: 1,2-Dichloroethane-d4	50.0	µg/L	SW8260C			50.00		100	80 - 136				
Surr: 4-Bromofluorobenzene	52.3	µg/L	SW8260C			50.00		105	85 - 121				
Surr: Dibromofluoromethane	48.1	µg/L	SW8260C			50.00		96.3	78 - 132				
Surr: Toluene-d8	50.1	µg/L	SW8260C			50.00		100	81 - 123				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1902310
Project: February Ground Water 2019

Contact: Tanner Holliday
Dept: MSVOA
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1902310-003CMS		Date Analyzed: 02/19/2019 1352h											
Test Code: 8260-W-DEN100													
Chloroform	3,430	µg/L	SW8260C	9.98	100	2,000	1300	107	50 - 146				
Methylene chloride	2,080	µg/L	SW8260C	40.0	100	2,000	1.91	104	30 - 192				
Surr: 1,2-Dichloroethane-d4	4,970	µg/L	SW8260C			5,000		99.4	72 - 151				
Surr: 4-Bromofluorobenzene	4,980	µg/L	SW8260C			5,000		99.7	80 - 152				
Surr: Dibromofluoromethane	5,010	µg/L	SW8260C			5,000		100	72 - 135				
Surr: Toluene-d8	4,900	µg/L	SW8260C			5,000		97.9	80 - 124				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1902310
Project: February Ground Water 2019

Contact: Tanner Holliday
Dept: MSVOA
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1902310-003CMSD		Date Analyzed: 02/19/2019 1412h											
Test Code: 8260-W-DEN100													
Chloroform	3,460	µg/L	SW8260C	9.98	100	2,000	1300	108	50 - 146	3430	0.725	25	
Methylene chloride	2,120	µg/L	SW8260C	40.0	100	2,000	1.91	106	30 - 192	2080	1.86	25	
Surr: 1,2-Dichloroethane-d4	4,980	µg/L	SW8260C			5,000		99.7	72 - 151				
Surr: 4-Bromofluorobenzene	5,010	µg/L	SW8260C			5,000		100	80 - 152				
Surr: Dibromofluoromethane	5,030	µg/L	SW8260C			5,000		101	72 - 135				
Surr: Toluene-d8	4,960	µg/L	SW8260C			5,000		99.3	80 - 124				

WORK ORDER Summary

Work Order: **1902310**

Page 1 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 3/4/2019

Client ID: ENE300

Contact: Tanner Holliday

Project: February Ground Water 2019

QC Level: III

WO Type: Project

Comments: QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com;

NB

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1902310-001A	MW-11_02132019	2/13/2019 1125h	2/18/2019 0945h	200.8-DIS <i>1 SEL Analytes: MN</i>	Aqueous	df -	dis met	1
				200.8-DIS-PR		df -	dis met	
1902310-002A	MW-25_02122019	2/12/2019 1215h	2/18/2019 0945h	200.8-DIS <i>1 SEL Analytes: CD</i>	Aqueous	df -	dis met	1
				200.8-DIS-PR		df -	dis met	
1902310-003A	MW-26_02132019	2/13/2019 1300h	2/18/2019 0945h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	df -	no2/no3	1
1902310-003B				300.0-W <i>1 SEL Analytes: CL</i>		df -	cl	
1902310-003C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 2 / # of Surr: 4</i>		VOC	Fridge	3
1902310-004A	MW-30_02132019	2/13/2019 1020h	2/18/2019 0945h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	df -	no2/no3	1
1902310-004B				300.0-W <i>1 SEL Analytes: CL</i>		df -	so4	
1902310-004C				200.8-DIS <i>1 SEL Analytes: U</i>		DF -	DIS MET	
				200.8-DIS-PR		DF -	DIS MET	
1902310-005A	MW-31_02122019	2/12/2019 1300h	2/18/2019 0945h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	df -	no2/no3	1
1902310-005B				300.0-W <i>2 SEL Analytes: CL SO4</i>		df -	cl/so4	
1902310-005C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		df -	tds	
1902310-005D				200.8-DIS <i>2 SEL Analytes: SE U</i>		df -	dis met	
				200.8-DIS-PR		df -	dis met	

WORK ORDER Summary

Work Order: **1902310** Page 2 of 2

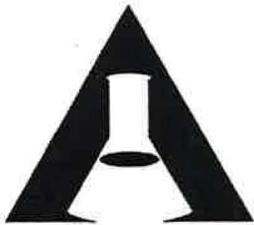
Client: Energy Fuels Resources, Inc.

Due Date: 3/4/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1902310-006A	MW-65_02132019	2/13/2019 1020h	2/18/2019 0945h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous		df - no2/no3 1
1902310-006B				300.0-W <i>1 SEL Analytes: CL</i>			df - so4
1902310-006C				200.8-DIS <i>1 SEL Analytes: U</i>			DF - DIS MET
				200.8-DIS-PR			DF - DIS MET
1902310-007A	Trip Blank	2/13/2019 1300h	2/18/2019 0945h	8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 2 / # of Surr: 4</i>	Aqueous		VOCFridge 3

AWAL Use Only - Close Hold Times

Test Code	# Samps	Min. days left
TDS-W-2540C	1	-.14



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CHAIN OF CUSTODY

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (FQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

1902310

AWAL Lab Sample Set #
 Page 1 of 1

Due Date: 3/4/19

QC Level:	Turn Around Time:	Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.	Due Date:
3	Standard		3/4/19
			Laboratory Use Only
			Samples Were: UPS
			1 Shipped or hand delivered
			2 Ambient or Chilled
			3 Temperature 0.2 °C
			4 Received Broken/Leaking (Improperly Sealed) Y N
			5 Properly Preserved Y N
			Checked at bench Y N
			6 Received Within Holding Times Y N
			Discrepancies Between Sample Labels and COC Record? Y N

Client: **Energy Fuels Resources, Inc.**
 Address: **6425 S. Hwy. 191 Blanding, UT 84511**
 Contact: **Tanner Holliday**
 Phone #: **(435) 678-2221** Cell #: _____
 Email: **gpalmer@energyfuels.com; kWeinel@energyfuels.com; dturk@energyfuels.com**
 Project Name: **February Ground Water 2019**
 Project #: _____
 PO #: _____
 Sampler Name: **Tanner Holliday**

Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	Dissolved Manganese (200.7/200.8)	Cl (4500 or 300.0)	TDS (2540C)	Dissolved Uranium (200.7/200.8)	Dissolved Cadmium (200.7/200.8)	Dissolved Selenium (200.7/200.8)	Fluoride (A*500-F C or 300.0)	SO4 (4500 or 300.0)	VOCs Chloroform, Dichloromethane, (8260C)	Known Hazards & Sample Comments
MW-11_02132019	2/13/2019	1125	1	W		X									
MW-25_02122019	2/12/2019	1215	1	W					X						
MW-26_02132019	2/13/2019	1300	5	W	X	X								X	
MW-30_02132019	2/13/2019	1020	3	W	X	X	X	X	X		X	X			
MW-31_02122019	2/12/2019	1300	4	W	X	X	X	X	X		X	X			
MW-65_02132019	2/13/2019	1020	3	W	X	X	X	X	X						
Trip Blank	2/13/2019	1300	3	W										X	

Relinquished by: Signature <i>Tanner Holliday</i>	Date: 2/14/2019	Received by: Signature _____	Date: _____
Print Name: Tanner Holliday	Time: 1130	Print Name: _____	Time: _____
Relinquished by: Signature _____	Date: _____	Received by: Signature _____	Date: _____
Print Name: _____	Time: _____	Print Name: _____	Time: _____
Relinquished by: Signature _____	Date: _____	Received by: Signature _____	Date: _____
Print Name: _____	Time: _____	Print Name: _____	Time: _____
Relinquished by: Signature _____	Date: _____	Received by: Signature <i>Denise Bruun</i>	Date: 2/16/19
Print Name: _____	Time: _____	Print Name: Denise Bruun	Time: 9:45

Special Instructions:
 Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.

Lab Set ID: 1902310
 pH Lot #: 5792

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	-001	-002	-003	-004	-005	-006											
Ammonia	pH <2 H ₂ SO ₄																	
COD	pH <2 H ₂ SO ₄																	
Cyanide	pH >12 NaOH																	
Metals	pH <2 HNO ₃	yes	yes		yes	yes	yes											
NO ₂ /NO ₃	pH <2 H ₂ SO ₄	yes	yes	yes	yes	yes	yes											
O & G	pH <2 HCL																	
Phenols	pH <2 H ₂ SO ₄																	
Sulfide	pH >9 NaOH, Zn Acetate																	
TKN	pH <2 H ₂ SO ₄																	
T PO ₄	pH <2 H ₂ SO ₄																	
Cr VI+	pH >9 (NH ₄) ₂ SO ₄																	

- Procedure:
- 1) Pour a small amount of sample in the sample lid
 - 2) Pour sample from lid gently over wide range pH paper
 - 3) **Do Not** dip the pH paper in the sample bottle or lid
 - 4) If sample is not preserved, properly list its extension and receiving pH in the appropriate column above
 - 5) Flag COC, notify client if requested
 - 6) Place client conversation on COC
 - 7) Samples may be adjusted

Frequency: All samples requiring preservation

- * The sample required additional preservative upon receipt.
- + The sample was received unpreserved.
- ▲ The sample was received unpreserved and therefore preserved upon receipt.
- # The sample pH was unadjustable to a pH < 2 due to the sample matrix.
- The sample pH was unadjustable to a pH > ____ due to the sample matrix interference.

Tab F2

Laboratory Analytical Reports – Accelerated Monitoring

March 2019



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: March Ground Water 2019
Lab Sample ID: 1903153-001
Client Sample ID: MW-11_03062019
Collection Date: 3/6/2019 1125h
Received Date: 3/7/2019 1045h

Contact: Tanner Holliday

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Manganese	mg/L	3/8/2019 1033h	3/18/2019 1853h	E200.8	0.0100	0.170	

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Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: March Ground Water 2019
Lab Sample ID: 1903153-002
Client Sample ID: MW-25_03052019
Collection Date: 3/5/2019 1100h
Received Date: 3/7/2019 1045h

Contact: Tanner Holliday

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	3/8/2019 1033h	3/18/2019 1921h	E200.8	0.000500	0.00154	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: March Ground Water 2019
Lab Sample ID: 1903153-003
Client Sample ID: MW-26_03062019
Collection Date: 3/6/2019 730h
Received Date: 3/7/2019 1045h

Contact: Tanner Holliday

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		3/19/2019 1204h	E300.0	1.00	60.4	
Nitrate/Nitrite (as N)	mg/L		3/8/2019 1419h	E353.2	0.100	3.22	

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ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: March Ground Water 2019
Lab Sample ID: 1903153-003C
Client Sample ID: MW-26_03062019
Collection Date: 3/6/2019 730h
Received Date: 3/7/2019 1045h

Contact: Tanner Holliday

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 3/7/2019 1613h

Units: µg/L **Dilution Factor:** 100 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Chloroform	67-66-3	100	1,290	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	5,080	5,000	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	5,090	5,000	102	80-152	
Surr: Dibromofluoromethane		1868-53-7	4,900	5,000	98.0	72-135	
Surr: Toluene-d8		2037-26-5	5,050	5,000	101	80-124	

Analyzed: 3/7/2019 1533h

Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Methylene chloride	75-09-2	1.00	1.45	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.0	50.00	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	51.1	50.00	102	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.6	50.00	99.2	72-135	
Surr: Toluene-d8		2037-26-5	49.9	50.00	99.8	80-124	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: March Ground Water 2019
Lab Sample ID: 1903153-004
Client Sample ID: MW-30_03062019
Collection Date: 3/6/2019 1020h
Received Date: 3/7/2019 1045h

Contact: Tanner Holliday

Analytical Results

DISSOLVED METALS

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Uranium	mg/L	3/8/2019 1033h	3/18/2019 1949h	E200.8	0.000300	0.00839	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: March Ground Water 2019
Lab Sample ID: 1903153-004
Client Sample ID: MW-30_03062019
Collection Date: 3/6/2019 1020h
Received Date: 3/7/2019 1045h

Contact: Tanner Holliday

Analytical Results

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Chloride	mg/L		3/19/2019 1221h	E300.0	2.00	160	
Nitrate/Nitrite (as N)	mg/L		3/8/2019 1422h	E353.2	0.100	16.2	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: March Ground Water 2019
Lab Sample ID: 1903153-005
Client Sample ID: MW-31_03052019
Collection Date: 3/5/2019 1320h
Received Date: 3/7/2019 1045h

Contact: Tanner Holliday

Analytical Results

DISSOLVED METALS

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Selenium	mg/L	3/8/2019 1033h	3/18/2019 1927h	E200.8	0.00500	0.0911	
Uranium	mg/L	3/8/2019 1033h	3/18/2019 1952h	E200.8	0.000300	0.0125	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.

Contact: Tanner Holliday

Project: March Ground Water 2019

Lab Sample ID: 1903153-005

Client Sample ID: MW-31_03052019

Collection Date: 3/5/2019 1320h

Received Date: 3/7/2019 1045h

Analytical Results

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
Chloride	mg/L		3/19/2019 1113h	E300.0	10.0	322	
Nitrate/Nitrite (as N)	mg/L		3/8/2019 1423h	E353.2	0.100	18.5	
Sulfate	mg/L		3/18/2019 1232h	E300.0	75.0	953	
Total Dissolved Solids	mg/L		3/8/2019 1120h	SM2540C	20.0	2,160	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Tanner Holliday
Project: March Ground Water 2019
Lab Sample ID: 1903153-006
Client Sample ID: MW-65_03052019
Collection Date: 3/5/2019 1320h
Received Date: 3/7/2019 1045h

Analytical Results

DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Selenium	mg/L	3/8/2019 1033h	3/18/2019 1930h	E200.8	0.00500	0.0907	
Uranium	mg/L	3/8/2019 1033h	3/18/2019 1955h	E200.8	0.000300	0.0129	

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.

Contact: Tanner Holliday

Project: March Ground Water 2019

Lab Sample ID: 1903153-006

Client Sample ID: MW-65_03052019

Collection Date: 3/5/2019 1320h

Received Date: 3/7/2019 1045h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		3/19/2019 1056h	E300.0	10.0	317	
Nitrate/Nitrite (as N)	mg/L		3/8/2019 1424h	E353.2	0.100	18.3	
Sulfate	mg/L		3/18/2019 1214h	E300.0	150	867	
Total Dissolved Solids	mg/L		3/8/2019 1120h	SM2540C	20.0	2,070	

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ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc.
Project: March Ground Water 2019
Lab Sample ID: 1903153-007A
Client Sample ID: Trip Blank
Collection Date: 3/6/2019 730h
Received Date: 3/7/2019 1045h

Contact: Tanner Holliday

Test Code: 8260-W-DEN100

Analytical Results

VOAs by GC/MS Method 8260C/5030C

Analyzed: 3/7/2019 1513h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Chloroform	67-66-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	50.9	50.00	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	51.0	50.00	102	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.1	50.00	98.2	72-135	
Surr: Toluene-d8		2037-26-5	49.9	50.00	99.8	80-124	

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



Tanner Holliday
Energy Fuels Resources, Inc.
6425 South Hwy 191
Blanding, UT 84511
TEL: (435) 678-2221

RE: March Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1903153

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American West Analytical Laboratories received sample(s) on 3/7/2019 for the analyses presented in the following report.

American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, Wyoming, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Thank You,

Approved by:

Jose G. Rocha	Digitally signed by Jose G. Rocha
	DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou, email=jose@awal-labs.com, c=US Date: 2019.03.22 14:57:46 -06'00'

Laboratory Director or designee



SAMPLE SUMMARY

Client: Energy Fuels Resources, Inc.
Project: March Ground Water 2019
Lab Set ID: 1903153
Date Received: 3/7/2019 1045h

Contact: Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1903153-001A	MW-11_03062019	3/6/2019 1125h	Aqueous	ICPMS Metals, Dissolved
1903153-002A	MW-25_03052019	3/5/2019 1100h	Aqueous	ICPMS Metals, Dissolved
1903153-003A	MW-26_03062019	3/6/2019 730h	Aqueous	Nitrite/Nitrate (as N), E353.2
1903153-003B	MW-26_03062019	3/6/2019 730h	Aqueous	Anions, E300.0
1903153-003C	MW-26_03062019	3/6/2019 730h	Aqueous	VOA by GC/MS Method 8260C/5030C
1903153-004A	MW-30_03062019	3/6/2019 1020h	Aqueous	Nitrite/Nitrate (as N), E353.2
1903153-004B	MW-30_03062019	3/6/2019 1020h	Aqueous	Anions, E300.0
1903153-004C	MW-30_03062019	3/6/2019 1020h	Aqueous	ICPMS Metals, Dissolved
1903153-005A	MW-31_03052019	3/5/2019 1320h	Aqueous	Nitrite/Nitrate (as N), E353.2
1903153-005B	MW-31_03052019	3/5/2019 1320h	Aqueous	Anions, E300.0
1903153-005C	MW-31_03052019	3/5/2019 1320h	Aqueous	ICPMS Metals, Dissolved
1903153-005D	MW-31_03052019	3/5/2019 1320h	Aqueous	Total Dissolved Solids, A2540C
1903153-006A	MW-65_03052019	3/5/2019 1320h	Aqueous	Nitrite/Nitrate (as N), E353.2
1903153-006B	MW-65_03052019	3/5/2019 1320h	Aqueous	Anions, E300.0
1903153-006C	MW-65_03052019	3/5/2019 1320h	Aqueous	ICPMS Metals, Dissolved
1903153-006D	MW-65_03052019	3/5/2019 1320h	Aqueous	Total Dissolved Solids, A2540C
1903153-007A	Trip Blank	3/6/2019 730h	Aqueous	VOA by GC/MS Method 8260C/5030C

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Laboratory Director

Jose Rocha
QA Officer



Inorganic Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Tanner Holliday
Project: March Ground Water 2019
Lab Set ID: 1903153

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Jose Rocha

QA Officer

Sample Receipt Information:

Date of Receipt: 3/7/2019
Date(s) of Collection: 3/5-3/16/2019
Sample Condition: See Chain of Custody
C-O-C Discrepancies: See Chain of Custody

Holding Time and Preservation Requirements: The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

Preparation and Analysis Requirements: The samples were analyzed following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD, DUP:

Method Blanks (MB): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Samples (LCS): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicates (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

Duplicate (DUP): The parameters that required a duplicate analysis had RPDs within the control limits.

Corrective Action: None required.



Volatile Case Narrative

Client: Energy Fuels Resources, Inc.
Contact: Tanner Holliday
Project: March Ground Water 2019
Lab Set ID: 1903153

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Kyle F. Gross
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Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt: 3/7/2019
Date(s) of Collection: 3/5-3/16/2019
Sample Condition: See Chain of Custody
C-O-C Discrepancies: See Chain of Custody
Method: SW-846 8260C/5030C
Analysis: Volatile Organic Compounds

General Set Comments: Multiple target analytes were observed above reporting limits.

Holding Time and Preservation Requirements: All samples were received in appropriate containers and properly preserved. The analysis and preparation of all samples were performed within the method holding times following the methods stated on the analytical reports.

Analytical QC Requirements: All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

Batch QC Requirements: MB, LCS, MS, MSD, RPD, and Surrogates:

Method Blanks (MBs): No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

Laboratory Control Sample (LCSs): All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

Matrix Spike / Matrix Spike Duplicate (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

Surrogates: All surrogate recoveries were within established limits.

Corrective Action: None required.



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1903153

Project: March Ground Water 2019

Contact: Tanner Holliday

Dept: ME

QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-61207	Date Analyzed:		03/18/2019 1850h										
Test Code: 200.8-DIS	Date Prepared:		03/08/2019 1033h										
Cadmium	0.189	mg/L	E200.8	0.0000858	0.000500	0.2000	0	94.5	85 - 115				
Manganese	0.197	mg/L	E200.8	0.00108	0.00200	0.2000	0	98.5	85 - 115				
Selenium	0.192	mg/L	E200.8	0.000574	0.00200	0.2000	0	96.2	85 - 115				
Uranium	0.185	mg/L	E200.8	0.000176	0.00200	0.2000	0	92.5	85 - 115				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1903153

Project: March Ground Water 2019

Contact: Tanner Holliday

Dept: ME

QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-61207	Date Analyzed:		03/18/2019 1908h										
Test Code: 200.8-DIS	Date Prepared:		03/08/2019 1033h										
Cadmium	< 0.0000500	mg/L	E200.8	0.00000858	0.0000500								
Manganese	< 0.000200	mg/L	E200.8	0.000108	0.000200								
Selenium	< 0.000200	mg/L	E200.8	0.0000574	0.000200								
Uranium	< 0.000200	mg/L	E200.8	0.0000176	0.000200								



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1903153
Project: March Ground Water 2019

Contact: Tanner Holliday
Dept: ME
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1903153-001AMS	Date Analyzed: 03/18/2019 1902h												
Test Code: 200.8-DIS	Date Prepared: 03/08/2019 1033h												
Cadmium	0.191	mg/L	E200.8	0.0000858	0.000500	0.2000	0	95.6	75 - 125				
Manganese	0.366	mg/L	E200.8	0.00108	0.00200	0.2000	0.17	98.1	75 - 125				
Selenium	0.196	mg/L	E200.8	0.000574	0.00200	0.2000	0	98.0	75 - 125				
Uranium	0.191	mg/L	E200.8	0.000176	0.00200	0.2000	0.000842	94.8	75 - 125				



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1903153
Project: March Ground Water 2019

Contact: Tanner Holliday
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1903153-001AMSD	Date Analyzed: 03/18/2019 1905h												
Test Code: 200.8-DIS	Date Prepared: 03/08/2019 1033h												
Cadmium	0.193	mg/L	E200.8	0.0000858	0.000500	0.2000	0	96.3	75 - 125	0.191	0.765	20	
Manganese	0.373	mg/L	E200.8	0.00108	0.00200	0.2000	0.17	101	75 - 125	0.366	1.74	20	
Selenium	0.195	mg/L	E200.8	0.000574	0.00200	0.2000	0	97.6	75 - 125	0.196	0.447	20	
Uranium	0.191	mg/L	E200.8	0.000176	0.00200	0.2000	0.000842	95.2	75 - 125	0.191	0.433	20	



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1903153
Project: March Ground Water 2019

Contact: Tanner Holliday
Dept: WC
QC Type: DUP

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1903153-005DDUP													
Date Analyzed: 03/08/2019 1120h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	2,110	mg/L	SM2540C	16.0	20.0					2160	2.25	5	



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1903153

Project: March Ground Water 2019

Contact: Tanner Holliday

Dept: WC

QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R123620	Date Analyzed: 03/18/2019 1138h												
Test Code:	300.0-W												
Sulfate	5.13	mg/L	E300.0	0.0557	0.750	5.000	0	103	90 - 110				
Lab Sample ID: LCS-R123676	Date Analyzed: 03/19/2019 1039h												
Test Code:	300.0-W												
Chloride	4.68	mg/L	E300.0	0.0386	0.100	5.000	0	93.7	90 - 110				
Lab Sample ID: LCS-R123351	Date Analyzed: 03/08/2019 1345h												
Test Code:	NO2/NO3-W-353.2												
Nitrate/Nitrite (as N)	1.02	mg/L	E353.2	0.00363	0.0100	1.000	0	102	90 - 110				
Lab Sample ID: LCS-R123351	Date Analyzed: 03/08/2019 1502h												
Test Code:	NO2/NO3-W-353.2												
Nitrate/Nitrite (as N)	0.999	mg/L	E353.2	0.00363	0.0100	1.000	0	99.9	90 - 110				
Lab Sample ID: LCS-R123392	Date Analyzed: 03/08/2019 1120h												
Test Code:	TDS-W-2540C												
Total Dissolved Solids	184	mg/L	SM2540C	8.00	10.0	205.0	0	89.8	80 - 120				



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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1903153
Project: March Ground Water 2019

Contact: Tanner Holliday
Dept: WC
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R123620	Date Analyzed: 03/18/2019 1121h												
Test Code: 300.0-W													
Sulfate	< 0.750	mg/L	E300.0	0.0557	0.750								
Lab Sample ID: MB-R123676	Date Analyzed: 03/19/2019 1023h												
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Lab Sample ID: MB	Date Analyzed: 03/08/2019 1344h												
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								
Lab Sample ID: MB-R123351	Date Analyzed: 03/08/2019 1434h												
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								
Lab Sample ID: MB-R123392	Date Analyzed: 03/08/2019 1120h												
Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.00	10.0								



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Jose Rocha
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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1903153
Project: March Ground Water 2019

Contact: Tanner Holliday
Dept: WC
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1903153-005BMS Date Analyzed: 03/18/2019 1249h													
Test Code: 300.0-W													
Sulfate	1,940	mg/L	E300.0	11.1	150	1,000	953	98.6	90 - 110				
Lab Sample ID: 1903153-005BMS Date Analyzed: 03/19/2019 1130h													
Test Code: 300.0-W													
Chloride	1,290	mg/L	E300.0	7.72	20.0	1,000	322	96.5	90 - 110				
Lab Sample ID: 1903244-005AMS Date Analyzed: 03/19/2019 1747h													
Test Code: 300.0-W													
Chloride	140	mg/L	E300.0	0.772	2.00	100.0	40.4	99.3	90 - 110				
Lab Sample ID: 1903153-003AMS Date Analyzed: 03/08/2019 1420h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	13.4	mg/L	E353.2	0.0363	0.100	10.00	3.22	102	90 - 110				



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1903153
Project: March Ground Water 2019

Contact: Tanner Holliday
Dept: WC
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1903153-005BMSD Date Analyzed: 03/18/2019 1306h													
Test Code: 300.0-W													
Sulfate	1,940	mg/L	E300.0	11.1	150	1,000	953	98.4	90 - 110	1940	0.0865	20	
Lab Sample ID: 1903153-005BMSD Date Analyzed: 03/19/2019 1147h													
Test Code: 300.0-W													
Chloride	1,270	mg/L	E300.0	7.72	20.0	1,000	322	95.1	90 - 110	1290	1.10	20	
Lab Sample ID: 1903244-005AMSD Date Analyzed: 03/19/2019 1804h													
Test Code: 300.0-W													
Chloride	136	mg/L	E300.0	0.772	2.00	100.0	40.4	95.4	90 - 110	140	2.77	20	
Lab Sample ID: 1903153-003AMSD Date Analyzed: 03/08/2019 1421h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	12.8	mg/L	E353.2	0.0363	0.100	10.00	3.22	95.6	90 - 110	13.4	4.81	10	



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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1903153
Project: March Ground Water 2019

Contact: Tanner Holliday
Dept: MSVOA
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS VOC-1 030719A		Date Analyzed: 03/07/2019 1028h											
Test Code: 8260-W-DEN100													
Chloroform	22.1	µg/L	SW8260C	0.0998	1.00	20.00	0	110	85 - 124				
Methylene chloride	22.2	µg/L	SW8260C	0.400	1.00	20.00	0	111	65 - 154				
Surr: 1,2-Dichloroethane-d4	52.6	µg/L	SW8260C			50.00		105	80 - 136				
Surr: 4-Bromofluorobenzene	49.8	µg/L	SW8260C			50.00		99.6	85 - 121				
Surr: Dibromofluoromethane	51.7	µg/L	SW8260C			50.00		103	78 - 132				
Surr: Toluene-d8	49.5	µg/L	SW8260C			50.00		99.0	81 - 123				

analyses applicable to the CWA, SDWA, and RCRA are performed in accordance with NELAP protocols. Pertinent sampling information is located on the attached COC. Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This



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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.

Lab Set ID: 1903153

Project: March Ground Water 2019

Contact: Tanner Holliday

Dept: MSVOA

QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB VOC-1 030719A	Date Analyzed: 03/07/2019 1108h												
Test Code: 8260-W-DEN100													
Chloroform	< 1.00	µg/L	SW8260C	0.0998	1.00								
Methylene chloride	< 1.00	µg/L	SW8260C	0.400	1.00								
Surr: 1,2-Dichloroethane-d4	51.0	µg/L	SW8260C			50.00		102	80 - 136				
Surr: 4-Bromofluorobenzene	51.0	µg/L	SW8260C			50.00		102	85 - 121				
Surr: Dibromofluoromethane	49.0	µg/L	SW8260C			50.00		98.0	78 - 132				
Surr: Toluene-d8	50.2	µg/L	SW8260C			50.00		100	81 - 123				



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 Laboratory Director

Jose Rocha
 QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1903153
Project: March Ground Water 2019

Contact: Tanner Holliday
Dept: MSVOA
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1903153-003CMS	Date Analyzed: 03/07/2019 1633h												
Test Code: 8260-W-DEN100													
Chloroform	3,450	µg/L	SW8260C	9.98	100	2,000	1290	108	50 - 146				
Methylene chloride	2,270	µg/L	SW8260C	40.0	100	2,000	0	113	30 - 192				
Surr: 1,2-Dichloroethane-d4	5,120	µg/L	SW8260C			5,000		103	72 - 151				
Surr: 4-Bromofluorobenzene	4,990	µg/L	SW8260C			5,000		99.7	80 - 152				
Surr: Dibromofluoromethane	5,020	µg/L	SW8260C			5,000		100	72 - 135				
Surr: Toluene-d8	4,970	µg/L	SW8260C			5,000		99.3	80 - 124				



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Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1903153
Project: March Ground Water 2019

Contact: Tanner Holliday
Dept: MSVOA
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1903153-003CMSD	Date Analyzed: 03/07/2019 1653h												
Test Code: 8260-W-DEN100													
Chloroform	3,420	µg/L	SW8260C	9.98	100	2,000	1290	107	50 - 146	3450	0.670	25	
Methylene chloride	2,240	µg/L	SW8260C	40.0	100	2,000	0	112	30 - 192	2270	1.33	25	
Surr: 1,2-Dichloroethane-d4	5,160	µg/L	SW8260C			5,000		103	72 - 151				
Surr: 4-Bromofluorobenzene	4,960	µg/L	SW8260C			5,000		99.1	80 - 152				
Surr: Dibromofluoromethane	5,020	µg/L	SW8260C			5,000		100	72 - 135				
Surr: Toluene-d8	4,980	µg/L	SW8260C			5,000		99.6	80 - 124				

WORK ORDER Summary

Work Order: **1903153** Page 1 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 3/21/2019

Client ID: ENE300

Contact: Tanner Holliday

Project: March Ground Water 2019

QC Level: III

WO Type: Project

Comments: QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com; 1 of the Trip Blank vials was received broken.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1903153-001A	MW-11_03062019	3/6/2019 1125h	3/7/2019 1045h	200.8-DIS <i>1 SEL Analytes: MN</i>	Aqueous	df-met	1
				200.8-DIS-PR		df-met	
1903153-002A	MW-25_03052019	3/5/2019 1100h	3/7/2019 1045h	200.8-DIS <i>1 SEL Analytes: CD</i>	Aqueous	df-met	1
				200.8-DIS-PR		df-met	
1903153-003A	MW-26_03062019	3/6/2019 0730h	3/7/2019 1045h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	DF-NO2/NO3	1
1903153-003B				300.0-W <i>1 SEL Analytes: CL</i>		DF-cl	
1903153-003C				8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 2 / # of Surr: 4</i>		Purge	3
1903153-004A	MW-30_03062019	3/6/2019 1020h	3/7/2019 1045h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	DF-NO2/NO3	1
1903153-004B				300.0-W <i>1 SEL Analytes: CL</i>		DF-cl	
1903153-004C				200.8-DIS <i>1 SEL Analytes: U</i>		DF-Metals	
				200.8-DIS-PR		DF-Metals	
1903153-005A	MW-31_03052019	3/5/2019 1320h	3/7/2019 1045h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	DF-NO2/NO3	1
1903153-005B				300.0-W <i>2 SEL Analytes: CL SO4</i>		DF-cl	
1903153-005C				200.8-DIS <i>2 SEL Analytes: SE U</i>		DF-Metals	
				200.8-DIS-PR		DF-Metals	
1903153-005D				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		DF-tds	

WORK ORDER Summary

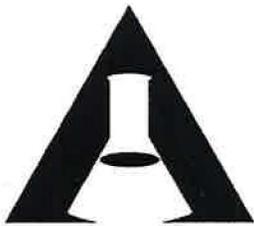
Work Order: **1903153**

Page 2 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 3/21/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1903153-006A	MW-65_03052019	3/5/2019 1320h	3/7/2019 1045h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	DF-NO2/NO3	1
1903153-006B				300.0-W <i>2 SEL Analytes: CL SO4</i>		DF-cl	
1903153-006C				200.8-DIS <i>2 SEL Analytes: SE U</i>		DF-Metals	
1903153-006D				200.8-DIS-PR TDS-W-2540C <i>1 SEL Analytes: TDS</i>		DF-Metals DF-tds	
1903153-007A	Trip Blank	3/6/2019 0730h	3/7/2019 1045h	8260-W-DEN100 <i>Test Group: 8260-W-DEN100; # of Analytes: 2 / # of Surr: 4</i>	Aqueous	Purge	2



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CHAIN OF CUSTODY

1903153

All analysis will be conducted using NELAP accredited methods and all data will be reported using AWAL's standard analyte lists and reporting limits (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

AWAL Lab Sample Set #
 Page 1 of 1

QC Level:		Turn Around Time:		Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.		Due Date:		
3		Standard						
# of Containers Sample Matrix NO2/NO3 (353.2) Dissolved Manganese (200.7/200.8) Cl (4500 or 300.0) TDS (2540C) Dissolved Uranium (200.7/200.8) Dissolved Cadmium (200.7/200.8) Dissolved Selenium (200.7/200.8) Fluoride (44500-FC or 300.0) SO4 (4500 or 300.0) VOCs Chloroform, Dichloromethane, (8260C)								

Include EDD:
LOCUS UPLOAD EXCEL
 Field Filtered For:
Dissolved Metals

For Compliance With:
 NELAP
 RCRA
 CWA
 SDWA
 ELAP / A2LA
 NLLAP
 Non-Compliance
 Other:

Laboratory Use Only

Samples Were: *WPS*

- Shipped or hand delivered
- Ambient or Chilled
- Temperature *1.9 °C*
- Received Broken/Leaking (Improperly Sealed)
- Properly Preserved
- Received Within Holding Times

Present on Outer Package
 Unbroken on Outer Package
 Present on Sample
 Unbroken on Sample
 Discrepancies Between Sample Labels and COC Record?

Client: **Energy Fuels Resources, Inc.**

Address: **6425 S. Hwy. 191 Blanding, UT 84511**

Contact: **Tanner Holliday**

Phone #: **(435) 678-2221** Cell #: _____

Email: **gpalmer@energyfuels.com; KWeinel@energyfuels.com; tholliday@energyfuels.com**

Project Name: **March Ground Water 2019**

Project #: _____

PO #: _____

Sampler Name: **Tanner Holliday**

Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	Dissolved Manganese (200.7/200.8)	Cl (4500 or 300.0)	TDS (2540C)	Dissolved Uranium (200.7/200.8)	Dissolved Cadmium (200.7/200.8)	Dissolved Selenium (200.7/200.8)	Fluoride (44500-FC or 300.0)	SO4 (4500 or 300.0)	VOCs Chloroform, Dichloromethane, (8260C)	Known Hazards & Sample Comments
1 MW-11_03062019	3/6/2019	1125	1	W		X									
2 MW-25_03052019	3/5/2019	1100	1	W					X						
3 MW-26_03062019	3/6/2019	730	5	W	X	X								X	
4 MW-30_03062019	3/6/2019	1020	3	W	X	X		X							
5 MW-31_03052019	3/5/2019	1320	4	W	X	X	X	X	X		X	X			
6 MW-65_03052019	3/5/2019	1320	4	W	X	X	X	X	X		X	X			
7 TRIP BLANK	3/6/2019	730	3	W										X	

Relinquished by: <i>Tanner Holliday</i>	Date: 3/6/2019	Received by: _____	Date: _____	Special Instructions: Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.
Signature: _____	Time: 1200	Signature: _____	Time: _____	
Print Name: Tanner Holliday		Print Name: _____	Time: _____	
Relinquished by: _____	Date: _____	Received by: <i>Edna Hayward</i>	Date: 3/17/19	
Signature: _____	Time: _____	Signature: _____	Time: 1045	
Print Name: _____		Print Name: _____	Time: _____	
Relinquished by: _____	Date: _____	Received by: _____	Date: _____	
Signature: _____	Time: _____	Signature: _____	Time: _____	
Print Name: _____		Print Name: _____	Time: _____	
Relinquished by: _____	Date: _____	Received by: _____	Date: _____	
Signature: _____	Time: _____	Signature: _____	Time: _____	
Print Name: _____		Print Name: _____	Time: _____	

Lab Set ID: 1903153
 pH Lot #: 5792

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	1	2	3	4	5	6												
Ammonia	pH <2 H ₂ SO ₄																		
COD	pH <2 H ₂ SO ₄																		
Cyanide	pH >12 NaOH																		
Metals	pH <2 HNO ₃	Yes	Yes		Yes	Yes	Yes												
NO ₂ /NO ₃	pH <2 H ₂ SO ₄			Yes	Yes	Yes	Yes												
O & G	pH <2 HCL																		
Phenols	pH <2 H ₂ SO ₄																		
Sulfide	pH >9 NaOH, Zn Acetate																		
TKN	pH <2 H ₂ SO ₄																		
T PO ₄	pH <2 H ₂ SO ₄																		
Cr VI+	pH >9 (NH ₄) ₂ SO ₄																		

- Procedure:
- 1) Pour a small amount of sample in the sample lid
 - 2) Pour sample from lid gently over wide range pH paper
 - 3) **Do Not** dip the pH paper in the sample bottle or lid
 - 4) If sample is not preserved, properly list its extension and receiving pH in the appropriate column above
 - 5) Flag COC, notify client if requested
 - 6) Place client conversation on COC
 - 7) Samples may be adjusted

Frequency: All samples requiring preservation

- * The sample required additional preservative upon receipt.
- + The sample was received unpreserved.
- ▲ The sample was received unpreserved and therefore preserved upon receipt.
- # The sample pH was unadjustable to a pH < 2 due to the sample matrix.
- The sample pH was unadjustable to a pH > ____ due to the sample matrix interference.

Tab G

Quality Assurance and Data Validation Tables

G-1A: Field QA/QC Evaluation

Location	1x Casing Volume	Volume Pumped	2x Casing Volume	Volume Check	Conductivity		RPD	pH		RPD	Temperature		RPD	Redox		RPD	Turbidity		RPD
MW-05	21.45	43.40	42.90	okay	2903	2900	0.10	7.27	7.27	0.00	13.83	13.87	0.29	262	261	0.38	0	0	0.00
MW-11	29.02	58.59	58.04	okay	3015	3011	0.13	7.38	7.36	0.27	14.05	14.03	0.14	362	350	3.37	16.0	15.0	6.45
MW-12	15.37	32.55	30.74	okay	4214	4221	0.17	6.58	6.57	0.15	13.70	13.74	0.29	472	468	0.85	1.1	1.1	0.00
MW-14	17.36	35.80	34.72	okay	3958	3968	0.25	6.51	6.50	0.15	13.61	13.71	0.73	311	317	1.91	0	0	0.00
MW-24	5.64	11.52	11.28	Pumped Dry	4554	4550	0.09	4.65	4.63	0.43	13.30	13.39	0.67	NM		NC	NM		NC
MW-25	23.34	47.74	46.68	okay	3209	3209	0.00	6.48	6.48	0.00	14.00	13.97	0.21	426	424	0.47	1.0	1.0	0.00
MW-26	NA	Continuously Pumped well		--	3529		NC	6.43		NC	13.77		NC	355		NC	0		NC
MW-27	26.23	53.16	52.46	okay	1143	1142	0.09	7.19	7.19	0.00	14.36	14.40	0.28	494	495	0.20	0	0	0.00
MW-28	23.21	52.08	46.42	okay	4053	4045	0.20	6.42	6.44	0.31	14.05	14.04	0.07	469	467	0.43	1.0	1.1	9.52
MW-30	22.83	46.65	45.66	okay	2174	2173	0.05	6.57	6.60	0.46	13.98	14.01	0.21	453	451	0.44	0	0	0.00
MW-31	39.76	81.37	79.52	okay	2912	2917	0.17	6.88	6.89	0.15	13.98	14.05	0.50	439	438	0.23	1.0	1.0	0.00
MW-32	33.28	67.27	66.56	okay	3807	3807	0.00	6.23	6.23	0.00	13.69	13.70	0.07	282	279	1.07	59.0	58.0	1.71
MW-35	7.86	16.27	15.72	okay	4208	4209	0.02	6.43	6.45	0.31	13.76	13.70	0.44	341	337	1.18	0	0	0.00
MW-36	7.16	16.27	14.32	okay	4980	4968	0.24	6.34	6.35	0.16	13.64	13.67	0.22	514	511	0.59	0	0	0.00
MW-38	2.50	5.00	5.00	Pumped Dry	4703	4710	0.15	7.03	6.95	1.14	13.50	13.55	0.37	NM		NC	NM		NC
MW-39	24.04	52.08	48.08	okay	4810	4805	0.10	4.07	4.05	0.49	14.04	14.03	0.07	530	531	0.19	2.8	2.7	3.64
MW-40	26.09	53.16	52.18	okay	3978	3977	0.03	6.26	6.30	0.64	13.70	13.80	0.73	505	503	0.40	11.0	11.0	0.00

MW-26 is a continually pumped well.

MW-24, MW-38 were pumped dry and sampled after recovery.

NM = Not Measured. The QAP does not require the measurement of redox potential or turbidity in wells that were purged to dryness.

RPD = Relative Percent Difference

The QAP states that turbidity should be less than 5 Nephelometric Turbidity Units ("NTU") prior to sampling unless the well is characterized by water that has a higher turbidity. The QAP does not require that turbidity measurements be less than 5 NTU prior to sampling. As such, the noted observations regarding turbidity measurements less than 5 NTU are included for information purposes only.

G-1B: Accelerated Field QA/QC Evaluation

Location	1x Casing Volume	Volume Pumped	2x Casing Volume	Volume Check	Conductivity		RPD	pH		RPD	Temperature		RPD	Redox		RPD	Turbidity		RPD
February Accelerated Sampling																			
MW-11	29.09	58.59	58.18	okay	3055	3054	0.03	6.74	6.80	0.89	14.00	14.01	0.07	317	310	2.23	0	0	0.00
MW-25	29.06	58.59	58.12	okay	3227	3215	0.37	6.30	6.35	0.79	14.07	14.09	0.14	259	258	0.39	13.0	13.0	0.00
MW-26	NA	Continuously Pumped well	--		3545		NC	6.25		NC	14.58		NC	295		NC	3.0		NC
MW-30	22.87	46.65	45.74	okay	2183	2177	0.28	6.45	6.46	0.15	14.17	14.15	0.14	354	355	0.28	0	0	0.00
MW-31	34.70	70.52	69.4	okay	2930	2932	0.07	6.17	6.24	1.13	14.30	14.37	0.49	363	370	1.91	0	0	0.00
March Accelerated Sampling																			
MW-11	29.12	58.59	58.24	okay	2925	2930	0.17	7.48	7.48	0.00	14.00	14.01	0.07	259	256	1.17	0	0	0.00
MW-25	23.16	46.65	46.32	okay	3170	3169	0.03	6.77	6.76	0.15	14.43	14.44	0.07	476	475	0.21	15.0	15.2	1.32
MW-26	NA	Continuously Pumped well	--		3481		NC	6.77		NC	14.31		NC	340		NC	0		NC
MW-30	22.90	46.65	45.8	okay	2142	2144	0.09	6.97	6.97	0.00	14.00	14.01	0.07	318	322	1.25	0	0	0.00
MW-31	39.95	80.29	79.9	okay	2917	2912	0.17	7.18	7.15	0.42	14.70	14.65	0.34	426	423	0.71	0	0	0.00

MW-26, is a continually pumped well.

There are no wells that were pumped dry and sampled after recovery.

NM = Not Measured. The QAP does not require the measurement of redox potential or turbidity in wells that were purged to dryness.

RPD = Relative Percent Difference

The QAP states that turbidity should be less than 5 Nephelometric Turbidity Units ("NTU") prior to sampling unless the well is characterized by water that has a higher turbidity. The QAP does not require that turbidity measurements be less than 5 NTU prior to sampling. As such, the noted observations regarding turbidity measurements less than 5 NTU are included for information purposes only.

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
Trip Blank	Toluene	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Tetrahydrofuran	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Xylenes, Total	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Carbon tetrachloride	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Acetone	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Chloroform	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Benzene	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Chloromethane	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Methylene chloride	1/15/2019	1/21/2019	6	14	OK
Trip Blank	2-Butanone	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Naphthalene	1/15/2019	1/21/2019	6	14	OK
Trip Blank	Toluene	1/23/2019	1/25/2019	2	14	OK
Trip Blank	Tetrahydrofuran	1/23/2019	1/25/2019	2	14	OK
Trip Blank	Xylenes, Total	1/23/2019	1/25/2019	2	14	OK
Trip Blank	Carbon tetrachloride	1/23/2019	1/25/2019	2	14	OK
Trip Blank	Acetone	1/23/2019	1/25/2019	2	14	OK
Trip Blank	Chloroform	1/23/2019	1/25/2019	2	14	OK
Trip Blank	Benzene	1/23/2019	1/25/2019	2	14	OK
Trip Blank	Chloromethane	1/23/2019	1/25/2019	2	14	OK
Trip Blank	Methylene chloride	1/23/2019	1/25/2019	2	14	OK
Trip Blank	2-Butanone	1/23/2019	1/25/2019	2	14	OK
Trip Blank	Naphthalene	1/23/2019	1/25/2019	2	14	OK
MW-05	Uranium	1/17/2019	1/31/2019	14	180	OK
MW-11	Toluene	1/15/2019	1/21/2019	6	14	OK
MW-11	Tetrahydrofuran	1/15/2019	1/21/2019	6	14	OK
MW-11	Xylenes, Total	1/15/2019	1/21/2019	6	14	OK
MW-11	Sulfate	1/15/2019	1/23/2019	8	28	OK
MW-11	Chloride	1/15/2019	1/23/2019	8	28	OK
MW-11	Fluoride	1/15/2019	1/23/2019	8	28	OK
MW-11	Carbon tetrachloride	1/15/2019	1/21/2019	6	14	OK
MW-11	Acetone	1/15/2019	1/21/2019	6	14	OK
MW-11	Chloroform	1/15/2019	1/21/2019	6	14	OK
MW-11	Benzene	1/15/2019	1/21/2019	6	14	OK
MW-11	Chloromethane	1/15/2019	1/21/2019	6	14	OK
MW-11	Iron	1/15/2019	1/31/2019	16	180	OK
MW-11	Lead	1/15/2019	1/31/2019	16	180	OK
MW-11	Magnesium	1/15/2019	1/30/2019	15	180	OK
MW-11	Manganese	1/15/2019	1/31/2019	16	180	OK
MW-11	Mercury	1/15/2019	1/28/2019	13	180	OK
MW-11	Molybdenum	1/15/2019	1/31/2019	16	180	OK
MW-11	Nickel	1/15/2019	1/31/2019	16	180	OK
MW-11	Potassium	1/15/2019	1/30/2019	15	180	OK
MW-11	Silver	1/15/2019	1/31/2019	16	180	OK
MW-11	Sodium	1/15/2019	1/30/2019	15	180	OK
MW-11	Thallium	1/15/2019	1/31/2019	16	180	OK
MW-11	Tin	1/15/2019	1/31/2019	16	180	OK
MW-11	Arsenic	1/15/2019	1/31/2019	16	180	OK
MW-11	Beryllium	1/15/2019	2/1/2019	17	180	OK
MW-11	Cadmium	1/15/2019	1/31/2019	16	180	OK
MW-11	Chromium	1/15/2019	1/31/2019	16	180	OK
MW-11	Cobalt	1/15/2019	1/31/2019	16	180	OK
MW-11	Copper	1/15/2019	1/31/2019	16	180	OK
MW-11	Uranium	1/15/2019	1/31/2019	16	180	OK

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-11	Vanadium	1/15/2019	1/30/2019	15	180	OK
MW-11	Zinc	1/15/2019	1/31/2019	16	180	OK
MW-11	Calcium	1/15/2019	1/30/2019	15	180	OK
MW-11	Methylene chloride	1/15/2019	1/21/2019	6	14	OK
MW-11	Ammonia (as N)	1/15/2019	1/22/2019	7	28	OK
MW-11	Selenium	1/15/2019	1/31/2019	16	180	OK
MW-11	2-Butanone	1/15/2019	1/21/2019	6	14	OK
MW-11	Naphthalene	1/15/2019	1/21/2019	6	14	OK
MW-11	Bicarbonate (as CaCO3)	1/15/2019	1/22/2019	7	14	OK
MW-11	Carbonate (as CaCO3)	1/15/2019	1/22/2019	7	14	OK
MW-11	Gross Radium Alpha	1/15/2019	2/6/2019	22	180	OK
MW-11	Nitrate/Nitrite (as N)	1/15/2019	1/21/2019	6	28	OK
MW-11	Total Dissolved Solids	1/15/2019	1/23/2019	8	7	EXCEED
MW-12	Uranium	1/21/2019	2/7/2019	17	180	OK
MW-14	Toluene	1/17/2019	1/21/2019	4	14	OK
MW-14	Tetrahydrofuran	1/17/2019	1/21/2019	4	14	OK
MW-14	Xylenes, Total	1/17/2019	1/21/2019	4	14	OK
MW-14	Sulfate	1/17/2019	1/23/2019	6	28	OK
MW-14	Chloride	1/17/2019	1/23/2019	6	28	OK
MW-14	Fluoride	1/17/2019	1/23/2019	6	28	OK
MW-14	Carbon tetrachloride	1/17/2019	1/21/2019	4	14	OK
MW-14	Acetone	1/17/2019	1/21/2019	4	14	OK
MW-14	Chloroform	1/17/2019	1/21/2019	4	14	OK
MW-14	Benzene	1/17/2019	1/21/2019	4	14	OK
MW-14	Chloromethane	1/17/2019	1/21/2019	4	14	OK
MW-14	Iron	1/17/2019	1/31/2019	14	180	OK
MW-14	Lead	1/17/2019	1/31/2019	14	180	OK
MW-14	Magnesium	1/17/2019	1/30/2019	13	180	OK
MW-14	Manganese	1/17/2019	1/31/2019	14	180	OK
MW-14	Mercury	1/17/2019	1/28/2019	11	180	OK
MW-14	Molybdenum	1/17/2019	1/31/2019	14	180	OK
MW-14	Nickel	1/17/2019	1/31/2019	14	180	OK
MW-14	Potassium	1/17/2019	1/30/2019	13	180	OK
MW-14	Silver	1/17/2019	1/31/2019	14	180	OK
MW-14	Sodium	1/17/2019	1/30/2019	13	180	OK
MW-14	Thallium	1/17/2019	1/31/2019	14	180	OK
MW-14	Tin	1/17/2019	1/31/2019	14	180	OK
MW-14	Arsenic	1/17/2019	1/31/2019	14	180	OK
MW-14	Beryllium	1/17/2019	2/1/2019	15	180	OK
MW-14	Cadmium	1/17/2019	1/31/2019	14	180	OK
MW-14	Chromium	1/17/2019	1/31/2019	14	180	OK
MW-14	Cobalt	1/17/2019	1/31/2019	14	180	OK
MW-14	Copper	1/17/2019	1/31/2019	14	180	OK
MW-14	Uranium	1/17/2019	1/31/2019	14	180	OK
MW-14	Vanadium	1/17/2019	1/30/2019	13	180	OK
MW-14	Zinc	1/17/2019	1/31/2019	14	180	OK
MW-14	Calcium	1/17/2019	1/30/2019	13	180	OK
MW-14	Methylene chloride	1/17/2019	1/21/2019	4	14	OK
MW-14	Ammonia (as N)	1/17/2019	1/22/2019	5	28	OK
MW-14	Selenium	1/17/2019	1/31/2019	14	180	OK
MW-14	2-Butanone	1/17/2019	1/21/2019	4	14	OK
MW-14	Naphthalene	1/17/2019	1/21/2019	4	14	OK
MW-14	Bicarbonate (as CaCO3)	1/17/2019	1/22/2019	5	14	OK

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-14	Carbonate (as CaCO3)	1/17/2019	1/22/2019	5	14	OK
MW-14	Gross Radium Alpha	1/17/2019	2/6/2019	20	180	OK
MW-14	Nitrate/Nitrite (as N)	1/17/2019	1/21/2019	4	28	OK
MW-14	Total Dissolved Solids	1/17/2019	1/23/2019	6	7	OK
MW-24	Thallium	1/23/2019	2/8/2019	16	180	OK
MW-24	Beryllium	1/23/2019	2/7/2019	15	180	OK
MW-24	Cadmium	1/23/2019	2/6/2019	14	180	OK
MW-25	Toluene	1/16/2019	1/21/2019	5	14	OK
MW-25	Tetrahydrofuran	1/16/2019	1/21/2019	5	14	OK
MW-25	Xylenes, Total	1/16/2019	1/21/2019	5	14	OK
MW-25	Sulfate	1/16/2019	1/23/2019	7	28	OK
MW-25	Chloride	1/16/2019	1/23/2019	7	28	OK
MW-25	Fluoride	1/16/2019	1/23/2019	7	28	OK
MW-25	Carbon tetrachloride	1/16/2019	1/21/2019	5	14	OK
MW-25	Acetone	1/16/2019	1/21/2019	5	14	OK
MW-25	Chloroform	1/16/2019	1/21/2019	5	14	OK
MW-25	Benzene	1/16/2019	1/21/2019	5	14	OK
MW-25	Chloromethane	1/16/2019	1/21/2019	5	14	OK
MW-25	Iron	1/16/2019	1/31/2019	15	180	OK
MW-25	Lead	1/16/2019	1/31/2019	15	180	OK
MW-25	Magnesium	1/16/2019	1/30/2019	14	180	OK
MW-25	Manganese	1/16/2019	1/31/2019	15	180	OK
MW-25	Mercury	1/16/2019	1/28/2019	12	180	OK
MW-25	Molybdenum	1/16/2019	1/31/2019	15	180	OK
MW-25	Nickel	1/16/2019	1/31/2019	15	180	OK
MW-25	Potassium	1/16/2019	1/30/2019	14	180	OK
MW-25	Silver	1/16/2019	1/31/2019	15	180	OK
MW-25	Sodium	1/16/2019	1/30/2019	14	180	OK
MW-25	Thallium	1/16/2019	1/31/2019	15	180	OK
MW-25	Tin	1/16/2019	1/31/2019	15	180	OK
MW-25	Arsenic	1/16/2019	1/31/2019	15	180	OK
MW-25	Beryllium	1/16/2019	2/1/2019	16	180	OK
MW-25	Cadmium	1/16/2019	1/31/2019	15	180	OK
MW-25	Chromium	1/16/2019	1/31/2019	15	180	OK
MW-25	Cobalt	1/16/2019	1/31/2019	15	180	OK
MW-25	Copper	1/16/2019	1/31/2019	15	180	OK
MW-25	Uranium	1/16/2019	1/31/2019	15	180	OK
MW-25	Vanadium	1/16/2019	1/30/2019	14	180	OK
MW-25	Zinc	1/16/2019	1/31/2019	15	180	OK
MW-25	Calcium	1/16/2019	1/30/2019	14	180	OK
MW-25	Methylene chloride	1/16/2019	1/21/2019	5	14	OK
MW-25	Ammonia (as N)	1/16/2019	1/31/2019	15	28	OK
MW-25	Selenium	1/16/2019	1/31/2019	15	180	OK
MW-25	2-Butanone	1/16/2019	1/21/2019	5	14	OK
MW-25	Naphthalene	1/16/2019	1/21/2019	5	14	OK
MW-25	Bicarbonate (as CaCO3)	1/16/2019	1/22/2019	6	14	OK
MW-25	Carbonate (as CaCO3)	1/16/2019	1/22/2019	6	14	OK
MW-25	Gross Radium Alpha	1/16/2019	2/6/2019	21	180	OK
MW-25	Nitrate/Nitrite (as N)	1/16/2019	1/21/2019	5	28	OK
MW-25	Total Dissolved Solids	1/16/2019	1/23/2019	7	7	OK
MW-26	Toluene	1/17/2019	1/21/2019	4	14	OK
MW-26	Tetrahydrofuran	1/17/2019	1/21/2019	4	14	OK
MW-26	Xylenes, Total	1/17/2019	1/21/2019	4	14	OK

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-26	Sulfate	1/17/2019	1/23/2019	6	28	OK
MW-26	Chloride	1/17/2019	1/23/2019	6	28	OK
MW-26	Fluoride	1/17/2019	1/23/2019	6	28	OK
MW-26	Carbon tetrachloride	1/17/2019	1/21/2019	4	14	OK
MW-26	Acetone	1/17/2019	1/21/2019	4	14	OK
MW-26	Chloroform	1/17/2019	1/21/2019	4	14	OK
MW-26	Benzene	1/17/2019	1/21/2019	4	14	OK
MW-26	Chloromethane	1/17/2019	1/21/2019	4	14	OK
MW-26	Iron	1/17/2019	1/31/2019	14	180	OK
MW-26	Lead	1/17/2019	1/31/2019	14	180	OK
MW-26	Magnesium	1/17/2019	1/30/2019	13	180	OK
MW-26	Manganese	1/17/2019	1/31/2019	14	180	OK
MW-26	Mercury	1/17/2019	1/28/2019	11	180	OK
MW-26	Molybdenum	1/17/2019	1/31/2019	14	180	OK
MW-26	Nickel	1/17/2019	1/31/2019	14	180	OK
MW-26	Potassium	1/17/2019	1/30/2019	13	180	OK
MW-26	Silver	1/17/2019	1/31/2019	14	180	OK
MW-26	Sodium	1/17/2019	1/30/2019	13	180	OK
MW-26	Thallium	1/17/2019	1/31/2019	14	180	OK
MW-26	Tin	1/17/2019	1/31/2019	14	180	OK
MW-26	Arsenic	1/17/2019	1/31/2019	14	180	OK
MW-26	Beryllium	1/17/2019	2/1/2019	15	180	OK
MW-26	Cadmium	1/17/2019	1/31/2019	14	180	OK
MW-26	Chromium	1/17/2019	1/31/2019	14	180	OK
MW-26	Cobalt	1/17/2019	1/31/2019	14	180	OK
MW-26	Copper	1/17/2019	1/31/2019	14	180	OK
MW-26	Uranium	1/17/2019	1/31/2019	14	180	OK
MW-26	Vanadium	1/17/2019	1/30/2019	13	180	OK
MW-26	Zinc	1/17/2019	1/31/2019	14	180	OK
MW-26	Calcium	1/17/2019	1/30/2019	13	180	OK
MW-26	Methylene chloride	1/17/2019	1/21/2019	4	14	OK
MW-26	Ammonia (as N)	1/17/2019	1/31/2019	14	28	OK
MW-26	Selenium	1/17/2019	1/31/2019	14	180	OK
MW-26	2-Butanone	1/17/2019	1/21/2019	4	14	OK
MW-26	Naphthalene	1/17/2019	1/21/2019	4	14	OK
MW-26	Bicarbonate (as CaCO3)	1/17/2019	1/22/2019	5	14	OK
MW-26	Carbonate (as CaCO3)	1/17/2019	1/22/2019	5	14	OK
MW-26	Gross Radium Alpha	1/17/2019	2/6/2019	20	180	OK
MW-26	Nitrate/Nitrite (as N)	1/17/2019	1/21/2019	4	28	OK
MW-26	Total Dissolved Solids	1/17/2019	1/23/2019	6	7	OK
MW-27	Chloride	1/21/2019	2/5/2019	15	28	OK
MW-27	Nitrate/Nitrite (as N)	1/21/2019	1/29/2019	8	28	OK
MW-28	Chloride	1/22/2019	2/5/2019	14	28	OK
MW-28	Cadmium	1/22/2019	2/7/2019	16	180	OK
MW-28	Uranium	1/22/2019	2/7/2019	16	180	OK
MW-30	Toluene	1/16/2019	1/21/2019	5	14	OK
MW-30	Tetrahydrofuran	1/16/2019	1/21/2019	5	14	OK
MW-30	Xylenes, Total	1/16/2019	1/21/2019	5	14	OK
MW-30	Sulfate	1/16/2019	1/23/2019	7	28	OK
MW-30	Chloride	1/16/2019	1/23/2019	7	28	OK
MW-30	Fluoride	1/16/2019	1/23/2019	7	28	OK
MW-30	Carbon tetrachloride	1/16/2019	1/21/2019	5	14	OK
MW-30	Acetone	1/16/2019	1/21/2019	5	14	OK

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-30	Chloroform	1/16/2019	1/21/2019	5	14	OK
MW-30	Benzene	1/16/2019	1/21/2019	5	14	OK
MW-30	Chloromethane	1/16/2019	1/21/2019	5	14	OK
MW-30	Iron	1/16/2019	1/31/2019	15	180	OK
MW-30	Lead	1/16/2019	1/31/2019	15	180	OK
MW-30	Magnesium	1/16/2019	1/30/2019	14	180	OK
MW-30	Manganese	1/16/2019	1/31/2019	15	180	OK
MW-30	Mercury	1/16/2019	1/28/2019	12	180	OK
MW-30	Molybdenum	1/16/2019	1/31/2019	15	180	OK
MW-30	Nickel	1/16/2019	1/31/2019	15	180	OK
MW-30	Potassium	1/16/2019	1/30/2019	14	180	OK
MW-30	Silver	1/16/2019	1/31/2019	15	180	OK
MW-30	Sodium	1/16/2019	1/30/2019	14	180	OK
MW-30	Thallium	1/16/2019	1/31/2019	15	180	OK
MW-30	Tin	1/16/2019	1/31/2019	15	180	OK
MW-30	Arsenic	1/16/2019	1/31/2019	15	180	OK
MW-30	Beryllium	1/16/2019	2/1/2019	16	180	OK
MW-30	Cadmium	1/16/2019	1/31/2019	15	180	OK
MW-30	Chromium	1/16/2019	1/31/2019	15	180	OK
MW-30	Cobalt	1/16/2019	1/31/2019	15	180	OK
MW-30	Copper	1/16/2019	1/31/2019	15	180	OK
MW-30	Uranium	1/16/2019	2/1/2019	16	180	OK
MW-30	Vanadium	1/16/2019	1/30/2019	14	180	OK
MW-30	Zinc	1/16/2019	1/31/2019	15	180	OK
MW-30	Calcium	1/16/2019	1/30/2019	14	180	OK
MW-30	Methylene chloride	1/16/2019	1/21/2019	5	14	OK
MW-30	Ammonia (as N)	1/16/2019	1/31/2019	15	28	OK
MW-30	Selenium	1/16/2019	1/31/2019	15	180	OK
MW-30	2-Butanone	1/16/2019	1/21/2019	5	14	OK
MW-30	Naphthalene	1/16/2019	1/21/2019	5	14	OK
MW-30	Bicarbonate (as CaCO3)	1/16/2019	1/22/2019	6	14	OK
MW-30	Carbonate (as CaCO3)	1/16/2019	1/22/2019	6	14	OK
MW-30	Gross Radium Alpha	1/16/2019	2/6/2019	21	180	OK
MW-30	Nitrate/Nitrite (as N)	1/16/2019	1/21/2019	5	28	OK
MW-30	Total Dissolved Solids	1/16/2019	1/23/2019	7	7	OK
MW-31	Toluene	1/15/2019	1/21/2019	6	14	OK
MW-31	Tetrahydrofuran	1/15/2019	1/21/2019	6	14	OK
MW-31	Xylenes, Total	1/15/2019	1/21/2019	6	14	OK
MW-31	Sulfate	1/15/2019	1/23/2019	8	28	OK
MW-31	Chloride	1/15/2019	1/23/2019	8	28	OK
MW-31	Fluoride	1/15/2019	1/23/2019	8	28	OK
MW-31	Carbon tetrachloride	1/15/2019	1/21/2019	6	14	OK
MW-31	Acetone	1/15/2019	1/21/2019	6	14	OK
MW-31	Chloroform	1/15/2019	1/21/2019	6	14	OK
MW-31	Benzene	1/15/2019	1/21/2019	6	14	OK
MW-31	Chloromethane	1/15/2019	1/21/2019	6	14	OK
MW-31	Iron	1/15/2019	1/31/2019	16	180	OK
MW-31	Lead	1/15/2019	1/31/2019	16	180	OK
MW-31	Magnesium	1/15/2019	1/30/2019	15	180	OK
MW-31	Manganese	1/15/2019	1/31/2019	16	180	OK
MW-31	Mercury	1/15/2019	1/28/2019	13	180	OK
MW-31	Molybdenum	1/15/2019	1/31/2019	16	180	OK
MW-31	Nickel	1/15/2019	1/31/2019	16	180	OK

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-31	Potassium	1/15/2019	1/30/2019	15	180	OK
MW-31	Silver	1/15/2019	1/31/2019	16	180	OK
MW-31	Sodium	1/15/2019	1/30/2019	15	180	OK
MW-31	Thallium	1/15/2019	1/31/2019	16	180	OK
MW-31	Tin	1/15/2019	1/31/2019	16	180	OK
MW-31	Arsenic	1/15/2019	1/31/2019	16	180	OK
MW-31	Beryllium	1/15/2019	2/1/2019	17	180	OK
MW-31	Cadmium	1/15/2019	1/31/2019	16	180	OK
MW-31	Chromium	1/15/2019	1/31/2019	16	180	OK
MW-31	Cobalt	1/15/2019	1/31/2019	16	180	OK
MW-31	Copper	1/15/2019	1/31/2019	16	180	OK
MW-31	Uranium	1/15/2019	2/1/2019	17	180	OK
MW-31	Vanadium	1/15/2019	1/30/2019	15	180	OK
MW-31	Zinc	1/15/2019	1/31/2019	16	180	OK
MW-31	Calcium	1/15/2019	1/30/2019	15	180	OK
MW-31	Methylene chloride	1/15/2019	1/21/2019	6	14	OK
MW-31	Ammonia (as N)	1/15/2019	1/31/2019	16	28	OK
MW-31	Selenium	1/15/2019	1/31/2019	16	180	OK
MW-31	2-Butanone	1/15/2019	1/21/2019	6	14	OK
MW-31	Naphthalene	1/15/2019	1/21/2019	6	14	OK
MW-31	Bicarbonate (as CaCO3)	1/15/2019	1/22/2019	7	14	OK
MW-31	Carbonate (as CaCO3)	1/15/2019	1/22/2019	7	14	OK
MW-31	Gross Radium Alpha	1/15/2019	2/6/2019	22	180	OK
MW-31	Nitrate/Nitrite (as N)	1/15/2019	1/21/2019	6	28	OK
MW-31	Total Dissolved Solids	1/15/2019	1/23/2019	8	7	EXCEED
MW-32	Sulfate	1/22/2019	2/5/2019	14	28	OK
MW-32	Chloride	1/22/2019	2/5/2019	14	28	OK
MW-35	Ammonia (as N)	1/16/2019	1/31/2019	15	28	OK
MW-36	Toluene	1/23/2019	1/25/2019	2	14	OK
MW-36	Tetrahydrofuran	1/23/2019	1/25/2019	2	14	OK
MW-36	Xylenes, Total	1/23/2019	1/25/2019	2	14	OK
MW-36	Sulfate	1/23/2019	2/5/2019	13	28	OK
MW-36	Chloride	1/23/2019	2/6/2019	14	28	OK
MW-36	Fluoride	1/23/2019	2/6/2019	14	28	OK
MW-36	Carbon tetrachloride	1/23/2019	1/25/2019	2	14	OK
MW-36	Acetone	1/23/2019	1/25/2019	2	14	OK
MW-36	Chloroform	1/23/2019	1/25/2019	2	14	OK
MW-36	Benzene	1/23/2019	1/25/2019	2	14	OK
MW-36	Chloromethane	1/23/2019	1/25/2019	2	14	OK
MW-36	Iron	1/23/2019	2/7/2019	15	180	OK
MW-36	Lead	1/23/2019	2/7/2019	15	180	OK
MW-36	Magnesium	1/23/2019	2/6/2019	14	180	OK
MW-36	Manganese	1/23/2019	2/7/2019	15	180	OK
MW-36	Mercury	1/23/2019	1/28/2019	5	180	OK
MW-36	Molybdenum	1/23/2019	2/6/2019	14	180	OK
MW-36	Nickel	1/23/2019	2/7/2019	15	180	OK
MW-36	Potassium	1/23/2019	2/6/2019	14	180	OK
MW-36	Silver	1/23/2019	2/6/2019	14	180	OK
MW-36	Sodium	1/23/2019	2/6/2019	14	180	OK
MW-36	Thallium	1/23/2019	2/8/2019	16	180	OK
MW-36	Tin	1/23/2019	2/6/2019	14	180	OK
MW-36	Arsenic	1/23/2019	2/7/2019	15	180	OK
MW-36	Beryllium	1/23/2019	2/7/2019	15	180	OK

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-36	Cadmium	1/23/2019	2/6/2019	14	180	OK
MW-36	Chromium	1/23/2019	2/7/2019	15	180	OK
MW-36	Cobalt	1/23/2019	2/7/2019	15	180	OK
MW-36	Copper	1/23/2019	2/7/2019	15	180	OK
MW-36	Uranium	1/23/2019	2/7/2019	15	180	OK
MW-36	Vanadium	1/23/2019	2/6/2019	14	180	OK
MW-36	Zinc	1/23/2019	2/8/2019	16	180	OK
MW-36	Calcium	1/23/2019	2/6/2019	14	180	OK
MW-36	Methylene chloride	1/23/2019	1/25/2019	2	14	OK
MW-36	Ammonia (as N)	1/23/2019	1/31/2019	8	28	OK
MW-36	Selenium	1/23/2019	2/8/2019	16	180	OK
MW-36	2-Butanone	1/23/2019	1/25/2019	2	14	OK
MW-36	Naphthalene	1/23/2019	1/25/2019	2	14	OK
MW-36	Bicarbonate (as CaCO3)	1/23/2019	1/28/2019	5	14	OK
MW-36	Carbonate (as CaCO3)	1/23/2019	1/28/2019	5	14	OK
MW-36	Gross Radium Alpha	1/23/2019	2/12/2019	20	180	OK
MW-36	Nitrate/Nitrite (as N)	1/23/2019	1/29/2019	6	28	OK
MW-36	Total Dissolved Solids	1/23/2019	1/25/2019	2	7	OK
MW-38	Toluene	1/24/2019	1/25/2019	1	14	OK
MW-38	Tetrahydrofuran	1/24/2019	1/25/2019	1	14	OK
MW-38	Xylenes, Total	1/24/2019	1/25/2019	1	14	OK
MW-38	Sulfate	1/24/2019	2/5/2019	12	28	OK
MW-38	Chloride	1/24/2019	2/5/2019	12	28	OK
MW-38	Fluoride	1/24/2019	2/6/2019	13	28	OK
MW-38	Carbon tetrachloride	1/24/2019	1/25/2019	1	14	OK
MW-38	Acetone	1/24/2019	1/25/2019	1	14	OK
MW-38	Chloroform	1/24/2019	1/25/2019	1	14	OK
MW-38	Benzene	1/24/2019	1/25/2019	1	14	OK
MW-38	Chloromethane	1/24/2019	1/25/2019	1	14	OK
MW-38	Iron	1/24/2019	2/7/2019	14	180	OK
MW-38	Lead	1/24/2019	2/7/2019	14	180	OK
MW-38	Magnesium	1/24/2019	2/6/2019	13	180	OK
MW-38	Manganese	1/24/2019	2/7/2019	14	180	OK
MW-38	Mercury	1/24/2019	1/28/2019	4	180	OK
MW-38	Molybdenum	1/24/2019	2/6/2019	13	180	OK
MW-38	Nickel	1/24/2019	2/7/2019	14	180	OK
MW-38	Potassium	1/24/2019	2/6/2019	13	180	OK
MW-38	Silver	1/24/2019	2/6/2019	13	180	OK
MW-38	Sodium	1/24/2019	2/6/2019	13	180	OK
MW-38	Thallium	1/24/2019	2/8/2019	15	180	OK
MW-38	Tin	1/24/2019	2/6/2019	13	180	OK
MW-38	Arsenic	1/24/2019	2/7/2019	14	180	OK
MW-38	Beryllium	1/24/2019	2/7/2019	14	180	OK
MW-38	Cadmium	1/24/2019	2/6/2019	13	180	OK
MW-38	Chromium	1/24/2019	2/7/2019	14	180	OK
MW-38	Cobalt	1/24/2019	2/7/2019	14	180	OK
MW-38	Copper	1/24/2019	2/7/2019	14	180	OK
MW-38	Uranium	1/24/2019	2/7/2019	14	180	OK
MW-38	Vanadium	1/24/2019	2/6/2019	13	180	OK
MW-38	Zinc	1/24/2019	2/8/2019	15	180	OK
MW-38	Calcium	1/24/2019	2/6/2019	13	180	OK
MW-38	Methylene chloride	1/24/2019	1/25/2019	1	14	OK
MW-38	Ammonia (as N)	1/24/2019	1/31/2019	7	28	OK

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-38	Selenium	1/24/2019	2/8/2019	15	180	OK
MW-38	2-Butanone	1/24/2019	1/25/2019	1	14	OK
MW-38	Naphthalene	1/24/2019	1/25/2019	1	14	OK
MW-38	Bicarbonate (as CaCO3)	1/24/2019	1/28/2019	4	14	OK
MW-38	Carbonate (as CaCO3)	1/24/2019	1/28/2019	4	14	OK
MW-38	Gross Radium Alpha	1/24/2019	2/12/2019	19	180	OK
MW-38	Nitrate/Nitrite (as N)	1/24/2019	1/29/2019	5	28	OK
MW-38	Total Dissolved Solids	1/24/2019	1/25/2019	1	7	OK
MW-39	Toluene	1/23/2019	1/25/2019	2	14	OK
MW-39	Tetrahydrofuran	1/23/2019	1/25/2019	2	14	OK
MW-39	Xylenes, Total	1/23/2019	1/25/2019	2	14	OK
MW-39	Sulfate	1/23/2019	2/5/2019	13	28	OK
MW-39	Chloride	1/23/2019	2/5/2019	13	28	OK
MW-39	Fluoride	1/23/2019	2/6/2019	14	28	OK
MW-39	Carbon tetrachloride	1/23/2019	1/25/2019	2	14	OK
MW-39	Acetone	1/23/2019	1/25/2019	2	14	OK
MW-39	Chloroform	1/23/2019	1/25/2019	2	14	OK
MW-39	Benzene	1/23/2019	1/25/2019	2	14	OK
MW-39	Chloromethane	1/23/2019	1/25/2019	2	14	OK
MW-39	Iron	1/23/2019	2/7/2019	15	180	OK
MW-39	Lead	1/23/2019	2/7/2019	15	180	OK
MW-39	Magnesium	1/23/2019	2/6/2019	14	180	OK
MW-39	Manganese	1/23/2019	2/7/2019	15	180	OK
MW-39	Mercury	1/23/2019	1/28/2019	5	180	OK
MW-39	Molybdenum	1/23/2019	2/6/2019	14	180	OK
MW-39	Nickel	1/23/2019	2/7/2019	15	180	OK
MW-39	Potassium	1/23/2019	2/6/2019	14	180	OK
MW-39	Silver	1/23/2019	2/6/2019	14	180	OK
MW-39	Sodium	1/23/2019	2/6/2019	14	180	OK
MW-39	Thallium	1/23/2019	2/8/2019	16	180	OK
MW-39	Tin	1/23/2019	2/6/2019	14	180	OK
MW-39	Arsenic	1/23/2019	2/7/2019	15	180	OK
MW-39	Beryllium	1/23/2019	2/7/2019	15	180	OK
MW-39	Cadmium	1/23/2019	2/6/2019	14	180	OK
MW-39	Chromium	1/23/2019	2/7/2019	15	180	OK
MW-39	Cobalt	1/23/2019	2/7/2019	15	180	OK
MW-39	Copper	1/23/2019	2/7/2019	15	180	OK
MW-39	Uranium	1/23/2019	2/7/2019	15	180	OK
MW-39	Vanadium	1/23/2019	2/6/2019	14	180	OK
MW-39	Zinc	1/23/2019	2/8/2019	16	180	OK
MW-39	Calcium	1/23/2019	2/6/2019	14	180	OK
MW-39	Methylene chloride	1/23/2019	1/25/2019	2	14	OK
MW-39	Ammonia (as N)	1/23/2019	2/12/2019	20	28	OK
MW-39	Selenium	1/23/2019	2/8/2019	16	180	OK
MW-39	2-Butanone	1/23/2019	1/25/2019	2	14	OK
MW-39	Naphthalene	1/23/2019	1/25/2019	2	14	OK
MW-39	Bicarbonate (as CaCO3)	1/23/2019	1/28/2019	5	14	OK
MW-39	Carbonate (as CaCO3)	1/23/2019	1/28/2019	5	14	OK
MW-39	Gross Radium Alpha	1/23/2019	2/12/2019	20	180	OK
MW-39	Nitrate/Nitrite (as N)	1/23/2019	1/29/2019	6	28	OK
MW-39	Total Dissolved Solids	1/23/2019	1/25/2019	2	7	OK
MW-40	Toluene	1/23/2019	1/25/2019	2	14	OK
MW-40	Tetrahydrofuran	1/23/2019	1/25/2019	2	14	OK

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-40	Xylenes, Total	1/23/2019	1/25/2019	2	14	OK
MW-40	Sulfate	1/23/2019	2/5/2019	13	28	OK
MW-40	Chloride	1/23/2019	2/6/2019	14	28	OK
MW-40	Fluoride	1/23/2019	2/6/2019	14	28	OK
MW-40	Carbon tetrachloride	1/23/2019	1/25/2019	2	14	OK
MW-40	Acetone	1/23/2019	1/25/2019	2	14	OK
MW-40	Chloroform	1/23/2019	1/25/2019	2	14	OK
MW-40	Benzene	1/23/2019	1/25/2019	2	14	OK
MW-40	Chloromethane	1/23/2019	1/25/2019	2	14	OK
MW-40	Iron	1/23/2019	2/7/2019	15	180	OK
MW-40	Lead	1/23/2019	2/7/2019	15	180	OK
MW-40	Magnesium	1/23/2019	2/6/2019	14	180	OK
MW-40	Manganese	1/23/2019	2/7/2019	15	180	OK
MW-40	Mercury	1/23/2019	1/28/2019	5	180	OK
MW-40	Molybdenum	1/23/2019	2/6/2019	14	180	OK
MW-40	Nickel	1/23/2019	2/7/2019	15	180	OK
MW-40	Potassium	1/23/2019	2/6/2019	14	180	OK
MW-40	Silver	1/23/2019	2/6/2019	14	180	OK
MW-40	Sodium	1/23/2019	2/6/2019	14	180	OK
MW-40	Thallium	1/23/2019	2/8/2019	16	180	OK
MW-40	Tin	1/23/2019	2/6/2019	14	180	OK
MW-40	Arsenic	1/23/2019	2/7/2019	15	180	OK
MW-40	Beryllium	1/23/2019	2/7/2019	15	180	OK
MW-40	Cadmium	1/23/2019	2/6/2019	14	180	OK
MW-40	Chromium	1/23/2019	2/7/2019	15	180	OK
MW-40	Cobalt	1/23/2019	2/7/2019	15	180	OK
MW-40	Copper	1/23/2019	2/7/2019	15	180	OK
MW-40	Uranium	1/23/2019	2/7/2019	15	180	OK
MW-40	Vanadium	1/23/2019	2/6/2019	14	180	OK
MW-40	Zinc	1/23/2019	2/8/2019	16	180	OK
MW-40	Calcium	1/23/2019	2/6/2019	14	180	OK
MW-40	Methylene chloride	1/23/2019	1/25/2019	2	14	OK
MW-40	Ammonia (as N)	1/23/2019	1/31/2019	8	28	OK
MW-40	Selenium	1/23/2019	2/8/2019	16	180	OK
MW-40	2-Butanone	1/23/2019	1/25/2019	2	14	OK
MW-40	Naphthalene	1/23/2019	1/25/2019	2	14	OK
MW-40	Bicarbonate (as CaCO3)	1/23/2019	1/28/2019	5	14	OK
MW-40	Carbonate (as CaCO3)	1/23/2019	1/28/2019	5	14	OK
MW-40	Gross Radium Alpha	1/23/2019	2/12/2019	20	180	OK
MW-40	Nitrate/Nitrite (as N)	1/23/2019	1/29/2019	6	28	OK
MW-40	Total Dissolved Solids	1/23/2019	1/25/2019	2	7	OK
MW-65	Toluene	1/23/2019	1/25/2019	2	14	OK
MW-65	Tetrahydrofuran	1/23/2019	1/25/2019	2	14	OK
MW-65	Xylenes, Total	1/23/2019	1/25/2019	2	14	OK
MW-65	Sulfate	1/23/2019	2/5/2019	13	28	OK
MW-65	Chloride	1/23/2019	2/6/2019	14	28	OK
MW-65	Fluoride	1/23/2019	2/6/2019	14	28	OK
MW-65	Carbon tetrachloride	1/23/2019	1/25/2019	2	14	OK
MW-65	Acetone	1/23/2019	1/25/2019	2	14	OK
MW-65	Chloroform	1/23/2019	1/25/2019	2	14	OK
MW-65	Benzene	1/23/2019	1/25/2019	2	14	OK
MW-65	Chloromethane	1/23/2019	1/25/2019	2	14	OK
MW-65	Iron	1/23/2019	2/7/2019	15	180	OK

G-2A: Quarterly Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-65	Lead	1/23/2019	2/7/2019	15	180	OK
MW-65	Magnesium	1/23/2019	2/6/2019	14	180	OK
MW-65	Manganese	1/23/2019	2/7/2019	15	180	OK
MW-65	Mercury	1/23/2019	1/28/2019	5	180	OK
MW-65	Molybdenum	1/23/2019	2/6/2019	14	180	OK
MW-65	Nickel	1/23/2019	2/7/2019	15	180	OK
MW-65	Potassium	1/23/2019	2/6/2019	14	180	OK
MW-65	Silver	1/23/2019	2/6/2019	14	180	OK
MW-65	Sodium	1/23/2019	2/6/2019	14	180	OK
MW-65	Thallium	1/23/2019	2/8/2019	16	180	OK
MW-65	Tin	1/23/2019	2/6/2019	14	180	OK
MW-65	Arsenic	1/23/2019	2/7/2019	15	180	OK
MW-65	Beryllium	1/23/2019	2/7/2019	15	180	OK
MW-65	Cadmium	1/23/2019	2/6/2019	14	180	OK
MW-65	Chromium	1/23/2019	2/7/2019	15	180	OK
MW-65	Cobalt	1/23/2019	2/7/2019	15	180	OK
MW-65	Copper	1/23/2019	2/7/2019	15	180	OK
MW-65	Uranium	1/23/2019	2/7/2019	15	180	OK
MW-65	Vanadium	1/23/2019	2/6/2019	14	180	OK
MW-65	Zinc	1/23/2019	2/8/2019	16	180	OK
MW-65	Calcium	1/23/2019	2/6/2019	14	180	OK
MW-65	Methylene chloride	1/23/2019	1/25/2019	2	14	OK
MW-65	Ammonia (as N)	1/23/2019	1/31/2019	8	28	OK
MW-65	Selenium	1/23/2019	2/8/2019	16	180	OK
MW-65	2-Butanone	1/23/2019	1/25/2019	2	14	OK
MW-65	Naphthalene	1/23/2019	1/25/2019	2	14	OK
MW-65	Bicarbonate (as CaCO3)	1/23/2019	1/28/2019	5	14	OK
MW-65	Carbonate (as CaCO3)	1/23/2019	1/28/2019	5	14	OK
MW-65	Gross Radium Alpha	1/23/2019	2/12/2019	20	180	OK
MW-65	Nitrate/Nitrite (as N)	1/23/2019	1/29/2019	6	28	OK
MW-65	Total Dissolved Solids	1/23/2019	1/25/2019	2	7	OK

G-2B: Accelerated Holding Time Evaluation

Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
Trip Blank	Chloroform	2/13/2019	2/19/2019	6	14	OK
Trip Blank	Methylene chloride	2/13/2019	2/19/2019	6	14	OK
Trip Blank	Chloroform	3/6/2019	3/7/2019	1	14	OK
Trip Blank	Methylene chloride	3/6/2019	3/7/2019	1	14	OK
MW-11	Manganese	2/13/2019	2/20/2019	7	180	OK
MW-11	Manganese	3/6/2019	3/18/2019	12	180	OK
MW-25	Cadmium	2/12/2019	2/20/2019	8	180	OK
MW-25	Cadmium	3/5/2019	3/18/2019	13	180	OK
MW-26	Chloride	2/13/2019	2/21/2019	8	28	OK
MW-26	Chloroform	2/13/2019	2/19/2019	6	14	OK
MW-26	Methylene chloride	2/13/2019	2/19/2019	6	14	OK
MW-26	Nitrate/Nitrite (as N)	2/13/2019	2/20/2019	7	28	OK
MW-26	Chloride	3/6/2019	3/19/2019	13	28	OK
MW-26	Chloroform	3/6/2019	3/7/2019	1	14	OK
MW-26	Methylene chloride	3/6/2019	3/7/2019	1	14	OK
MW-26	Nitrate/Nitrite (as N)	3/6/2019	3/8/2019	2	28	OK
MW-30	Chloride	2/13/2019	2/21/2019	8	28	OK
MW-30	Uranium	2/13/2019	2/20/2019	7	180	OK
MW-30	Nitrate/Nitrite (as N)	2/13/2019	2/20/2019	7	28	OK
MW-30	Chloride	3/6/2019	3/19/2019	13	28	OK
MW-30	Uranium	3/6/2019	3/18/2019	12	180	OK
MW-30	Nitrate/Nitrite (as N)	3/6/2019	3/8/2019	2	28	OK
MW-31	Sulfate	2/12/2019	2/21/2019	9	28	OK
MW-31	Chloride	2/12/2019	2/21/2019	9	28	OK
MW-31	Uranium	2/12/2019	2/20/2019	8	180	OK
MW-31	Selenium	2/12/2019	2/20/2019	8	180	OK
MW-31	Nitrate/Nitrite (as N)	2/12/2019	2/20/2019	8	28	OK
MW-31	Total Dissolved Solids	2/12/2019	2/19/2019	7	7	OK
MW-31	Sulfate	3/5/2019	3/18/2019	13	28	OK
MW-31	Chloride	3/5/2019	3/19/2019	14	28	OK
MW-31	Uranium	3/5/2019	3/18/2019	13	180	OK
MW-31	Selenium	3/5/2019	3/18/2019	13	180	OK
MW-31	Nitrate/Nitrite (as N)	3/5/2019	3/8/2019	3	28	OK
MW-31	Total Dissolved Solids	3/5/2019	3/8/2019	3	7	OK
MW-65	Chloride	2/13/2019	2/21/2019	8	28	OK
MW-65	Uranium	2/13/2019	2/20/2019	7	180	OK
MW-65	Nitrate/Nitrite (as N)	2/13/2019	2/20/2019	7	28	OK
MW-65	Sulfate	3/5/2019	3/18/2019	13	28	OK
MW-65	Chloride	3/5/2019	3/19/2019	14	28	OK
MW-65	Uranium	3/5/2019	3/18/2019	13	180	OK
MW-65	Selenium	3/5/2019	3/18/2019	13	180	OK
MW-65	Nitrate/Nitrite (as N)	3/5/2019	3/8/2019	3	28	OK
MW-65	Total Dissolved Solids	3/5/2019	3/8/2019	3	7	OK

G-3A: Quarterly Sample Laboratory Receipt Temperature Check

Sample Batch	Wells in Batch	Temperature
GEL69482	MW-11, MW-14, MW-25, MW-26, MW-30, MW-31	NA
GEL 469930	MW-36, MW-38, MW-39, MW-40, MW-65	NA
AWAL 1901434	MW-05, MW-11, MW-14, MW-25, MW-26, MW-30, MW-31, MW-35, Trip Blank	2.3 °C
AWAL 1901565	MW-12, MW-24, MW-27, MW-28, MW-32, MW-36, MW-38, MW-39, MW-40, MW-65, Trip Blank	2.1 °C

N/A = These shipments contained samples for the analysis of gross alpha only. Per Table 1 in the approved QAP, samples submitted for gross alpha analyses do not have a sample temperature requirement.

G-3B: Accelerated Sample Laboratory Receipt Temperature Check

Sample Batch	Wells in Batch	Temperature
AWAL 1902310 - February	MW-11, MW-14, MW-25, MW-26, MW-30, MW-31, MW-65, Trip Blank	0.2 °C
AWAL 1903153 - March	MW-11, MW-14, MW-25, MW-26, MW-30, MW-31, MW-65, Trip Blank	1.9 °C

N/A = These shipments contained samples for the analysis of gross alpha only. Per Table 1 in the approved QAP, samples submitted for gross alpha analyses do not have a sample temperature requirement.

G-4A: Quarterly Sample Analytical Method Check

Parameter	QAP Method	Method Used by Lab
Ammonia (as N)	A4500-NH3 G or E350.1	E350.1
Nitrate + Nitrite (as N)	E353.1 or E353.2	E353.2
Metals	E200.7 or E200.8	E200.7 and E200.8
Gross Alpha	E900.0 or E900.1 or E903.0	E903.0
VOCs	SW8260B or SW8260C	SW8260C
Chloride	A4500-Cl B or A4500-Cl E or E300.0	E300.0
Fluoride	A4500-F C or E300.0	E300.0
Sulfate	A4500-SO4 E or E300.0	E300.0
TDS	A2540 C	A2540 C
Carbonate as CO ₃ , Bicarbonate as HCO ₃	A2320 B	A2320 B
Mercury	E245.1 or E200.7 or E200.8	E245.1
Calcium, Magnesium, Potassium, Sodium	E200.7	E200.7

G-4B: Accelerated Sample Analytical Method Check

Parameter	QAP Method	Method Used by Lab
Ammonia (as N)	A4500-NH3 G or E350.1	E350.1
Nitrate + Nitrite (as N)	E353.1 or E353.2	E353.2
Metals	E200.7 or E200.8	E200.7 or E200.8
VOCs	SW8260B or SW8260C	SW8260C
Chloride	A4500-Cl B or A4500-Cl E or E300.0	E300.0
Fluoride	A4500-F C or E300.0	A4500-F C
Sulfate	A4500-SO4 E or E300.0	E300.0
TDS	A2540 C	A2540 C

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
Trip Blank	Toluene	1	ug/L	U	1	1	OK
Trip Blank	Tetrahydrofuran	1	ug/L	U	1	1	OK
Trip Blank	Xylenes, Total	1	ug/L	U	1	1	OK
Trip Blank	Carbon tetrachloride	1	ug/L	U	1	1	OK
Trip Blank	Acetone	20	ug/L	U	1	20	OK
Trip Blank	Chloroform	1	ug/L	U	1	1	OK
Trip Blank	Benzene	1	ug/L	U	1	1	OK
Trip Blank	Chloromethane	1	ug/L	U	1	1	OK
Trip Blank	Methylene chloride	1	ug/L	U	1	1	OK
Trip Blank	2-Butanone	20	ug/L	U	1	20	OK
Trip Blank	Naphthalene	1	ug/L	U	1	1	OK
Trip Blank	Toluene	1	ug/L	U	1	1	OK
Trip Blank	Tetrahydrofuran	1	ug/L	U	1	1	OK
Trip Blank	Xylenes, Total	1	ug/L	U	1	1	OK
Trip Blank	Carbon tetrachloride	1	ug/L	U	1	1	OK
Trip Blank	Acetone	20	ug/L	U	1	20	OK
Trip Blank	Chloroform	1	ug/L	U	1	1	OK
Trip Blank	Benzene	1	ug/L	U	1	1	OK
Trip Blank	Chloromethane	1	ug/L	U	1	1	OK
Trip Blank	Methylene chloride	1	ug/L	U	1	1	OK
Trip Blank	2-Butanone	20	ug/L	U	1	20	OK
Trip Blank	Naphthalene	1	ug/L	U	1	1	OK
MW-05	Uranium	0.3	ug/L		2	0.3	OK
MW-11	Toluene	1	ug/L	U	1	1	OK
MW-11	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-11	Xylenes, Total	1	ug/L	U	1	1	OK
MW-11	Sulfate	150	mg/L		200	1	OK
MW-11	Chloride	1	mg/L		10	1	OK
MW-11	Fluoride	0.1	mg/L		1	0.1	OK
MW-11	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-11	Acetone	20	ug/L	U	1	20	OK
MW-11	Chloroform	1	ug/L	U	1	1	OK
MW-11	Benzene	1	ug/L	U	1	1	OK
MW-11	Chloromethane	1	ug/L	U	1	1	OK
MW-11	Iron	30	ug/L	U	5	30	OK
MW-11	Lead	1	ug/L	U	5	1	OK
MW-11	Magnesium	1	mg/L		1	0.5	OK
MW-11	Manganese	10	ug/L		20	10	OK
MW-11	Mercury	0.5	ug/L	U	1	0.5	OK
MW-11	Molybdenum	10	ug/L	U	20	10	OK
MW-11	Nickel	20	ug/L	U	20	20	OK
MW-11	Potassium	1	mg/L		1	0.5	OK
MW-11	Silver	10	ug/L	U	20	10	OK
MW-11	Sodium	20	mg/L		20	0.5	OK
MW-11	Thallium	0.5	ug/L	U	5	0.5	OK
MW-11	Tin	100	ug/L	U	20	100	OK
MW-11	Arsenic	5	ug/L	U	20	5	OK
MW-11	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-11	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-11	Chromium	25	ug/L	U	20	25	OK
MW-11	Cobalt	10	ug/L	U	20	10	OK
MW-11	Copper	10	ug/L	U	20	10	OK
MW-11	Uranium	0.3	ug/L		2	0.3	OK
MW-11	Vanadium	15	ug/L	U	1	15	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-11	Zinc	10	ug/L	U	20	10	OK
MW-11	Calcium	20	mg/L		20	0.5	OK
MW-11	Methylene chloride	1	ug/L	U	1	1	OK
MW-11	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-11	Selenium	5	ug/L	U	20	5	OK
MW-11	2-Butanone	20	ug/L	U	1	20	OK
MW-11	Naphthalene	1	ug/L	U	1	1	OK
MW-11	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-11	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-11	Gross Radium Alpha	0.968	pCi/L	U	1	1	OK
MW-11	Nitrate/Nitrite (as N)	0.1	mg/L	U	1	0.1	OK
MW-11	Total Dissolved Solids	20	mg/L		2	10	OK
MW-12	Uranium	0.3	ug/L		2	0.3	OK
MW-14	Toluene	1	ug/L	U	1	1	OK
MW-14	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-14	Xylenes, Total	1	ug/L	U	1	1	OK
MW-14	Sulfate	150	mg/L		200	1	OK
MW-14	Chloride	1	mg/L		10	1	OK
MW-14	Fluoride	0.1	mg/L		1	0.1	OK
MW-14	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-14	Acetone	20	ug/L	U	1	20	OK
MW-14	Chloroform	1	ug/L	U	1	1	OK
MW-14	Benzene	1	ug/L	U	1	1	OK
MW-14	Chloromethane	1	ug/L	U	1	1	OK
MW-14	Iron	30	ug/L	U	5	30	OK
MW-14	Lead	1	ug/L	U	5	1	OK
MW-14	Magnesium	20	mg/L		20	0.5	OK
MW-14	Manganese	10	ug/L		20	10	OK
MW-14	Mercury	0.5	ug/L	U	1	0.5	OK
MW-14	Molybdenum	10	ug/L	U	20	10	OK
MW-14	Nickel	20	ug/L	U	20	20	OK
MW-14	Potassium	1	mg/L		1	0.5	OK
MW-14	Silver	10	ug/L	U	20	10	OK
MW-14	Sodium	20	mg/L		20	0.5	OK
MW-14	Thallium	0.5	ug/L	U	5	0.5	OK
MW-14	Tin	100	ug/L	U	20	100	OK
MW-14	Arsenic	5	ug/L	U	20	5	OK
MW-14	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-14	Cadmium	0.5	ug/L		20	0.5	OK
MW-14	Chromium	25	ug/L	U	20	25	OK
MW-14	Cobalt	10	ug/L	U	20	10	OK
MW-14	Copper	10	ug/L	U	20	10	OK
MW-14	Uranium	0.3	ug/L		2	0.3	OK
MW-14	Vanadium	15	ug/L	U	1	15	OK
MW-14	Zinc	10	ug/L		20	10	OK
MW-14	Calcium	20	mg/L		20	0.5	OK
MW-14	Methylene chloride	1	ug/L	U	1	1	OK
MW-14	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-14	Selenium	5	ug/L	U	20	5	OK
MW-14	2-Butanone	20	ug/L	U	1	20	OK
MW-14	Naphthalene	1	ug/L	U	1	1	OK
MW-14	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-14	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-14	Gross Radium Alpha	0.879	pCi/L	U	1	1	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-14	Nitrate/Nitrite (as N)	0.1	mg/L	U	1	0.1	OK
MW-14	Total Dissolved Solids	20	mg/L		2	10	OK
MW-24	Thallium	0.5	ug/L		5	0.5	OK
MW-24	Beryllium	0.5	ug/L		5	0.5	OK
MW-24	Cadmium	0.5	ug/L		20	0.5	OK
MW-25	Toluene	1	ug/L	U	1	1	OK
MW-25	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-25	Xylenes, Total	1	ug/L	U	1	1	OK
MW-25	Sulfate	150	mg/L		200	1	OK
MW-25	Chloride	1	mg/L		10	1	OK
MW-25	Fluoride	0.1	mg/L		1	0.1	OK
MW-25	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-25	Acetone	20	ug/L	U	1	20	OK
MW-25	Chloroform	1	ug/L	U	1	1	OK
MW-25	Benzene	1	ug/L	U	1	1	OK
MW-25	Chloromethane	1	ug/L	U	1	1	OK
MW-25	Iron	30	ug/L	U	5	30	OK
MW-25	Lead	1	ug/L	U	5	1	OK
MW-25	Magnesium	20	mg/L		20	0.5	OK
MW-25	Manganese	10	ug/L		20	10	OK
MW-25	Mercury	0.5	ug/L	U	1	0.5	OK
MW-25	Molybdenum	10	ug/L		20	10	OK
MW-25	Nickel	20	ug/L	U	20	20	OK
MW-25	Potassium	1	mg/L		1	0.5	OK
MW-25	Silver	10	ug/L	U	20	10	OK
MW-25	Sodium	20	mg/L		20	0.5	OK
MW-25	Thallium	0.5	ug/L		5	0.5	OK
MW-25	Tin	100	ug/L	U	20	100	OK
MW-25	Arsenic	5	ug/L	U	20	5	OK
MW-25	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-25	Cadmium	0.5	ug/L		20	0.5	OK
MW-25	Chromium	25	ug/L	U	20	25	OK
MW-25	Cobalt	10	ug/L	U	20	10	OK
MW-25	Copper	10	ug/L	U	20	10	OK
MW-25	Uranium	0.3	ug/L		2	0.3	OK
MW-25	Vanadium	15	ug/L	U	1	15	OK
MW-25	Zinc	10	ug/L	U	20	10	OK
MW-25	Calcium	20	mg/L		20	0.5	OK
MW-25	Methylene chloride	1	ug/L	U	1	1	OK
MW-25	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-25	Selenium	5	ug/L	U	20	5	OK
MW-25	2-Butanone	20	ug/L	U	1	20	OK
MW-25	Naphthalene	1	ug/L	U	1	1	OK
MW-25	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-25	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-25	Gross Radium Alpha	0.936	pCi/L	U	1	1	OK
MW-25	Nitrate/Nitrite (as N)	0.1	mg/L	U	1	0.1	OK
MW-25	Total Dissolved Solids	20	mg/L		2	10	OK
MW-26	Toluene	1	ug/L	U	1	1	OK
MW-26	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-26	Xylenes, Total	1	ug/L	U	1	1	OK
MW-26	Sulfate	150	mg/L		200	1	OK
MW-26	Chloride	1	mg/L		10	1	OK
MW-26	Fluoride	0.1	mg/L		1	0.1	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-26	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-26	Acetone	20	ug/L	U	1	20	OK
MW-26	Chloroform	100	ug/L		100	1	OK
MW-26	Benzene	1	ug/L	U	1	1	OK
MW-26	Chloromethane	1	ug/L	U	1	1	OK
MW-26	Iron	100	ug/L		20	30	OK
MW-26	Lead	1	ug/L	U	5	1	OK
MW-26	Magnesium	20	mg/L		20	0.5	OK
MW-26	Manganese	10	ug/L		20	10	OK
MW-26	Mercury	0.5	ug/L	U	1	0.5	OK
MW-26	Molybdenum	10	ug/L	U	20	10	OK
MW-26	Nickel	20	ug/L	U	20	20	OK
MW-26	Potassium	1	mg/L		1	0.5	OK
MW-26	Silver	10	ug/L	U	20	10	OK
MW-26	Sodium	20	mg/L		20	0.5	OK
MW-26	Thallium	0.5	ug/L	U	5	0.5	OK
MW-26	Tin	100	ug/L	U	20	100	OK
MW-26	Arsenic	5	ug/L	U	20	5	OK
MW-26	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-26	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-26	Chromium	25	ug/L	U	20	25	OK
MW-26	Cobalt	10	ug/L	U	20	10	OK
MW-26	Copper	10	ug/L	U	20	10	OK
MW-26	Uranium	0.3	ug/L		2	0.3	OK
MW-26	Vanadium	15	ug/L	U	1	15	OK
MW-26	Zinc	10	ug/L	U	20	10	OK
MW-26	Calcium	20	mg/L		20	0.5	OK
MW-26	Methylene chloride	1	ug/L		1	1	OK
MW-26	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-26	Selenium	5	ug/L	U	20	5	OK
MW-26	2-Butanone	20	ug/L	U	1	20	OK
MW-26	Naphthalene	1	ug/L	U	1	1	OK
MW-26	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-26	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-26	Gross Radium Alpha	1.09	pCi/L		1	1	OK
MW-26	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-26	Total Dissolved Solids	20	mg/L		2	10	OK
MW-27	Chloride	1	mg/L		10	1	OK
MW-27	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-28	Chloride	2	mg/L		20	1	OK
MW-28	Cadmium	0.5	ug/L		5	0.5	OK
MW-28	Uranium	0.3	ug/L		2	0.3	OK
MW-30	Toluene	1	ug/L	U	1	1	OK
MW-30	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-30	Xylenes, Total	1	ug/L	U	1	1	OK
MW-30	Sulfate	75	mg/L		100	1	OK
MW-30	Chloride	10	mg/L		100	1	OK
MW-30	Fluoride	0.1	mg/L		1	0.1	OK
MW-30	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-30	Acetone	20	ug/L	U	1	20	OK
MW-30	Chloroform	1	ug/L	U	1	1	OK
MW-30	Benzene	1	ug/L	U	1	1	OK
MW-30	Chloromethane	1	ug/L	U	1	1	OK
MW-30	Iron	30	ug/L	U	5	30	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-30	Lead	1	ug/L	U	5	1	OK
MW-30	Magnesium	20	mg/L		20	0.5	OK
MW-30	Manganese	10	ug/L		20	10	OK
MW-30	Mercury	0.5	ug/L	U	1	0.5	OK
MW-30	Molybdenum	10	ug/L	U	20	10	OK
MW-30	Nickel	20	ug/L	U	20	20	OK
MW-30	Potassium	1	mg/L		1	0.5	OK
MW-30	Silver	10	ug/L	U	20	10	OK
MW-30	Sodium	20	mg/L		20	0.5	OK
MW-30	Thallium	0.5	ug/L	U	5	0.5	OK
MW-30	Tin	100	ug/L	U	20	100	OK
MW-30	Arsenic	5	ug/L	U	20	5	OK
MW-30	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-30	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-30	Chromium	25	ug/L	U	20	25	OK
MW-30	Cobalt	10	ug/L	U	20	10	OK
MW-30	Copper	10	ug/L	U	20	10	OK
MW-30	Uranium	0.5	ug/L		5	0.3	OK
MW-30	Vanadium	15	ug/L	U	1	15	OK
MW-30	Zinc	10	ug/L	U	20	10	OK
MW-30	Calcium	20	mg/L		20	0.5	OK
MW-30	Methylene chloride	1	ug/L	U	1	1	OK
MW-30	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-30	Selenium	5	ug/L		20	5	OK
MW-30	2-Butanone	20	ug/L	U	1	20	OK
MW-30	Naphthalene	1	ug/L	U	1	1	OK
MW-30	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-30	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-30	Gross Radium Alpha	0.973	pCi/L		1	1	OK
MW-30	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-30	Total Dissolved Solids	20	mg/L		2	10	OK
MW-31	Toluene	1	ug/L	U	1	1	OK
MW-31	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-31	Xylenes, Total	1	ug/L	U	1	1	OK
MW-31	Sulfate	75	mg/L		100	1	OK
MW-31	Chloride	10	mg/L		100	1	OK
MW-31	Fluoride	0.1	mg/L		1	0.1	OK
MW-31	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-31	Acetone	20	ug/L	U	1	20	OK
MW-31	Chloroform	1	ug/L	U	1	1	OK
MW-31	Benzene	1	ug/L	U	1	1	OK
MW-31	Chloromethane	1	ug/L	U	1	1	OK
MW-31	Iron	30	ug/L	U	5	30	OK
MW-31	Lead	1	ug/L	U	5	1	OK
MW-31	Magnesium	20	mg/L		20	0.5	OK
MW-31	Manganese	10	ug/L	U	20	10	OK
MW-31	Mercury	0.5	ug/L	U	1	0.5	OK
MW-31	Molybdenum	10	ug/L	U	20	10	OK
MW-31	Nickel	20	ug/L	U	20	20	OK
MW-31	Potassium	1	mg/L		1	0.5	OK
MW-31	Silver	10	ug/L	U	20	10	OK
MW-31	Sodium	20	mg/L		20	0.5	OK
MW-31	Thallium	0.5	ug/L	U	5	0.5	OK
MW-31	Tin	100	ug/L	U	20	100	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-31	Arsenic	5	ug/L	U	20	5	OK
MW-31	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-31	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-31	Chromium	25	ug/L	U	20	25	OK
MW-31	Cobalt	10	ug/L	U	20	10	OK
MW-31	Copper	10	ug/L	U	20	10	OK
MW-31	Uranium	0.5	ug/L		5	0.3	OK
MW-31	Vanadium	15	ug/L	U	1	15	OK
MW-31	Zinc	10	ug/L	U	20	10	OK
MW-31	Calcium	20	mg/L		20	0.5	OK
MW-31	Methylene chloride	1	ug/L	U	1	1	OK
MW-31	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-31	Selenium	5	ug/L		20	5	OK
MW-31	2-Butanone	20	ug/L	U	1	20	OK
MW-31	Naphthalene	1	ug/L	U	1	1	OK
MW-31	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-31	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-31	Gross Radium Alpha	0.931	pCi/L	U	1	1	OK
MW-31	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-31	Total Dissolved Solids	20	mg/L		2	10	OK
MW-32	Sulfate	750	mg/L		1000	1	OK
MW-32	Chloride	1	mg/L		10	1	OK
MW-35	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-36	Toluene	1	ug/L	U	1	1	OK
MW-36	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-36	Xylenes, Total	1	ug/L	U	1	1	OK
MW-36	Sulfate	750	mg/L		1000	1	OK
MW-36	Chloride	1	mg/L		10	1	OK
MW-36	Fluoride	0.1	mg/L		1	0.1	OK
MW-36	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-36	Acetone	20	ug/L	U	1	20	OK
MW-36	Chloroform	1	ug/L	U	1	1	OK
MW-36	Benzene	1	ug/L	U	1	1	OK
MW-36	Chloromethane	1	ug/L	U	1	1	OK
MW-36	Iron	30	ug/L	U	5	30	OK
MW-36	Lead	1	ug/L	U	2	1	OK
MW-36	Magnesium	20	mg/L		20	0.5	OK
MW-36	Manganese	10	ug/L	U	2	10	OK
MW-36	Mercury	0.5	ug/L	U	1	0.5	OK
MW-36	Molybdenum	10	ug/L	U	20	10	OK
MW-36	Nickel	20	ug/L	U	2	20	OK
MW-36	Potassium	1	mg/L		1	0.5	OK
MW-36	Silver	10	ug/L	U	20	10	OK
MW-36	Sodium	20	mg/L		20	0.5	OK
MW-36	Thallium	0.5	ug/L		5	0.5	OK
MW-36	Tin	100	ug/L	U	20	100	OK
MW-36	Arsenic	5	ug/L	U	2	5	OK
MW-36	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-36	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-36	Chromium	25	ug/L	U	2	25	OK
MW-36	Cobalt	10	ug/L	U	2	10	OK
MW-36	Copper	10	ug/L	U	2	10	OK
MW-36	Uranium	0.3	ug/L		2	0.3	OK
MW-36	Vanadium	15	ug/L	U	1	15	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-36	Zinc	10	ug/L	U	20	10	OK
MW-36	Calcium	20	mg/L		20	0.5	OK
MW-36	Methylene chloride	1	ug/L	U	1	1	OK
MW-36	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-36	Selenium	5	ug/L		20	5	OK
MW-36	2-Butanone	20	ug/L	U	1	20	OK
MW-36	Naphthalene	1	ug/L	U	1	1	OK
MW-36	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-36	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-36	Gross Radium Alpha	0.912	pCi/L		1	1	OK
MW-36	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-36	Total Dissolved Solids	20	mg/L		2	10	OK
MW-38	Toluene	1	ug/L	U	1	1	OK
MW-38	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-38	Xylenes, Total	1	ug/L	U	1	1	OK
MW-38	Sulfate	750	mg/L		1000	1	OK
MW-38	Chloride	1	mg/L		10	1	OK
MW-38	Fluoride	0.1	mg/L		1	0.1	OK
MW-38	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-38	Acetone	20	ug/L	U	1	20	OK
MW-38	Chloroform	1	ug/L	U	1	1	OK
MW-38	Benzene	1	ug/L	U	1	1	OK
MW-38	Chloromethane	1	ug/L	U	1	1	OK
MW-38	Iron	30	ug/L	U	5	30	OK
MW-38	Lead	1	ug/L	U	2	1	OK
MW-38	Magnesium	20	mg/L		20	0.5	OK
MW-38	Manganese	10	ug/L	U	2	10	OK
MW-38	Mercury	0.5	ug/L	U	1	0.5	OK
MW-38	Molybdenum	10	ug/L	U	20	10	OK
MW-38	Nickel	20	ug/L	U	2	20	OK
MW-38	Potassium	1	mg/L		1	0.5	OK
MW-38	Silver	10	ug/L	U	20	10	OK
MW-38	Sodium	20	mg/L		20	0.5	OK
MW-38	Thallium	0.5	ug/L	U	5	0.5	OK
MW-38	Tin	100	ug/L	U	20	100	OK
MW-38	Arsenic	5	ug/L	U	2	5	OK
MW-38	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-38	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-38	Chromium	25	ug/L	U	2	25	OK
MW-38	Cobalt	10	ug/L	U	2	10	OK
MW-38	Copper	10	ug/L	U	2	10	OK
MW-38	Uranium	0.3	ug/L		2	0.3	OK
MW-38	Vanadium	15	ug/L	U	1	15	OK
MW-38	Zinc	10	ug/L		20	10	OK
MW-38	Calcium	20	mg/L		20	0.5	OK
MW-38	Methylene chloride	1	ug/L	U	1	1	OK
MW-38	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-38	Selenium	5	ug/L		20	5	OK
MW-38	2-Butanone	20	ug/L	U	1	20	OK
MW-38	Naphthalene	1	ug/L	U	1	1	OK
MW-38	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-38	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-38	Gross Radium Alpha	0.877	pCi/L		1	1	OK
MW-38	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-38	Total Dissolved Solids	20	mg/L		2	10	OK
MW-39	Toluene	1	ug/L	U	1	1	OK
MW-39	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-39	Xylenes, Total	1	ug/L	U	1	1	OK
MW-39	Sulfate	750	mg/L		1000	1	OK
MW-39	Chloride	1	mg/L		10	1	OK
MW-39	Fluoride	0.1	mg/L		1	0.1	OK
MW-39	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-39	Acetone	20	ug/L	U	1	20	OK
MW-39	Chloroform	1	ug/L	U	1	1	OK
MW-39	Benzene	1	ug/L	U	1	1	OK
MW-39	Chloromethane	1	ug/L	U	1	1	OK
MW-39	Iron	2500	ug/L		500	30	OK
MW-39	Lead	1	ug/L	U	2	1	OK
MW-39	Magnesium	20	mg/L		20	0.5	OK
MW-39	Manganese	50	ug/L		500	10	OK
MW-39	Mercury	0.5	ug/L	U	1	0.5	OK
MW-39	Molybdenum	10	ug/L	U	20	10	OK
MW-39	Nickel	20	ug/L		2	20	OK
MW-39	Potassium	1	mg/L		1	0.5	OK
MW-39	Silver	10	ug/L	U	20	10	OK
MW-39	Sodium	20	mg/L		20	0.5	OK
MW-39	Thallium	0.5	ug/L		5	0.5	OK
MW-39	Tin	100	ug/L	U	20	100	OK
MW-39	Arsenic	5	ug/L	U	2	5	OK
MW-39	Beryllium	0.5	ug/L		5	0.5	OK
MW-39	Cadmium	0.5	ug/L		20	0.5	OK
MW-39	Chromium	25	ug/L	U	2	25	OK
MW-39	Cobalt	10	ug/L		2	10	OK
MW-39	Copper	10	ug/L		2	10	OK
MW-39	Uranium	0.3	ug/L		2	0.3	OK
MW-39	Vanadium	15	ug/L	U	1	15	OK
MW-39	Zinc	10	ug/L		20	10	OK
MW-39	Calcium	20	mg/L		20	0.5	OK
MW-39	Methylene chloride	1	ug/L	U	1	1	OK
MW-39	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-39	Selenium	5	ug/L	U	20	5	OK
MW-39	2-Butanone	20	ug/L	U	1	20	OK
MW-39	Naphthalene	1	ug/L	U	1	1	OK
MW-39	Bicarbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-39	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-39	Gross Radium Alpha	0.725	pCi/L		1	1	OK
MW-39	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-39	Total Dissolved Solids	20	mg/L		2	10	OK
MW-40	Toluene	1	ug/L	U	1	1	OK
MW-40	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-40	Xylenes, Total	1	ug/L	U	1	1	OK
MW-40	Sulfate	750	mg/L		1000	1	OK
MW-40	Chloride	1	mg/L		10	1	OK
MW-40	Fluoride	0.1	mg/L		1	0.1	OK
MW-40	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-40	Acetone	20	ug/L	U	1	20	OK
MW-40	Chloroform	1	ug/L	U	1	1	OK
MW-40	Benzene	1	ug/L	U	1	1	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-40	Chloromethane	1	ug/L	U	1	1	OK
MW-40	Iron	30	ug/L	U	5	30	OK
MW-40	Lead	1	ug/L	U	2	1	OK
MW-40	Magnesium	20	mg/L		20	0.5	OK
MW-40	Manganese	10	ug/L		2	10	OK
MW-40	Mercury	0.5	ug/L	U	1	0.5	OK
MW-40	Molybdenum	10	ug/L	U	20	10	OK
MW-40	Nickel	20	ug/L	U	2	20	OK
MW-40	Potassium	1	mg/L		1	0.5	OK
MW-40	Silver	10	ug/L	U	20	10	OK
MW-40	Sodium	20	mg/L		20	0.5	OK
MW-40	Thallium	0.5	ug/L		5	0.5	OK
MW-40	Tin	100	ug/L	U	20	100	OK
MW-40	Arsenic	5	ug/L	U	2	5	OK
MW-40	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-40	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-40	Chromium	25	ug/L	U	2	25	OK
MW-40	Cobalt	10	ug/L	U	2	10	OK
MW-40	Copper	10	ug/L	U	2	10	OK
MW-40	Uranium	0.3	ug/L		2	0.3	OK
MW-40	Vanadium	15	ug/L	U	1	15	OK
MW-40	Zinc	10	ug/L	U	20	10	OK
MW-40	Calcium	20	mg/L		20	0.5	OK
MW-40	Methylene chloride	1	ug/L	U	1	1	OK
MW-40	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-40	Selenium	5	ug/L		20	5	OK
MW-40	2-Butanone	20	ug/L	U	1	20	OK
MW-40	Naphthalene	1	ug/L	U	1	1	OK
MW-40	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-40	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-40	Gross Radium Alpha	0.765	pCi/L		1	1	OK
MW-40	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-40	Total Dissolved Solids	20	mg/L		2	10	OK
MW-65	Toluene	1	ug/L	U	1	1	OK
MW-65	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-65	Xylenes, Total	1	ug/L	U	1	1	OK
MW-65	Sulfate	750	mg/L		1000	1	OK
MW-65	Chloride	1	mg/L		10	1	OK
MW-65	Fluoride	0.1	mg/L		1	0.1	OK
MW-65	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-65	Acetone	20	ug/L	U	1	20	OK
MW-65	Chloroform	1	ug/L	U	1	1	OK
MW-65	Benzene	1	ug/L	U	1	1	OK
MW-65	Chloromethane	1	ug/L	U	1	1	OK
MW-65	Iron	30	ug/L	U	5	30	OK
MW-65	Lead	1	ug/L	U	2	1	OK
MW-65	Magnesium	20	mg/L		20	0.5	OK
MW-65	Manganese	10	ug/L	U	2	10	OK
MW-65	Mercury	0.5	ug/L	U	1	0.5	OK
MW-65	Molybdenum	10	ug/L	U	20	10	OK
MW-65	Nickel	20	ug/L	U	2	20	OK
MW-65	Potassium	1	mg/L		1	0.5	OK
MW-65	Silver	10	ug/L	U	20	10	OK
MW-65	Sodium	20	mg/L		20	0.5	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-65	Thallium	0.5	ug/L		5	0.5	OK
MW-65	Tin	100	ug/L	U	20	100	OK
MW-65	Arsenic	5	ug/L	U	2	5	OK
MW-65	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-65	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-65	Chromium	25	ug/L	U	2	25	OK
MW-65	Cobalt	10	ug/L	U	2	10	OK
MW-65	Copper	10	ug/L	U	2	10	OK
MW-65	Uranium	0.3	ug/L		2	0.3	OK
MW-65	Vanadium	15	ug/L	U	1	15	OK
MW-65	Zinc	10	ug/L	U	20	10	OK
MW-65	Calcium	20	mg/L		20	0.5	OK
MW-65	Methylene chloride	1	ug/L	U	1	1	OK
MW-65	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-65	Selenium	5	ug/L		20	5	OK
MW-65	2-Butanone	20	ug/L	U	1	20	OK
MW-65	Naphthalene	1	ug/L	U	1	1	OK
MW-65	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-65	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-65	Gross Radium Alpha	0.989	pCi/L	U	1	1	OK
MW-65	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-65	Total Dissolved Solids	20	mg/L		2	10	OK

G-5B Accelerated Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
Trip Blank	Chloroform	1	ug/L	U	1	1	OK
Trip Blank	Methylene chloride	1	ug/L	U	1	1	OK
Trip Blank	Chloroform	1	ug/L	U	1	1	OK
Trip Blank	Methylene chloride	1	ug/L	U	1	1	OK
MW-11	Manganese	10	ug/L		20	10	OK
MW-11	Manganese	10	ug/L		20	10	OK
MW-25	Cadmium	0.5	ug/L		20	0.5	OK
MW-25	Cadmium	0.5	ug/L		20	0.5	OK
MW-26	Chloride	1	mg/L		10	1	OK
MW-26	Chloroform	100	ug/L		100	1	OK
MW-26	Methylene chloride	1	ug/L		1	1	OK
MW-26	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-26	Chloride	1	mg/L		10	1	OK
MW-26	Chloroform	100	ug/L		100	1	OK
MW-26	Methylene chloride	1	ug/L		1	1	OK
MW-26	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-30	Chloride	1	mg/L		10	1	OK
MW-30	Uranium	0.3	ug/L		2	0.3	OK
MW-30	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-30	Chloride	2	mg/L		20	1	OK
MW-30	Uranium	0.3	ug/L		2	0.3	OK
MW-30	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-31	Sulfate	75	mg/L		100	1	OK
MW-31	Chloride	10	mg/L		100	1	OK
MW-31	Uranium	0.3	ug/L		2	0.3	OK
MW-31	Selenium	5	ug/L		20	5	OK
MW-31	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-31	Total Dissolved Solids	20	mg/L		2	10	OK
MW-31	Sulfate	75	mg/L		100	1	OK
MW-31	Chloride	10	mg/L		100	1	OK
MW-31	Uranium	0.3	ug/L		2	0.3	OK
MW-31	Selenium	5	ug/L		20	5	OK
MW-31	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-31	Total Dissolved Solids	20	MG/L		2	10	OK
MW-65	Chloride	2	mg/L		20	1	OK
MW-65	Uranium	0.3	ug/L		2	0.3	OK
MW-65	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-65	Sulfate	150	mg/L		200	1	OK
MW-65	Chloride	10	mg/L		100	1	OK
MW-65	Uranium	0.3	ug/L		2	0.3	OK
MW-65	Selenium	5	ug/L		20	5	OK
MW-65	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-65	Total Dissolved Solids	20	mg/L		2	10	OK

G-6A: Quarterly Sample Trip Blank Evaluation

Lab Report	Constituent	Result
AWAL 1901434	2-Butanone	ND
	Acetone	ND
	Benzene	ND
	Carbon Tetrachloride	ND
	Chloroform	ND
	Chloromethane	ND
	Methylene Chloride	ND
	Naphthalene	ND
	Tetrahydrofuran	ND
	Toluene	ND
Xylenes, Total	ND	
AWAL 1901565	2-Butanone	ND
	Acetone	ND
	Benzene	ND
	Carbon Tetrachloride	ND
	Chloroform	ND
	Chloromethane	ND
	Methylene Chloride	ND
	Naphthalene	ND
	Tetrahydrofuran	ND
	Toluene	ND
Xylenes, Total	ND	

G-6B: Accelerated Sample Trip Blank Evaluation

All trip blanks for the Accelerated samples were non detect.

Blank	Sample Date	Laboratory
AWAL 1902310	2/13/2019	AWAL
AWAL 1903153	3/6/2019	AWAL

G-7A: QA/QC Evaluation for Quarterly Sample Duplicates

Constituent	MW-36 1/23/2019	MW-65 1/23/2019	%RPD
Bicarbonate as CaCO ₃ (mg/L)	284	284	0.00
Calcium (mg/L)	503	501	0.40
Chloride (mg/L)	56.8	56.3	0.88
Fluoride (mg/L)	0.288	0.290	0.69
Magnesium (mg/L)	163	159	2.48
Nitrate + Nitrite (as N) (mg/L)	0.229	0.194	16.55
Potassium (mg/L)	10.0	10.2	1.98
Selenium (mg/L)	0.220	0.226	2.69
Sodium (mg/L)	779	778	0.13
Sulfate (mg/L)	2400	2180	9.61
TDS (mg/L)	4220	3860	8.91
Thallium (mg/L)	0.000631	0.000645	2.19
Uranium (mg/L)	0.0236	0.0243	2.92
Radiologic Duplicate Tests			
Gross Alpha minus Rn & U*	1.53	1.0U	N/A

* Duplicate checks reported for gross alpha minus RN and U are not %RPD. Calculated values are based on the formula in the approved QAP.

Per the approved QAP, an RPD greater than 20% is acceptable if the reported results are less than 5 times the RL. These results are provided for information only.

N/A - The duplicate test was not performed because both results were not greater than the RL.

G-7B: QA/QC Evaluation for Accelerated Sample Duplicates

Constituent	MW-30 2/13/19	MW-65 2/13/19	%RPD*
Nitrate + Nitrite (as N) (mg/L)	18.2	18	1.10
Uranium (mg/L)	0.00909	0.00917	0.88
Chloride (mg/L)	167	157	6.17
Constituent	MW-31 3/5/19	MW-65 3/5/19	%RPD
Nitrate + Nitrite (as N) (mg/L)	18.5	18.3	1.09
Sulfate (mg/L)	953	867	9.45
Total Dissolved Solids (mg/L)	2160	2070	4.26
Uranium (mg/L)	0.0125	0.0129	3.15
Selenium (mg/L)	0.0911	0.0907	0.44
Chloride (mg/L)	322	317	1.56

G-8A: Quarterly Sample Radiologics Counting Error

Well	Gross Alpha minus Rn & U	Gross Alpha minus Rn and U Precision (+/-)	Counting Error \leq 20%	GWCL	Within GWCL?
MW-11	1.00 U	0.247	NC	3.75	NC
MW-14	1.00 U	0.268	NC	7.5	NC
MW-25	1.00 U	0.274	NC	7.5	NC
MW-26	2.58	0.550	N	4.69	Y
MW-30	1.09	0.392	N	3.75	Y
MW-31	1.00 U	0.314	NC	7.5	NC
MW-36	1.53	0.401	N	7.5	Y
MW-38	1.11	0.337	N	-	-
MW-39	3.09	0.467	Y	-	-
MW-40	1.92	0.426	N	-	-
MW-65	1.00 U	0.342	NC	7.5	NC

N/A - the counting error is less than 20% of the activity as required by the GWDP and this check column is not applicable.

NC = Not calculated. The sample results are nondetect and the check is not applicable.

G-8B: Radiologics Counting Error for Accelerated Samples

There are no accelerated samples collected for Gross Alpha.

G-9A: Quarterly Sample Laboratory Matrix QC

Matrix Spike % Recovery Comparison

Lab Report	Well	Analyte	MS %REC	MSD %REC	REC Range	RPD	RPD Range
1901434	MW-11	Sodium*	NC	NC	70-130	NC	20
1901434	MW-11	Ammonia as (N)	166	168	90-110	0.800	10
1901434	MW-14	Ammonia as (N)	163	164	90-110	0.547	10
1901434	MW-25	Ammonia as (N)	132	130	90-110	1.76	10
1901565	MW-38	Sodium*	NC	NC	70-130	NC	20
1901565	MW-38	Calcium*	NC	NC	70-130	NC	20
1901565	MW-38	Magnesium*	NC	NC	70-130	NC	20
1901565	MW-25	Ammonia as (N)	132	130	90-110	1.76	10
1901565	MW-65	Ammonia as (N)	120	120	90-110	0.249	10
1901565	MW-27	Nitrate/Nitrite as (N)	113	107	90-110	3.46	10
469482	MW-14	Gross Alpha	81.1	110	75-125	30.3	20

* Recovery was not calculated as the analyte level in the sample was greater than 4 times the spike amount

NA: QC was not performed on an EFRI sample.

Method Blank Detections

All Method Blanks for the quarter were non-detect.

Laboratory Control Sample

All Laboratory Control Samples were within acceptance limits for the quarter.

Laboratory Duplicate % Recovery Comparison

All Laboratory Duplicates were within acceptance limits for the quarter.

G-9B: Accelerated Laboratory Matrix QC

Matrix Spike % Recovery Comparison

Lab Report	Well	Analyte	MS %REC	MSD %REC	REC Range	RPD %	RPD Range %
1902310 - February Accelerated	MW-25	Manganese*	NC	NC	75-125	NC	20

* Recovery was not calculated as the analyte level in the sample was greater than 4 times the spike amount

Laboratory Duplicate % Recovery Comparison

Lab Report	Well	Analyte	Sample Result (mg/L)	Lab Duplicate Result (mg/L)	RPD %	RPD Range %
1902310 - February Accelerated	MW-31	Total Dissolved Solids	2200	2090	5.22	5

Method Blank Detections

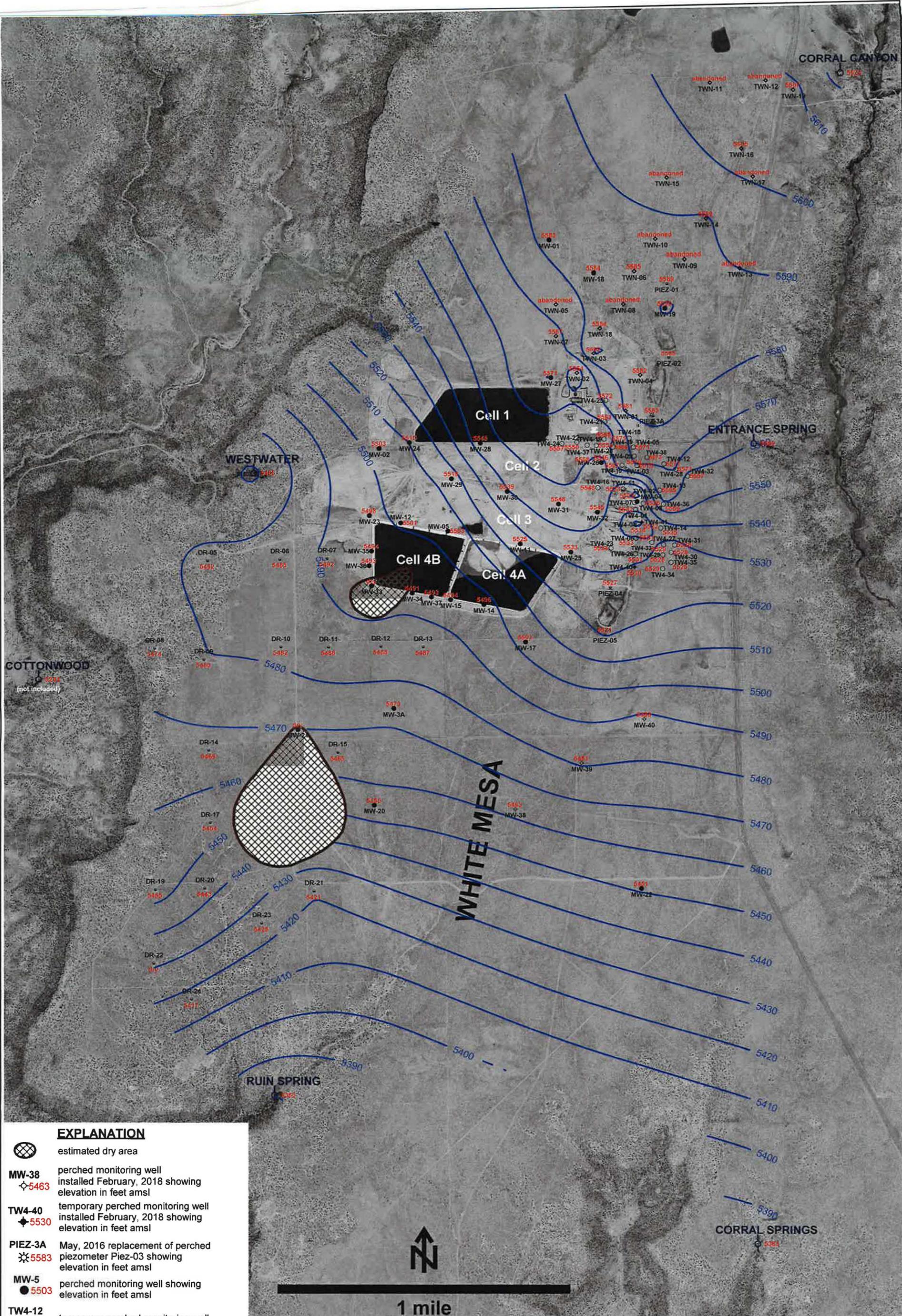
All Method Blanks for the quarter were non-detect.

Laboratory Control Sample

All Laboratory Control Samples were within acceptance limits for the quarter.

Tab H

Kriged Current Quarterly Groundwater Contour Map



EXPLANATION

-  estimated dry area
- MW-38**  perched monitoring well installed February, 2018 showing elevation in feet amsl
- TW4-40**  temporary perched monitoring well installed February, 2018 showing elevation in feet amsl
- PIEZ-3A**  May, 2016 replacement of perched piezometer Piez-03 showing elevation in feet amsl
- MW-5**  perched monitoring well showing elevation in feet amsl
- TW4-12**  temporary perched monitoring well showing elevation in feet amsl
- TWN-7**  temporary perched nitrate monitoring well showing elevation in feet amsl
- PIEZ-1**  perched piezometer showing elevation in feet amsl
- RUIN SPRING**  seep or spring showing elevation in feet amsl

NOTES: MW-4, MW-26, TW4-1, TW4-2, TW4-4, TW4-11, TW4-19, TW4-20, TW4-21, TW4-37, TW4-39 and TW4-41 are chloroform pumping wells; TW4-22, TW4-24, TW4-25 and TWN-2 are nitrate pumping wells; TW4-4 and TW4-11 water levels are below the base of the Burro Canyon Formation; TW4-16 water level appears anomalously low this quarter



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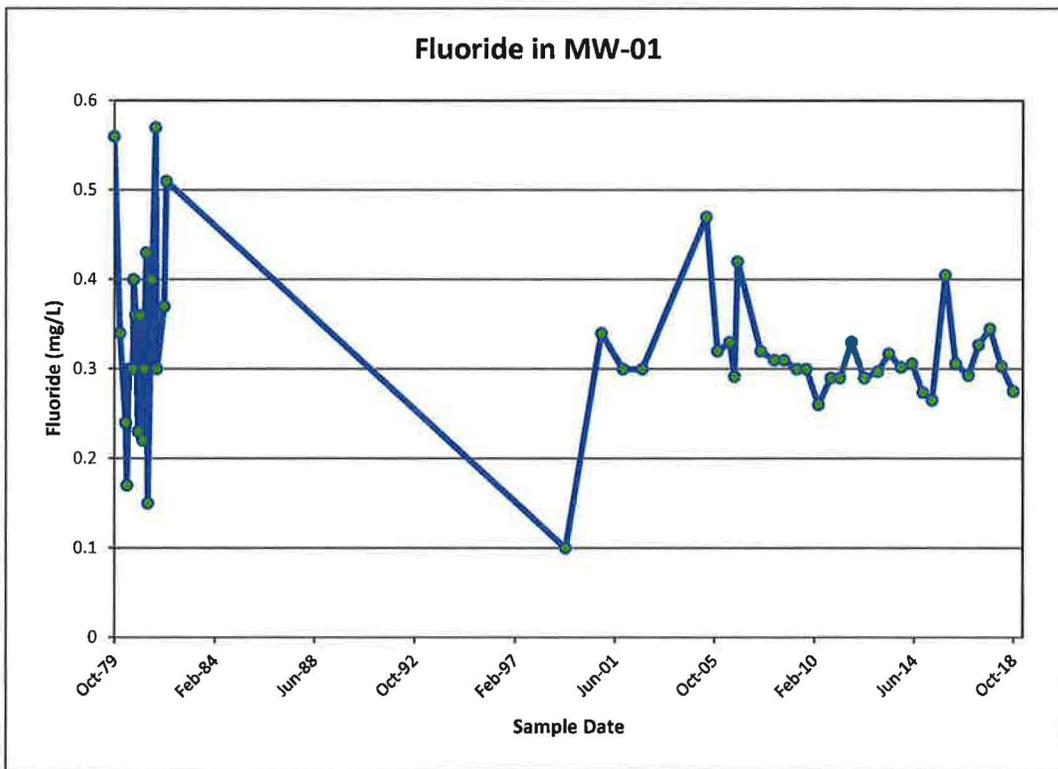
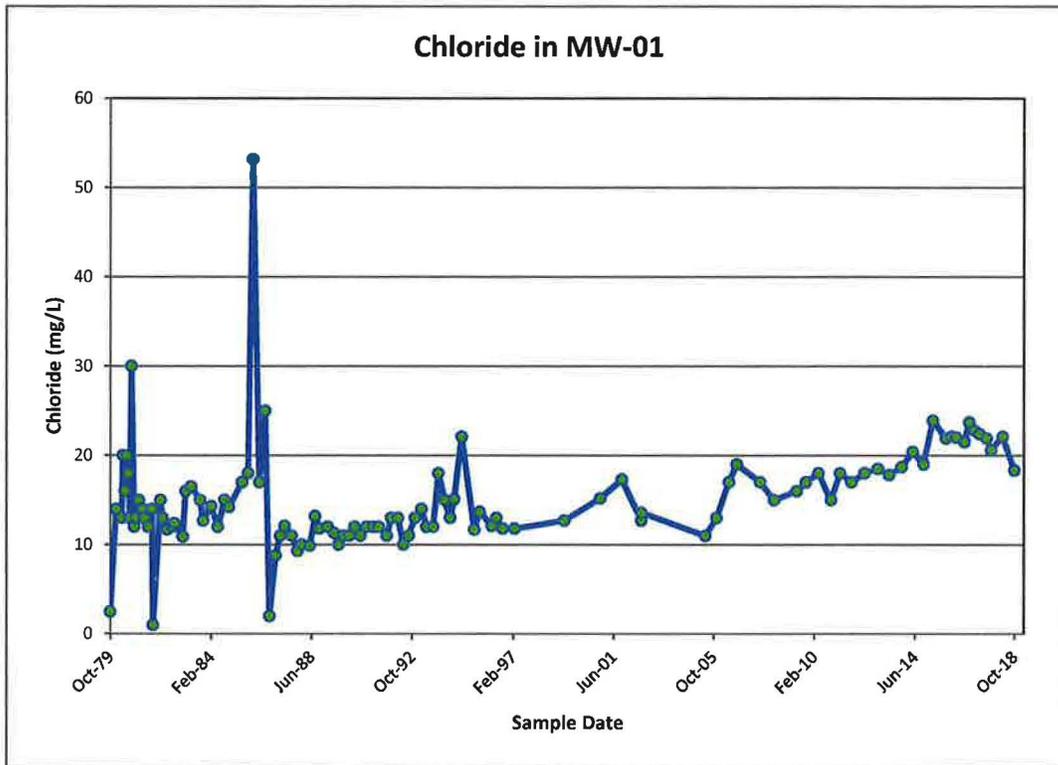
**KRIGED 1st QUARTER, 2019 WATER LEVELS
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
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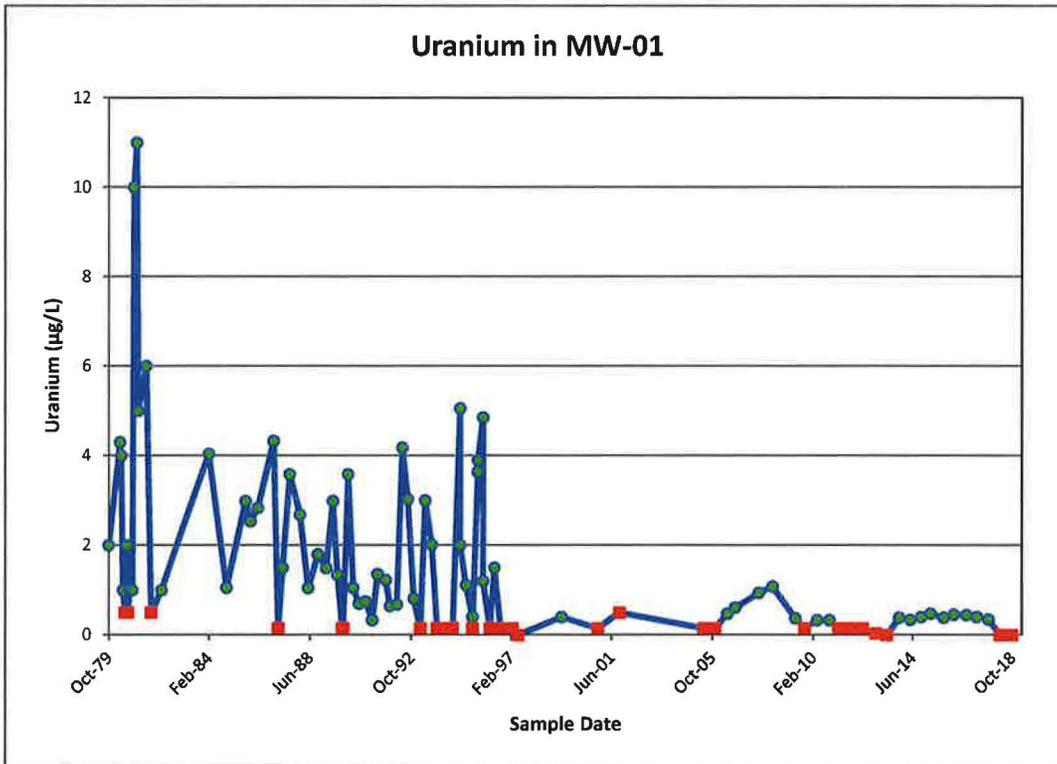
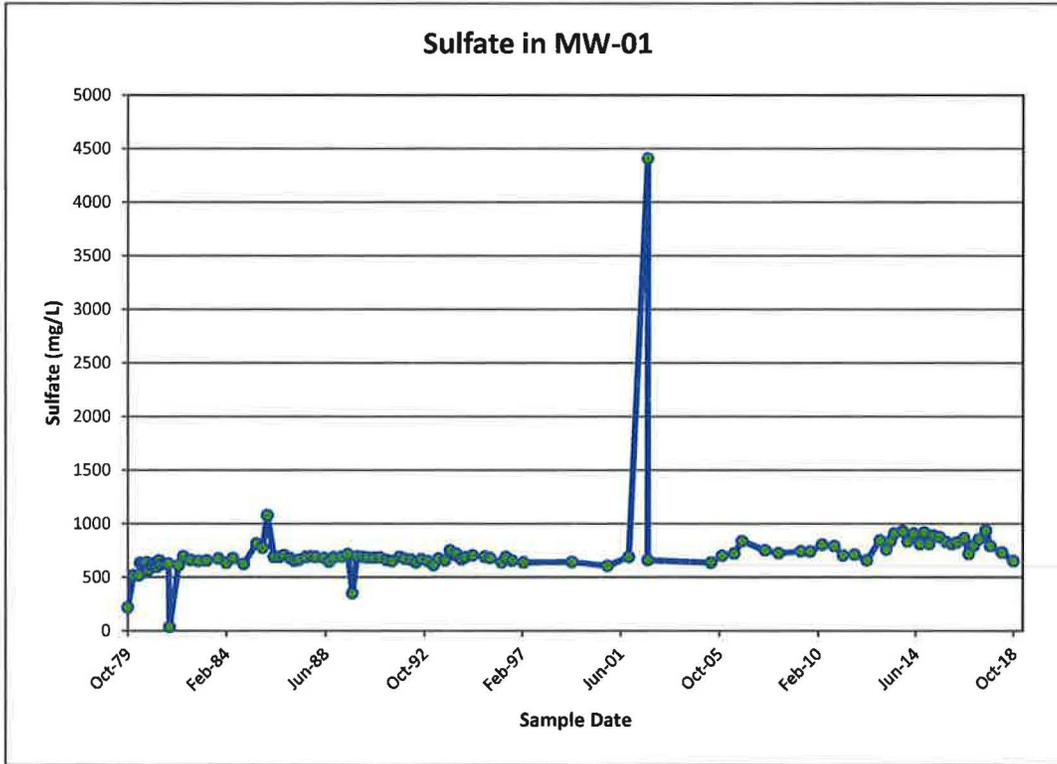
Tab I

Groundwater Time Concentration Plots

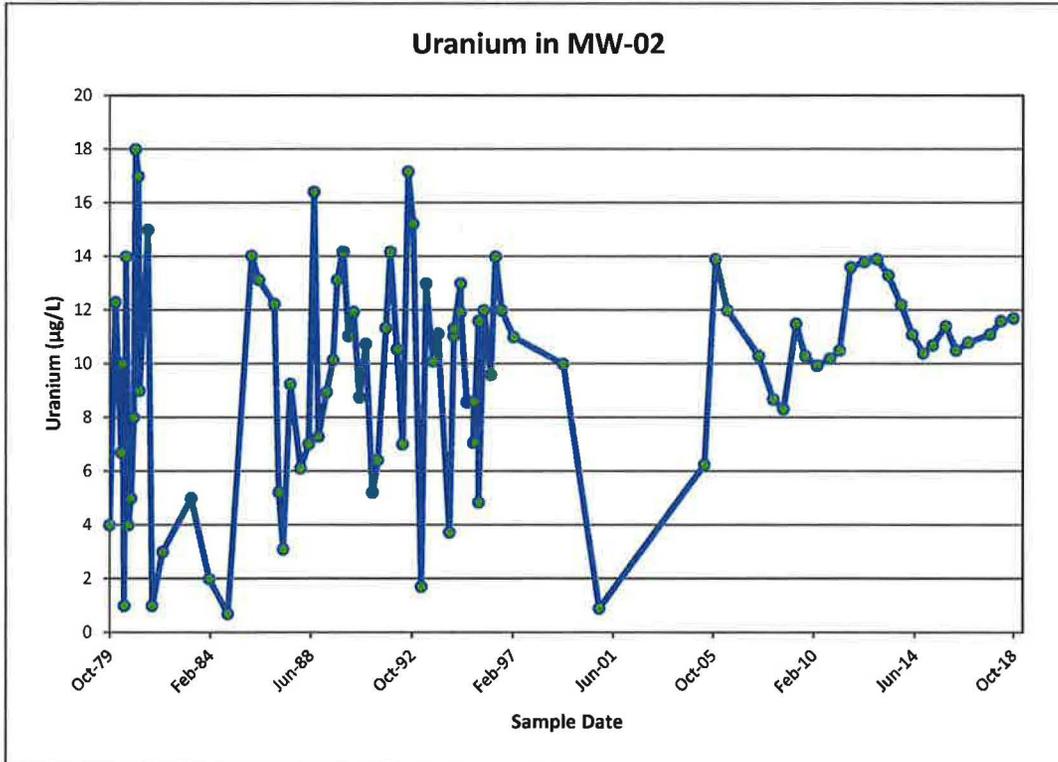
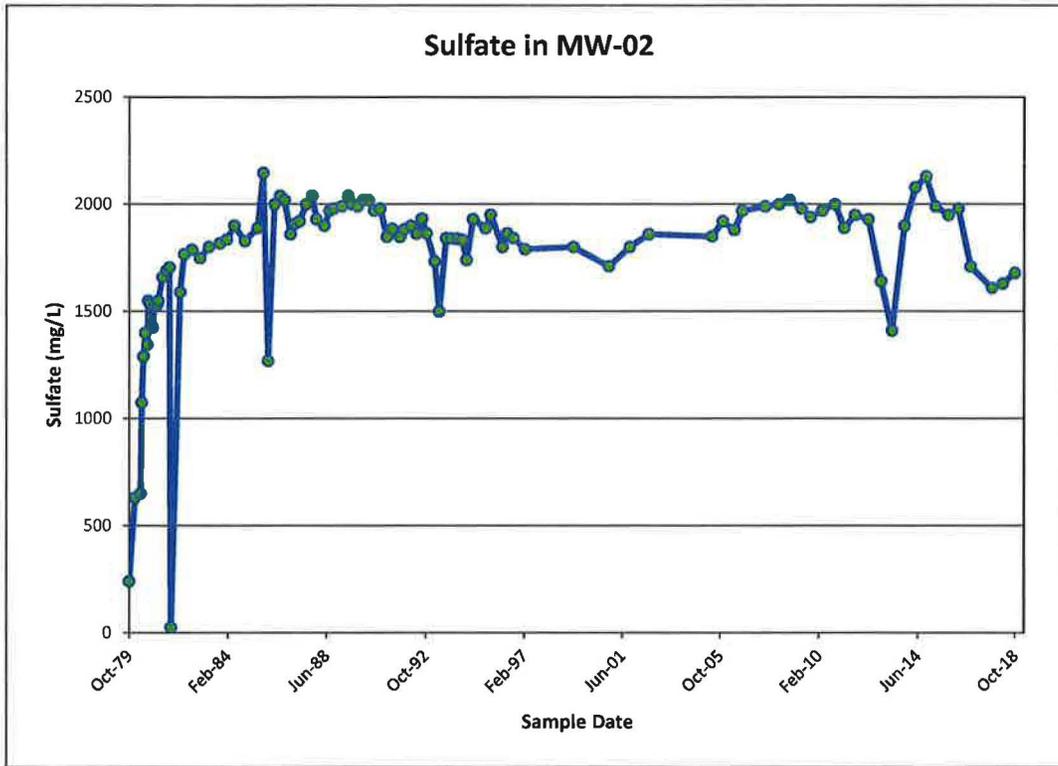
Time concentration plots for MW-01



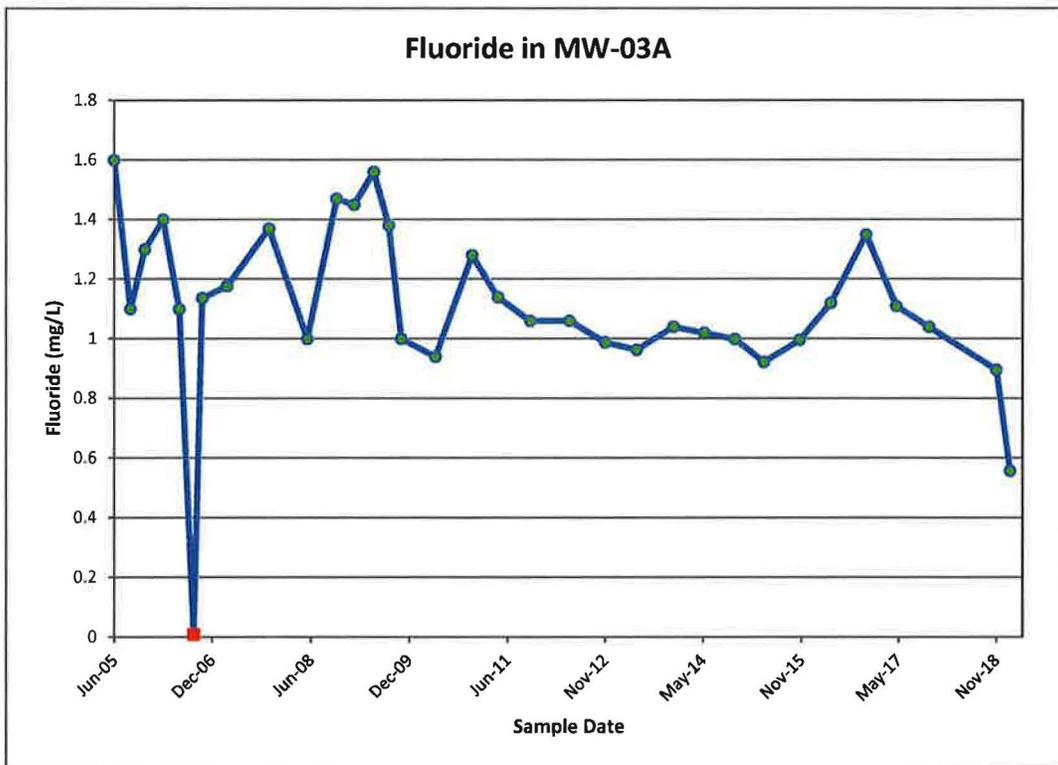
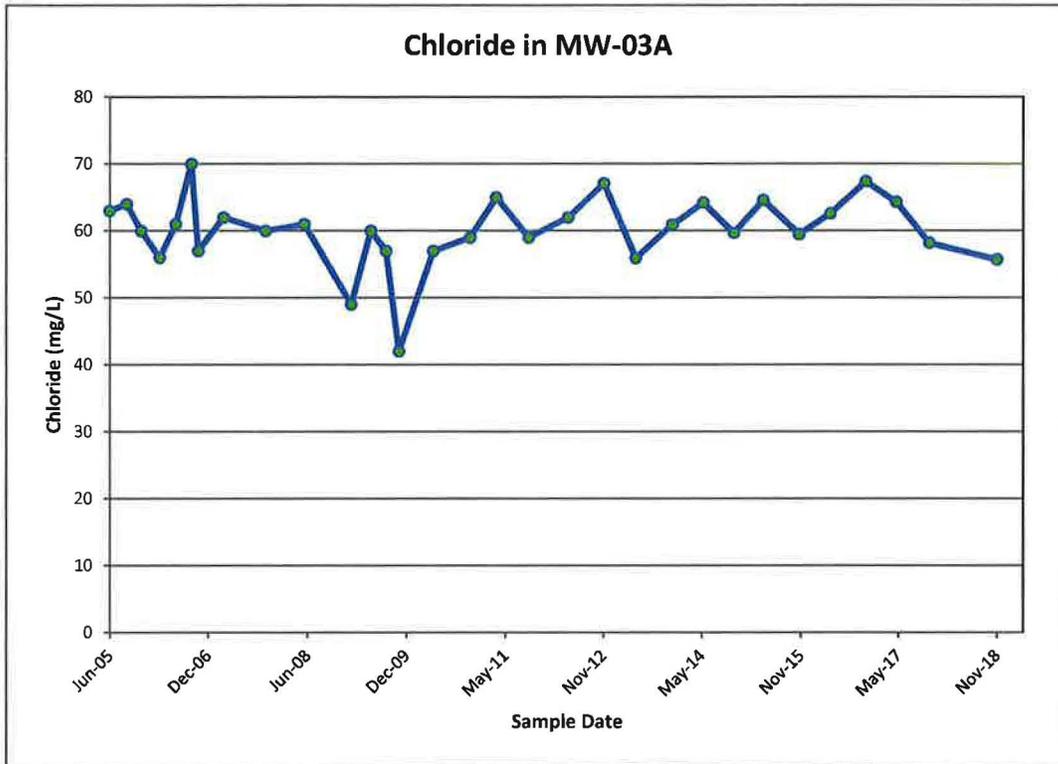
Time concentration plots for MW-01



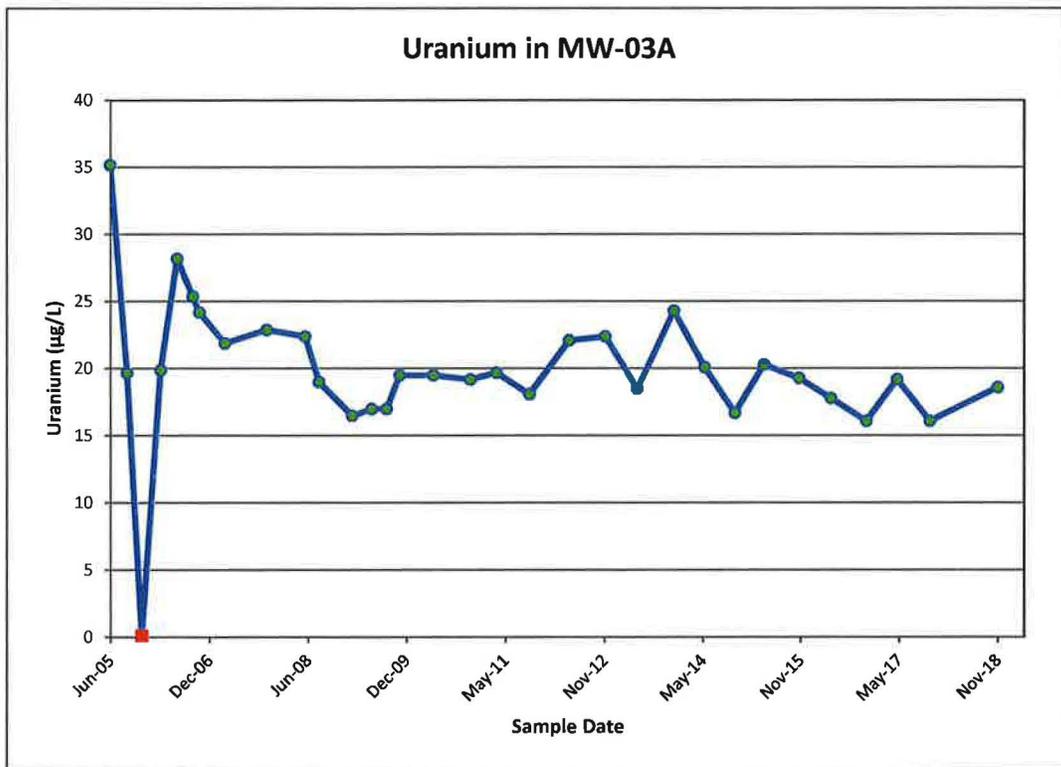
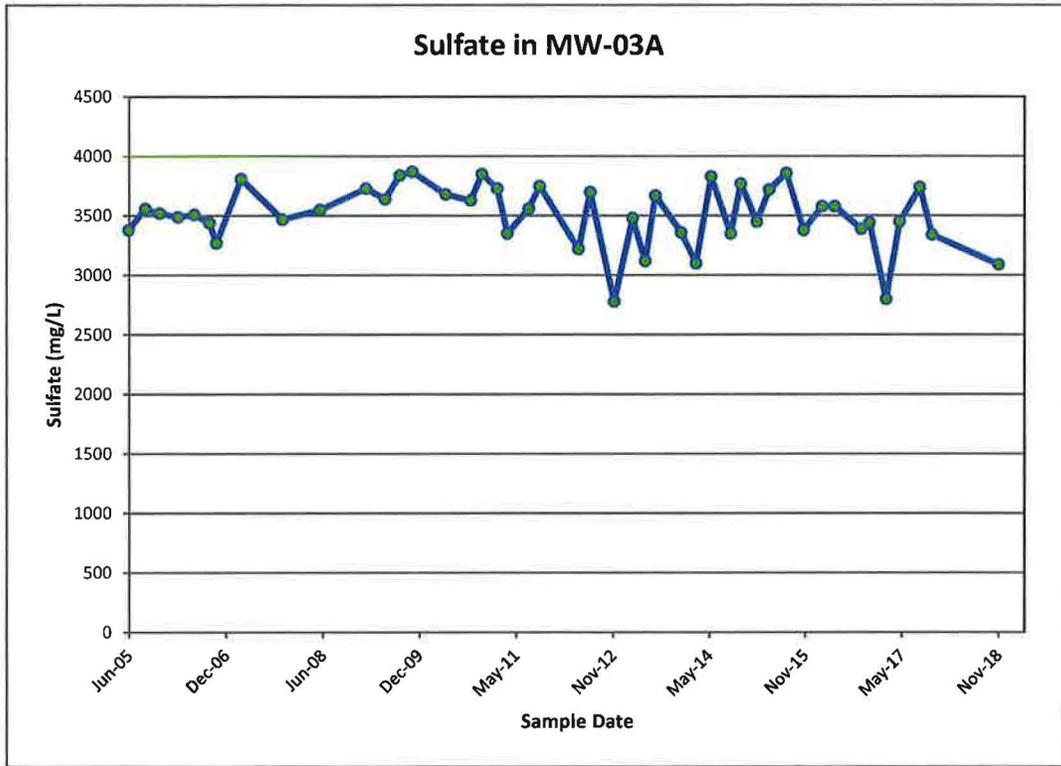
Time concentration plots for MW-02



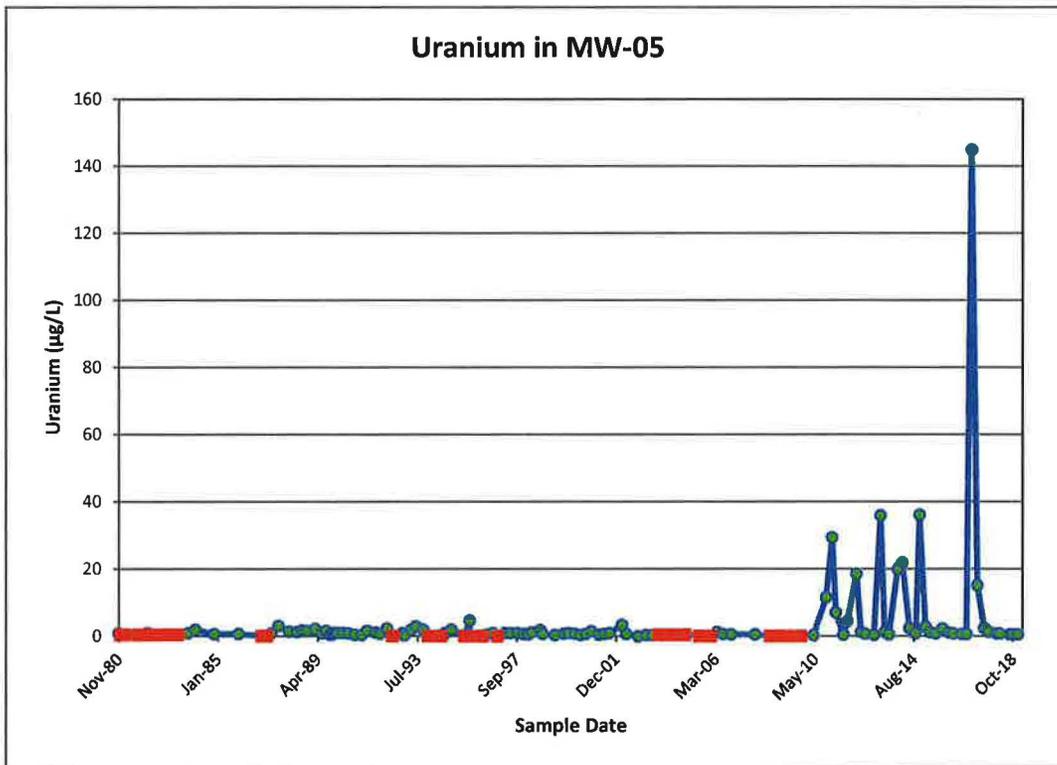
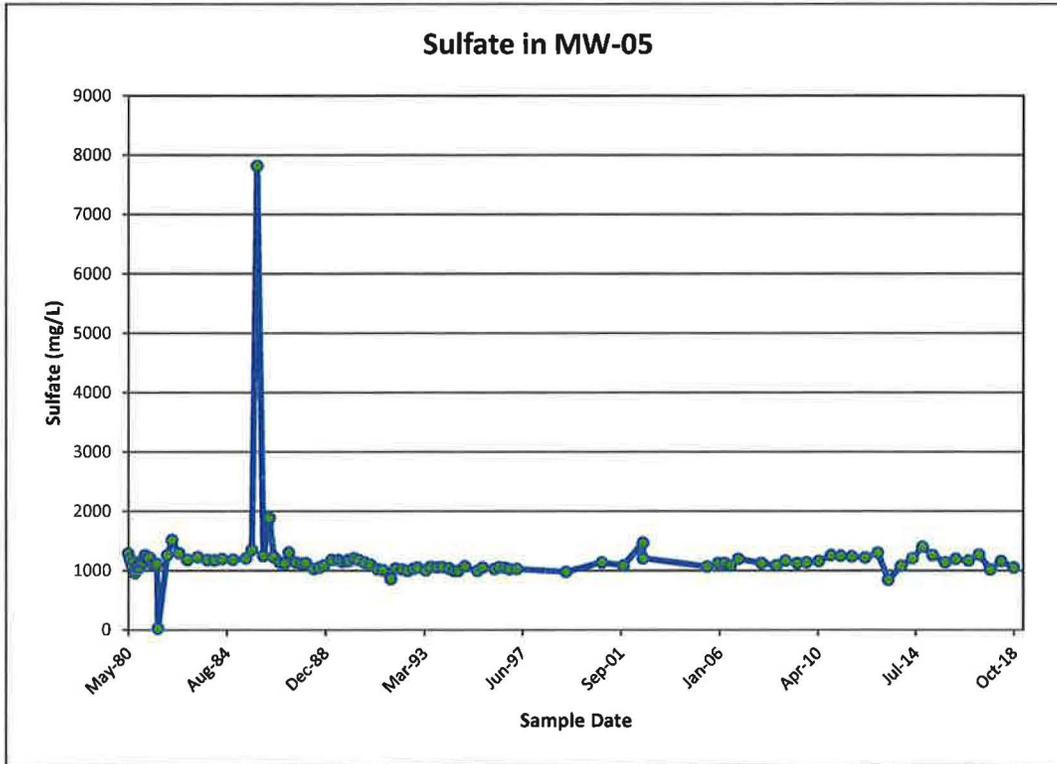
Time concentration plots for MW-03A



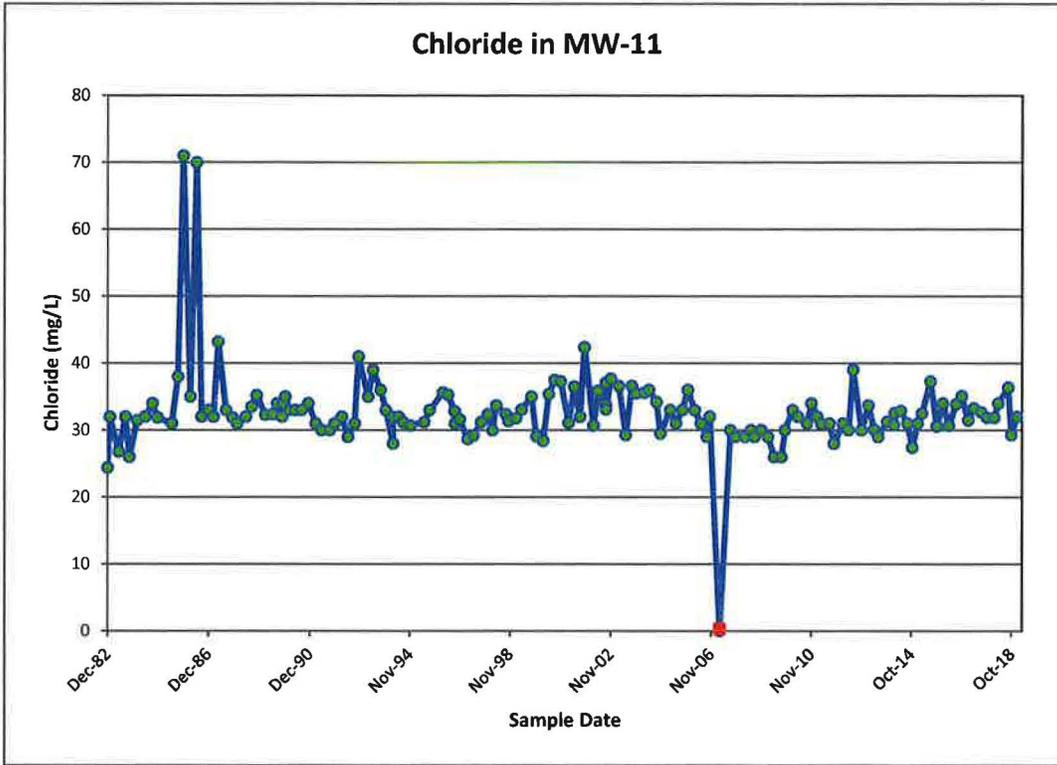
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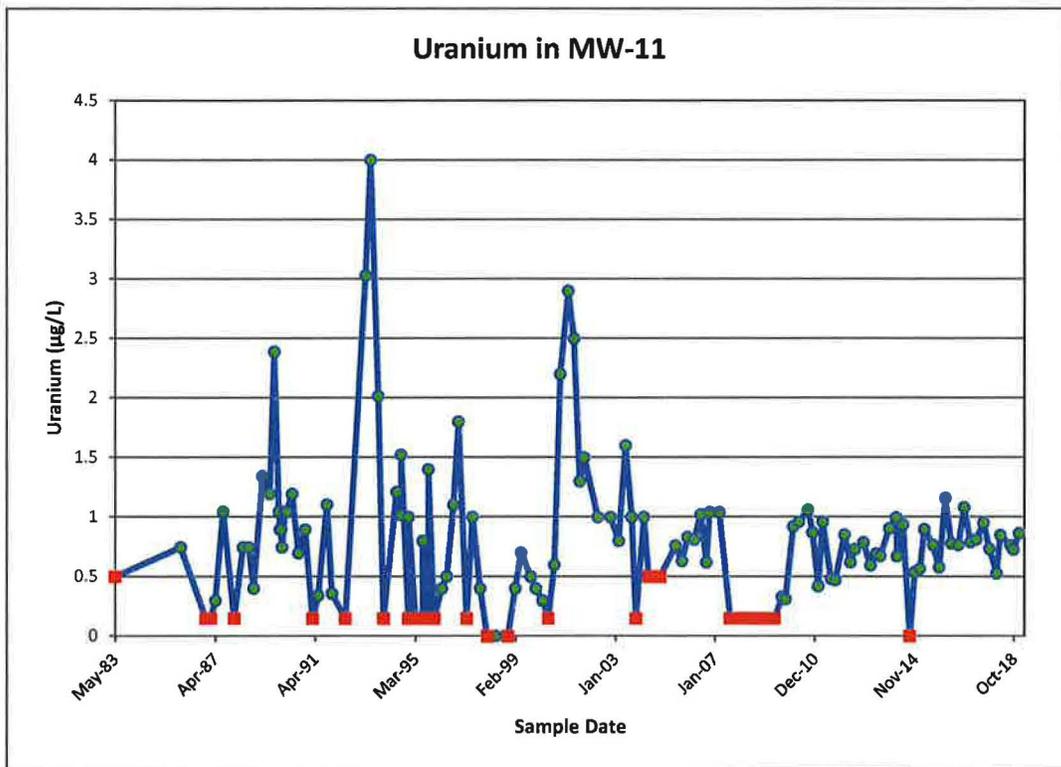
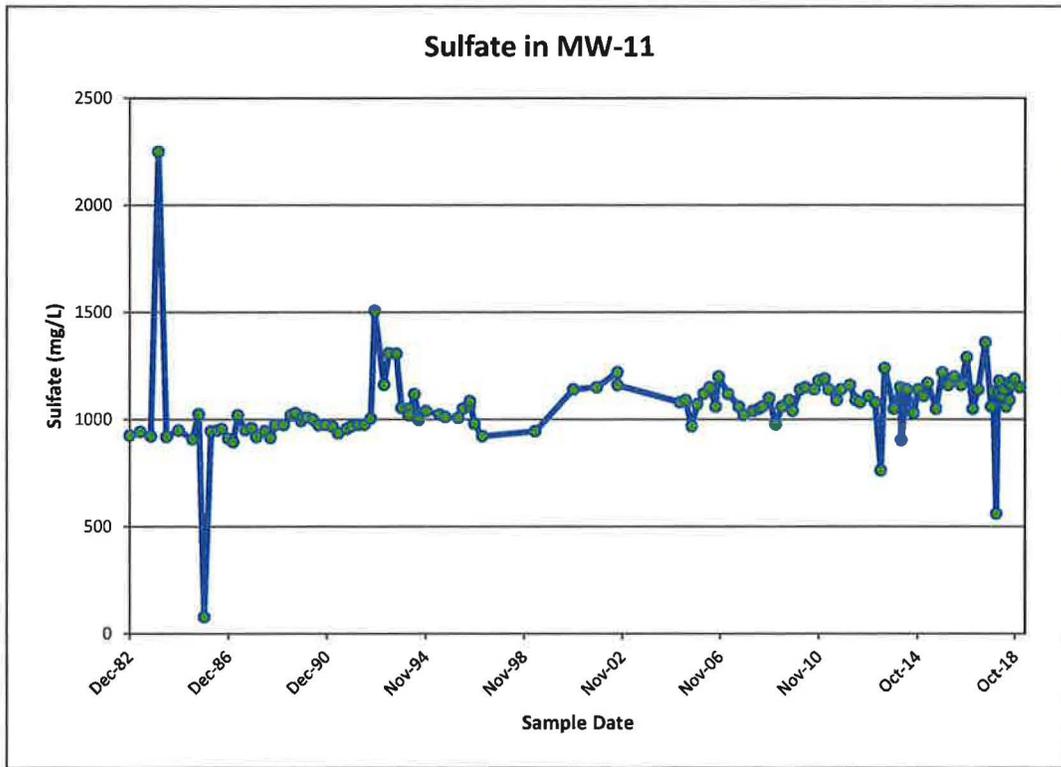
Time concentration plots for MW-05



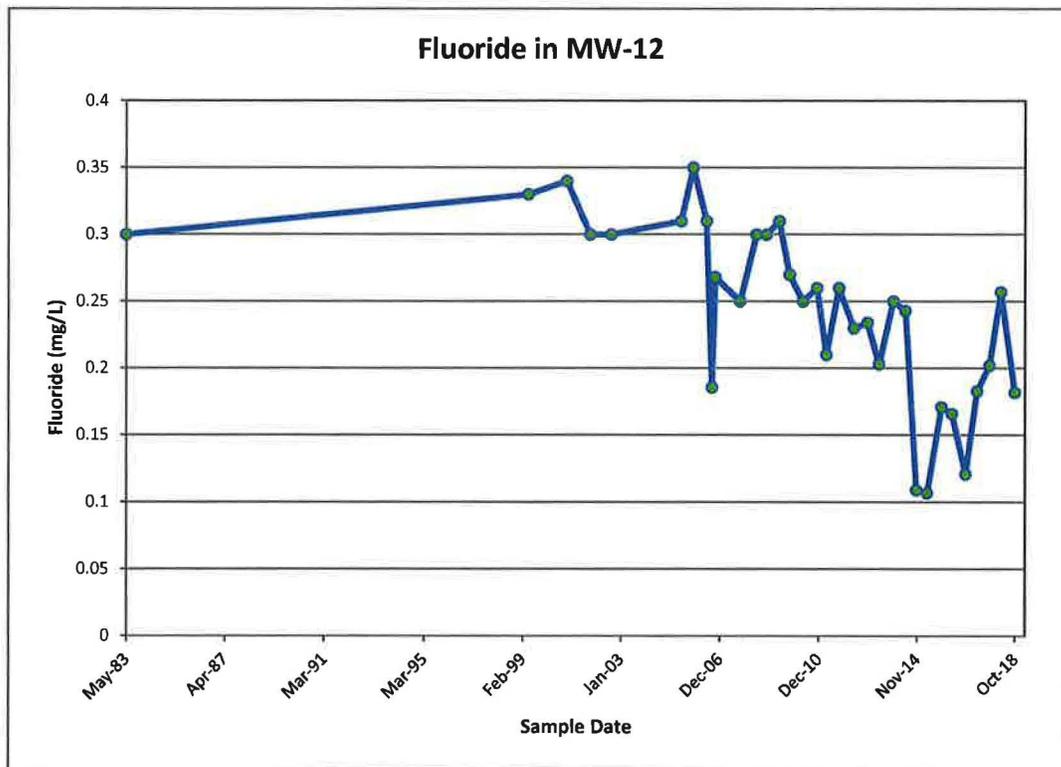
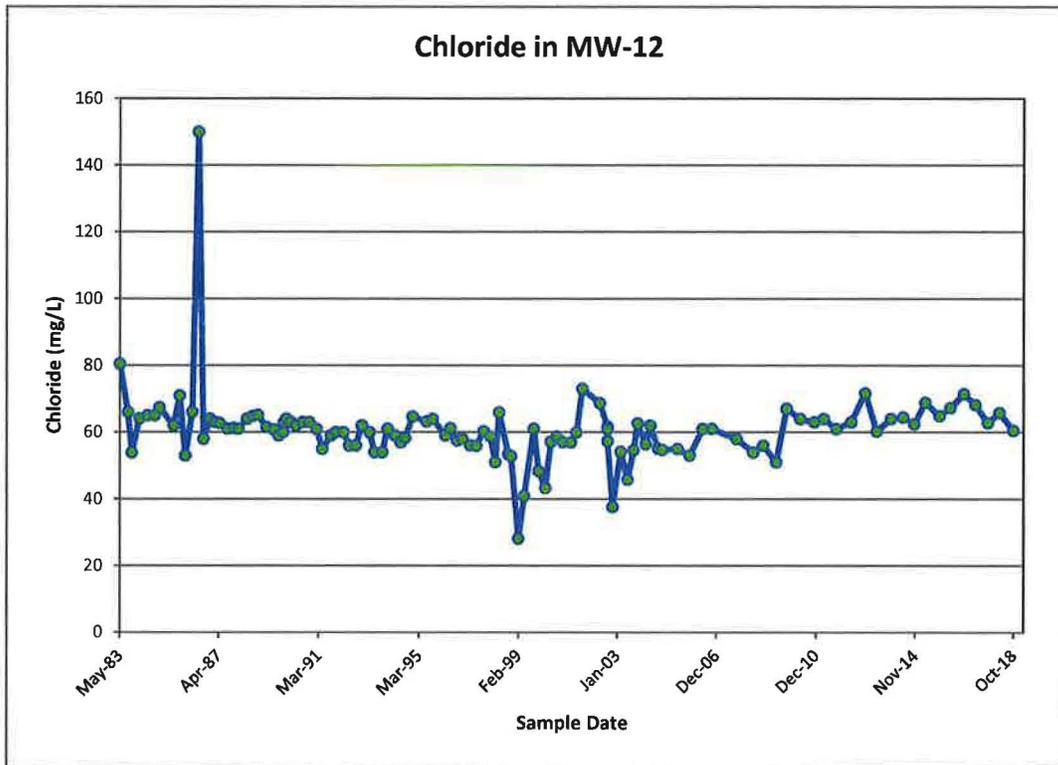
Time concentration plots for MW-11



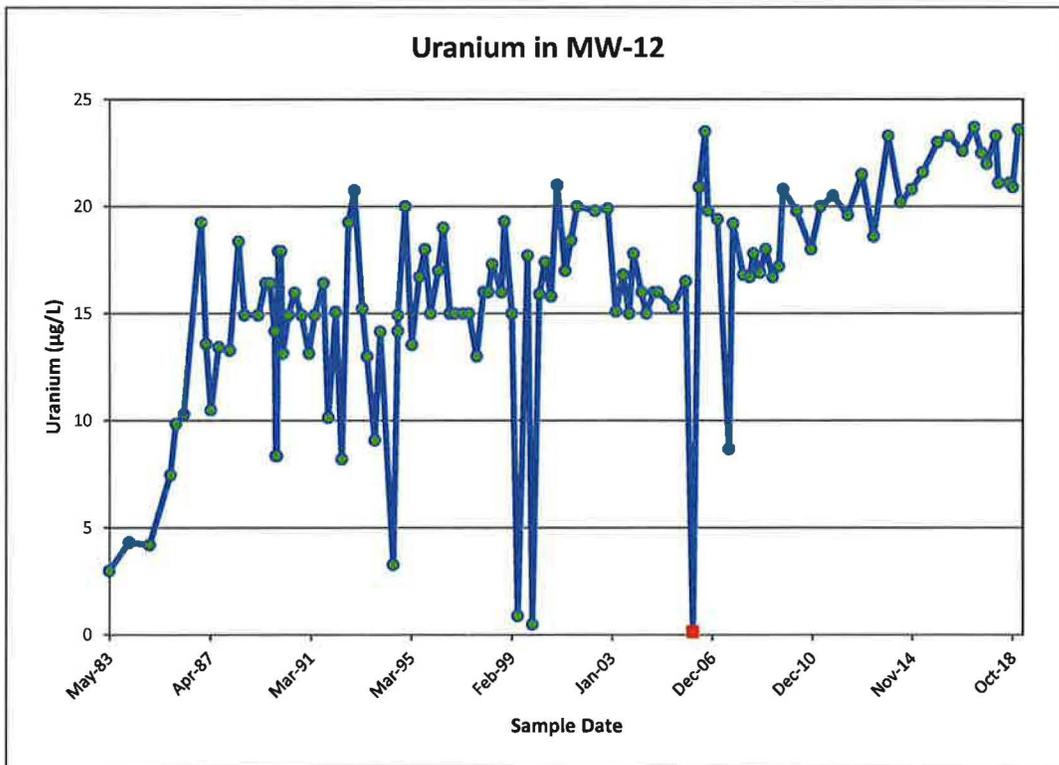
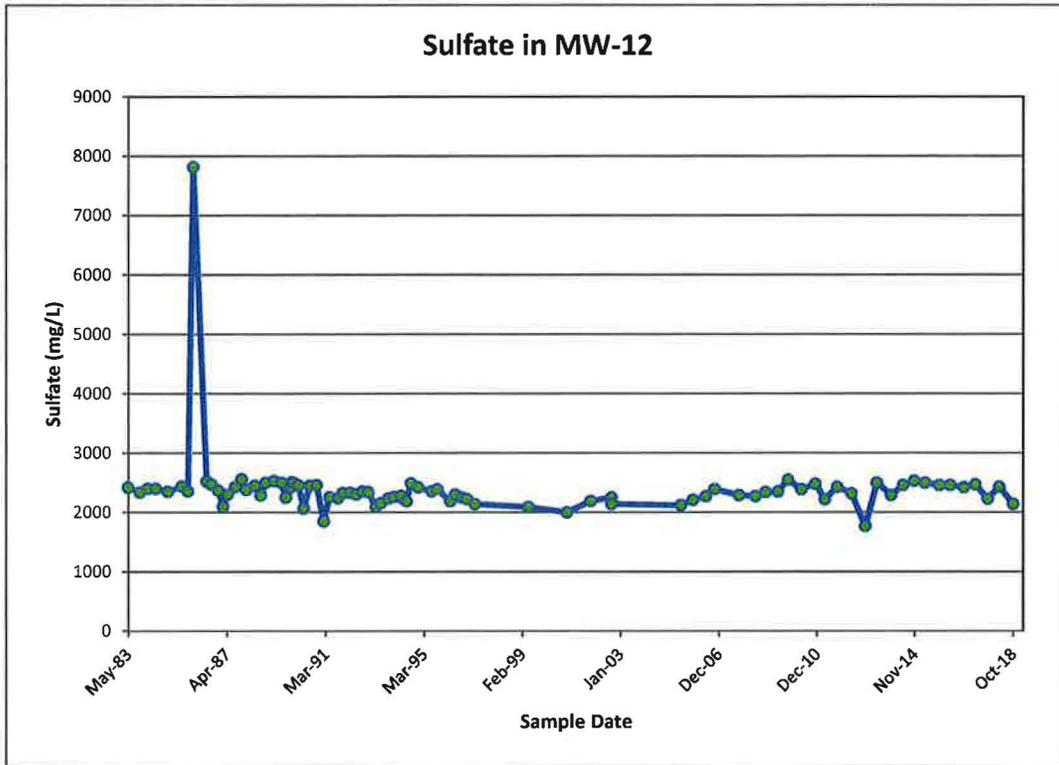
Time concentration plots for MW-11



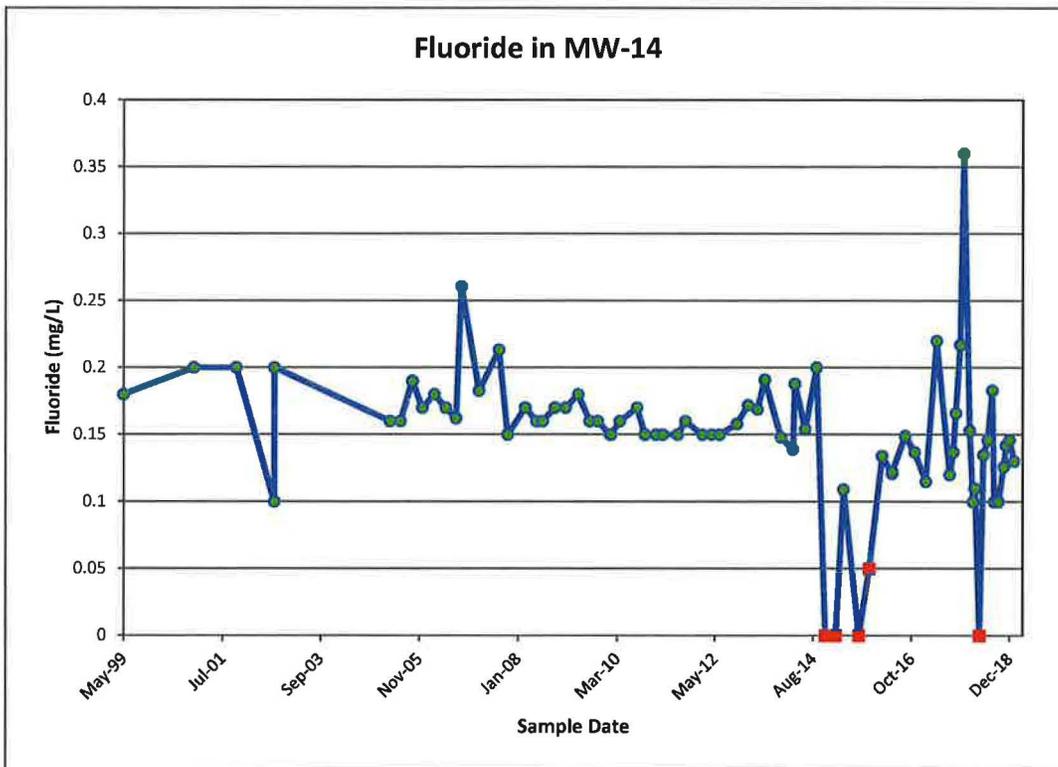
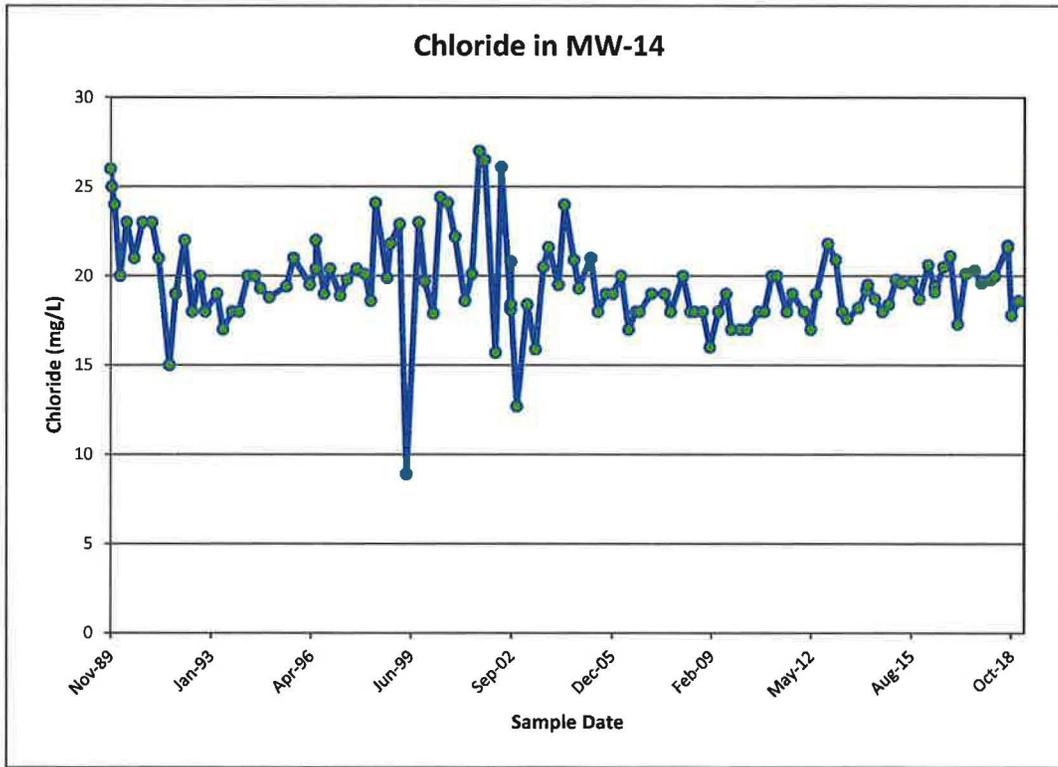
Time concentration plots for MW-12



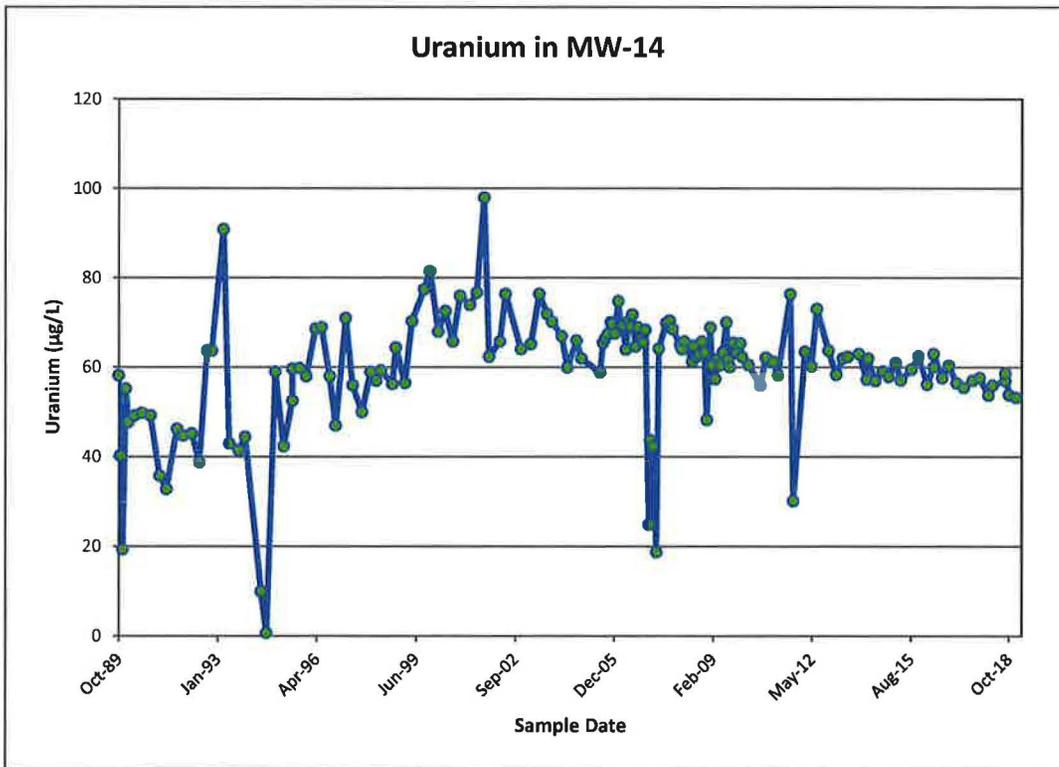
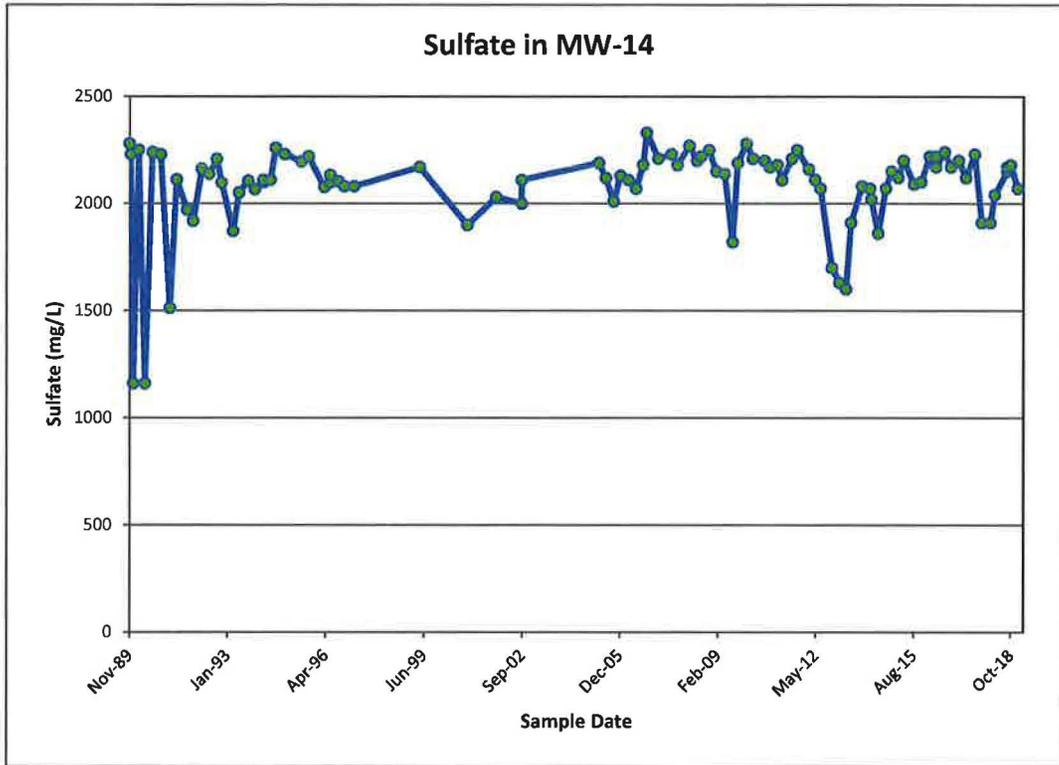
Time concentration plots for MW-12



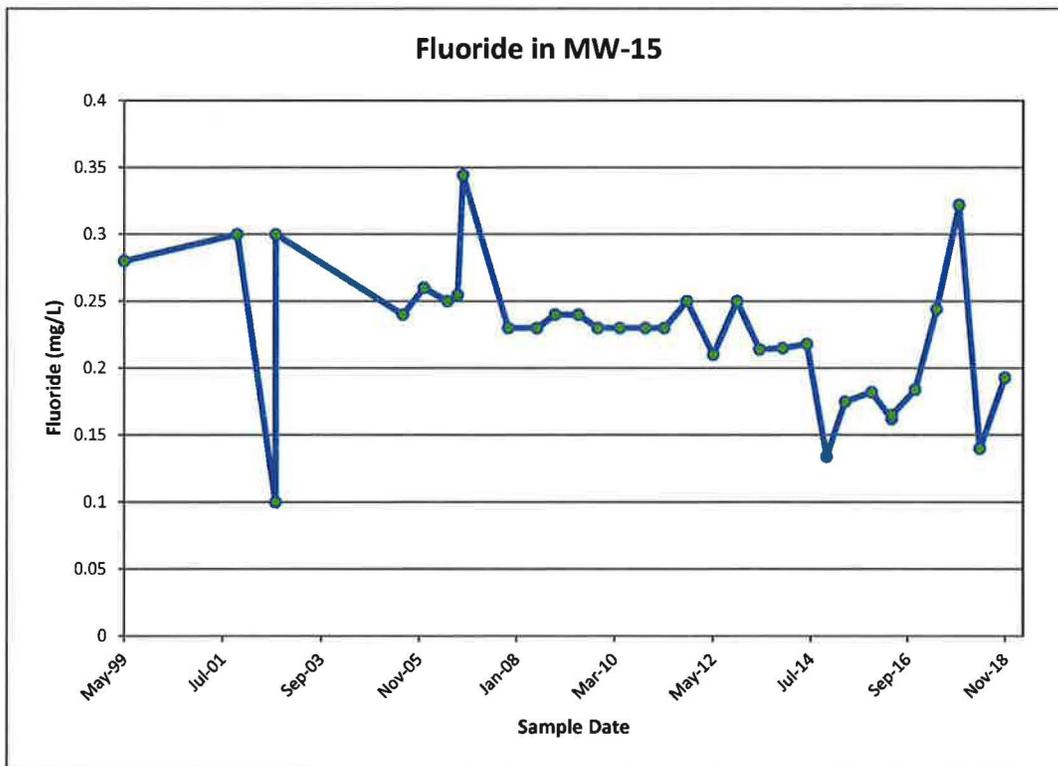
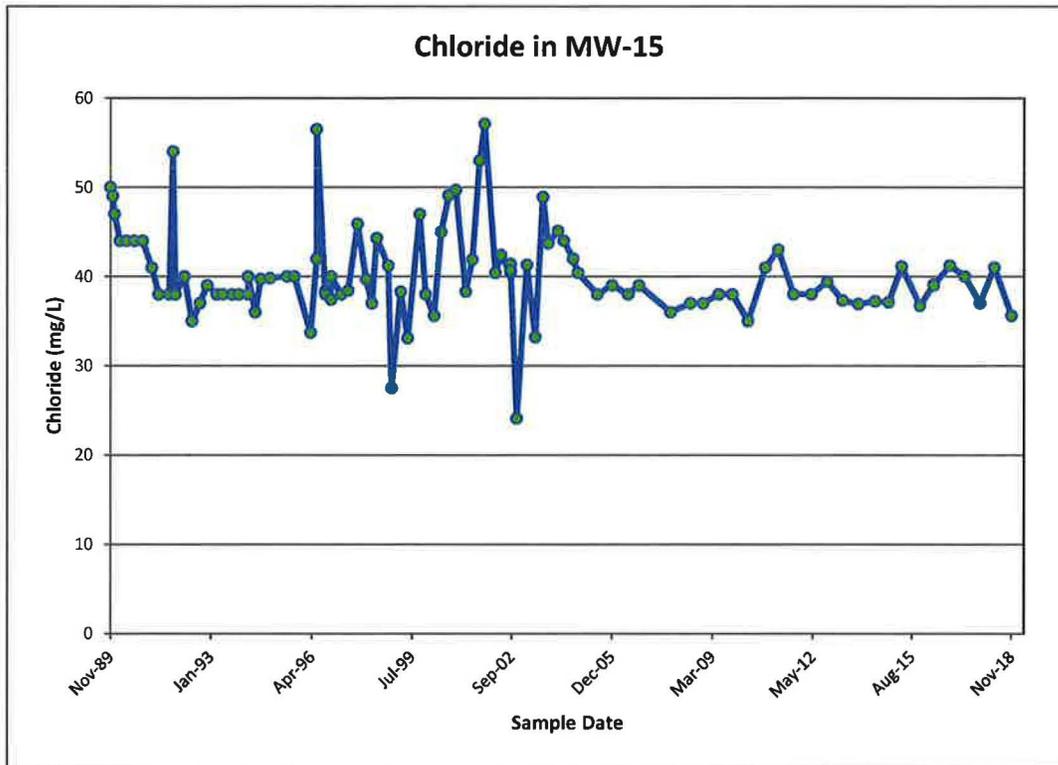
Time concentration plots for MW-14



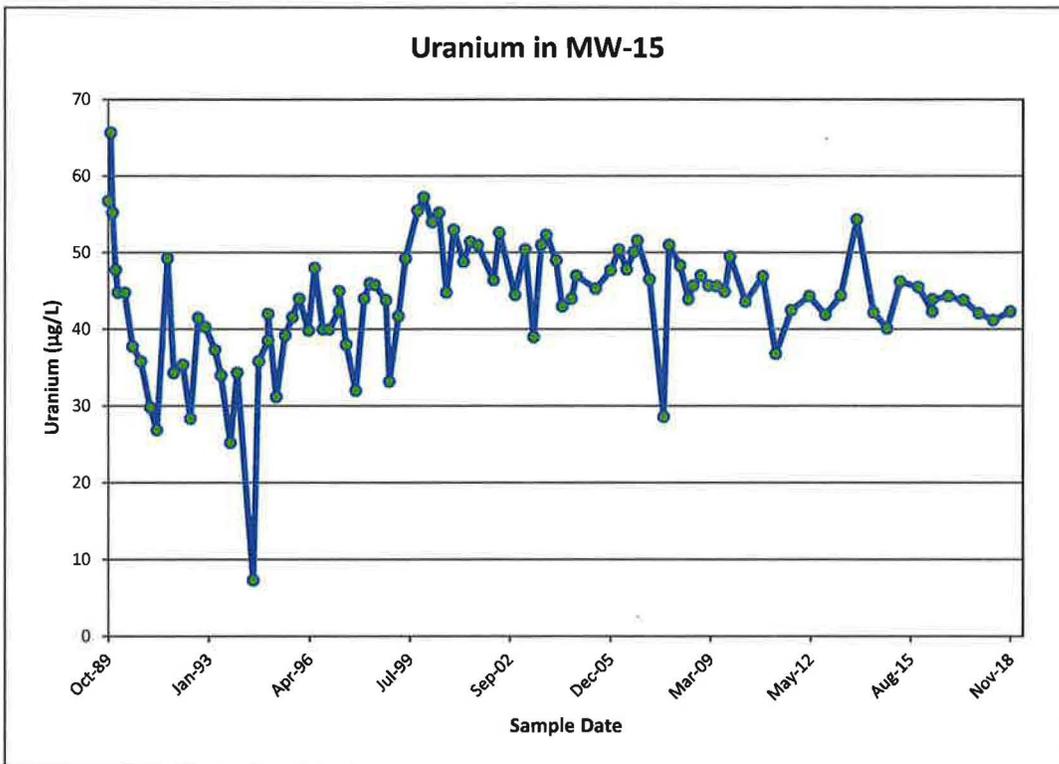
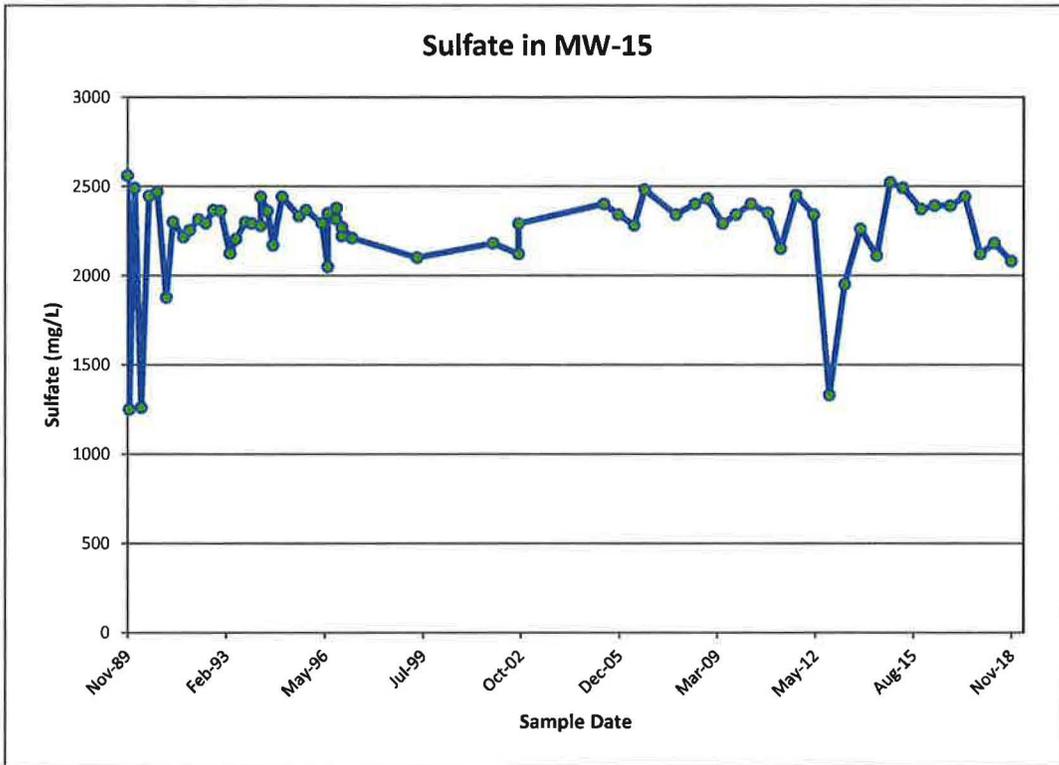
Time concentration plots for MW-14



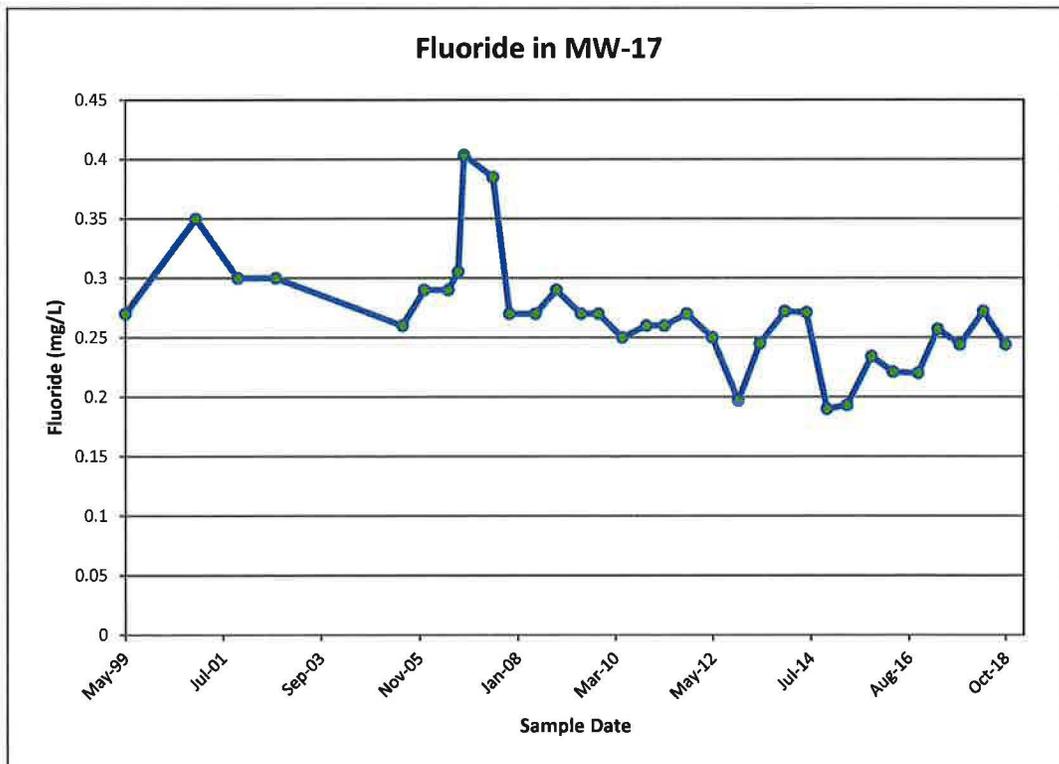
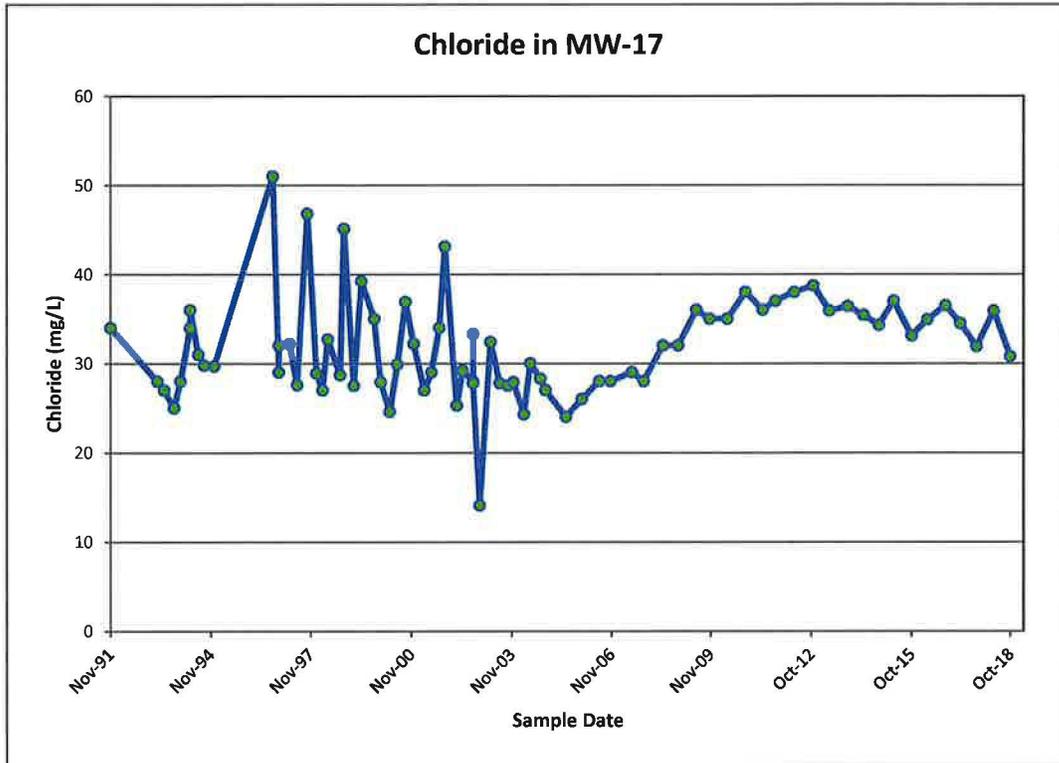
Time concentration plots for MW-15



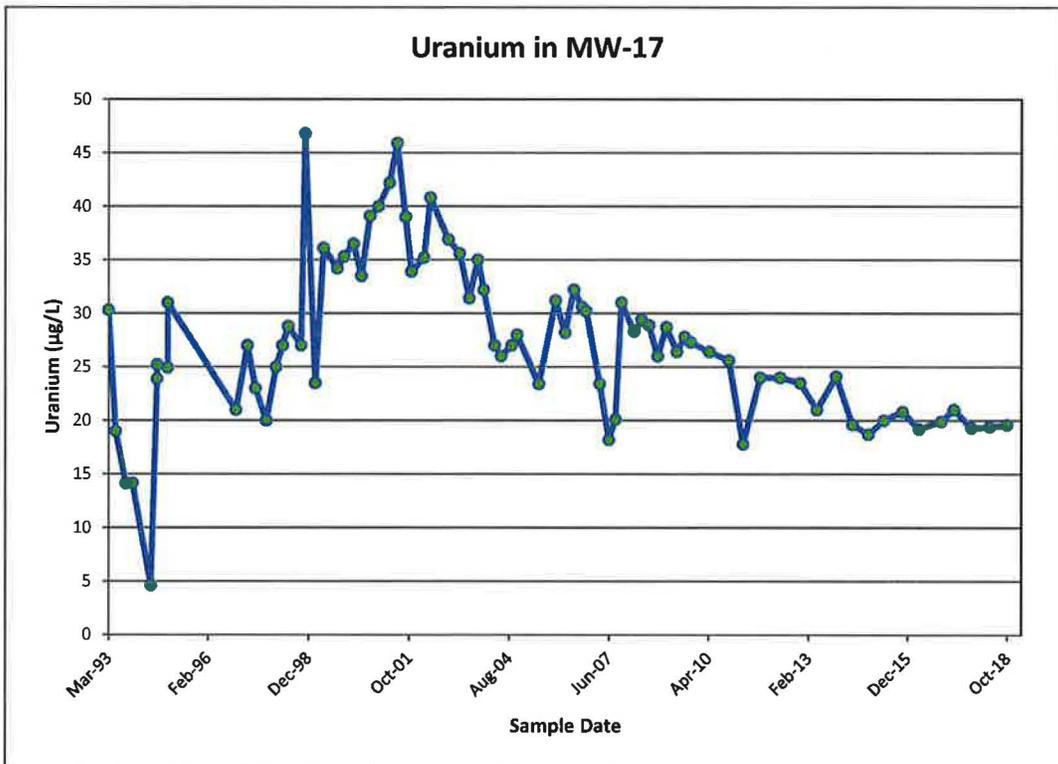
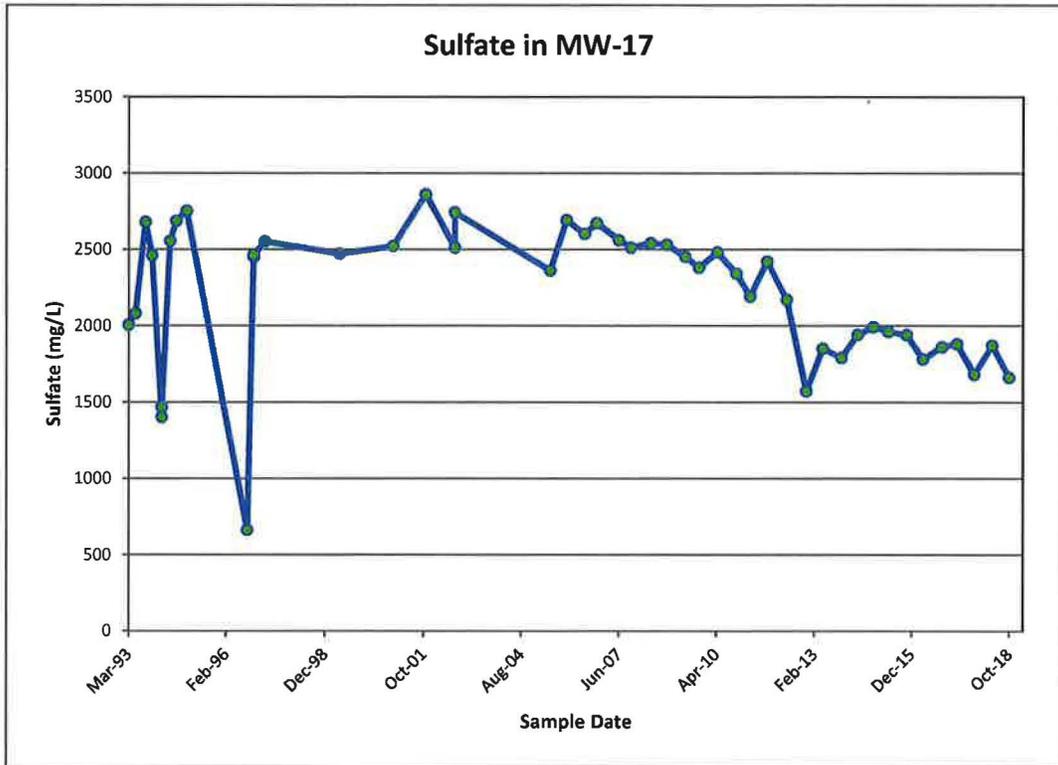
Time concentration plots for MW-15



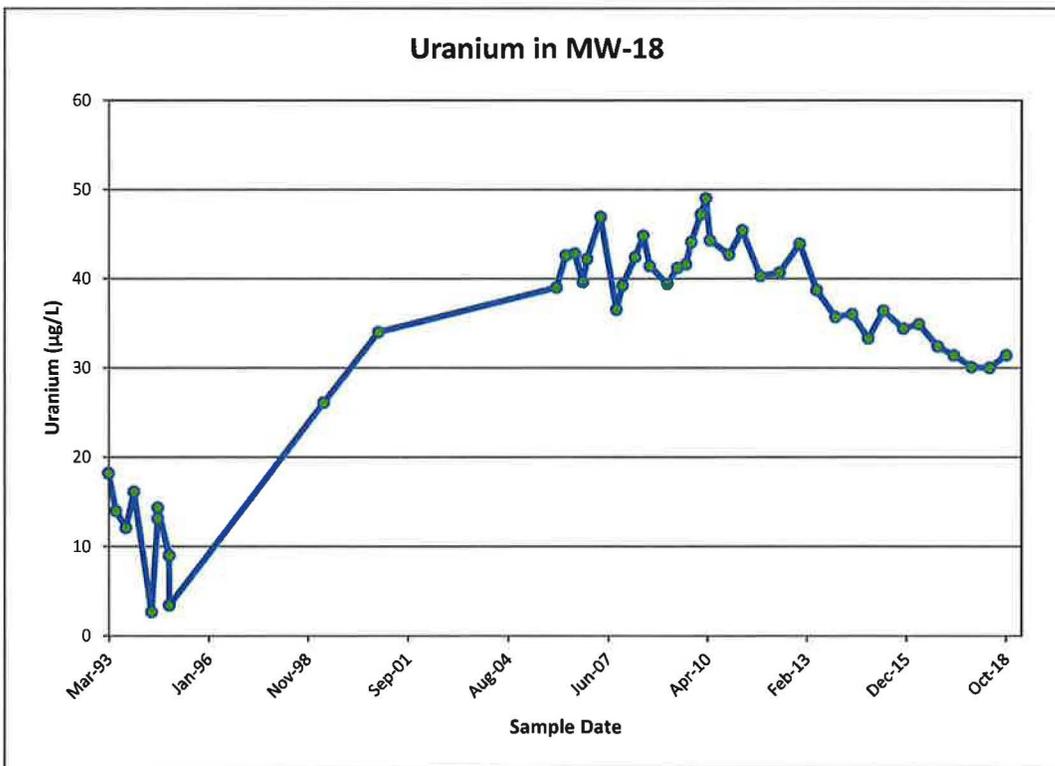
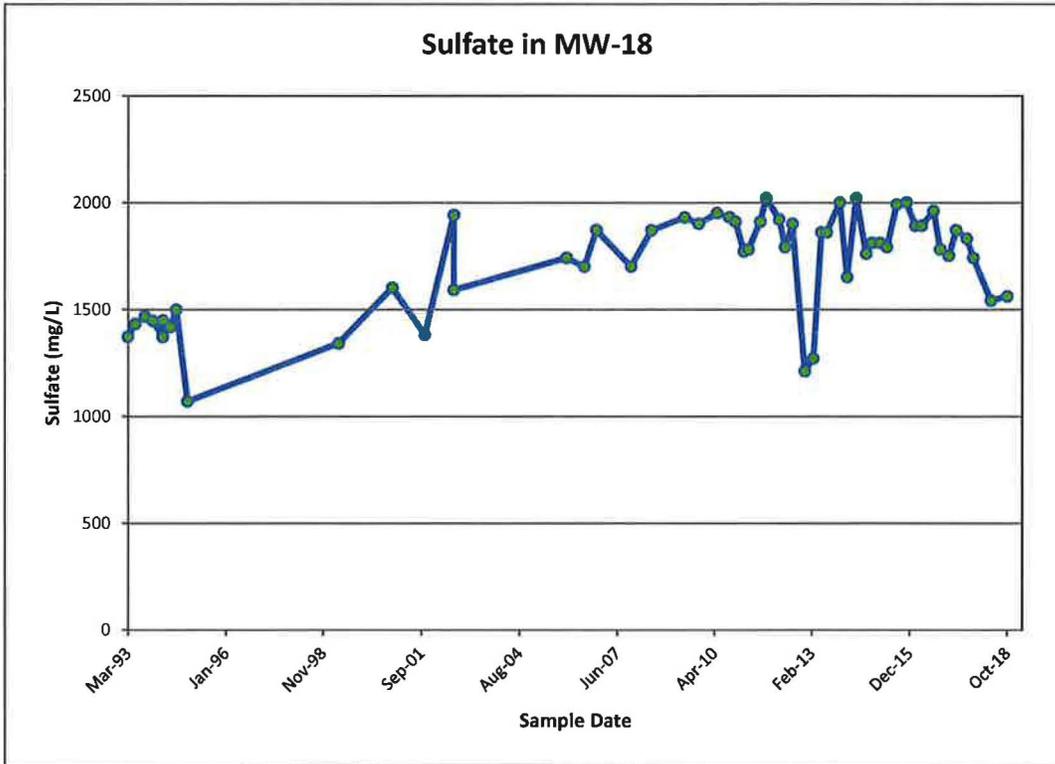
Time concentration plots for MW-17



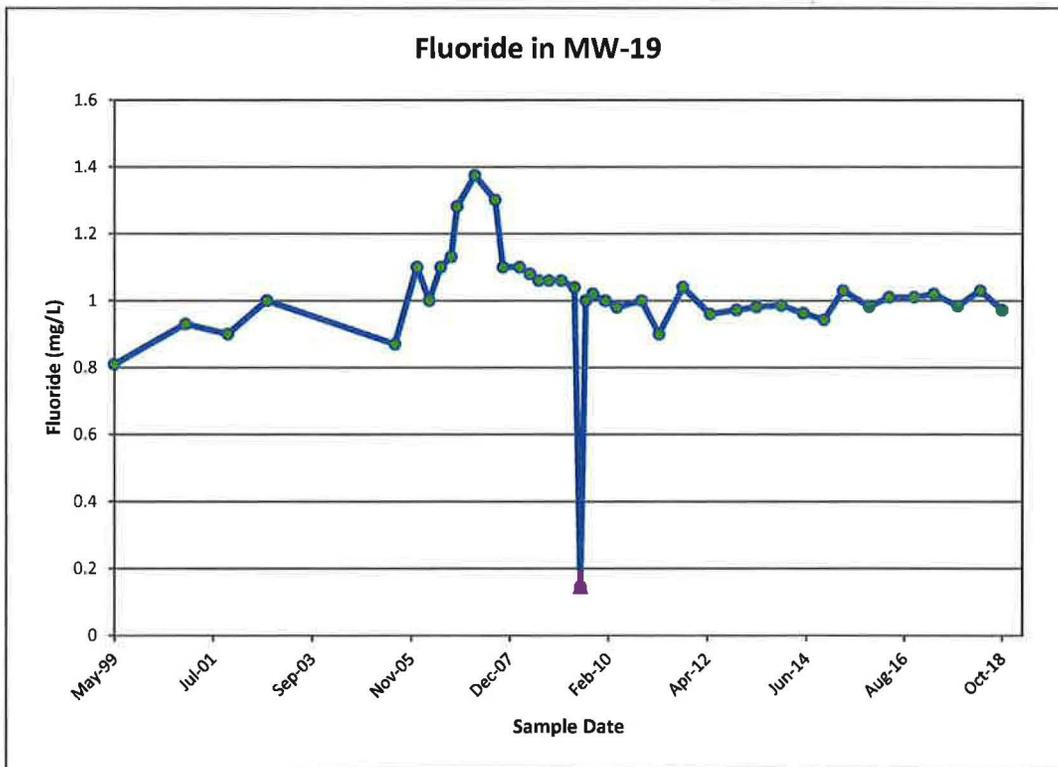
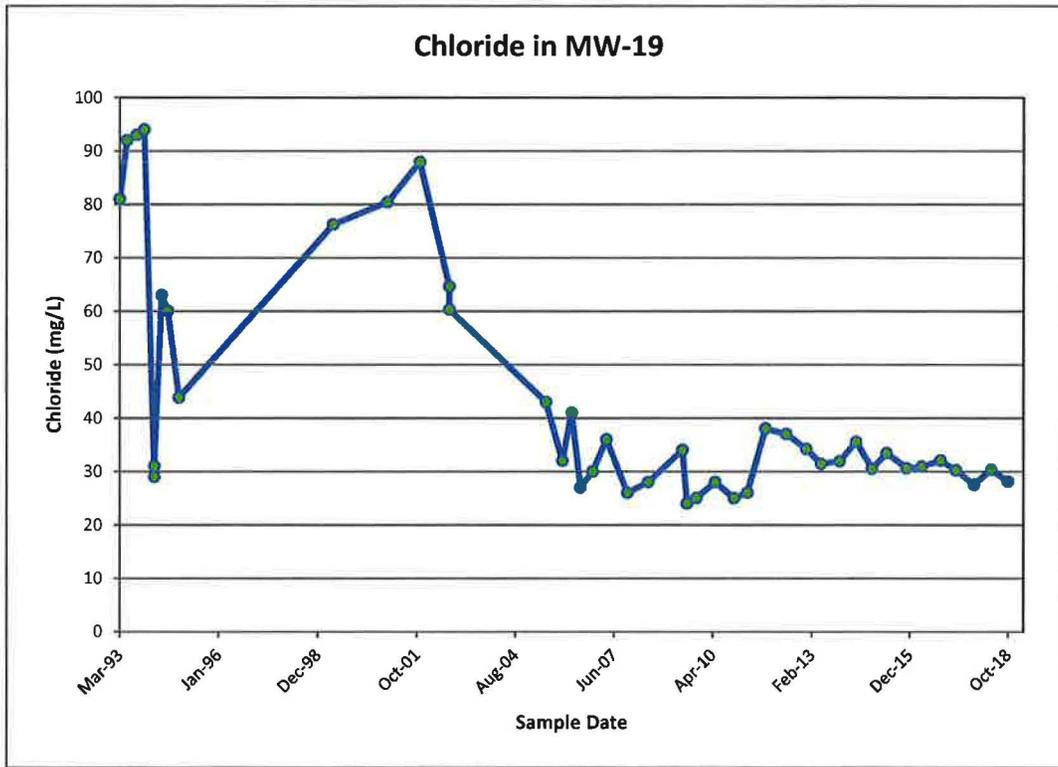
Time concentration plots for MW-17



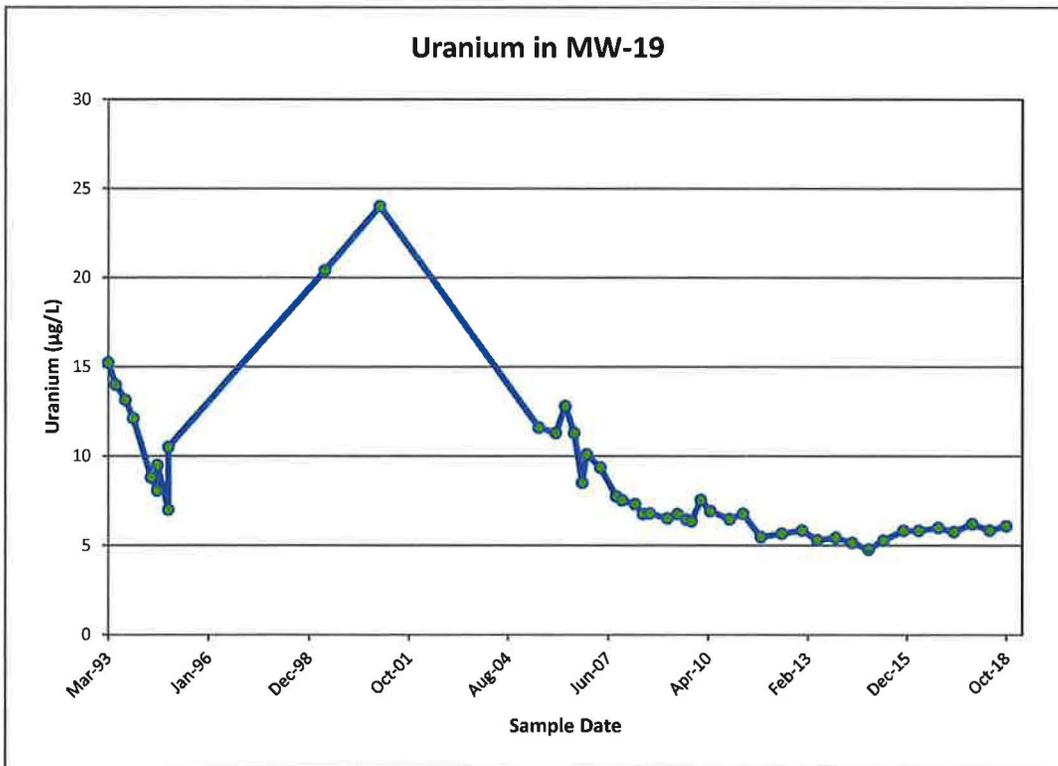
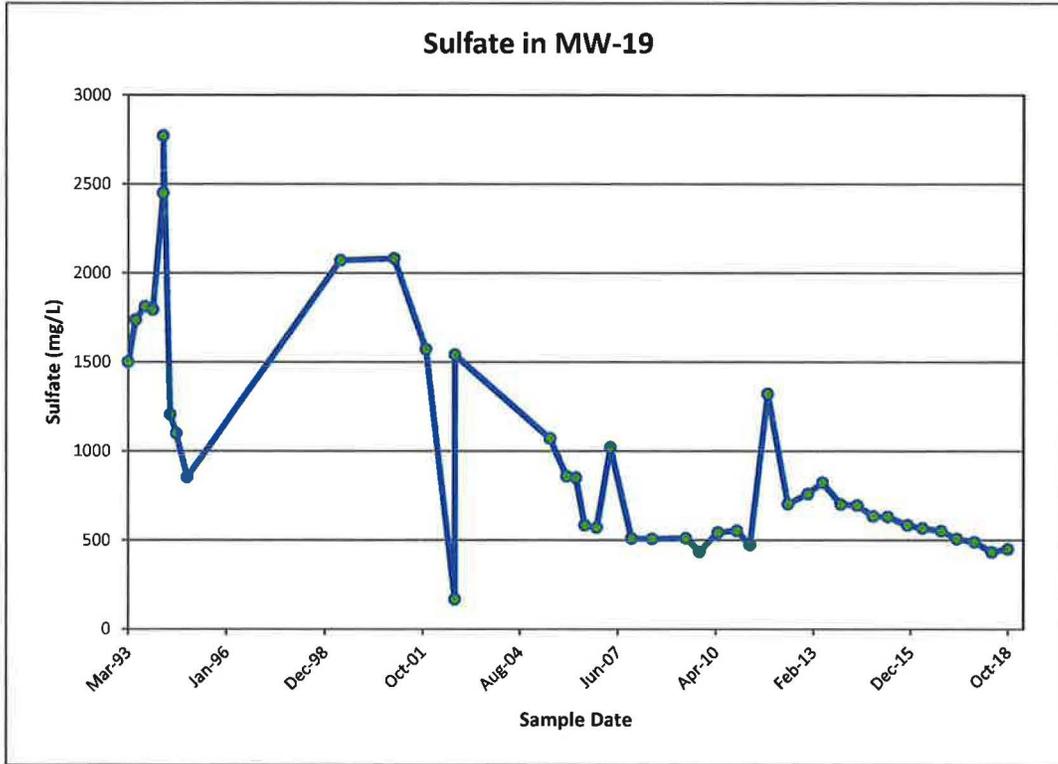
Time concentration plots for MW-18



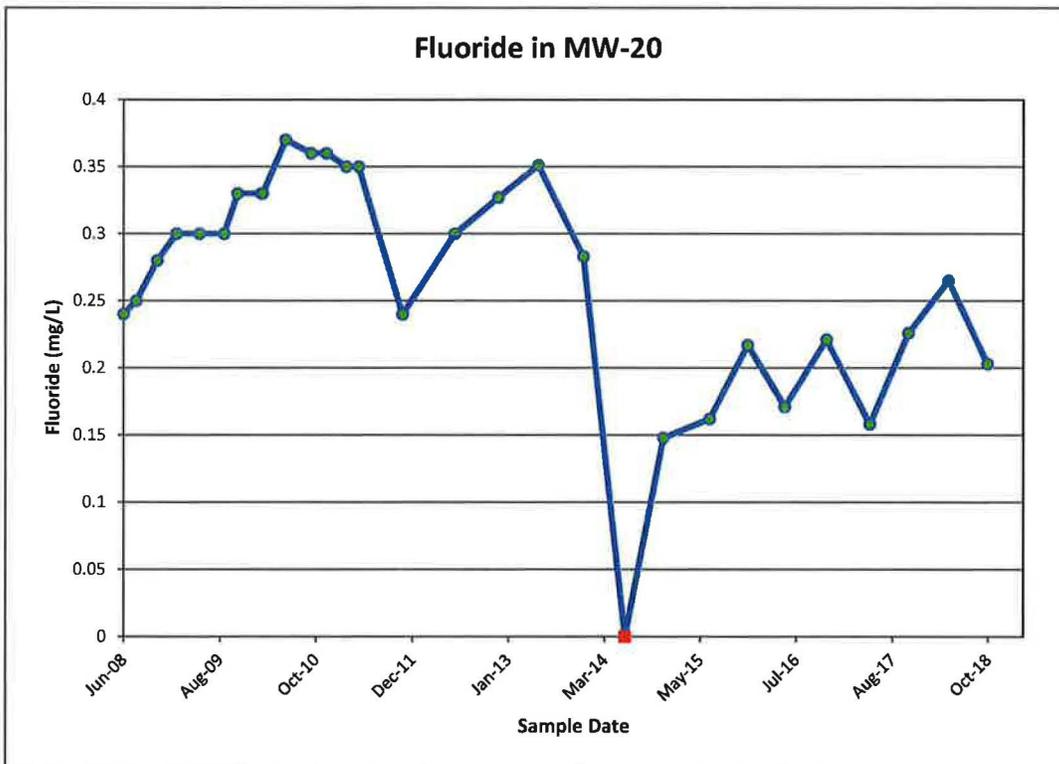
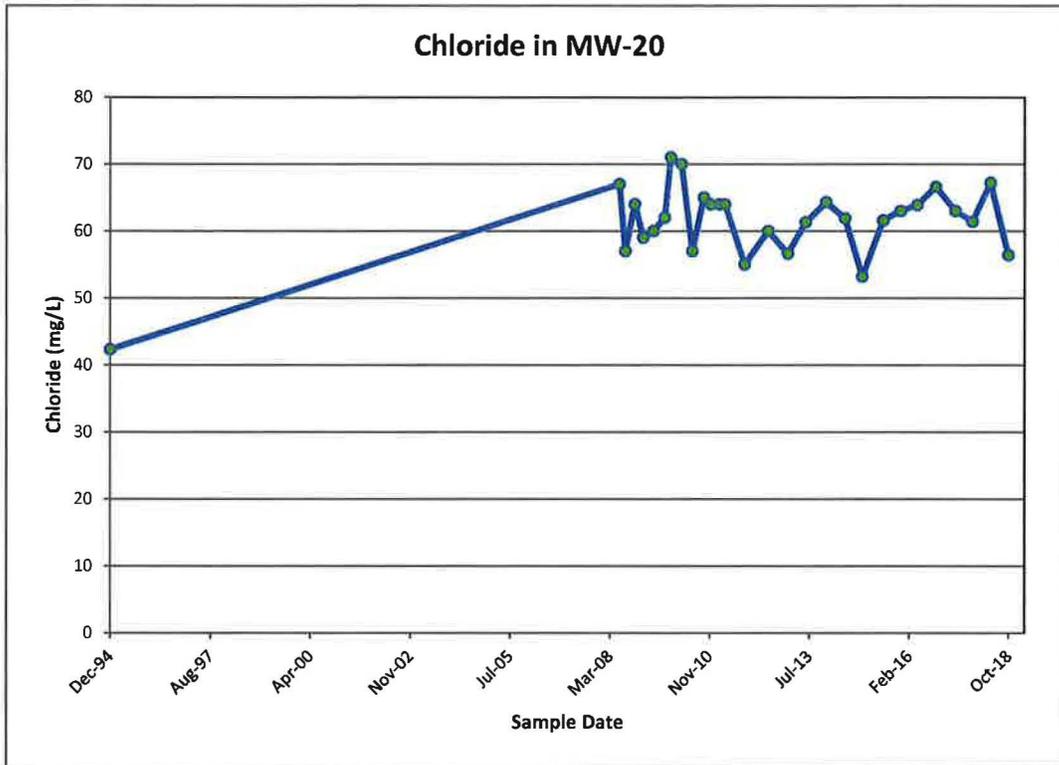
Time concentration plots for MW-19



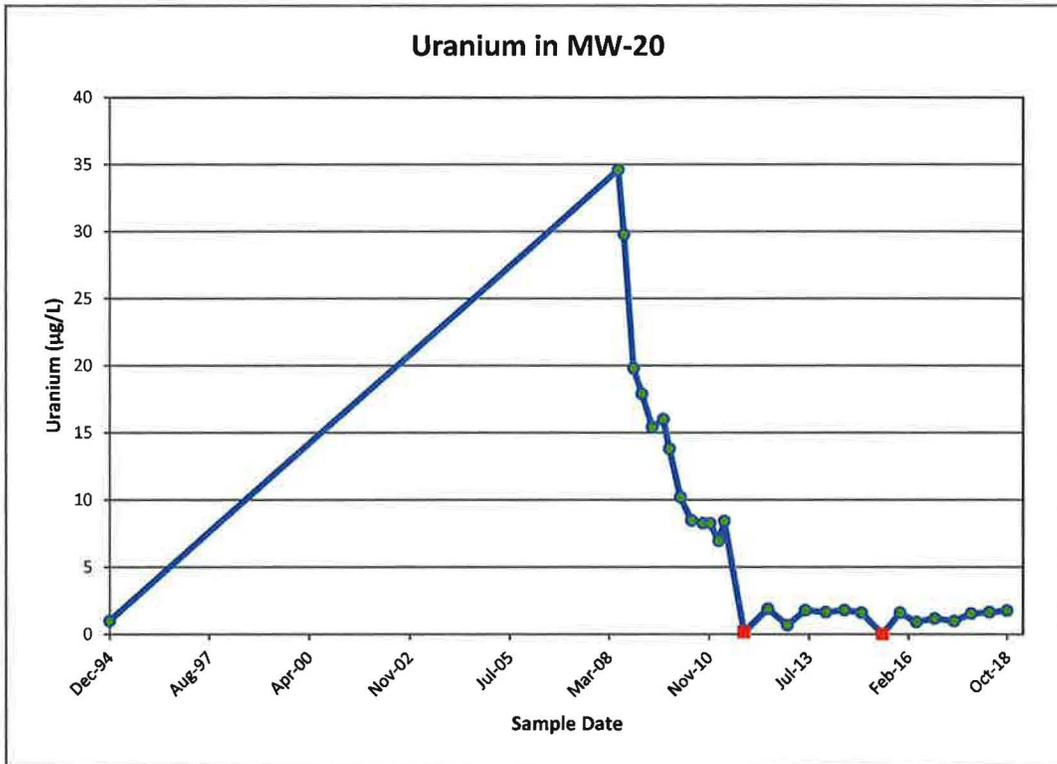
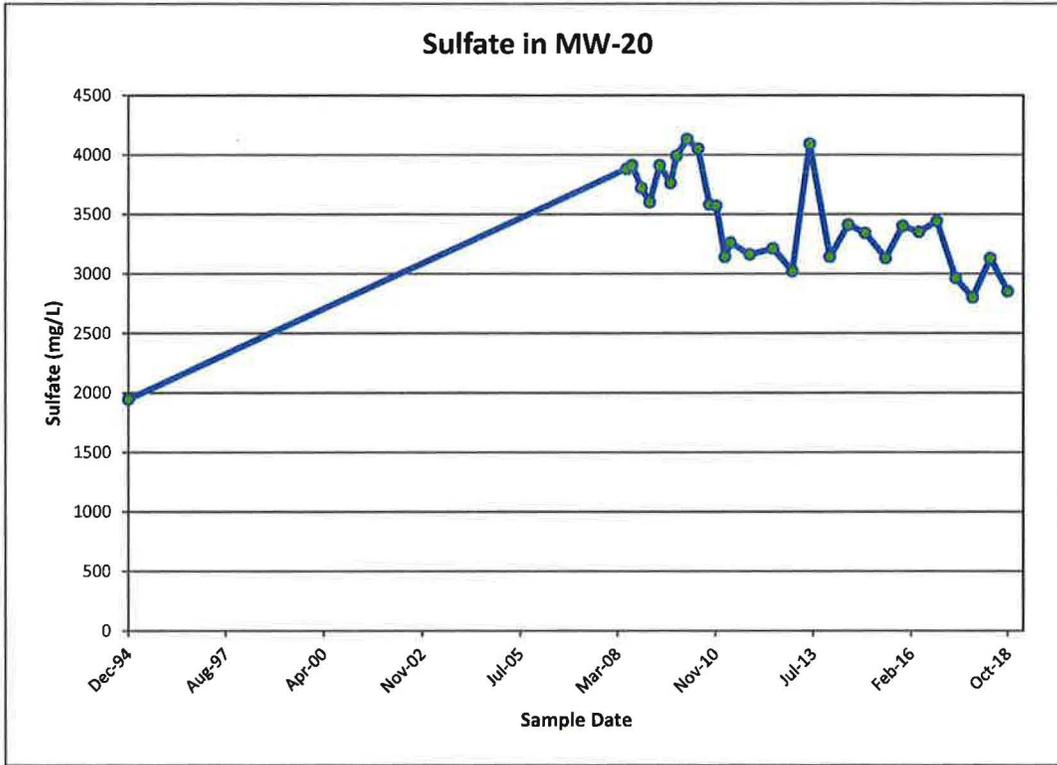
Time concentration plots for MW-19



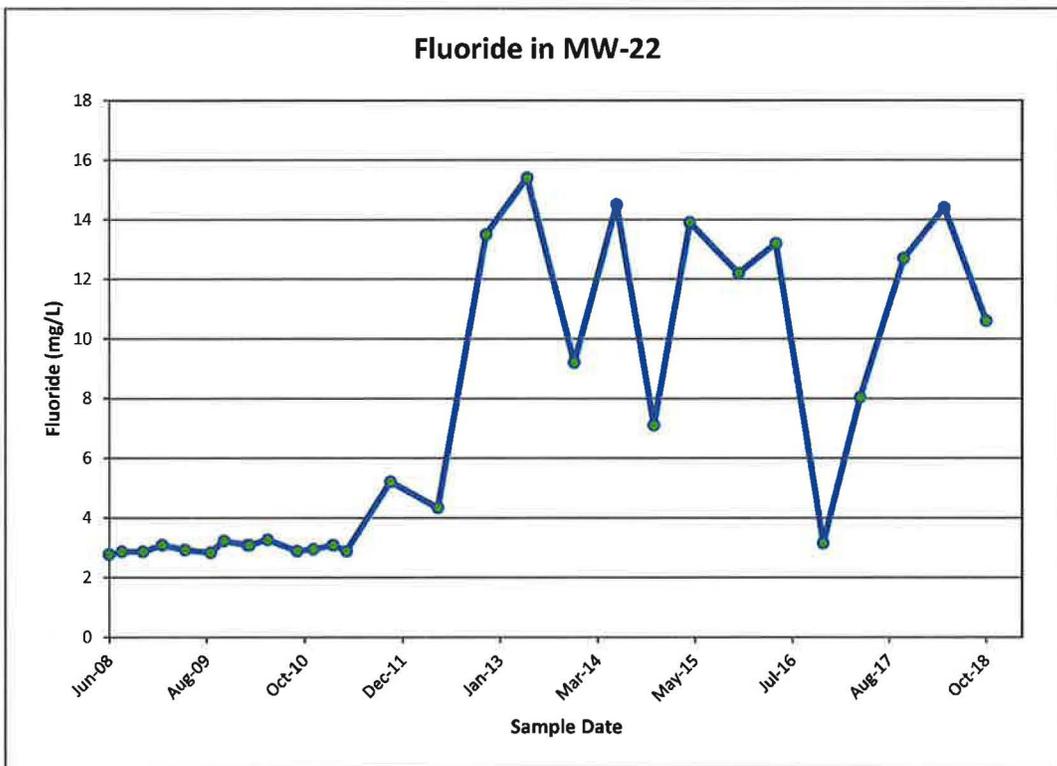
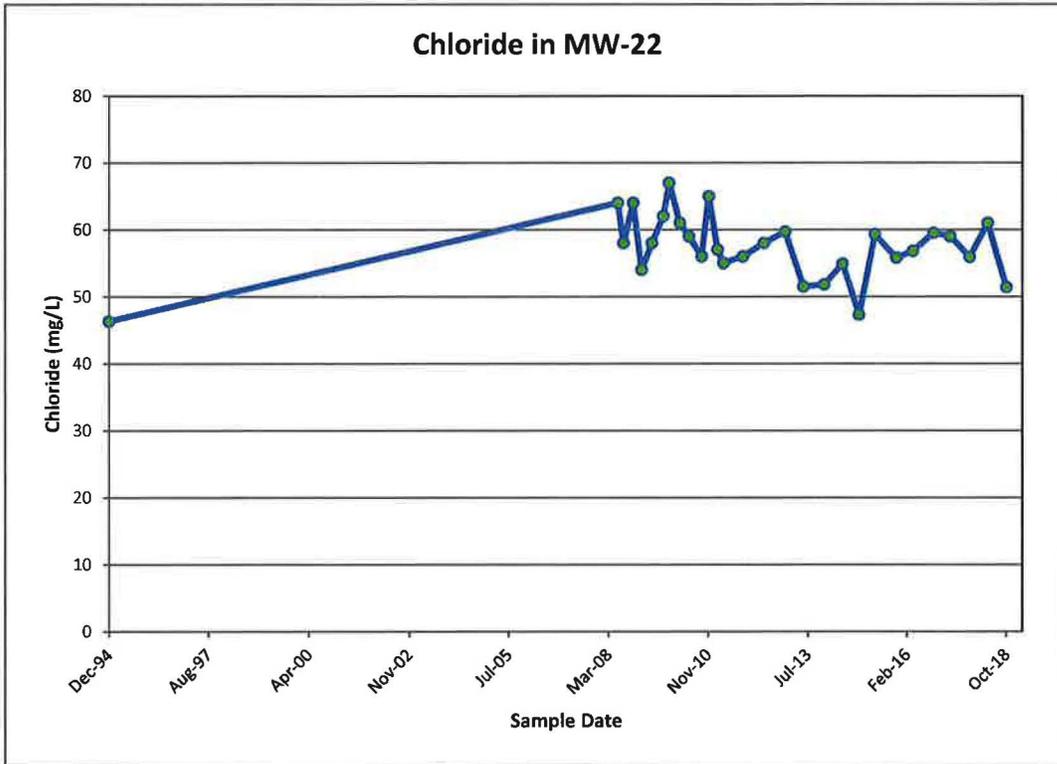
Time concentration plots for MW-20



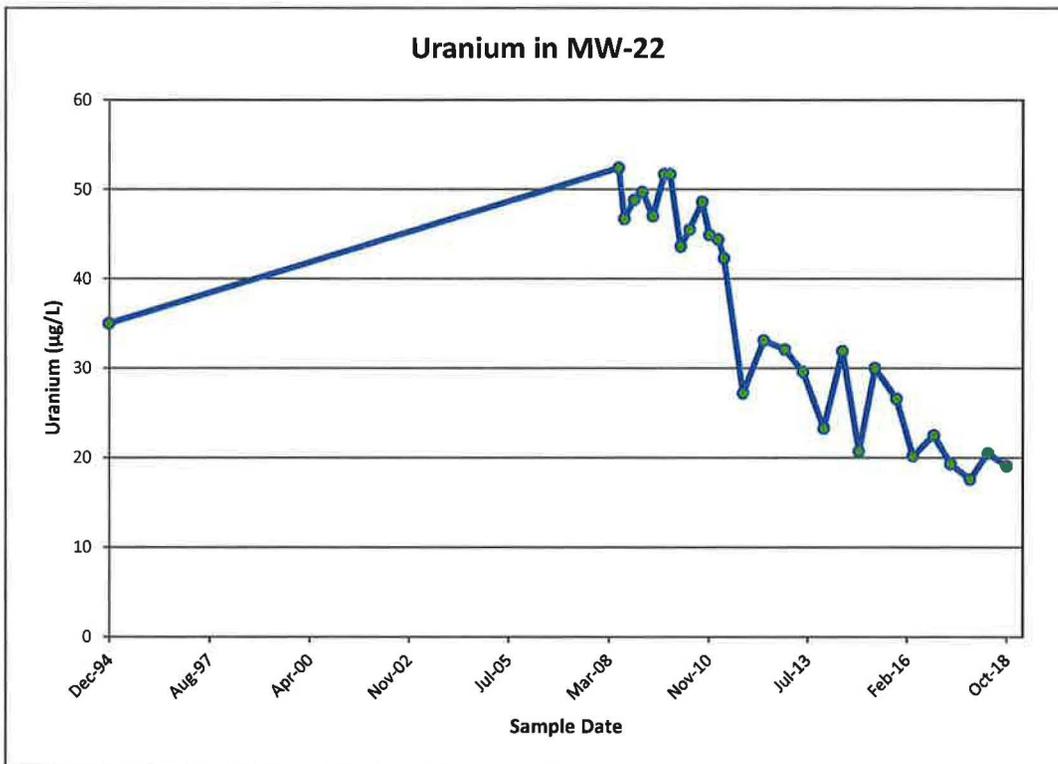
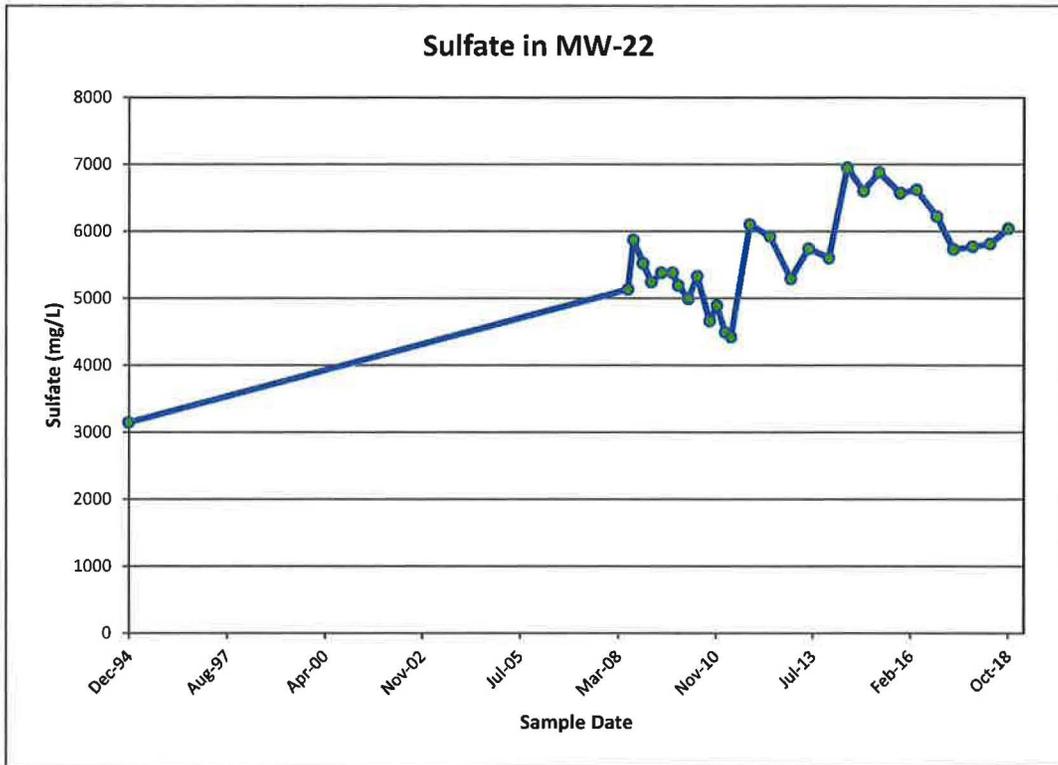
Time concentration plots for MW-20



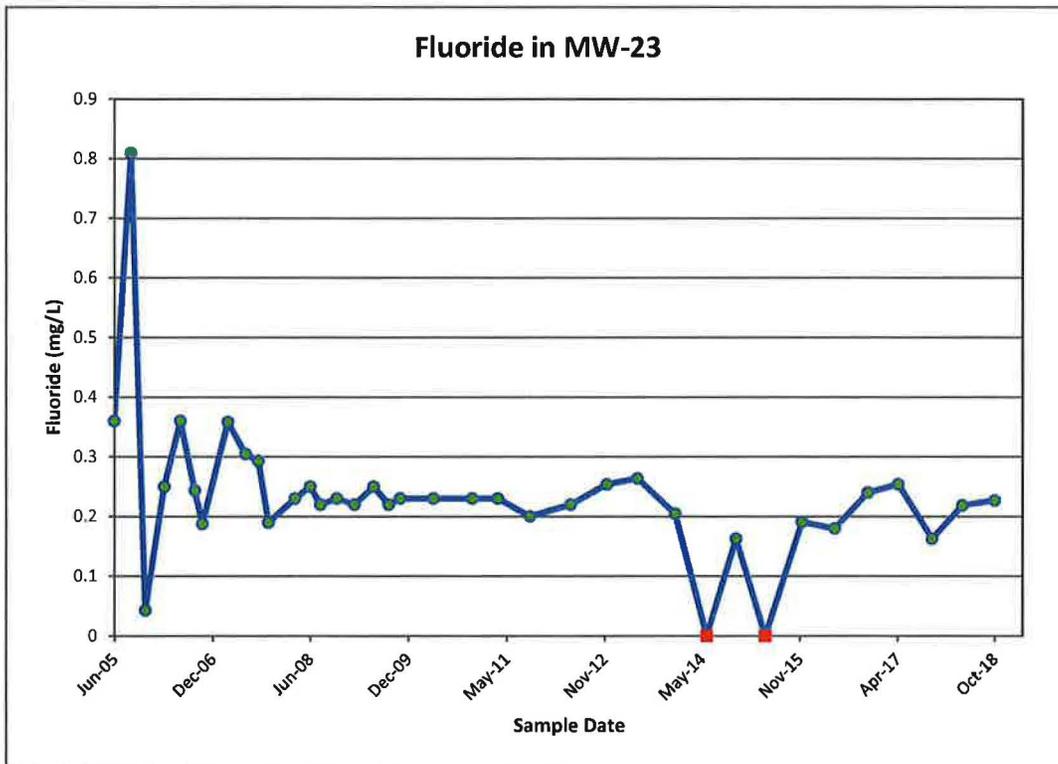
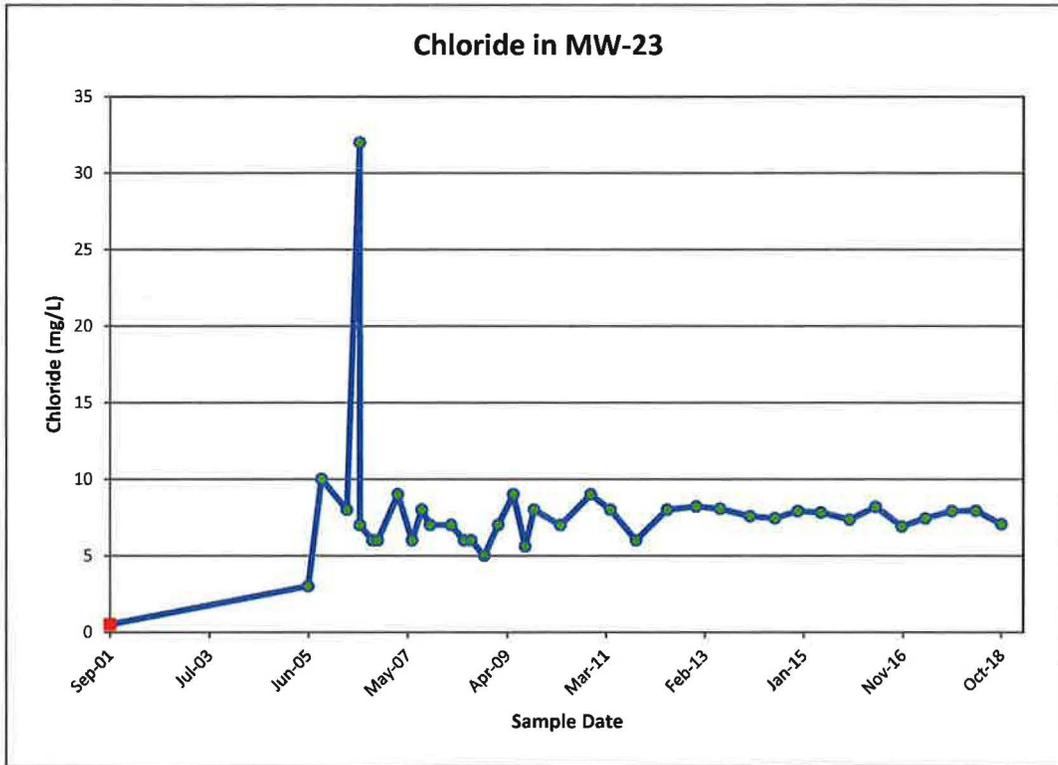
Time concentration plots for MW-22



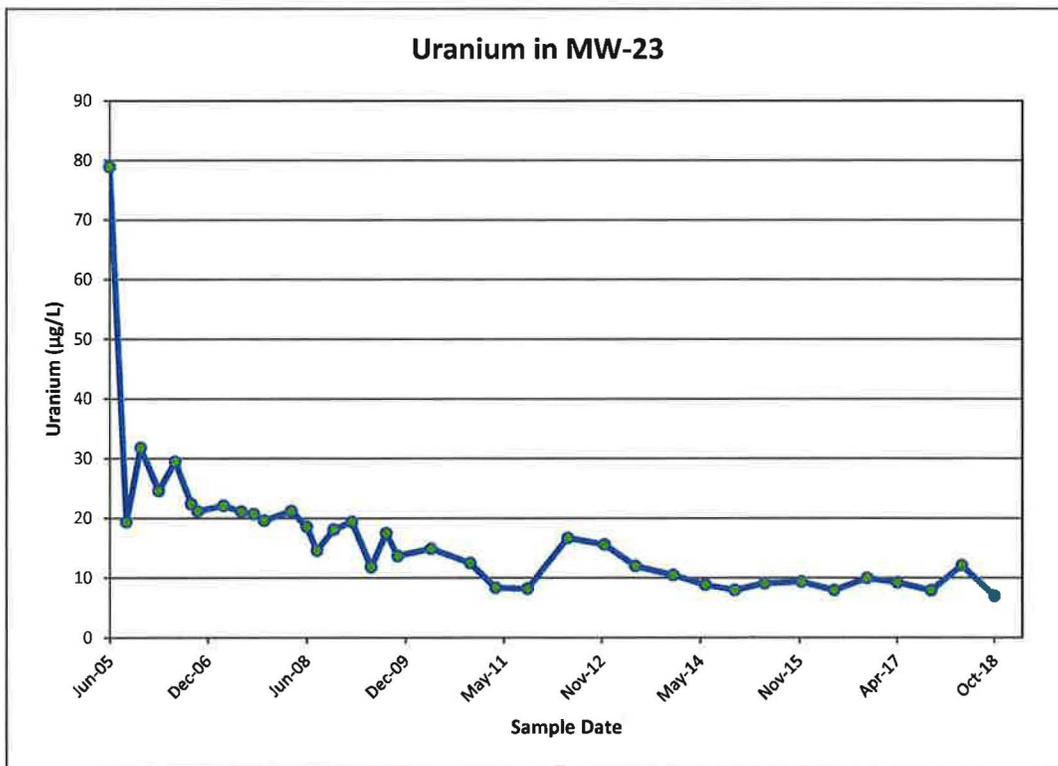
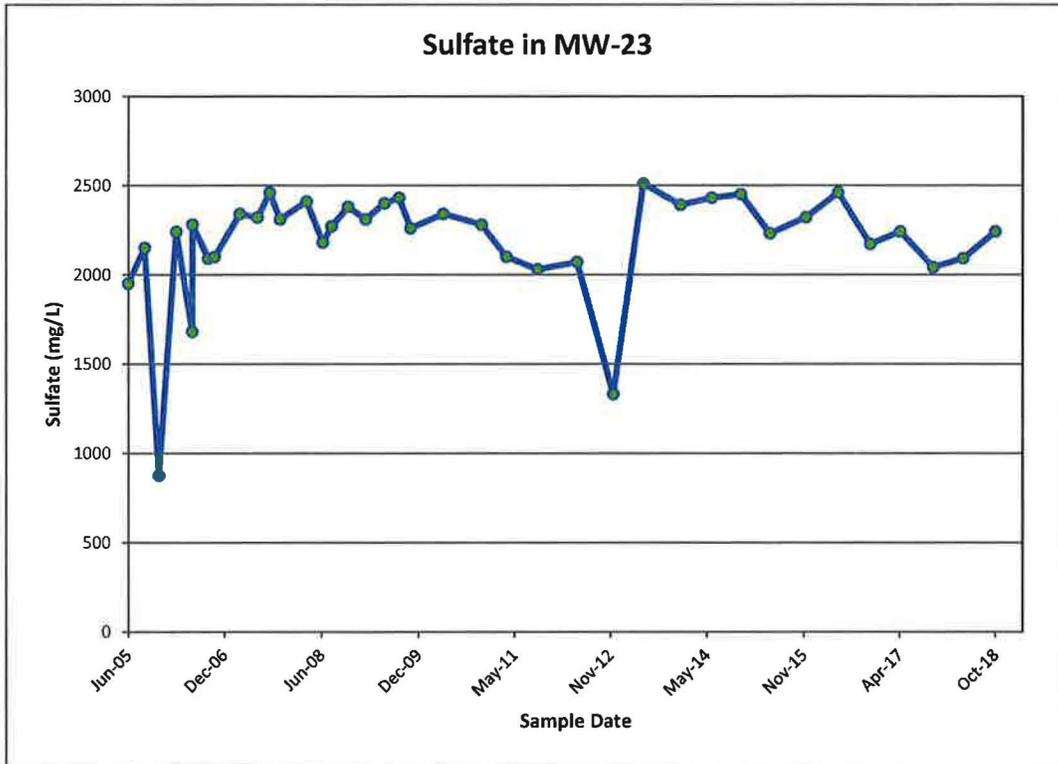
Time concentration plots for MW-22



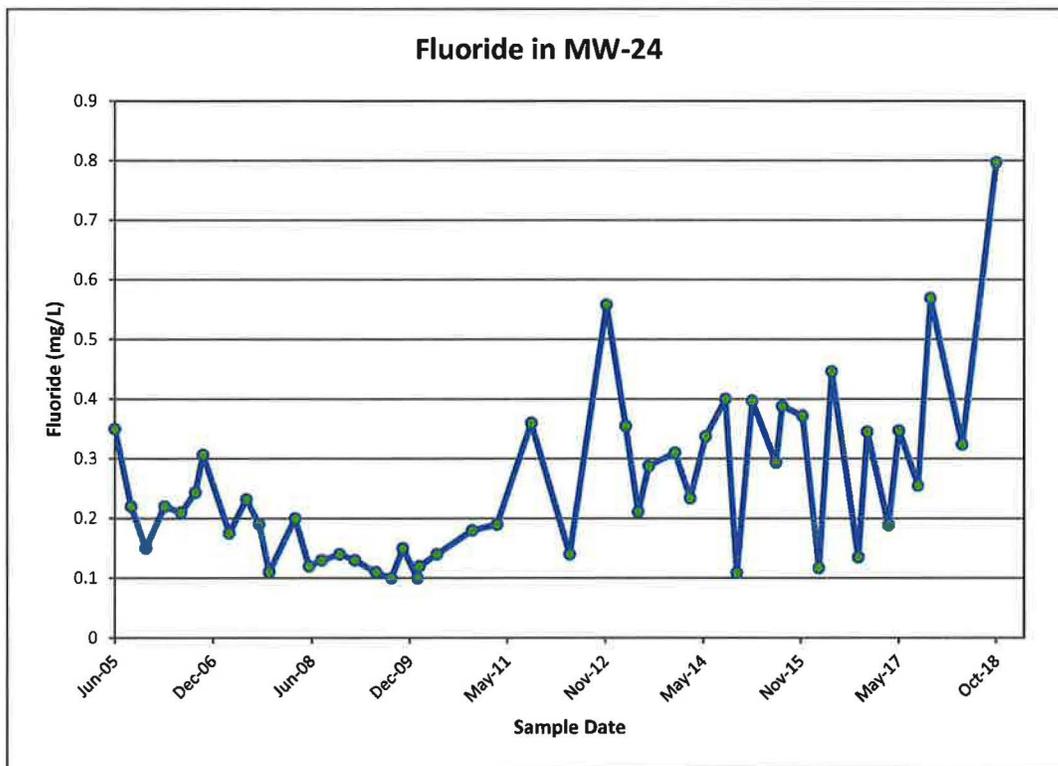
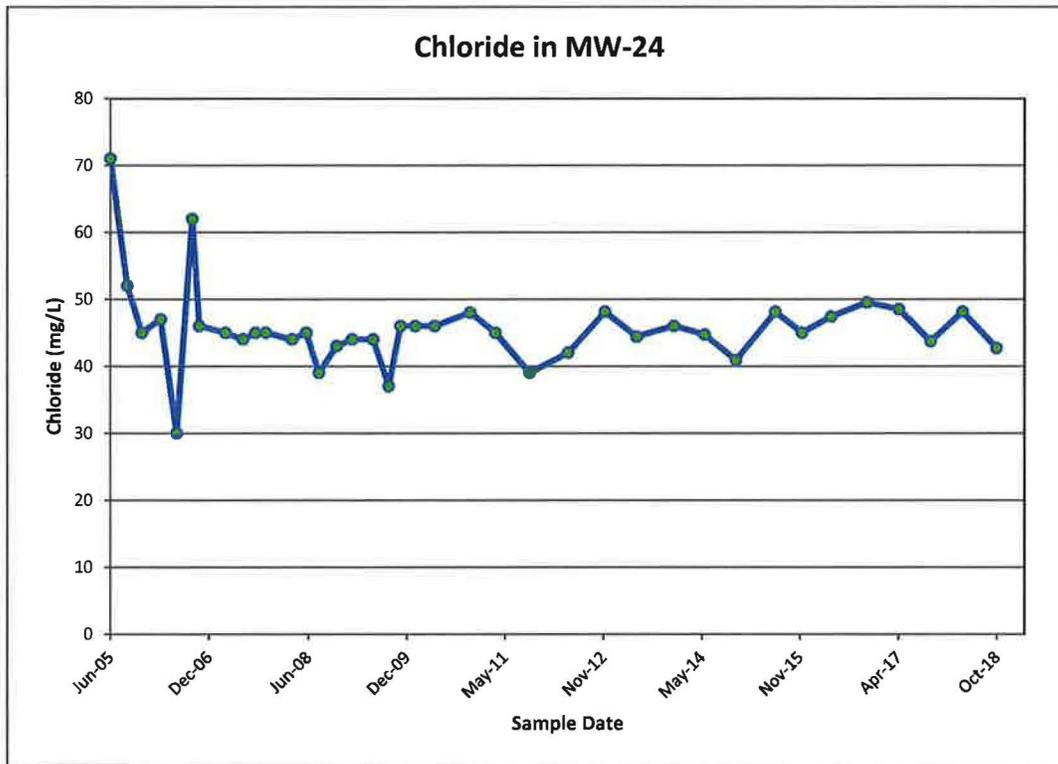
Time concentration plots for MW-23



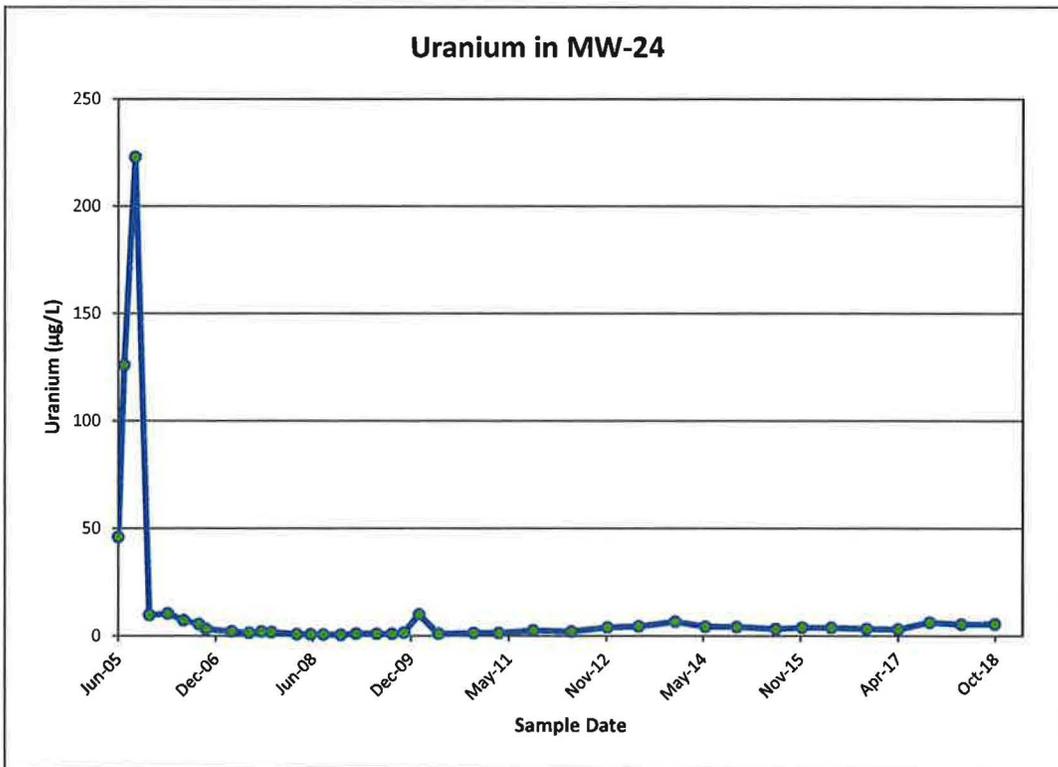
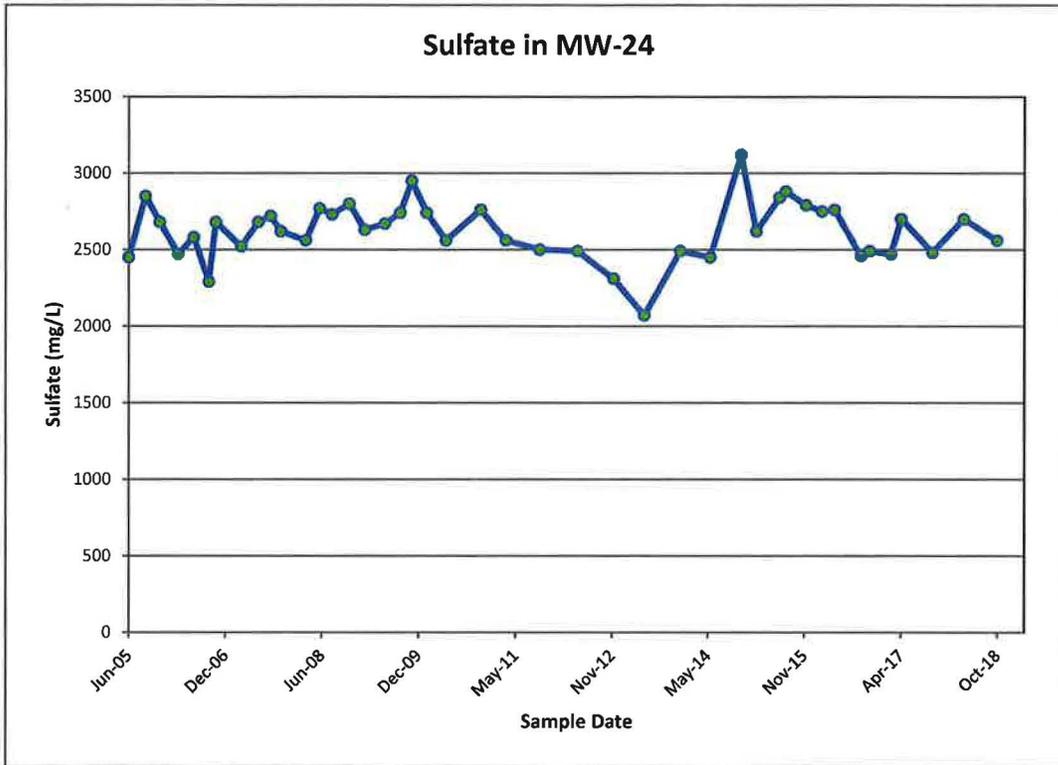
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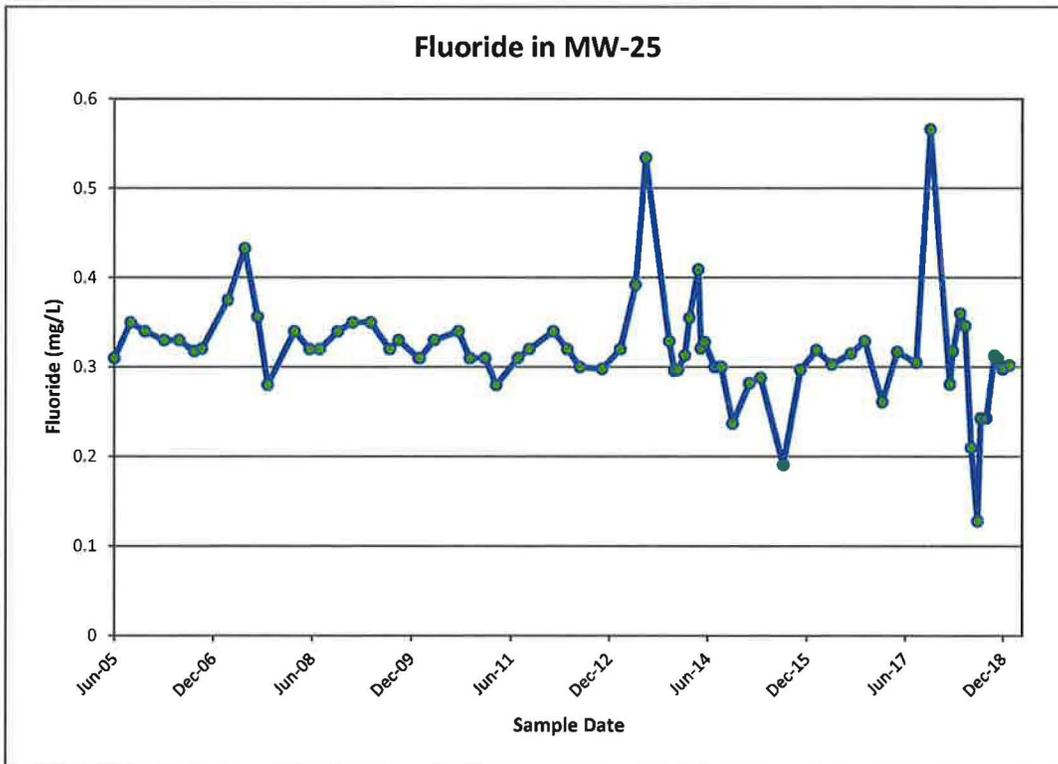
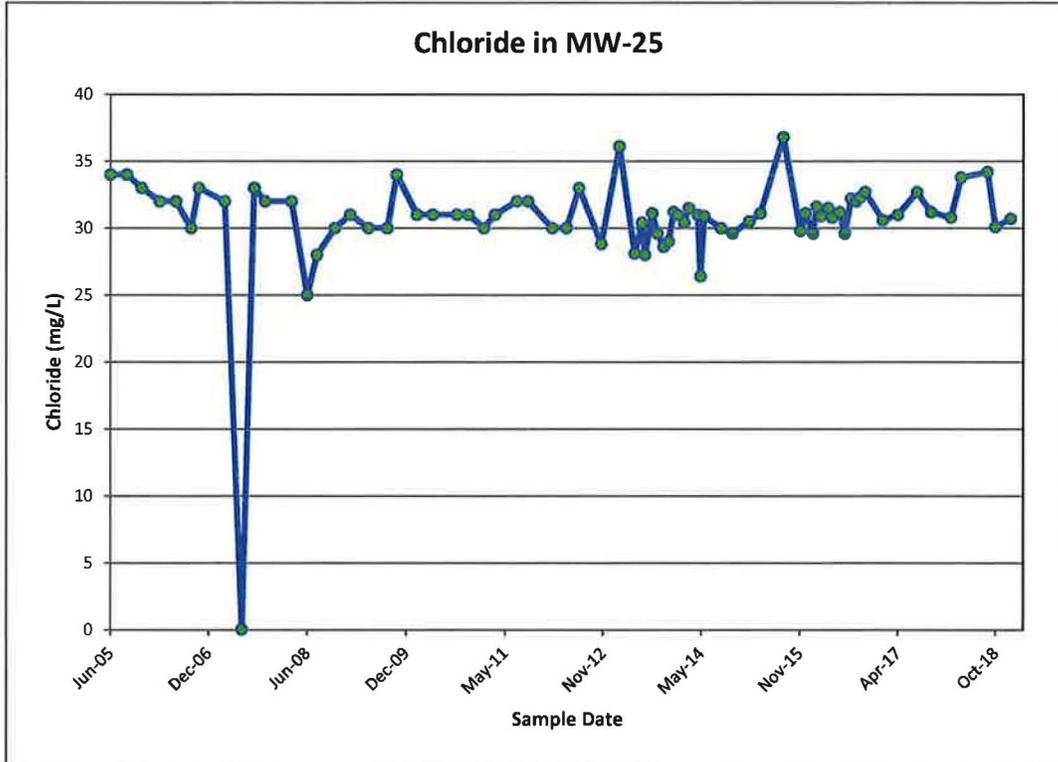
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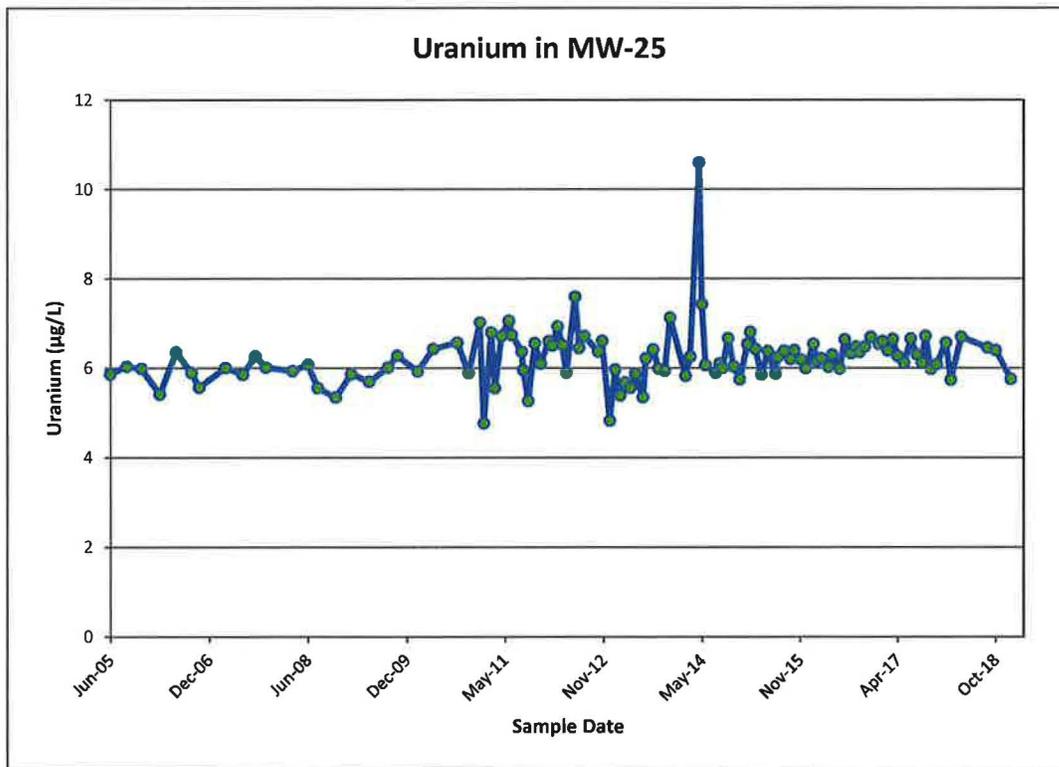
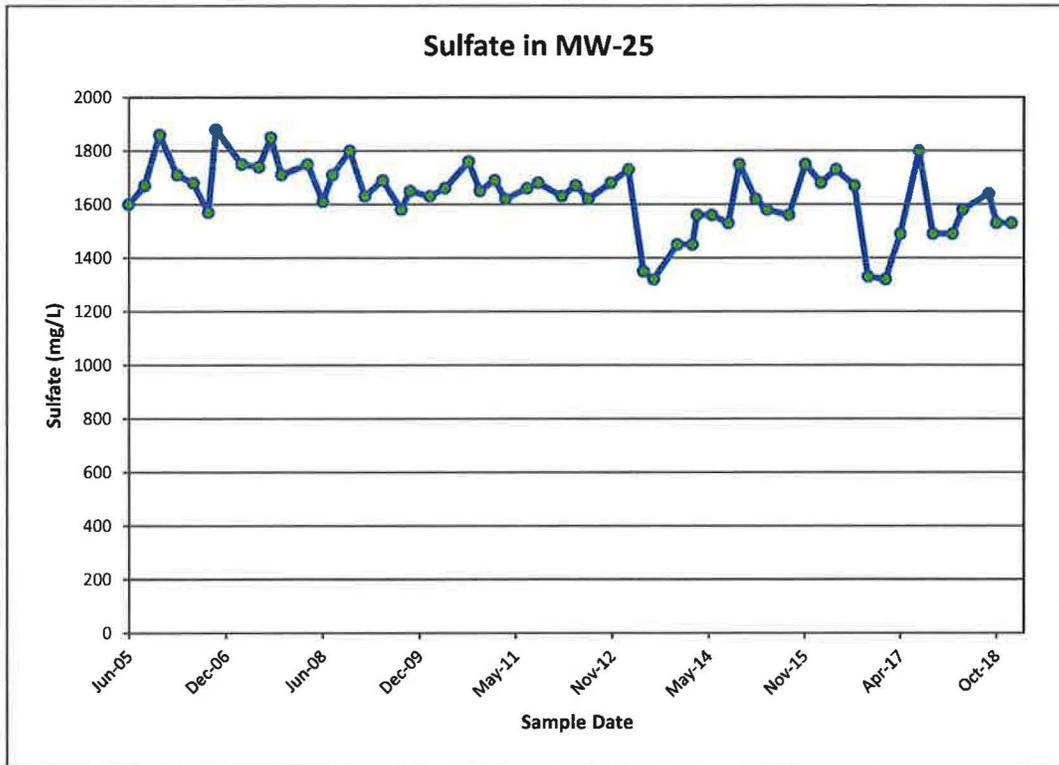
Time concentration plots for MW-24



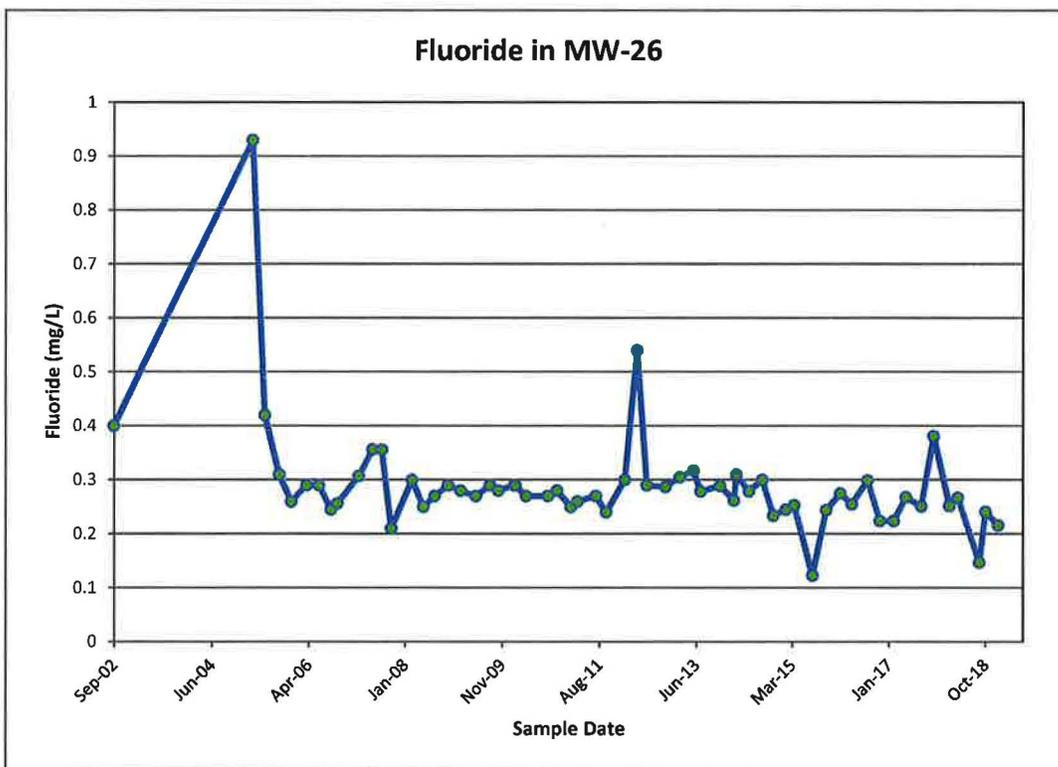
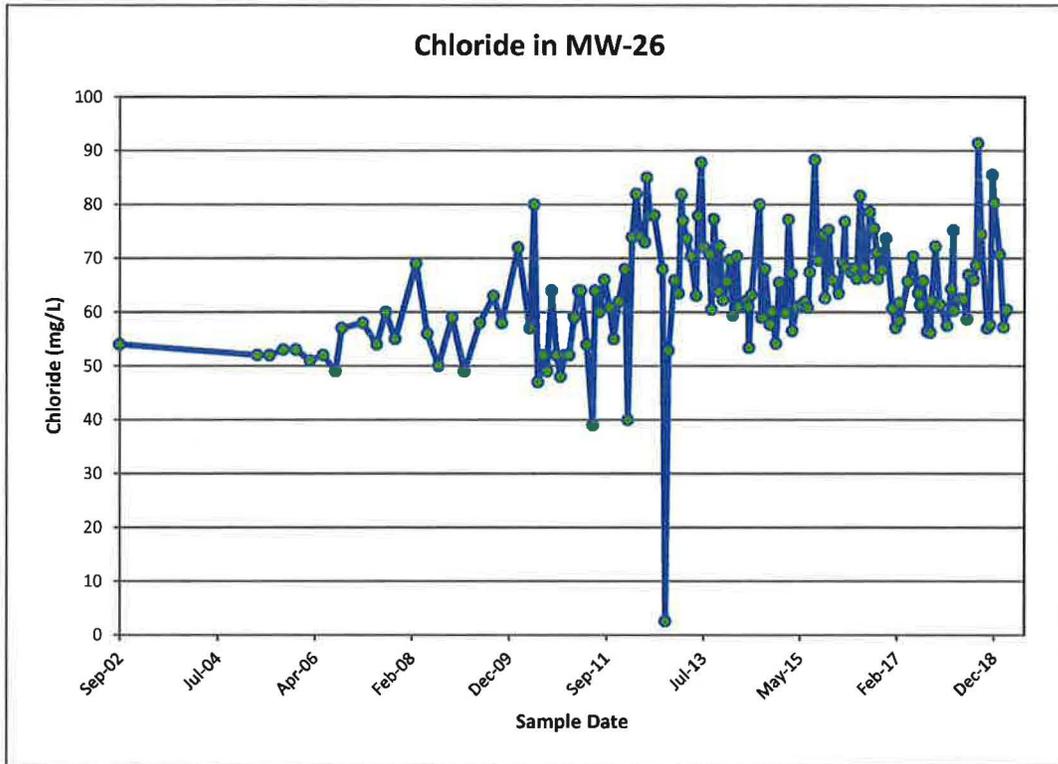
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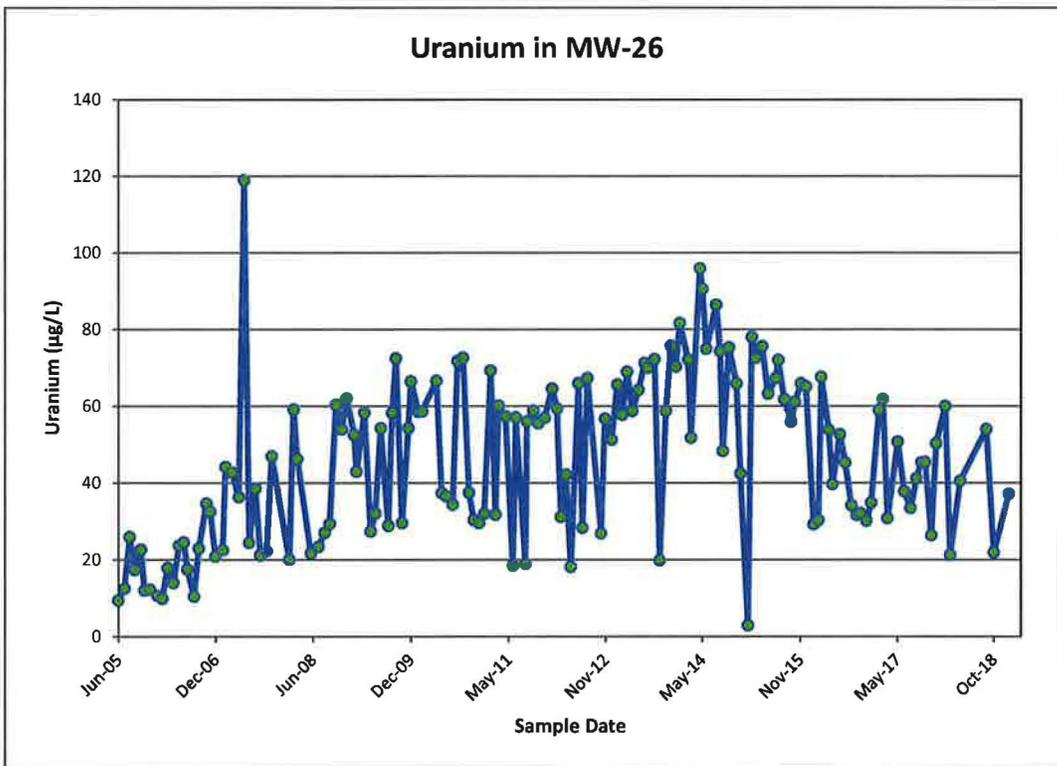
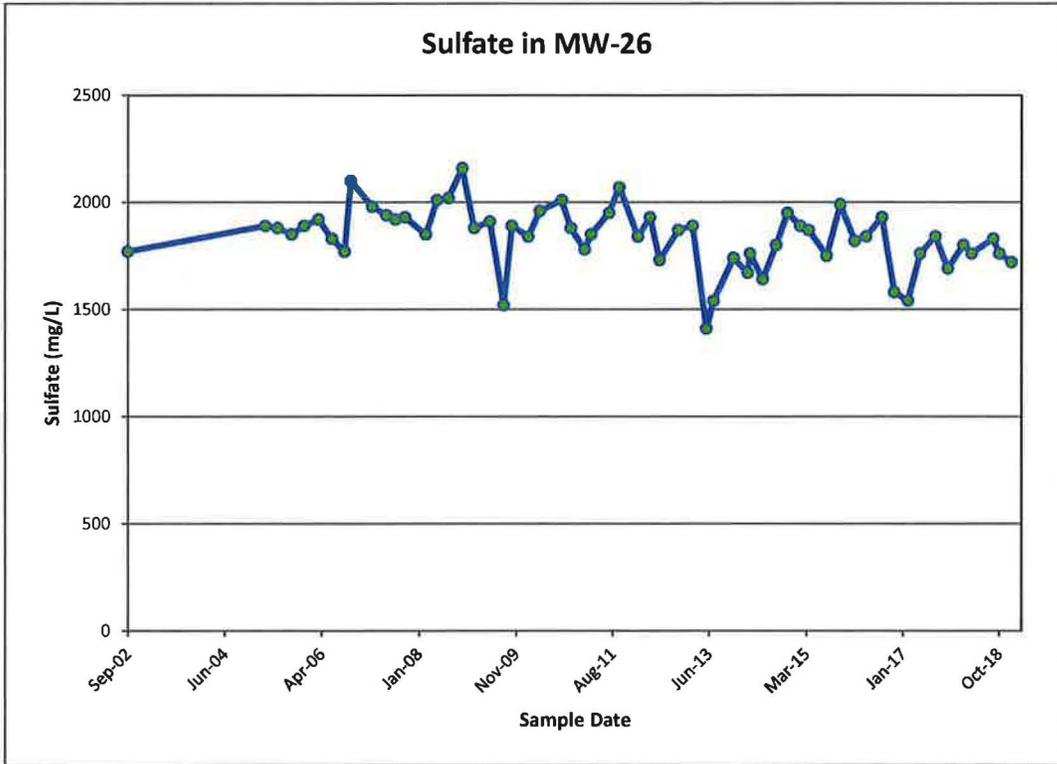
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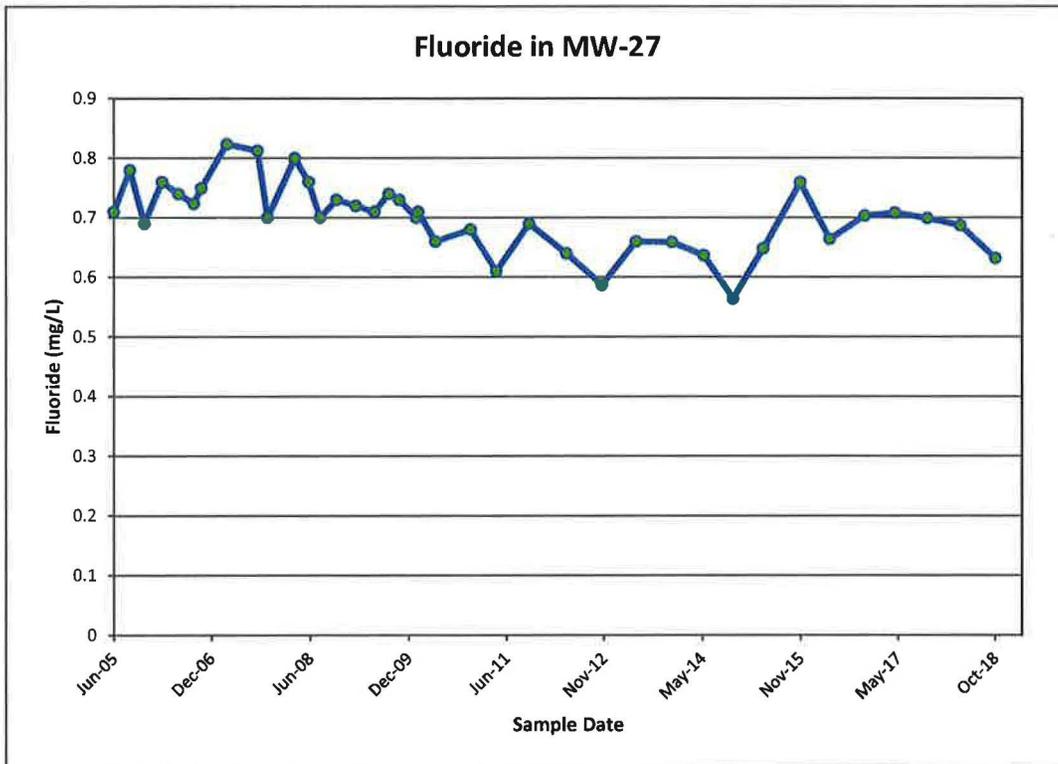
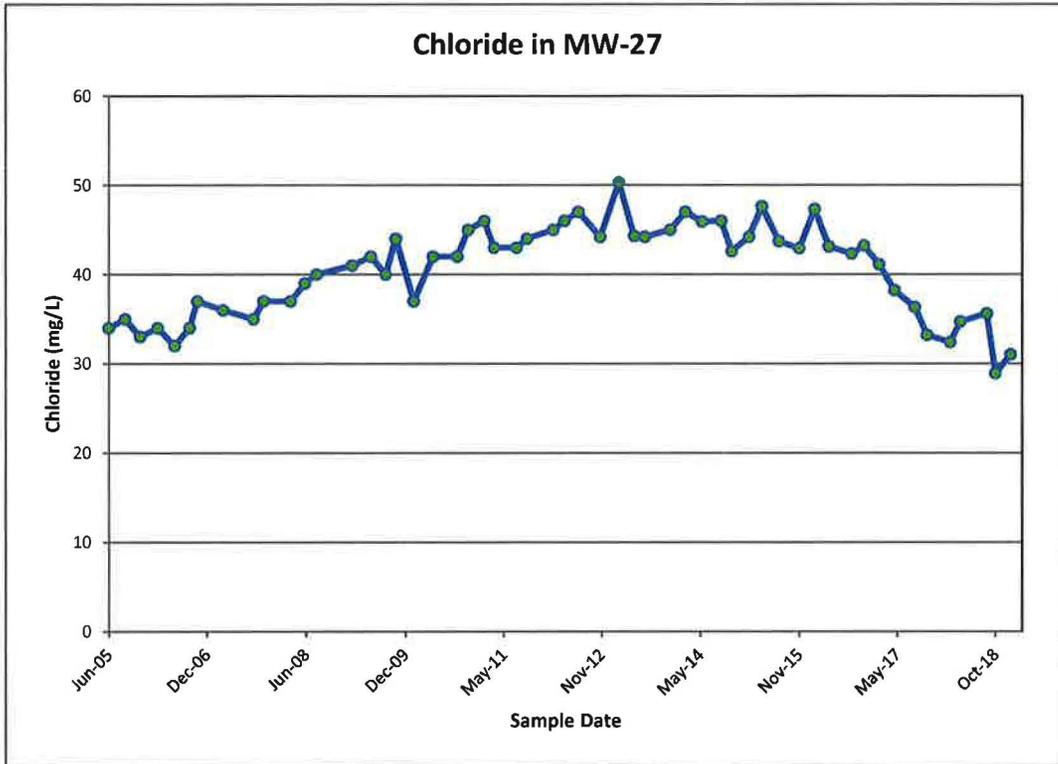
Time concentration plots for MW-26



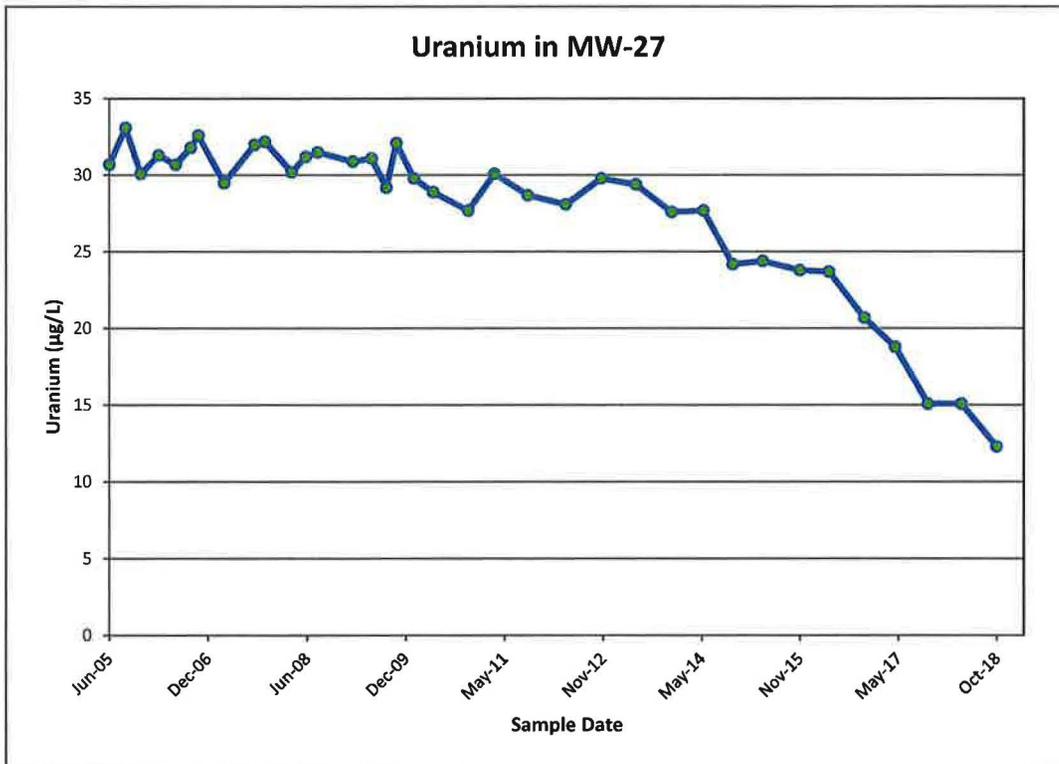
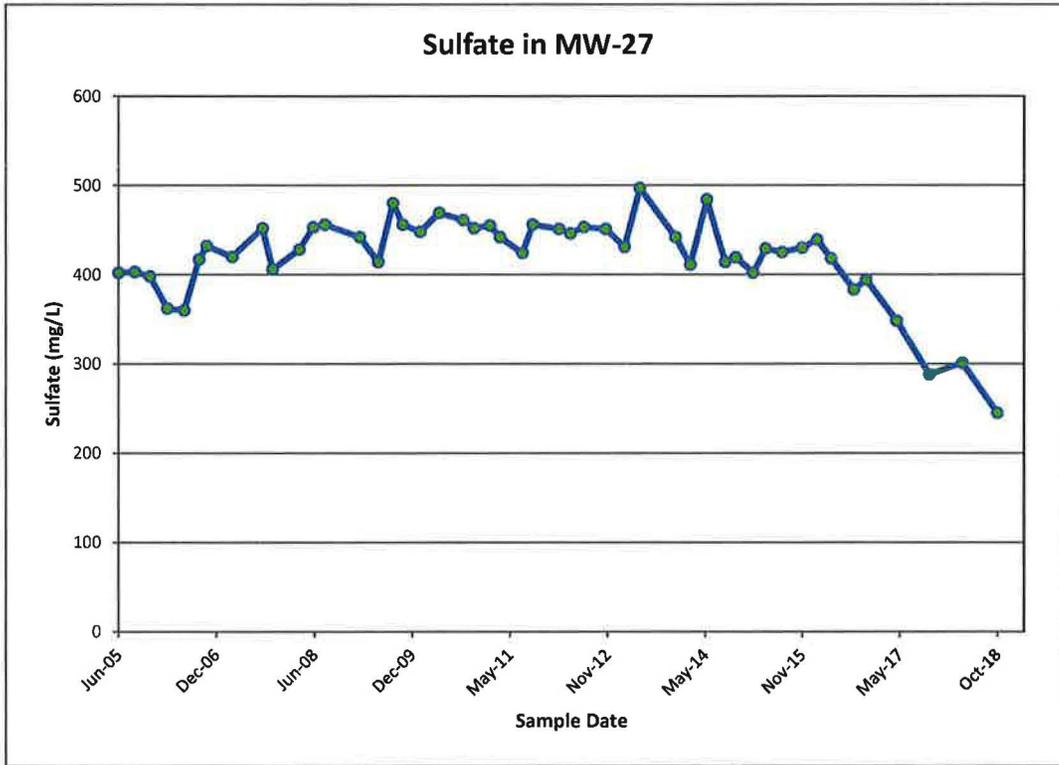
Time concentration plots for MW-26



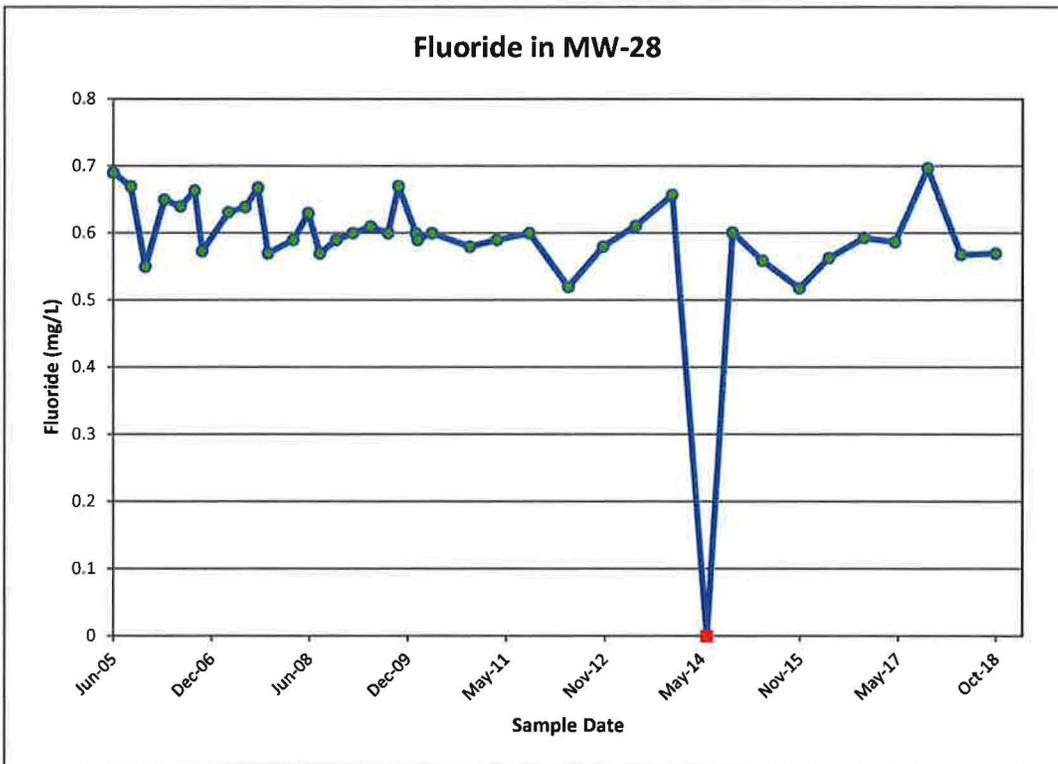
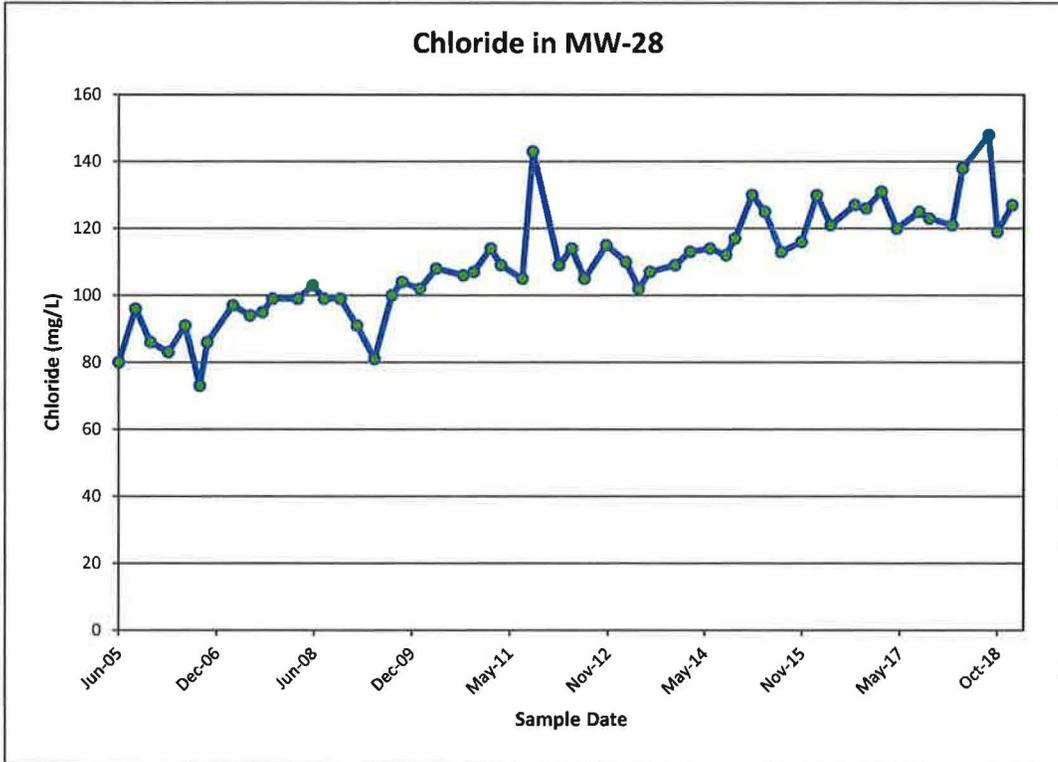
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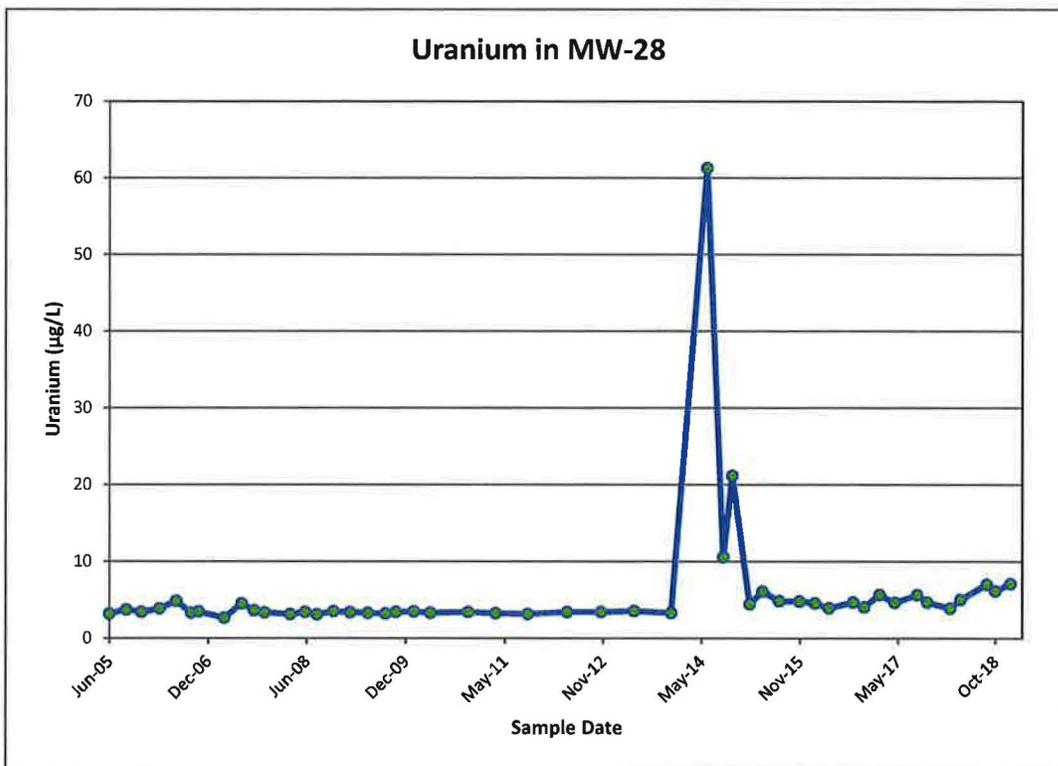
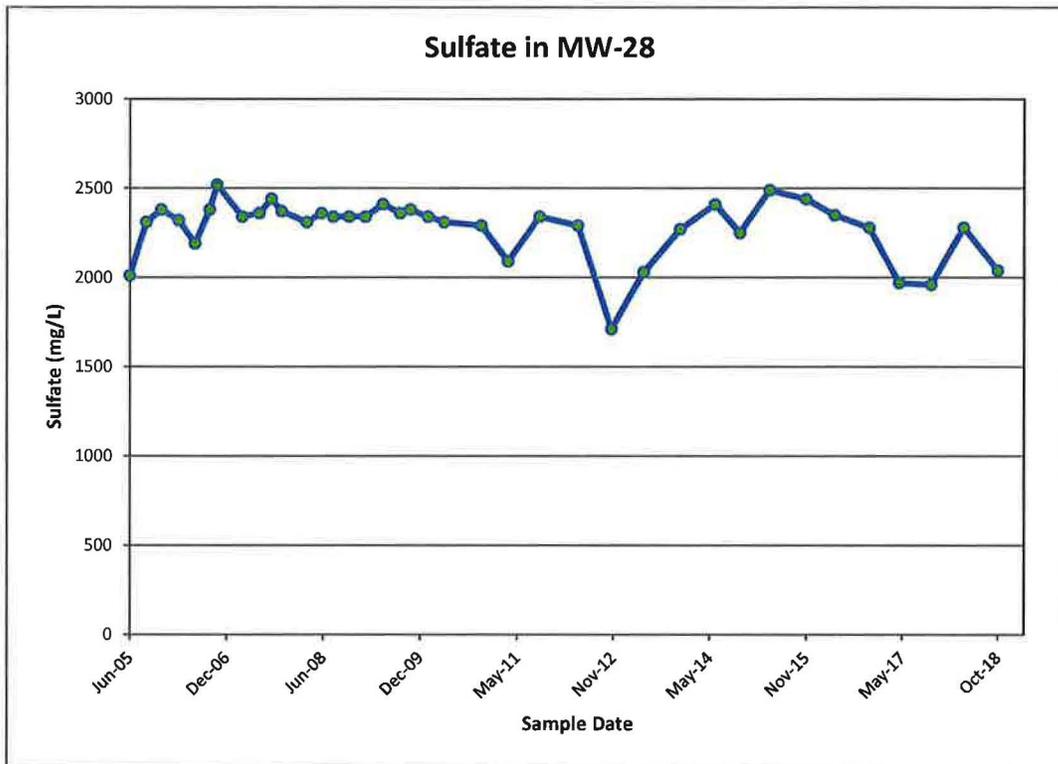
Time concentration plots for MW-27



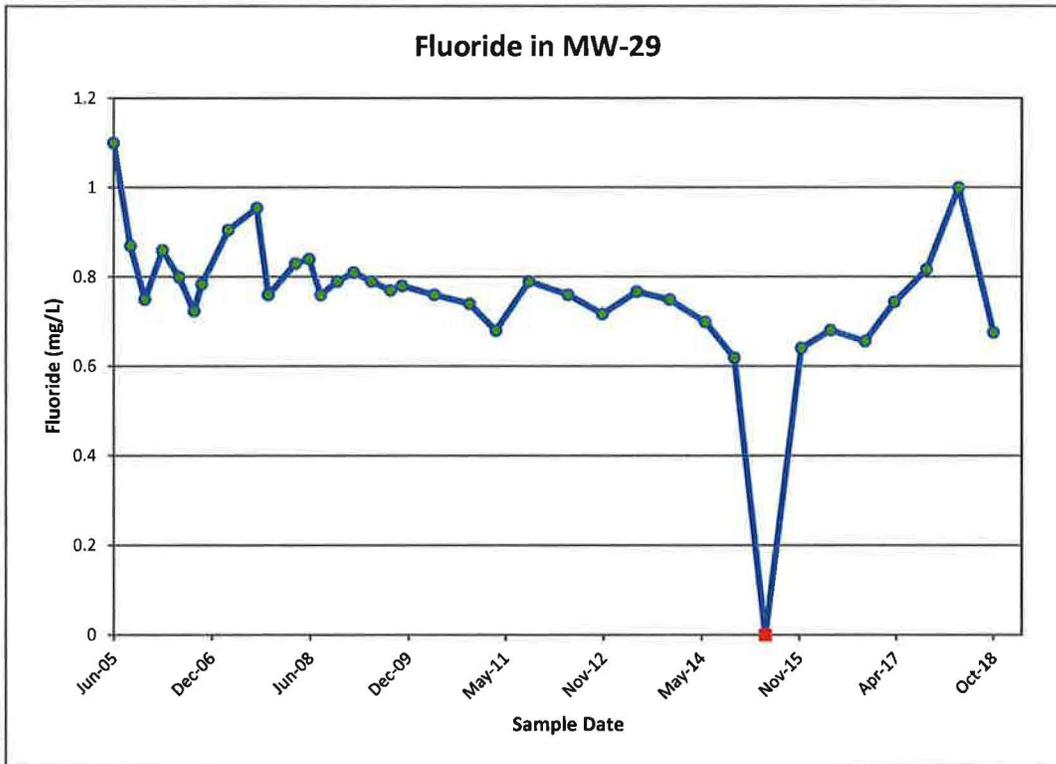
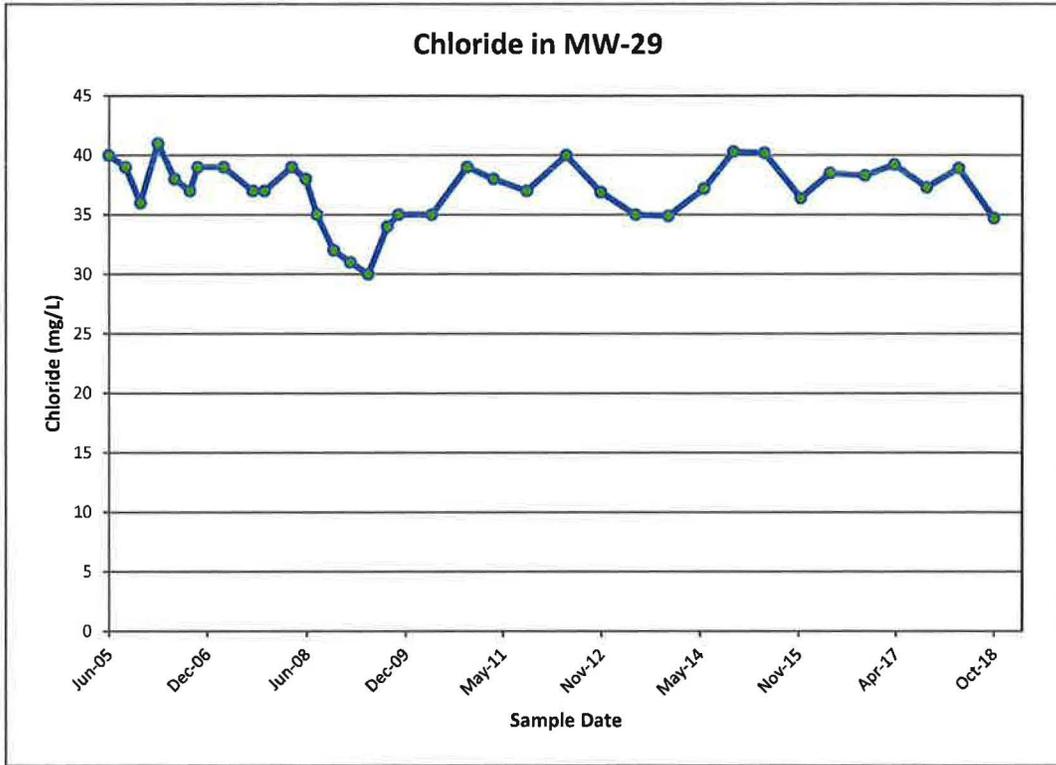
Time concentration plots for MW-28



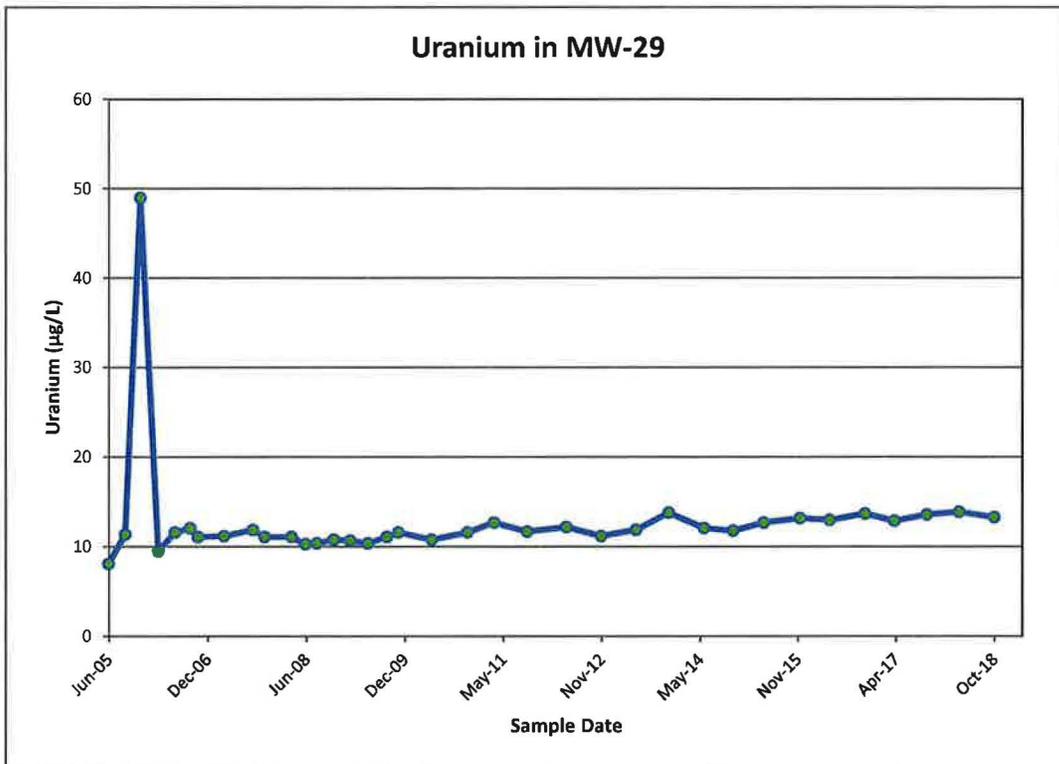
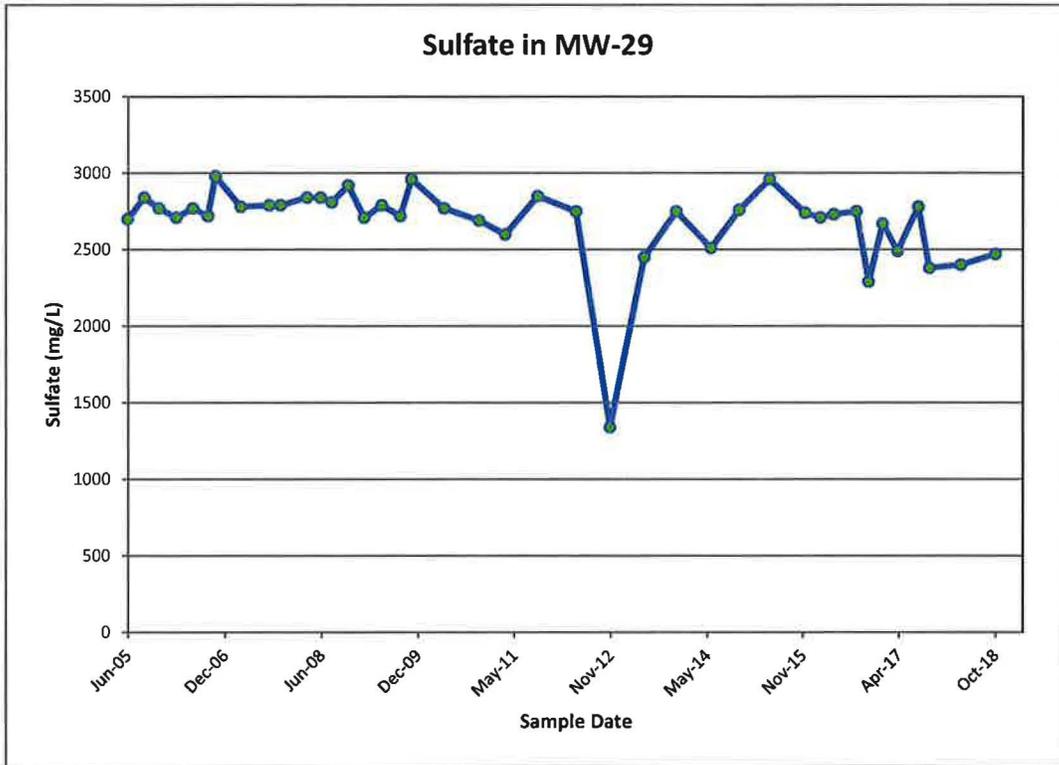
Time concentration plots for MW-28



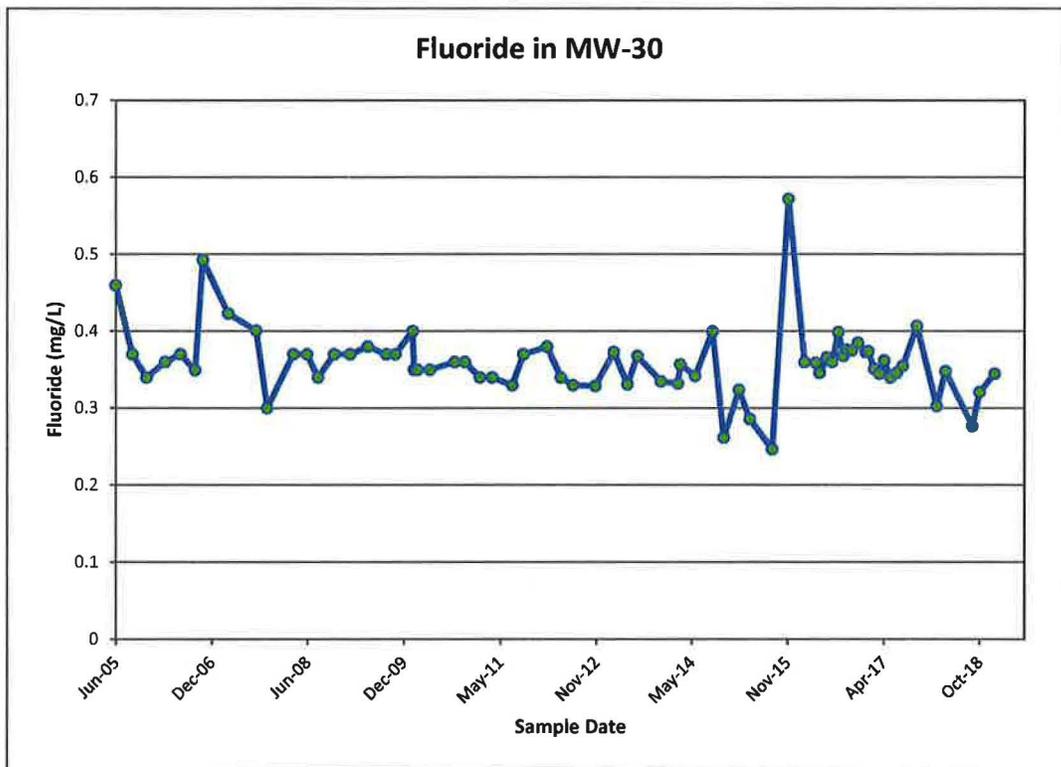
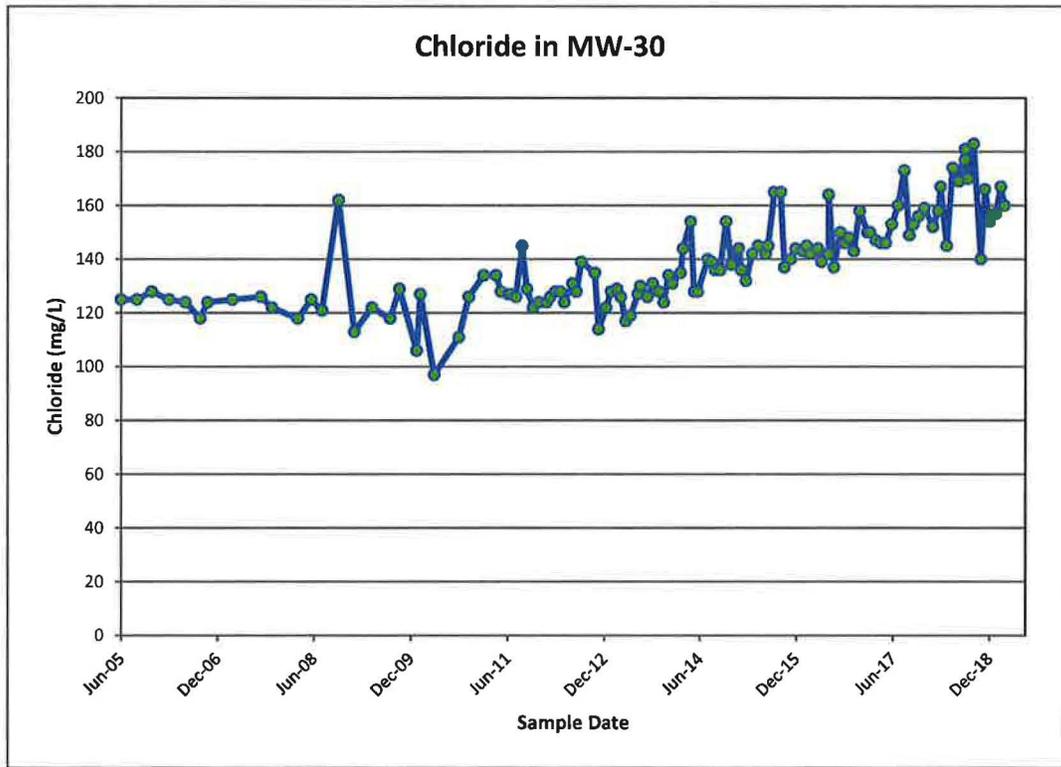
Time concentration plots for MW-29



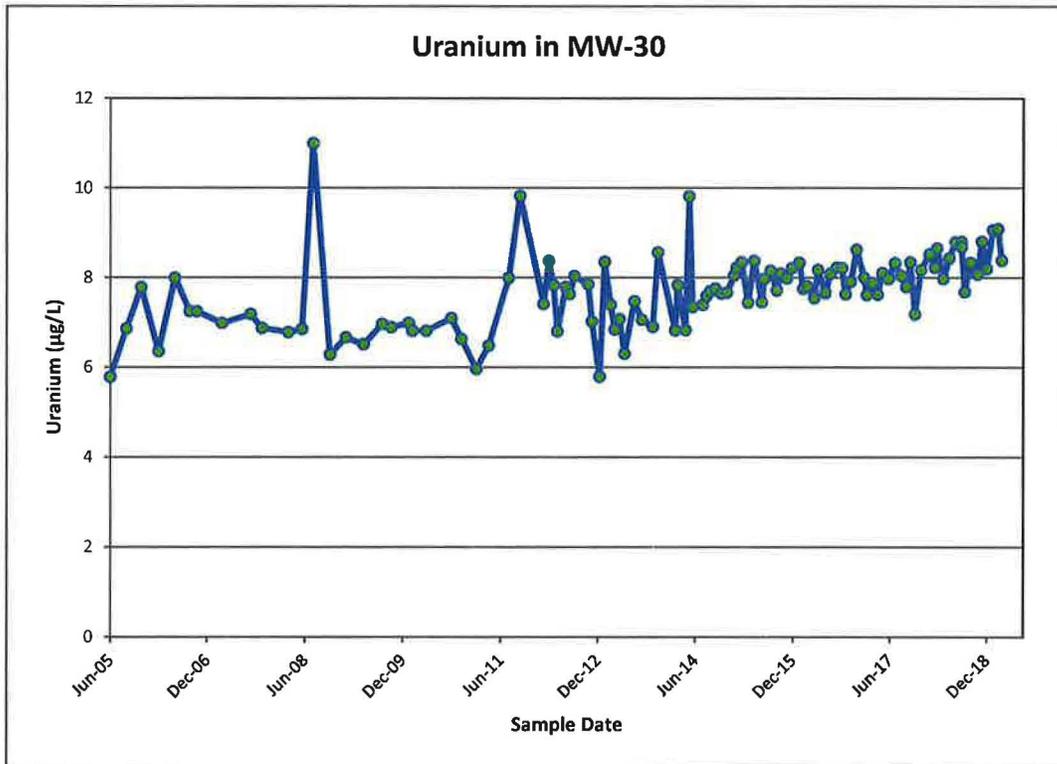
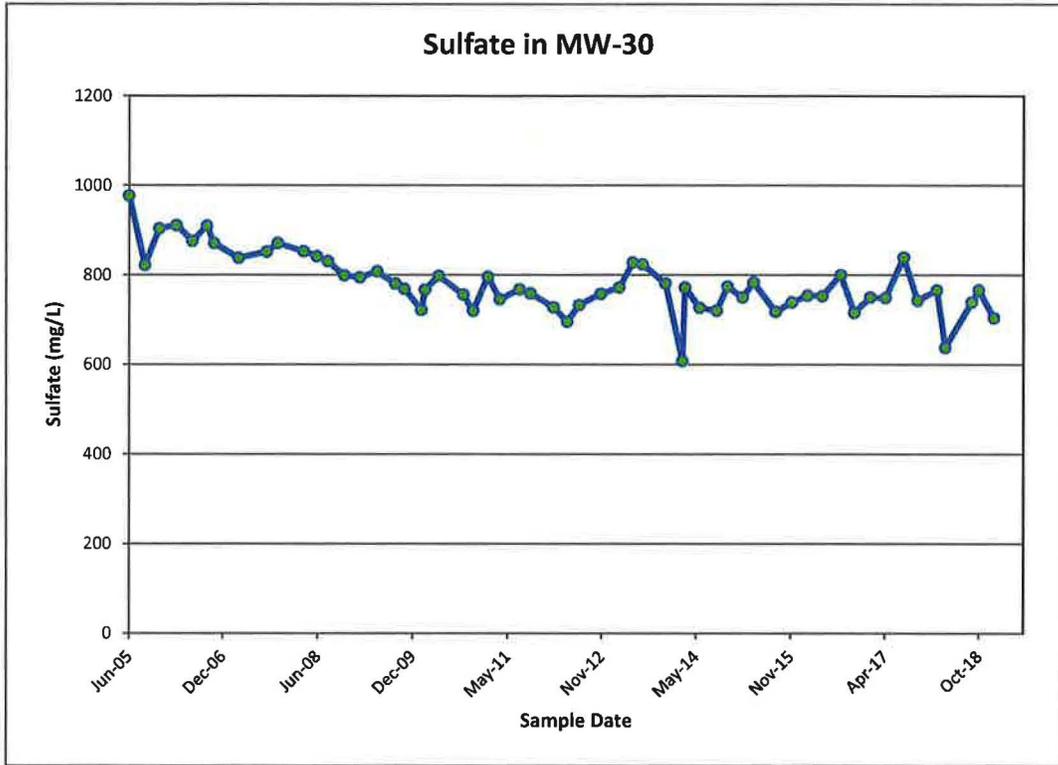
Time concentration plots for MW-29



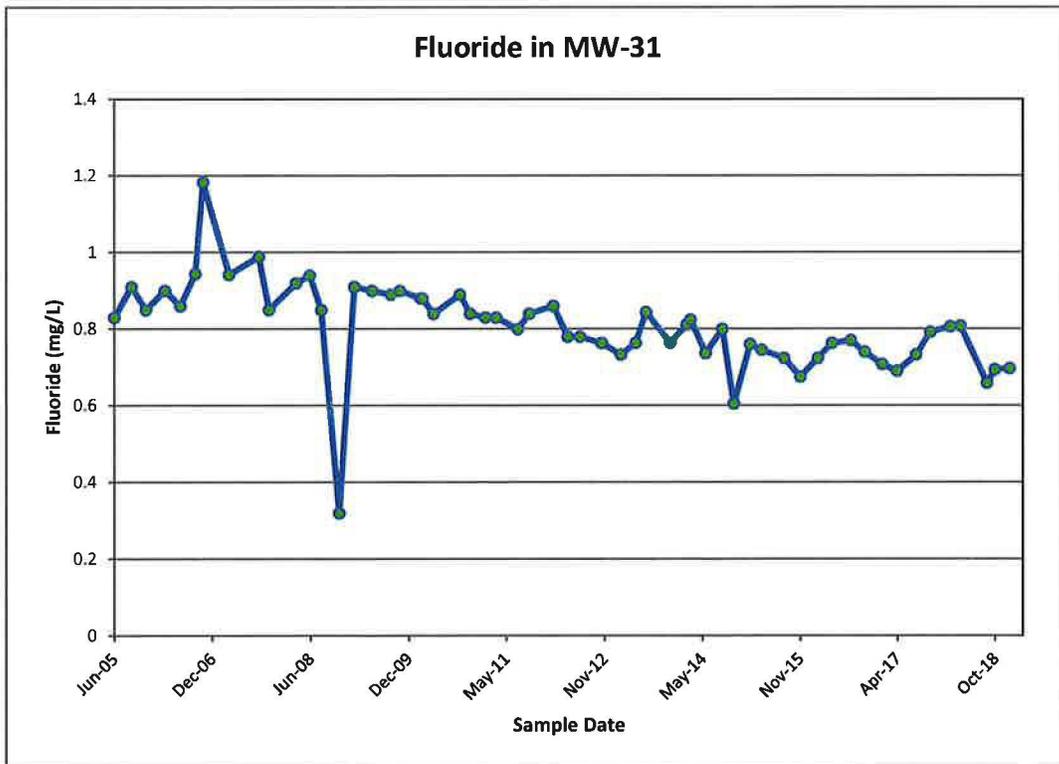
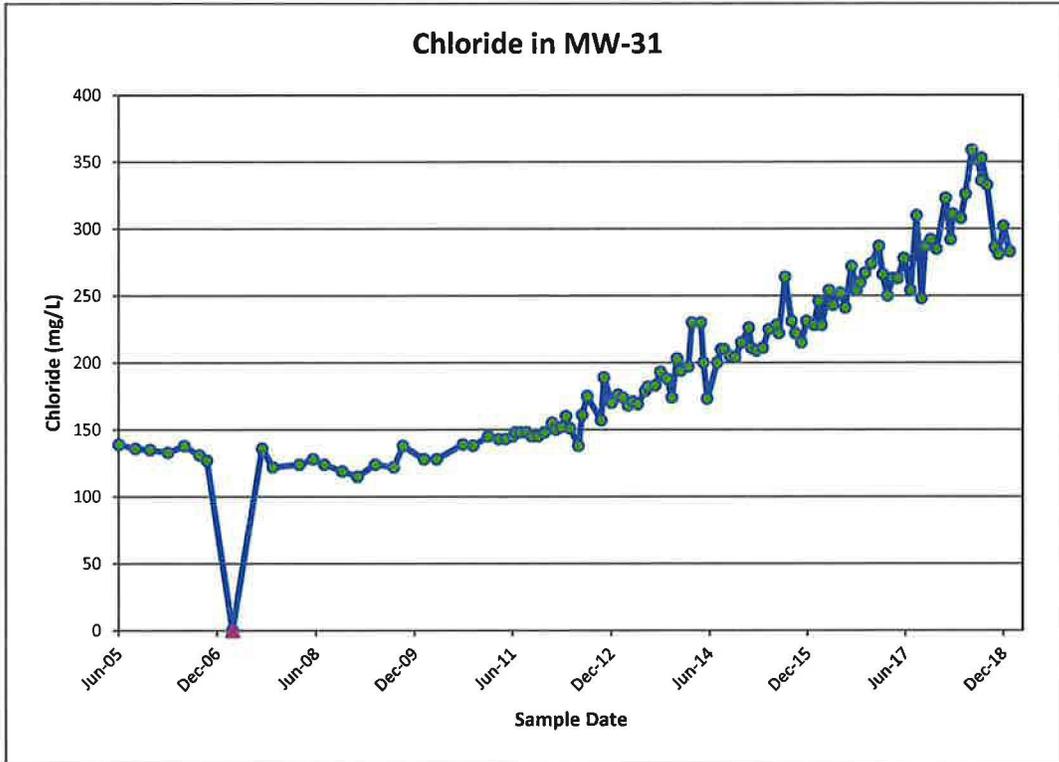
Time concentration plots for MW-30



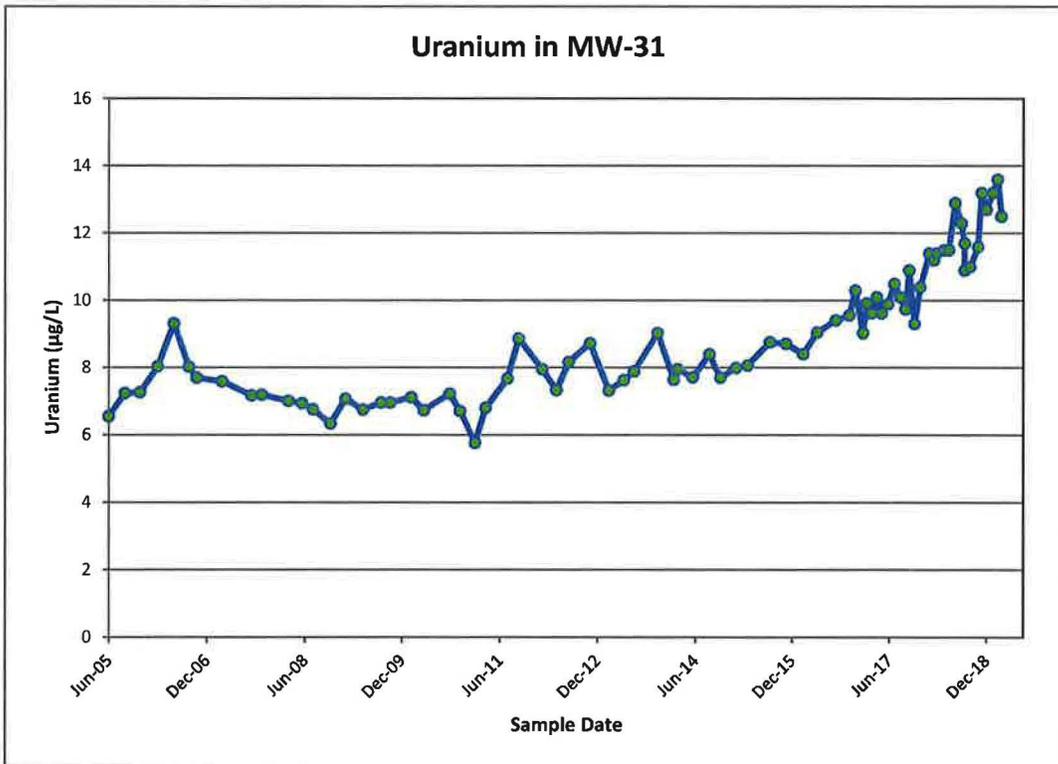
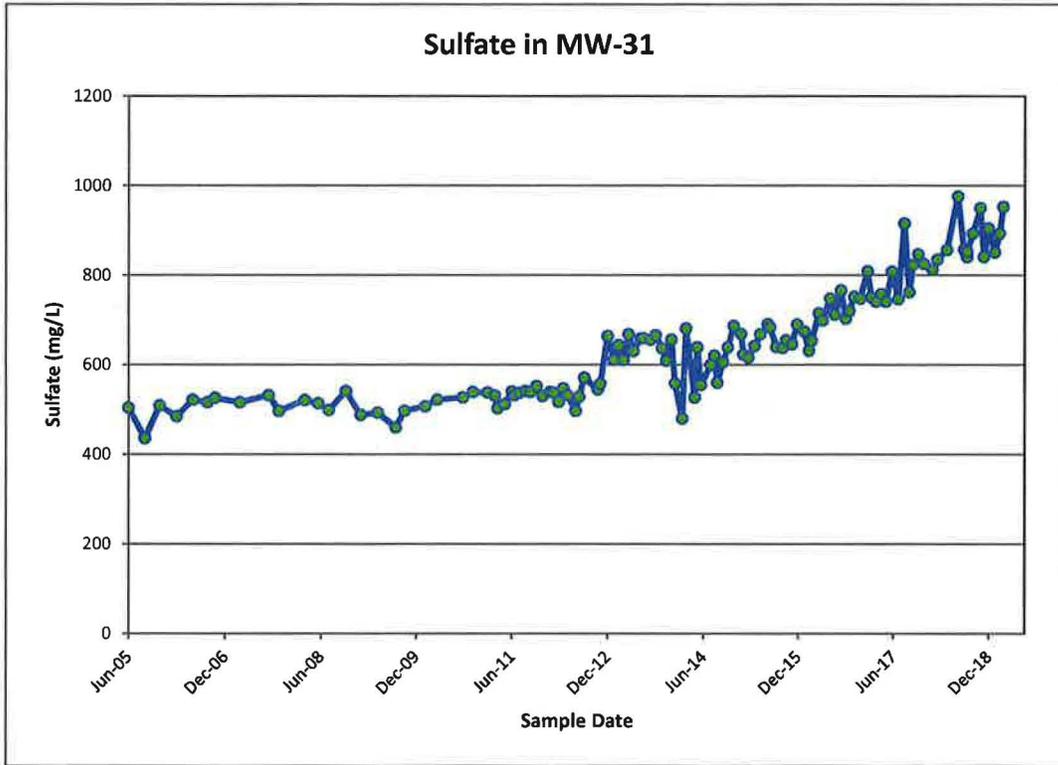
Time concentration plots for MW-30



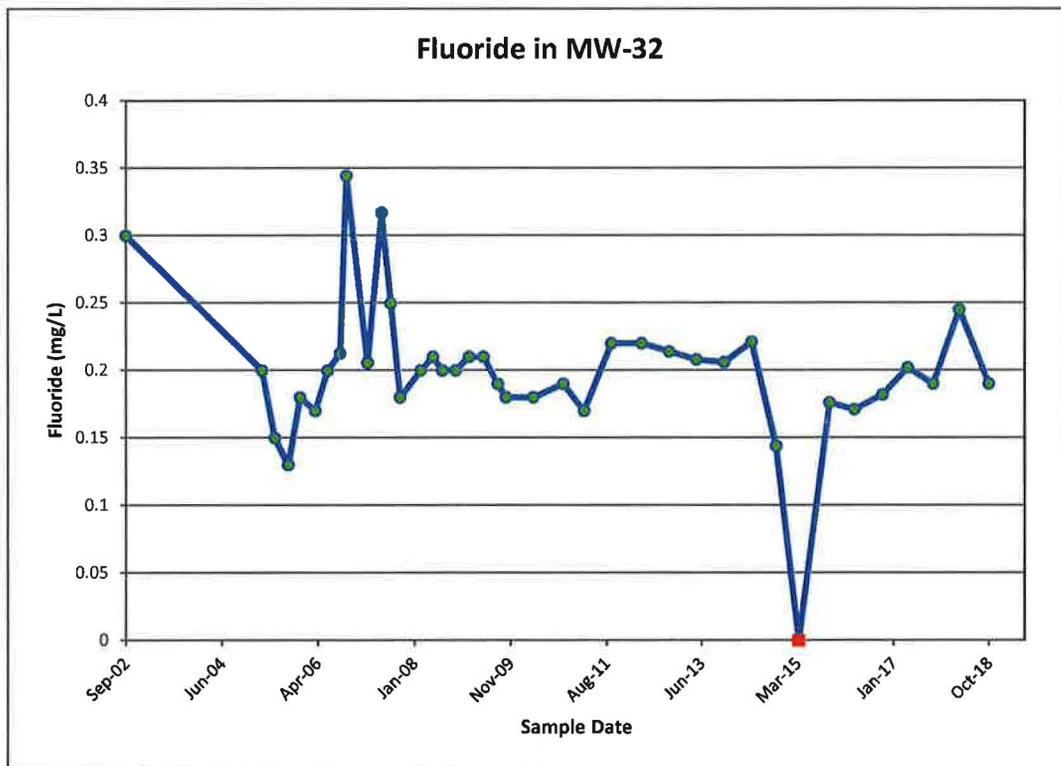
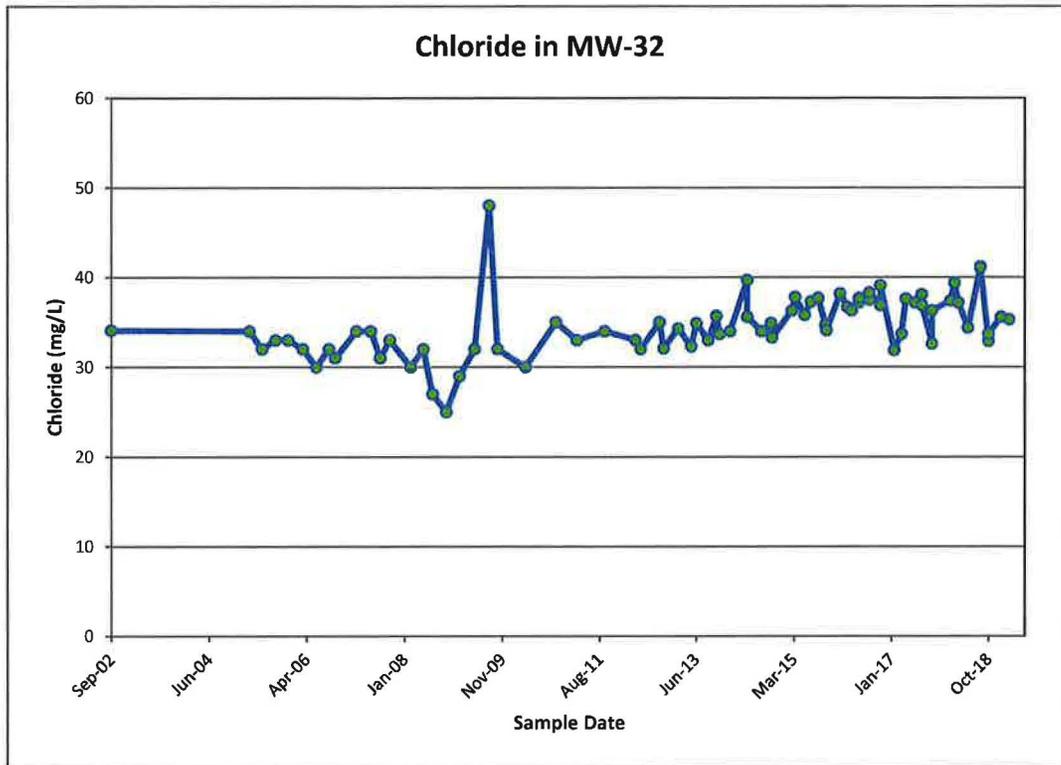
Time concentration plots for MW-31



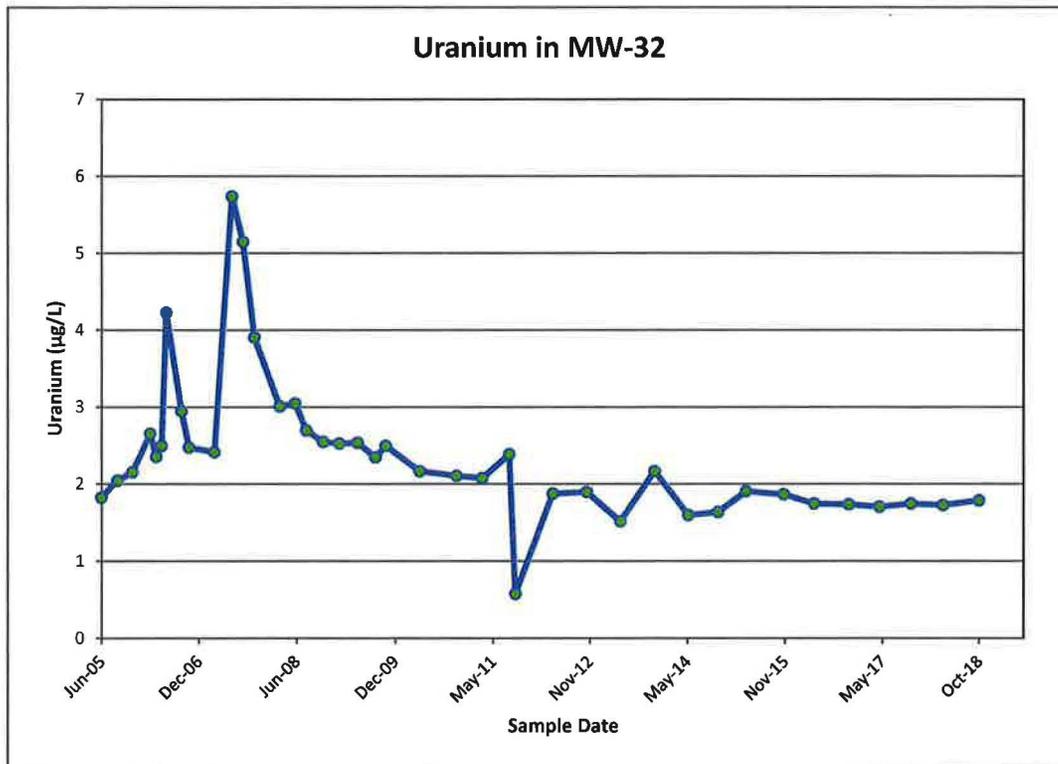
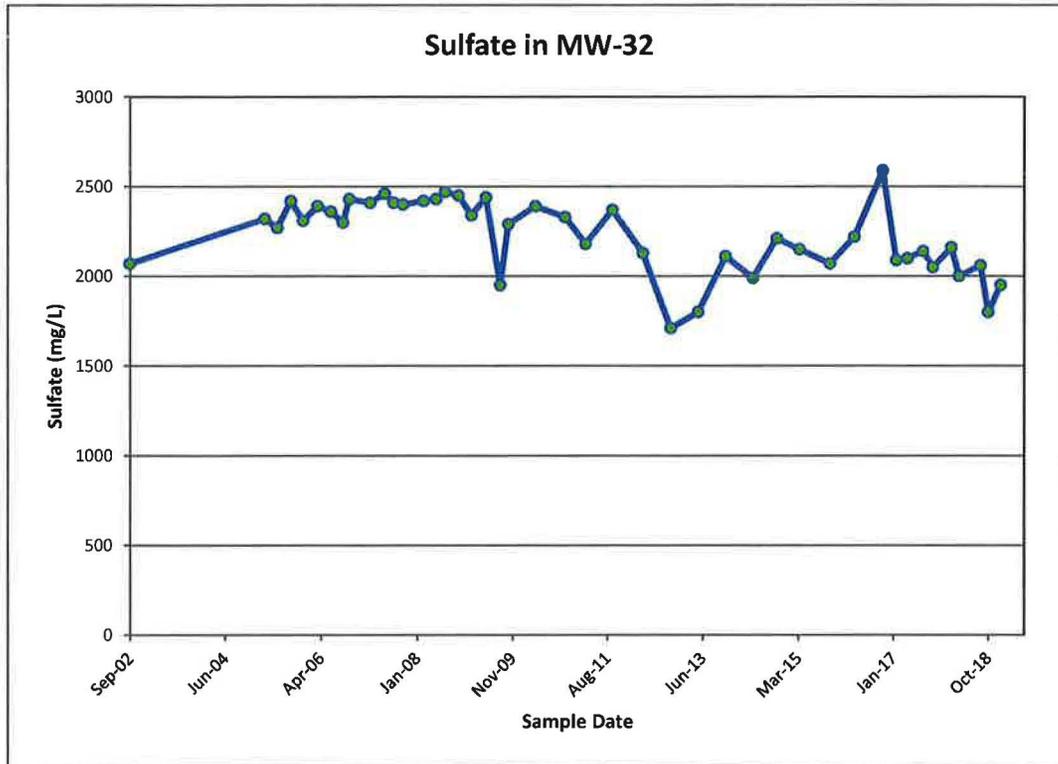
Time concentration plots for MW-31



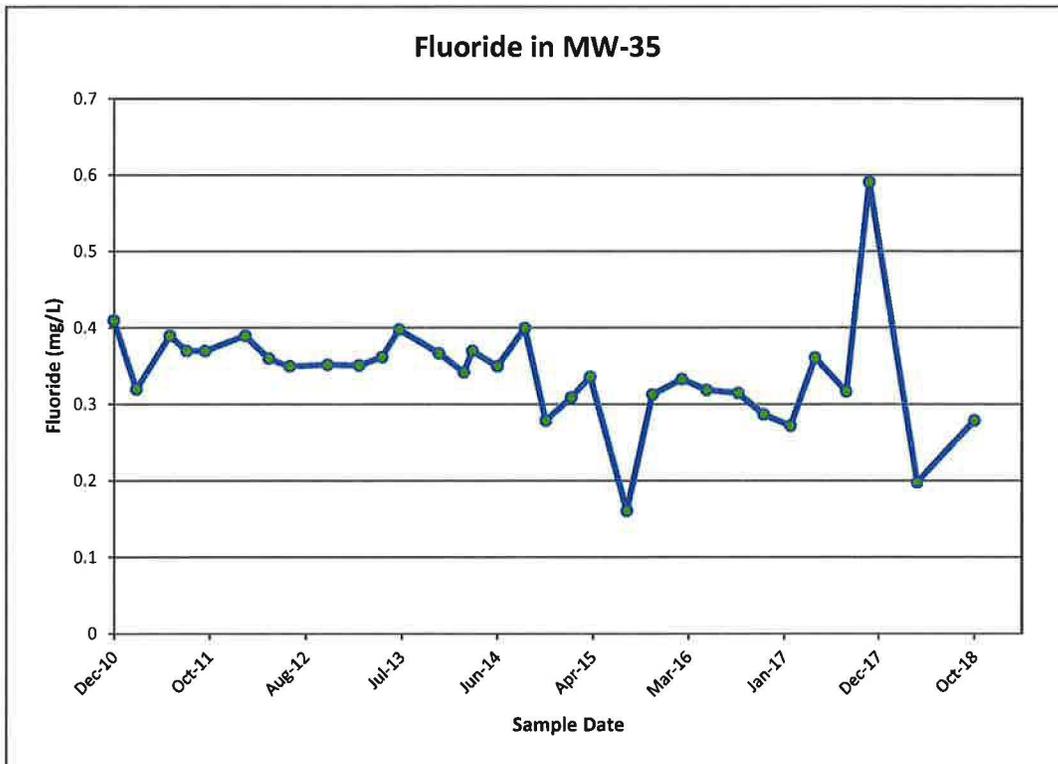
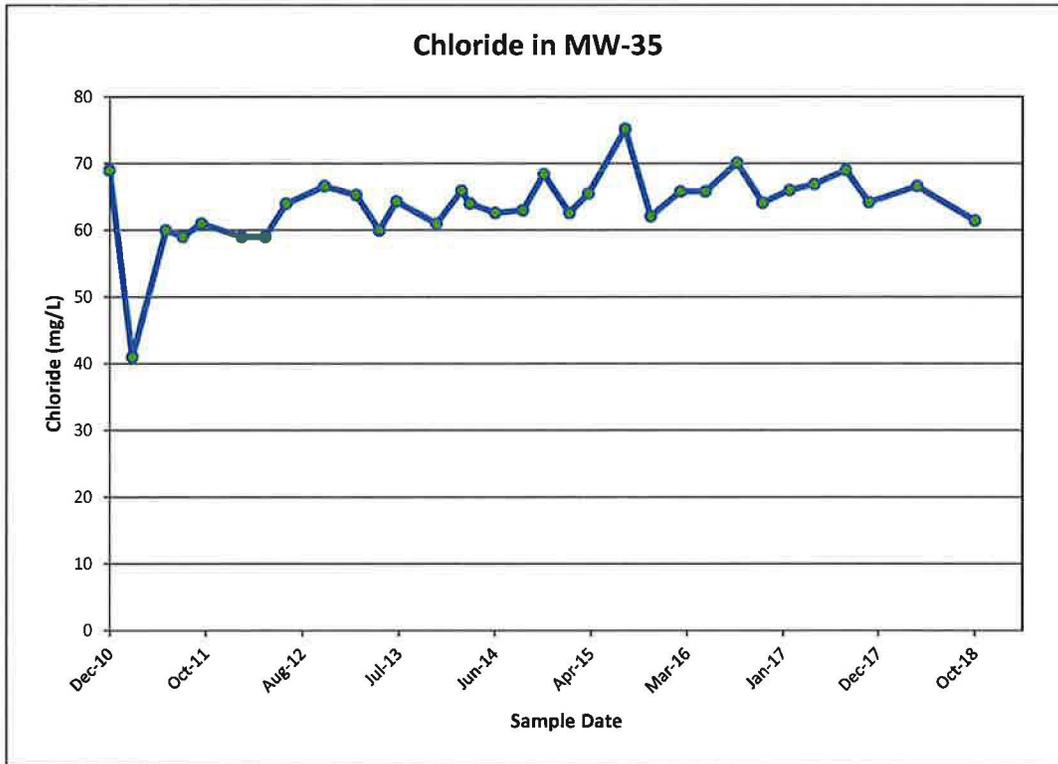
Time concentration plots for MW-32



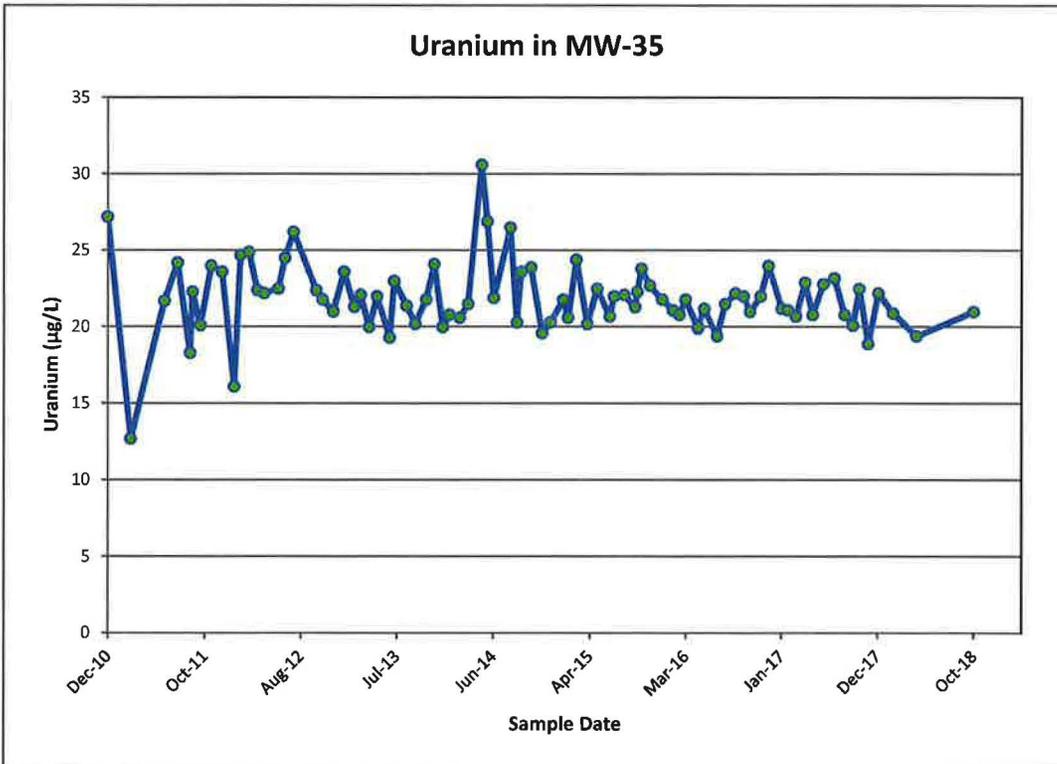
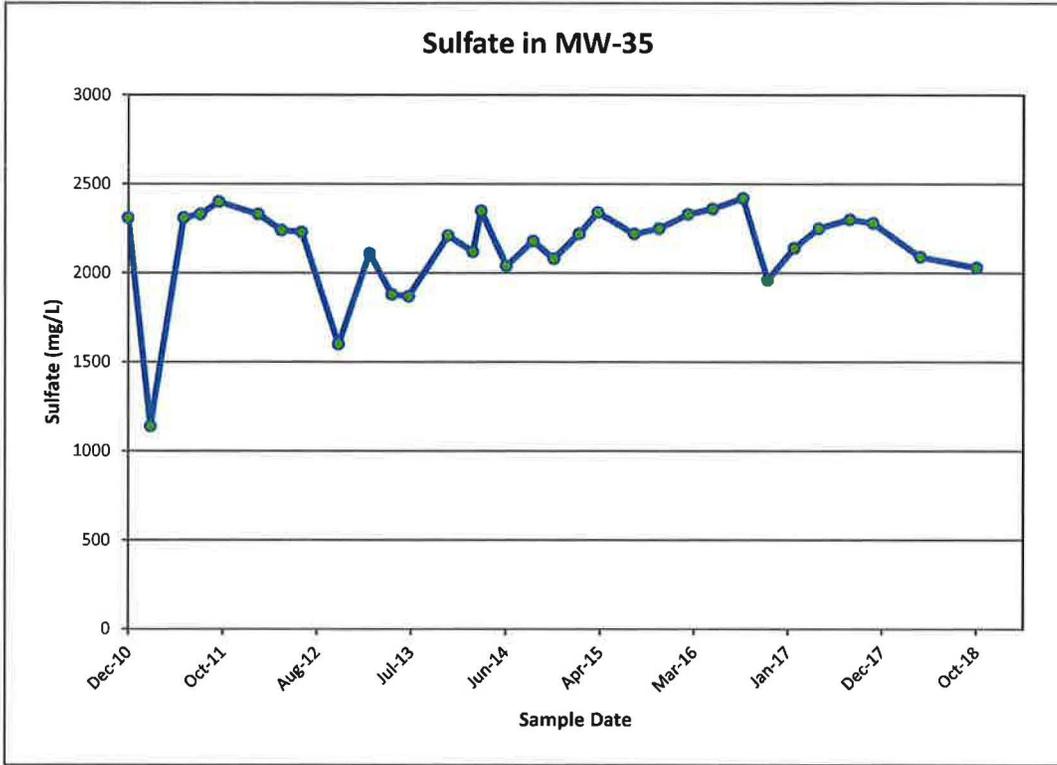
Time concentration plots for MW-32



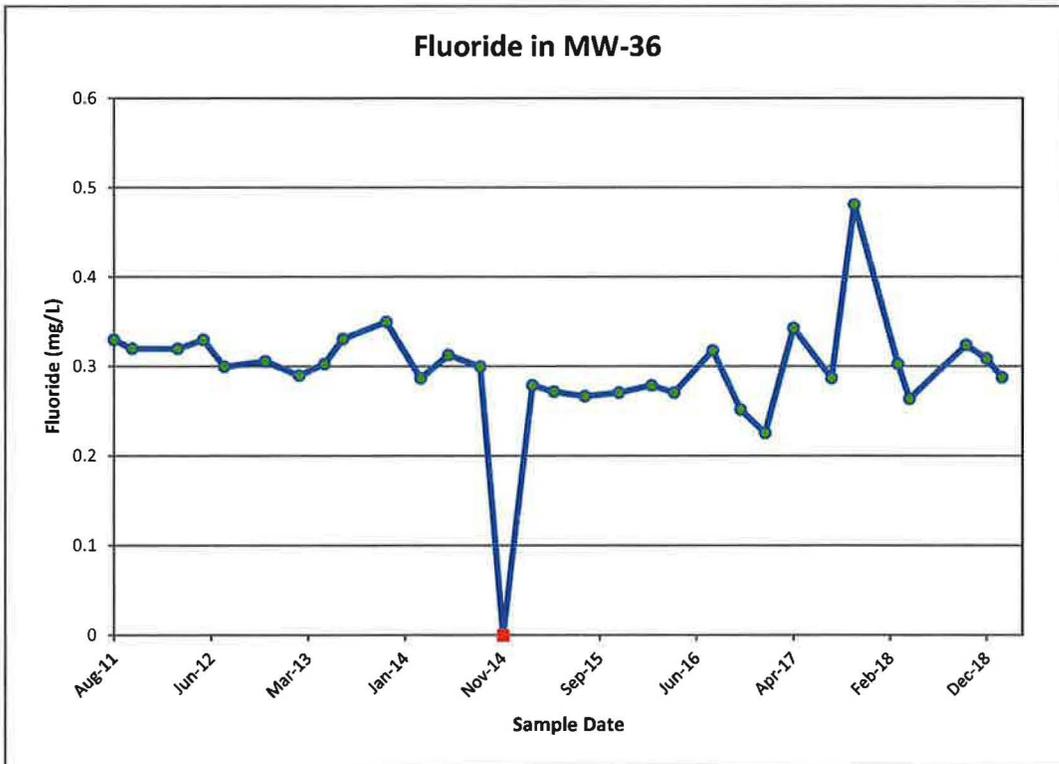
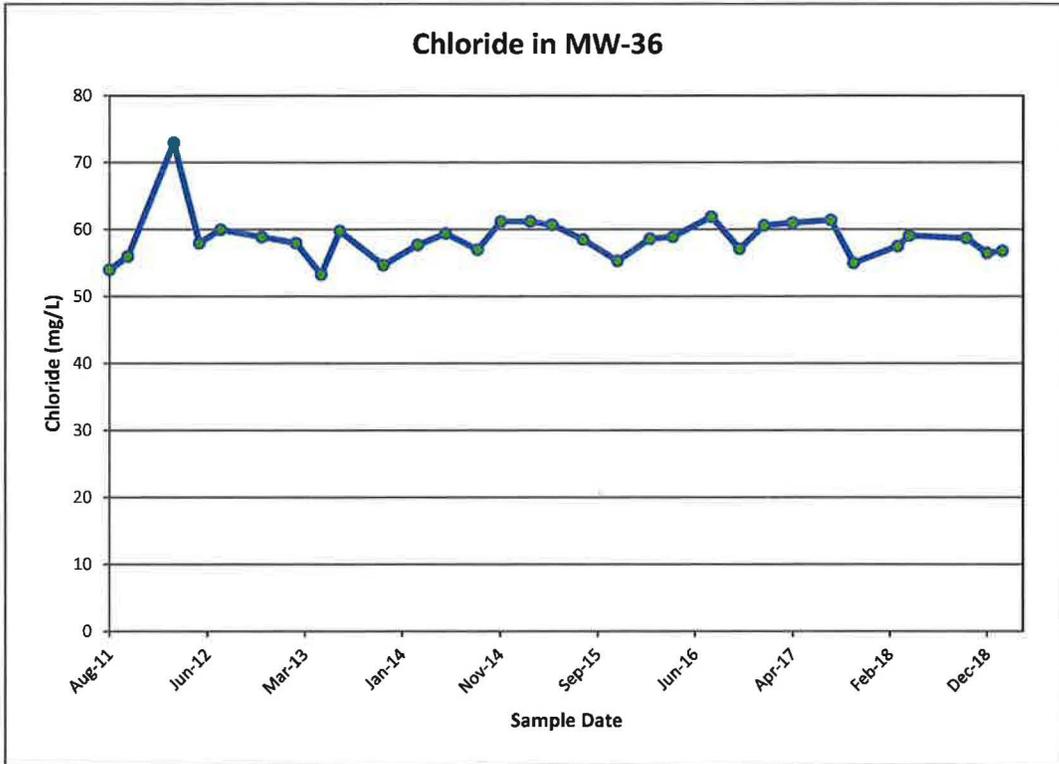
Time concentration plots for MW-35



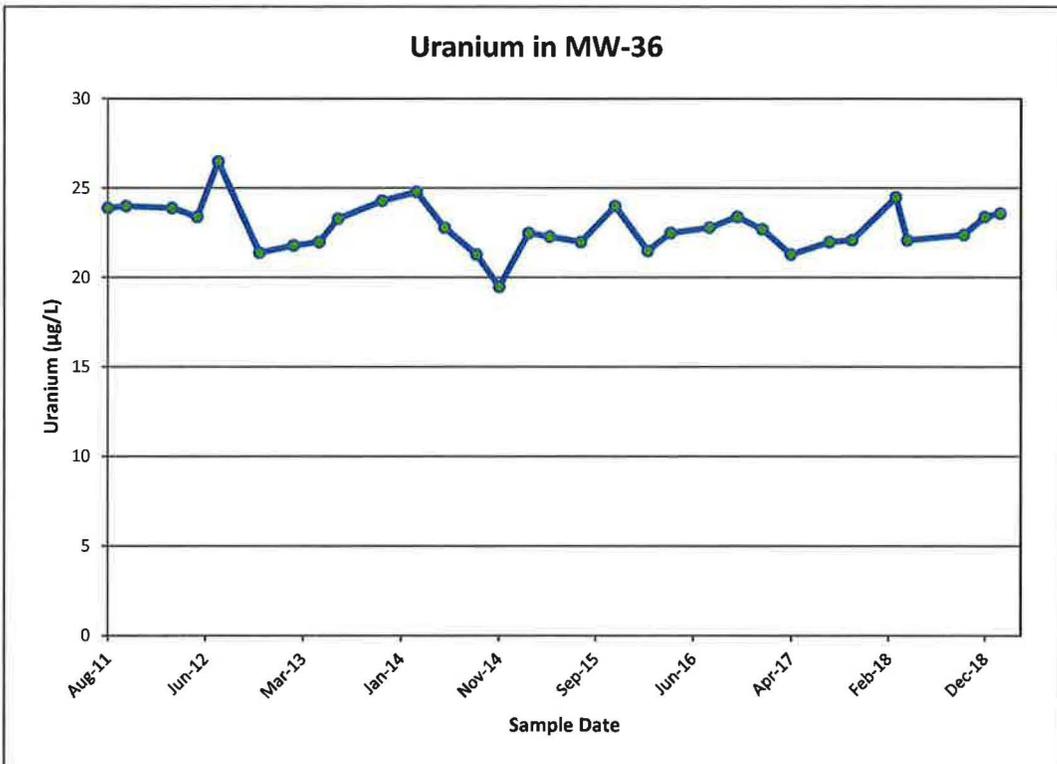
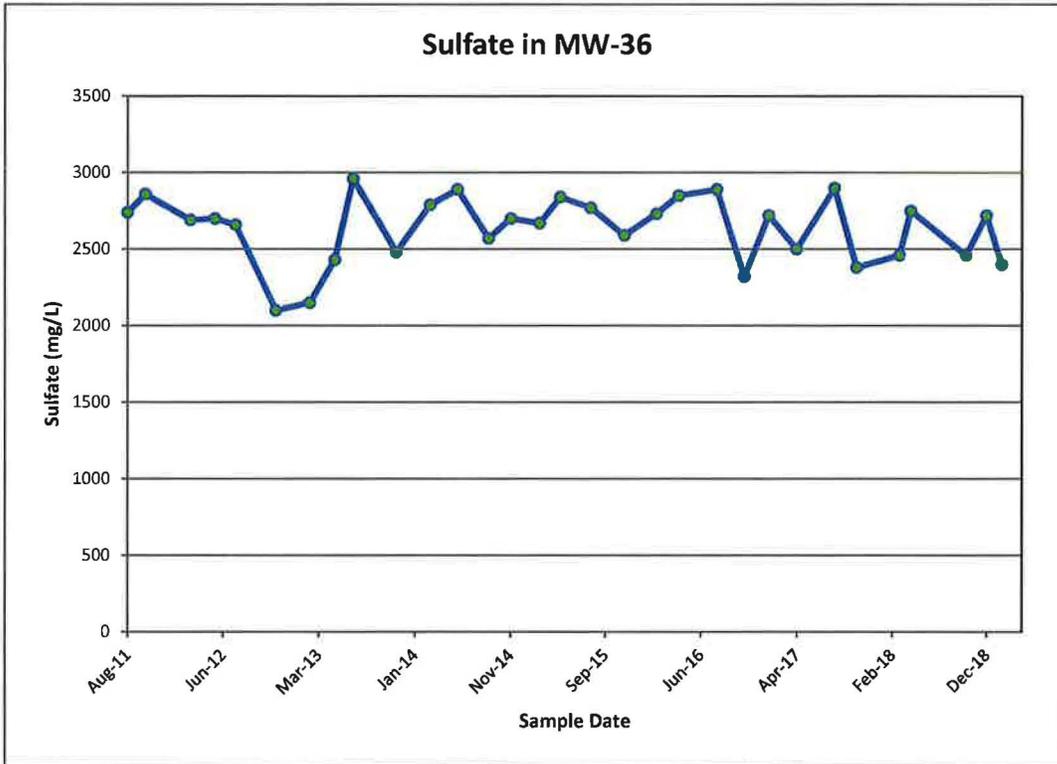
Time concentration plots for MW-35



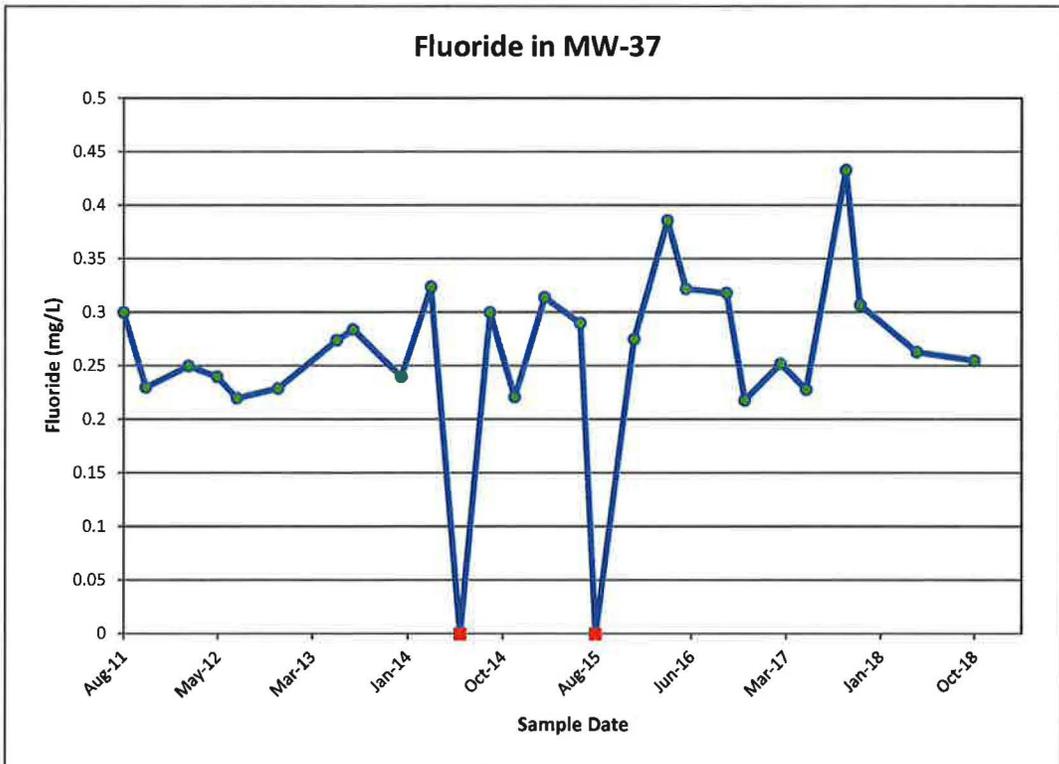
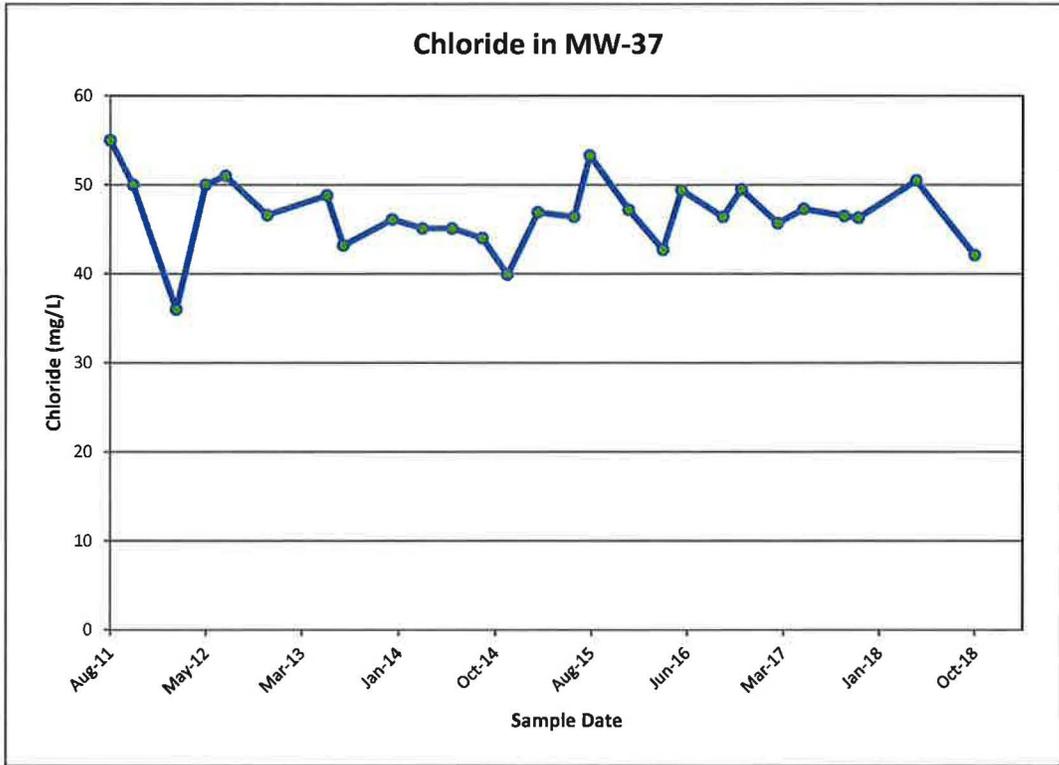
Time concentration plots for MW-36



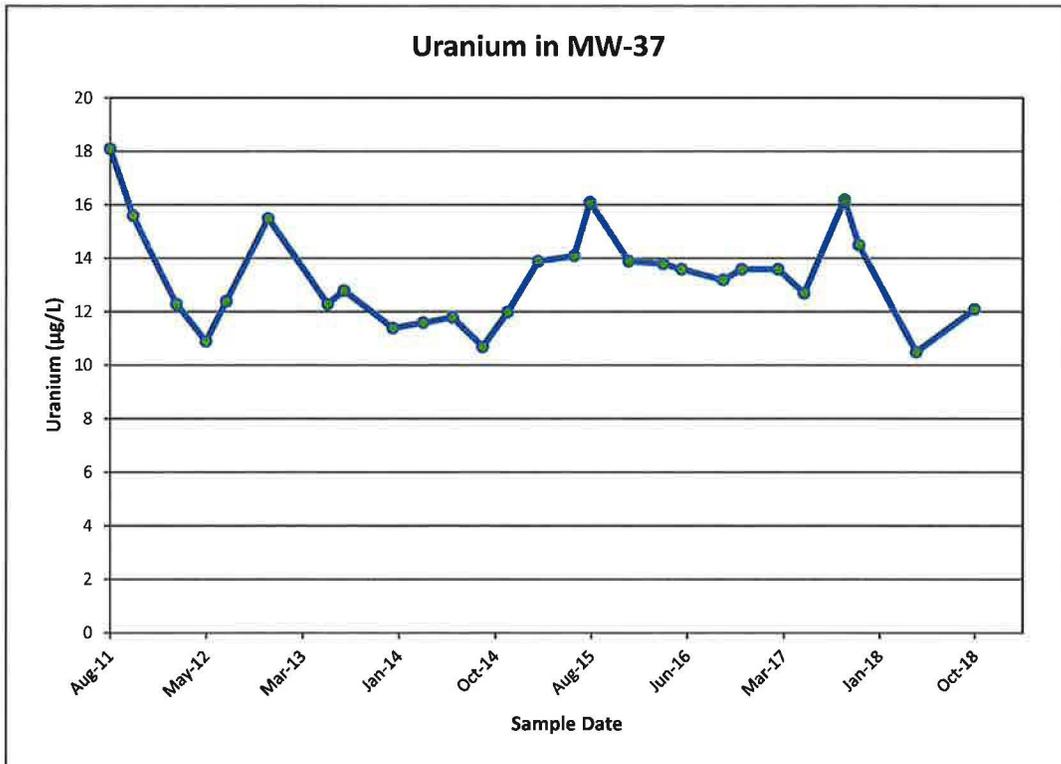
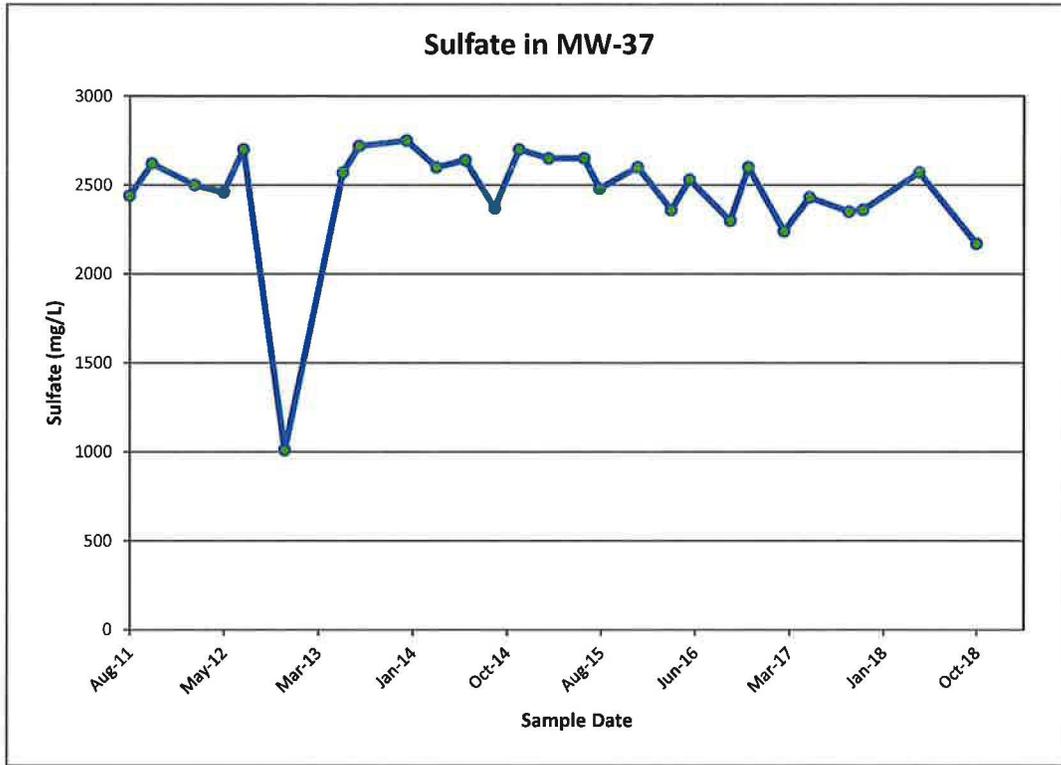
Time concentration plots for MW-36



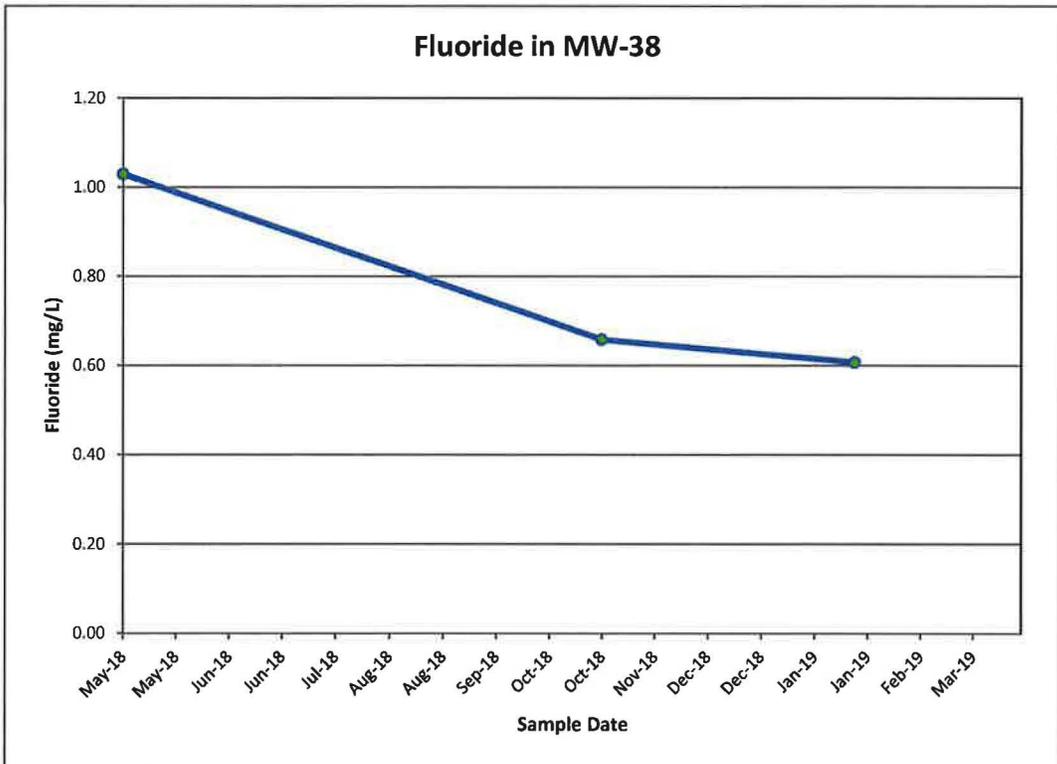
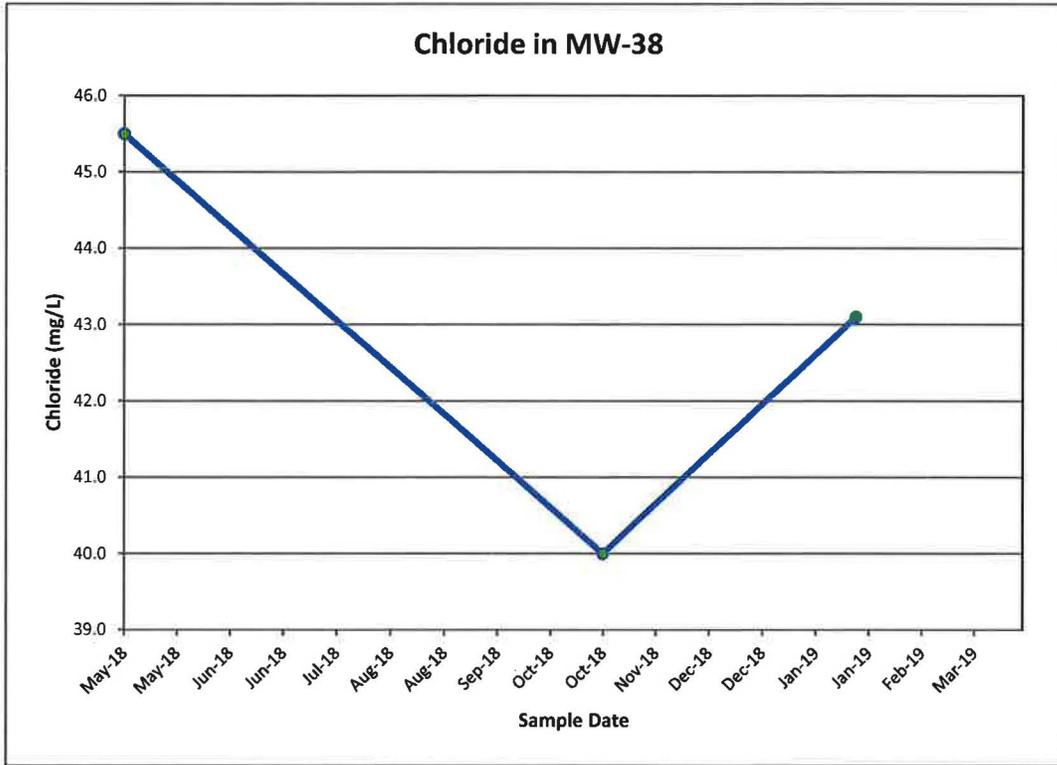
Time concentration plots for MW-37



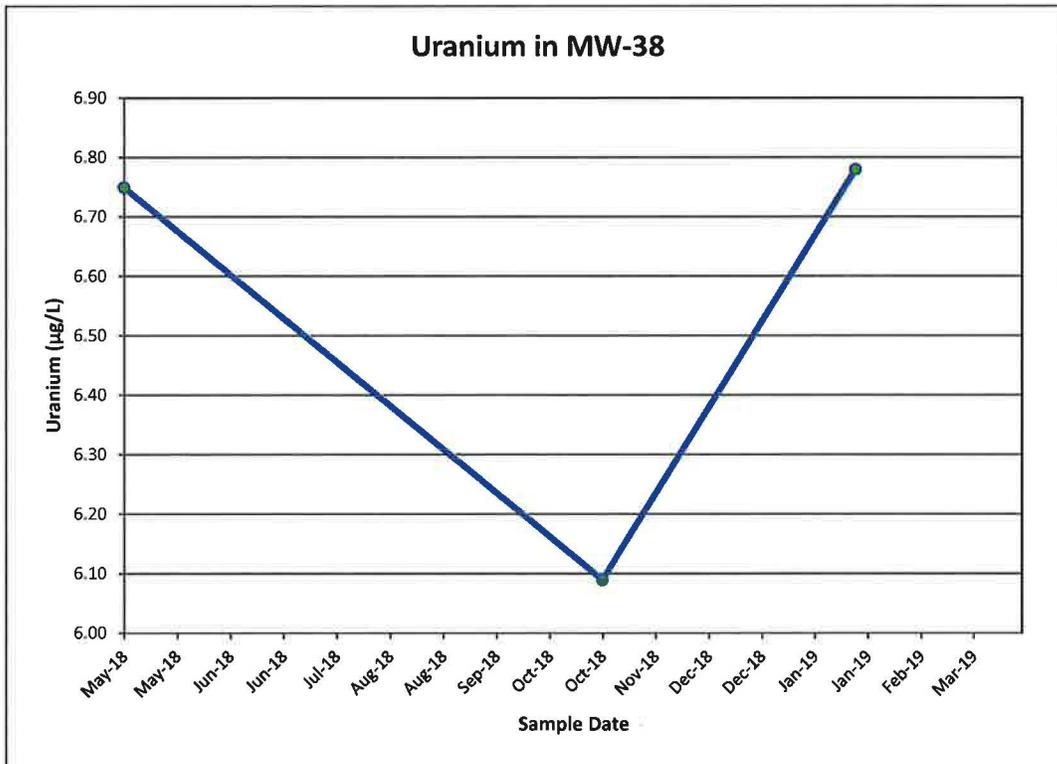
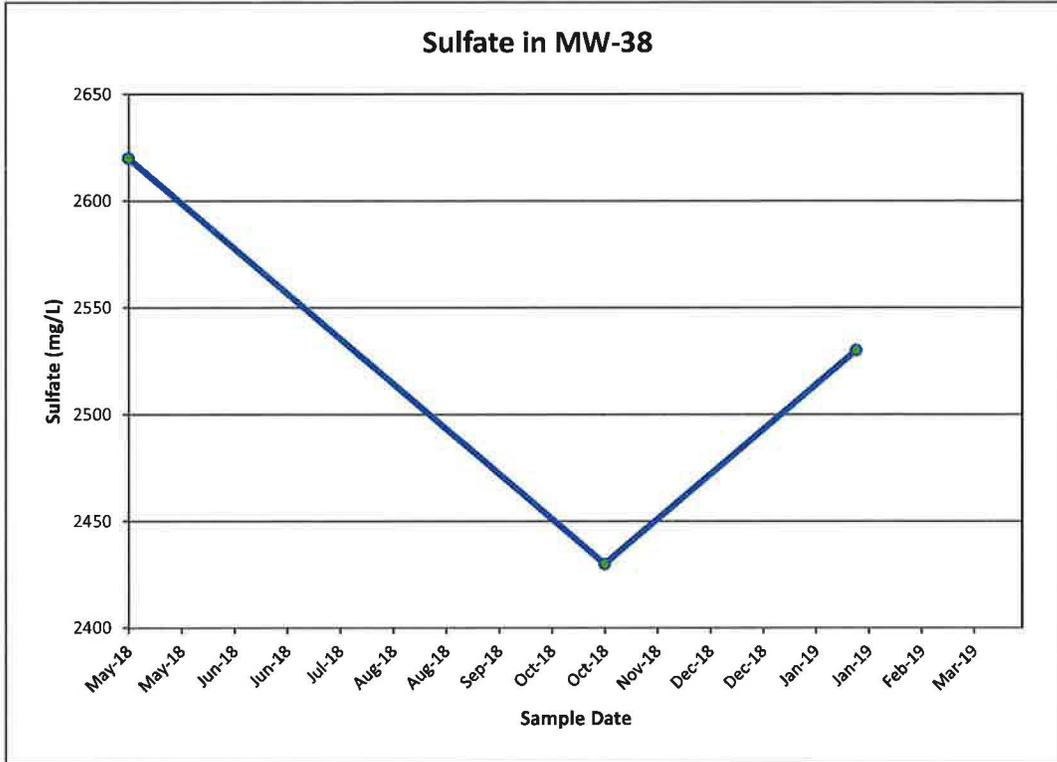
Time concentration plots for MW-37



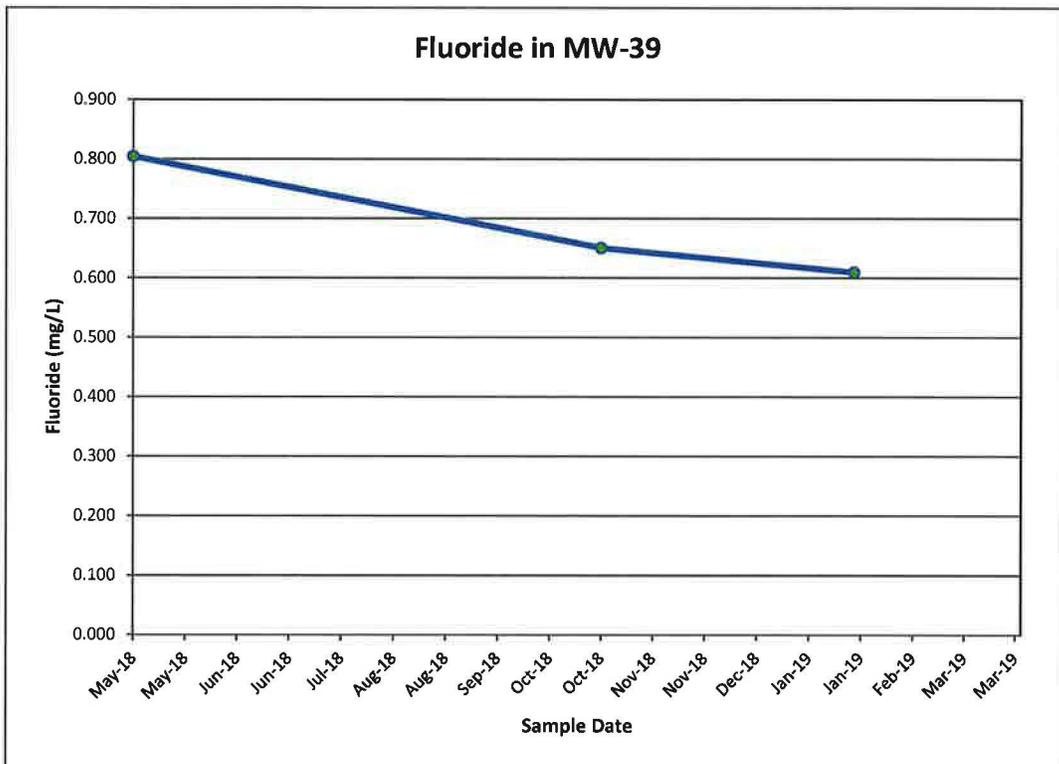
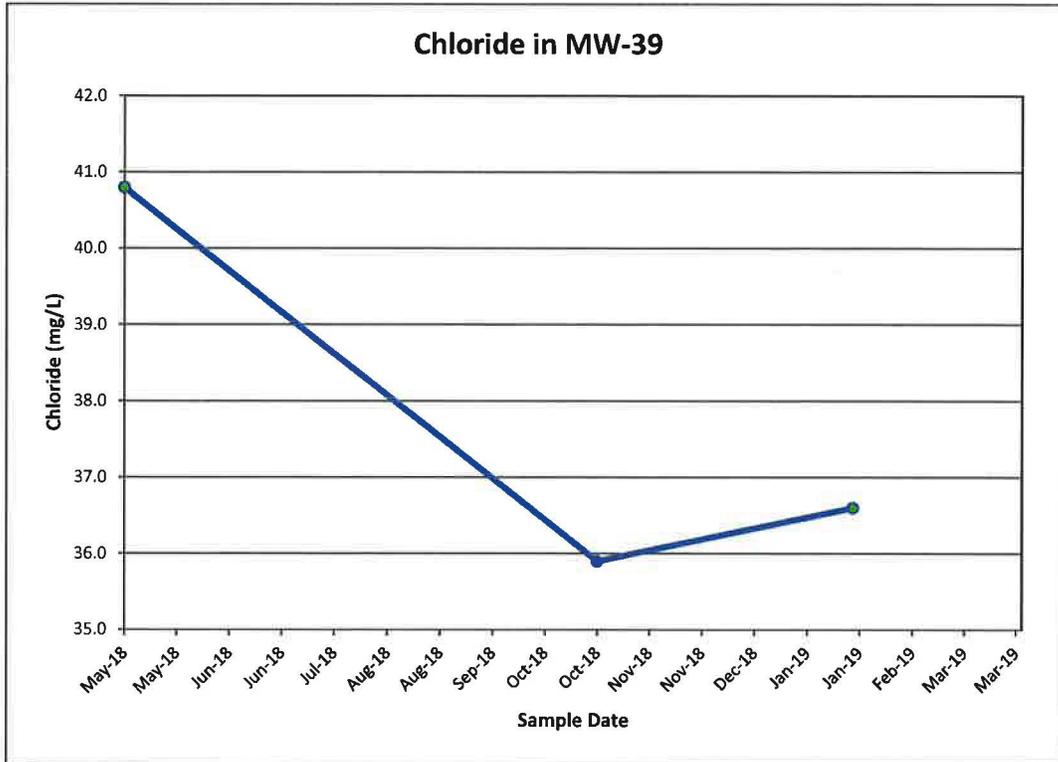
Time concentration plots for MW-38



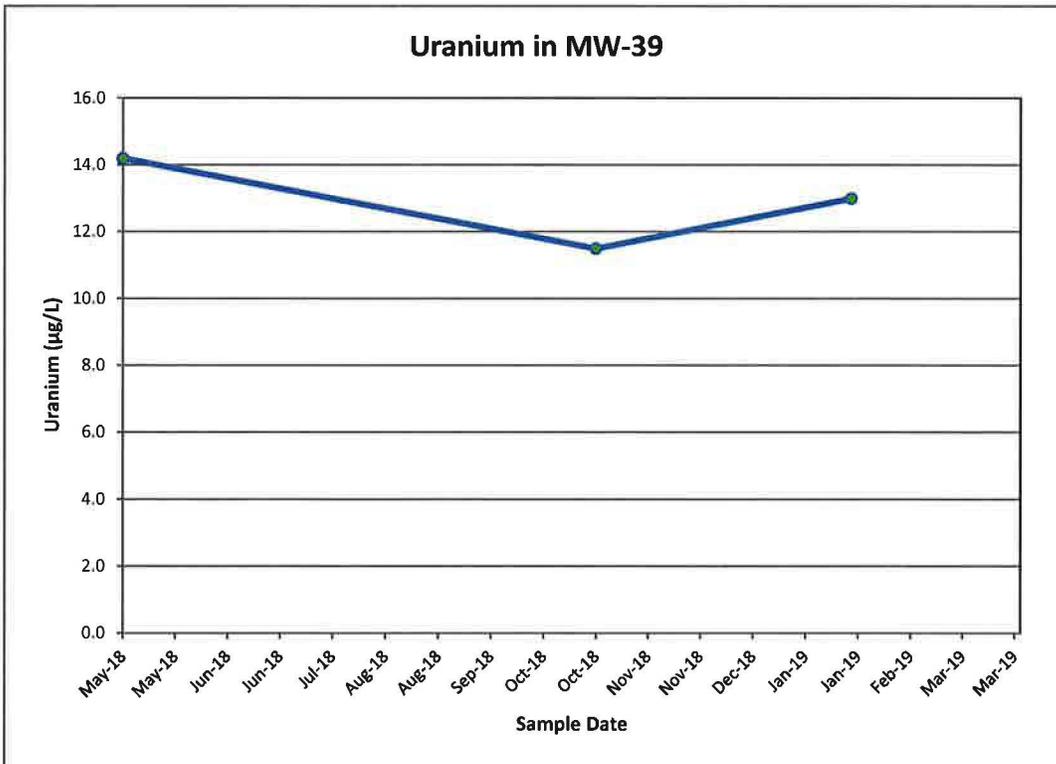
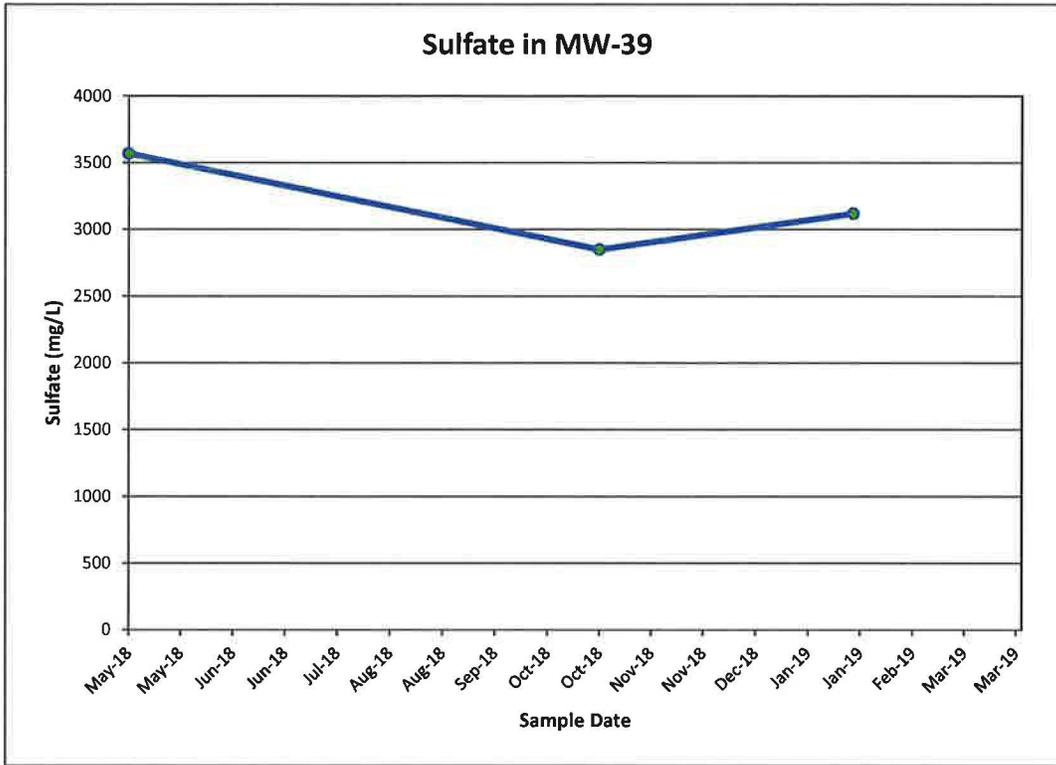
Time concentration plots for MW-38



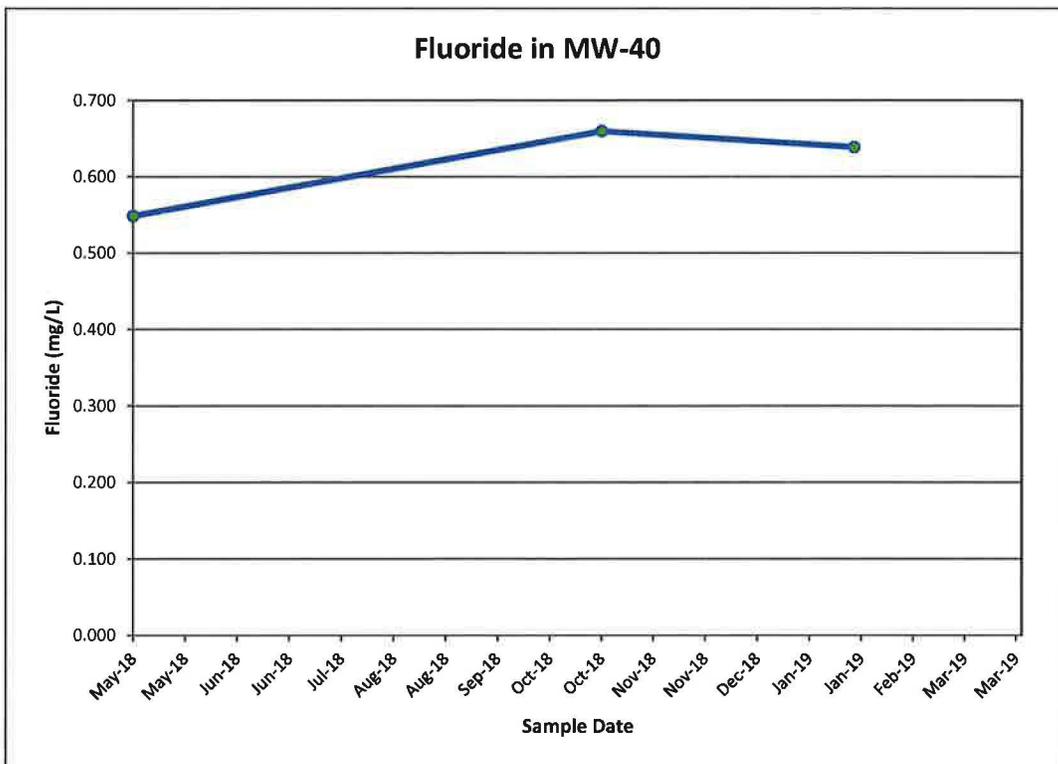
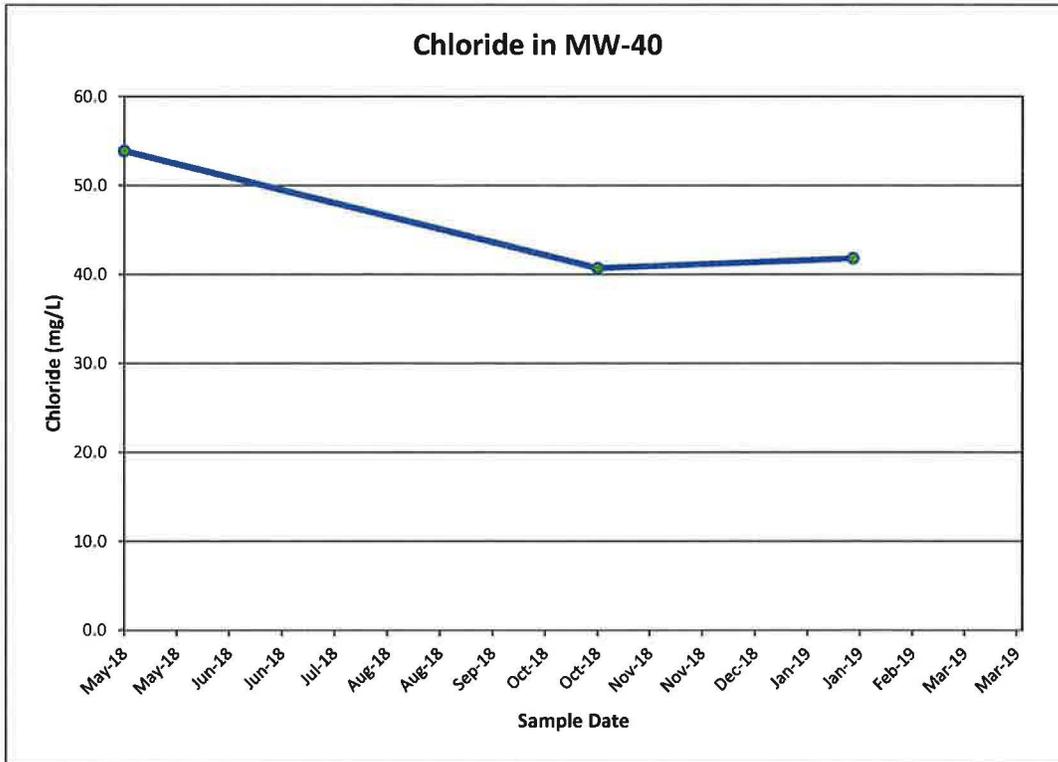
Time concentration plots for MW-39



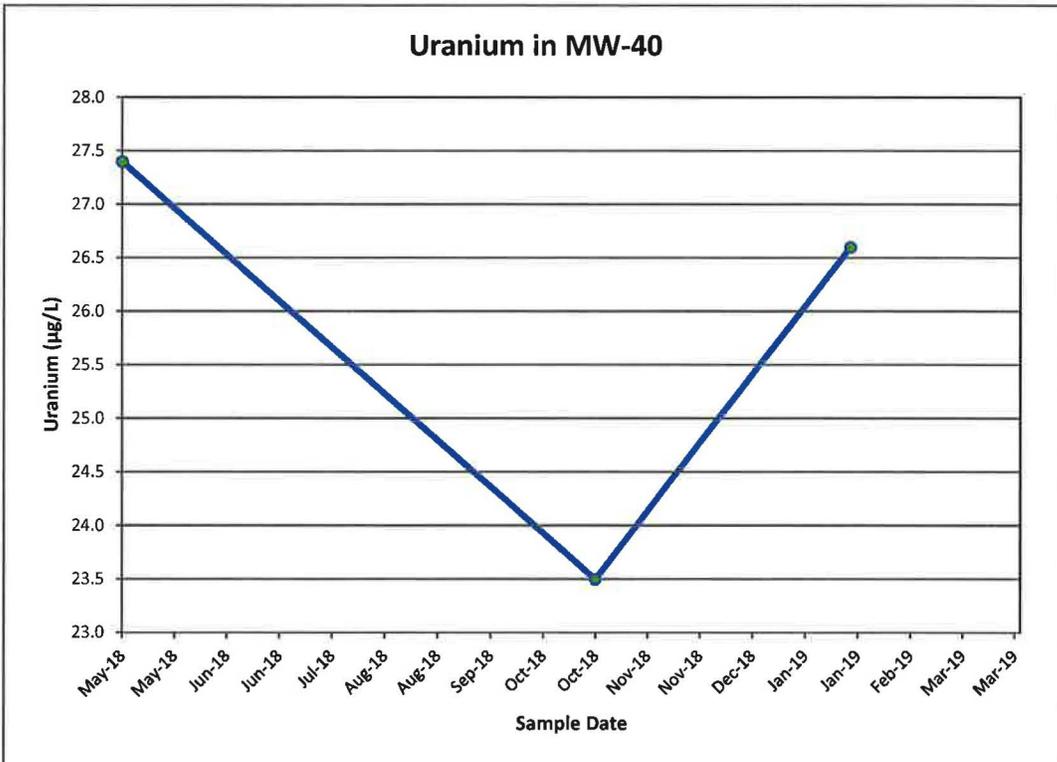
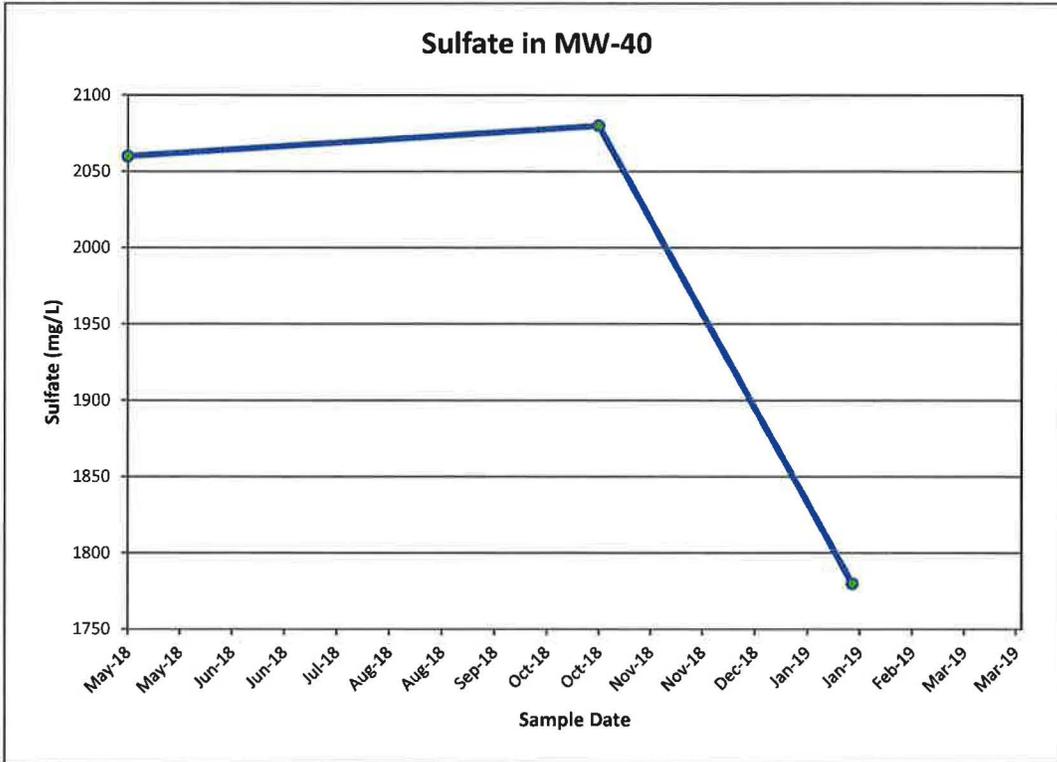
Time concentration plots for MW-39



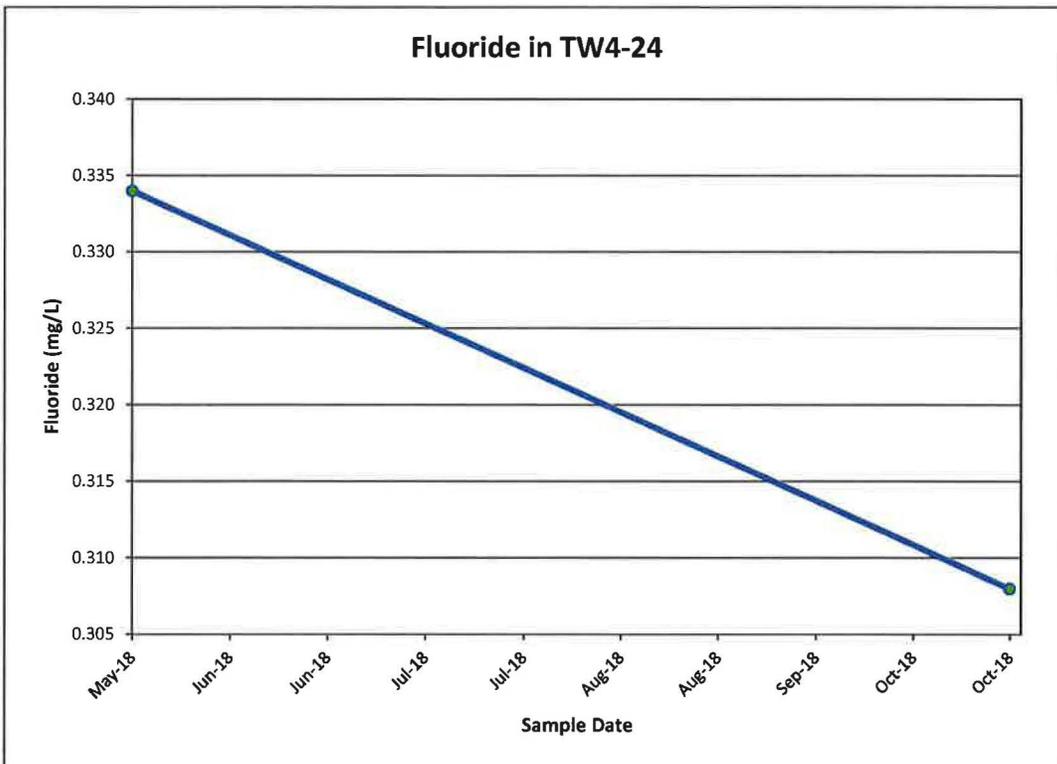
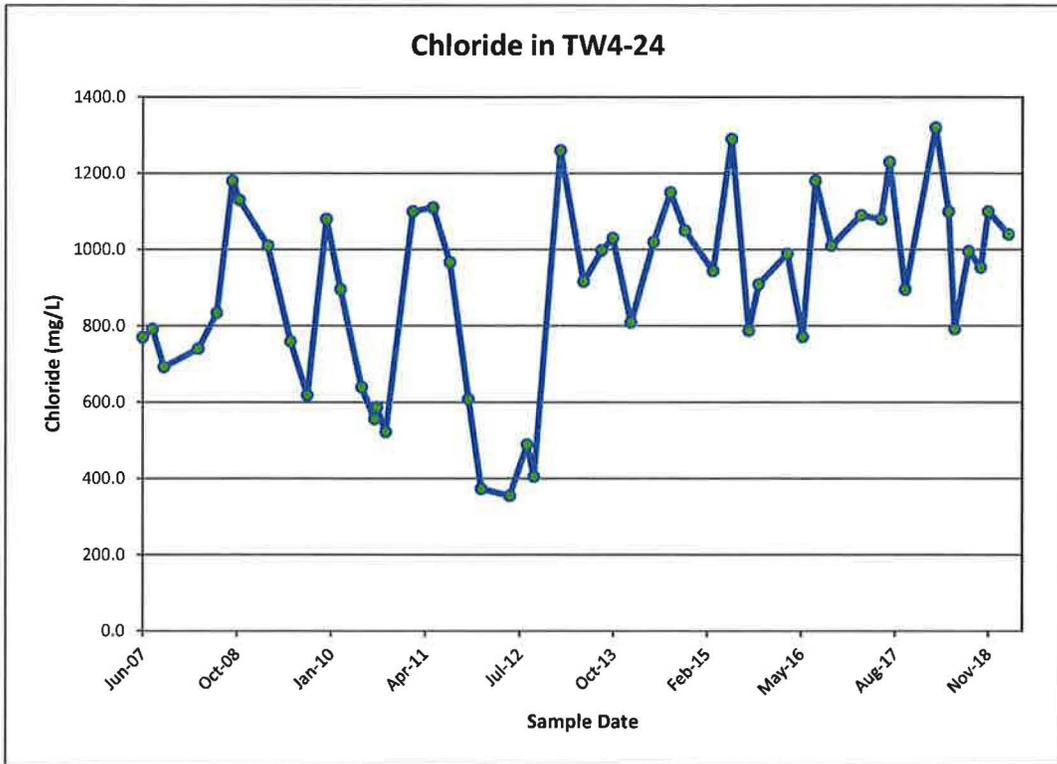
Time concentration plots for MW-40



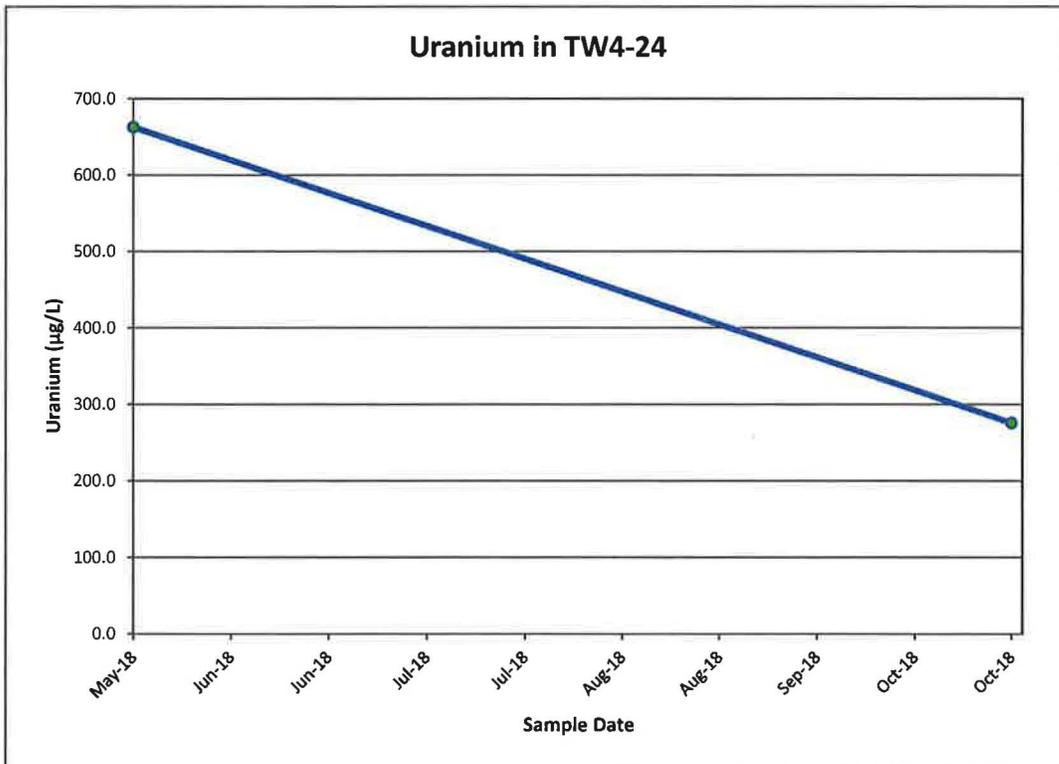
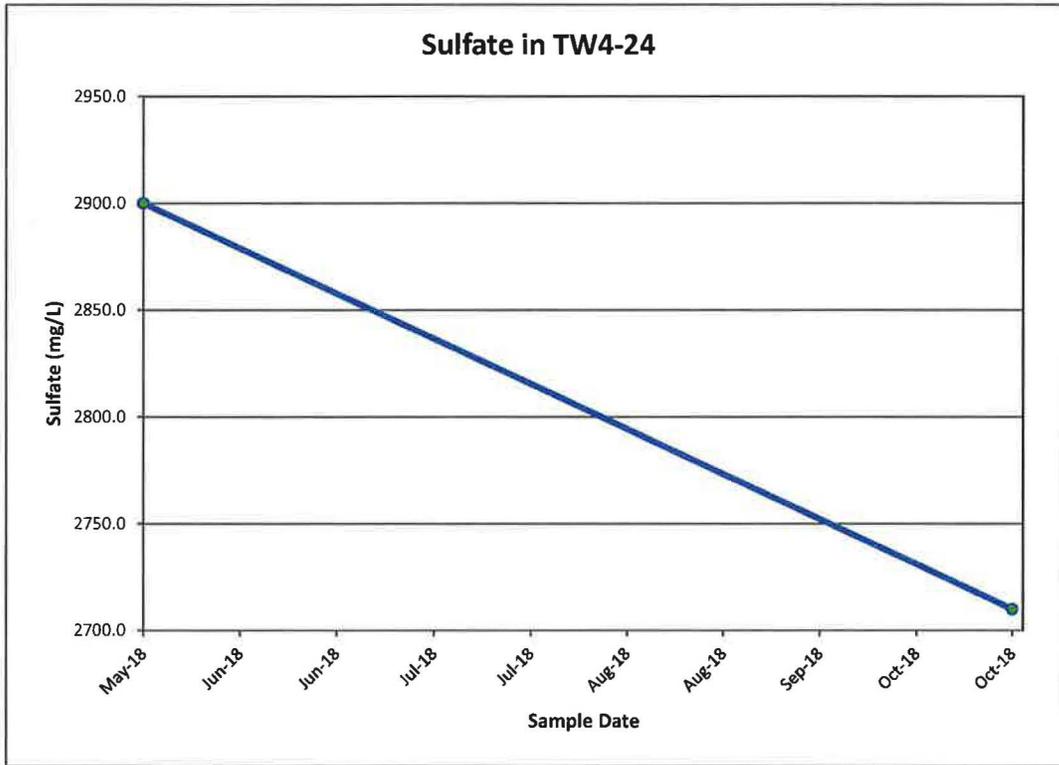
Time concentration plots for MW-40



Time concentration plots for TW4-24



Time concentration plots for TW4-24



Tab J

CSV Transmittal Letter

Kathy Weinel

From: Kathy Weinel
Sent: Friday, May 10, 2019 12:47 PM
To: Phillip Goble
Cc: 'Thomas Rushing'; David Frydenlund; Logan Shumway; Scott Bakken; Terry Slade; Paul Goranson
Subject: Transmittal of CSV Files White Mesa Mill 2019 Q1 Groundwater Monitoring
Attachments: Q1 2019 DTWs - All Programs.csv; Q1 2019 GW Analytical Data.csv; Q1 2019 GW Field Data.csv

Dear Mr. Goble,

Attached to this e-mail is an electronic copy of laboratory results for groundwater monitoring conducted at the White Mesa Mill during the first quarter of 2019, in Comma Separated Value (CSV) format.

Please contact me at 303-389-4134 if you have any questions on this transmittal.

Yours Truly

Kathy Weinel



Kathy Weinel
Quality Assurance Manager

t: 303.389.4134 | f: 303.389.4125
225 Union Blvd., Suite 600
Lakewood, CO 80228

<http://www.energyfuels.com>

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