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DRC-2020-003724

Div of Waste Management  
and Radiation Control

February 14, 2020

FEB 20 2020

**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 4th 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 4th 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'. The signature is written in a cursive style.

**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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Kathy Weinel  
Quality Assurance Manager

cc: William Paul Goranson  
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Scott Bakken  
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Terry Slade

**White Mesa Uranium Mill**  
**Groundwater Monitoring Report**

**State of Utah**  
**Groundwater Discharge Permit No. UGW370004**

**4th Quarter**  
**(October through December)**  
**2019**

Prepared by:



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

**February 14, 2020**

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## 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 fourth 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 quarterly, semi-annual 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 and the wells sampled semi-annually. Wells which are sampled routinely every quarter and semi-annually were analyzed for the parameters listed in Table 2 and Part I.E.1.d) 2)ii of the GWDP.

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.

There were several wells resampled during the period. The wells were resampled for the following reasons:

- Wells MW-02, MW-15 and MW-70 (duplicate of MW-15) were resampled due to laboratory issues.
- Wells MW-20 and 37 were resampled for Total Dissolved Solids (“TDS”) because of shipping issues. The TDS fractions were received at the laboratory outside of holding times.

## **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.

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).

## **2.1.3 Background Well Monitoring**

Monitor wells MW-38, MW-39, and MW-40 were installed in the first quarter 2018 pursuant to the GWDP Part 1.H.2 and quarterly sampling commenced in fourth quarter 2018. The GWDP Part 1.H.3 requires the completion of a background report for each of these wells after the completion of 8 quarters of sampling. The background reports and resultant Groundwater Compliance Limits (“GWCLs”) are to be calculated based on 8 statistically valid data points.

The statistical methods used for the background assessments and calculation of the GWCLs will be calculated as described in the GWDP Part 1.H.3.c.1), as approved by the Utah Division of Waste Management and Radiation Control (“DWMRC”).

The fourth quarter analytical results for MW-38, MW-39, and MW-40 are included in Tab E.

## **2.1.4 TW4-24**

Pursuant to the GWDP, Part 1.E.1.c).ii, semi-annual monitoring of TW4-24 commenced in the second quarter of 2018. TW4-24 is currently used as a pumping well for the nitrate corrective action, is located within the chloroform plume, and is expected to exceed groundwater quality standards for analytes associated with these projects. It is expected that monitoring results will be highly variable as a result of the pumping and should not be used for direct compliance purposes. Rising or decreasing trends in analytes caused solely by pumping should not be unexpected. Further, as background cannot be established for this pumping well, and given the variability of background concentrations across the site, analyte concentrations in TW4-24 may also vary widely from site ranges due to natural background variability and/or localized changes resulting from long-term pumping.

### **2.1.5 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. The accelerated monitoring samples were analyzed for a more limited and specific parameter list as shown in Table 2.

### **2.1.6 Groundwater Head Monitoring**

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

- The quarterly groundwater compliance monitoring wells (including MW-33 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 the 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 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, background groundwater quality has been determined on a well-by-well basis, as defined by the statistics contained in the Decision Tree/Flowchart used for the previous Background Reports that was conditionally approved by the DWMRC on August 24, 2007. GWCLs that reflect this background groundwater quality have been set for compliance monitoring wells.

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.

Exceedances of the GWCLs for this quarter are listed in Table 2 for sampling required under the revised GWDP. Accelerated requirements resulting from this quarter are highlighted for ease of reference. Table 3 documents the accelerated sampling program and shows the results and frequency of the accelerated sampling conducted.

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 March 19, 2019, which sets revised GWCLs, requirements to perform accelerated monitoring under Part I.G.1 of the previous GWDP ceased, effective March 19, 2019, and the effect of the issuance of the revised GWDP was to create a “clean slate” for most constituents going forward.

This means that accelerated monitoring during this quarter was required under the revised GWDP for only those constituents that exceeded the GWCLs since March 19, 2019.

#### **2.4.3 Compliance Status**

Analytes that have exceeded the GWCLs 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. A review of the accelerated data collected during the quarter is reported in EFRI’s Exceedance Notice for the quarter.

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 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, second, third and fourth 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.

In the fourth quarter 2018 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. Gross alpha results have been below the GWCL since the initial exceedance noted in the fourth quarter 2018.

In the second quarter 2019 the selenium result in MW-28 exceeded the GWCL. Selenium will be accelerated as required by the GWDP. The third quarter 2019 selenium result was below the GWCL and the fourth quarter selenium result exceeded the GWCL.

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:

Two duplicate samples were 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 month of accelerated sampling 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.

Six 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-20, MW-37 and MW-38 have dedicated pumps for purging and sampling and as such no rinsate blanks samples are required. MW-20, MW-37 and MW-38 were purged and sampled with a disposable bailer and no rinsate blank was 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 after 2 casing volumes were removed: MW-03A, MW-23 and MW-24.

Based upon the review of the Field Data Sheets, quarterly and semi-annually sampled locations conformed to the QAP requirement for purging using the two casing volume technique except for MW-20, MW-37 and MW-38. MW-20, MW-37 and MW-38 were evacuated to dryness before two casing volumes could be removed. MW-20, MW-37 and MW-38 have insufficient water to purge using a pump. Due to the small volume of water present, these wells are purged and sampled using a disposable bailer. MW-20, MW-37 and MW-38 conformed to the QAP, 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. MW-03A, MW-23, and MW-24 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 for well MW-03A, MW-23, and MW-24.

Additionally, two casing volumes were not purged from MW-26 and TW4-24, prior to sampling because MW-26 and TW4-24 are continuously pumped wells. 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 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-18, MW-19, MW-25, MW-26, MW-29, MW-31, MW-32, MW-36, MW-39 and TW4-24. Per the QAP, 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-11 and MW-25 in the November monthly event and MW-31 in the December monthly event. As previously noted, the QAP does not require that turbidity be less than 5 NTU. Turbidity measurements prior to sampling were within a 10% RPD for the accelerated sampling wells

The other field parameters (conductance, pH, redox potential, dissolved oxygen [DO] 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 is 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.

AWAL noted an exceeded holding time in the QC sample summary for a TDS laboratory duplicate. The analytical data for the parent sample were analyzed in holding time. There are no EFRI sample data affected by this missed 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 the reported value for the analyte was higher than the increased RL.

### **3.4.6 Trip Blank Evaluation**

The trip blank results were reviewed to identify any VOC sample contamination which is the result of sample handling and shipment. Trip blank evaluations are provided in Tab G. The trip blank results associated with the quarterly, semi-annual and accelerated samples were all nondetect for VOCs.

### **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.

Field duplicate sample results were assessed as required by the SOP. Duplicate results were within the acceptance limits specified in the QAP. Field duplicate results are shown in Attachment G.

The duplicate results were within a 20% RPD in the monthly 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 requires that when gross alpha results are reported with an activity equal to or greater than the GWCL the counting variance shall be 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-22, MW-31, and MW-36, 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, MW-22, does not have a GWCL and this second level check cannot be performed. MW-31 and MW-36 passed the secondary check. 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.

All of the radiologic duplicates were within acceptance limits. Results of quarterly, semi-annual, and accelerated radiologic sample QC are provided under Tab G.

### 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 were 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 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 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.

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 quarterly, semi-annual and accelerated method blank results were nondetect.

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 for the quarterly, semi-annual and accelerated samples 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 effects 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**

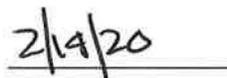
This document was prepared by Energy Fuels Resources (USA) Inc.

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 Q4 2019

Well	Normal Frequency	Purpose for sampling this quarter	Sample Date	Date of Lab Report
MW-01	Semi-annually	General Monitoring Well	10/22/19	(12/16/19) [11/25/19]
MW-02	Semi-annually	Semi-annually	10/23/19	(12/16/19) [11/25/19]
MW-02 Resample	Semi-annually	Semi-annually	11/22/19	(12/18/19)
MW-03A	Semi-annually	Semi-annually	11/06/19	(12/4/19) [12/6/19]
MW-05	Semi-annually	Semi-annually	10/23/19	(12/16/19) [11/25/19]
MW-11	Quarterly	Quarterly	10/15/19	(11/06/19) [11/25/19]
MW-12	Semi-annually	Semi-annually	10/23/19	(12/16/19) [11/25/19]
MW-14	Quarterly	Quarterly	10/09/19	(11/06/19) [11/11/19]
MW-15	Semi-annually	Semi-annually	10/28/19	(12/16/19) (12/19/19) [12/06/19]
MW-15 Resample	Semi-annually	Semi-annually	12/04/19	(12/17/19)
MW-17	Semi-annually	Semi-annually	10/23/19	(12/16/19) [11/25/19]
MW-18	Semi-annually	General Monitoring Well	10/15/19	(11/06/19) [11/25/19]
MW-19	Semi-annually	General Monitoring Well	10/14/19	(11/06/19) [11/25/19]
MW-20	Semi-annually	General Monitoring Well	11/22/19	(12/18/19) [01/02/20]
MW-20 Resample	Semi-annually	General Monitoring Well	12/04/19	(12/17/19)
MW-22	Semi-annually	General Monitoring Well	10/29/19	(12/16/19) (12/19/19) [12/06/19]
MW-23	Semi-annually	Semi-annually	10/29/19	(12/16/19) (12/19/19) [12/06/19]
MW-24	Semi-annually	Semi-annually	11/06/19	(12/04/19) [12/06/19]
MW-25	Quarterly	Quarterly	10/09/19	(11/06/19) [11/11/19]
MW-26	Quarterly	Quarterly	10/09/19	(11/06/19) [11/11/19]
MW-27	Semi-annually	Semi-annually	10/22/19	(12/16/19) [11/25/19]
MW-28	Semi-annually	Semi-annually	10/22/19	(12/16/19) [11/25/19]
MW-29	Semi-annually	Semi-annually	10/22/19	(12/16/19) [11/25/19]
MW-30	Quarterly	Quarterly	10/08/19	(11/06/19) [11/11/19]
MW-31	Quarterly	Quarterly	10/09/19	(11/06/19) [11/11/19]
MW-32	Semi-annually	Semi-annually	10/08/19	(11/06/19) [11/11/19]
MW-35	Semi-annually	Semi-annually	10/08/19	(11/06/19) [11/11/19]
MW-36	Quarterly	Quarterly	10/08/19	(11/06/19) [11/11/19]
MW-37	Semi-annually	Semi-annually	11/22/19	(12/18/19) [01/02/20]
MW-37 Resample	Semi-annually	Semi-annually	12/04/19	(12/17/19)
MW-38	Background	Background	11/06/19	(12/04/19) [12/06/19]
MW-39	Background	Background	10/29/19	(12/16/19) (12/19/19) [12/06/19]
MW-40	Background	Background	10/23/19	(12/16/19) [11/25/19]
TW4-24	Semi-annually	General Monitoring Well	10/09/19	(11/06/19) [11/11/19]
MW-65	1 per Batch	Duplicate of MW-14	10/09/19	(11/06/19) [11/11/19]
MW-70	1 per Batch	Duplicate of MW-15	10/28/19	(12/16/19) (12/19/19) [12/06/19]
MW-70 Resample	1 per Batch	Duplicate of MW-15	12/04/19	(12/17/19)
<b>Accelerated November Monthly</b>				
MW-11	Monthly	Accelerated	11/12/19	(12/04/19) (01/08/20)
MW-14	Monthly	Accelerated	11/13/19	(12/04/19) (01/08/20)
MW-25	Monthly	Accelerated	11/13/19	(12/04/19) (01/08/20)
MW-26	Monthly	Accelerated	11/13/19	(12/04/19) (01/08/20)
MW-30	Monthly	Accelerated	11/13/19	(12/04/19) (01/08/20)
MW-31	Monthly	Accelerated	11/12/19	(12/04/19) (01/08/20)
MW-36	Monthly	Accelerated	11/13/19	(12/04/19) (01/08/20)
MW-65	1 per Batch	Duplicate of MW-30	11/13/19	(12/04/19) (01/08/20)
<b>Accelerated December Monthly</b>				
MW-11	Monthly	Accelerated	12/03/19	(12/19/19)
MW-14	Monthly	Accelerated	12/03/19	(12/19/19)
MW-25	Monthly	Accelerated	12/04/19	(12/19/19)
MW-26	Monthly	Accelerated	12/04/19	(12/19/19)
MW-30	Monthly	Accelerated	12/04/19	(12/19/19)
MW-31	Monthly	Accelerated	12/03/19	(12/19/19)
MW-36	Monthly	Accelerated	12/03/19	(12/19/19)
MW-65	1 per Batch	Duplicate of MW-31	12/03/19	(12/19/19)

## Notes:

Multiple dates shown for a single laboratory depict resubmission dates for the data. Resubmissions were required to correct reporting errors. When multiple dates are shown for a single laboratory, the final submission date is shown in italics.

Dates in parenthesis depicts the date that data was reported by American West Laboratories (AWAL).

Dates in brackets are the date and data reported by 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
<b>Quarterly Wells Accelerated to Monthly Sampling</b>							
MW-11 (Class II)	Manganese (ug/L)	164.67	174	Quarterly	Monthly	Q2 2018	Q3 2018 (September)
	Chloride (mg/L)	39.16	48.4	Quarterly	Monthly	Q3 2019	Q4 2019 (November)
	Sulfate (mg/L)	1309	1410	Quarterly	Monthly	Q3 2019	Q4 2019 (November)
MW-14 (Class III)	Sulfate (mg/L)	2330	2450	Quarterly	Monthly	Q3 2019	Q4 2019 (November)
	Fluoride (mg/L)	0.22	0.248	Quarterly	Monthly	Q3 2019	Q4 2019 (November)
MW-25 (Class III)	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
MW-30 (Class II)	Nitrogen, Ammonia as N	0.92	0.938	Quarterly	Monthly	Q1 2019	May 2019
	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
MW-31 (Class III)	Uranium (ug/L)	8.32	8.57	Quarterly	Monthly	Q4 2013	March 2014
	Nitrate + Nitrite (as N) (mg/L)	5	21.7	Quarterly	Monthly	Q1 2010	May 2010
	Total Dissolved Solids (mg/L)	2132	2580	Quarterly	Monthly	Q3 2019	Q4 2019 (November)
	Sulfate (mg/L)	993	1150	Quarterly	Monthly	Q3 2019	Q4 2019 (November)
MW-36 (Class III)	Chloride (mg/L)	143	145	Quarterly	Monthly	Q1 2011	May 2011
	Sulfate (mg/L)	3146.21	3170	Quarterly	Monthly	Q3 2019	Q4 2019 (November)
	Field pH (S.U.)	6.49	6.35	Quarterly	Monthly	Q1 2019	May 2019
<b>Semi-Annual Wells Accelerated to Quarterly Sampling</b>							
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-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
	Manganese (ug/L)	7507	7700	Semi-Annually	Quarterly	Q4 2019	Q1 2020
	Fluoride (mg/L)	0.47	0.797	Semi-Annually	Quarterly	Q4 2018	Q3 2019
MW-27 (Class III)	Field pH (S.U.)	5.03	4.45	Semi-Annually	Quarterly	Q2 2018	Q3 2018 (September)
	Nitrate + Nitrite (as N) (mg/L)	5.6	5.8	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
	Selenium (ug/L)	11.1	12.4	Semi-Annually	Quarterly	Q2 2019	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
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 Q4 2019 sampling event.

Table 3 – GWCL Exceedances for Fourth Quarter 2019 under the March 19, 2019 GWDP

Monitoring Well (Water Class)	Constituent Exceeding GWCL	GWCL in March 19, 2019 GWDP	Q2 2019 Results						Q3 2019 Results						Q4 2019 Results					
			Q2 2019 Sample Date	Q2 2019 Result	May 2019 Monthly Sample Date	May 2019 Monthly Result	June 2019 Monthly Sample Date	June 2019 Monthly Result	Q3 2019 Sample Date	Q3 2019 Result	August 2019 Monthly Sample Date	August 2019 Monthly Result	Sept. 2019 Monthly Sample Date	Sept. 2019 Monthly Result	Q4 2019 Sample Date	Q4 2019 Result	November 2019 Monthly Sample Date	November 2019 Monthly Result	December 2019 Monthly Sample Date	December 2019 Monthly Result
<b>Required Quarterly Sampling Wells</b>																				
MW-11 (Class II)	Chloride (mg/L)	39.16		34		NA		NA		48.4		NA		NA		30.8		39.1		35.4
	Sulfate (mg/L)	1309	4/24/2019	1160	5/7/2019	NA	6/3/2019	NA	7/16/2019	1410	8/5/2019	NA	9/24/2019	NA	10/15/2019	1290	11/12/2019	1140	12/3/2019	1100
	Manganese (ug/L)	164.67		181		210		210		199		202		174		185		206		167
MW-14 (Class III)	Fluoride (mg/L)	0.22	4/23/2019	<0.100	NS	NA	NS	NA	7/15/2019	0.248	NS	NA	NS	NA	10/9/2019	<0.100	11/13/2019	0.127	12/3/2019	0.120
	Sulfate (mg/L)	2330		1780		NA		NA		2450		NA		NA		2180		2110		2120
MW-25 (Class III)	Cadmium (ug/L)	1.5	4/10/2019	1.30	5/8/2019	1.41	6/4/2019	1.47	7/15/2019	1.23	8/6/2019	1.37	9/23/2019	1.38	10/9/2019	1.45	11/13/2019	1.36	12/4/2019	1.45
MW-26 (Class III)	Nitrate + Nitrite (as N) (mg/L)	0.62		3.00		0.986		3.16		2.06		3.10		1.59		2.35		2.90		2.32
	Chloroform (ug/L)	70		4140		1140		778		3110		1090		1540		1710		1280		1110
	Chloride (mg/L)	58.31	4/24/2019	82.0	5/7/2019	73.0	6/4/2019	72.6	7/16/2019	75.2	8/6/2019	83.5	9/24/2019	62.1	10/9/2019	73.8	11/13/2019	62.3	12/4/2019	57.7
	Methylene Chloride (ug/L)	5		4.16		1.69		<1.00		10.7		1.12		3.35		2.95		1.73		2.64
	Nitrogen, Ammonia as N	0.92		0.104		0.479		0.0919		0.357		0.164		0.496		0.273		0.178		0.207
MW-30 (Class II)	Nitrate + Nitrite (as N) (mg/L)	2.5		18.5		17.9		15.8		19.3		15.8		17.9		18.2		17.2		17.8
	Chloride (mg/L)	128		138		175		165		181		190		176		170		180		185
	Selenium (ug/L)	47.2	4/9/2019	53.6	5/7/2019	47.1	6/3/2019	49.9	7/16/2019	48.4	8/6/2019	50.9	9/24/2019	49.1	10/8/2019	56.8	11/13/2019	47.8	12/4/2019	56.4
	Uranium (ug/L)	8.32		8.62		8.15		8.88		9.03		9.39		8.12		8.69		9.29		8.99
	Field pH (S.U.)	6.47 - 8.5		7.06		7.00		7.12		6.86		7.42		7.00		7.16		7.21		7.22
MW-31 (Class III)	Nitrate + Nitrite (as N) (mg/L)	5		19.7		18.9		19.7		19.8		17.0		19.5		19.8		18.8		18.3
	Sulfate (mg/L)	993	4/10/2019	917	5/7/2019	NA	6/3/2019	NA	7/15/2019	1150	8/5/2019	NA	9/23/2019	NA	10/9/2019	1010	11/12/2019	990	12/3/2019	1020
	TDS (mg/L)	2132		2080		NA		NA		2580		NA		NA		2280		2650		2030
	Chloride (mg/L)	143		294		346		325		374		372		365		318		338		343
MW-36 (Class III)	Sulfate (mg/L)	3146.21	4/18/2019	2470	5/21/2019	NA	6/3/2019	NA	7/16/2019	3170	8/6/2019	NA	9/23/2019	NA	10/8/2019	2850	11/13/2019	2590	12/3/2019	2710
	Field pH (S.U.)	6.49 - 8.5		7.05		6.73		7.01		6.60		7.33		6.92		7.05		7.09		7.24
<b>Required Semi-Annual Sampling Wells</b>																				
MW-12 (Class III)	Uranium (ug/L)	23.5	4/25/2019	23.2	NS	NA	NS	NA	7/11/2019	23.1	NS	NA	NS	NA	10/23/2019	21.6	NS	NA	NS	NA
MW-24 (Class III)	Beryllium (ug/L)	2		2.83		NA		NA		2.94		NA		NA		3.25		NA		NA
	Cadmium (ug/L)	6.43		8.24		NA		NA		8.37		NA		NA		9.31		NA		NA
	Fluoride (mg/L)	0.47		0.839		NA		NA		0.996		NA		NA		0.667		NA		NA
	Nickel (mg/L)	50	5/2/2019	63.9	NS	NA	NS	NA	7/18/2019	70.6	NS	NA	NS	NA	11/6/2019	75.4	NS	NA	NS	NA
	Manganese (ug/L)	7507		7020		NA		NA		NA		NA		NA		7700		NA		NA
	Thallium (ug/L)	2.01		2.73		NA		NA		2.61		NA		NA		2.88		NA		NA
	Field pH (S.U.)	5.03 - 8.5		4.53		NA		NA		5.03		NA		NA		5.19		NA		NA
MW-27 (Class III)	Nitrate + Nitrite (as N) (mg/L)	5.6	4/23/2019	6.33	NS	NA	NS	NA	7/12/2019 8/15/2019	6.50	NS	NA	NS	NA	10/22/2019	6.27	NS	NA	NS	NA
MW-28 (Class III)	Chloride (mg/L)	105		165		NA		NA		133		NA		NA		149		NA		NA
	Selenium (ug/L)	11.1	4/24/2019	12.4	NS	NA	NS	NA	7/12/2019	10.6	NS	NA	NS	NA	10/22/2019	16.5	NS	NA	NS	NA
	Gross Alpha (pCi/L)	2.42		1.94		NA		NA	8/16/2019	1.20		NA		NA		<1.00		NA		NA
	Uranium (ug/L)	4.9		9.60		NA		NA		7.83		NA		NA		12.4		NA		NA
MW-32 (Class III)	Chloride (mg/L)	35.39	4/9/2019	34.5	NS	NA	NS	NA	8/15/2019	35.7	NS	NA	NS	NA	10/8/2019	35.3	NS	NA	NS	NA
MW-35 (Class II)	Nitrogen, Ammonia as N	0.14	4/18/2019	0.0634	NS	NA	NS	NA	7/11/2019	0.0935	NS	NA	NS	NA	10/8/2019	<0.0500	NS	NA	NS	NA

Notes:

NS= Not Required and Not Sampled

NA= Not Applicable

Exceedances are shown in yellow

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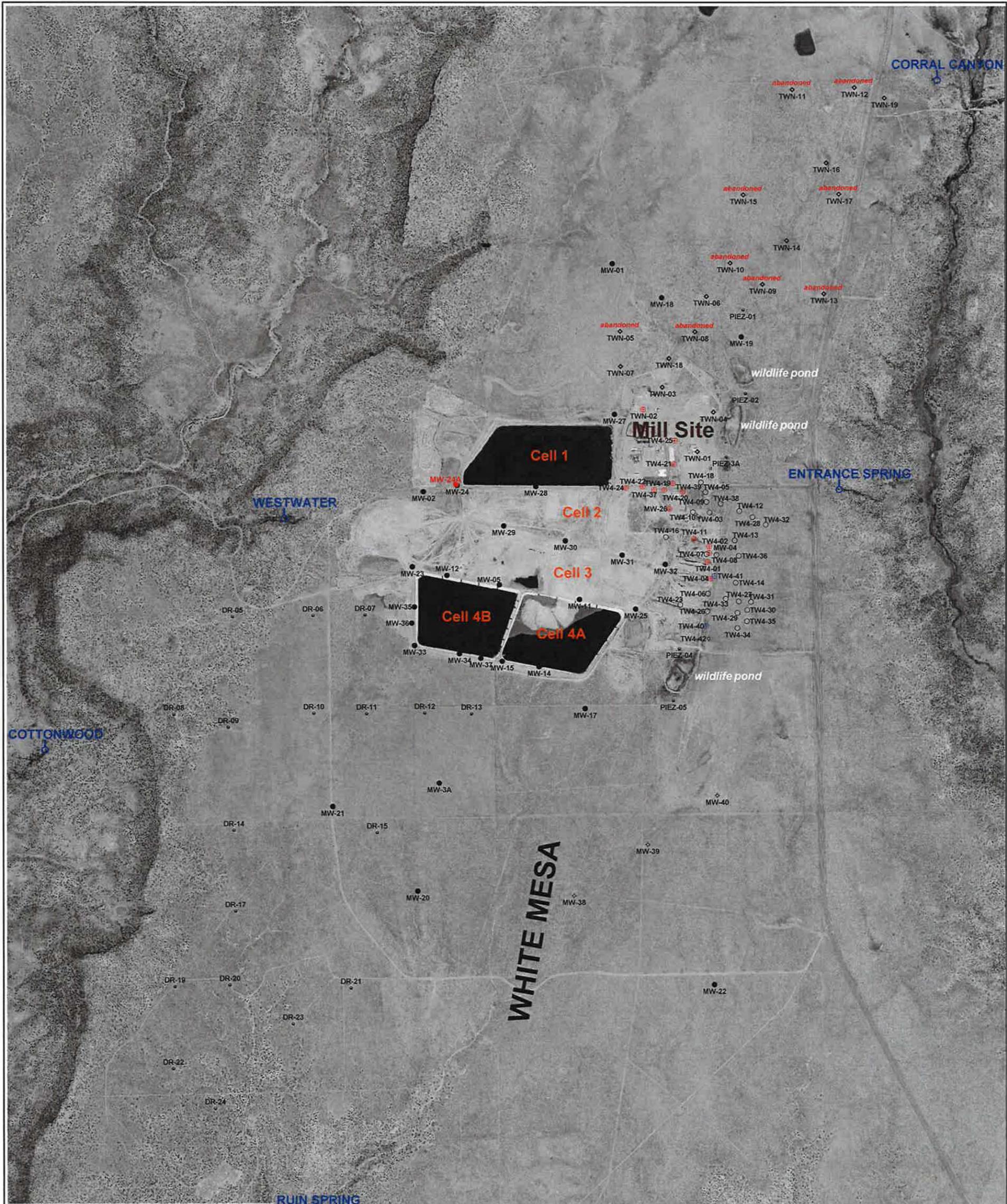
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Tab A

Site Plan and Perched Well Locations White Mesa Site



**EXPLANATION**

- MW-24A perched monitoring well installed December 2019
- TW4-42 temporary perched monitoring well installed April 2019
- ⊕ TW4-40 perched chloroform pumping well installed February 2018
- ⊕ TW4-19 perched chloroform or nitrate pumping well
- ⊕ MW-38 perched monitoring well installed February 2018
- MW-5 perched monitoring well
- TW4-12 temporary perched monitoring well
- ◇ TWN-7 temporary perched nitrate monitoring well
- PIEZ-1 perched piezometer
- ♁ RUIN SPRING seep or spring



**HYDRO  
GEO  
CHEM, INC.**

**WHITE MESA SITE PLAN SHOWING LOCATIONS OF  
PERCHED WELLS AND PIEZOMETERS**

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/aug19/Uwelloc1219.srf	A-1

Tab B

Field Data Worksheets Quarterly Sampling



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-01
Field Sample ID	MW-01_10222019
Purge Date & Time	10/22/2019 7:00
Sample Date & Time	10/22/2019 10:00

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

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

Weather Conditions	Clear
External Ambient Temperature (C)	3
Previous Well Sampled	MW-27

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	19.41
Calculated Casing Volumes Purge Duration (min)	178.93
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	118.00
Well Casing Diameter (in)	3
Depth to Water Before Purging (ft)	65.10

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/22/2019 9:57	38.40	1773	7.32	14.35	251	1.5	12.1	
10/22/2019 9:58	38.62	1774	7.32	14.36	248	1.5	12.0	
10/22/2019 9:59	38.84	1775	7.32	14.35	246	1.5	12.1	
10/22/2019 10:00	39.06	1773	7.32	14.32	245	1.5	12.0	

Volume of water purged (gals)	39.06
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Final Depth to Water (feet)	98.23
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Name of Certified Analytical Laboratory	GEL
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**Pumping Rate Calculations**

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	180.00
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?
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y
General Inorganics	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
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
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y

**Comments:**

Arrived on site at 0656. Purge began at 0700. Purged well for a total of 180 minutes. Purge ended and samples collected at 1000. Water was clear. Left site at 1010.

**Signature of Field Technician**

*Danner Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-02
Field Sample ID	MW-02_10232019
Purge Date & Time	10/23/2019 6:35
Sample Date & Time	10/23/2019 8:35
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	12.42
Calculated Casing Volumes Purge Duration (min)	114.53
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Clear
External Ambient Temperature (C)	2
Previous Well Sampled	MW-40

Well Depth (ft)	128.80
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	109.77

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/23/2019 8:32	25.38	3571	7.30	14.23	409	0	37.5	
10/23/2019 8:33	25.60	3577	7.29	14.20	408	0	37.1	
10/23/2019 8:34	25.82	3574	7.30	14.13	407	0	36.7	
10/23/2019 8:35	26.04	3574	7.29	14.06	406	0	36.5	

Volume of water purged (gals)	26.04
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Final Depth to Water (feet)	118.83
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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)	120.00
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 0630. Purge began at 0635. Purged well for a total of 120 minutes. Purge ended and samples collected at 0835. Water was clear. Left site at 0845.

**Signature of Field Technician**

*Darrell Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-02
Field Sample ID	MW-02_11222019
Purge Date & Time	11/22/2019 10:55
Sample Date & Time	11/22/2019 12:55
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	12.50
Calculated Casing Volumes Purge Duration (min)	115.25
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 Resample
Sampler	TH/DL
Weather Conditions	Cloudy
External Ambient Temperature (C)	7
Previous Well Sampled	MW-15

Well Depth (ft)	128.80
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	109.65

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/22/2019 12:52	25.38	3619	7.35	13.97	425	0	27.1	
11/22/2019 12:53	25.60	3607	7.36	13.93	425	0	27.1	
11/22/2019 12:54	25.82	3604	7.37	13.96	425	0	26.8	
11/22/2019 12:55	26.04	3605	7.36	13.96	425	0	26.6	

Volume of water purged (gals)	26.04
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Final Depth to Water (feet)	118.89
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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?
Fluoride	Y	WATER	1	250-mL HDPE	U	None	N

**Pumping Rate Calculations**

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	120.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ( )	0

**Comments:**

Arrived on site at 1052. Purge began at 1055. Purged well for a total of 120 minutes. Purge ended and sample collected at 1255. Water was clear. Left site at 1259.

**Signature of Field Technician**

*Summer Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-03A
Field Sample ID	MW-03A_11062019
Purge Date & Time	11/5/2019 10:05
Sample Date & Time	11/6/2019 8:30
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	7.01
Calculated Casing Volumes Purge Duration (min)	67.49
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	11
Previous Well Sampled	MW-37

Well Depth (ft)	95.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	84.25

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/5/2019 11:15	14.56	5824	6.84	14.20	458	1.8	74.6	
11/6/2019 8:29		5785	6.76	14.33				Before
11/6/2019 8:40		5791	6.81	14.31				After

Volume of water purged (gals)	14.56
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Final Depth to Water (feet)	93.10
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Name of Certified Analytical Laboratory	AWSL
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**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 0959. Purge began at 1005. Purged well for a total of 70 minutes. Purged well dry. Water was clear. Purge ended at 1115. Left site at 1115. Arrived on site at 0826. Depth to water was 87.45. Samples collected at 0830. Left site at 0841.

**Signature of Field Technician**

*Jarvis Holliday*

**Pumping Rate Calculations**

Flow Rate (Q = S/60) (gal/min)	.208
Time to evacuate 2 Casing Volumes (min)	70.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness (gals)	14.56



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-05
Field Sample ID	MW-05_10232019
Purge Date & Time	10/23/2019 8:50
Sample Date & Time	10/23/2019 12:10
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

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Partly cloudy
External Ambient Temperature (C)	7
Previous Well Sampled	MW-02

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	DO	Before/After
10/23/2019 12:07	42.74	2804	7.64	14.80	360	0	12.2	
10/23/2019 12:08	42.96	2805	7.64	14.75	352	0	11.9	
10/23/2019 12:09	43.18	2804	7.65	14.71	345	0	11.9	
10/23/2019 12:10	43.40	2804	7.65	14.70	339	0	11.9	

Volume of water purged (gals)	43.40
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Final Depth to Water (feet)	125.40
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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?
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 0847. Purge began at 0850. Purged well for a total of 200 minutes. Purge ended and samples collected at 1210. Water was clear. Left site at 1219.

**Signature of Field Technician**

*Jarvis Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-11
Field Sample ID	MW-11_10152019
Purge Date & Time	10/15/2019 9:30
Sample Date & Time	10/15/2019 14:00

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Sunny
External Ambient Temperature (C)	13
Previous Well Sampled	MW-23

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	29.05
Calculated Casing Volumes Purge Duration (min)	267.82
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)	85.50

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/15/2019 13:57	57.93	2874	7.62	14.90	395	0	7.2	
10/15/2019 13:58	58.15	2882	7.63	14.92	390	0	7.0	
10/15/2019 13:59	58.37	2881	7.63	14.95	385	0	7.0	
10/15/2019 14:00	58.59	2880	7.64	14.97	378	0	6.9	

Volume of water purged (gals)	58.59
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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)	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 0925. Purge began at 0930. Purged well for a total of 270 minutes. Purge ended and samples collected at 1400. Water was clear. Left site at 1410.

**Signature of Field Technician**

*Danner Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-12
Field Sample ID	MW-12_10232019
Purge Date & Time	10/23/2019 12:25
Sample Date & Time	10/23/2019 14:45

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	14.69
Calculated Casing Volumes Purge Duration (min)	135.41
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Partly cloudy
External Ambient Temperature (C)	15
Previous Well Sampled	MW-17

Well Depth (ft)	130.40
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	107.90

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/23/2019 14:42	29.72	4090	6.78	15.02	405	0	14.6	
10/23/2019 14:43	29.94	4082	6.78	15.02	405	0	14.6	
10/23/2019 14:44	30.16	4099	6.78	15.01	404	0	14.7	
10/23/2019 14:45	30.38	4097	6.79	15.02	403	0	14.8	

Volume of water purged (gals)	30.38
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Final Depth to Water (feet)	121.98
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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)	140.00
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 1222. Purge began at 1225. Purged well for a total of 140 minutes. Purge ended and samples collected at 1445. Water was clear. Left site at 1454.

**Signature of Field Technician**

*Turner Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-14
Field Sample ID	MW-14_10092019
Purge Date & Time	10/9/2019 10:45
Sample Date & Time	10/9/2019 13:45
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	17.41
Calculated Casing Volumes Purge Duration (min)	160.51
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	15
Previous Well Sampled	MW-26

Well Depth (ft)	128.70
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	102.03

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/9/2019 13:42	38.40	3817	6.78	15.10	391	4.7	1.4	
10/9/2019 13:43	38.62	3805	6.79	14.95	388	4.8	1.3	
10/9/2019 13:44	38.84	3806	6.79	15.00	386	4.9	1.3	
10/9/2019 13:45	39.06	3809	6.79	14.99	385	4.9	1.3	

Volume of water purged (gals)	39.06
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Final Depth to Water (feet)	102.34
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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)	180.00
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 1042. Purge began at 1045. Purged well for a total of 180 minutes. Purge ended and samples collected at 1345. Water was clear. Left site at 1359.

**Signature of Field Technician**

*Juanita Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-15
Field Sample ID	MW-15_10282019
Purge Date & Time	10/28/2019 10:15
Sample Date & Time	10/28/2019 13:35
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	20.54
Calculated Casing Volumes Purge Duration (min)	189.40
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Clear
External Ambient Temperature (C)	-3
Previous Well Sampled	MW-12

Well Depth (ft)	137.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	105.53

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/28/2019 13:32	42.74	4142	7.01	14.64	423	0	20.0	
10/28/2019 13:33	42.96	4150	7.01	14.70	424	0	20.0	
10/28/2019 13:34	43.18	4152	7.01	14.71	425	0	19.9	
10/28/2019 13:35	43.40	4149	7.02	14.70	426	0	19.8	

Volume of water purged (gals)	43.40
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Final Depth to Water (feet)	108.30
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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)	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 - 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 1010. Purge began at 1015. Purged well for a total of 200 minutes. Purge ended and samples collected at 1335. Water was clear. Left site at 1350.

Signature of Field Technician

*Turner Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-15
Field Sample ID	MW-15_12042019
Purge Date & Time	12/4/2019 7:55
Sample Date & Time	12/4/2019 11:15
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	20.45
Calculated Casing Volumes Purge Duration (min)	188.49
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 Resample - 2
Sampler	TH/DL
Weather Conditions	Cloudy
External Ambient Temperature (C)	1
Previous Well Sampled	N/A

Well Depth (ft)	137.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	105.68

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
12/4/2019 11:12	42.74	4104	6.95	14.39	397	0	26.0	
12/4/2019 11:13	42.96	4103	6.97	14.39	396	0	24.8	
12/4/2019 11:14	43.18	4101	6.98	14.40	395	0	25.0	
12/4/2019 11:15	43.40	4103	6.98	14.42	394	0	24.8	

Volume of water purged (gals)	43.40
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Final Depth to Water (feet)	108.37
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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?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y

**Comments:**

Arrived on site at 0750. Purge began at 0755. Purged well for a total of 200 minutes. Purge ended and samples collected at 1115. Water was clear. Left site at 1120.

**Signature of Field Technician**

*James Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-17
Field Sample ID	MW-17_10232019
Purge Date & Time	10/23/2019 10:45
Sample Date & Time	10/23/2019 14:50

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Partly cloudy
External Ambient Temperature (C)	11
Previous Well Sampled	MW-05

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	26.15
Calculated Casing Volumes Purge Duration (min)	241.03
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	112.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	71.95

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/23/2019 14:47	52.51	3614	7.03	14.85	399	0	8.3	
10/23/2019 14:48	52.73	3611	7.03	14.77	398	0	8.3	
10/23/2019 14:49	52.94	3613	7.04	14.76	398	0	8.1	
10/23/2019 14:50	53.16	3614	7.04	14.75	398	0	8.1	

Volume of water purged (gals)	53.16
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Final Depth to Water (feet)	85.30
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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)	245.00
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 1040. Purge began at 1045. Purged well for a total of 245 minutes. Purge ended and samples collected at 1450. Water was clear. Left site at 1500.

**Signature of Field Technician**

*Jarvis Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-18
Field Sample ID	MW-18_10152019
Purge Date & Time	10/15/2019 6:30
Sample Date & Time	10/15/2019 12:40

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	39.53
Calculated Casing Volumes Purge Duration (min)	364.41
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Clear
External Ambient Temperature (C)	4
Previous Well Sampled	MW-19

Well Depth (ft)	134.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	73.45

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/15/2019 12:37	79.63	60.4	6.70	15.02	378	5.9	1.2	
10/15/2019 12:38	79.85	56.9	6.70	14.99	375	5.7	1.0	
10/15/2019 12:39	80.07	55.2	6.70	14.95	372	5.8	1.0	
10/15/2019 12:40	80.29	56.3	6.71	14.97	370	5.9	1.0	

Volume of water purged (gals)	80.29
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Final Depth to Water (feet)	76.32
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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?
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 0625. Purge began at 0630. Purged well for a total of 370 minutes. Purge ended and samples collected at 1240. Water was mostly clear. Left site at 1250.

**Signature of Field Technician**

*Jurnee Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-19
Field Sample ID	MW-19_10142019
Purge Date & Time	10/14/2019 6:30
Sample Date & Time	10/14/2019 15:30

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	54.88
Calculated Casing Volumes Purge Duration (min)	505.84
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Clear
External Ambient Temperature (C)	4
Previous Well Sampled	MW-14

Well Depth (ft)	149.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	64.95

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/14/2019 15:27	116.52	1284	7.11	15.15	352	103	110.0	
10/14/2019 15:28	116.74	1281	7.11	15.13	373	115	106.0	
10/14/2019 15:29	116.96	1281	7.11	15.05	383	110	105.6	
10/14/2019 15:30	117.18	1271	7.11	15.05	388	111	103.4	

Volume of water purged (gals)	117.18
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Final Depth to Water (feet)	76.67
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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)	540.00
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 0625. Purge began at 0630. Purged well for a total of 540 minutes. Purge ended and samples collected at 1530. Water was mostly clear but had tiny little bubbles surfacing. Left site at 1540.

**Signature of Field Technician**

*Duane Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-20
Field Sample ID	MW-20_11222019
Purge Date & Time	11/5/2019 10:13
Sample Date & Time	11/22/2019 14:00

Purging Equipment	Bailer
Pump Type	Grundfos
Purging Method	2 Casings
Casing Volume (gal)	5.19
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 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Sunny
External Ambient Temperature (C)	11
Previous Well Sampled	MW-03A

Well Depth (ft)	92.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	84.05

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/5/2019 10:21	6.00	6225	7.36	14.07	480	27.0	80.1	
11/22/2019 14:00		5437	7.50	14.30				Before
11/22/2019 14:06		5440	7.48	14.27				After

Volume of water purged (gals)	7.00
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Final Depth to Water (feet)	91.95
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Name of Certified Analytical Laboratory	AWSL
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**Pumping Rate Calculations**

Flow Rate (Q = S/60) ( )	
Time to evacuate 2 Casing Volumes ( )	
Number of casing Volumes	1.34
Volume, if well evacuated to dryness (gals)	7.00

**Analytical Samples Information**

Type of Sample/Analysis	Sample Collected?	Matrix	Container		Sample Filtered?	Preservative	
			Number	Type		Type	Added?
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 1010. Bailing began at 1013. Bailed a total of 7 gallons from well. Bailed well dry. Water was murky with some sand particles. Left site at 1029. Arrived on site at 1355. Depth to water was 89.58. Samples bailed and collected at 1400. Left site at 1410.

**Signature of Field Technician**

*James Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-20
Field Sample ID	MW-20_12042019
Purge Date & Time	12/4/2019 9:59
Sample Date & Time	12/4/2019 10:00

Purging Equipment	Bailer
Pump Type	Grundfos
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	2019 Q4 Resample - 2

Sampler	TH/DL
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Weather Conditions	Cloudy
External Ambient Temperature (C)	4
Previous Well Sampled	MW-15

Well Depth (ft)	92.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	90.10

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
12/4/2019 10:00		5433	7.64	14.00				Before
12/4/2019 10:02		5446	7.69	13.95				After

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 ( )	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

**Comments:**

Arrived on site at 0955. Depth to water was 90.10. Samples bailed and collected at 1000. Left site at 1005.

**Signature of Field Technician**

*Janner Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-22
Field Sample ID	MW-22_10292019
Purge Date & Time	10/29/2019 7:25
Sample Date & Time	10/29/2019 12:25

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	31.13
Calculated Casing Volumes Purge Duration (min)	286.95
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Partly cloudy
External Ambient Temperature (C)	0
Previous Well Sampled	MW-15

Well Depth (ft)	114.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	66.32

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/29/2019 12:22	64.44	7416	4.82	14.80	435	2.1	8.9	
10/29/2019 12:23	64.66	7402	4.83	14.76	447	2.6	8.5	
10/29/2019 12:24	64.88	7379	4.83	14.80	459	2.5	8.0	
10/29/2019 12:25	65.10	7358	4.84	14.79	472	2.4	7.9	

Volume of water purged (gals)	65.10
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Final Depth to Water (feet)	97.56
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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)	300.00
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 0720. Purge began at 0725. Purged well for a total total of 300 minutes. Purge ended and samples collected at 1225. Water was mostly clear. Left site at 1235.

**Signature of Field Technician**

*Janice Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-23
Field Sample ID	MW-23_10292019
Purge Date & Time	10/28/2019 7:00
Sample Date & Time	10/29/2019 13:30

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Partly Cloudy
External Ambient Temperature ( )	0
Previous Well Sampled	

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume ( )	11.80
Calculated Casing Volumes Purge Duration ( )	113.46
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance ( )	1000

Well Depth (ft)	132.00
Well Casing Diameter ( )	4
Depth to Water Before Purging (ft)	113.93

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/15/2019 9:00	24.96	3991	7.02	16.71	344	7.0	48.6	
10/29/2019 13:29		1538	7.06	14.30				Before
10/29/2019 13:41		1535	7.04	14.23				After

Volume of water purged ( )	24.96
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Final Depth to Water (feet)	128.50
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Name of Certified Analytical Laboratory	
AWSL	

**Pumping Rate Calculations**

Flow Rate (Q = S/60) ( )	0.208
Time to evacuate 2 Casing Volumes ( )	120.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ( )	24.96

**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 0655. Purge began at 0700. Purged well for a total of 120 minutes. Purged well dry. Purge ended at 0900. Water was clear. Left site at 0904. Arrived on site at 1325. Depth to water was 120.25. Samples collected at 1330. Left site at 1345.

**Signature of Field Technician**

*Janner Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-24
Field Sample ID	MW-24_11062019
Purge Date & Time	11/5/2019 8:43
Sample Date & Time	11/6/2019 8:00

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Sunny
External Ambient Temperature (C)	9
Previous Well Sampled	MW-22

Purging Equipment	Bailer
Pump Type	Grundfos
Purging Method	2 Casings
Casing Volume (gal)	5.62
Calculated Casing Volumes Purge Duration ( )	
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	120.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	111.38

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/5/2019 8:53	6.00	3973	5.26	14.80	431	120.1	81.2	
11/6/2019 7:59		4419	5.20	15.20				Before
11/6/2019 8:05		4410	5.19	15.23				After

Volume of water purged (gals)	11.00
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Final Depth to Water (feet)	120.00
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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	1.95
Volume, if well evacuated to dryness (gals)	11.00

**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 0840. Bailing began at 0843. Bailed a total of 11 gallons from well. Well ran dry. Water started clear and ended with a grey brown coloration with some sand particles. Left site at 0909. Arrived on site at 0755. Depth to water was 111.36. Samples bailed and collected at 0800. Left site at 0808.

**Signature of Field Technician**

*Juanee Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-25
Field Sample ID	MW-25_10092019
Purge Date & Time	10/9/2019 6:50
Sample Date & Time	10/9/2019 10:30

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Clear
External Ambient Temperature (C)	3
Previous Well Sampled	MW-36

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	23.01
Calculated Casing Volumes Purge Duration (min)	212.14
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	115.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	79.75

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/9/2019 10:27	47.08	3096	6.87	14.95	335	795	4.0	
10/9/2019 10:28	47.30	3089	6.86	14.85	337	800	3.5	
10/9/2019 10:29	47.52	3095	6.87	14.86	338	805	3.3	
10/9/2019 10:30	47.74	3096	6.87	14.81	339	814	3.2	

Volume of water purged (gals)	47.74
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Final Depth to Water (feet)	81.72
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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 0645. Purge began at 0650. Purged well for a total of 220 minutes. Purge ended and samples collected at 1030. Water was a little murky with little tiny air bubbles surfacing. Left site at 1040.

**Signature of Field Technician**

*Jarnee Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-26
Field Sample ID	MW-26_10092019
Purge Date & Time	10/9/2019 9:59
Sample Date & Time	10/9/2019 10:00

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Sunny
External Ambient Temperature (C)	15
Previous Well Sampled	MW-31

Purging Equipment	Pump
Pump Type	Grundfos
Purging Method	2 Casings
Casing Volume (gal)	31.99
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)	72.34

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/9/2019 9:59		3419	6.75	16.60	374	5.1	33.0	

Volume of water purged ( )	
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Final Depth to Water (feet)	110.45
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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 0955. Samples collected at 1000. Water was mostly clear. Left site at 1005.

**Signature of Field Technician**

*Darrell Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-27
Field Sample ID	MW-27_10222019
Purge Date & Time	10/22/2019 6:30
Sample Date & Time	10/22/2019 10:30

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Clear
External Ambient Temperature (C)	2
Previous Well Sampled	MW-11

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	24.76
Calculated Casing Volumes Purge Duration (min)	228.27
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	95.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	57.07

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/22/2019 10:27	51.42	1081	7.58	15.05	396	0	106.4	
10/22/2019 10:28	51.64	1081	7.59	15.02	401	0	106.9	
10/22/2019 10:29	51.86	1081	7.60	15.03	405	0	106.5	
10/22/2019 10:30	52.08	1083	7.60	15.02	409	0	106.5	

Volume of water purged (gals)	52.08
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Final Depth to Water (feet)	58.65
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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)	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 0625. Purge began at 0630. Purged well for a total of 240 minutes. Purge ended and samples collected at 1030. Water was clear. Left site at 1041.

**Signature of Field Technician**

*Jarvis Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-28
Field Sample ID	MW-28_10222019
Purge Date & Time	10/22/2019 10:25
Sample Date & Time	10/22/2019 14:05

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Sunny
External Ambient Temperature (C)	10
Previous Well Sampled	MW-01

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	22.85
Calculated Casing Volumes Purge Duration (min)	210.64
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)	75.00

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/22/2019 14:02	47.08	4058	6.35	15.22	388	0	32.9	
10/22/2019 14:03	47.30	4060	6.35	15.20	388	0	33.5	
10/22/2019 14:04	47.52	4061	6.36	15.17	390	0	33.5	
10/22/2019 14:05	47.74	4067	6.37	15.20	390	0	33.1	

Volume of water purged (gals)	47.74
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Final Depth to Water (feet)	78.90
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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 1021. Purge began at 1025. Purged well for a total of 220 minutes. Purge ended and samples collected at 1405. Water was clear. Left site at 1415.

**Signature of Field Technician**

*Janner Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-29
Field Sample ID	MW-29_10222019
Purge Date & Time	10/22/2019 10:55
Sample Date & Time	10/22/2019 13:45
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	17.63
Calculated Casing Volumes Purge Duration (min)	162.49
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	11
Previous Well Sampled	MW-28

Well Depth (ft)	135.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	108.00

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/22/2019 13:42	36.23	4482	6.63	14.62	294	10.0	7.6	
10/22/2019 13:43	36.45	4477	6.63	14.61	288	7.6	6.9	
10/22/2019 13:44	36.67	4472	6.63	14.62	284	8.0	6.8	
10/22/2019 13:45	36.89	4471	6.63	14.62	282	8.1	6.8	

Volume of water purged (gals)	36.89
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Final Depth to Water (feet)	110.65
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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)	170.00
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 1050. Purge began at 1055. Purged well for a total of 170 minutes. Purge ended and samples collected at 1345. Water was mostly clear. Left site at 1355.

Signature of Field Technician

*Darnee Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-30
Field Sample ID	MW-30_10082019
Purge Date & Time	10/8/2019 7:40
Sample Date & Time	10/8/2019 11:20

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	22.82
Calculated Casing Volumes Purge Duration (min)	210.34
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Sunny
External Ambient Temperature (C)	4
Previous Well Sampled	MW-32

Well Depth (ft)	110.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	75.05

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/8/2019 11:17	47.08	2127	7.11	14.76	358	4.3	59.2	
10/8/2019 11:18	47.30	2116	7.12	14.77	357	4.5	59.0	
10/8/2019 11:19	47.52	2118	7.14	14.78	356	4.6	55.8	
10/8/2019 11:20	47.74	2121	7.16	14.80	356	4.6	55.8	

Volume of water purged (gals)	47.74
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Final Depth to Water (feet)	77.50
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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 0737. Purge began at 0740. Purged well for a total of 220 minutes. Purge ended and samples collected at 1120. Water was clear. Left site at 1131.

**Signature of Field Technician**

*Darwin Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-31
Field Sample ID	MW-31_10092019
Purge Date & Time	10/9/2019 7:00
Sample Date & Time	10/9/2019 13:15
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	40.02
Calculated Casing Volumes Purge Duration (min)	368.92
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Clear
External Ambient Temperature (C)	3
Previous Well Sampled	MW-25

Well Depth (ft)	130.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	68.70

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/9/2019 13:12	80.72	2978	7.23	15.30	341	5.0	118.0	
10/9/2019 13:13	80.94	2984	7.23	15.20	340	5.0	118.6	
10/9/2019 13:14	81.15	2995	7.23	15.08	340	5.1	118.5	
10/9/2019 13:15	81.37	2969	7.23	15.14	340	5.2	116.8	

Volume of water purged (gals)	81.37
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Final Depth to Water (feet)	72.42
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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)	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 0656. Purge began at 0700. Purged well for a total of 375 minutes. Purge ended and samples collected at 1315. Water was clear. Left site at 1325.

**Signature of Field Technician**

*Turner Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-32
Field Sample ID	MW-32_10082019
Purge Date & Time	10/8/2019 7:35
Sample Date & Time	10/8/2019 12:40

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	32.68
Calculated Casing Volumes Purge Duration (min)	301.22
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Sunny
External Ambient Temperature (C)	4
Previous Well Sampled	N/A

Well Depth (ft)	130.60
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	80.55

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/8/2019 12:37	65.53	3664	6.53	14.92	330	112	5.6	
10/8/2019 12:38	65.75	3668	6.52	14.89	311	115	4.6	
10/8/2019 12:39	65.96	3664	6.51	14.85	306	120	4.5	
10/8/2019 12:40	66.18	3664	6.51	14.79	310	123	4.4	

Volume of water purged (gals)	66.18
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Final Depth to Water (feet)	86.32
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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)	305.00
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 0730. Purge began at 0735. Purged well for a total of 305 minutes. Purge ended and samples collected at 1240. Water was a little murky with a lot of little tiny bubbles surfacing. Left site at 1250.

**Signature of Field Technician**

*Darrell Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-35
Field Sample ID	MW-35_10082019
Purge Date & Time	10/8/2019 12:00
Sample Date & Time	10/8/2019 13:15
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	7.95
Calculated Casing Volumes Purge Duration (min)	73.30
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	20
Previous Well Sampled	MW-30

Well Depth (ft)	124.50
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	112.32

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/8/2019 13:12	15.62	18.3	6.90	15.10	385	4.6	5.1	
10/8/2019 13:13	15.84	18.0	6.94	15.08	367	4.9	4.0	
10/8/2019 13:14	16.05	17.9	6.96	14.94	362	4.9	3.9	
10/8/2019 13:15	16.27	18.0	7.00	14.90	356	5.0	4.0	

Volume of water purged (gals)	16.27
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Final Depth to Water (feet)	113.05
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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?
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 1156. Purge began at 1200. Purged well for a total of 75 minutes. Purge ended and samples collected at 1315. Water was clear. Left site at 1325.
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**Signature of Field Technician**

*Jurnee Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-36
Field Sample ID	MW-36_10082019
Purge Date & Time	10/8/2019 13:00
Sample Date & Time	10/8/2019 14:15
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	7.24
Calculated Casing Volumes Purge Duration (min)	66.80
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	20
Previous Well Sampled	MW-35

Well Depth (ft)	121.60
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	110.50

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/8/2019 14:12	15.62	4698	7.00	15.80	434	5.0	82.4	
10/8/2019 14:13	15.84	4700	7.02	15.83	435	5.1	84.0	
10/8/2019 14:14	16.05	4760	7.04	15.82	436	5.3	84.0	
10/8/2019 14:15	16.27	4776	7.05	15.85	437	5.3	83.4	

Volume of water purged (gals)	16.27
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Final Depth to Water (feet)	111.45
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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)	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?
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 1257. Purge began at 1300. Purged well for a total of 75 minutes. Purge ended and samples collected at 1415. Water was clear. Left site at 1425.

Signature of Field Technician

*Danner Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-37
Field Sample ID	MW-37_11222019
Purge Date & Time	11/5/2019 9:16
Sample Date & Time	11/22/2019 9:15

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Purging Equipment	Bailer
Pump Type	Grundfos
Purging Method	2 Casings
Casing Volume (gal)	10.11
Calculated Casing Volumes Purge Duration ( )	
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	10
Previous Well Sampled	MW-24

Well Depth (ft)	121.80
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	106.31

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/5/2019 9:29	6.00	4254	6.52	14.06	485	15.9	68.3	
11/22/2019 9:14		4425	6.83	14.80				Before
11/22/2019 9:20		4415	6.84	14.77				After

Volume of water purged (gals)	14.50
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Final Depth to Water (feet)	121.69
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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?
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 0914. Bailing began at 0916. Bailed a total of 14.50 gallons from well. Bailed well dry. Water started clear and ended murky. Left site at 0950. Arrived on site at 0910. Depth to water was 112.65. Samples bailed and collected at 0915. Left site at 0922.

Signature of Field Technician

*Darwin Kelly*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-37
Field Sample ID	MW-37_12042019
Purge Date & Time	11/26/2019 13:08
Sample Date & Time	12/4/2019 9:30

Purging Equipment	Bailer
Pump Type	Grundfos
Purging Method	2 Casings
Casing Volume (gal)	5.87
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 Q4 Resample - 2

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

Well Depth (ft)	121.80
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	112.15

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/26/2019 13:13	6.00	4287	6.92	14.03	444	27.5	98.3	
12/4/2019 9:29		4300	7.03	14.15				Before
12/4/2019 9:33		4297	7.02	14.14				After

Volume of water purged (gals)	9.00
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Final Depth to Water (feet)	121.42
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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

**Pumping Rate Calculations**

Flow Rate (Q = S/60) ( )	
Time to evacuate 2 Casing Volumes ( )	
Number of casing Volumes	1.53
Volume, if well evacuated to dryness ( )	

**Comments:**

Arrived on site at 1305. Bailing well began at 1308. Purged a total of 9 gallons from well. Purged well dry. Water started clear and ended murky. Left site at 1325. Arrived on site at 0927. Depth to water was 117.32. Samples bailed and collected at 0930. Left site at 0935.

**Signature of Field Technician**

*Janner Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-38
Field Sample ID	MW-38_11062019
Purge Date & Time	11/5/2019 10:38
Sample Date & Time	11/6/2019 9:00
Purging Equipment	Bailer
Pump Type	Grundfos
Purging Method	2 Casings
Casing Volume (gal)	2.44
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 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	11
Previous Well Sampled	MW-20

Well Depth (ft)	74.40
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	70.66

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/5/2019 10:45	5.00	4342	7.62	14.00	452	17.4	86.2	
11/6/2019 9:00		4550	7.45	15.40				Before
11/6/2019 9:06		4541	7.45	15.36				After

Volume of water purged (gals)	5.00
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Final Depth to Water (feet)	74.30
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Name of Certified Analytical Laboratory	AWSL
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**Pumping Rate Calculations**

Flow Rate (Q = S/60) ( )	
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 1034. Bailing began at 1038. Bailed a total of 5 gallons from well. Bailed well dry. Water was mostly clear. Left site at 1047. Arrived on site at 0856. Depth to water was 70.61. Samples bailed and collected at 0900. Left site at 0908.

**Signature of Field Technician**

*James Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-39
Field Sample ID	MW-39_10292019
Purge Date & Time	10/29/2019 7:45
Sample Date & Time	10/29/2019 11:45
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	24.46
Calculated Casing Volumes Purge Duration (min)	225.51
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Partly cloudy
External Ambient Temperature (C)	0
Previous Well Sampled	MW-22

Well Depth (ft)	102.50
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	65.03

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/29/2019 11:42	51.42	4494	4.18	14.49	535	120.0	8.6	
10/29/2019 11:43	51.64	4492	4.19	14.51	545	129.7	8.3	
10/29/2019 11:44	51.86	4490	4.19	14.48	548	131.0	8.0	
10/29/2019 11:45	52.08	4493	4.20	14.48	548	133.0	8.1	

Volume of water purged (gals)	52.08
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Final Depth to Water (feet)	68.83
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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)	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 0741. Purge began at 0745. Purged well for a total of 240 minutes. Purge ended and samples collected at 1145. Water was a little murky with little bubbles surfacing. Left site at 1155.

**Signature of Field Technician**

*Darrell Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-40
Field Sample ID	MW-40_10232019
Purge Date & Time	10/23/2019 6:20
Sample Date & Time	10/23/2019 10:25

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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Weather Conditions	Clear
External Ambient Temperature (C)	2
Previous Well Sampled	MW-29

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	26.12
Calculated Casing Volumes Purge Duration (min)	240.73
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Well Depth (ft)	120.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	80.00

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/23/2019 10:22	52.51	3860	7.04	14.14	408	0	109.9	
10/23/2019 10:23	52.73	3855	7.04	14.14	407	0	110.1	
10/23/2019 10:24	52.94	3853	7.04	14.19	406	0	108.8	
10/23/2019 10:25	53.16	3855	7.04	14.16	406	0	107.9	

Volume of water purged (gals)	53.16
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Final Depth to Water (feet)	80.92
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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)	245.00
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 0616. Purge began at 0620. Purged well for a total of 245 minutes. Purge ended and samples collected at 1025. Water was clear. Left site at 1034.

**Signature of Field Technician**

*Danner Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-65
Field Sample ID	MW-65_10092019
Purge Date & Time	
Sample Date & Time	10/9/2019 13:45

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

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

Sampler	TH/DL
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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	DO	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
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	Y

**Comments:**

Duplicate of MW-14
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**Signature of Field Technician**

*James Holley*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-70
Field Sample ID	MW-70_10282019
Purge Date & Time	
Sample Date & Time	10/28/2019 13:35

Sampling Program	
Sampling Event	2019 Q4 GW Quarterly

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	DO	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?
Nutrients	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 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
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:**

Duplicate of MW-15
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**Signature of Field Technician**

*Janner Holliday*



**White Mesa Mill**

**Field Data Worksheet For Groundwater**

Location ID	MW-70
Field Sample ID	MW-70_12042019
Purge Date & Time	
Sample Date & Time	12/4/2019 11:15

Sampling Program	
Sampling Event	2019 Q4 Resample - 2

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	DO	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?
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y

**Comments:**

Duplicate of MW-15
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Signature of Field Technician

*James Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	TW4-24
Field Sample ID	TW4-24_10092019
Purge Date & Time	10/9/2019 12:29
Sample Date & Time	10/9/2019 12:30
Purging Equipment	Pump
Pump Type	Grundfos
Purging Method	2 Casings
Casing Volume (gal)	27.87
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 Q4 GW Quarterly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	18
Previous Well Sampled	MW-14

Well Depth (ft)	114.80
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	72.11

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
10/9/2019 12:29		7178	6.66	17.21	341	5.3	18.1	

Volume of water purged ( )

Final Depth to Water (feet) 79.80

Name of Certified Analytical Laboratory  
AWSL

**Pumping Rate Calculations**

Flow Rate (Q = S/60) (gal/min)	16.0
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?
General Inorganics	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y
Gross Alpha	Y	WATER	1	250-mL HDPE	Y	HNO3	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
VOCs - Full Suite for GW	Y	WATER	3	40ml VOA	U	HCl (pH<2), 4 Deg C	Y

**Comments:**

Arrived on site at 1225. Samples collected at 1230. Water was clear. Left site at 1237.

**Signature of Field Technician**

*Juanee Holliday*

Tab C

Field Data Worksheets Accelerated Monitoring

Tab C1

Field Data Worksheets Accelerated Monitoring

November 2019



**White Mesa Mill**

**Field Data Worksheet For Groundwater**

Location ID	MW-11
Field Sample ID	MW-11_11122019
Purge Date & Time	11/12/2019 8:00
Sample Date & Time	11/12/2019 12:30
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	28.96
Calculated Casing Volumes Purge Duration (min)	266.91
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	November Monthly
Sampler	TH/DL
Weather Conditions	Sunny
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)	85.65

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/12/2019 12:27	57.93	2884	7.58	14.50	383	200.7	4.0	
11/12/2019 12:28	58.15	2875	7.57	14.41	369	205.8	3.3	
11/12/2019 12:29	58.37	2881	7.57	14.39	364	207.5	3.1	
11/12/2019 12:30	58.59	2885	7.57	14.36	360	209.3	3.1	

Volume of water purged (gals)	58.59
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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)	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
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 0756. Purge began at 0800. Purged well for a total of 270 minutes. Purge ended and samples collected at 1230. Water was a little murky with little bubbles surfacing. Left site at 1236.

**Signature of Field Technician**

*Juanne Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-14
Field Sample ID	MW-14_11132019
Purge Date & Time	11/13/2019 10:45
Sample Date & Time	11/13/2019 13:45
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	17.28
Calculated Casing Volumes Purge Duration (min)	159.30
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	November Monthly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	11
Previous Well Sampled	MW-25

Well Depth (ft)	128.70
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	102.23

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/13/2019 13:42	38.40	3798	6.83	14.55	319	0	5.3	
11/13/2019 13:43	38.62	3785	6.81	14.48	318	0	5.2	
11/13/2019 13:44	38.84	3788	6.81	14.41	319	0	5.0	
11/13/2019 13:45	39.06	3788	6.81	14.42	319	0	5.0	

Volume of water purged (gals)	39.06
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Final Depth to Water (feet)	102.62
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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)	180.00
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?
Sulfate	Y	WATER	1	250-mL HDPE	U	None	N
Fluoride	Y	WATER	1	250-mL HDPE	U	None	N

**Comments:**

Arrived on site at 1041. Purge began at 1045. Purged well for a total of 180 minutes. Purge ended and samples collected at 1345. Water was clear. Left site at 1348.

**Signature of Field Technician**

*Darrell Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-25
Field Sample ID	MW-25_11132019
Purge Date & Time	11/13/2019 7:10
Sample Date & Time	11/13/2019 11:10

Sampling Program	
Sampling Event	November Monthly

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	22.82
Calculated Casing Volumes Purge Duration (min)	210.34
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Clear
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)	80.05

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/13/2019 11:07	51.42	3078	6.89	14.67	395	253	5.5	
11/13/2019 11:08	51.64	3075	6.89	14.66	395	260	5.3	
11/13/2019 11:09	51.86	3102	6.89	14.65	395	263	5.0	
11/13/2019 11:10	52.08	3074	6.89	14.64	395	269	5.0	

Volume of water purged (gals)	52.08
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Final Depth to Water (feet)	81.92
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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?
Heavy Metals - Cd only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

**Comments:**

Arrived on site at 0706. Purge began at 0710. Purged well for a total of 240 minutes. Purge ended and samples collected at 1110. Water was a little murky with little bubbles surfacing. Left site at 1114.

**Signature of Field Technician**

*James 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-26
Field Sample ID	MW-26_11132019
Purge Date & Time	11/13/2019 12:58
Sample Date & Time	11/13/2019 13:00
Purging Equipment	Pump
Pump Type	Grundfos
Purging Method	2 Casings
Casing Volume (gal)	30.03
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	November Monthly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	14
Previous Well Sampled	MW-36

Well Depth (ft)	121.33
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	75.34

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/13/2019 12:59		3324	6.96	18.20	349	0	15.9	

Volume of water purged ( )

Final Depth to Water (feet) 80.09

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
Ammonia	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y

**Comments:**

Arrived on site at 1255. Samples collected at 1300. Water was clear. Left site at 1304.

**Signature of Field Technician**

*Darrell Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-30
Field Sample ID	MW-30_11132019
Purge Date & Time	11/13/2019 6:50
Sample Date & Time	11/13/2019 10:25
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	22.75
Calculated Casing Volumes Purge Duration (min)	209.74
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	November Monthly
Sampler	TH/DL
Weather Conditions	Clear
External Ambient Temperature (C)	0
Previous Well Sampled	MW-11

Well Depth (ft)	110.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	75.15

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/13/2019 10:22	46.00	2109	7.21	14.70	391	0	61.2	
11/13/2019 10:23	46.22	2110	7.20	14.67	392	0	60.0	
11/13/2019 10:24	46.43	2110	7.21	14.64	393	0	59.7	
11/13/2019 10:25	46.65	2107	7.21	14.62	394	0	59.4	

Volume of water purged (gals)	46.65
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Final Depth to Water (feet)	77.68
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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 - U and Se only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
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 0646. Purge began at 0650. Purged well for a total of 215 minutes. Purge ended and samples collected at 1025. Water was clear. Left site at 1035.

**Signature of Field Technician**

*James Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-31
Field Sample ID	MW-31_11122019
Purge Date & Time	11/12/2019 7:45
Sample Date & Time	11/12/2019 13:55
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	39.69
Calculated Casing Volumes Purge Duration (min)	365.86
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	November Monthly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	0
Previous Well Sampled	N/A

Well Depth (ft)	130.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	69.21

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/12/2019 13:52	79.63	2954	7.31	14.81	395	4.5	119.0	
11/12/2019 13:53	79.85	2951	7.30	14.77	395	4.7	118.5	
11/12/2019 13:54	80.07	2974	7.31	14.78	395	4.9	118.0	
11/12/2019 13:55	80.29	2953	7.33	14.80	395	5.1	117.0	

Volume of water purged (gals)	80.29
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Final Depth to Water (feet)	72.88
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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
Sulfate	Y	WATER	1	250-mL HDPE	U	None	N
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y

**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

**Comments:**

Arrived on site at 0740. Purge began at 0745. Purged well for a total of 370 minutes. Purge ended and samples collected at 1355. Water was clear. Left site at 1401.

**Signature of Field Technician**

*Juanita Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-36
Field Sample ID	MW-36_11132019
Purge Date & Time	11/13/2019 11:20
Sample Date & Time	11/13/2019 12:30
Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	7.24
Calculated Casing Volumes Purge Duration (min)	66.80
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	November Monthly
Sampler	TH/DL
Weather Conditions	Sunny
External Ambient Temperature (C)	11
Previous Well Sampled	MW-14

Well Depth (ft)	121.60
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	110.50

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	DO	Before/After
11/13/2019 12:27	14.53	4749	7.08	14.45	400	0	83.5	
11/13/2019 12:28	14.75	4748	7.08	14.39	400	0	83.5	
11/13/2019 12:29	14.97	4744	7.09	14.40	400	0	83.3	
11/13/2019 12:30	15.19	4743	7.09	14.39	400	0	83.2	

Volume of water purged (gals)	15.19
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Final Depth to Water (feet)	112.00
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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?
Sulfate	Y	WATER	1	250-mL HDPE	U	None	N

Pumping Rate Calculations

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	70.00
Number of casing Volumes	2.00
Volume, if well evacuated to dryness ( )	0

Comments:

Arrived on site at 1117. Purge began at 1120. Purged well for a total of 70 minutes. Purge ended and sample collected at 1230. Water was clear. Left site at 1235.

Signature of Field Technician

*Jarvis Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-65
Field Sample ID	MW-65_11132019
Purge Date & Time	
Sample Date & Time	11/13/2019 10:25
Purging Equipment	
Pump Type	
Purging Method	
Casing Volume ( )	
Calculated Casing Volumes Purge Duration ( )	
pH Buffer 7.0	
pH Buffer 4.0	
Specific Conductance ( )	

Sampling Program	
Sampling Event	November Monthly
Sampler	TH/DL
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	DO	Before/After
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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

**Comments:**

Duplicate of MW-30

**Signature of Field Technician**

*Jarrod Holliday*

Tab C2

Field Data Worksheets Accelerated Monitoring

December 2019



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-11
Field Sample ID	MW-11_12032019
Purge Date & Time	12/3/2019 7:30
Sample Date & Time	12/3/2019 12:00

Sampling Program	
Sampling Event	December Monthly

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	29.04
Calculated Casing Volumes Purge Duration (min)	267.69
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Cloudy
External Ambient Temperature (C)	-3
Previous Well Sampled	MW-31

Well Depth (ft)	130.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	85.52

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Dissolved Oxygen	Before/After
12/3/2019 11:57	57.93	2832	7.59	14.40	390	0	2.1	
12/3/2019 11:58	58.15	2834	7.62	14.27	371	0	2.0	
12/3/2019 11:59	58.37	2837	7.62	14.25	367	0	1.9	
12/3/2019 12:00	58.59	2839	7.63	14.26	362	0	1.9	

Volume of water purged (gals)	58.59
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Final Depth to Water (feet)	85.77
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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
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
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 0724. Purge began at 0730. Purged well for a total of 270 minutes. Purge ended and samples collected at 1200. Water was clear. Left site at 1205.
--

Signature of Field Technician

*Darlene Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-14
Field Sample ID	MW-14_12032019
Purge Date & Time	12/3/2019 12:15
Sample Date & Time	12/3/2019 14:55

Sampling Program	
Sampling Event	December Monthly

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	17.21
Calculated Casing Volumes Purge Duration (min)	158.70
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Cloudy
External Ambient Temperature (C)	8
Previous Well Sampled	MW-11

Well Depth (ft)	128.70
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	102.33

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Dissolved Oxygen	Before/After
12/3/2019 14:52	34.06	3768	6.92	14.22	422	0	6.7	
12/3/2019 14:53	34.28	3780	6.90	14.19	421	0	6.2	
12/3/2019 14:54	34.50	3780	6.92	14.23	422	0	6.0	
12/3/2019 14:55	34.72	3779	6.95	14.24	424	0	5.9	

Volume of water purged (gals)	34.72
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Final Depth to Water (feet)	102.70
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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)	160.00
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?
Sulfate	Y	WATER	1	250-mL HDPE	U	None	N
Fluoride	Y	WATER	1	250-mL HDPE	U	None	N

**Comments:**

Arrived on site at 1210. Purge began at 1215. Purged well for a total of 160 minutes. Purge ended and sample collected at 1455. Water was clear. Left site at 1500.
---

Signature of Field Technician

*Darlene Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-25
Field Sample ID	MW-25_12042019
Purge Date & Time	12/4/2019 8:05
Sample Date & Time	12/4/2019 11:45

Sampling Program	
Sampling Event	December Monthly

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	22.82
Calculated Casing Volumes Purge Duration (min)	210.34
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-36

Well Depth (ft)	115.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	80.05

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Dissolved Oxygen	Before/After
12/4/2019 11:42	47.08	2767	7.02	14.15	387	2.0	11.1	
12/4/2019 11:43	47.30	2844	7.00	14.38	387	2.5	5.2	
12/4/2019 11:44	47.52	2726	7.00	14.41	387	2.7	5.0	
12/4/2019 11:45	47.74	2779	6.99	14.40	387	2.6	4.9	

Volume of water purged (gals)	47.74
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Final Depth to Water (feet)	82.01
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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?
Heavy Metals - Cd only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y

**Comments:**

Arrived on site at 0801. Purge began at 0805. Purged well for a total of 220 minutes. Purge ended and samples collected at 1145. Water was clear. Left site at 1150.

**Signature of Field Technician**

*Summer Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-26
Field Sample ID	MW-26_12042019
Purge Date & Time	12/4/2019 8:59
Sample Date & Time	12/4/2019 9:00

Sampling Program	
Sampling Event	December Monthly

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	Continuous
Purging Method	2 Casings
Casing Volume (gal)	28.97
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)	2
Previous Well Sampled	MW-25

Well Depth (ft)	121.33
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	76.96

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Dissolved Oxygen	Before/After
12/4/2019 8:59		3408	6.84	15.96	325	0	15.2	

Volume of water purged ( )	
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Final Depth to Water (feet)	86.76
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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
Ammonia	Y	WATER	1	250-mL HDPE	U	H2SO4 (pH<2), 4 Deg C	Y

Comments:

Arrived on site at 0855. Samples collected at 0900. Water was clear. Left site at 0907.
---

Signature of Field Technician

*Janner Holliday*



**White Mesa Mill**  
Field Data Worksheet For Groundwater

Groundwater Discharge Permit  
Groundwater Monitoring Quality Assurance Plan

Location ID	MW-30
Field Sample ID	MW-30_12042019
Purge Date & Time	12/4/2019 12:00
Sample Date & Time	12/4/2019 15:35

Sampling Program	
Sampling Event	December Monthly

Sampler	TH/DL
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Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	22.82
Calculated Casing Volumes Purge Duration (min)	210.34
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Weather Conditions	Cloudy
External Ambient Temperature (C)	8
Previous Well Sampled	MW-26

Well Depth (ft)	110.00
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	75.05

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Dissolved Oxygen	Before/After
12/4/2019 15:32	46.00	2104	7.21	14.37	396	0	58.9	
12/4/2019 15:33	46.22	2104	7.22	14.37	396	0	58.9	
12/4/2019 15:34	46.43	2106	7.22	14.37	396	0	58.6	
12/4/2019 15:35	46.65	2104	7.22	14.38	396	0	58.5	

Volume of water purged (gals)	46.65
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Final Depth to Water (feet)	77.52
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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 - U and Se only	Y	WATER	1	250-mL HDPE	Y	HNO3 (pH<2)	Y
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 1158. Purge began at 1200. Purged well for a total of 215 minutes. Purge ended and samples collected at 1535. Water was clear. Left site at 1543.

**Signature of Field Technician**

*James Holliday*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-31
Field Sample ID	MW-31_12032019
Purge Date & Time	12/3/2019 7:15
Sample Date & Time	12/3/2019 13:25

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

Sampling Program	
Sampling Event	December Monthly

Sampler	TH/DL
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Weather Conditions	Partly cloudy
External Ambient Temperature (C)	-3
Previous Well Sampled	N/A

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	Dissolved Oxygen	Before/After
12/3/2019 13:22	79.63	2976	7.30	14.52	410	8.6	122.0	
12/3/2019 13:23	79.85	2978	7.29	14.53	409	10.1	121.2	
12/3/2019 13:24	80.07	2978	7.29	14.51	409	11.2	121.3	
12/3/2019 13:25	80.29	2976	7.29	14.53	408	12.0	121.3	

Volume of water purged (gals)	80.29
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Final Depth to Water (feet)	72.90
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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
Total Dissolved Solids	Y	WATER	1	250-mL HDPE	U	4 Deg C	Y

**Comments:**  
Arrived on site at 0710. Purge began at 0715. Purged well for a total of 370 minutes. Purge ended and samples collected at 1325. Water was mostly clear. Left site at 1338.

Signature of Field Technician

*James H. Kelly*



White Mesa Mill  
Field Data Worksheet For Groundwater

Location ID	MW-36
Field Sample ID	MW-36_12032019
Purge Date & Time	12/3/2019 13:45
Sample Date & Time	12/3/2019 15:15

Purging Equipment	Pump
Pump Type	QED
Purging Method	2 Casings
Casing Volume (gal)	7.11
Calculated Casing Volumes Purge Duration (min)	65.54
pH Buffer 7.0	7.0
pH Buffer 4.0	4.0
Specific Conductance (micromhos)	1000

Sampling Program	
Sampling Event	December Monthly

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

Weather Conditions	Cloudy
External Ambient Temperature (C)	8
Previous Well Sampled	MW-14

Well Depth (ft)	121.60
Well Casing Diameter (in)	4
Depth to Water Before Purging (ft)	110.71

Date/Time	Gallons Purged	Conductivity	pH	Temp (Deg C)	Redox	Turbidity	Dissolved Oxygen	Before/After
12/3/2019 15:12	18.87	4652	7.26	13.89	423	0	84.8	
12/3/2019 15:13	19.09	4655	7.25	13.88	424	0	83.0	
12/3/2019 15:14	19.31	4643	7.25	14.00	424	0	83.0	
12/3/2019 15:15	19.53	4645	7.24	13.97	425	0	82.7	

Volume of water purged (gals)	19.53
-------------------------------	-------

Final Depth to Water (feet)	111.19
-----------------------------	--------

Name of Certified Analytical Laboratory	
AWSL	

**Pumping Rate Calculations**

Flow Rate (Q = S/60) (gal/min)	.217
Time to evacuate 2 Casing Volumes (min)	90.00
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?
Sulfate	Y	WATER	1	250-mL HDPE	U	None	N

**Comments:**  
Arrived on site at 1342. Purge began at 1345. Purged well for a total of 90 minutes. Purge ended and sample collected at 1515. Water was clear. Left site at 1519.

Signature of Field Technician

*Janner Holliday*



**White Mesa Mill**  
**Field Data Worksheet For Groundwater**

Location ID	MW-65
Field Sample ID	MW-65_12032019
Purge Date & Time	
Sample Date & Time	12/3/2019 13:25

Sampling Program	
Sampling Event	December Monthly

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	Dissolved Oxygen	Before/After
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Volume of water purged ()	
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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
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:**

Duplicate of MW-31
--------------------

Signature of Field Technician

*James Hillberg*

Tab D

Quarterly Depth to Water

Name: Tanner Holliday, Deen Lyman

Date: 11/18/2019-11/19/2019

Date	Time	Well	Depth to Water (ft.)	Date	Time	Well	Depth to Water (ft.)	Date	Time	Well	Depth to Water (ft.)
11/19/2019	1225	MW-01	64.63	11/18/2019	929	MW-04	88.66	11/19/2019	1217	PIEZ-01	66.51
11/19/2019	1339	MW-02	109.58	11/18/2019	934	TW4-01	107.73	11/19/2019	1211	PIEZ-02	44.01
11/18/2019	1348	MW-03A	84.22	11/18/2019	911	TW4-02	109.10	11/19/2019	1300	PIEZ-03A	55.16
11/18/2019	1047	MW-05	108.47	11/18/2019	1432	TW4-03	62.55	11/18/2019	1408	PIEZ-04	64.84
11/19/2019	913	MW-11	85.31	11/18/2019	949	TW4-04	85.41	11/18/2019	1401	PIEZ-05	64.12
11/19/2019	1042	MW-12	107.74	11/18/2019	1442	TW4-05	69.97	11/19/2019	1231	TWN-01	67.16
11/19/2019	927	MW-14	102.13	11/18/2019	1421	TW4-06	77.09	11/18/2019	814	TWN-02	58.82
11/19/2019	932	MW-15	105.45	11/18/2019	1425	TW4-07	81.94	11/19/2019	1305	TWN-03	41.72
11/19/2019	1320	MW-17	71.94	11/18/2019	1428	TW4-08	85.03	11/19/2019	1253	TWN-04	60.19
11/19/2019	1222	MW-18	73.10	11/18/2019	1439	TW4-09	67.93	11/19/2019	1219	TWN-06	79.80
11/19/2019	1214	MW-19	64.78	11/18/2019	1446	TW4-10	67.36	11/19/2019	1229	TWN-07	82.00
11/19/2019	901	MW-20	89.62	11/18/2019	905	TW4-11	91.12	11/19/2019	1205	TWN-14	59.94
11/19/2019	845	MW-22	66.35	11/18/2019	1253	TW4-12	54.17	11/19/2019	1158	TWN-16	47.51
11/19/2019	1037	MW-23	115.41	11/18/2019	1250	TW4-13	55.55	11/19/2019	1248	TWN-18	61.73
11/19/2019	1220	MW-24	111.03	11/18/2019	1242	TW4-14	77.68	11/19/2019	1153	TWN-19	53.52
11/19/2019	921	MW-25	79.90	11/18/2019	813	TW4-16	71.75	11/19/2019	1012	DR-05	82.92
11/18/2019	855	MW-26	76.30	11/19/2019	1236	TW4-18	70.89	11/19/2019	1008	DR-06	94.10
11/19/2019	1226	MW-27	56.85	11/18/2019	1045	TW4-19	69.52	11/19/2019	1017	DR-07	91.94
11/19/2019	1206	MW-28	74.55	11/18/2019	843	TW4-20	80.13	11/19/2019	1004	DR-08	51.40
11/19/2019	905	MW-29	107.61	11/18/2019	800	TW4-21	83.44	11/19/2019	1000	DR-09	86.31
11/19/2019	854	MW-30	74.97	11/18/2019	830	TW4-22	84.03	11/19/2019	957	DR-10	78.40
11/19/2019	848	MW-31	68.82	11/18/2019	1417	TW4-23	73.86	11/18/2019	1336	DR-11	98.08
11/19/2019	844	MW-32	80.54	11/18/2019	823	TW4-24	73.39	11/18/2019	1328	DR-12	91.82
11/19/2019	1012	MW-33	DRY	11/18/2019	808	TW4-25	72.25	11/18/2019	1342	DR-13	69.87
11/19/2019	1007	MW-34	107.42	11/18/2019	1412	TW4-26	71.54	11/19/2019	1018	DR-14	75.95
11/19/2019	1032	MW-35	112.18	11/18/2019	1220	TW4-27	78.82	11/19/2019	858	DR-15	92.65
11/19/2019	1023	MW-36	110.45	11/18/2019	1257	TW4-28	47.13	11/19/2019	1022	DR-17	64.60
11/19/2019	1000	MW-37	113.91	11/18/2019	1239	TW4-29	76.81	11/19/2019	1025	DR-19	63.09
11/19/2019	850	MW-38	70.36	11/18/2019	1226	TW4-30	74.87	11/19/2019	1035	DR-20	55.62
11/19/2019	853	MW-39	65.06	11/18/2019	1223	TW4-31	76.56	11/19/2019	1043	DR-21	100.52
11/18/2019	1310	MW-40	79.95	11/18/2019	1300	TW4-32	54.98	11/19/2019	1032	DR-22	DRY
				11/18/2019	1216	TW4-33	76.28	11/19/2019	1039	DR-23	70.22
				11/18/2019	1235	TW4-34	75.04	11/19/2019	1030	DR-24	44.12
				11/18/2019	1229	TW4-35	74.75				
				11/18/2019	1246	TW4-36	57.31				
				11/18/2019	837	TW4-37	71.71				
				11/18/2019	1435	TW4-38	58.09				
				11/18/2019	849	TW4-39	79.58				
				11/18/2019	956	TW4-40	71.15				
				11/18/2019	942	TW4-41	78.27				
				11/18/2019	1211	TW4-42	67.57				

MW-26 = TW4-15

MW-32 = TW4-17

Comments:

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Tab E

Laboratory Analytical Reports – Quarterly Sampling



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-001  
**Client Sample ID:** MW-01\_10222019  
**Collection Date:** 10/22/2019 1000h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/29/2019 1309h	11/5/2019 1521h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/4/2019 1149h	E200.7	20.0	<b>183</b>	
Chromium	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.100	<b>0.269</b>	
Lead	mg/L	10/29/2019 1309h	11/5/2019 1521h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/4/2019 1149h	E200.7	20.0	<b>70.4</b>	
Manganese	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.0100	<b>0.128</b>	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 628h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/29/2019 1309h	11/6/2019 1728h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/29/2019 1309h	11/6/2019 1728h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/29/2019 1309h	11/6/2019 1928h	E200.7	2.00	<b>6.41</b>	
Selenium	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.00500	< 0.00500	
Silver	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/4/2019 1149h	E200.7	20.0	<b>173</b>	
Thallium	mg/L	10/29/2019 1309h	11/5/2019 1521h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/29/2019 1309h	11/5/2019 1408h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/29/2019 1309h	11/5/2019 1521h	E200.8	0.000300	< 0.000300	
Vanadium	mg/L	10/29/2019 1309h	11/4/2019 1253h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/29/2019 1309h	11/5/2019 1408h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-001  
**Client Sample ID:** MW-01\_10222019  
**Collection Date:** 10/22/2019 1000h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/7/2019 917h	11/7/2019 1348h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	<b>232</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/5/2019 434h	E300.0	1.00	<b>19.7</b>	
Fluoride	mg/L		11/6/2019 2220h	E300.0	0.100	<b>0.285</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>1.40</b>	
Nitrate/Nitrite (as N)	mg/L		10/28/2019 1113h	E353.2	0.100	< 0.100	
Sulfate	mg/L		11/5/2019 024h	E300.0	75.0	<b>808</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>22.0</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>22.6</b>	
Total Dissolved Solids	mg/L		10/28/2019 1240h	SM2540C	20.0	<b>1,390</b>	@
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>0.991</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>1,400</b>	

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

<sup>1</sup> - 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



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-001A  
**Client Sample ID:** MW-01\_10222019  
**Collection Date:** 10/22/2019 1000h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/25/2019 1504h    **Extracted:**  
**Units:** µg/L    **Dilution Factor:** 1    **Method:** SW8260D

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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	
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	<b>4.75</b>	
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	49.2	50.00	98.3	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	45.0	50.00	90.1	80-152	
Surr: Dibromofluoromethane		1868-53-7	45.4	50.00	90.8	72-135	
Surr: Toluene-d8		2037-26-5	47.6	50.00	95.3	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 22, 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-01_10222019	Project: DNMI00100
Sample ID: 494487004	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 22-OCT-19 10:00	
Receive Date: 29-OCT-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	+/-0.252	0.915	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			98.2	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-002  
**Client Sample ID:** MW-02\_10232019  
**Collection Date:** 10/23/2019 835h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/29/2019 1309h	11/5/2019 1415h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/29/2019 1309h	11/5/2019 1524h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/29/2019 1309h	11/5/2019 1415h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/4/2019 1151h	E200.7	20.0	<b>344</b>	
Chromium	mg/L	10/29/2019 1309h	11/5/2019 1415h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/29/2019 1309h	11/5/2019 1415h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/29/2019 1309h	11/5/2019 1415h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/29/2019 1309h	11/5/2019 1524h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/29/2019 1309h	11/5/2019 1524h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/4/2019 1151h	E200.7	20.0	<b>102</b>	
Manganese	mg/L	10/29/2019 1309h	11/5/2019 1415h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 638h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/29/2019 1309h	11/6/2019 1731h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/29/2019 1309h	11/6/2019 1731h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/29/2019 1309h	11/6/2019 1931h	E200.7	2.00	<b>9.27</b>	
Selenium	mg/L	10/29/2019 1309h	11/5/2019 1415h	E200.8	0.00500	<b>0.0156</b>	
Silver	mg/L	10/29/2019 1309h	11/5/2019 1415h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/4/2019 1151h	E200.7	20.0	<b>499</b>	
Thallium	mg/L	10/29/2019 1309h	11/5/2019 1524h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/29/2019 1309h	11/5/2019 1415h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/29/2019 1309h	11/5/2019 1524h	E200.8	0.000300	<b>0.0127</b>	
Vanadium	mg/L	10/29/2019 1309h	11/4/2019 1255h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/29/2019 1309h	11/5/2019 1415h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-002  
**Client Sample ID:** MW-02\_10232019  
**Collection Date:** 10/23/2019 835h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/7/2019 917h	11/7/2019 1358h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		10/28/2019 848h	SM2320B	1.00	<b>320</b>	
Carbonate (as CaCO3)	mg/L		10/28/2019 848h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/7/2019 1144h	E300.0	1.00	<b>6.88</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>-1.63</b>	
Nitrate/Nitrite (as N)	mg/L		10/28/2019 1114h	E353.2	0.100	< 0.100	
Sulfate	mg/L		11/5/2019 114h	E300.0	150	<b>2,050</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>49.1</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>47.5</b>	
Total Dissolved Solids	mg/L		10/28/2019 1240h	SM2540C	20.0	<b>2,760</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>0.863</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>3,200</b>	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912025-004  
**Client Sample ID:** MW-02\_11222019  
**Collection Date:** 11/22/2019 1255h  
**Received Date:** 12/3/2019 1044h

**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>
Fluoride	mg/L		12/11/2019 556h	E300.0	0.100	0.106	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-002A  
**Client Sample ID:** MW-02\_10232019  
**Collection Date:** 10/23/2019 835h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/25/2019 1524h      **Extracted:**  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8260D

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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	48.6	50.00	97.3	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	44.8	50.00	89.7	80-152	
Surr: Dibromofluoromethane		1868-53-7	44.7	50.00	89.4	72-135	
Surr: Toluene-d8		2037-26-5	46.6	50.00	93.3	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 22, 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-02_10232019	Project: DNMI00100
Sample ID: 494487005	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 23-OCT-19 08:35	
Receive Date: 29-OCT-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	0.913	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			103	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-001  
**Client Sample ID:** MW-03A\_11062019  
**Collection Date:** 11/6/2019 830h  
**Received Date:** 11/8/2019 1210h

**Contact:** Tanner Holliday

## 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	11/8/2019 1400h	11/19/2019 1210h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	11/8/2019 1400h	11/19/2019 1201h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	11/8/2019 1400h	11/19/2019 1210h	E200.8	0.000500	<b>0.00114</b>	
Calcium	mg/L	11/8/2019 1400h	11/18/2019 1650h	E200.7	20.0	<b>433</b>	
Chromium	mg/L	11/8/2019 1400h	11/19/2019 1210h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	11/8/2019 1400h	11/19/2019 1210h	E200.8	0.0100	< 0.0100	
Copper	mg/L	11/8/2019 1400h	11/20/2019 1353h	E200.8	0.0100	< 0.0100	
Iron	mg/L	11/8/2019 1400h	11/19/2019 1201h	E200.8	0.0300	< 0.0300	
Lead	mg/L	11/8/2019 1400h	11/19/2019 1201h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	11/8/2019 1400h	11/18/2019 1650h	E200.7	20.0	<b>261</b>	
Manganese	mg/L	11/8/2019 1400h	11/19/2019 1210h	E200.8	0.0100	<b>0.0978</b>	
Mercury	mg/L	11/12/2019 1600h	11/13/2019 947h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	11/8/2019 1400h	11/19/2019 1210h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	11/8/2019 1400h	11/19/2019 1210h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	11/8/2019 1400h	11/18/2019 1708h	E200.7	1.00	<b>43.0</b>	
Selenium	mg/L	11/8/2019 1400h	11/20/2019 1353h	E200.8	0.00500	<b>0.0554</b>	
Silver	mg/L	11/8/2019 1400h	11/19/2019 1210h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	11/8/2019 1400h	11/18/2019 1650h	E200.7	20.0	<b>741</b>	
Thallium	mg/L	11/8/2019 1400h	11/19/2019 1201h	E200.8	0.000500	< 0.000500	
Tin	mg/L	11/8/2019 1400h	11/20/2019 1353h	E200.8	0.100	< 0.100	
Uranium	mg/L	11/8/2019 1400h	11/20/2019 1451h	E200.8	0.000300	<b>0.0196</b>	
Vanadium	mg/L	11/8/2019 1400h	11/22/2019 1424h	E200.8	0.0150	< 0.0150	
Zinc	mg/L	11/8/2019 1400h	11/19/2019 1210h	E200.8	0.0100	<b>0.0202</b>	

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



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-001  
**Client Sample ID:** MW-03A\_11062019  
**Collection Date:** 11/6/2019 830h  
**Received Date:** 11/8/2019 1210h

**Contact:** Tanner Holliday

## 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	11/13/2019 1013h	11/13/2019 1357h	E350.1	0.0500	< 0.0500	1
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		11/13/2019 710h	SM2320B	1.00	<b>480</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		11/13/2019 710h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/14/2019 051h	E300.0	1.00	<b>58.8</b>	
Fluoride	mg/L		11/14/2019 142h	E300.0	0.200	<b>0.440</b>	
Ion Balance	%		11/18/2019 1745h	Calc.	-100	<b>-7.50</b>	
Nitrate/Nitrite (as N)	mg/L		11/13/2019 834h	E353.2	0.100	<b>0.758</b>	
Sulfate	mg/L		11/13/2019 2254h	E300.0	375	<b>3,730</b>	
Total Anions, Measured	meq/L		11/18/2019 1745h	Calc.		<b>88.8</b>	
Total Cations, Measured	meq/L		11/18/2019 1745h	Calc.		<b>76.4</b>	
Total Dissolved Solids	mg/L		11/11/2019 1325h	SM2540C	20.0	<b>5,580</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/18/2019 1745h	Calc.		<b>1.01</b>	
Total Dissolved Solids, Calculated	mg/L		11/18/2019 1745h	Calc.		<b>5,550</b>	

<sup>1</sup> - 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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-001A  
**Client Sample ID:** MW-03A\_11062019  
**Collection Date:** 11/6/2019 830h  
**Received Date:** 11/8/2019 1210h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 11/12/2019 1215h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	

Jose Rocha  
QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	53.8	50.00	108	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	48.7	50.00	97.5	80-152	
Surr: Dibromofluoromethane		1868-53-7	51.0	50.00	102	72-135	
Surr: Toluene-d8		2037-26-5	50.3	50.00	101	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 4, 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-03A_11062019	Project: DNMI00100
Sample ID: 495672006	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 06-NOV-19 08:30	
Receive Date: 08-NOV-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	+/-0.270	0.929	1.00	pCi/L			KSDI	12/03/19	1629	1939966	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"			103	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-003  
**Client Sample ID:** MW-05\_10232019  
**Collection Date:** 10/23/2019 1210h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/29/2019 1309h	11/5/2019 1527h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/4/2019 1157h	E200.7	20.0	<b>161</b>	
Chromium	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/29/2019 1309h	11/5/2019 1527h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/29/2019 1309h	11/5/2019 1527h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/4/2019 1157h	E200.7	20.0	<b>47.3</b>	
Manganese	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.0100	<b>0.111</b>	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 640h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/29/2019 1309h	11/6/2019 1741h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/29/2019 1309h	11/6/2019 1741h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/29/2019 1309h	11/6/2019 1937h	E200.7	2.00	<b>7.39</b>	
Selenium	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.00500	< 0.00500	
Silver	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/4/2019 1157h	E200.7	20.0	<b>524</b>	
Thallium	mg/L	10/29/2019 1309h	11/5/2019 1527h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/29/2019 1309h	11/5/2019 1527h	E200.8	0.000300	<b>0.000726</b>	
Vanadium	mg/L	10/29/2019 1309h	11/4/2019 1302h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/29/2019 1309h	11/5/2019 1440h	E200.8	0.0100	< 0.0100	

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Laboratory Director

Jose Rocha  
QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-003  
**Client Sample ID:** MW-05\_10232019  
**Collection Date:** 10/23/2019 1210h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

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Kyle F. Gross  
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Jose Rocha  
QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/7/2019 917h	11/7/2019 1358h	E350.1	0.0500	<b>0.240</b>	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	<b>328</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/5/2019 507h	E300.0	1.00	<b>51.7</b>	
Fluoride	mg/L		11/6/2019 2310h	E300.0	0.200	<b>0.782</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>0.780</b>	
Nitrate/Nitrite (as N)	mg/L		10/28/2019 1043h	E353.2	0.100	<b>0.235</b>	
Sulfate	mg/L		11/5/2019 130h	E300.0	150	<b>1,270</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>34.4</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>34.9</b>	
Total Dissolved Solids	mg/L		10/28/2019 1240h	SM2540C	20.0	<b>2,050</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>0.910</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>2,260</b>	



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-003A  
**Client Sample ID:** MW-05\_10232019  
**Collection Date:** 10/23/2019 1210h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/25/2019 1543h    **Extracted:**  
**Units:** µg/L    **Dilution Factor:** 1    **Method:** SW8260D

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	<b>1.28</b>	
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	48.5	50.00	97.0	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	43.2	50.00	86.3	80-152	
Surr: Dibromofluoromethane		1868-53-7	44.7	50.00	89.3	72-135	
Surr: Toluene-d8		2037-26-5	46.7	50.00	93.4	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 22, 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-05_10232019	Project: DNMI00100
Sample ID: 494487006	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 23-OCT-19 12:10	
Receive Date: 29-OCT-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	+/-0.240	0.814	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			96.7	(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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-002  
**Client Sample ID:** MW-11\_10152019  
**Collection Date:** 10/15/2019 1400h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

## 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	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/26/2019 1039h	10/28/2019 1845h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/1/2019 1913h	E200.7	10.0	<b>87.9</b>	
Chromium	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/26/2019 1039h	10/30/2019 210h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/26/2019 1039h	10/28/2019 1845h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/1/2019 2013h	E200.7	10.0	<b>27.2</b>	
Manganese	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.0100	<b>0.185</b>	
Mercury	mg/L	10/28/2019 1725h	10/29/2019 1240h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	11/5/2019 1040h	11/5/2019 1733h	E200.7	1.00	<b>7.97</b>	
Selenium	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.00500	< 0.00500	
Silver	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/1/2019 1913h	E200.7	10.0	<b>525</b>	
Thallium	mg/L	10/26/2019 1039h	10/28/2019 1845h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/26/2019 1039h	10/28/2019 1210h	E200.8	0.00100	<b>0.00101</b>	
Vanadium	mg/L	11/5/2019 1040h	11/6/2019 1119h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/26/2019 1039h	10/30/2019 210h	E200.8	0.0100	< 0.0100	

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



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-002  
**Client Sample ID:** MW-11\_10152019  
**Collection Date:** 10/15/2019 1400h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/29/2019 814h	10/29/2019 1348h	E350.1	0.0500	<b>0.610</b>	
Bicarbonate (as CaCO3)	mg/L		10/21/2019 722h	SM2320B	1.00	<b>376</b>	
Carbonate (as CaCO3)	mg/L		10/21/2019 722h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/31/2019 343h	E300.0	1.00	<b>30.8</b>	
Fluoride	mg/L		11/1/2019 231h	E300.0	0.100	<b>0.319</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>-8.65</b>	
Nitrate/Nitrite (as N)	mg/L		10/21/2019 1157h	E353.2	0.100	<b>0.160</b>	
Sulfate	mg/L		10/30/2019 2242h	E300.0	150	<b>1,290</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>35.2</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>29.6</b>	
Total Dissolved Solids	mg/L		10/21/2019 1300h	SM2540C	20.0	<b>2,100</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>0.959</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>2,190</b>	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-002A  
**Client Sample ID:** MW-11\_10152019  
**Collection Date:** 10/15/2019 1400h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/21/2019 1100h      **Extracted:**  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8260D

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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	51.6	50.00	103	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	51.9	50.00	104	80-152	
Surr: Dibromofluoromethane		1868-53-7	51.4	50.00	103	72-135	
Surr: Toluene-d8		2037-26-5	51.6	50.00	103	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

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## Certificate of Analysis

Report Date: November 22, 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_10152019	Project: DNMI00100
Sample ID: 494487001	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 15-OCT-19 14:00	
Receive Date: 29-OCT-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	+/-0.298	0.827	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			95.2	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-004  
**Client Sample ID:** MW-12\_10232019  
**Collection Date:** 10/23/2019 1445h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## 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	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/29/2019 1309h	11/5/2019 1530h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/4/2019 1200h	E200.7	20.0	<b>551</b>	
Chromium	mg/L	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/29/2019 1309h	11/5/2019 1530h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/29/2019 1309h	11/5/2019 1530h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/4/2019 1200h	E200.7	20.0	<b>245</b>	
Manganese	mg/L	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 642h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/29/2019 1309h	11/6/2019 1744h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/29/2019 1309h	11/6/2019 1744h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/29/2019 1309h	11/6/2019 1939h	E200.7	2.00	<b>12.6</b>	
Selenium	mg/L	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.00500	<b>0.0303</b>	
Silver	mg/L	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/4/2019 1200h	E200.7	20.0	<b>331</b>	
Thallium	mg/L	10/29/2019 1309h	11/5/2019 1530h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/29/2019 1309h	11/5/2019 1530h	E200.8	0.000300	<b>0.0216</b>	
Vanadium	mg/L	10/29/2019 1309h	11/4/2019 1305h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/29/2019 1309h	11/5/2019 1444h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-004  
**Client Sample ID:** MW-12\_10232019  
**Collection Date:** 10/23/2019 1445h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/7/2019 917h	11/7/2019 1359h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	<b>344</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/5/2019 524h	E300.0	1.00	<b>67.0</b>	
Fluoride	mg/L		11/19/2019 1040h	SM4500-F-C	0.100	<b>0.377</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>0.0367</b>	
Nitrate/Nitrite (as N)	mg/L		10/28/2019 1044h	E353.2	0.100	<b>0.161</b>	
Sulfate	mg/L		11/14/2019 1019h	E300.0	150	<b>2,480</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>62.3</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>62.3</b>	
Total Dissolved Solids	mg/L		10/28/2019 1240h	SM2540C	20.0	<b>3,680</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>0.923</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>3,980</b>	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-004A  
**Client Sample ID:** MW-12\_10232019  
**Collection Date:** 10/23/2019 1445h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/25/2019 1603h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	49.6	50.00	99.1	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	45.6	50.00	91.3	80-152	
Surr: Dibromofluoromethane		1868-53-7	45.5	50.00	91.1	72-135	
Surr: Toluene-d8		2037-26-5	47.5	50.00	95.1	80-124	

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 22, 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-12_10232019	Project: DNMI00100
Sample ID: 494487007	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 23-OCT-19 14:45	
Receive Date: 29-OCT-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	+/-0.234	0.830	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			97.8	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-001  
**Client Sample ID:** MW-14\_10092019  
**Collection Date:** 10/9/2019 1345h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.000500	<b>0.00131</b>	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1333h	E200.7	20.0	<b>546</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1333h	E200.7	20.0	<b>168</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1152h	E200.8	0.0100	<b>1.92</b>	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1205h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/27/2019 1631h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1314h	E200.7	1.00	<b>11.4</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.00500	< 0.00500	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1333h	E200.7	20.0	<b>388</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/26/2019 1208h	E200.8	0.000500	<b>0.0486</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1314h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1034h	E200.8	0.0100	<b>0.0128</b>	

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Jose Rocha  
QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-001  
**Client Sample ID:** MW-14\_10092019  
**Collection Date:** 10/9/2019 1345h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/22/2019 902h	10/22/2019 1235h	E350.1	0.0500	<b>0.136</b>	<sup>1</sup>
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>436</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/29/2019 522h	E300.0	1.00	<b>18.7</b>	
Fluoride	mg/L		10/27/2019 551h	E300.0	0.100	< 0.100	
Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>3.16</b>	
Nitrate/Nitrite (as N)	mg/L		10/15/2019 1329h	E353.2	0.100	< 0.100	
Sulfate	mg/L		10/26/2019 2325h	E300.0	150	<b>2,180</b>	
Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>54.7</b>	
Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>58.2</b>	
Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>3,340</b>	
Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>0.934</b>	
Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>3,580</b>	

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

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# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-001A  
**Client Sample ID:** MW-14\_10092019  
**Collection Date:** 10/9/2019 1345h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1156h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	

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 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	48.2	50.00	96.3	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	46.6	50.00	93.1	80-152	
Surr: Dibromofluoromethane		1868-53-7	47.0	50.00	93.9	72-135	
Surr: Toluene-d8		2037-26-5	48.8	50.00	97.6	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 9, 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_10092019	Project: DNMI00100
Sample ID: 493013001	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 09-OCT-19 13:45	
Receive Date: 15-OCT-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	+/-0.217	0.687	1.00	pCi/L			BXF1	11/01/19	1405	1929579	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"			98.2	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-001  
**Client Sample ID:** MW-15\_10282019  
**Collection Date:** 10/28/2019 1335h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	11/4/2019 1102h	11/6/2019 1827h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	11/4/2019 1102h	11/11/2019 1555h	E200.7	50.0	<b>447</b>	
Chromium	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.0100	< 0.0100	
Copper	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.0100	< 0.0100	
Iron	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.0300	< 0.0300	
Lead	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	11/4/2019 1102h	11/11/2019 1555h	E200.7	50.0	<b>167</b>	
Manganese	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 658h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	11/4/2019 1102h	11/11/2019 1222h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	11/4/2019 1102h	11/11/2019 1618h	E200.7	1.00	<b>11.8</b>	
Selenium	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.00500	<b>0.122</b>	
Silver	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	11/4/2019 1102h	11/11/2019 1555h	E200.7	50.0	<b>518</b>	
Thallium	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.000500	< 0.000500	
Tin	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.100	< 0.100	
Uranium	mg/L	11/4/2019 1102h	11/6/2019 1851h	E200.8	0.000300	<b>0.0482</b>	
Vanadium	mg/L	11/4/2019 1102h	11/11/2019 1706h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	11/4/2019 1102h	11/6/2019 1851h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-001  
**Client Sample ID:** MW-15\_10282019  
**Collection Date:** 10/28/2019 1335h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/20/2019 1104h	11/20/2019 1351h	E350.1	0.0500	< 0.0500	1
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/31/2019 627h	SM2320B	1.00	<b>364</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/31/2019 627h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/11/2019 1733h	E300.0	1.00	<b>40.1</b>	
Fluoride	mg/L		11/19/2019 1040h	SM4500-F-C	0.100	<b>0.485</b>	
Ion Balance	%		11/11/2019 1708h	Calc.	-100	<b>0.571</b>	
Nitrate/Nitrite (as N)	mg/L		10/31/2019 826h	E353.2	0.100	<b>0.198</b>	
Sulfate	mg/L		11/7/2019 1800h	E300.0	150	<b>2,390</b>	
Total Anions, Measured	meq/L		11/11/2019 1708h	Calc.		<b>58.2</b>	
Total Cations, Measured	meq/L		11/11/2019 1708h	Calc.		<b>58.9</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/11/2019 1708h	Calc.		<b>1.35</b>	
Total Dissolved Solids, Calculated	mg/L		11/11/2019 1708h	Calc.		<b>3,790</b>	

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

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## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912110-001  
**Client Sample ID:** MW-15\_12042019  
**Collection Date:** 12/4/2019 1115h  
**Received Date:** 12/5/2019 1143h

**Contact:** Tanner Holliday

### Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Total Dissolved Solids	mg/L		12/6/2019 1110h	SM2540C	20.0	<b>3,340</b>	@

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

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Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-001A  
**Client Sample ID:** MW-15\_10282019  
**Collection Date:** 10/28/2019 1335h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/31/2019 1046h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	49.1	50.00	98.2	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	45.5	50.00	90.9	80-152	
Surr: Dibromofluoromethane		1868-53-7	45.2	50.00	90.5	72-135	
Surr: Toluene-d8		2037-26-5	47.7	50.00	95.4	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 4, 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-15_10282019	Project: DNMI00100
Sample ID: 495672001	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 28-OCT-19 13:35	
Receive Date: 08-NOV-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	0.967	1.00	pCi/L			KSD1	12/03/19	1628	1939966	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"			105	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-005  
**Client Sample ID:** MW-17\_10232019  
**Collection Date:** 10/23/2019 1450h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## 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	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/29/2019 1309h	11/5/2019 1534h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/4/2019 1202h	E200.7	20.0	<b>321</b>	
Chromium	mg/L	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/29/2019 1309h	11/5/2019 1534h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/29/2019 1309h	11/5/2019 1534h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/4/2019 1202h	E200.7	20.0	<b>161</b>	
Manganese	mg/L	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.0100	<b>0.0852</b>	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 648h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/29/2019 1309h	11/6/2019 1747h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/29/2019 1309h	11/6/2019 1747h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/29/2019 1309h	11/6/2019 1942h	E200.7	2.00	<b>9.02</b>	
Selenium	mg/L	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.00500	<b>0.0123</b>	
Silver	mg/L	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/4/2019 1202h	E200.7	20.0	<b>507</b>	
Thallium	mg/L	10/29/2019 1309h	11/5/2019 1534h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/29/2019 1309h	11/5/2019 1534h	E200.8	0.000300	<b>0.0187</b>	
Vanadium	mg/L	10/29/2019 1309h	11/4/2019 1307h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/29/2019 1309h	11/5/2019 1447h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-005  
**Client Sample ID:** MW-17\_10232019  
**Collection Date:** 10/23/2019 1450h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

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Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/7/2019 917h	11/7/2019 1400h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	<b>364</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/5/2019 541h	E300.0	1.00	<b>33.0</b>	
Fluoride	mg/L		11/19/2019 1040h	SM4500-F-C	0.100	<b>0.742</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>3.08</b>	
Nitrate/Nitrite (as N)	mg/L		10/28/2019 1050h	E353.2	0.100	<b>1.08</b>	
Sulfate	mg/L		11/5/2019 237h	E300.0	150	<b>1,930</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>48.5</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>51.6</b>	
Total Dissolved Solids	mg/L		10/28/2019 1240h	SM2540C	20.0	<b>3,250</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>1.02</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>3,190</b>	



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-005A  
**Client Sample ID:** MW-17\_10232019  
**Collection Date:** 10/23/2019 1450h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/25/2019 1623h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	48.5	50.00	97.0	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	44.9	50.00	89.7	80-152	
Surr: Dibromofluoromethane		1868-53-7	44.8	50.00	89.7	72-135	
Surr: Toluene-d8		2037-26-5	46.6	50.00	93.1	80-124	

Jose Rocha  
QA Officer

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 22, 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-17_10232019	Project: DNMI00100
Sample ID: 494487008	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 23-OCT-19 14:50	
Receive Date: 29-OCT-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	+/-0.263	0.840	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			95.2	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-001  
**Client Sample ID:** MW-18\_10152019  
**Collection Date:** 10/15/2019 1240h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/26/2019 1039h	10/28/2019 1841h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/1/2019 1910h	E200.7	10.0	<b>528</b>	
Chromium	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/26/2019 1039h	10/30/2019 201h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/26/2019 1039h	10/28/2019 1841h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/1/2019 2010h	E200.7	10.0	<b>117</b>	
Manganese	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.0100	<b>0.0738</b>	
Mercury	mg/L	10/28/2019 1725h	10/29/2019 1226h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	11/5/2019 1040h	11/5/2019 1731h	E200.7	1.00	<b>7.95</b>	
Selenium	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.00500	< 0.00500	
Silver	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/1/2019 1910h	E200.7	10.0	<b>173</b>	
Thallium	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.00100	<b>0.00220</b>	
Tin	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/26/2019 1039h	10/28/2019 1201h	E200.8	0.00100	<b>0.0267</b>	
Vanadium	mg/L	11/5/2019 1040h	11/6/2019 1116h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/26/2019 1039h	10/30/2019 201h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-001  
**Client Sample ID:** MW-18\_10152019  
**Collection Date:** 10/15/2019 1240h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/29/2019 814h	10/29/2019 1341h	E350.1	0.0500	< 0.0500	<sup>1</sup>
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/21/2019 722h	SM2320B	1.00	<b>310</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/21/2019 722h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/31/2019 326h	E300.0	1.00	<b>38.3</b>	
Fluoride	mg/L		11/1/2019 214h	E300.0	0.100	< 0.100	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>-4.98</b>	
Nitrate/Nitrite (as N)	mg/L		10/21/2019 1203h	E353.2	0.100	< 0.100	
Sulfate	mg/L		10/30/2019 2226h	E300.0	150	<b>1,970</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>48.2</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>43.7</b>	
Total Dissolved Solids	mg/L		10/21/2019 1300h	SM2540C	20.0	<b>3,060</b>	@
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>1.02</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>3,020</b>	

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

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

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Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-001A  
**Client Sample ID:** MW-18\_10152019  
**Collection Date:** 10/15/2019 1240h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/21/2019 1039h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	52.4	50.00	105	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	52.2	50.00	104	80-152	
Surr: Dibromofluoromethane		1868-53-7	51.8	50.00	104	72-135	
Surr: Toluene-d8		2037-26-5	51.6	50.00	103	80-124	

<sup>1</sup> - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.  
 \$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 22, 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-18_10152019	Project: DNMI00100
Sample ID: 494487002	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 15-OCT-19 12:40	
Receive Date: 29-OCT-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	+/-0.259	0.805	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			97.1	(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



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-003  
**Client Sample ID:** MW-19\_10142019  
**Collection Date:** 10/14/2019 1530h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

## 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	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/26/2019 1039h	10/28/2019 1848h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/1/2019 1853h	E200.7	20.0	117	
Chromium	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/26/2019 1039h	10/30/2019 213h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/26/2019 1039h	10/28/2019 1848h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/1/2019 2020h	E200.7	1.00	45.2	
Manganese	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	10/28/2019 1725h	10/29/2019 1242h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	11/5/2019 1040h	11/5/2019 1736h	E200.7	1.00	4.70	
Selenium	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.00500	0.0117	
Silver	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/1/2019 1853h	E200.7	20.0	88.1	
Thallium	mg/L	10/26/2019 1039h	10/28/2019 1848h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/26/2019 1039h	10/28/2019 1213h	E200.8	0.00100	0.00555	
Vanadium	mg/L	11/5/2019 1040h	11/6/2019 1121h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/26/2019 1039h	10/30/2019 213h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-003  
**Client Sample ID:** MW-19\_10142019  
**Collection Date:** 10/14/2019 1530h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/29/2019 814h	10/29/2019 1349h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/21/2019 722h	SM2320B	1.00	<b>204</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/21/2019 722h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/31/2019 359h	E300.0	1.00	<b>25.7</b>	
Fluoride	mg/L		11/1/2019 248h	E300.0	0.100	<b>0.965</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>-5.31</b>	
Nitrate/Nitrite (as N)	mg/L		10/21/2019 1158h	E353.2	0.100	<b>2.43</b>	
Sulfate	mg/L		10/30/2019 2332h	E300.0	75.0	<b>491</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>15.1</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>13.5</b>	
Total Dissolved Solids	mg/L		10/21/2019 1300h	SM2540C	20.0	<b>852</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>0.950</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>897</b>	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-003A  
**Client Sample ID:** MW-19\_10142019  
**Collection Date:** 10/14/2019 1530h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/21/2019 1121h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	52.6	50.00	105	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	52.8	50.00	106	80-152	
Surr: Dibromofluoromethane		1868-53-7	52.3	50.00	105	72-135	
Surr: Toluene-d8		2037-26-5	52.3	50.00	105	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 22, 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-19_10142019	Project: DNMI00100
Sample ID: 494487003	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 14-OCT-19 15:30	
Receive Date: 29-OCT-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	+/-0.252	0.929	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			96.7	(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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912025-002  
**Client Sample ID:** MW-20\_11222019  
**Collection Date:** 11/22/2019 1400h  
**Received Date:** 12/3/2019 1044h

**Contact:** Tanner Holliday

## 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	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	12/3/2019 1144h	12/13/2019 1617h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	12/3/2019 1144h	12/13/2019 1454h	E200.7	20.0	<b>313</b>	
Chromium	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.0100	< 0.0100	
Copper	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.0100	< 0.0100	
Iron	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.0300	< 0.0300	
Lead	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	12/3/2019 1144h	12/13/2019 1454h	E200.7	20.0	<b>30.0</b>	
Manganese	mg/L	12/3/2019 1144h	12/13/2019 1617h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	12/5/2019 1454h	12/6/2019 1636h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.0100	<b>0.0175</b>	
Nickel	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	12/3/2019 1144h	12/13/2019 1520h	E200.7	1.00	<b>37.4</b>	
Selenium	mg/L	12/3/2019 1144h	12/13/2019 1617h	E200.8	0.00500	< 0.00500	
Silver	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	12/3/2019 1144h	12/13/2019 1713h	E200.7	50.0	<b>1,070</b>	
Thallium	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.000500	< 0.000500	
Tin	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.100	< 0.100	
Uranium	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.000300	<b>0.00186</b>	
Vanadium	mg/L	12/3/2019 1144h	12/12/2019 1751h	E200.8	0.0150	< 0.0150	
Zinc	mg/L	12/3/2019 1144h	12/13/2019 1617h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912025-002  
**Client Sample ID:** MW-20\_11222019  
**Collection Date:** 11/22/2019 1400h  
**Received Date:** 12/3/2019 1044h

**Contact:** Tanner Holliday

## Analytical Results

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Laboratory Director

Jose Rocha

QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	12/15/2019 1031h	12/15/2019 1444h	E350.1	0.0500	<b>0.162</b>	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/4/2019 943h	SM2320B	1.00	<b>71.5</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/4/2019 943h	SM2320B	1.00	< 1.00	
Chloride	mg/L		12/11/2019 504h	E300.0	1.00	<b>58.7</b>	
Fluoride	mg/L		12/11/2019 539h	E300.0	0.100	< 0.100	
Ion Balance	%		12/13/2019 1602h	Calc.	-100	<b>-0.440</b>	
Nitrate/Nitrite (as N)	mg/L		12/3/2019 1127h	E353.2	0.100	<b>9.30</b>	
Sulfate	mg/L		12/10/2019 2036h	E300.0	375	<b>3,030</b>	
Total Anions, Measured	meq/L		12/13/2019 1602h	Calc.		<b>66.3</b>	
Total Cations, Measured	meq/L		12/13/2019 1602h	Calc.		<b>65.7</b>	
Total Dissolved Solids Ratio, Measured/Calculated			12/13/2019 1602h	Calc.		<b>0.971</b>	
Total Dissolved Solids, Calculated	mg/L		12/13/2019 1602h	Calc.		<b>4,590</b>	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912110-002  
**Client Sample ID:** MW-20\_12042019  
**Collection Date:** 12/4/2019 1000h  
**Received Date:** 12/5/2019 1143h

**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>
Total Dissolved Solids	mg/L		12/6/2019 1110h	SM2540C	20.0	<b>4,460</b>	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912025-002A  
**Client Sample ID:** MW-20\_11222019  
**Collection Date:** 11/22/2019 1400h  
**Received Date:** 12/3/2019 1044h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 12/3/2019 1213h      **Extracted:**  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8260D

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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	48.9	50.00	97.9	72-135	
Surr: Toluene-d8		2037-26-5	51.6	50.00	103	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 24, 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-20_11222019	Project: DNMI00100
Sample ID: 498014002	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 22-NOV-19 14:00	
Receive Date: 04-DEC-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	+/-0.276	0.969	1.00	pCi/L			KSDI	12/19/19	1352	1950311	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"			73.6	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-002  
**Client Sample ID:** MW-22\_10292019  
**Collection Date:** 10/29/2019 1225h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## 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	11/4/2019 1102h	11/6/2019 1854h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	11/4/2019 1102h	11/6/2019 1830h	E200.8	0.000500	<b>0.0113</b>	
Cadmium	mg/L	11/4/2019 1102h	11/6/2019 1854h	E200.8	0.000500	<b>0.163</b>	
Calcium	mg/L	11/4/2019 1102h	11/11/2019 1557h	E200.7	50.0	<b>433</b>	<sup>2</sup>
Chromium	mg/L	11/4/2019 1102h	11/6/2019 1854h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	11/4/2019 1102h	11/6/2019 1830h	E200.8	0.0100	<b>0.493</b>	
Copper	mg/L	11/4/2019 1102h	11/6/2019 1854h	E200.8	0.0100	<b>0.0861</b>	
Iron	mg/L	11/4/2019 1102h	11/6/2019 1854h	E200.8	0.0300	<b>0.0850</b>	
Lead	mg/L	11/4/2019 1102h	11/6/2019 1754h	E200.8	0.00200	<b>0.00399</b>	
Magnesium	mg/L	11/4/2019 1102h	11/11/2019 1557h	E200.7	50.0	<b>1,210</b>	<sup>2</sup>
Manganese	mg/L	11/4/2019 1102h	11/11/2019 1259h	E200.8	0.100	<b>45.9</b>	<sup>2</sup>
Mercury	mg/L	11/4/2019 1600h	11/5/2019 713h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	11/4/2019 1102h	11/11/2019 1225h	E200.8	0.0100	<b>0.267</b>	
Nickel	mg/L	11/4/2019 1102h	11/6/2019 1830h	E200.8	0.0200	<b>0.280</b>	
Potassium	mg/L	11/4/2019 1102h	11/11/2019 1620h	E200.7	1.00	<b>23.5</b>	<sup>1</sup>
Selenium	mg/L	11/4/2019 1102h	11/6/2019 1854h	E200.8	0.00500	<b>0.0183</b>	
Silver	mg/L	11/4/2019 1102h	11/6/2019 1854h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	11/4/2019 1102h	11/11/2019 1557h	E200.7	50.0	<b>292</b>	<sup>2</sup>
Thallium	mg/L	11/4/2019 1102h	11/6/2019 1754h	E200.8	0.00200	<b>0.00220</b>	
Tin	mg/L	11/4/2019 1102h	11/6/2019 1854h	E200.8	0.100	< 0.100	
Uranium	mg/L	11/4/2019 1102h	11/6/2019 1754h	E200.8	0.00200	<b>0.0225</b>	
Vanadium	mg/L	11/4/2019 1102h	11/11/2019 1708h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	11/4/2019 1102h	11/11/2019 1253h	E200.8	0.0120	<b>1.30</b>	<sup>1</sup>

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

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



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-002  
**Client Sample ID:** MW-22\_10292019  
**Collection Date:** 10/29/2019 1225h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## 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	11/8/2019 950h	11/8/2019 1225h	E350.1	0.0500	<b>0.949</b>	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/31/2019 627h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/31/2019 627h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/11/2019 1823h	E300.0	1.00	<b>57.3</b>	
Fluoride	mg/L		11/11/2019 1823h	E300.0	1.00	<b>11.1</b>	
Ion Balance	%		11/11/2019 1708h	Calc.	-100	<b>1.02</b>	
Nitrate/Nitrite (as N)	mg/L		10/31/2019 834h	E353.2	0.100	<b>2.39</b>	
Sulfate	mg/L		11/7/2019 1817h	E300.0	750	<b>6,250</b>	
Total Anions, Measured	meq/L		11/11/2019 1708h	Calc.		<b>132</b>	
Total Cations, Measured	meq/L		11/11/2019 1708h	Calc.		<b>135</b>	
Total Dissolved Solids	mg/L		10/31/2019 1125h	SM2540C	50.0	<b>8,160</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/11/2019 1708h	Calc.		<b>0.987</b>	
Total Dissolved Solids, Calculated	mg/L		11/11/2019 1708h	Calc.		<b>8,270</b>	



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-002A  
**Client Sample ID:** MW-22\_10292019  
**Collection Date:** 10/29/2019 1225h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/31/2019 1208h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	

Jose Rocha  
QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	48.9	50.00	97.9	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	44.4	50.00	88.9	80-152	
Surr: Dibromofluoromethane		1868-53-7	44.3	50.00	88.7	72-135	
Surr: Toluene-d8		2037-26-5	46.9	50.00	93.8	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 4, 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-22_10292019	Project: DNMI00100
Sample ID: 495672002	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 29-OCT-19 12:25	
Receive Date: 08-NOV-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		1.17	+/-0.371	0.941	1.00	pCi/L			KSD1	12/03/19	1628	1939966	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"			99.3	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-003  
**Client Sample ID:** MW-23\_10292019  
**Collection Date:** 10/29/2019 1330h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## 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	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	11/4/2019 1102h	11/6/2019 1833h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	11/4/2019 1102h	11/11/2019 1604h	E200.7	50.0	<b>458</b>	
Chromium	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.0100	< 0.0100	
Copper	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.0100	< 0.0100	
Iron	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.0300	< 0.0300	
Lead	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	11/4/2019 1102h	11/11/2019 1604h	E200.7	50.0	<b>156</b>	
Manganese	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 715h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	11/4/2019 1102h	11/11/2019 1234h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	11/4/2019 1102h	11/11/2019 1631h	E200.7	1.00	<b>9.60</b>	
Selenium	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.00500	< 0.00500	
Silver	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	11/4/2019 1102h	11/11/2019 1604h	E200.7	50.0	<b>410</b>	
Thallium	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.000500	< 0.000500	
Tin	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.100	< 0.100	
Uranium	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.000300	<b>0.00823</b>	
Vanadium	mg/L	11/4/2019 1102h	11/11/2019 1715h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	11/4/2019 1102h	11/6/2019 1857h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-003  
**Client Sample ID:** MW-23\_10292019  
**Collection Date:** 10/29/2019 1330h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## 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	11/8/2019 950h	11/8/2019 1225h	E350.1	0.0500	< 0.0500	1
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/31/2019 627h	SM2320B	1.00	<b>282</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/31/2019 627h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/11/2019 2235h	E300.0	1.00	<b>7.79</b>	
Fluoride	mg/L		11/11/2019 2037h	E300.0	0.200	<b>0.247</b>	
Ion Balance	%		11/11/2019 1708h	Calc.	-100	<b>-1.05</b>	
Nitrate/Nitrite (as N)	mg/L		10/31/2019 836h	E353.2	0.100	<b>0.190</b>	
Sulfate	mg/L		11/7/2019 1907h	E300.0	150	<b>2,360</b>	
Total Anions, Measured	meq/L		11/11/2019 1708h	Calc.		<b>54.9</b>	
Total Cations, Measured	meq/L		11/11/2019 1708h	Calc.		<b>53.8</b>	
Total Dissolved Solids	mg/L		10/31/2019 1125h	SM2540C	20.0	<b>3,380</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/11/2019 1708h	Calc.		<b>0.949</b>	
Total Dissolved Solids, Calculated	mg/L		11/11/2019 1708h	Calc.		<b>3,570</b>	

<sup>1</sup> - 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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-003A  
**Client Sample ID:** MW-23\_10292019  
**Collection Date:** 10/29/2019 1330h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/31/2019 1228h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	48.4	50.00	96.8	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	44.3	50.00	88.6	80-152	
Surr: Dibromofluoromethane		1868-53-7	44.1	50.00	88.2	72-135	
Surr: Toluene-d8		2037-26-5	46.9	50.00	93.8	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

Jose Rocha

QA Officer

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 4, 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-23_10292019	Project: DNMI00100
Sample ID: 495672003	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 29-OCT-19 13:30	
Receive Date: 08-NOV-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	+/-0.334	0.979	1.00	pCi/L			KSD1	12/03/19	1628	1939966	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"			104	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-002  
**Client Sample ID:** MW-24\_11062019  
**Collection Date:** 11/6/2019 800h  
**Received Date:** 11/8/2019 1210h

**Contact:** Tanner Holliday

## 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	11/8/2019 1400h	11/19/2019 1213h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	11/8/2019 1400h	11/19/2019 1204h	E200.8	0.000500	<b>0.00325</b>	
Cadmium	mg/L	11/8/2019 1400h	11/19/2019 1213h	E200.8	0.000500	<b>0.00931</b>	
Calcium	mg/L	11/8/2019 1400h	11/18/2019 1652h	E200.7	20.0	<b>484</b>	2
Chromium	mg/L	11/8/2019 1400h	11/19/2019 1213h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	11/8/2019 1400h	11/19/2019 1213h	E200.8	0.0100	<b>0.126</b>	
Copper	mg/L	11/8/2019 1400h	11/20/2019 1356h	E200.8	0.0100	<b>0.0116</b>	
Iron	mg/L	11/8/2019 1400h	11/19/2019 1204h	E200.8	0.0300	<b>0.0820</b>	
Lead	mg/L	11/8/2019 1400h	11/20/2019 1436h	E200.8	0.00100	<b>0.00300</b>	
Magnesium	mg/L	11/8/2019 1400h	11/18/2019 1652h	E200.7	20.0	<b>194</b>	2
Manganese	mg/L	11/8/2019 1400h	11/20/2019 1417h	E200.8	0.0200	<b>7.70</b>	2
Mercury	mg/L	11/12/2019 1600h	11/13/2019 957h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	11/8/2019 1400h	11/19/2019 1213h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	11/8/2019 1400h	11/19/2019 1213h	E200.8	0.0200	<b>0.0754</b>	
Potassium	mg/L	11/8/2019 1400h	11/18/2019 1710h	E200.7	1.00	<b>19.4</b>	1
Selenium	mg/L	11/8/2019 1400h	11/20/2019 1356h	E200.8	0.00500	<b>0.00665</b>	
Silver	mg/L	11/8/2019 1400h	11/19/2019 1213h	E200.8	0.0100	< 0.0100	1
Sodium	mg/L	11/8/2019 1400h	11/18/2019 1652h	E200.7	20.0	<b>425</b>	2
Thallium	mg/L	11/8/2019 1400h	11/20/2019 1436h	E200.8	0.000500	<b>0.00288</b>	
Tin	mg/L	11/8/2019 1400h	11/20/2019 1356h	E200.8	0.100	< 0.100	
Uranium	mg/L	11/8/2019 1400h	11/20/2019 1545h	E200.8	0.000300	<b>0.00623</b>	
Vanadium	mg/L	11/8/2019 1400h	11/22/2019 1427h	E200.8	0.0150	< 0.0150	
Zinc	mg/L	11/8/2019 1400h	11/19/2019 1213h	E200.8	0.0100	<b>0.177</b>	

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

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



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-002  
**Client Sample ID:** MW-24\_11062019  
**Collection Date:** 11/6/2019 800h  
**Received Date:** 11/8/2019 1210h

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/13/2019 1013h	11/13/2019 1359h	E350.1	0.0500	<b>0.200</b>	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		11/13/2019 710h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO <sub>3</sub> )	mg/L		11/13/2019 710h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/14/2019 108h	E300.0	1.00	<b>44.0</b>	
Fluoride	mg/L		11/14/2019 158h	E300.0	0.200	<b>0.667</b>	
Ion Balance	%		11/18/2019 1745h	Calc.	-100	<b>2.70</b>	
Nitrate/Nitrite (as N)	mg/L		11/13/2019 838h	E353.2	0.100	<b>0.627</b>	
Sulfate	mg/L		11/27/2019 1142h	E300.0	375	<b>2,630</b>	
Total Anions, Measured	meq/L		11/18/2019 1745h	Calc.		<b>56.0</b>	
Total Cations, Measured	meq/L		11/18/2019 1745h	Calc.		<b>59.1</b>	
Total Dissolved Solids	mg/L		11/11/2019 1325h	SM2540C	20.0	<b>4,390</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/18/2019 1745h	Calc.		<b>1.16</b>	
Total Dissolved Solids, Calculated	mg/L		11/18/2019 1745h	Calc.		<b>3,800</b>	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-002A  
**Client Sample ID:** MW-24\_11062019  
**Collection Date:** 11/6/2019 800h  
**Received Date:** 11/8/2019 1210h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 11/12/2019 914h      **Extracted:**  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8260D

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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	53.1	50.00	106	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	49.1	50.00	98.2	80-152	
Surr: Dibromofluoromethane		1868-53-7	51.0	50.00	102	72-135	
Surr: Toluene-d8		2037-26-5	50.5	50.00	101	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 4, 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-24_11062019	Project: DNMI00100
Sample ID: 495672007	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 06-NOV-19 08:00	
Receive Date: 08-NOV-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		2.86	+/-0.513	0.960	1.00	pCi/L			KSD1	12/03/19	1629	1939966	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"			104	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-002  
**Client Sample ID:** MW-25\_10092019  
**Collection Date:** 10/9/2019 1030h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.000500	<b>0.00145</b>	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1335h	E200.7	20.0	<b>364</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1335h	E200.7	20.0	<b>132</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1211h	E200.8	0.0100	<b>1.43</b>	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1215h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/27/2019 1634h	E200.8	0.0100	<b>0.0163</b>	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1317h	E200.7	1.00	<b>8.78</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.00500	< 0.00500	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1335h	E200.7	20.0	<b>322</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.000500	<b>0.000840</b>	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/26/2019 1038h	E200.8	0.000300	<b>0.00615</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1317h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1038h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-002  
**Client Sample ID:** MW-25\_10092019  
**Collection Date:** 10/9/2019 1030h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## 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	10/22/2019 902h	10/22/2019 1242h	E350.1	0.0500	<b>0.505</b>	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>378</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/27/2019 302h	E300.0	1.00	<b>31.9</b>	
Fluoride	mg/L		10/29/2019 504h	E300.0	0.200	<b>0.292</b>	
Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>0.341</b>	
Nitrate/Nitrite (as N)	mg/L		10/15/2019 1330h	E353.2	0.100	< 0.100	
Sulfate	mg/L		10/26/2019 2342h	E300.0	150	<b>1,660</b>	
Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>43.0</b>	
Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>43.3</b>	
Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>2,480</b>	
Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>0.902</b>	
Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>2,740</b>	



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-002A  
**Client Sample ID:** MW-25\_10092019  
**Collection Date:** 10/9/2019 1030h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1454h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	

Jose Rocha

QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	47.5	50.00	95.1	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	45.8	50.00	91.6	80-152	
Surr: Dibromofluoromethane		1868-53-7	45.9	50.00	91.7	72-135	
Surr: Toluene-d8		2037-26-5	47.6	50.00	95.3	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 9, 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_10092019	Project: DNMI00100
Sample ID: 493013002	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 09-OCT-19 10:30	
Receive Date: 15-OCT-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	+/-0.271	0.650	1.00	pCi/L			BXF1	11/01/19	1405	1929579	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-003  
**Client Sample ID:** MW-26\_10092019  
**Collection Date:** 10/9/2019 1000h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## 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	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1342h	E200.7	20.0	<b>495</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1217h	E200.8	0.0500	<b>0.720</b>	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1342h	E200.7	20.0	<b>170</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1217h	E200.8	0.0100	<b>0.886</b>	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1217h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/27/2019 1643h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1324h	E200.7	1.00	<b>10.4</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.00500	<b>0.00507</b>	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1342h	E200.7	20.0	<b>188</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/26/2019 1214h	E200.8	0.000500	<b>0.0411</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1324h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1053h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-003  
**Client Sample ID:** MW-26\_10092019  
**Collection Date:** 10/9/2019 1000h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/22/2019 902h	10/22/2019 1243h	E350.1	0.0500	<b>0.273</b>	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>382</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/27/2019 319h	E300.0	1.00	<b>73.8</b>	
Fluoride	mg/L		10/29/2019 356h	E300.0	0.200	<b>0.444</b>	
Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>-1.29</b>	
Nitrate/Nitrite (as N)	mg/L		10/15/2019 1311h	E353.2	0.100	<b>2.35</b>	
Sulfate	mg/L		10/26/2019 2358h	E300.0	150	<b>1,860</b>	
Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>48.4</b>	
Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>47.2</b>	
Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>2,920</b>	
Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>0.966</b>	
Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>3,030</b>	

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web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-003A  
**Client Sample ID:** MW-26\_10092019  
**Collection Date:** 10/9/2019 1000h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/16/2019 1441h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 20                      **Method:** SW8260D

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Salt Lake City, UT 84119

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Chloroform	67-66-3	20.0	1,710	~

Phone: (801) 263-8686

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	941	1,000	94.1	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	944	1,000	94.4	80-152	
Surr: Dibromofluoromethane		1868-53-7	940	1,000	94.0	72-135	
Surr: Toluene-d8		2037-26-5	974	1,000	97.4	80-124	

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

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**Analyzed:** 10/15/2019 1514h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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	2.95	
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	47.5	50.00	95.1	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	46.8	50.00	93.7	80-152	
Surr: Dibromofluoromethane		1868-53-7	47.2	50.00	94.4	72-135	
Surr: Toluene-d8		2037-26-5	47.9	50.00	95.8	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 9, 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_10092019	Project: DNMI00100
Sample ID: 493013003	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 09-OCT-19 10:00	
Receive Date: 15-OCT-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		3.60	+/-0.557	0.872	1.00	pCi/L			BXF1	11/01/19	1405	1929579	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"			103	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-006  
**Client Sample ID:** MW-27\_10222019  
**Collection Date:** 10/22/2019 1030h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/29/2019 1309h	11/5/2019 1450h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/29/2019 1309h	11/5/2019 1537h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/29/2019 1309h	11/5/2019 1450h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/4/2019 1204h	E200.7	20.0	<b>117</b>	
Chromium	mg/L	10/29/2019 1309h	11/5/2019 1450h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/29/2019 1309h	11/5/2019 1450h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/29/2019 1309h	11/5/2019 1450h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/29/2019 1309h	11/5/2019 1537h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/29/2019 1309h	11/5/2019 1537h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/4/2019 1204h	E200.7	20.0	<b>50.0</b>	
Manganese	mg/L	10/29/2019 1309h	11/5/2019 1450h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 650h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/29/2019 1309h	11/6/2019 1750h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/29/2019 1309h	11/6/2019 1750h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/29/2019 1309h	11/6/2019 1944h	E200.7	2.00	<b>3.82</b>	
Selenium	mg/L	10/29/2019 1309h	11/5/2019 1450h	E200.8	0.00500	<b>0.0131</b>	
Silver	mg/L	10/29/2019 1309h	11/5/2019 1450h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/4/2019 1204h	E200.7	20.0	<b>78.8</b>	
Thallium	mg/L	10/29/2019 1309h	11/5/2019 1537h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/29/2019 1309h	11/5/2019 1450h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/29/2019 1309h	11/5/2019 1537h	E200.8	0.000300	<b>0.0108</b>	
Vanadium	mg/L	10/29/2019 1309h	11/4/2019 1309h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/29/2019 1309h	11/5/2019 1450h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-006  
**Client Sample ID:** MW-27\_10222019  
**Collection Date:** 10/22/2019 1030h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## 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	11/7/2019 917h	11/7/2019 1401h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	<b>352</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/5/2019 557h	E300.0	1.00	<b>31.5</b>	
Fluoride	mg/L		11/7/2019 231h	E300.0	0.100	<b>0.714</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>-1.11</b>	
Nitrate/Nitrite (as N)	mg/L		10/28/2019 1051h	E353.2	0.100	<b>6.27</b>	
Sulfate	mg/L		11/5/2019 254h	E300.0	37.5	<b>276</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>13.8</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>13.5</b>	
Total Dissolved Solids	mg/L		10/28/2019 1240h	SM2540C	20.0	<b>764</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>0.987</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>774</b>	



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-006A  
**Client Sample ID:** MW-27\_10222019  
**Collection Date:** 10/22/2019 1030h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/25/2019 1643h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	

Jose Rocha

QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	48.6	50.00	97.2	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	44.8	50.00	89.6	80-152	
Surr: Dibromofluoromethane		1868-53-7	44.7	50.00	89.3	72-135	
Surr: Toluene-d8		2037-26-5	46.8	50.00	93.5	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 22, 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-27_10222019	Project: DNMI00100
Sample ID: 494487009	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 22-OCT-19 10:30	
Receive Date: 29-OCT-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	+/-0.295	0.949	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			98.9	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-007  
**Client Sample ID:** MW-28\_10222019  
**Collection Date:** 10/22/2019 1405h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## 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	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.00500	<b>0.0106</b>	
Beryllium	mg/L	10/29/2019 1309h	11/5/2019 1540h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.000500	<b>0.00470</b>	
Calcium	mg/L	10/29/2019 1309h	11/4/2019 1213h	E200.7	20.0	<b>569</b>	
Chromium	mg/L	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.0100	<b>0.0284</b>	
Copper	mg/L	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/29/2019 1309h	11/5/2019 1540h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/29/2019 1309h	11/5/2019 1540h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/4/2019 1213h	E200.7	20.0	<b>209</b>	
Manganese	mg/L	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.0100	<b>1.26</b>	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 652h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/29/2019 1309h	11/6/2019 1802h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/29/2019 1309h	11/6/2019 1802h	E200.8	0.0200	<b>0.0210</b>	
Potassium	mg/L	10/29/2019 1309h	11/6/2019 1946h	E200.7	2.00	<b>11.9</b>	
Selenium	mg/L	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.00500	<b>0.0165</b>	
Silver	mg/L	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/4/2019 1213h	E200.7	20.0	<b>351</b>	
Thallium	mg/L	10/29/2019 1309h	11/5/2019 1540h	E200.8	0.000500	<b>0.000796</b>	
Tin	mg/L	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/29/2019 1309h	11/5/2019 1540h	E200.8	0.000300	<b>0.0124</b>	
Vanadium	mg/L	10/29/2019 1309h	11/4/2019 1325h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/29/2019 1309h	11/5/2019 1453h	E200.8	0.0100	<b>0.0560</b>	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-007  
**Client Sample ID:** MW-28\_10222019  
**Collection Date:** 10/22/2019 1405h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

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web: www.awal-labs.com

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	11/7/2019 917h	11/7/2019 1401h	E350.1	0.0500	<b>0.118</b>	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	<b>234</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/28/2019 848h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/5/2019 614h	E300.0	2.00	<b>149</b>	
Fluoride	mg/L		11/7/2019 1127h	E300.0	0.200	<b>0.552</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>1.51</b>	
Nitrate/Nitrite (as N)	mg/L		10/28/2019 1052h	E353.2	0.100	<b>5.14</b>	
Sulfate	mg/L		11/5/2019 310h	E300.0	150	<b>2,420</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>59.4</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>61.2</b>	
Total Dissolved Solids	mg/L		10/28/2019 1240h	SM2540C	20.0	<b>3,780</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>0.980</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>3,860</b>	



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-007A  
**Client Sample ID:** MW-28\_10222019  
**Collection Date:** 10/22/2019 1405h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/25/2019 1703h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	

Jose Rocha

QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	48.1	50.00	96.3	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	44.0	50.00	88.0	80-152	
Surr: Dibromofluoromethane		1868-53-7	44.6	50.00	89.3	72-135	
Surr: Toluene-d8		2037-26-5	46.3	50.00	92.6	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 22, 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-28_10222019	Project: DNMI00100
Sample ID: 494487010	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 22-OCT-19 14:05	
Receive Date: 29-OCT-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	+/-0.266	0.768	1.00	pCi/L			KSD1	11/18/19	1220	1934418	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"			90.3	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-008  
**Client Sample ID:** MW-29\_10222019  
**Collection Date:** 10/22/2019 1345h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## 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	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/29/2019 1309h	11/5/2019 1546h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/4/2019 1215h	E200.7	20.0	<b>529</b>	
Chromium	mg/L	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.100	<b>1.33</b>	
Lead	mg/L	10/29/2019 1309h	11/5/2019 1546h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/4/2019 1215h	E200.7	20.0	<b>241</b>	
Manganese	mg/L	10/29/2019 1309h	11/7/2019 1337h	E200.8	0.0100	<b>4.89</b>	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 654h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/29/2019 1309h	11/6/2019 1806h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/29/2019 1309h	11/6/2019 1806h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/29/2019 1309h	11/6/2019 1955h	E200.7	2.00	<b>17.0</b>	
Selenium	mg/L	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.00500	< 0.00500	
Silver	mg/L	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/4/2019 1215h	E200.7	20.0	<b>494</b>	
Thallium	mg/L	10/29/2019 1309h	11/5/2019 1546h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/29/2019 1309h	11/5/2019 1546h	E200.8	0.000300	<b>0.0142</b>	
Vanadium	mg/L	10/29/2019 1309h	11/4/2019 1327h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/29/2019 1309h	11/5/2019 1456h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-008  
**Client Sample ID:** MW-29\_10222019  
**Collection Date:** 10/22/2019 1345h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## 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	11/7/2019 917h	11/7/2019 1402h	E350.1	0.0500	<b>0.635</b>	
Bicarbonate (as CaCO3)	mg/L		10/28/2019 848h	SM2320B	1.00	<b>298</b>	
Carbonate (as CaCO3)	mg/L		10/28/2019 848h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/5/2019 631h	E300.0	1.00	<b>38.0</b>	
Fluoride	mg/L		11/7/2019 033h	E300.0	0.200	<b>0.559</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>3.31</b>	
Nitrate/Nitrite (as N)	mg/L		10/28/2019 1115h	E353.2	0.100	< 0.100	
Sulfate	mg/L		11/5/2019 327h	E300.0	150	<b>2,730</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>63.9</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>68.3</b>	
Total Dissolved Solids	mg/L		10/28/2019 1240h	SM2540C	20.0	<b>4,220</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>0.996</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>4,230</b>	



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-008A  
**Client Sample ID:** MW-29\_10222019  
**Collection Date:** 10/22/2019 1345h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tamer Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/28/2019 1615h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	

Jose Rocha

QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	52.9	50.00	106	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	51.2	50.00	102	80-152	
Surr: Dibromofluoromethane		1868-53-7	52.1	50.00	104	72-135	
Surr: Toluene-d8		2037-26-5	51.3	50.00	103	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 22, 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-29_10222019	Project: DNMI00100
Sample ID: 494487011	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 22-OCT-19 13:45	
Receive Date: 29-OCT-19	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Gas Flow Proportional Counting</b>													
GFPC, Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha	U	1.00	+/-0.300	0.801	1.00	pCi/L			KSD1	11/15/19	1618	1934418	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"			97.1	(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 |



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-004  
**Client Sample ID:** MW-30\_10082019  
**Collection Date:** 10/8/2019 1120h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1344h	E200.7	20.0	<b>298</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1344h	E200.7	20.0	<b>82.5</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1219h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/27/2019 1646h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1326h	E200.7	1.00	<b>6.37</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.00500	<b>0.0568</b>	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1344h	E200.7	20.0	<b>114</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/26/2019 1056h	E200.8	0.000300	<b>0.00869</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1326h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1056h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-004  
**Client Sample ID:** MW-30\_10082019  
**Collection Date:** 10/8/2019 1120h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/22/2019 902h	10/22/2019 1243h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>160</b>	
Carbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/27/2019 015h	E300.0	5.00	<b>170</b>	
Fluoride	mg/L		10/27/2019 426h	E300.0	0.100	<b>0.278</b>	
Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>3.95</b>	
Nitrate/Nitrite (as N)	mg/L		10/15/2019 1312h	E353.2	0.100	<b>18.2</b>	
Sulfate	mg/L		10/27/2019 015h	E300.0	37.5	<b>790</b>	
Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>24.7</b>	
Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>26.8</b>	
Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>1,580</b>	
Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>1.00</b>	
Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>1,570</b>	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-004A  
**Client Sample ID:** MW-30\_10082019  
**Collection Date:** 10/8/2019 1120h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1534h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	

Jose Rocha

QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	48.0	50.00	96.0	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	46.0	50.00	92.0	80-152	
Surr: Dibromofluoromethane		1868-53-7	46.5	50.00	92.9	72-135	
Surr: Toluene-d8		2037-26-5	48.2	50.00	96.5	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 9, 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_10082019	Project: DNMI00100
Sample ID: 493013004	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 08-OCT-19 11:20	
Receive Date: 15-OCT-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	+/-0.277	0.811	1.00	pCi/L			BXF1	11/01/19	1404	1929579	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"			96.3	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-005  
**Client Sample ID:** MW-31\_10092019  
**Collection Date:** 10/9/2019 1315h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1346h	E200.7	20.0	<b>346</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1346h	E200.7	20.0	<b>167</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1221h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/27/2019 1659h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1329h	E200.7	1.00	<b>6.63</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.00500	<b>0.101</b>	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1346h	E200.7	20.0	<b>124</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/26/2019 1124h	E200.8	0.000300	<b>0.0144</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1329h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1124h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-005  
**Client Sample ID:** MW-31\_10092019  
**Collection Date:** 10/9/2019 1315h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/22/2019 902h	10/22/2019 1244h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>185</b>	
Carbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/27/2019 032h	E300.0	10.0	<b>318</b>	
Fluoride	mg/L		10/27/2019 409h	E300.0	0.100	<b>0.526</b>	
Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>3.61</b>	
Nitrate/Nitrite (as N)	mg/L		10/15/2019 1313h	E353.2	0.100	<b>19.8</b>	
Sulfate	mg/L		10/27/2019 032h	E300.0	75.0	<b>1,010</b>	
Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>34.0</b>	
Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>36.5</b>	
Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>2,280</b>	
Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>1.08</b>	
Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>2,100</b>	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-005A  
**Client Sample ID:** MW-31\_10092019  
**Collection Date:** 10/9/2019 1315h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1553h      **Extracted:**  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8260D

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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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Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	48.7	50.00	97.5	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	47.4	50.00	94.8	80-152	
Surr: Dibromofluoromethane		1868-53-7	47.3	50.00	94.6	72-135	
Surr: Toluene-d8		2037-26-5	49.2	50.00	98.3	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 9, 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_10092019	Project: DNMI00100
Sample ID: 493013005	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 09-OCT-19 13:15	
Receive Date: 15-OCT-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		1.20	+/-0.276	0.568	1.00	pCi/L			BXF1	11/01/19	1404	1929579	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"			98.2	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-006  
**Client Sample ID:** MW-32\_10082019  
**Collection Date:** 10/8/2019 1240h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.000500	<b>0.00158</b>	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1348h	E200.7	20.0	<b>582</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.0100	<b>0.0400</b>	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1220h	E200.8	0.500	<b>5.32</b>	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1348h	E200.7	20.0	<b>238</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1220h	E200.8	0.0100	<b>4.75</b>	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1223h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/27/2019 1702h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.0200	<b>0.0454</b>	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1331h	E200.7	1.00	<b>12.6</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.00500	< 0.00500	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1348h	E200.7	20.0	<b>279</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.000300	<b>0.00175</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1331h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1127h	E200.8	0.0100	<b>0.0707</b>	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-006  
**Client Sample ID:** MW-32\_10082019  
**Collection Date:** 10/8/2019 1240h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/22/2019 902h	10/22/2019 1245h	E350.1	0.0500	<b>0.647</b>	
Bicarbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>384</b>	
Carbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/27/2019 335h	E300.0	1.00	<b>35.3</b>	
Fluoride	mg/L		10/27/2019 642h	E300.0	0.100	< 0.100	
Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>6.87</b>	
Nitrate/Nitrite (as N)	mg/L		10/15/2019 1331h	E353.2	0.100	< 0.100	
Sulfate	mg/L		10/27/2019 155h	E300.0	150	<b>2,150</b>	
Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>53.5</b>	
Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>61.4</b>	
Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>3,310</b>	
Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>0.936</b>	
Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>3,530</b>	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-006A  
**Client Sample ID:** MW-32\_10082019  
**Collection Date:** 10/8/2019 1240h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1613h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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	48.3	50.00	96.5	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	45.9	50.00	91.7	80-152	
Surr: Dibromofluoromethane		1868-53-7	46.7	50.00	93.4	72-135	
Surr: Toluene-d8		2037-26-5	48.3	50.00	96.5	80-124	

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: November 9, 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-32_10082019	Project: DNMI00100
Sample ID: 493013006	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 08-OCT-19 12:40	
Receive Date: 15-OCT-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		3.03	+/-0.433	0.731	1.00	pCi/L			BXF1	11/01/19	1404	1929579	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"			99.7	(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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-007  
**Client Sample ID:** MW-35\_10082019  
**Collection Date:** 10/8/2019 1315h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## 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	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1350h	E200.7	20.0	<b>567</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.0300	<b>0.191</b>	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1350h	E200.7	20.0	<b>177</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1223h	E200.8	0.0100	<b>0.251</b>	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1236h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/27/2019 1705h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1451h	E200.7	2.00	<b>11.7</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1223h	E200.8	0.00500	<b>0.00704</b>	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1350h	E200.7	20.0	<b>442</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/26/2019 1223h	E200.8	0.000500	<b>0.0193</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1451h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1131h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-007  
**Client Sample ID:** MW-35\_10082019  
**Collection Date:** 10/8/2019 1315h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/22/2019 902h	10/22/2019 1246h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>322</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/27/2019 352h	E300.0	1.00	<b>62.5</b>	
Fluoride	mg/L		10/29/2019 430h	E300.0	0.400	<b>0.413</b>	
Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>4.89</b>	
Nitrate/Nitrite (as N)	mg/L		10/15/2019 1332h	E353.2	0.100	< 0.100	
Sulfate	mg/L		10/27/2019 212h	E300.0	150	<b>2,320</b>	
Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>56.6</b>	
Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>62.4</b>	
Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>3,480</b>	
Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>0.920</b>	
Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>3,780</b>	

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web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-007A  
**Client Sample ID:** MW-35\_10082019  
**Collection Date:** 10/8/2019 1315h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1633h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	47.5	50.00	94.9	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	46.2	50.00	92.3	80-152	
Surr: Dibromofluoromethane		1868-53-7	45.6	50.00	91.1	72-135	
Surr: Toluene-d8		2037-26-5	47.0	50.00	93.9	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 9, 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-35_10082019	Project: DNMI00100
Sample ID: 493013007	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 08-OCT-19 13:15	
Receive Date: 15-OCT-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		5.93	+/-0.661	0.824	1.00	pCi/L			BXF1	11/01/19	1404	1929579	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"			96.3	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-008  
**Client Sample ID:** MW-36\_10082019  
**Collection Date:** 10/8/2019 1415h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1359h	E200.7	20.0	<b>473</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1359h	E200.7	20.0	<b>154</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1238h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/27/2019 1708h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1454h	E200.7	2.00	<b>10.5</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1227h	E200.8	0.00500	<b>0.264</b>	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1359h	E200.7	20.0	<b>769</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.000500	<b>0.000605</b>	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1134h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/26/2019 1227h	E200.8	0.000500	<b>0.0202</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1454h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1134h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-008  
**Client Sample ID:** MW-36\_10082019  
**Collection Date:** 10/8/2019 1415h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/22/2019 902h	10/22/2019 1247h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>272</b>	
Carbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/29/2019 122h	E300.0	1.00	<b>56.6</b>	
Fluoride	mg/L		11/2/2019 102h	E300.0	0.200	<b>0.209</b>	
Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>2.77</b>	
Nitrate/Nitrite (as N)	mg/L		10/15/2019 1317h	E353.2	0.100	<b>0.157</b>	
Sulfate	mg/L		10/28/2019 1608h	E300.0	150	<b>2,850</b>	
Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>66.3</b>	
Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>70.1</b>	
Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>4,200</b>	
Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>0.940</b>	
Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>4,470</b>	

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Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-008A  
**Client Sample ID:** MW-36\_10082019  
**Collection Date:** 10/8/2019 1415h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1653h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	

Jose Rocha  
QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	48.4	50.00	96.7	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	47.9	50.00	95.8	80-152	
Surr: Dibromofluoromethane		1868-53-7	46.7	50.00	93.4	72-135	
Surr: Toluene-d8		2037-26-5	48.6	50.00	97.2	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 9, 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_10082019	Project: DNMI00100
Sample ID: 493013008	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 08-OCT-19 14:15	
Receive Date: 15-OCT-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		1.33	+/-0.383	0.881	1.00	pCi/L			BXF1	11/01/19	1405	1929579	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"			89.9	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912025-001  
**Client Sample ID:** MW-37\_11222019  
**Collection Date:** 11/22/2019 915h  
**Received Date:** 12/3/2019 1044h

**Contact:** Tanner Holliday

## 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	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	12/3/2019 1144h	12/13/2019 1621h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	12/3/2019 1144h	12/13/2019 1447h	E200.7	20.0	<b>467</b>	<sup>2</sup>
Chromium	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.0100	< 0.0100	
Copper	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.0100	< 0.0100	
Iron	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.0300	< 0.0300	
Lead	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	12/3/2019 1144h	12/13/2019 1447h	E200.7	20.0	<b>131</b>	<sup>2</sup>
Manganese	mg/L	12/3/2019 1144h	12/13/2019 1621h	E200.8	0.0100	<b>0.0124</b>	
Mercury	mg/L	12/5/2019 1454h	12/6/2019 1646h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	12/3/2019 1144h	12/13/2019 1508h	E200.7	1.00	<b>16.2</b>	<sup>1</sup>
Selenium	mg/L	12/3/2019 1144h	12/13/2019 1621h	E200.8	0.00500	< 0.00500	
Silver	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.0100	< 0.0100	<sup>1</sup>
Sodium	mg/L	12/3/2019 1144h	12/13/2019 1707h	E200.7	50.0	<b>506</b>	<sup>2</sup>
Thallium	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.000500	<b>0.000608</b>	
Tin	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.100	< 0.100	
Uranium	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.000300	<b>0.0116</b>	
Vanadium	mg/L	12/3/2019 1144h	12/12/2019 1741h	E200.8	0.0150	< 0.0150	
Zinc	mg/L	12/3/2019 1144h	12/13/2019 1621h	E200.8	0.0100	<b>0.0403</b>	

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

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



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912025-001  
**Client Sample ID:** MW-37\_11222019  
**Collection Date:** 11/22/2019 915h  
**Received Date:** 12/3/2019 1044h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	12/15/2019 1031h	12/15/2019 1440h	E350.1	0.0500	<b>0.149</b>	'
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		12/4/2019 943h	SM2320B	1.00	<b>235</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		12/4/2019 943h	SM2320B	1.00	< 1.00	
Chloride	mg/L		12/11/2019 447h	E300.0	1.00	<b>44.3</b>	
Fluoride	mg/L		12/11/2019 521h	E300.0	0.100	<b>0.106</b>	
Ion Balance	%		12/13/2019 1602h	Calc.	-100	<b>-3.77</b>	
Nitrate/Nitrite (as N)	mg/L		12/3/2019 1123h	E353.2	0.100	<b>0.148</b>	
Sulfate	mg/L		12/10/2019 2019h	E300.0	375	<b>2,640</b>	
Total Anions, Measured	meq/L		12/13/2019 1602h	Calc.		<b>61.0</b>	
Total Cations, Measured	meq/L		12/13/2019 1602h	Calc.		<b>56.5</b>	
Total Dissolved Solids Ratio, Measured/Calculated			12/13/2019 1602h	Calc.		<b>0.932</b>	
Total Dissolved Solids, Calculated	mg/L		12/13/2019 1602h	Calc.		<b>3,950</b>	

<sup>1</sup> - 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. **Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912110-003  
**Client Sample ID:** MW-37\_12042019  
**Collection Date:** 12/4/2019 930h  
**Received Date:** 12/5/2019 1143h

## 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>
Total Dissolved Solids	mg/L		12/6/2019 1110h	SM2540C	20.0	<b>3,680</b>	

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Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912025-001A  
**Client Sample ID:** MW-37\_11222019  
**Collection Date:** 11/22/2019 915h  
**Received Date:** 12/3/2019 1044h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 12/3/2019 1153h      **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	
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	

Jose Rocha

QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.2	50.00	102	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	55.8	50.00	112	80-152	
Surr: Dibromofluoromethane		1868-53-7	48.7	50.00	97.5	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: December 24, 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-37_11222019	Project: DNMI00100
Sample ID: 498014001	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 22-NOV-19 09:15	
Receive Date: 04-DEC-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	+/-0.252	0.997	1.00	pCi/L			KSD1	12/19/19	1352	1950311	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"			97.4	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-003  
**Client Sample ID:** MW-38\_11062019  
**Collection Date:** 11/6/2019 900h  
**Received Date:** 11/8/2019 1210h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	11/8/2019 1400h	11/19/2019 1237h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	11/8/2019 1400h	11/19/2019 1207h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	11/8/2019 1400h	11/19/2019 1237h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	11/8/2019 1400h	11/18/2019 1659h	E200.7	20.0	<b>483</b>	
Chromium	mg/L	11/8/2019 1400h	11/19/2019 1237h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	11/8/2019 1400h	11/19/2019 1237h	E200.8	0.0100	< 0.0100	
Copper	mg/L	11/8/2019 1400h	11/20/2019 1405h	E200.8	0.0100	< 0.0100	
Iron	mg/L	11/8/2019 1400h	11/19/2019 1207h	E200.8	0.0300	< 0.0300	
Lead	mg/L	11/8/2019 1400h	11/19/2019 1207h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	11/8/2019 1400h	11/18/2019 1659h	E200.7	20.0	<b>195</b>	
Manganese	mg/L	11/8/2019 1400h	11/19/2019 1237h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	11/12/2019 1600h	11/13/2019 959h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	11/8/2019 1400h	11/19/2019 1237h	E200.8	0.0100	<b>0.0102</b>	
Nickel	mg/L	11/8/2019 1400h	11/19/2019 1237h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	11/8/2019 1400h	11/18/2019 1722h	E200.7	1.00	<b>41.0</b>	
Selenium	mg/L	11/8/2019 1400h	11/20/2019 1405h	E200.8	0.00500	<b>0.157</b>	
Silver	mg/L	11/8/2019 1400h	11/19/2019 1237h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	11/8/2019 1400h	11/18/2019 1659h	E200.7	20.0	<b>410</b>	
Thallium	mg/L	11/8/2019 1400h	11/19/2019 1207h	E200.8	0.000500	< 0.000500	
Tin	mg/L	11/8/2019 1400h	11/20/2019 1405h	E200.8	0.100	< 0.100	
Uranium	mg/L	11/8/2019 1400h	11/20/2019 1457h	E200.8	0.000300	<b>0.00641</b>	
Vanadium	mg/L	11/8/2019 1400h	11/22/2019 1437h	E200.8	0.0150	< 0.0150	
Zinc	mg/L	11/8/2019 1400h	11/19/2019 1237h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-003  
**Client Sample ID:** MW-38\_11062019  
**Collection Date:** 11/6/2019 900h  
**Received Date:** 11/8/2019 1210h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/13/2019 1013h	11/13/2019 1400h	E350.1	0.0500	<b>0.0658</b>	
Bicarbonate (as CaCO3)	mg/L		11/13/2019 710h	SM2320B	1.00	<b>102</b>	
Carbonate (as CaCO3)	mg/L		11/13/2019 710h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/14/2019 125h	E300.0	1.00	<b>43.7</b>	
Fluoride	mg/L		11/14/2019 215h	E300.0	0.200	<b>0.576</b>	
Ion Balance	%		11/18/2019 1745h	Calc.	-100	<b>-3.96</b>	
Nitrate/Nitrite (as N)	mg/L		11/13/2019 839h	E353.2	0.100	<b>15.4</b>	
Sulfate	mg/L		11/13/2019 2328h	E300.0	375	<b>2,900</b>	
Total Anions, Measured	meq/L		11/18/2019 1745h	Calc.		<b>63.9</b>	
Total Cations, Measured	meq/L		11/18/2019 1745h	Calc.		<b>59.0</b>	
Total Dissolved Solids	mg/L		11/11/2019 1325h	SM2540C	20.0	<b>4,110</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/18/2019 1745h	Calc.		<b>0.991</b>	
Total Dissolved Solids, Calculated	mg/L		11/18/2019 1745h	Calc.		<b>4,150</b>	

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Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-003A  
**Client Sample ID:** MW-38\_11062019  
**Collection Date:** 11/6/2019 900h  
**Received Date:** 11/8/2019 1210h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 11/12/2019 1235h    **Extracted:**  
**Units:** µg/L    **Dilution Factor:** 1    **Method:** SW8260D

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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	
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	53.6	50.00	107	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	48.5	50.00	97.1	80-152	
Surr: Dibromofluoromethane		1868-53-7	50.7	50.00	101	72-135	
Surr: Toluene-d8		2037-26-5	50.2	50.00	100	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 4, 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_11062019	Project: DNMI00100
Sample ID: 495672008	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 06-NOV-19 09:00	
Receive Date: 08-NOV-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	+/-0.309	0.959	1.00	pCi/L			KSD1	12/03/19	1629	1939966	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"			106	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-004  
**Client Sample ID:** MW-39\_10292019  
**Collection Date:** 10/29/2019 1145h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	11/4/2019 1102h	11/6/2019 1836h	E200.8	0.000500	<b>0.00471</b>	
Cadmium	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.000500	<b>0.00297</b>	
Calcium	mg/L	11/4/2019 1102h	11/11/2019 1606h	E200.7	50.0	<b>445</b>	
Chromium	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.0100	<b>0.0593</b>	
Copper	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.0100	<b>0.0251</b>	
Iron	mg/L	11/4/2019 1102h	11/11/2019 1308h	E200.8	1.00	<b>14.6</b>	
Lead	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	11/4/2019 1102h	11/11/2019 1606h	E200.7	50.0	<b>195</b>	
Manganese	mg/L	11/4/2019 1102h	11/11/2019 1256h	E200.8	0.0100	<b>2.17</b>	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 717h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	11/4/2019 1102h	11/11/2019 1237h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.0200	<b>0.0290</b>	
Potassium	mg/L	11/4/2019 1102h	11/11/2019 1634h	E200.7	1.00	<b>15.2</b>	
Selenium	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.00500	< 0.00500	
Silver	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	11/4/2019 1102h	11/11/2019 1606h	E200.7	50.0	<b>516</b>	
Thallium	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.000500	<b>0.00350</b>	
Tin	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.100	< 0.100	
Uranium	mg/L	11/4/2019 1102h	11/6/2019 1900h	E200.8	0.000300	<b>0.0121</b>	
Vanadium	mg/L	11/4/2019 1102h	11/11/2019 1717h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	11/4/2019 1102h	11/6/2019 1836h	E200.8	0.0100	<b>0.257</b>	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-004  
**Client Sample ID:** MW-39\_10292019  
**Collection Date:** 10/29/2019 1145h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/8/2019 950h	11/8/2019 1233h	E350.1	0.0500	<b>0.270</b>	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/31/2019 627h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/31/2019 627h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/11/2019 1857h	E300.0	1.00	<b>41.7</b>	
Fluoride	mg/L		11/11/2019 2054h	E300.0	0.200	<b>1.11</b>	
Ion Balance	%		11/11/2019 1708h	Calc.	-100	<b>-3.22</b>	
Nitrate/Nitrite (as N)	mg/L		10/31/2019 837h	E353.2	0.100	<b>0.105</b>	
Sulfate	mg/L		11/7/2019 1924h	E300.0	150	<b>3,110</b>	
Total Anions, Measured	meq/L		11/11/2019 1708h	Calc.		<b>66.0</b>	
Total Cations, Measured	meq/L		11/11/2019 1708h	Calc.		<b>61.9</b>	
Total Dissolved Solids	mg/L		10/31/2019 1125h	SM2540C	20.0	<b>4,210</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/11/2019 1708h	Calc.		<b>0.969</b>	
Total Dissolved Solids, Calculated	mg/L		11/11/2019 1708h	Calc.		<b>4,340</b>	

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Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-004A  
**Client Sample ID:** MW-39\_10292019  
**Collection Date:** 10/29/2019 1145h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/31/2019 1248h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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	48.6	50.00	97.1	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	44.2	50.00	88.4	80-152	
Surr: Dibromofluoromethane		1868-53-7	44.9	50.00	89.9	72-135	
Surr: Toluene-d8		2037-26-5	46.6	50.00	93.2	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 4, 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_10292019	Project: DNMI00100
Sample ID: 495672004	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 29-OCT-19 11:45	
Receive Date: 08-NOV-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		2.59	+/-0.493	0.929	1.00	pCi/L			KSD1	12/03/19	1629	1939966	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"			103	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-009  
**Client Sample ID:** MW-40\_10232019  
**Collection Date:** 10/23/2019 1025h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

3440 South 700 West  
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 web: www.awal-labs.com

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	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/29/2019 1309h	11/5/2019 1543h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	10/29/2019 1309h	11/4/2019 1217h	E200.7	20.0	<b>486</b>	
Chromium	mg/L	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/29/2019 1309h	11/5/2019 1543h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/29/2019 1309h	11/5/2019 1543h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/29/2019 1309h	11/4/2019 1217h	E200.7	20.0	<b>212</b>	
Manganese	mg/L	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.0100	<b>0.113</b>	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 656h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/29/2019 1309h	11/6/2019 1809h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/29/2019 1309h	11/6/2019 1809h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/29/2019 1309h	11/6/2019 1958h	E200.7	2.00	<b>8.46</b>	
Selenium	mg/L	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.00500	<b>0.156</b>	
Silver	mg/L	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/29/2019 1309h	11/4/2019 1217h	E200.7	20.0	<b>367</b>	
Thallium	mg/L	10/29/2019 1309h	11/5/2019 1543h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/29/2019 1309h	11/5/2019 1543h	E200.8	0.000300	<b>0.0243</b>	
Vanadium	mg/L	10/29/2019 1309h	11/4/2019 1330h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/29/2019 1309h	11/5/2019 1459h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-009  
**Client Sample ID:** MW-40\_10232019  
**Collection Date:** 10/23/2019 1025h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/7/2019 917h	11/7/2019 1403h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		10/28/2019 848h	SM2320B	1.00	<b>232</b>	
Carbonate (as CaCO3)	mg/L		10/28/2019 848h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/5/2019 648h	E300.0	1.00	<b>43.4</b>	
Fluoride	mg/L		11/7/2019 050h	E300.0	0.200	<b>0.603</b>	
Ion Balance	%		11/1/2019 2059h	Calc.	-100	<b>2.92</b>	
Nitrate/Nitrite (as N)	mg/L		10/28/2019 1055h	E353.2	0.100	<b>2.75</b>	
Sulfate	mg/L		11/5/2019 344h	E300.0	150	<b>2,340</b>	
Total Anions, Measured	meq/L		11/1/2019 2059h	Calc.		<b>54.6</b>	
Total Cations, Measured	meq/L		11/1/2019 2059h	Calc.		<b>57.9</b>	
Total Dissolved Solids	mg/L		10/28/2019 1240h	SM2540C	20.0	<b>3,680</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/1/2019 2059h	Calc.		<b>1.02</b>	
Total Dissolved Solids, Calculated	mg/L		11/1/2019 2059h	Calc.		<b>3,600</b>	

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web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-009A  
**Client Sample ID:** MW-40\_10232019  
**Collection Date:** 10/23/2019 1025h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/28/2019 1717h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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	52.3	50.00	105	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	50.7	50.00	101	80-152	
Surr: Dibromofluoromethane		1868-53-7	51.7	50.00	103	72-135	
Surr: Toluene-d8		2037-26-5	50.9	50.00	102	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 22, 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_10232019	Project: DNMI00100
Sample ID: 494487012	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 23-OCT-19 10:25	
Receive Date: 29-OCT-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	+/-0.287	0.783	1.00	pCi/L			KSD1	11/15/19	1619	1934418	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"			91	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-010  
**Client Sample ID:** TW4-24\_10092019  
**Collection Date:** 10/9/2019 1230h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/14/2019 1048h	10/26/2019 1252h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.000500	<b>0.00148</b>	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1408h	E200.7	20.0	<b>563</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.0100	<b>0.0111</b>	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1408h	E200.7	20.0	<b>322</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1255h	E200.8	0.0100	<b>0.612</b>	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1242h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/28/2019 1545h	E200.8	0.0100	<b>0.855</b>	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1508h	E200.7	2.00	<b>12.6</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1255h	E200.8	0.00500	<b>0.0516</b>	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1408h	E200.7	20.0	<b>1,120</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.000500	<b>0.00183</b>	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1146h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/30/2019 046h	E200.8	0.00200	<b>0.686</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1508h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1146h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-010  
**Client Sample ID:** TW4-24\_10092019  
**Collection Date:** 10/9/2019 1230h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

	Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
3440 South 700 West	Ammonia (as N)	mg/L	10/22/2019 902h	10/22/2019 1248h	E350.1	0.0500	<b>8.98</b>	
Salt Lake City, UT 84119	Bicarbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>775</b>	
	Carbonate (as CaCO3)	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Phone: (801) 263-8686	Chloride	mg/L		10/27/2019 229h	E300.0	20.0	<b>1,060</b>	
Toll Free: (888) 263-8686	Fluoride	mg/L		10/27/2019 717h	E300.0	0.100	< 0.100	
Fax: (801) 263-8687	Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>-3.02</b>	
e-mail: awal@awal-labs.com	Nitrate/Nitrite (as N)	mg/L		10/15/2019 1335h	E353.2	0.500	<b>32.6</b>	
	Sulfate	mg/L		10/27/2019 229h	E300.0	150	<b>3,100</b>	
web: www.awal-labs.com	Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>110</b>	
	Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>104</b>	
	Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>7,090</b>	
Kyle F. Gross Laboratory Director	Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>1.06</b>	
Jose Rocha QA Officer	Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>6,670</b>	



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-010A  
**Client Sample ID:** TW4-24\_10092019  
**Collection Date:** 10/9/2019 1230h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1733h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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web: www.awal-labs.com

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	
Chloroform	67-66-3	1.00	<b>30.7</b>	
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	<b>2.17</b>	
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	48.2	50.00	96.4	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	47.0	50.00	94.1	80-152	
Surr: Dibromofluoromethane		1868-53-7	45.8	50.00	91.7	72-135	
Surr: Toluene-d8		2037-26-5	48.0	50.00	96.0	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 9, 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: TW4-24_10092019	Project: DNMI00100
Sample ID: 493013010	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 09-OCT-19 12:30	
Receive Date: 15-OCT-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	+/-0.186	0.608	1.00	pCi/L			BXF1	11/01/19	1404	1929579	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"			97.4	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-009  
**Client Sample ID:** MW-65\_10092019  
**Collection Date:** 10/9/2019 1345h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.000500	<b>0.00127</b>	
Calcium	mg/L	10/14/2019 1048h	10/24/2019 1401h	E200.7	20.0	<b>488</b>	
Chromium	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.0100	< 0.0100	
Copper	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.0100	< 0.0100	
Iron	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.0300	< 0.0300	
Lead	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	10/14/2019 1048h	10/24/2019 1401h	E200.7	20.0	<b>151</b>	
Manganese	mg/L	10/14/2019 1048h	10/26/2019 1233h	E200.8	0.0100	<b>1.94</b>	
Mercury	mg/L	10/21/2019 1311h	10/22/2019 1240h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	10/14/2019 1048h	10/27/2019 1711h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	10/14/2019 1048h	10/25/2019 1457h	E200.7	2.00	<b>12.3</b>	
Selenium	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.00500	< 0.00500	
Silver	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	10/14/2019 1048h	10/24/2019 1401h	E200.7	20.0	<b>348</b>	
Thallium	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.000500	< 0.000500	
Tin	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.100	< 0.100	
Uranium	mg/L	10/14/2019 1048h	10/26/2019 1230h	E200.8	0.000500	<b>0.0470</b>	
Vanadium	mg/L	10/14/2019 1048h	10/25/2019 1457h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	10/14/2019 1048h	10/26/2019 1137h	E200.8	0.0100	<b>0.0125</b>	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-009  
**Client Sample ID:** MW-65\_10092019  
**Collection Date:** 10/9/2019 1345h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	10/22/2019 902h	10/22/2019 1247h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	<b>402</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		10/14/2019 1036h	SM2320B	1.00	< 1.00	
Chloride	mg/L		10/29/2019 139h	E300.0	2.00	<b>18.6</b>	
Fluoride	mg/L		10/29/2019 339h	E300.0	0.100	< 0.100	
Ion Balance	%		10/24/2019 1834h	Calc.	-100	<b>-4.57</b>	
Nitrate/Nitrite (as N)	mg/L		10/15/2019 1333h	E353.2	0.100	< 0.100	
Sulfate	mg/L		10/28/2019 1518h	E300.0	150	<b>2,340</b>	
Total Anions, Measured	meq/L		10/24/2019 1834h	Calc.		<b>57.2</b>	
Total Cations, Measured	meq/L		10/24/2019 1834h	Calc.		<b>52.2</b>	
Total Dissolved Solids	mg/L		10/14/2019 1300h	SM2540C	20.0	<b>3,440</b>	
Total Dissolved Solids Ratio, Measured/Calculated			10/24/2019 1834h	Calc.		<b>0.958</b>	
Total Dissolved Solids, Calculated	mg/L		10/24/2019 1834h	Calc.		<b>3,600</b>	

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Kyle F. Gross  
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Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-009A  
**Client Sample ID:** MW-65\_10092019  
**Collection Date:** 10/9/2019 1345h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1713h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	

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 QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	46.4	50.00	92.7	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	46.4	50.00	92.9	80-152	
Surr: Dibromofluoromethane		1868-53-7	43.5	50.00	87.1	72-135	
Surr: Toluene-d8		2037-26-5	48.6	50.00	97.1	80-124	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: November 9, 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_10092019	Project: DNMI00100
Sample ID: 493013009	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 09-OCT-19 13:45	
Receive Date: 15-OCT-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	+/-0.217	0.594	1.00	pCi/L			BXF1	11/01/19	1403	1929579	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"			96.3	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-005  
**Client Sample ID:** MW-70\_10282019  
**Collection Date:** 10/28/2019 1335h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	11/4/2019 1102h	11/6/2019 1839h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	11/4/2019 1102h	11/11/2019 1608h	E200.7	50.0	<b>454</b>	
Chromium	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.0100	< 0.0100	
Copper	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.0100	< 0.0100	
Iron	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.0300	< 0.0300	
Lead	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	11/4/2019 1102h	11/11/2019 1608h	E200.7	50.0	<b>172</b>	
Manganese	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	11/4/2019 1600h	11/5/2019 719h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	11/4/2019 1102h	11/11/2019 1240h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	11/4/2019 1102h	11/11/2019 1636h	E200.7	1.00	<b>9.78</b>	
Selenium	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.00500	<b>0.125</b>	
Silver	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	11/4/2019 1102h	11/11/2019 1608h	E200.7	50.0	<b>510</b>	
Thallium	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.000500	< 0.000500	
Tin	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.100	< 0.100	
Uranium	mg/L	11/4/2019 1102h	11/6/2019 1903h	E200.8	0.000300	<b>0.0479</b>	
Vanadium	mg/L	11/4/2019 1102h	11/11/2019 1720h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	11/4/2019 1102h	11/6/2019 1903h	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.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-005  
**Client Sample ID:** MW-70\_10282019  
**Collection Date:** 10/28/2019 1335h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/8/2019 950h	11/8/2019 1234h	E350.1	0.0500	<b>0.119</b>	
Bicarbonate (as CaCO3)	mg/L		10/31/2019 627h	SM2320B	1.00	<b>372</b>	
Carbonate (as CaCO3)	mg/L		10/31/2019 627h	SM2320B	1.00	< 1.00	
Chloride	mg/L		11/11/2019 1913h	E300.0	1.00	<b>40.9</b>	
Fluoride	mg/L		11/11/2019 2309h	E300.0	0.100	< 0.100	
Ion Balance	%		11/11/2019 1708h	Calc.	-100	<b>-1.04</b>	
Nitrate/Nitrite (as N)	mg/L		10/31/2019 838h	E353.2	0.100	<b>0.192</b>	
Sulfate	mg/L		11/13/2019 1141h	E300.0	375	<b>2,490</b>	
Total Anions, Measured	meq/L		11/11/2019 1708h	Calc.		<b>60.5</b>	
Total Cations, Measured	meq/L		11/11/2019 1708h	Calc.		<b>59.2</b>	
Total Dissolved Solids Ratio, Measured/Calculated			11/11/2019 1708h	Calc.		<b>0.964</b>	
Total Dissolved Solids, Calculated	mg/L		11/11/2019 1708h	Calc.		<b>3,900</b>	

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QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912110-004  
**Client Sample ID:** MW-70\_12042019  
**Collection Date:** 12/4/2019 1115h  
**Received Date:** 12/5/2019 1143h

**Contact:** Tanner Holliday

## Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Total Dissolved Solids	mg/L		12/6/2019 1110h	SM2540C	50.0	<b>3,370</b>	

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Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-005A  
**Client Sample ID:** MW-70\_10282019  
**Collection Date:** 10/28/2019 1335h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/31/2019 1308h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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	

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Jose Rocha  
 QA Officer

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	48.3	50.00	96.6	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	44.1	50.00	88.3	80-152	
Surr: Dibromofluoromethane		1868-53-7	44.6	50.00	89.3	72-135	
Surr: Toluene-d8		2037-26-5	46.9	50.00	93.8	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 4, 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-70_10282019	Project: DNMI00100
Sample ID: 495672005	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 28-OCT-19 13:35	
Receive Date: 08-NOV-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	+/-0.245	0.917	1.00	pCi/L			KSD1	12/03/19	1629	1939966	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"			102	(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:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910332-011A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 10/8/2019 1120h  
**Received Date:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/15/2019 1434h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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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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 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	48.0	50.00	96.0	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	47.3	50.00	94.6	80-152	
Surr: Dibromofluoromethane		1868-53-7	46.8	50.00	93.7	72-135	
Surr: Toluene-d8		2037-26-5	48.3	50.00	96.5	80-124	



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910514-004A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 10/14/2019 1530h  
**Received Date:** 10/18/2019 1105h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/21/2019 1142h      **Extracted:**  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8260D

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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	53.5	50.00	107	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	53.8	50.00	108	80-152	
Surr: Dibromofluoromethane		1868-53-7	52.6	50.00	105	72-135	
Surr: Toluene-d8		2037-26-5	52.8	50.00	106	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910680-010A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 10/22/2019 1000h  
**Received Date:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/28/2019 1738h    **Extracted:**  
**Units:** µg/L    **Dilution Factor:** 1    **Method:** SW8260D

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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	53.4	50.00	107	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	53.3	50.00	107	80-152	
Surr: Dibromofluoromethane		1868-53-7	52.1	50.00	104	72-135	
Surr: Toluene-d8		2037-26-5	52.1	50.00	104	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1910785-006A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 10/28/2019 1335h  
**Received Date:** 10/30/2019 1300h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 10/31/2019 1327h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

3440 South 700 West  
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web: www.awal-labs.com

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	48.5	50.00	97.0	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	45.1	50.00	90.1	80-152	
Surr: Dibromofluoromethane		1868-53-7	45.5	50.00	91.0	72-135	
Surr: Toluene-d8		2037-26-5	47.3	50.00	94.7	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1911206-004A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 11/6/2019 800h  
**Received Date:** 11/8/2019 1210h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 11/12/2019 1255h    **Extracted:**  
**Units:** µg/L    **Dilution Factor:** 1    **Method:** SW8260D

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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	52.9	50.00	106	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	49.7	50.00	99.4	80-152	
Surr: Dibromofluoromethane		1868-53-7	50.6	50.00	101	72-135	
Surr: Toluene-d8		2037-26-5	49.9	50.00	99.8	80-124	

\$ - This compound exceeded (low) the control limit for the CCV.



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Sample ID:** 1912025-003A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 11/22/2019 915h  
**Received Date:** 12/3/2019 1044h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 12/3/2019 1233h      **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

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Salt Lake City, UT 84119

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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	
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	56.2	50.00	112	80-152	
Surr: Dibromofluoromethane		1868-53-7	48.7	50.00	97.4	72-135	
Surr: Toluene-d8		2037-26-5	51.9	50.00	104	80-124	

Jose Rocha

QA Officer



Tanner Holliday  
Energy Fuels Resources, Inc.  
6425 South Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 4th Quarter Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1910332

3440 South 700 West  
Salt Lake City, UT 84119

American West Analytical Laboratories received sample(s) on 10/11/2019 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.

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web: [www.awal-labs.com](http://www.awal-labs.com)

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,

**Jose G.  
Rocha**

Digitally signed by Jose G. Rocha  
DN: cn=Jose G. Rocha,  
o=American West Analytical  
Laboratories, ou=UT00031,  
email=jose@awal-labs.com,  
c=US  
Date: 2019.11.06 13:28:29  
-07'00'

Approved by:

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910332  
**Date Received:** 10/11/2019 1245h

**Contact:** Tanner Holliday

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 Salt Lake City, UT 84119

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910332-001A	MW-14_10092019	10/9/2019 1345h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910332-001B	MW-14_10092019	10/9/2019 1345h	Aqueous	Anions, E300.0
1910332-001B	MW-14_10092019	10/9/2019 1345h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910332-001C	MW-14_10092019	10/9/2019 1345h	Aqueous	Total Dissolved Solids, A2540C
1910332-001D	MW-14_10092019	10/9/2019 1345h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910332-001D	MW-14_10092019	10/9/2019 1345h	Aqueous	Ammonia, Aqueous
1910332-001E	MW-14_10092019	10/9/2019 1345h	Aqueous	Ion Balance
1910332-001E	MW-14_10092019	10/9/2019 1345h	Aqueous	ICP Metals, Dissolved
1910332-001E	MW-14_10092019	10/9/2019 1345h	Aqueous	ICPMS Metals, Dissolved
1910332-001E	MW-14_10092019	10/9/2019 1345h	Aqueous	Mercury, Drinking Water Dissolved
1910332-002A	MW-25_10092019	10/9/2019 1030h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910332-002B	MW-25_10092019	10/9/2019 1030h	Aqueous	Anions, E300.0
1910332-002B	MW-25_10092019	10/9/2019 1030h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910332-002C	MW-25_10092019	10/9/2019 1030h	Aqueous	Total Dissolved Solids, A2540C
1910332-002D	MW-25_10092019	10/9/2019 1030h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910332-002D	MW-25_10092019	10/9/2019 1030h	Aqueous	Ammonia, Aqueous
1910332-002E	MW-25_10092019	10/9/2019 1030h	Aqueous	Ion Balance
1910332-002E	MW-25_10092019	10/9/2019 1030h	Aqueous	ICP Metals, Dissolved
1910332-002E	MW-25_10092019	10/9/2019 1030h	Aqueous	ICPMS Metals, Dissolved
1910332-002E	MW-25_10092019	10/9/2019 1030h	Aqueous	Mercury, Drinking Water Dissolved
1910332-003A	MW-26_10092019	10/9/2019 1000h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910332-003B	MW-26_10092019	10/9/2019 1000h	Aqueous	Anions, E300.0
1910332-003B	MW-26_10092019	10/9/2019 1000h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910332-003C	MW-26_10092019	10/9/2019 1000h	Aqueous	Total Dissolved Solids, A2540C
1910332-003D	MW-26_10092019	10/9/2019 1000h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910332-003D	MW-26_10092019	10/9/2019 1000h	Aqueous	Ammonia, Aqueous
1910332-003E	MW-26_10092019	10/9/2019 1000h	Aqueous	ICP Metals, Dissolved
1910332-003E	MW-26_10092019	10/9/2019 1000h	Aqueous	ICPMS Metals, Dissolved



**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910332  
**Date Received:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910332-003E	MW-26_10092019	10/9/2019 1000h	Aqueous	Mercury, Drinking Water Dissolved
1910332-003E	MW-26_10092019	10/9/2019 1000h	Aqueous	Ion Balance
1910332-004A	MW-30_10082019	10/8/2019 1120h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910332-004B	MW-30_10082019	10/8/2019 1120h	Aqueous	Anions, E300.0
1910332-004B	MW-30_10082019	10/8/2019 1120h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910332-004C	MW-30_10082019	10/8/2019 1120h	Aqueous	Total Dissolved Solids, A2540C
1910332-004D	MW-30_10082019	10/8/2019 1120h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910332-004D	MW-30_10082019	10/8/2019 1120h	Aqueous	Ammonia, Aqueous
1910332-004E	MW-30_10082019	10/8/2019 1120h	Aqueous	Ion Balance
1910332-004E	MW-30_10082019	10/8/2019 1120h	Aqueous	Mercury, Drinking Water Dissolved
1910332-004E	MW-30_10082019	10/8/2019 1120h	Aqueous	ICP Metals, Dissolved
1910332-004E	MW-30_10082019	10/8/2019 1120h	Aqueous	ICPMS Metals, Dissolved
1910332-005A	MW-31_10092019	10/9/2019 1315h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910332-005B	MW-31_10092019	10/9/2019 1315h	Aqueous	Anions, E300.0
1910332-005B	MW-31_10092019	10/9/2019 1315h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910332-005C	MW-31_10092019	10/9/2019 1315h	Aqueous	Total Dissolved Solids, A2540C
1910332-005D	MW-31_10092019	10/9/2019 1315h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910332-005D	MW-31_10092019	10/9/2019 1315h	Aqueous	Ammonia, Aqueous
1910332-005E	MW-31_10092019	10/9/2019 1315h	Aqueous	Mercury, Drinking Water Dissolved
1910332-005E	MW-31_10092019	10/9/2019 1315h	Aqueous	Ion Balance
1910332-005E	MW-31_10092019	10/9/2019 1315h	Aqueous	ICP Metals, Dissolved
1910332-005E	MW-31_10092019	10/9/2019 1315h	Aqueous	ICPMS Metals, Dissolved
1910332-006A	MW-32_10082019	10/8/2019 1240h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910332-006B	MW-32_10082019	10/8/2019 1240h	Aqueous	Anions, E300.0
1910332-006B	MW-32_10082019	10/8/2019 1240h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910332-006C	MW-32_10082019	10/8/2019 1240h	Aqueous	Total Dissolved Solids, A2540C
1910332-006D	MW-32_10082019	10/8/2019 1240h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910332-006D	MW-32_10082019	10/8/2019 1240h	Aqueous	Ammonia, Aqueous
1910332-006E	MW-32_10082019	10/8/2019 1240h	Aqueous	Ion Balance
1910332-006E	MW-32_10082019	10/8/2019 1240h	Aqueous	ICP Metals, Dissolved

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910332  
**Date Received:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910332-006E	MW-32_10082019	10/8/2019 1240h	Aqueous	ICPMS Metals, Dissolved
3440 South 700 West Salt Lake City, UT 84119	1910332-006E	MW-32_10082019	10/8/2019 1240h	Aqueous Mercury, Drinking Water Dissolved
	1910332-007A	MW-35_10082019	10/8/2019 1315h	Aqueous VOA by GC/MS Method 8260D/5030C
	1910332-007B	MW-35_10082019	10/8/2019 1315h	Aqueous Anions, E300.0
Phone: (801) 263-8686	1910332-007B	MW-35_10082019	10/8/2019 1315h	Aqueous Alkalinity/ Bicarbonate/ Carbonate, Low Level
Toll Free: (888) 263-8686	1910332-007C	MW-35_10082019	10/8/2019 1315h	Aqueous Total Dissolved Solids, A2540C
Fax: (801) 263-8687	1910332-007D	MW-35_10082019	10/8/2019 1315h	Aqueous Nitrite/Nitrate (as N), E353.2
e-mail: awal@awal-labs.com	1910332-007D	MW-35_10082019	10/8/2019 1315h	Aqueous Ammonia, Aqueous
	1910332-007E	MW-35_10082019	10/8/2019 1315h	Aqueous Ion Balance
web: www.awal-labs.com	1910332-007E	MW-35_10082019	10/8/2019 1315h	Aqueous ICP Metals, Dissolved
	1910332-007E	MW-35_10082019	10/8/2019 1315h	Aqueous ICPMS Metals, Dissolved
	1910332-007E	MW-35_10082019	10/8/2019 1315h	Aqueous Mercury, Drinking Water Dissolved
Kyle F. Gross Laboratory Director	1910332-008A	MW-36_10082019	10/8/2019 1415h	Aqueous VOA by GC/MS Method 8260D/5030C
	1910332-008B	MW-36_10082019	10/8/2019 1415h	Aqueous Anions, E300.0
Jose Rocha QA Officer	1910332-008B	MW-36_10082019	10/8/2019 1415h	Aqueous Alkalinity/ Bicarbonate/ Carbonate, Low Level
	1910332-008C	MW-36_10082019	10/8/2019 1415h	Aqueous Total Dissolved Solids, A2540C
	1910332-008D	MW-36_10082019	10/8/2019 1415h	Aqueous Nitrite/Nitrate (as N), E353.2
	1910332-008D	MW-36_10082019	10/8/2019 1415h	Aqueous Ammonia, Aqueous
	1910332-008E	MW-36_10082019	10/8/2019 1415h	Aqueous Ion Balance
	1910332-008E	MW-36_10082019	10/8/2019 1415h	Aqueous ICP Metals, Dissolved
	1910332-008E	MW-36_10082019	10/8/2019 1415h	Aqueous ICPMS Metals, Dissolved
	1910332-008E	MW-36_10082019	10/8/2019 1415h	Aqueous Mercury, Drinking Water Dissolved
	1910332-009A	MW-65_10092019	10/9/2019 1345h	Aqueous VOA by GC/MS Method 8260D/5030C
	1910332-009B	MW-65_10092019	10/9/2019 1345h	Aqueous Anions, E300.0
	1910332-009B	MW-65_10092019	10/9/2019 1345h	Aqueous Alkalinity/ Bicarbonate/ Carbonate, Low Level
	1910332-009C	MW-65_10092019	10/9/2019 1345h	Aqueous Total Dissolved Solids, A2540C
	1910332-009D	MW-65_10092019	10/9/2019 1345h	Aqueous Nitrite/Nitrate (as N), E353.2
	1910332-009D	MW-65_10092019	10/9/2019 1345h	Aqueous Ammonia, Aqueous
	1910332-009E	MW-65_10092019	10/9/2019 1345h	Aqueous ICP Metals, Dissolved
	1910332-009E	MW-65_10092019	10/9/2019 1345h	Aqueous ICPMS Metals, Dissolved



**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910332  
**Date Received:** 10/11/2019 1245h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910332-009E	MW-65_10092019	10/9/2019 1345h	Aqueous	Ion Balance
1910332-009E	MW-65_10092019	10/9/2019 1345h	Aqueous	Mercury, Drinking Water Dissolved
1910332-010A	TW4-24_10092019	10/9/2019 1230h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910332-010B	TW4-24_10092019	10/9/2019 1230h	Aqueous	Anions, E300.0
1910332-010B	TW4-24_10092019	10/9/2019 1230h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910332-010C	TW4-24_10092019	10/9/2019 1230h	Aqueous	Total Dissolved Solids, A2540C
1910332-010D	TW4-24_10092019	10/9/2019 1230h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910332-010D	TW4-24_10092019	10/9/2019 1230h	Aqueous	Ammonia, Aqueous
1910332-010E	TW4-24_10092019	10/9/2019 1230h	Aqueous	Ion Balance
1910332-010E	TW4-24_10092019	10/9/2019 1230h	Aqueous	ICP Metals, Dissolved
1910332-010E	TW4-24_10092019	10/9/2019 1230h	Aqueous	ICPMS Metals, Dissolved
1910332-010E	TW4-24_10092019	10/9/2019 1230h	Aqueous	Mercury, Drinking Water Dissolved
1910332-011A	Trip Blank	10/8/2019 1120h	Aqueous	VOA by GC/MS Method 8260D/5030C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910332

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3440 South 700 West  
Salt Lake City, UT 84119

### **Sample Receipt Information:**

**Date of Receipt:** 10/11/2019  
**Date(s) of Collection:** 10/8-10/9/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation of all samples were performed within the method holding times. All 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:

**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: the MS and MSD percent recoveries for Ammonia on sample 1910332-001D were outside of the control limits due to sample matrix interference.

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

**Corrective Action:** None required.

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web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## Volatile Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910332

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### **Sample Receipt Information:**

**Date of Receipt:** 10/11/2019  
**Date(s) of Collection:** 10/8-10/9/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8260D/5030C  
**Analysis:** Tetrahydrofuran

**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:** 1910332

**Project:** 4th Quarter 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	
<b>Lab Sample ID:</b> LCS-65612	Date Analyzed:	10/24/2019 1331h												
Test Code:	200.7-DIS		Date Prepared:	10/14/2019 1048h										
Calcium	9.60	mg/L	E200.7	0.102	1.00	10.00	0	96.0	85 - 115					
Magnesium	10.3	mg/L	E200.7	0.139	1.00	10.00	0	103	85 - 115					
Potassium	10.4	mg/L	E200.7	0.114	1.00	10.00	0	104	85 - 115					
Sodium	10.4	mg/L	E200.7	0.306	1.00	10.00	0	104	85 - 115					
<b>Lab Sample ID:</b> LCS-65612	Date Analyzed:	10/25/2019 1312h												
Test Code:	200.7-DIS		Date Prepared:	10/14/2019 1048h										
Vanadium	0.203	mg/L	E200.7	0.00167	0.00500	0.2000	0	101	85 - 115					
<b>Lab Sample ID:</b> LCS-65613	Date Analyzed:	10/26/2019 1031h												
Test Code:	200.8-DIS		Date Prepared:	10/14/2019 1048h										
Arsenic	0.195	mg/L	E200.8	0.000298	0.00200	0.2000	0	97.7	85 - 115					
Beryllium	0.183	mg/L	E200.8	0.000198	0.00200	0.2000	0	91.7	85 - 115					
Cadmium	0.201	mg/L	E200.8	0.0000858	0.000500	0.2000	0	101	85 - 115					
Chromium	0.201	mg/L	E200.8	0.00191	0.00200	0.2000	0	101	85 - 115					
Cobalt	0.201	mg/L	E200.8	0.000300	0.00400	0.2000	0	101	85 - 115					
Copper	0.204	mg/L	E200.8	0.00282	0.00200	0.2000	0	102	85 - 115					
Iron	0.997	mg/L	E200.8	0.0496	0.100	1.000	0	99.7	85 - 115					
Lead	0.195	mg/L	E200.8	0.000448	0.00200	0.2000	0	97.4	85 - 115					
Manganese	0.198	mg/L	E200.8	0.00108	0.00200	0.2000	0	98.9	85 - 115					
Nickel	0.198	mg/L	E200.8	0.00148	0.00200	0.2000	0	99.0	85 - 115					
Selenium	0.191	mg/L	E200.8	0.000574	0.00200	0.2000	0	95.5	85 - 115					
Silver	0.169	mg/L	E200.8	0.000232	0.00200	0.2000	0	84.6	85 - 115				§	
Thallium	0.190	mg/L	E200.8	0.000154	0.00200	0.2000	0	94.9	85 - 115					
Uranium	0.183	mg/L	E200.8	0.000176	0.00200	0.2000	0	91.4	85 - 115					
Zinc	0.996	mg/L	E200.8	0.00418	0.00600	1.000	0	99.6	85 - 115					



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910332

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-65613	Date Analyzed:	10/27/2019	1628h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/14/2019	1048h										
Molybdenum	0.198	mg/L	E200.8	0.000652	0.00400	0.2000	0	99.1	85 - 115				
<b>Lab Sample ID:</b> LCS-65613	Date Analyzed:	10/27/2019	1740h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/14/2019	1048h										
Tin	0.963	mg/L	E200.8	0.00291	0.0100	1.000	0	96.3	85 - 115				
<b>Lab Sample ID:</b> LCS-65776	Date Analyzed:	10/22/2019	1159h										
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	10/21/2019	1311h										
Mercury	0.00369	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	111	85 - 115				

§ - QC limits are set with an accuracy of two significant figures, therefore the recovery rounds to an acceptable value within the control limits.



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB-65612	Date Analyzed:	10/24/2019	1322h										
Test Code:	200.7-DIS	Date Prepared:	10/14/2019	1048h									
Calcium	< 1.00	mg/L	E200.7	0.102	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.139	1.00								
Potassium	< 1.00	mg/L	E200.7	0.114	1.00								
Sodium	< 1.00	mg/L	E200.7	0.306	1.00								
<b>Lab Sample ID:</b> MB-65612	Date Analyzed:	10/25/2019	1310h										
Test Code:	200.7-DIS	Date Prepared:	10/14/2019	1048h									
Vanadium	< 0.00500	mg/L	E200.7	0.00167	0.00500								
<b>Lab Sample ID:</b> MB-65613	Date Analyzed:	10/27/2019	1625h										
Test Code:	200.8-DIS	Date Prepared:	10/14/2019	1048h									
Molybdenum	< 0.00200	mg/L	E200.8	0.000326	0.00200								
<b>Lab Sample ID:</b> MB-65613	Date Analyzed:	10/28/2019	1541h										
Test Code:	200.8-DIS	Date Prepared:	10/14/2019	1048h									
Arsenic	< 0.000200	mg/L	E200.8	0.0000298	0.000200								
Beryllium	< 0.000200	mg/L	E200.8	0.0000198	0.000200								
Cadmium	< 0.0000500	mg/L	E200.8	0.00000858	0.0000500								
Chromium	< 0.000200	mg/L	E200.8	0.000191	0.000200								
Cobalt	< 0.000400	mg/L	E200.8	0.0000300	0.000400								
Iron	< 0.0100	mg/L	E200.8	0.00496	0.0100								
Lead	< 0.000200	mg/L	E200.8	0.0000448	0.000200								
Manganese	< 0.000200	mg/L	E200.8	0.000108	0.000200								
Nickel	< 0.000200	mg/L	E200.8	0.000148	0.000200								
Selenium	< 0.000200	mg/L	E200.8	0.0000574	0.000200								
Silver	< 0.000200	mg/L	E200.8	0.0000232	0.000200								
Thallium	< 0.000200	mg/L	E200.8	0.0000154	0.000200								
Tin	< 0.000400	mg/L	E200.8	0.000116	0.000400								



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Laboratory Director

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QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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	
<b>Lab Sample ID:</b> MB-65613	Date Analyzed:	10/30/2019 043h												
Test Code:	200.8-DIS		Date Prepared:	10/14/2019 1048h										
Copper	< 0.000200	mg/L	E200.8	0.000282	0.000200									
Uranium	< 0.000200	mg/L	E200.8	0.0000176	0.000200									
Zinc	< 0.000600	mg/L	E200.8	0.000418	0.000600									
<b>Lab Sample ID:</b> MB-65776	Date Analyzed:	10/22/2019 1157h												
Test Code:	HG-DW-DIS-245.1		Date Prepared:	10/21/2019 1311h										
Mercury	< 0.0000900	mg/L	E245.1	0.0000396	0.0000900									



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## QC SUMMARY REPORT

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

**Contact:** Tanner Holliday

**Lab Set ID:** 1910332

**Dept:** ME

**Project:** 4th 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
<b>Lab Sample ID: 1910332-002EMS</b> Date Analyzed: 10/24/2019 1337h													
Test Code: 200.7-DIS Date Prepared: 10/14/2019 1048h													
Calcium	452	mg/L	E200.7	20.4	200	100.0	364	87.7	70 - 130				
Magnesium	227	mg/L	E200.7	27.8	200	100.0	132	95.1	70 - 130				
Sodium	414	mg/L	E200.7	61.2	200	100.0	322	91.7	70 - 130				
<b>Lab Sample ID: 1910332-009EMS</b> Date Analyzed: 10/24/2019 1404h													
Test Code: 200.7-DIS Date Prepared: 10/14/2019 1048h													
Calcium	609	mg/L	E200.7	20.4	200	100.0	488	121	70 - 130				
Magnesium	265	mg/L	E200.7	27.8	200	100.0	151	114	70 - 130				
Sodium	465	mg/L	E200.7	61.2	200	100.0	348	117	70 - 130				
<b>Lab Sample ID: 1910332-002EMS</b> Date Analyzed: 10/25/2019 1319h													
Test Code: 200.7-DIS Date Prepared: 10/14/2019 1048h													
Potassium	102	mg/L	E200.7	1.14	10.0	100.0	8.78	93.2	70 - 130				
Vanadium	1.95	mg/L	E200.7	0.0167	0.0500	2.000	0	97.7	70 - 130				
<b>Lab Sample ID: 1910332-009EMS</b> Date Analyzed: 10/25/2019 1504h													
Test Code: 200.7-DIS Date Prepared: 10/14/2019 1048h													
Potassium	125	mg/L	E200.7	2.28	20.0	100.0	11.4	114	70 - 130				
Vanadium	2.16	mg/L	E200.7	0.0334	0.100	2.000	0	108	70 - 130				
<b>Lab Sample ID: 1910332-002EMS</b> Date Analyzed: 10/26/2019 1047h													
Test Code: 200.8-DIS Date Prepared: 10/14/2019 1048h													
Arsenic	1.98	mg/L	E200.8	0.00298	0.0200	2.000	0.000142	99.2	75 - 125				
Beryllium	1.69	mg/L	E200.8	0.00198	0.0200	2.000	0	84.6	75 - 125				
Cadmium	1.99	mg/L	E200.8	0.000858	0.00500	2.000	0.00145	99.6	75 - 125				
Chromium	2.11	mg/L	E200.8	0.0191	0.0200	2.000	0	106	75 - 125				
Cobalt	2.11	mg/L	E200.8	0.00300	0.0400	2.000	0.00942	105	75 - 125				
Copper	2.11	mg/L	E200.8	0.0282	0.0200	2.000	0	106	75 - 125				
Iron	10.2	mg/L	E200.8	0.496	1.00	10.00	0	102	75 - 125				
Lead	1.97	mg/L	E200.8	0.00448	0.0200	2.000	0.0000454	98.6	75 - 125				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910332

**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910332-002EMS</b>													
Date Analyzed:		10/26/2019 1047h											
Test Code:		200.8-DIS											
Date Prepared:		10/14/2019 1048h											
Manganese	3.51	mg/L	E200.8	0.0108	0.0200	2.000	1.6	95.3	75 - 125				
Nickel	2.09	mg/L	E200.8	0.0148	0.0200	2.000	0.0054	104	75 - 125				
Selenium	1.87	mg/L	E200.8	0.00574	0.0200	2.000	0	93.6	75 - 125				
Silver	1.67	mg/L	E200.8	0.00232	0.0200	2.000	0	83.3	75 - 125				
Thallium	1.94	mg/L	E200.8	0.00154	0.0200	2.000	0.00084	96.9	75 - 125				
Uranium	1.89	mg/L	E200.8	0.00176	0.0200	2.000	0.00615	94.1	75 - 125				
Zinc	10.3	mg/L	E200.8	0.0418	0.0600	10.00	0.00483	103	75 - 125				
<b>Lab Sample ID: 1910332-009EMS</b>													
Date Analyzed:		10/26/2019 1140h											
Test Code:		200.8-DIS											
Date Prepared:		10/14/2019 1048h											
Arsenic	2.01	mg/L	E200.8	0.00298	0.0200	2.000	0.000165	101	75 - 125				
Beryllium	1.76	mg/L	E200.8	0.00198	0.0200	2.000	0	88.0	75 - 125				
Cadmium	1.98	mg/L	E200.8	0.000858	0.00500	2.000	0.00127	98.8	75 - 125				
Chromium	2.03	mg/L	E200.8	0.0191	0.0200	2.000	0	102	75 - 125				
Cobalt	2.06	mg/L	E200.8	0.00300	0.0400	2.000	0.0027	103	75 - 125				
Copper	2.01	mg/L	E200.8	0.0282	0.0200	2.000	0	100	75 - 125				
Iron	9.96	mg/L	E200.8	0.496	1.00	10.00	0.00564	99.5	75 - 125				
Lead	1.93	mg/L	E200.8	0.00448	0.0200	2.000	0.0000579	96.5	75 - 125				
Manganese	3.98	mg/L	E200.8	0.0108	0.0200	2.000	2.14	91.7	75 - 125				
Nickel	2.03	mg/L	E200.8	0.0148	0.0200	2.000	0.00421	101	75 - 125				
Selenium	1.99	mg/L	E200.8	0.00574	0.0200	2.000	0.000187	99.7	75 - 125				
Silver	1.64	mg/L	E200.8	0.00232	0.0200	2.000	0	82.1	75 - 125				
Thallium	1.88	mg/L	E200.8	0.00154	0.0200	2.000	0.00036	93.9	75 - 125				
Uranium	1.87	mg/L	E200.8	0.00176	0.0200	2.000	0.0611	90.4	75 - 125				
Zinc	10.1	mg/L	E200.8	0.0418	0.0600	10.00	0.0125	101	75 - 125				
<b>Lab Sample ID: 1910332-002EMS</b>													
Date Analyzed:		10/27/2019 1637h											
Test Code:		200.8-DIS											
Date Prepared:		10/14/2019 1048h											
Molybdenum	2.01	mg/L	E200.8	0.00652	0.0400	2.000	0.0163	99.6	75 - 125				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910332-009EMS	Date Analyzed:	10/27/2019	1715h										
Test Code:	200.8-DIS	Date Prepared:	10/14/2019	1048h									
Molybdenum	2.00	mg/L	E200.8	0.00652	0.0400	2.000	0.00429	99.5	75 - 125				
<b>Lab Sample ID:</b> 1910332-002EMS	Date Analyzed:	10/27/2019	1743h										
Test Code:	200.8-DIS	Date Prepared:	10/14/2019	1048h									
Tin	9.92	mg/L	E200.8	0.0466	0.160	10.00	0	99.2	75 - 125				
<b>Lab Sample ID:</b> 1910332-009EMS	Date Analyzed:	10/27/2019	1749h										
Test Code:	200.8-DIS	Date Prepared:	10/14/2019	1048h									
Tin	9.92	mg/L	E200.8	0.0466	0.160	10.00	0	99.2	75 - 125				
<b>Lab Sample ID:</b> 1910332-001EMS	Date Analyzed:	10/22/2019	1211h										
Test Code:	HG-DW-DIS-245.1	Date Prepared:	10/21/2019	1311h									
Mercury	0.00356	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	107	85 - 115				

1910332-002EMS: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.

1910332-009EMS: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910332-002EMSD</b>													
Date Analyzed:		10/24/2019 1340h											
Test Code:		200.7-DIS											
Date Prepared:		10/14/2019 1048h											
Calcium	449	mg/L	E200.7	20.4	200	100.0	364	84.1	70 - 130	452	0.795	20	
Magnesium	230	mg/L	E200.7	27.8	200	100.0	132	97.7	70 - 130	227	1.16	20	
Sodium	410	mg/L	E200.7	61.2	200	100.0	322	88.3	70 - 130	414	0.816	20	
<b>Lab Sample ID: 1910332-009EMSD</b>													
Date Analyzed:		10/24/2019 1406h											
Test Code:		200.7-DIS											
Date Prepared:		10/14/2019 1048h											
Calcium	572	mg/L	E200.7	20.4	200	100.0	488	84.4	70 - 130	609	6.27	20	
Magnesium	237	mg/L	E200.7	27.8	200	100.0	151	85.7	70 - 130	265	11.2	20	
Sodium	433	mg/L	E200.7	61.2	200	100.0	348	84.7	70 - 130	465	7.10	20	
<b>Lab Sample ID: 1910332-002EMSD</b>													
Date Analyzed:		10/25/2019 1321h											
Test Code:		200.7-DIS											
Date Prepared:		10/14/2019 1048h											
Potassium	103	mg/L	E200.7	1.14	10.0	100.0	8.78	94.0	70 - 130	102	0.721	20	
Vanadium	1.95	mg/L	E200.7	0.0167	0.0500	2.000	0	97.3	70 - 130	1.95	0.411	20	
<b>Lab Sample ID: 1910332-009EMSD</b>													
Date Analyzed:		10/25/2019 1506h											
Test Code:		200.7-DIS											
Date Prepared:		10/14/2019 1048h											
Potassium	123	mg/L	E200.7	2.28	20.0	100.0	11.4	111	70 - 130	114	6.91	20	
Vanadium	2.09	mg/L	E200.7	0.0334	0.100	2.000	0	104	70 - 130	2.15	2.73	20	
<b>Lab Sample ID: 1910332-002EMSD</b>													
Date Analyzed:		10/26/2019 1050h											
Test Code:		200.8-DIS											
Date Prepared:		10/14/2019 1048h											
Arsenic	1.95	mg/L	E200.8	0.00298	0.0200	2.000	0.000142	97.7	75 - 125	1.98	1.48	20	
Beryllium	1.76	mg/L	E200.8	0.00198	0.0200	2.000	0	87.8	75 - 125	1.69	3.65	20	
Cadmium	2.03	mg/L	E200.8	0.000858	0.00500	2.000	0.00145	101	75 - 125	1.99	1.66	20	
Chromium	2.10	mg/L	E200.8	0.0191	0.0200	2.000	0	105	75 - 125	2.11	0.563	20	
Cobalt	2.11	mg/L	E200.8	0.00300	0.0400	2.000	0.00942	105	75 - 125	2.11	0.0380	20	
Copper	2.11	mg/L	E200.8	0.0282	0.0200	2.000	0	106	75 - 125	2.11	0.0472	20	
Iron	10.2	mg/L	E200.8	0.496	1.00	10.00	0	102	75 - 125	10.2	0.191	20	
Lead	2.00	mg/L	E200.8	0.00448	0.0200	2.000	0.0000454	100	75 - 125	1.97	1.38	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:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910332-002EMSD</b>													
Date Analyzed:		10/26/2019 1050h											
Test Code:		200.8-DIS											
Date Prepared:		10/14/2019 1048h											
Manganese	3.44	mg/L	E200.8	0.0108	0.0200	2.000	1.6	91.7	75 - 125	3.51	2.06	20	
Nickel	2.11	mg/L	E200.8	0.0148	0.0200	2.000	0.0054	105	75 - 125	2.09	1.20	20	
Selenium	1.98	mg/L	E200.8	0.00574	0.0200	2.000	0	98.8	75 - 125	1.87	5.47	20	
Silver	1.60	mg/L	E200.8	0.00232	0.0200	2.000	0	80.2	75 - 125	1.67	3.79	20	
Thallium	1.96	mg/L	E200.8	0.00154	0.0200	2.000	0.00084	97.9	75 - 125	1.94	0.938	20	
Uranium	1.92	mg/L	E200.8	0.00176	0.0200	2.000	0.00615	95.5	75 - 125	1.89	1.47	20	
Zinc	10.4	mg/L	E200.8	0.0418	0.0600	10.00	0.00483	104	75 - 125	10.3	0.827	20	
<b>Lab Sample ID: 1910332-009EMSD</b>													
Date Analyzed:		10/26/2019 1143h											
Test Code:		200.8-DIS											
Date Prepared:		10/14/2019 1048h											
Arsenic	1.98	mg/L	E200.8	0.00298	0.0200	2.000	0.000165	99.2	75 - 125	2.01	1.53	20	
Beryllium	1.80	mg/L	E200.8	0.00198	0.0200	2.000	0	90.2	75 - 125	1.76	2.51	20	
Cadmium	1.97	mg/L	E200.8	0.000858	0.00500	2.000	0.00127	98.2	75 - 125	1.98	0.604	20	
Chromium	2.00	mg/L	E200.8	0.0191	0.0200	2.000	0	100	75 - 125	2.03	1.47	20	
Cobalt	2.02	mg/L	E200.8	0.00300	0.0400	2.000	0.0027	101	75 - 125	2.06	2.09	20	
Copper	2.00	mg/L	E200.8	0.0282	0.0200	2.000	0	100	75 - 125	2.01	0.350	20	
Iron	9.76	mg/L	E200.8	0.496	1.00	10.00	0.00564	97.5	75 - 125	9.96	1.98	20	
Lead	1.94	mg/L	E200.8	0.00448	0.0200	2.000	0.0000579	97.1	75 - 125	1.93	0.613	20	
Manganese	3.76	mg/L	E200.8	0.0108	0.0200	2.000	2.14	80.9	75 - 125	3.98	5.57	20	
Nickel	1.99	mg/L	E200.8	0.0148	0.0200	2.000	0.00421	99.1	75 - 125	2.03	2.32	20	
Selenium	1.97	mg/L	E200.8	0.00574	0.0200	2.000	0.000187	98.5	75 - 125	1.99	1.17	20	
Silver	1.66	mg/L	E200.8	0.00232	0.0200	2.000	0	83.0	75 - 125	1.64	1.10	20	
Thallium	1.89	mg/L	E200.8	0.00154	0.0200	2.000	0.00036	94.5	75 - 125	1.88	0.617	20	
Uranium	1.85	mg/L	E200.8	0.00176	0.0200	2.000	0.0611	89.5	75 - 125	1.87	0.977	20	
Zinc	10.1	mg/L	E200.8	0.0418	0.0600	10.00	0.0125	100	75 - 125	10.1	0.114	20	
<b>Lab Sample ID: 1910332-002EMSD</b>													
Date Analyzed:		10/27/2019 1640h											
Test Code:		200.8-DIS											
Date Prepared:		10/14/2019 1048h											
Molybdenum	2.04	mg/L	E200.8	0.00652	0.0400	2.000	0.0163	101	75 - 125	2.01	1.33	20	

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 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:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910332-009EMSD	Date Analyzed:	10/27/2019	1718h										
Test Code:	200.8-DIS	Date Prepared:	10/14/2019	1048h									
Molybdenum	1.98	mg/L	E200.8	0.00652	0.0400	2.000	0.00429	98.8	75 - 125	2	0.710	20	
<b>Lab Sample ID:</b> 1910332-002EMSD	Date Analyzed:	10/27/2019	1746h										
Test Code:	200.8-DIS	Date Prepared:	10/14/2019	1048h									
Tin	10.1	mg/L	E200.8	0.0466	0.160	10.00	0	101	75 - 125	9.92	1.70	20	
<b>Lab Sample ID:</b> 1910332-009EMSD	Date Analyzed:	10/27/2019	1752h										
Test Code:	200.8-DIS	Date Prepared:	10/14/2019	1048h									
Tin	9.79	mg/L	E200.8	0.0466	0.160	10.00	0	97.9	75 - 125	9.92	1.32	20	
<b>Lab Sample ID:</b> 1910332-001EMSD	Date Analyzed:	10/22/2019	1213h										
Test Code:	HG-DW-DIS-245.1	Date Prepared:	10/21/2019	1311h									
Mercury	0.00354	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	106	85 - 115	0.00357	0.751	20	

1910332-002EMSD: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.

1910332-009EMSD: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910332-001CDUP	Date Analyzed: 10/14/2019 1300h												
<b>Test Code:</b> TDS-W-2540C													
Total Dissolved Solids	3,460	mg/L	SM2540C	16.0	20.0					3340	3.53	5	



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS-R131852</b> Date Analyzed: 10/26/2019 2308h													
Test Code: 300.0-W													
Chloride	4.94	mg/L	E300.0	0.0386	0.100	5.000	0	98.9	90 - 110				
Fluoride	5.10	mg/L	E300.0	0.0240	0.100	5.000	0	102	90 - 110				
Sulfate	5.09	mg/L	E300.0	0.174	0.750	5.000	0	102	90 - 110				
<b>Lab Sample ID: LCS-R131876</b> Date Analyzed: 10/28/2019 1045h													
Test Code: 300.0-W													
Chloride	5.02	mg/L	E300.0	0.0386	0.100	5.000	0	100	90 - 110				
Fluoride	5.06	mg/L	E300.0	0.0240	0.100	5.000	0	101	90 - 110				
Sulfate	5.12	mg/L	E300.0	0.174	0.750	5.000	0	102	90 - 110				
<b>Lab Sample ID: LCS-R132110</b> Date Analyzed: 11/01/2019 1427h													
Test Code: 300.0-W													
Fluoride	5.13	mg/L	E300.0	0.0240	0.100	5.000	0	103	90 - 110				
<b>Lab Sample ID: LCS-R131268</b> Date Analyzed: 10/14/2019 1036h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	250	mg/L	SM2320B	0.781	1.00	250.0	0	99.8	90 - 110				
<b>Lab Sample ID: LCS-65787</b> Date Analyzed: 10/22/2019 1234h													
Test Code: NH3-W-350.1      Date Prepared: 10/22/2019 902h													
Ammonia (as N)	11.0	mg/L	E350.1	0.0492	0.0500	10.00	0	110	90 - 110				
<b>Lab Sample ID: LCS-R131346</b> Date Analyzed: 10/15/2019 1250h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.04	mg/L	E353.2	0.00363	0.0100	1.000	0	104	90 - 110				
<b>Lab Sample ID: LCS-R131353</b> Date Analyzed: 10/14/2019 1300h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	176	mg/L	SM2540C	8.00	10.0	205.0	0	85.9	80 - 120				



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Jose Rocha  
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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID: MB-R131852</b> Date Analyzed: 10/26/2019 2252h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID: MB-R131876</b> Date Analyzed: 10/28/2019 1028h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID: MB-R132110</b> Date Analyzed: 11/01/2019 1412h													
Test Code: 300.0-W													
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
<b>Lab Sample ID: MB-R131268</b> Date Analyzed: 10/14/2019 1036h													
Test Code: ALK-W-2320B-LL													
Bicarbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
Carbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
<b>Lab Sample ID: MB-65787</b> Date Analyzed: 10/22/2019 1233h													
Test Code: NH3-W-350.1 Date Prepared: 10/22/2019 902h													
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
<b>Lab Sample ID: MB-R131346</b> Date Analyzed: 10/15/2019 1248h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								
<b>Lab Sample ID: MB-R131353</b> Date Analyzed: 10/14/2019 1300h													
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:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910332-005BMS</b> Date Analyzed: 10/27/2019 048h													
Test Code: 300.0-W													
Chloride	1,330	mg/L	E300.0	7.72	20.0	1,000	318	101	90 - 110				
Fluoride	1,030	mg/L	E300.0	4.80	20.0	1,000	0	103	90 - 110				
Sulfate	2,060	mg/L	E300.0	34.8	150	1,000	1010	105	90 - 110				
<b>Lab Sample ID: 1910332-009BMS</b> Date Analyzed: 10/28/2019 1535h													
Test Code: 300.0-W													
Chloride	2,590	mg/L	E300.0	19.3	50.0	2,500	18.6	103	90 - 110				
Fluoride	2,560	mg/L	E300.0	12.0	50.0	2,500	0	102	90 - 110				
Sulfate	4,950	mg/L	E300.0	87.0	375	2,500	2340	104	90 - 110				
<b>Lab Sample ID: 1910332-001BMS</b> Date Analyzed: 10/14/2019 1036h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,430	mg/L	SM2320B	0.781	1.00	1,000	436	99.6	80 - 120				
<b>Lab Sample ID: 1910332-001DMS</b> Date Analyzed: 10/22/2019 1236h													
Test Code: NH3-W-350.1 Date Prepared: 10/22/2019 902h													
Ammonia (as N)	13.6	mg/L	E350.1	0.0492	0.0500	10.00	0.137	135	90 - 110				
<b>Lab Sample ID: 1910332-001DMS</b> Date Analyzed: 10/15/2019 1307h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.2	mg/L	E353.2	0.0363	0.100	10.00	0	102	90 - 110				

<sup>1</sup> - 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:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910332-005BMSD</b>		Date Analyzed: 10/27/2019 105h											
Test Code: 300.0-W													
Chloride	1,330	mg/L	E300.0	7.72	20.0	1,000	318	101	90 - 110	1330	0.101	20	
Fluoride	1,030	mg/L	E300.0	4.80	20.0	1,000	0	103	90 - 110	1030	0.292	20	
Sulfate	2,080	mg/L	E300.0	34.8	150	1,000	1010	107	90 - 110	2060	0.729	20	
<b>Lab Sample ID: 1910332-009BMSD</b>		Date Analyzed: 10/28/2019 1551h											
Test Code: 300.0-W													
Chloride	2,550	mg/L	E300.0	19.3	50.0	2,500	18.6	101	90 - 110	2590	1.32	20	
Fluoride	2,590	mg/L	E300.0	12.0	50.0	2,500	0	104	90 - 110	2560	1.33	20	
Sulfate	4,890	mg/L	E300.0	87.0	375	2,500	2340	102	90 - 110	4950	1.06	20	
<b>Lab Sample ID: 1910332-001BMSD</b>		Date Analyzed: 10/14/2019 1036h											
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,430	mg/L	SM2320B	0.781	1.00	1,000	436	99.4	80 - 120	1430	0.140	10	
<b>Lab Sample ID: 1910332-001DMSD</b>		Date Analyzed: 10/22/2019 1241h											
Test Code: NH3-W-350.1		Date Prepared: 10/22/2019 902h											
Ammonia (as N)	13.9	mg/L	E350.1	0.0492	0.0500	10.00	0.137	138	90 - 110	13.6	2.25	10	1
<b>Lab Sample ID: 1910332-001DMSD</b>		Date Analyzed: 10/15/2019 1308h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.5	mg/L	E353.2	0.0363	0.100	10.00	0	105	90 - 110	10.2	2.22	10	

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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS VOC-1 101519A</b>		<b>Date Analyzed:</b> 10/15/2019 933h											
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	38.0	µg/L	SW8260D	1.31	20.0	20.00	0	190	74 - 215				
Acetone	44.6	µg/L	SW8260D	2.87	20.0	20.00	0	223	70 - 350				
Benzene	20.9	µg/L	SW8260D	0.147	1.00	20.00	0	104	82 - 132				
Carbon tetrachloride	21.1	µg/L	SW8260D	0.262	1.00	20.00	0	105	77 - 143				
Chloroform	20.8	µg/L	SW8260D	0.166	1.00	20.00	0	104	85 - 124				
Chloromethane	16.8	µg/L	SW8260D	0.832	1.00	20.00	0	83.9	30 - 149				
Methylene chloride	20.9	µg/L	SW8260D	0.448	1.00	20.00	0	105	65 - 154				
Naphthalene	20.8	µg/L	SW8260D	0.704	1.00	20.00	0	104	62 - 129				
Tetrahydrofuran	19.5	µg/L	SW8260D	0.436	1.00	20.00	0	97.5	59 - 135				
Toluene	21.2	µg/L	SW8260D	0.177	1.00	20.00	0	106	69 - 129				
Xylenes, Total	63.2	µg/L	SW8260D	0.253	1.00	60.00	0	105	66 - 124				
Surr: 1,2-Dichloroethane-d4	47.7	µg/L	SW8260D			50.00		95.4	80 - 136				
Surr: 4-Bromofluorobenzene	47.4	µg/L	SW8260D			50.00		94.7	85 - 121				
Surr: Dibromofluoromethane	47.0	µg/L	SW8260D			50.00		94.0	78 - 132				
Surr: Toluene-d8	47.8	µg/L	SW8260D			50.00		95.5	81 - 123				
<b>Lab Sample ID: LCS VOC-1 101619A</b>		<b>Date Analyzed:</b> 10/16/2019 803h											
<b>Test Code:</b> 8260D-W-DEN100													
Chloroform	18.6	µg/L	SW8260D	0.166	1.00	20.00	0	93.0	85 - 124				
Surr: 1,2-Dichloroethane-d4	47.4	µg/L	SW8260D			50.00		94.9	80 - 136				
Surr: 4-Bromofluorobenzene	46.5	µg/L	SW8260D			50.00		93.0	85 - 121				
Surr: Dibromofluoromethane	47.3	µg/L	SW8260D			50.00		94.5	78 - 132				
Surr: Toluene-d8	49.0	µg/L	SW8260D			50.00		98.1	81 - 123				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID: MB VOC-1 101619A</b>		Date Analyzed: 10/16/2019 823h											
Test Code: 8260D-W-DEN100													
Chloroform	< 1.00	µg/L	SW8260D	0.166	1.00								
Surr: 1,2-Dichloroethane-d4	47.7	µg/L	SW8260D			50.00		95.4	80 - 136				
Surr: 4-Bromofluorobenzene	47.6	µg/L	SW8260D			50.00		95.2	85 - 121				
Surr: Dibromofluoromethane	47.2	µg/L	SW8260D			50.00		94.5	78 - 132				
Surr: Toluene-d8	48.6	µg/L	SW8260D			50.00		97.1	81 - 123				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1910332

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910332-001AMS	Date Analyzed: 10/15/2019 1354h												
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	16.7	µg/L	SW8260D	1.31	20.0	20.00	0	83.5	74 - 215				
Acetone	19.3	µg/L	SW8260D	2.87	20.0	20.00	0	96.6	70 - 350				
Benzene	22.2	µg/L	SW8260D	0.147	1.00	20.00	0	111	82 - 132				
Carbon tetrachloride	23.0	µg/L	SW8260D	0.262	1.00	20.00	0	115	77 - 143				
Chloroform	21.9	µg/L	SW8260D	0.166	1.00	20.00	0	110	85 - 124				
Chloromethane	16.3	µg/L	SW8260D	0.832	1.00	20.00	0	81.6	30 - 149				
Methylene chloride	22.6	µg/L	SW8260D	0.448	1.00	20.00	0	113	65 - 154				
Naphthalene	21.1	µg/L	SW8260D	0.704	1.00	20.00	0	106	62 - 129				
Tetrahydrofuran	19.6	µg/L	SW8260D	0.436	1.00	20.00	0	98.0	59 - 135				
Toluene	22.4	µg/L	SW8260D	0.177	1.00	20.00	0	112	69 - 129				
Xylenes, Total	66.6	µg/L	SW8260D	0.253	1.00	60.00	0	111	66 - 124				
Surr: 1,2-Dichloroethane-d4	47.7	µg/L	SW8260D			50.00		95.4	80 - 136				
Surr: 4-Bromofluorobenzene	47.1	µg/L	SW8260D			50.00		94.1	85 - 121				
Surr: Dibromofluoromethane	47.4	µg/L	SW8260D			50.00		94.8	78 - 132				
Surr: Toluene-d8	47.7	µg/L	SW8260D			50.00		95.4	81 - 123				



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Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910332  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910332-001AMSD	Date Analyzed: 10/15/2019 1414h												
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	16.7	µg/L	SW8260D	1.31	20.0	20.00	0	83.4	74 - 215	16.7	0.180	35	
Acetone	21.7	µg/L	SW8260D	2.87	20.0	20.00	0	108	70 - 350	19.3	11.5	35	
Benzene	21.1	µg/L	SW8260D	0.147	1.00	20.00	0	106	82 - 132	22.2	5.26	35	
Carbon tetrachloride	21.2	µg/L	SW8260D	0.262	1.00	20.00	0	106	77 - 143	23	7.92	35	
Chloroform	21.2	µg/L	SW8260D	0.166	1.00	20.00	0	106	85 - 124	21.9	3.53	35	
Chloromethane	17.5	µg/L	SW8260D	0.832	1.00	20.00	0	87.6	30 - 149	16.3	7.10	35	
Methylene chloride	21.6	µg/L	SW8260D	0.448	1.00	20.00	0	108	65 - 154	22.6	4.48	35	
Naphthalene	20.7	µg/L	SW8260D	0.704	1.00	20.00	0	104	62 - 129	21.1	1.96	35	
Tetrahydrofuran	19.8	µg/L	SW8260D	0.436	1.00	20.00	0	99.0	59 - 135	19.6	1.12	35	
Toluene	21.3	µg/L	SW8260D	0.177	1.00	20.00	0	106	69 - 129	22.4	5.08	35	
Xylenes, Total	63.7	µg/L	SW8260D	0.253	1.00	60.00	0	106	66 - 124	66.6	4.54	35	
Surr: 1,2-Dichloroethane-d4	47.2	µg/L	SW8260D			50.00		94.4	80 - 136				
Surr: 4-Bromofluorobenzene	47.5	µg/L	SW8260D			50.00		95.1	85 - 121				
Surr: Dibromofluoromethane	47.0	µg/L	SW8260D			50.00		94.1	78 - 132				
Surr: Toluene-d8	48.4	µg/L	SW8260D			50.00		96.7	81 - 123				

**WORK ORDER Summary**

Work Order: **1910332**

Page 1 of 7

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

Due Date: 10/25/2019

**Client ID:** ENE300

**Contact:** Tanner Holliday

**Project:** 4th Quarter Ground Water 2019

**QC Level:** III

WO Type: Project

**Comments:** QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com. Do not use "\*R\_" samples as MS/MSD.;

DB

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910332-001A	MW-14_10092019	10/9/2019 1345h	10/11/2019 1245h	8260D-W-DEN100	Aqueous		VOCFridge	3
<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>								
1910332-001B				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>								
1910332-001C				TDS-W-2540C			df - tds	
<i>1 SEL Analytes: TDS</i>								
1910332-001D				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>								
1910332-001E				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>								
1910332-002A	MW-25_10092019	10/9/2019 1030h	10/11/2019 1245h	8260D-W-DEN100	Aqueous		VOCFridge	3
<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>								
1910332-002B				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>								
1910332-002C				TDS-W-2540C			df - tds	
<i>1 SEL Analytes: TDS</i>								

# WORK ORDER Summary

Work Order: **1910332** Page 2 of 7

Client: Energy Fuels Resources, Inc.

Due Date: 10/25/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910332-002D	MW-25_10092019	10/9/2019 1030h	10/11/2019 1245h	NH3-W-350.1	Aqueous		df - no2/no3 & nh3	1
				<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>				
1910332-002E				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>				
1910332-003A	MW-26_10092019	10/9/2019 1000h	10/11/2019 1245h	8260D-W-DEN100	Aqueous		VOCFridge	3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1910332-003B				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>				
1910332-003C				TDS-W-2540C			df - tds	
				<i>1 SEL Analytes: TDS</i>				
1910332-003D				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>				
1910332-003E				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>				

# WORK ORDER Summary

Work Order: **1910332** Page 3 of 7

Client: Energy Fuels Resources, Inc.

Due Date: 10/25/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1910332-003E	MW-26_10092019	10/9/2019 1000h	10/11/2019 1245h	HG-DW-DIS-PR	Aqueous	df-met	1
				IONBALANCE		df-met	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc			
1910332-004A	MW-30-10082019	10/8/2019 1120h	10/11/2019 1245h	8260D-W-DEN100	Aqueous	VOCFridge	3
				Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4			
1910332-004B				300.0-W		df - wc	1
				3 SEL Analytes: CL F SO4			
				ALK-W-2320B-LL		df - wc	
				2 SEL Analytes: ALKB ALKC			
1910332-004C				TDS-W-2540C		df - tds	
				1 SEL Analytes: TDS			
1910332-004D				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			
1910332-004E				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			
1910332-005A	MW-31_10092019	10/9/2019 1315h	10/11/2019 1245h	8260D-W-DEN100	Aqueous	VOCFridge	2
				Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4			
1910332-005B				300.0-W		df - wc	1
				3 SEL Analytes: CL F SO4			
				ALK-W-2320B-LL		df - wc	
				2 SEL Analytes: ALKB ALKC			
1910332-005C				TDS-W-2540C		df - tds	
				1 SEL Analytes: TDS			
1910332-005D				NH3-W-350.1		df - no2/no3 & nh3	
				1 SEL Analytes: NH3N			

# WORK ORDER Summary

Work Order: **1910332** Page 4 of 7

Client: Energy Fuels Resources, Inc.

Due Date: 10/25/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1910332-005D	MW-31_10092019	10/9/2019 1315h	10/11/2019 1245h	NH3-W-PR	Aqueous	df - no2/no3 & nh3	1
				NO2/NO3-W-353.2		df - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N			
1910332-005E				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						
1910332-006A	MW-32_10082019	10/8/2019 1240h	10/11/2019 1245h	8260D-W-DEN100	Aqueous	VOCFridge	3
				Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4			
1910332-006B				300.0-W		df - wc	1
				3 SEL Analytes: CL F SO4			
				ALK-W-2320B-LL		df - wc	
				2 SEL Analytes: ALKB ALKC			
1910332-006C				TDS-W-2540C		df - tds	
				1 SEL Analytes: TDS			
1910332-006D				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			
1910332-006E				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: **1910332** Page 5 of 7

Client: Energy Fuels Resources, Inc.

Due Date: 10/25/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910332-006E	MW-32_10082019	10/8/2019 1240h	10/11/2019 1245h	IONBALANCE	Aqueous	df-met		1
5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc								
1910332-007A	MW-35_10082019	10/8/2019 1315h	10/11/2019 1245h	8260D-W-DEN100	Aqueous		VOCFridge	3
Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4								
1910332-007B				300.0-W		df - wc		1
3 SEL Analytes: CL F SO4								
				ALK-W-2320B-LL		df - wc		
2 SEL Analytes: ALKB ALKC								
1910332-007C				TDS-W-2540C		df - tds		
1 SEL Analytes: TDS								
1910332-007D				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								
1910332-007E				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								
1910332-008A	MW-36_10082019	10/8/2019 1415h	10/11/2019 1245h	8260D-W-DEN100	Aqueous		VOCFridge	3
Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4								
1910332-008B				300.0-W		df - wc		1
3 SEL Analytes: CL F SO4								
				ALK-W-2320B-LL		df - wc		
2 SEL Analytes: ALKB ALKC								
1910332-008C				TDS-W-2540C		df - tds		
1 SEL Analytes: TDS								
1910332-008D				NH3-W-350.1		df - no2/no3 & nh3		
1 SEL Analytes: NH3N								
				NH3-W-PR		df - no2/no3 & nh3		

# WORK ORDER Summary

Work Order: **1910332** Page 6 of 7

Client: Energy Fuels Resources, Inc.

Due Date: 10/25/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1910332-008D	MW-36_10082019	10/8/2019 1415h	10/11/2019 1245h	NO2/NO3-W-353.2	Aqueous		df - no2/no3 & nh3 1
				1 SEL Analytes: NO3NO2N			
1910332-008E				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			
1910332-009A	MW-65_10092019	10/9/2019 1345h	10/11/2019 1245h	8260D-W-DEN100	Aqueous		VOCFridge 3
				Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4			
1910332-009B				300.0-W			df - wc 1
				3 SEL Analytes: CL F SO4			
				ALK-W-2320B-LL			df - wc
				2 SEL Analytes: ALKB ALKC			
1910332-009C				TDS-W-2540C			df - tds
				1 SEL Analytes: TDS			
1910332-009D				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			
1910332-009E				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			

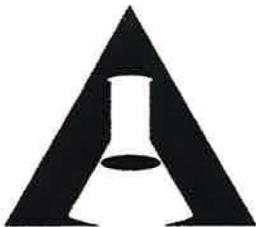
# WORK ORDER Summary

Work Order: **1910332** Page 7 of 7

Client: Energy Fuels Resources, Inc.

Due Date: 10/25/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1910332-010A	TW4-24_10092019	10/9/2019 1230h	10/11/2019 1245h	8260D-W-DEN100	Aqueous		VOCFridge
						2	
1910332-010B				300.0-W			df - wc
				3 SEL Analytes: CL F SO4			
				ALK-W-2320B-LL			df - wc
				2 SEL Analytes: ALKB ALKC			
1910332-010C				TDS-W-2540C			df - tds
				1 SEL Analytes: TDS			
1910332-010D				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			
1910332-010E				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			
1910332-011A	Trip Blank	10/8/2019 1120h	10/11/2019 1245h	8260D-W-DEN100	Aqueous		VOCFridge
				Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4			



# American West Analytical Laboratories

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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 (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

1910332  
 AWAL Lab Sample Set #  
 Page 1 of 1

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: **4th 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														
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)	Known Hazards & Sample Comments	Laboratory Use Only	
															1	2
1 MW-14_10092019	10/9/2019	1345	7	W	x	x	x	x	x	x	x	x	x		Y	N
2 MW-25_10092019	10/9/2019	1030	7	W	x	x	x	x	x	x	x	x	x		Y	N
3 MW-26_10092019	10/9/2019	1000	7	W	x	x	x	x	x	x	x	x	x		Y	N
4 MW-30_10082019	10/8/2019	1120	7	W	x	x	x	x	x	x	x	x	x		Y	N
5 MW-31_10092019	10/9/2019	1315	7	W	x	x	x	x	x	x	x	x	x	1 vial broken	Y	N
6 MW-32_10082019	10/8/2019	1240	7	W	x	x	x	x	x	x	x	x	x		Y	N
7 MW-35_10082019	10/8/2019	1315	7	W	x	x	x	x	x	x	x	x	x		Y	N
8 MW-36_10082019	10/8/2019	1415	7	W	x	x	x	x	x	x	x	x	x		Y	N
9 MW-65_10092019	10/9/2019	1345	7	W	x	x	x	x	x	x	x	x	x		Y	N
10 TW4-24_10092019	10/9/2019	1230	7	W	x	x	x	x	x	x	x	x	x	1 vial broken	Y	N
11 Trip Blank	10/8/2019	1120	3	W											Y	N
12																

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:

Samples Were: **UPS**

- Shipped or hand delivered
- Ambient or Chilled
- Temperature 0.9 °C
- Received Broken/Leaking (improperly Sealed) **N** *#5 \$ VOC broken*
- Properly Preserved **N**
- Checked at bench **N**
- Received Within Holding Times **N**

COC Tape Was:

- 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: Signature <i>Tanner Holliday</i>	Date: 10/10/2019	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: 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 Bruhn</i>	Date: 10/11/19	
Print Name:	Time:	Print Name: Denise Bruhn	Time: 12:45	

Lab Set ID: 1910332

pH Lot #: 6086

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	-001	-002	-003	-004	-005	-006	-007	-008	-009	-010								
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>	yes																	
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cyanide	pH >12 NaOH																		
Metals	pH <2 HNO <sub>3</sub>	yes																	
NO <sub>2</sub> /NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>	yes																	
O & G	pH <2 HCL																		
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Sulfide	pH >9 NaOH, Zn Acetate																		
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cr VI+	pH >9 (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>																		

- 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.



Tanner Holliday  
Energy Fuels Resources, Inc.  
6425 South Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 4th Quarter Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1910514

3440 South 700 West

Salt Lake City, UT 84119

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web: [www.awal-labs.com](http://www.awal-labs.com)

American West Analytical Laboratories received sample(s) on 10/18/2019 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:

<b>Jose G. Rocha</b>	Digitally signed by Jose G. Rocha
	DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou=UT00031, email=jose@awal-labs.com, c=US Date: 2019.11.06 13:32:48 -07'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910514  
**Date Received:** 10/18/2019 1105h

**Contact:** Tanner Holliday

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 Salt Lake City, UT 84119

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910514-001A	MW-18_10152019	10/15/2019 1240h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910514-001B	MW-18_10152019	10/15/2019 1240h	Aqueous	Anions, E300.0
1910514-001B	MW-18_10152019	10/15/2019 1240h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910514-001C	MW-18_10152019	10/15/2019 1240h	Aqueous	Total Dissolved Solids, A2540C
1910514-001D	MW-18_10152019	10/15/2019 1240h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910514-001D	MW-18_10152019	10/15/2019 1240h	Aqueous	Ammonia, Aqueous
1910514-001E	MW-18_10152019	10/15/2019 1240h	Aqueous	Ion Balance
1910514-001E	MW-18_10152019	10/15/2019 1240h	Aqueous	ICP Metals, Dissolved
1910514-001E	MW-18_10152019	10/15/2019 1240h	Aqueous	ICPMS Metals, Dissolved
1910514-001E	MW-18_10152019	10/15/2019 1240h	Aqueous	Mercury, Drinking Water Dissolved
1910514-002A	MW-11_10152019	10/15/2019 1400h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910514-002B	MW-11_10152019	10/15/2019 1400h	Aqueous	Anions, E300.0
1910514-002B	MW-11_10152019	10/15/2019 1400h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910514-002C	MW-11_10152019	10/15/2019 1400h	Aqueous	Total Dissolved Solids, A2540C
1910514-002D	MW-11_10152019	10/15/2019 1400h	Aqueous	Ammonia, Aqueous
1910514-002D	MW-11_10152019	10/15/2019 1400h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910514-002E	MW-11_10152019	10/15/2019 1400h	Aqueous	Ion Balance
1910514-002E	MW-11_10152019	10/15/2019 1400h	Aqueous	ICP Metals, Dissolved
1910514-002E	MW-11_10152019	10/15/2019 1400h	Aqueous	ICPMS Metals, Dissolved
1910514-002E	MW-11_10152019	10/15/2019 1400h	Aqueous	Mercury, Drinking Water Dissolved
1910514-003A	MW-19_10142019	10/14/2019 1530h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910514-003B	MW-19_10142019	10/14/2019 1530h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910514-003B	MW-19_10142019	10/14/2019 1530h	Aqueous	Anions, E300.0
1910514-003C	MW-19_10142019	10/14/2019 1530h	Aqueous	Total Dissolved Solids, A2540C
1910514-003D	MW-19_10142019	10/14/2019 1530h	Aqueous	Ammonia, Aqueous
1910514-003D	MW-19_10142019	10/14/2019 1530h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910514-003E	MW-19_10142019	10/14/2019 1530h	Aqueous	Ion Balance
1910514-003E	MW-19_10142019	10/14/2019 1530h	Aqueous	ICP Metals, Dissolved
1910514-003E	MW-19_10142019	10/14/2019 1530h	Aqueous	ICPMS Metals, Dissolved



**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910514  
**Date Received:** 10/18/2019 1105h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910514-003E	MW-19_10142019	10/14/2019 1530h	Aqueous	Mercury, Drinking Water Dissolved
1910514-004A	Trip Blank	10/14/2019 1530h	Aqueous	VOA by GC/MS Method 8260D/5030C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910514

3440 South 700 West  
Salt Lake City, UT 84119

### Sample Receipt Information:

**Date of Receipt:** 10/18/2019  
**Date(s) of Collection:** 10/14-10/15/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation of all samples were performed within the method holding times. All 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:

**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
1910514-001D	Ammonia	MS/MSD	Sample matrix interference
1910514-002E	Sodium	MS/MSD	Sample matrix interference

**Duplicate (DUP):** The parameters that required a duplicate analysis had RPDs within the control limits, with the following exception: the RPD for Total Dissolved Solids on sample 1910514-001C was outside of the control limits due to suspected sample non-homogeneity or sample matrix interference.

**Corrective Action:** None required.



## Volatile Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910514

---

3440 South 700 West  
Salt Lake City, UT 84119

### Sample Receipt Information:

**Date of Receipt:** 10/18/2019  
**Date(s) of Collection:** 10/14-10/15/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8260D/5030C  
**Analysis:** Tetrahydrofuran

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**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.

Kyle F. Gross  
Laboratory Director

**Analytical QC Requirements:** All instrument calibration and calibration check requirements were met, with exceptions noted on the reports. 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, with the following exceptions: the MSD percent recovery for Acetone on sample 1910514-001A was outside of the control limits due to sample matrix interference.

**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:** 1910514

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-65952	Date Analyzed:	11/01/2019	1924h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Calcium	9.34	mg/L	E200.7	0.102	1.00	10.00	0	93.4	85 - 115				
Sodium	9.01	mg/L	E200.7	0.306	1.00	10.00	0	90.1	85 - 115				
<b>Lab Sample ID:</b> LCS-65952	Date Analyzed:	11/01/2019	2008h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Magnesium	9.10	mg/L	E200.7	0.139	1.00	10.00	0	91.0	85 - 115				
<b>Lab Sample ID:</b> LCS-66097	Date Analyzed:	11/05/2019	1729h										
Test Code:	200.7-DIS	Date Prepared:	11/05/2019	1040h									
Potassium	10.3	mg/L	E200.7	0.114	1.00	10.00	0	103	85 - 115				
<b>Lab Sample ID:</b> LCS-66097	Date Analyzed:	11/06/2019	1114h										
Test Code:	200.7-DIS	Date Prepared:	11/05/2019	1040h									
Vanadium	0.199	mg/L	E200.7	0.00167	0.00500	0.2000	0	99.4	85 - 115				
<b>Lab Sample ID:</b> LCS-65904	Date Analyzed:	10/28/2019	1015h										
Test Code:	200.8-DIS	Date Prepared:	10/26/2019	1039h									
Arsenic	0.198	mg/L	E200.8	0.000298	0.00200	0.2000	0	98.9	85 - 115				
Beryllium	0.198	mg/L	E200.8	0.000198	0.00200	0.2000	0	98.9	85 - 115				
Cadmium	0.199	mg/L	E200.8	0.0000858	0.000500	0.2000	0	99.6	85 - 115				
Chromium	0.201	mg/L	E200.8	0.00191	0.00200	0.2000	0	101	85 - 115				
Cobalt	0.199	mg/L	E200.8	0.000300	0.00400	0.2000	0	99.3	85 - 115				
Iron	0.997	mg/L	E200.8	0.0496	0.100	1.000	0	99.7	85 - 115				
Lead	0.193	mg/L	E200.8	0.000448	0.00200	0.2000	0	96.5	85 - 115				
Manganese	0.200	mg/L	E200.8	0.00108	0.00200	0.2000	0	100	85 - 115				
Molybdenum	0.199	mg/L	E200.8	0.000652	0.00400	0.2000	0	99.5	85 - 115				
Nickel	0.198	mg/L	E200.8	0.00148	0.00200	0.2000	0	99.0	85 - 115				
Selenium	0.197	mg/L	E200.8	0.000574	0.00200	0.2000	0	98.7	85 - 115				
Silver	0.194	mg/L	E200.8	0.000232	0.00200	0.2000	0	96.9	85 - 115				
Thallium	0.187	mg/L	E200.8	0.000154	0.00200	0.2000	0	93.4	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:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-65904	Date Analyzed:		10/28/2019 1015h										
Test Code:	Date Prepared:		10/26/2019 1039h										
Uranium	0.188	mg/L	E200.8	0.000176	0.00200	0.2000	0	94.0	85 - 115				
<b>Lab Sample ID:</b> LCS-65904	Date Analyzed:		10/30/2019 134h										
Test Code:	Date Prepared:		10/26/2019 1039h										
Copper	0.198	mg/L	E200.8	0.00282	0.00200	0.2000	0	99.1	85 - 115				
Tin	1.02	mg/L	E200.8	0.00116	0.00400	1.000	0	102	85 - 115				
Zinc	1.00	mg/L	E200.8	0.00418	0.00600	1.000	0	100	85 - 115				
<b>Lab Sample ID:</b> LCS-65939	Date Analyzed:		10/29/2019 1224h										
Test Code:	Date Prepared:		10/28/2019 1725h										
Mercury	0.00349	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	105	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:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB-65952	Date Analyzed:	11/01/2019	1922h										
<b>Test Code:</b> 200.7-DIS	Date Prepared:	10/29/2019	1309h										
Calcium	< 1.00	mg/L	E200.7	0.102	1.00								
Sodium	< 1.00	mg/L	E200.7	0.306	1.00								
<b>Lab Sample ID:</b> MB-65952	Date Analyzed:	11/01/2019	2006h										
<b>Test Code:</b> 200.7-DIS	Date Prepared:	10/29/2019	1309h										
Magnesium	< 1.00	mg/L	E200.7	0.139	1.00								
<b>Lab Sample ID:</b> MB-66097	Date Analyzed:	11/05/2019	1726h										
<b>Test Code:</b> 200.7-DIS	Date Prepared:	11/05/2019	1040h										
Potassium	< 1.00	mg/L	E200.7	0.114	1.00								
<b>Lab Sample ID:</b> MB-66097	Date Analyzed:	11/06/2019	1112h										
<b>Test Code:</b> 200.7-DIS	Date Prepared:	11/05/2019	1040h										
Vanadium	< 0.00500	mg/L	E200.7	0.00167	0.00500								
<b>Lab Sample ID:</b> MB-65904	Date Analyzed:	10/28/2019	1012h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/26/2019	1039h										
Arsenic	< 0.000200	mg/L	E200.8	0.0000298	0.000200								
Beryllium	< 0.000200	mg/L	E200.8	0.0000198	0.000200								
Cadmium	< 0.0000500	mg/L	E200.8	0.00000858	0.0000500								
Chromium	< 0.000200	mg/L	E200.8	0.000191	0.000200								
Cobalt	< 0.000400	mg/L	E200.8	0.0000300	0.000400								
Iron	< 0.0100	mg/L	E200.8	0.00496	0.0100								
Lead	< 0.000200	mg/L	E200.8	0.0000448	0.000200								
Manganese	< 0.000200	mg/L	E200.8	0.000108	0.000200								
Molybdenum	< 0.000400	mg/L	E200.8	0.0000652	0.000400								
Nickel	< 0.000200	mg/L	E200.8	0.000148	0.000200								
Selenium	< 0.000200	mg/L	E200.8	0.0000574	0.000200								
Silver	< 0.000200	mg/L	E200.8	0.0000232	0.000200								
Thallium	< 0.000200	mg/L	E200.8	0.0000154	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:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB-65904	Date Analyzed:	10/28/2019	1012h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/26/2019	1039h										
Tin	< 0.000400	mg/L	E200.8	0.000116	0.000400								
Uranium	< 0.000200	mg/L	E200.8	0.0000176	0.000200								
<b>Lab Sample ID:</b> MB-FILTER-65851	Date Analyzed:	10/28/2019	1420h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/26/2019	1039h										
Selenium	< 0.00200	mg/L	E200.8	0.000574	0.00200								
<b>Lab Sample ID:</b> MB-65904	Date Analyzed:	10/30/2019	131h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/26/2019	1039h										
Copper	< 0.00200	mg/L	E200.8	0.00282	0.00200								
Zinc	< 0.00600	mg/L	E200.8	0.00418	0.00600								
<b>Lab Sample ID:</b> MB-65939	Date Analyzed:	10/29/2019	1222h										
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	10/28/2019	1725h										
Mercury	< 0.0000900	mg/L	E245.1	0.0000396	0.0000900								



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## QC SUMMARY REPORT

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

**Contact:** Tanner Holliday

**Lab Set ID:** 1910514

**Dept:** ME

**Project:** 4th 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
<b>Lab Sample ID:</b> 1910514-002EMS	Date Analyzed:	11/01/2019	1915h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Calcium	175	mg/L	E200.7	1.02	10.0	100.0	87.9	87.5	70 - 130				
Sodium	588	mg/L	E200.7	3.06	10.0	100.0	525	62.7	70 - 130				
<b>Lab Sample ID:</b> 1910514-002EMS	Date Analyzed:	11/01/2019	2015h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Magnesium	116	mg/L	E200.7	1.39	10.0	100.0	27.2	89.3	70 - 130				
<b>Lab Sample ID:</b> 1910680-002EMS	Date Analyzed:	11/04/2019	1153h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Calcium	462	mg/L	E200.7	20.4	200	100.0	344	118	70 - 130				
Magnesium	216	mg/L	E200.7	27.8	200	100.0	102	114	70 - 130				
Sodium	627	mg/L	E200.7	61.2	200	100.0	499	128	70 - 130				
<b>Lab Sample ID:</b> 1910514-003EMS	Date Analyzed:	11/05/2019	1743h										
Test Code:	200.7-DIS	Date Prepared:	11/05/2019	1040h									
Potassium	52.7	mg/L	E200.7	0.570	5.00	50.00	4.7	96.0	70 - 130				
<b>Lab Sample ID:</b> 1910514-003EMS	Date Analyzed:	11/06/2019	1123h										
Test Code:	200.7-DIS	Date Prepared:	11/05/2019	1040h									
Vanadium	0.975	mg/L	E200.7	0.00835	0.0250	1.000	0	97.5	70 - 130				
<b>Lab Sample ID:</b> 1910514-001EMS	Date Analyzed:	10/28/2019	1204h										
Test Code:	200.8-DIS	Date Prepared:	10/26/2019	1039h									
Arsenic	0.206	mg/L	E200.8	0.000298	0.00200	0.2000	0	103	75 - 125				
Beryllium	0.187	mg/L	E200.8	0.000198	0.00200	0.2000	0	93.6	75 - 125				
Cadmium	0.192	mg/L	E200.8	0.0000858	0.000500	0.2000	0.000161	95.7	75 - 125				
Chromium	0.198	mg/L	E200.8	0.00191	0.00200	0.2000	0	98.8	75 - 125				
Cobalt	0.194	mg/L	E200.8	0.000300	0.00400	0.2000	0	96.9	75 - 125				
Iron	0.995	mg/L	E200.8	0.0496	0.100	1.000	0.0294	96.6	75 - 125				
Lead	0.186	mg/L	E200.8	0.000448	0.00200	0.2000	0	92.9	75 - 125				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910514-001EMS	Date Analyzed:	10/28/2019 1204h											
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/26/2019 1039h											
Manganese	0.267	mg/L	E200.8	0.00108	0.00200	0.2000	0.0738	96.7	75 - 125				
Molybdenum	0.203	mg/L	E200.8	0.000652	0.00400	0.2000	0.00177	100	75 - 125				
Nickel	0.194	mg/L	E200.8	0.00148	0.00200	0.2000	0.00171	96.2	75 - 125				
Selenium	0.194	mg/L	E200.8	0.000574	0.00200	0.2000	0	97.2	75 - 125				
Silver	0.182	mg/L	E200.8	0.000232	0.00200	0.2000	0	91.1	75 - 125				
Thallium	0.184	mg/L	E200.8	0.000154	0.00200	0.2000	0.0022	91.0	75 - 125				
Uranium	0.212	mg/L	E200.8	0.000176	0.00200	0.2000	0.0267	92.6	75 - 125				
<b>Lab Sample ID:</b> 1910514-001EMS	Date Analyzed:	10/30/2019 204h											
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/26/2019 1039h											
Copper	0.186	mg/L	E200.8	0.00282	0.00200	0.2000	0	93.0	75 - 125				
Tin	1.02	mg/L	E200.8	0.00116	0.00400	1.000	0	102	75 - 125				
Zinc	0.962	mg/L	E200.8	0.00418	0.00600	1.000	0	96.2	75 - 125				
<b>Lab Sample ID:</b> 1910514-001EMS	Date Analyzed:	10/29/2019 1236h											
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	10/28/2019 1725h											
Mercury	0.00351	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	105	85 - 115				

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

1910514-003EMS: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.

1910680-002EMS: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.



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QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910514-002EMSD</b>		Date Analyzed:	11/01/2019 1917h										
<b>Test Code: 200.7-DIS</b>		Date Prepared:	10/29/2019 1309h										
Calcium	180	mg/L	E200.7	1.02	10.0	100.0	87.9	92.3	70 - 130	175	2.70	20	
Sodium	583	mg/L	E200.7	3.06	10.0	100.0	525	58.4	70 - 130	588	0.744	20	
<b>Lab Sample ID: 1910514-002EMSD</b>		Date Analyzed:	11/01/2019 2017h										
<b>Test Code: 200.7-DIS</b>		Date Prepared:	10/29/2019 1309h										
Magnesium	119	mg/L	E200.7	1.39	10.0	100.0	27.2	91.5	70 - 130	116	1.91	20	
<b>Lab Sample ID: 1910680-002EMSD</b>		Date Analyzed:	11/04/2019 1155h										
<b>Test Code: 200.7-DIS</b>		Date Prepared:	10/29/2019 1309h										
Calcium	454	mg/L	E200.7	20.4	200	100.0	344	110	70 - 130	462	1.76	20	
Magnesium	216	mg/L	E200.7	27.8	200	100.0	102	113	70 - 130	216	0.118	20	
Sodium	621	mg/L	E200.7	61.2	200	100.0	499	123	70 - 130	627	0.905	20	
<b>Lab Sample ID: 1910514-003EMSD</b>		Date Analyzed:	11/05/2019 1745h										
<b>Test Code: 200.7-DIS</b>		Date Prepared:	11/05/2019 1040h										
Potassium	53.3	mg/L	E200.7	0.570	5.00	50.00	4.7	97.2	70 - 130	52.7	1.13	20	
<b>Lab Sample ID: 1910514-003EMSD</b>		Date Analyzed:	11/06/2019 1125h										
<b>Test Code: 200.7-DIS</b>		Date Prepared:	11/05/2019 1040h										
Vanadium	1.02	mg/L	E200.7	0.00835	0.0250	1.000	0	102	70 - 130	0.975	4.53	20	
<b>Lab Sample ID: 1910514-001EMSD</b>		Date Analyzed:	10/28/2019 1207h										
<b>Test Code: 200.8-DIS</b>		Date Prepared:	10/26/2019 1039h										
Arsenic	0.208	mg/L	E200.8	0.000298	0.00200	0.2000	0	104	75 - 125	0.206	0.834	20	
Beryllium	0.182	mg/L	E200.8	0.000198	0.00200	0.2000	0	91.1	75 - 125	0.187	2.64	20	
Cadmium	0.192	mg/L	E200.8	0.0000858	0.000500	0.2000	0.000161	95.7	75 - 125	0.192	0.0486	20	
Chromium	0.196	mg/L	E200.8	0.00191	0.00200	0.2000	0	98.2	75 - 125	0.198	0.602	20	
Cobalt	0.195	mg/L	E200.8	0.000300	0.00400	0.2000	0	97.4	75 - 125	0.194	0.594	20	
Iron	0.989	mg/L	E200.8	0.0496	0.100	1.000	0.0294	96.0	75 - 125	0.995	0.631	20	
Lead	0.182	mg/L	E200.8	0.000448	0.00200	0.2000	0	91.0	75 - 125	0.186	2.06	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:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910514-001EMSD</b>		Date Analyzed:	10/28/2019 1207h										
Test Code: 200.8-DIS		Date Prepared:	10/26/2019 1039h										
Manganese	0.264	mg/L	E200.8	0.00108	0.00200	0.2000	0.0738	94.9	75 - 125	0.267	1.33	20	
Molybdenum	0.206	mg/L	E200.8	0.000652	0.00400	0.2000	0.00177	102	75 - 125	0.203	1.46	20	
Nickel	0.196	mg/L	E200.8	0.00148	0.00200	0.2000	0.00171	97.2	75 - 125	0.194	1.07	20	
Selenium	0.189	mg/L	E200.8	0.000574	0.00200	0.2000	0	94.7	75 - 125	0.194	2.60	20	
Silver	0.182	mg/L	E200.8	0.000232	0.00200	0.2000	0	91.1	75 - 125	0.182	0.0460	20	
Thallium	0.182	mg/L	E200.8	0.000154	0.00200	0.2000	0.0022	89.8	75 - 125	0.184	1.36	20	
Uranium	0.208	mg/L	E200.8	0.000176	0.00200	0.2000	0.0267	90.8	75 - 125	0.212	1.67	20	
<b>Lab Sample ID: 1910514-001EMSD</b>		Date Analyzed:	10/30/2019 207h										
Test Code: 200.8-DIS		Date Prepared:	10/26/2019 1039h										
Copper	0.218	mg/L	E200.8	0.00282	0.00200	0.2000	0	109	75 - 125	0.186	15.9	20	
Tin	0.998	mg/L	E200.8	0.00116	0.00400	1.000	0	99.8	75 - 125	1.02	1.91	20	
Zinc	1.12	mg/L	E200.8	0.00418	0.00600	1.000	0	112	75 - 125	0.962	15.6	20	
<b>Lab Sample ID: 1910514-001EMSD</b>		Date Analyzed:	10/29/2019 1238h										
Test Code: HG-DW-DIS-245.1		Date Prepared:	10/28/2019 1725h										
Mercury	0.00363	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	109	85 - 115	0.00351	3.32	20	

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

1910514-003EMSD: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.

1910680-002EMSD: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910514-001CDUP	Date Analyzed: 10/21/2019 1300h												
<b>Test Code:</b> TDS-W-2540C													
Total Dissolved Solids	3,290	mg/L	SM2540C	16.0	20.0					3060	7.18	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:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS-R132005</b>		Date Analyzed: 10/30/2019 2209h											
Test Code: 300.0-W													
Chloride	4.66	mg/L	E300.0	0.0386	0.100	5.000	0	93.1	90 - 110				
Sulfate	4.90	mg/L	E300.0	0.174	0.750	5.000	0	98.0	90 - 110				
<b>Lab Sample ID: LCS-R132067</b>		Date Analyzed: 10/31/2019 1359h											
Test Code: 300.0-W													
Fluoride	5.15	mg/L	E300.0	0.0240	0.100	5.000	0	103	90 - 110				
<b>Lab Sample ID: LCS-R131575</b>		Date Analyzed: 10/21/2019 722h											
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO <sub>3</sub> )	250	mg/L	SM2320B	0.781	1.00	250.0	0	99.8	90 - 110				
<b>Lab Sample ID: LCS-65942</b>		Date Analyzed: 10/29/2019 1336h											
Test Code: NH3-W-350.1		Date Prepared: 10/29/2019 814h											
Ammonia (as N)	9.30	mg/L	E350.1	0.0492	0.0500	10.00	0	93.0	90 - 110				
<b>Lab Sample ID: LCS-R131594</b>		Date Analyzed: 10/21/2019 1123h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.07	mg/L	E353.2	0.00363	0.0100	1.000	0	107	90 - 110				
<b>Lab Sample ID: LCS-R131655</b>		Date Analyzed: 10/21/2019 1300h											
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

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**Lab Set ID:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID: MB-R132005</b>													
Date Analyzed: 10/30/2019 2152h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID: MB-R132067</b>													
Date Analyzed: 10/31/2019 1343h													
Test Code: 300.0-W													
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
<b>Lab Sample ID: MB-R131575</b>													
Date Analyzed: 10/21/2019 722h													
Test Code: ALK-W-2320B-LL													
Bicarbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
Carbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
<b>Lab Sample ID: MB-65942</b>													
Date Analyzed: 10/29/2019 1335h													
Test Code: NH3-W-350.1													
Date Prepared: 10/29/2019 814h													
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
<b>Lab Sample ID: MB-R131594</b>													
Date Analyzed: 10/21/2019 1122h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								
<b>Lab Sample ID: MB-R131655</b>													
Date Analyzed: 10/21/2019 1300h													
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:** 1910514

**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910514-003BMS</b> Date Analyzed: 10/30/2019 2349h													
Test Code: 300.0-W													
Chloride	983	mg/L	E300.0	7.72	20.0	1,000	25.7	95.7	90 - 110				
Sulfate	1,460	mg/L	E300.0	34.8	150	1,000	491	96.5	90 - 110				
<b>Lab Sample ID: 1910514-003BMS</b> Date Analyzed: 10/21/2019 722h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,210	mg/L	SM2320B	0.781	1.00	1,000	204	100	80 - 120				
<b>Lab Sample ID: 1910514-001DMS</b> Date Analyzed: 10/29/2019 1342h													
Test Code: NH3-W-350.1 Date Prepared: 10/29/2019 814h													
Ammonia (as N)	13.2	mg/L	E350.1	0.0492	0.0500	10.00	0	132	90 - 110				1
<b>Lab Sample ID: 1910513-002BMS</b> Date Analyzed: 10/21/2019 1127h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.8	mg/L	E353.2	0.0363	0.100	10.00	0.162	106	90 - 110				
<b>Lab Sample ID: 1910513-003BMS</b> Date Analyzed: 10/21/2019 1130h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	12.8	mg/L	E353.2	0.0363	0.100	10.00	2.15	107	90 - 110				
<b>Lab Sample ID: 1910514-001DMS</b> Date Analyzed: 10/21/2019 1150h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.9	mg/L	E353.2	0.0363	0.100	10.00	0	109	90 - 110				

<sup>1</sup> - 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

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910514-003BMSD</b> Date Analyzed: 10/31/2019 006h													
Test Code: 300.0-W													
Chloride	969	mg/L	E300.0	7.72	20.0	1,000	25.7	94.3	90 - 110	983	1.47	20	
Sulfate	1,480	mg/L	E300.0	34.8	150	1,000	491	98.6	90 - 110	1460	1.47	20	
<b>Lab Sample ID: 1910514-003BMSD</b> Date Analyzed: 10/21/2019 722h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,210	mg/L	SM2320B	0.781	1.00	1,000	204	100	80 - 120	1210	0.166	10	
<b>Lab Sample ID: 1910514-001DMSD</b> Date Analyzed: 10/29/2019 1348h													
Test Code: NH3-W-350.1 Date Prepared: 10/29/2019 814h													
Ammonia (as N)	13.2	mg/L	E350.1	0.0492	0.0500	10.00	0	132	90 - 110	13.2	0.0760	10	†
<b>Lab Sample ID: 1910513-002BMSD</b> Date Analyzed: 10/21/2019 1128h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.8	mg/L	E353.2	0.0363	0.100	10.00	0.162	106	90 - 110	10.8	0	10	
<b>Lab Sample ID: 1910513-003BMSD</b> Date Analyzed: 10/21/2019 1132h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	12.7	mg/L	E353.2	0.0363	0.100	10.00	2.15	106	90 - 110	12.8	0.940	10	
<b>Lab Sample ID: 1910514-001DMSD</b> Date Analyzed: 10/21/2019 1156h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.8	mg/L	E353.2	0.0363	0.100	10.00	0	108	90 - 110	10.9	0.923	10	

† - 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

## QC SUMMARY REPORT

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

**Lab Set ID:** 1910514

**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS VOC-2 102119A</b>		Date Analyzed: 10/21/2019 916h											
Test Code: 8260D-W-DEN100													
2-Butanone	27.4	µg/L	SW8260D	1.31	20.0	20.00	0	137	74 - 215				
Acetone	21.4	µg/L	SW8260D	2.87	20.0	20.00	0	107	70 - 350				
Benzene	18.9	µg/L	SW8260D	0.147	1.00	20.00	0	94.6	82 - 132				
Carbon tetrachloride	21.3	µg/L	SW8260D	0.262	1.00	20.00	0	107	77 - 143				
Chloroform	20.0	µg/L	SW8260D	0.166	1.00	20.00	0	99.8	85 - 124				
Chloromethane	16.2	µg/L	SW8260D	0.832	1.00	20.00	0	81.2	30 - 149				
Methylene chloride	18.4	µg/L	SW8260D	0.448	1.00	20.00	0	91.8	65 - 154				
Naphthalene	18.3	µg/L	SW8260D	0.704	1.00	20.00	0	91.7	62 - 129				
Tetrahydrofuran	15.2	µg/L	SW8260D	0.436	1.00	20.00	0	76.1	59 - 135				
Toluene	19.4	µg/L	SW8260D	0.177	1.00	20.00	0	96.9	69 - 129				
Xylenes, Total	59.8	µg/L	SW8260D	0.253	1.00	60.00	0	99.7	66 - 124				
Surr: 1,2-Dichloroethane-d4	52.0	µg/L	SW8260D			50.00		104	80 - 136				
Surr: 4-Bromofluorobenzene	48.2	µg/L	SW8260D			50.00		96.4	85 - 121				
Surr: Dibromofluoromethane	53.0	µg/L	SW8260D			50.00		106	78 - 132				
Surr: Toluene-d8	50.0	µg/L	SW8260D			50.00		99.9	81 - 123				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910514

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB VOC-2 102119A	Date Analyzed:		10/21/2019 937h										
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260D	1.31	20.0								
Acetone	< 20.0	µg/L	SW8260D	2.87	20.0								
Benzene	< 1.00	µg/L	SW8260D	0.147	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260D	0.262	1.00								
Chloroform	< 1.00	µg/L	SW8260D	0.166	1.00								
Chloromethane	< 1.00	µg/L	SW8260D	0.832	1.00								
Methylene chloride	< 1.00	µg/L	SW8260D	0.448	1.00								
Naphthalene	< 1.00	µg/L	SW8260D	0.704	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260D	0.436	1.00								
Toluene	< 1.00	µg/L	SW8260D	0.177	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260D	0.253	1.00								
Surr: 1,2-Dichloroethane-d4	52.5	µg/L	SW8260D			50.00		105	80 - 136				
Surr: 4-Bromofluorobenzene	50.9	µg/L	SW8260D			50.00		102	85 - 121				
Surr: Dibromofluoromethane	51.6	µg/L	SW8260D			50.00		103	78 - 132				
Surr: Toluene-d8	51.0	µg/L	SW8260D			50.00		102	81 - 123				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910514  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910514-001AMS</b>		<b>Date Analyzed: 10/21/2019 1310h</b>											
<b>Test Code: 8260D-W-DEN100</b>													
2-Butanone	27.1	µg/L	SW8260D	1.31	20.0	20.00	0	136	74 - 215				
Acetone	15.3	µg/L	SW8260D	2.87	20.0	20.00	0	76.3	70 - 350				
Benzene	22.3	µg/L	SW8260D	0.147	1.00	20.00	0	112	82 - 132				
Carbon tetrachloride	24.5	µg/L	SW8260D	0.262	1.00	20.00	0	122	77 - 143				
Chloroform	23.6	µg/L	SW8260D	0.166	1.00	20.00	0	118	85 - 124				
Chloromethane	17.2	µg/L	SW8260D	0.832	1.00	20.00	0	86.2	30 - 149				
Methylene chloride	21.4	µg/L	SW8260D	0.448	1.00	20.00	0	107	65 - 154				
Naphthalene	22.9	µg/L	SW8260D	0.704	1.00	20.00	0	115	62 - 129				
Tetrahydrofuran	20.0	µg/L	SW8260D	0.436	1.00	20.00	0	100	59 - 135				
Toluene	22.8	µg/L	SW8260D	0.177	1.00	20.00	0	114	69 - 129				
Xylenes, Total	70.2	µg/L	SW8260D	0.253	1.00	60.00	0	117	66 - 124				
Surr: 1,2-Dichloroethane-d4	54.6	µg/L	SW8260D			50.00		109	80 - 136				
Surr: 4-Bromofluorobenzene	51.9	µg/L	SW8260D			50.00		104	85 - 121				
Surr: Dibromofluoromethane	54.9	µg/L	SW8260D			50.00		110	78 - 132				
Surr: Toluene-d8	51.6	µg/L	SW8260D			50.00		103	81 - 123				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910514

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910514-001AMSD	Date Analyzed: 10/21/2019 1331h												
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	24.4	µg/L	SW8260D	1.31	20.0	20.00	0	122	74 - 215	27.1	10.6	35	
Acetone	13.4	µg/L	SW8260D	2.87	20.0	20.00	0	66.8	70 - 350	15.3	13.3	35	
Benzene	20.9	µg/L	SW8260D	0.147	1.00	20.00	0	105	82 - 132	22.3	6.43	35	
Carbon tetrachloride	23.3	µg/L	SW8260D	0.262	1.00	20.00	0	116	77 - 143	24.5	5.03	35	
Chloroform	22.2	µg/L	SW8260D	0.166	1.00	20.00	0	111	85 - 124	23.7	6.28	35	
Chloromethane	17.0	µg/L	SW8260D	0.832	1.00	20.00	0	84.8	30 - 149	17.3	1.64	35	
Methylene chloride	19.8	µg/L	SW8260D	0.448	1.00	20.00	0	98.8	65 - 154	21.4	7.78	35	
Naphthalene	19.9	µg/L	SW8260D	0.704	1.00	20.00	0	99.3	62 - 129	22.9	14.3	35	
Tetrahydrofuran	18.1	µg/L	SW8260D	0.436	1.00	20.00	0	90.4	59 - 135	20	10.2	35	
Toluene	21.4	µg/L	SW8260D	0.177	1.00	20.00	0	107	69 - 129	22.8	6.19	35	
Xylenes, Total	65.0	µg/L	SW8260D	0.253	1.00	60.00	0	108	66 - 124	70.2	7.65	35	
Surr: 1,2-Dichloroethane-d4	52.6	µg/L	SW8260D			50.00		105	80 - 136				
Surr: 4-Bromofluorobenzene	50.5	µg/L	SW8260D			50.00		101	85 - 121				
Surr: Dibromofluoromethane	53.0	µg/L	SW8260D			50.00		106	78 - 132				
Surr: Toluene-d8	50.5	µg/L	SW8260D			50.00		101	81 - 123				

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

Client Sample IDs changed on Sample #s 1 & 2 due to  
mislabeling @ check-in - DB

**WORK ORDER Summary**

Work Order: **1910514** Page 1 of 3

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

Due Date: 11/1/2019

**Client ID:** ENE300

**Contact:** Tanner Holliday

**Project:** 4th Quarter Ground Water 2019

**QC Level:** III

WO Type: Project

**Comments:** QC 3 (no chromatograms). EDD-Denison. Email group. Do not use "\*R\_" samples as MS/MSD. 11-5-19 - Client Sample IDs changed on Sample #s 1 & 2 due to mislabeling @ check-in.;

DB

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1910514-001A	MW-18_10152019	10/15/2019 1240h	10/18/2019 1105h	8260D-W-DEN100	Aqueous		VOCFridge 3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>			
1910514-001B				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>			
1910514-001C				TDS-W-2540C			df - tds
				<i>1 SEL Analytes: TDS</i>			
1910514-001D				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>			
1910514-001E				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>			
1910514-002A	MW-11_10152019	10/15/2019 1400h	10/18/2019 1105h	8260D-W-DEN100	Aqueous		VOCFridge 3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>			
1910514-002B				300.0-W			df - wc 1
				<i>3 SEL Analytes: CL F SO4</i>			

# WORK ORDER Summary

Work Order: **1910514** Page 2 of 3

Client: Energy Fuels Resources, Inc.

Due Date: 11/1/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910514-002B	MW-11_10152019	10/15/2019 1400h	10/18/2019 1105h	ALK-W-2320B-LL	Aqueous		df - wc	1
				<i>2 SEL Analytes: ALKB ALKC</i>				
1910514-002C				TDS-W-2540C			df - tds	
				<i>1 SEL Analytes: TDS</i>				
1910514-002D				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>				
1910514-002E							200.7-DIS	
	<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>							
1910514-003A	MW-19_10142019	10/14/2019 1530h	10/18/2019 1105h	8260D-W-DEN100	Aqueous		VOCFridge	3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1910514-003B				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>				
1910514-003C				TDS-W-2540C			df - tds	
				<i>1 SEL Analytes: TDS</i>				
1910514-003D				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>							
1910514-003E			200.7-DIS		df-met			
	<i>5 SEL Analytes: CA MG K NA V</i>							
			200.7-DIS-PR		df-met			

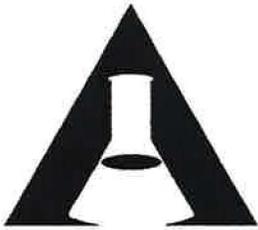
# WORK ORDER Summary

Work Order: **1910514** Page 3 of 3

Client: Energy Fuels Resources, Inc.

Due Date: 11/1/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910514-003E	MW-19_10142019	10/14/2019 1530h	10/18/2019 1105h	200.8-DIS	Aqueous		df-met	1
				<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>				
1910514-004A	Trip Blank	10/14/2019 1530h	10/18/2019 1105h	8260D-W-DEN100	Aqueous		VOCFridge	3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				



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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 (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

1910514  
 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				11/1/19	
Laboratory Use Only		Samples Were:		Shipped or hand delivered		2 Ambient or Chilled	
		WPS				3 Temperature 3.9 °C	
						4 Received Broken/Leaking (Improperly Sealed) Y N	
						5 Properly Preserved Y N	
						6 Received Within Holding Times Y N	
Known Hazards & Sample Comments		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	

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

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

Contact: **Tanner Holliday**

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

Email: **gpalmr@energyfuels.com; KWeinl@energyfuels.com; tholliday@energyfuels.com**

Project Name: **4th Quarter Ground Water 2019**

Project #: \_\_\_\_\_

PO #: \_\_\_\_\_

Sampler Name: **Tanner Holliday**

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, Ti, Sn, U, V, Zn, Na, K, Mg, Ca	Ion Balance	VOCs (8260C)
MW-11_10152019	10/15/2019	1400	7	W	x	x	x	x	x	x	x	x	x
MW-18_10152019	10/15/2019	1240	7	W	x	x	x	x	x	x	x	x	x
MW-19_10142019	10/14/2019	1530	7	W	x	x	x	x	x	x	x	x	x
TRIP BLANK	10/14/2019	1530	3	W									x

Relinquished by: Signature <i>Tanner Holliday</i>	Date: 10/17/2019	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 Braun</i>	Date: 10/18/19
Print Name:	Time:	Print Name: Denise Braun	Time: 11:05

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: 1910514  
 pH Lot #: 6086

**Preservation Check Sheet**

**Sample Set Extension and pH**

Analysis	Preservative	-001	-002	-003														
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>	yes	yes	yes														
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
Cyanide	pH >12 NaOH																	
Metals	pH <2 HNO <sub>3</sub>	yes	yes	yes														
NO <sub>2</sub> /NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>	yes	yes	yes														
O & G	pH <2 HCL																	
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
Sulfide	pH >9 NaOH, Zn Acetate																	
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
Cr VI+	pH >9 (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>																	

- 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.



Tanner Holliday  
Energy Fuels Resources, Inc.  
6425 South Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 4th Quarter Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1910680

3440 South 700 West

Salt Lake City, UT 84119

American West Analytical Laboratories received sample(s) on 10/25/2019 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.

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web: [www.awal-labs.com](http://www.awal-labs.com)

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=UT00031,  
email=jose@awal-labs.com,  
c=US  
Date: 2019.12.17 14:31:44  
-07'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910680  
**Date Received:** 10/25/2019 1014h

**Contact:** Tanner Holliday

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 Salt Lake City, UT 84119

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910680-001A	MW-01_10222019	10/22/2019 1000h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910680-001B	MW-01_10222019	10/22/2019 1000h	Aqueous	Anions, E300.0
1910680-001B	MW-01_10222019	10/22/2019 1000h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910680-001C	MW-01_10222019	10/22/2019 1000h	Aqueous	Total Dissolved Solids, A2540C
1910680-001D	MW-01_10222019	10/22/2019 1000h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910680-001D	MW-01_10222019	10/22/2019 1000h	Aqueous	Ammonia, Aqueous
1910680-001E	MW-01_10222019	10/22/2019 1000h	Aqueous	Ion Balance
1910680-001E	MW-01_10222019	10/22/2019 1000h	Aqueous	ICP Metals, Dissolved
1910680-001E	MW-01_10222019	10/22/2019 1000h	Aqueous	ICPMS Metals, Dissolved
1910680-001E	MW-01_10222019	10/22/2019 1000h	Aqueous	Mercury, Drinking Water Dissolved
1910680-002A	MW-02_10232019	10/23/2019 835h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910680-002B	MW-02_10232019	10/23/2019 835h	Aqueous	Anions, E300.0
1910680-002B	MW-02_10232019	10/23/2019 835h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910680-002C	MW-02_10232019	10/23/2019 835h	Aqueous	Total Dissolved Solids, A2540C
1910680-002D	MW-02_10232019	10/23/2019 835h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910680-002D	MW-02_10232019	10/23/2019 835h	Aqueous	Ammonia, Aqueous
1910680-002E	MW-02_10232019	10/23/2019 835h	Aqueous	Ion Balance
1910680-002E	MW-02_10232019	10/23/2019 835h	Aqueous	ICP Metals, Dissolved
1910680-002E	MW-02_10232019	10/23/2019 835h	Aqueous	ICPMS Metals, Dissolved
1910680-002E	MW-02_10232019	10/23/2019 835h	Aqueous	Mercury, Drinking Water Dissolved
1910680-003A	MW-05_10232019	10/23/2019 1210h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910680-003B	MW-05_10232019	10/23/2019 1210h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910680-003B	MW-05_10232019	10/23/2019 1210h	Aqueous	Anions, E300.0
1910680-003C	MW-05_10232019	10/23/2019 1210h	Aqueous	Total Dissolved Solids, A2540C
1910680-003D	MW-05_10232019	10/23/2019 1210h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910680-003D	MW-05_10232019	10/23/2019 1210h	Aqueous	Ammonia, Aqueous
1910680-003E	MW-05_10232019	10/23/2019 1210h	Aqueous	Ion Balance
1910680-003E	MW-05_10232019	10/23/2019 1210h	Aqueous	ICP Metals, Dissolved
1910680-003E	MW-05_10232019	10/23/2019 1210h	Aqueous	ICPMS Metals, Dissolved



**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910680  
**Date Received:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910680-003E	MW-05_10232019	10/23/2019 1210h	Aqueous	Mercury, Drinking Water Dissolved
1910680-004A	MW-12_10232019	10/23/2019 1445h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910680-004B	MW-12_10232019	10/23/2019 1445h	Aqueous	Fluoride, Aqueous
1910680-004B	MW-12_10232019	10/23/2019 1445h	Aqueous	Anions, E300.0
1910680-004B	MW-12_10232019	10/23/2019 1445h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910680-004C	MW-12_10232019	10/23/2019 1445h	Aqueous	Total Dissolved Solids, A2540C
1910680-004D	MW-12_10232019	10/23/2019 1445h	Aqueous	Ammonia, Aqueous
1910680-004D	MW-12_10232019	10/23/2019 1445h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910680-004E	MW-12_10232019	10/23/2019 1445h	Aqueous	Ion Balance
1910680-004E	MW-12_10232019	10/23/2019 1445h	Aqueous	ICP Metals, Dissolved
1910680-004E	MW-12_10232019	10/23/2019 1445h	Aqueous	ICPMS Metals, Dissolved
1910680-004E	MW-12_10232019	10/23/2019 1445h	Aqueous	Mercury, Drinking Water Dissolved
1910680-005A	MW-17_10232019	10/23/2019 1450h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910680-005B	MW-17_10232019	10/23/2019 1450h	Aqueous	Anions, E300.0
1910680-005B	MW-17_10232019	10/23/2019 1450h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910680-005B	MW-17_10232019	10/23/2019 1450h	Aqueous	Fluoride, Aqueous
1910680-005C	MW-17_10232019	10/23/2019 1450h	Aqueous	Total Dissolved Solids, A2540C
1910680-005D	MW-17_10232019	10/23/2019 1450h	Aqueous	Ammonia, Aqueous
1910680-005D	MW-17_10232019	10/23/2019 1450h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910680-005E	MW-17_10232019	10/23/2019 1450h	Aqueous	Ion Balance
1910680-005E	MW-17_10232019	10/23/2019 1450h	Aqueous	ICP Metals, Dissolved
1910680-005E	MW-17_10232019	10/23/2019 1450h	Aqueous	ICPMS Metals, Dissolved
1910680-005E	MW-17_10232019	10/23/2019 1450h	Aqueous	Mercury, Drinking Water Dissolved
1910680-006A	MW-27_10222019	10/22/2019 1030h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910680-006B	MW-27_10222019	10/22/2019 1030h	Aqueous	Anions, E300.0
1910680-006B	MW-27_10222019	10/22/2019 1030h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910680-006C	MW-27_10222019	10/22/2019 1030h	Aqueous	Total Dissolved Solids, A2540C
1910680-006D	MW-27_10222019	10/22/2019 1030h	Aqueous	Ammonia, Aqueous
1910680-006D	MW-27_10222019	10/22/2019 1030h	Aqueous	Nitrite/Nitrate (as N), E353.2

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Laboratory Director

Jose Rocha  
QA Officer



**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910680  
**Date Received:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910680-006E	MW-27_10222019	10/22/2019 1030h	Aqueous	Mercury, Drinking Water Dissolved
1910680-006E	MW-27_10222019	10/22/2019 1030h	Aqueous	ICPMS Metals, Dissolved
1910680-006E	MW-27_10222019	10/22/2019 1030h	Aqueous	Ion Balance
1910680-006E	MW-27_10222019	10/22/2019 1030h	Aqueous	ICP Metals, Dissolved
1910680-007A	MW-28_10222019	10/22/2019 1405h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910680-007B	MW-28_10222019	10/22/2019 1405h	Aqueous	Anions, E300.0
1910680-007B	MW-28_10222019	10/22/2019 1405h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910680-007C	MW-28_10222019	10/22/2019 1405h	Aqueous	Total Dissolved Solids, A2540C
1910680-007D	MW-28_10222019	10/22/2019 1405h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910680-007D	MW-28_10222019	10/22/2019 1405h	Aqueous	Ammonia, Aqueous
1910680-007E	MW-28_10222019	10/22/2019 1405h	Aqueous	Ion Balance
1910680-007E	MW-28_10222019	10/22/2019 1405h	Aqueous	Mercury, Drinking Water Dissolved
1910680-007E	MW-28_10222019	10/22/2019 1405h	Aqueous	ICPMS Metals, Dissolved
1910680-007E	MW-28_10222019	10/22/2019 1405h	Aqueous	ICP Metals, Dissolved
1910680-008A	MW-29_10222019	10/22/2019 1345h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910680-008B	MW-29_10222019	10/22/2019 1345h	Aqueous	Anions, E300.0
1910680-008B	MW-29_10222019	10/22/2019 1345h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910680-008C	MW-29_10222019	10/22/2019 1345h	Aqueous	Total Dissolved Solids, A2540C
1910680-008D	MW-29_10222019	10/22/2019 1345h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910680-008D	MW-29_10222019	10/22/2019 1345h	Aqueous	Ammonia, Aqueous
1910680-008E	MW-29_10222019	10/22/2019 1345h	Aqueous	ICPMS Metals, Dissolved
1910680-008E	MW-29_10222019	10/22/2019 1345h	Aqueous	Mercury, Drinking Water Dissolved
1910680-008E	MW-29_10222019	10/22/2019 1345h	Aqueous	ICP Metals, Dissolved
1910680-008E	MW-29_10222019	10/22/2019 1345h	Aqueous	Ion Balance
1910680-009A	MW-40_10232019	10/23/2019 1025h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910680-009B	MW-40_10232019	10/23/2019 1025h	Aqueous	Anions, E300.0
1910680-009B	MW-40_10232019	10/23/2019 1025h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910680-009C	MW-40_10232019	10/23/2019 1025h	Aqueous	Total Dissolved Solids, A2540C
1910680-009D	MW-40_10232019	10/23/2019 1025h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910680-009D	MW-40_10232019	10/23/2019 1025h	Aqueous	Ammonia, Aqueous

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910680  
**Date Received:** 10/25/2019 1014h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910680-009E	MW-40_10232019	10/23/2019 1025h	Aqueous	Ion Balance
1910680-009E	MW-40_10232019	10/23/2019 1025h	Aqueous	ICP Metals, Dissolved
1910680-009E	MW-40_10232019	10/23/2019 1025h	Aqueous	ICPMS Metals, Dissolved
1910680-009E	MW-40_10232019	10/23/2019 1025h	Aqueous	Mercury, Drinking Water Dissolved
1910680-010A	Trip Blank	10/22/2019 1000h	Aqueous	VOA by GC/MS Method 8260D/5030C

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Jose Rocha  
QA Officer



# Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910680

## Sample Receipt Information:

3440 South 700 West  
 Salt Lake City, UT 84119

**Date of Receipt:** 10/25/2019  
**Date(s) of Collection:** 10/22-10/23/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation of all samples were performed within the method holding times. All 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:

**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
1910514-002E	Sodium	MS/MSD	Sample matrix interference
1910680-001D	Ammonia	MS/MSD	Sample matrix interference

**Duplicate (DUP):** The parameters that required a duplicate analysis had RPDs within the control limits, with the following exception: the RPD for Total Dissolved Solids on sample 1910680-001C was outside of the control limits due to suspected sample non-homogeneity or sample matrix interference.

**Corrective Action:** None required.



## Volatile Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910680

---

### Sample Receipt Information:

**Date of Receipt:** 10/25/2019  
**Date(s) of Collection:** 10/22-10/23/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8260D/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, with CCV exceptions noted on the reports. 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



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-65952	Date Analyzed:		11/01/2019 1924h										
Test Code:	Date Prepared:		10/29/2019 1309h										
Calcium	9.34	mg/L	E200.7	0.102	1.00	10.00	0	93.4	85 - 115				
Sodium	9.01	mg/L	E200.7	0.306	1.00	10.00	0	90.1	85 - 115				
<b>Lab Sample ID:</b> LCS-65952	Date Analyzed:		11/01/2019 2008h										
Test Code:	Date Prepared:		10/29/2019 1309h										
Magnesium	9.10	mg/L	E200.7	0.139	1.00	10.00	0	91.0	85 - 115				
Potassium	11.4	mg/L	E200.7	0.114	1.00	10.00	0	114	85 - 115				
<b>Lab Sample ID:</b> LCS-65952	Date Analyzed:		11/04/2019 1147h										
Test Code:	Date Prepared:		10/29/2019 1309h										
Vanadium	0.212	mg/L	E200.7	0.00167	0.00500	0.2000	0	106	85 - 115				
<b>Lab Sample ID:</b> LCS-65953	Date Analyzed:		11/05/2019 1353h										
Test Code:	Date Prepared:		10/29/2019 1309h										
Arsenic	0.198	mg/L	E200.8	0.000298	0.00200	0.2000	0	99.0	85 - 115				
Beryllium	0.201	mg/L	E200.8	0.000198	0.00200	0.2000	0	101	85 - 115				
Cadmium	0.199	mg/L	E200.8	0.0000858	0.000500	0.2000	0	99.7	85 - 115				
Chromium	0.204	mg/L	E200.8	0.00191	0.00200	0.2000	0	102	85 - 115				
Cobalt	0.201	mg/L	E200.8	0.000300	0.00400	0.2000	0	101	85 - 115				
Copper	0.202	mg/L	E200.8	0.00282	0.00200	0.2000	0	101	85 - 115				
Iron	1.01	mg/L	E200.8	0.0496	0.100	1.000	0	101	85 - 115				
Lead	0.192	mg/L	E200.8	0.000448	0.00200	0.2000	0	95.8	85 - 115				
Manganese	0.204	mg/L	E200.8	0.00108	0.00200	0.2000	0	102	85 - 115				
Selenium	0.200	mg/L	E200.8	0.000574	0.00200	0.2000	0	100	85 - 115				
Silver	0.190	mg/L	E200.8	0.000232	0.00200	0.2000	0	94.8	85 - 115				
Thallium	0.188	mg/L	E200.8	0.000154	0.00200	0.2000	0	94.1	85 - 115				
Tin	1.00	mg/L	E200.8	0.00116	0.00400	1.000	0	100	85 - 115				
Uranium	0.194	mg/L	E200.8	0.000176	0.00200	0.2000	0	97.2	85 - 115				



**American West**  
ANALYTICAL LABORATORIES

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-65953	Date Analyzed:	11/05/2019	1353h										
Test Code:	200.8-DIS	Date Prepared:	10/29/2019	1309h									
Zinc	0.980	mg/L	E200.8	0.00418	0.00600	1.000	0	98.0	85 - 115				
<b>Lab Sample ID:</b> LCS-65953	Date Analyzed:	11/05/2019	1514h										
Test Code:	200.8-DIS	Date Prepared:	10/29/2019	1309h									
Nickel	0.188	mg/L	E200.8	0.00148	0.00200	0.2000	0	94.0	85 - 115				
<b>Lab Sample ID:</b> LCS-65953	Date Analyzed:	11/06/2019	1725h										
Test Code:	200.8-DIS	Date Prepared:	10/29/2019	1309h									
Molybdenum	0.199	mg/L	E200.8	0.000652	0.00400	0.2000	0	99.6	85 - 115				
Nickel	0.197	mg/L	E200.8	0.00148	0.00200	0.2000	0	98.3	85 - 115				
<b>Lab Sample ID:</b> LCS-66090	Date Analyzed:	11/05/2019	626h										
Test Code:	HG-DW-DIS-245.1	Date Prepared:	11/04/2019	1600h									
Mercury	0.00335	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	100	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:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB-65952	Date Analyzed:	11/01/2019	1922h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Calcium	< 1.00	mg/L	E200.7	0.102	1.00								
Sodium	< 1.00	mg/L	E200.7	0.306	1.00								
<b>Lab Sample ID:</b> MB-65952	Date Analyzed:	11/01/2019	2006h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Magnesium	< 1.00	mg/L	E200.7	0.139	1.00								
Potassium	< 1.00	mg/L	E200.7	0.114	1.00								
<b>Lab Sample ID:</b> MB-65952	Date Analyzed:	11/04/2019	1145h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Vanadium	< 0.00500	mg/L	E200.7	0.00167	0.00500								
<b>Lab Sample ID:</b> MB-65953	Date Analyzed:	11/05/2019	1350h										
Test Code:	200.8-DIS	Date Prepared:	10/29/2019	1309h									
Arsenic	< 0.00200	mg/L	E200.8	0.000298	0.00200								
Cadmium	< 0.000500	mg/L	E200.8	0.0000858	0.000500								
Chromium	< 0.00200	mg/L	E200.8	0.00191	0.00200								
Cobalt	< 0.00400	mg/L	E200.8	0.000300	0.00400								
Copper	< 0.00200	mg/L	E200.8	0.00282	0.00200								
Manganese	< 0.00200	mg/L	E200.8	0.00108	0.00200								
Selenium	< 0.00200	mg/L	E200.8	0.000574	0.00200								
Silver	< 0.00200	mg/L	E200.8	0.000232	0.00200								
Tin	< 0.00400	mg/L	E200.8	0.00116	0.00400								
Zinc	< 0.00600	mg/L	E200.8	0.00418	0.00600								
<b>Lab Sample ID:</b> MB-65953	Date Analyzed:	11/05/2019	1518h										
Test Code:	200.8-DIS	Date Prepared:	10/29/2019	1309h									
Beryllium	< 0.000200	mg/L	E200.8	0.0000198	0.000200								



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB-65953	Date Analyzed:	11/05/2019	1518h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/29/2019	1309h										
Iron	< 0.0100	mg/L	E200.8	0.00496	0.0100								
Lead	< 0.000200	mg/L	E200.8	0.0000448	0.000200								
Thallium	< 0.000200	mg/L	E200.8	0.0000154	0.000200								
Uranium	< 0.000200	mg/L	E200.8	0.0000176	0.000200								
<b>Lab Sample ID:</b> MB-65953	Date Analyzed:	11/05/2019	1511h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/29/2019	1309h										
Nickel	< 0.00200	mg/L	E200.8	0.00148	0.00200								
<b>Lab Sample ID:</b> MB-65953	Date Analyzed:	11/06/2019	1722h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/29/2019	1309h										
Molybdenum	< 0.00400	mg/L	E200.8	0.000652	0.00400								
Nickel	< 0.00200	mg/L	E200.8	0.00148	0.00200								
<b>Lab Sample ID:</b> MB-66090	Date Analyzed:	11/05/2019	624h										
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	11/04/2019	1600h										
Mercury	< 0.0000900	mg/L	E245.1	0.0000396	0.0000900								



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910514-002EMS	Date Analyzed:	11/01/2019 1915h											
Test Code:	200.7-DIS												
Calcium	175	mg/L	E200.7	1.02	10.0	100.0	87.9	87.5	70 - 130				
Sodium	588	mg/L	E200.7	3.06	10.0	100.0	525	62.7	70 - 130				1
<b>Lab Sample ID:</b> 1910514-002EMS	Date Analyzed:	11/01/2019 2015h											
Test Code:	200.7-DIS												
Magnesium	116	mg/L	E200.7	1.39	10.0	100.0	27.2	89.3	70 - 130				
<b>Lab Sample ID:</b> 1910680-002EMS	Date Analyzed:	11/04/2019 1153h											
Test Code:	200.7-DIS												
Calcium	462	mg/L	E200.7	20.4	200	100.0	344	118	70 - 130				
Magnesium	216	mg/L	E200.7	27.8	200	100.0	102	114	70 - 130				
Sodium	627	mg/L	E200.7	61.2	200	100.0	499	128	70 - 130				
<b>Lab Sample ID:</b> 1910680-002EMS	Date Analyzed:	11/04/2019 1257h											
Test Code:	200.7-DIS												
Vanadium	2.04	mg/L	E200.7	0.0167	0.0500	2.000	0	102	70 - 130				
<b>Lab Sample ID:</b> 1910680-002EMS	Date Analyzed:	11/06/2019 2013h											
Test Code:	200.7-DIS												
Potassium	117	mg/L	E200.7	2.28	20.0	100.0	9.27	107	70 - 130				
<b>Lab Sample ID:</b> 1910680-002EMS	Date Analyzed:	11/05/2019 1434h											
Test Code:	200.8-DIS												
Arsenic	2.01	mg/L	E200.8	0.00298	0.0200	2.000	0.000572	101	75 - 125				
Beryllium	1.98	mg/L	E200.8	0.00198	0.0200	2.000	0	98.9	75 - 125				
Cadmium	1.98	mg/L	E200.8	0.000858	0.00500	2.000	0	99.0	75 - 125				
Chromium	1.95	mg/L	E200.8	0.0191	0.0200	2.000	0	97.5	75 - 125				
Cobalt	1.95	mg/L	E200.8	0.00300	0.0400	2.000	0	97.4	75 - 125				
Copper	1.94	mg/L	E200.8	0.0282	0.0200	2.000	0	97.1	75 - 125				



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910680-002EMS</b>		Date Analyzed: 11/05/2019 1434h											
Test Code: 200.8-DIS		Date Prepared: 10/29/2019 1309h											
Iron	9.71	mg/L	E200.8	0.496	1.00	10.00	0	97.1	75 - 125				
Lead	1.96	mg/L	E200.8	0.00448	0.0200	2.000	0	97.8	75 - 125				
Manganese	1.94	mg/L	E200.8	0.0108	0.0200	2.000	0	96.9	75 - 125				
Selenium	2.02	mg/L	E200.8	0.00574	0.0200	2.000	0.0156	100	75 - 125				
Silver	1.87	mg/L	E200.8	0.00232	0.0200	2.000	0	93.5	75 - 125				
Thallium	1.92	mg/L	E200.8	0.00154	0.0200	2.000	0.000242	96.1	75 - 125				
Tin	10.4	mg/L	E200.8	0.0116	0.0400	10.00	0	104	75 - 125				
Uranium	2.01	mg/L	E200.8	0.00176	0.0200	2.000	0.0127	99.8	75 - 125				
Zinc	9.92	mg/L	E200.8	0.0418	0.0600	10.00	0.00617	99.1	75 - 125				
<b>Lab Sample ID: 1910680-002EMS</b>		Date Analyzed: 11/06/2019 1734h											
Test Code: 200.8-DIS		Date Prepared: 10/29/2019 1309h											
Molybdenum	2.00	mg/L	E200.8	0.00652	0.0400	2.000	0.00157	100	75 - 125				
Nickel	2.01	mg/L	E200.8	0.0148	0.0200	2.000	0	101	75 - 125				
<b>Lab Sample ID: 1910680-001EMS</b>		Date Analyzed: 11/05/2019 634h											
Test Code: HG-DW-DIS-245.1		Date Prepared: 11/04/2019 1600h											
Mercury	0.00338	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	102	85 - 115				
<b>Lab Sample ID: 1910785-001EMS</b>		Date Analyzed: 11/05/2019 704h											
Test Code: HG-DW-DIS-245.1		Date Prepared: 11/04/2019 1600h											
Mercury	0.00335	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	101	85 - 115				

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

1910680-002EMS: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910514-002EMSD	Date Analyzed:	11/01/2019	1917h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Calcium	180	mg/L	E200.7	1.02	10.0	100.0	87.9	92.3	70 - 130	175	2.70	20	
Sodium	583	mg/L	E200.7	3.06	10.0	100.0	525	58.4	70 - 130	588	0.744	20	1
<b>Lab Sample ID:</b> 1910514-002EMSD	Date Analyzed:	11/01/2019	2017h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Magnesium	119	mg/L	E200.7	1.39	10.0	100.0	27.2	91.5	70 - 130	116	1.91	20	
<b>Lab Sample ID:</b> 1910680-002EMSD	Date Analyzed:	11/04/2019	1155h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Calcium	454	mg/L	E200.7	20.4	200	100.0	344	110	70 - 130	462	1.76	20	
Magnesium	216	mg/L	E200.7	27.8	200	100.0	102	113	70 - 130	216	0.118	20	
Sodium	621	mg/L	E200.7	61.2	200	100.0	499	123	70 - 130	627	0.905	20	
<b>Lab Sample ID:</b> 1910680-002EMSD	Date Analyzed:	11/04/2019	1300h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Vanadium	2.05	mg/L	E200.7	0.0167	0.0500	2.000	0	103	70 - 130	2.04	0.753	20	
<b>Lab Sample ID:</b> 1910680-002EMSD	Date Analyzed:	11/06/2019	1935h										
Test Code:	200.7-DIS	Date Prepared:	10/29/2019	1309h									
Potassium	106	mg/L	E200.7	2.28	20.0	100.0	9.27	97.1	70 - 130	117	9.26	20	
<b>Lab Sample ID:</b> 1910680-002EMSD	Date Analyzed:	11/05/2019	1437h										
Test Code:	200.8-DIS	Date Prepared:	10/29/2019	1309h									
Arsenic	2.04	mg/L	E200.8	0.00298	0.0200	2.000	0.000572	102	75 - 125	2.01	1.48	20	
Beryllium	1.99	mg/L	E200.8	0.00198	0.0200	2.000	0	99.7	75 - 125	1.98	0.856	20	
Cadmium	2.02	mg/L	E200.8	0.000858	0.00500	2.000	0	101	75 - 125	1.98	1.88	20	
Chromium	1.99	mg/L	E200.8	0.0191	0.0200	2.000	0	99.7	75 - 125	1.95	2.27	20	
Cobalt	1.99	mg/L	E200.8	0.00300	0.0400	2.000	0	99.3	75 - 125	1.95	1.90	20	
Copper	1.98	mg/L	E200.8	0.0282	0.0200	2.000	0	98.8	75 - 125	1.94	1.73	20	



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910680-002EMSD	Date Analyzed:	11/05/2019 1437h											
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/29/2019 1309h											
Iron	9.89	mg/L	E200.8	0.496	1.00	10.00	0	98.9	75 - 125	9.71	1.83	20	
Lead	1.94	mg/L	E200.8	0.00448	0.0200	2.000	0	96.8	75 - 125	1.96	1.10	20	
Manganese	2.00	mg/L	E200.8	0.0108	0.0200	2.000	0	100	75 - 125	1.94	3.29	20	
Selenium	2.02	mg/L	E200.8	0.00574	0.0200	2.000	0.0156	100	75 - 125	2.02	0.0510	20	
Silver	1.87	mg/L	E200.8	0.00232	0.0200	2.000	0	93.6	75 - 125	1.87	0.0739	20	
Thallium	1.91	mg/L	E200.8	0.00154	0.0200	2.000	0.000242	95.5	75 - 125	1.92	0.568	20	
Tin	10.6	mg/L	E200.8	0.0116	0.0400	10.00	0	106	75 - 125	10.4	2.45	20	
Uranium	1.99	mg/L	E200.8	0.00176	0.0200	2.000	0.0127	98.9	75 - 125	2.01	0.839	20	
Zinc	9.97	mg/L	E200.8	0.0418	0.0600	10.00	0.00617	99.6	75 - 125	9.92	0.468	20	
<b>Lab Sample ID:</b> 1910680-002EMSD	Date Analyzed:	11/06/2019 1737h											
<b>Test Code:</b> 200.8-DIS	Date Prepared:	10/29/2019 1309h											
Molybdenum	2.05	mg/L	E200.8	0.00652	0.0400	2.000	0.00157	102	75 - 125	2	2.14	20	
Nickel	2.09	mg/L	E200.8	0.0148	0.0200	2.000	0	104	75 - 125	2.01	3.79	20	
<b>Lab Sample ID:</b> 1910680-001EMSD	Date Analyzed:	11/05/2019 636h											
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	11/04/2019 1600h											
Mercury	0.00342	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	103	85 - 115	0.00338	1.08	20	
<b>Lab Sample ID:</b> 1910785-001EMSD	Date Analyzed:	11/05/2019 707h											
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	11/04/2019 1600h											
Mercury	0.00336	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	101	85 - 115	0.00335	0.298	20	

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

1910680-002EMSD: Insufficient sample amount was provided to allow for a full amount analysis of the MS/MSD. Reduced sample volume for the MS/MSD was used as a result.



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QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910680-001CDUP		Date Analyzed: 10/28/2019 1240h											
<b>Test Code:</b> TDS-W-2540C													
Total Dissolved Solids	1,290	mg/L	SM2540C	16.0	20.0					1390	7.16	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:** 1910680  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-R132222		Date Analyzed: 11/05/2019 007h											
Test Code: 300.0-W													
Chloride	4.89	mg/L	E300.0	0.0386	0.100	5.000	0	97.9	90 - 110				
Sulfate	5.28	mg/L	E300.0	0.174	0.750	5.000	0	106	90 - 110				
<b>Lab Sample ID:</b> LCS-R132281		Date Analyzed: 11/06/2019 2130h											
Test Code: 300.0-W													
Fluoride	5.36	mg/L	E300.0	0.0240	0.100	5.000	0	107	90 - 110				
<b>Lab Sample ID:</b> LCS-R132319		Date Analyzed: 11/07/2019 1111h											
Test Code: 300.0-W													
Chloride	5.16	mg/L	E300.0	0.0386	0.100	5.000	0	103	90 - 110				
Fluoride	5.46	mg/L	E300.0	0.0240	0.100	5.000	0	109	90 - 110				
<b>Lab Sample ID:</b> LCS-R132584		Date Analyzed: 11/13/2019 1826h											
Test Code: 300.0-W													
Sulfate	5.42	mg/L	E300.0	0.174	0.750	5.000	0	108	90 - 110				
<b>Lab Sample ID:</b> LCS-R131854		Date Analyzed: 10/28/2019 848h											
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	250	mg/L	SM2320B	0.781	1.00	250.0	0	99.8	90 - 110				
<b>Lab Sample ID:</b> LCS-R132812		Date Analyzed: 11/19/2019 1040h											
Test Code: F-W-4500FC													
Fluoride	0.986	mg/L	SM4500-F-C	0.0207	0.100	1.000	0	98.6	90 - 110				
<b>Lab Sample ID:</b> LCS-66143		Date Analyzed: 11/07/2019 1347h											
Test Code: NH3-W-350.1		Date Prepared: 11/07/2019 917h											
Ammonia (as N)	10.8	mg/L	E350.1	0.0492	0.0500	10.00	0	108	90 - 110				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS-R131866</b>													
Date Analyzed: 10/28/2019 1037h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.01	mg/L	E353.2	0.00363	0.0100	1.000	0	101	90 - 110				
<b>Lab Sample ID: LCS-R131931</b>													
Date Analyzed: 10/28/2019 1240h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	212	mg/L	SM2540C	8.00	10.0	205.0	0	103	80 - 120				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID: MB-R132222</b> Date Analyzed: 11/04/2019 2350h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID: MB-R132281</b> Date Analyzed: 11/06/2019 2113h													
Test Code: 300.0-W													
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
<b>Lab Sample ID: MB-R132319</b> Date Analyzed: 11/07/2019 1054h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
<b>Lab Sample ID: MB-R132584</b> Date Analyzed: 11/13/2019 1809h													
Test Code: 300.0-W													
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID: MB-R131854</b> Date Analyzed: 10/28/2019 848h													
Test Code: ALK-W-2320B-LL													
Bicarbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
Carbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
<b>Lab Sample ID: MB-R132812</b> Date Analyzed: 11/19/2019 1040h													
Test Code: F-W-4500FC													
Fluoride	< 0.100	mg/L	SM4500-F-C	0.0207	0.100								
<b>Lab Sample ID: MB-66143</b> Date Analyzed: 11/07/2019 1346h													
Test Code: NH3-W-350.1 Date Prepared: 11/07/2019 917h													
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								



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**Project:** 4th Quarter 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
<b>Lab Sample ID: MB-R131866</b>													
Date Analyzed: 10/28/2019 1036h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								
<b>Lab Sample ID: MB-R131931</b>													
Date Analyzed: 10/28/2019 1240h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.00	10.0								



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**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910680-001BMS</b> Date Analyzed: 11/05/2019 040h													
Test Code: 300.0-W													
Chloride	977	mg/L	E300.0	7.72	20.0	1,000	19.7	95.7	90 - 110				
Sulfate	1,870	mg/L	E300.0	34.8	150	1,000	808	106	90 - 110				
<b>Lab Sample ID: 1910680-001BMS</b> Date Analyzed: 11/06/2019 2236h													
Test Code: 300.0-W													
Fluoride	5.43	mg/L	E300.0	0.0240	0.100	5.000	0.285	103	90 - 110				
<b>Lab Sample ID: 1910680-002BMS</b> Date Analyzed: 11/07/2019 1217h													
Test Code: 300.0-W													
Chloride	32.3	mg/L	E300.0	0.193	0.500	25.00	6.88	102	90 - 110				
Fluoride	27.0	mg/L	E300.0	0.120	0.500	25.00	0.0922	107	90 - 110				
<b>Lab Sample ID: 1911206-003BMS</b> Date Analyzed: 11/13/2019 2344h													
Test Code: 300.0-W													
Sulfate	5,490	mg/L	E300.0	87.0	375	2,500	2900	104	90 - 110				
<b>Lab Sample ID: 1910680-001BMS</b> Date Analyzed: 10/28/2019 848h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,230	mg/L	SM2320B	0.781	1.00	1,000	232	100	80 - 120				
<b>Lab Sample ID: 1910680-005BMS</b> Date Analyzed: 11/19/2019 1040h													
Test Code: F-W-4500FC													
Fluoride	1.86	mg/L	SM4500-F-C	0.0207	0.100	1.000	0.742	112	80 - 120				
<b>Lab Sample ID: 1910680-001DMS</b> Date Analyzed: 11/07/2019 1356h													
Test Code: NH3-W-350.1 Date Prepared: 11/07/2019 917h													
Ammonia (as N)	12.4	mg/L	E350.1	0.0492	0.0500	10.00	0	124	90 - 110				1



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## QC SUMMARY REPORT

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**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910680-001DMS		Date Analyzed: 10/28/2019 1039h											
<b>Test Code:</b> NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.3	mg/L	E353.2	0.0363	0.100	10.00	0.0058	103	90 - 110				

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



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## QC SUMMARY REPORT

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**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
<b>Lab Sample ID: 1910680-001BMSD</b> Date Analyzed: 11/05/2019 057h													
Test Code: 300.0-W													
Chloride	1,010	mg/L	E300.0	7.72	20.0	1,000	19.7	98.7	90 - 110	977	2.96	20	
Sulfate	1,860	mg/L	E300.0	34.8	150	1,000	808	105	90 - 110	1870	0.793	20	
<b>Lab Sample ID: 1910680-001BMSD</b> Date Analyzed: 11/06/2019 2253h													
Test Code: 300.0-W													
Fluoride	5.44	mg/L	E300.0	0.0240	0.100	5.000	0.285	103	90 - 110	5.43	0.291	20	
<b>Lab Sample ID: 1910680-002BMSD</b> Date Analyzed: 11/07/2019 1234h													
Test Code: 300.0-W													
Chloride	32.2	mg/L	E300.0	0.193	0.500	25.00	6.88	101	90 - 110	32.3	0.260	20	
Fluoride	27.2	mg/L	E300.0	0.120	0.500	25.00	0.0922	108	90 - 110	27	0.794	20	
<b>Lab Sample ID: 1911206-003BMSD</b> Date Analyzed: 11/14/2019 001h													
Test Code: 300.0-W													
Sulfate	5,450	mg/L	E300.0	87.0	375	2,500	2900	102	90 - 110	5490	0.652	20	
<b>Lab Sample ID: 1910680-001BMSD</b> Date Analyzed: 10/28/2019 848h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,230	mg/L	SM2320B	0.781	1.00	1,000	232	100	80 - 120	1230	0	10	
<b>Lab Sample ID: 1910680-005BMSD</b> Date Analyzed: 11/19/2019 1040h													
Test Code: F-W-4500FC													
Fluoride	1.84	mg/L	SM4500-F-C	0.0207	0.100	1.000	0.742	110	80 - 120	1.86	1.08	10	
<b>Lab Sample ID: 1910680-001DMSD</b> Date Analyzed: 11/07/2019 1357h													
Test Code: NH3-W-350.1 Date Prepared: 11/07/2019 917h													
Ammonia (as N)	12.6	mg/L	E350.1	0.0492	0.0500	10.00	0	126	90 - 110	12.4	2.24	10	



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## QC SUMMARY REPORT

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**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910680-001DMSD		Date Analyzed: 10/28/2019 1040h											
<b>Test Code:</b> NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.2	mg/L	E353.2	0.0363	0.100	10.00	0.0058	101	90 - 110	10.3	1.37	10	

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



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## QC SUMMARY REPORT

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**Lab Set ID:** 1910680  
**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS VOC-1 102519A</b> Date Analyzed: 10/25/2019 811h													
Test Code: 8260D-W-DEN100													
2-Butanone	35.6	µg/L	SW8260D	1.31	20.0	20.00	0	178	74 - 236				
Acetone	43.8	µg/L	SW8260D	2.87	20.0	20.00	0	219	70 - 350				
Benzene	18.2	µg/L	SW8260D	0.147	1.00	20.00	0	91.2	82 - 132				
Carbon tetrachloride	17.2	µg/L	SW8260D	0.262	1.00	20.00	0	85.8	77 - 143				
Chloroform	18.7	µg/L	SW8260D	0.166	1.00	20.00	0	93.7	85 - 124				
Chloromethane	14.0	µg/L	SW8260D	0.832	1.00	20.00	0	70.1	30 - 149				
Methylene chloride	18.5	µg/L	SW8260D	0.448	1.00	20.00	0	92.7	65 - 154				
Naphthalene	19.2	µg/L	SW8260D	0.704	1.00	20.00	0	95.8	62 - 129				
Tetrahydrofuran	20.1	µg/L	SW8260D	0.436	1.00	20.00	0	101	59 - 135				
Toluene	19.2	µg/L	SW8260D	0.177	1.00	20.00	0	96.0	69 - 129				
Xylenes, Total	55.9	µg/L	SW8260D	0.253	1.00	60.00	0	93.1	66 - 124				
Surr: 1,2-Dichloroethane-d4	48.6	µg/L	SW8260D			50.00		97.1	80 - 136				
Surr: 4-Bromofluorobenzene	45.0	µg/L	SW8260D			50.00		89.9	85 - 121				
Surr: Dibromofluoromethane	46.1	µg/L	SW8260D			50.00		92.2	78 - 132				
Surr: Toluene-d8	48.2	µg/L	SW8260D			50.00		96.5	81 - 123				

<b>Lab Sample ID: LCS VOC-2 102819A</b> Date Analyzed: 10/28/2019 1415h													
Test Code: 8260D-W-DEN100													
2-Butanone	30.2	µg/L	SW8260D	1.31	20.0	20.00	0	151	74 - 236				
Acetone	33.5	µg/L	SW8260D	2.87	20.0	20.00	0	168	70 - 350				
Benzene	18.0	µg/L	SW8260D	0.147	1.00	20.00	0	89.9	82 - 132				
Carbon tetrachloride	17.7	µg/L	SW8260D	0.262	1.00	20.00	0	88.4	77 - 143				
Chloroform	18.8	µg/L	SW8260D	0.166	1.00	20.00	0	94.0	85 - 124				
Chloromethane	18.2	µg/L	SW8260D	0.832	1.00	20.00	0	91.2	30 - 149				
Methylene chloride	17.8	µg/L	SW8260D	0.448	1.00	20.00	0	89.1	65 - 154				
Naphthalene	13.4	µg/L	SW8260D	0.704	1.00	20.00	0	66.9	62 - 129				
Tetrahydrofuran	16.2	µg/L	SW8260D	0.436	1.00	20.00	0	81.2	59 - 135				
Toluene	19.9	µg/L	SW8260D	0.177	1.00	20.00	0	99.6	69 - 129				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910680  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS VOC-2 102819A	Date Analyzed: 10/28/2019 1415h												
<b>Test Code:</b> 8260D-W-DEN100													
Xylenes, Total	57.9	µg/L	SW8260D	0.253	1.00	60.00	0	96.6	66 - 124				
Surr: 1,2-Dichloroethane-d4	52.3	µg/L	SW8260D			50.00		105	80 - 136				
Surr: 4-Bromofluorobenzene	47.7	µg/L	SW8260D			50.00		95.4	85 - 121				
Surr: Dibromofluoromethane	52.8	µg/L	SW8260D			50.00		106	78 - 132				
Surr: Toluene-d8	50.4	µg/L	SW8260D			50.00		101	81 - 123				



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**QC Type:** MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: MB VOC-1 102519A</b>		<b>Date Analyzed:</b> 10/25/2019 830h											
Test Code: 8260D-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260D	1.31	20.0								
Acetone	< 20.0	µg/L	SW8260D	2.87	20.0								
Benzene	< 1.00	µg/L	SW8260D	0.147	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260D	0.262	1.00								
Chloroform	< 1.00	µg/L	SW8260D	0.166	1.00								
Chloromethane	< 1.00	µg/L	SW8260D	0.832	1.00								
Methylene chloride	< 1.00	µg/L	SW8260D	0.448	1.00								
Naphthalene	< 1.00	µg/L	SW8260D	0.704	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260D	0.436	1.00								
Toluene	< 1.00	µg/L	SW8260D	0.177	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260D	0.253	1.00								
Surr: 1,2-Dichloroethane-d4	48.5	µg/L	SW8260D			50.00		97.0	80 - 136				
Surr: 4-Bromofluorobenzene	46.5	µg/L	SW8260D			50.00		92.9	85 - 121				
Surr: Dibromofluoromethane	45.4	µg/L	SW8260D			50.00		90.8	78 - 132				
Surr: Toluene-d8	48.2	µg/L	SW8260D			50.00		96.5	81 - 123				
<b>Lab Sample ID: MB VOC-2 102819A</b>		<b>Date Analyzed:</b> 10/28/2019 1436h											
Test Code: 8260D-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260D	1.31	20.0								
Acetone	< 20.0	µg/L	SW8260D	2.87	20.0								
Benzene	< 1.00	µg/L	SW8260D	0.147	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260D	0.262	1.00								
Chloroform	< 1.00	µg/L	SW8260D	0.166	1.00								
Chloromethane	< 1.00	µg/L	SW8260D	0.832	1.00								
Methylene chloride	< 1.00	µg/L	SW8260D	0.448	1.00								
Naphthalene	< 1.00	µg/L	SW8260D	0.704	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260D	0.436	1.00								
Toluene	< 1.00	µg/L	SW8260D	0.177	1.00								

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**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB VOC-2 102819A	<b>Date Analyzed:</b> 10/28/2019 1436h												
<b>Test Code:</b> 8260D-W-DEN100													
Xylenes, Total	< 1.00	µg/L	SW8260D	0.253	1.00								
Surr: 1,2-Dichloroethane-d4	52.1	µg/L	SW8260D			50.00		104	80 - 136				
Surr: 4-Bromofluorobenzene	50.1	µg/L	SW8260D			50.00		100	85 - 121				
Surr: Dibromofluoromethane	51.1	µg/L	SW8260D			50.00		102	78 - 132				
Surr: Toluene-d8	50.2	µg/L	SW8260D			50.00		100	81 - 123				



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**Lab Set ID:** 1910680

**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910680-008AMS</b>		Date Analyzed: 10/28/2019 1636h											
<b>Test Code: 8260D-W-DEN100</b>													
2-Butanone	20.3	µg/L	SW8260D	1.31	20.0	20.00	0	102	74 - 236				
Acetone	15.3	µg/L	SW8260D	2.87	20.0	20.00	0	76.4	70 - 350				
Benzene	20.9	µg/L	SW8260D	0.147	1.00	20.00	0	105	82 - 132				
Carbon tetrachloride	20.3	µg/L	SW8260D	0.262	1.00	20.00	0	101	77 - 143				
Chloroform	21.8	µg/L	SW8260D	0.166	1.00	20.00	0	109	85 - 124				
Chloromethane	17.6	µg/L	SW8260D	0.832	1.00	20.00	0	88.2	30 - 149				
Methylene chloride	20.1	µg/L	SW8260D	0.448	1.00	20.00	0	100	65 - 154				
Naphthalene	16.1	µg/L	SW8260D	0.704	1.00	20.00	0	80.4	62 - 129				
Tetrahydrofuran	16.2	µg/L	SW8260D	0.436	1.00	20.00	0	80.9	59 - 135				
Toluene	22.9	µg/L	SW8260D	0.177	1.00	20.00	0	114	69 - 129				
Xylenes, Total	66.7	µg/L	SW8260D	0.253	1.00	60.00	0	111	66 - 124				
Surr: 1,2-Dichloroethane-d4	52.2	µg/L	SW8260D			50.00		104	80 - 136				
Surr: 4-Bromofluorobenzene	48.1	µg/L	SW8260D			50.00		96.3	85 - 121				
Surr: Dibromofluoromethane	52.5	µg/L	SW8260D			50.00		105	78 - 132				
Surr: Toluene-d8	49.9	µg/L	SW8260D			50.00		99.8	81 - 123				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910680  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910680-008AMSD		<b>Date Analyzed:</b> 10/28/2019 1656h											
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	20.6	µg/L	SW8260D	1.31	20.0	20.00	0	103	74 - 236	20.3	1.27	35	
Acetone	16	µg/L	SW8260D	2.87	20.0	20.00	0	80.0	70 - 350	15.3	4.54	35	
Benzene	19.0	µg/L	SW8260D	0.147	1.00	20.00	0	94.8	82 - 132	20.9	9.92	35	
Carbon tetrachloride	18.8	µg/L	SW8260D	0.262	1.00	20.00	0	94.3	77 - 143	20.3	7.26	35	
Chloroform	19.8	µg/L	SW8260D	0.166	1.00	20.00	0	99.2	85 - 124	21.8	9.51	35	
Chloromethane	15.0	µg/L	SW8260D	0.832	1.00	20.00	0	75.2	30 - 149	17.6	15.8	35	
Methylene chloride	18.2	µg/L	SW8260D	0.448	1.00	20.00	0	91.2	65 - 154	20.1	9.60	35	
Naphthalene	14.8	µg/L	SW8260D	0.704	1.00	20.00	0	74.0	62 - 129	16.1	8.23	35	
Tetrahydrofuran	16.4	µg/L	SW8260D	0.436	1.00	20.00	0	82.0	59 - 135	16.2	1.47	35	
Toluene	20.8	µg/L	SW8260D	0.177	1.00	20.00	0	104	69 - 129	22.9	9.72	35	
Xylenes, Total	60.7	µg/L	SW8260D	0.253	1.00	60.00	0	101	66 - 124	66.7	9.51	35	
Surr: 1,2-Dichloroethane-d4	53.1	µg/L	SW8260D			50.00		106	80 - 136				
Surr: 4-Bromofluorobenzene	49.3	µg/L	SW8260D			50.00		98.6	85 - 121				
Surr: Dibromofluoromethane	52.5	µg/L	SW8260D			50.00		105	78 - 132				
Surr: Toluene-d8	50.5	µg/L	SW8260D			50.00		101	81 - 123				

The Fluoride on MW-02 was removed and was resampled  
on workorder 1912025. -MC

**WORK ORDER Summary**

Work Order: **1910680** Page 1 of 7

Client: Energy Fuels Resources, Inc. Due Date: 11/8/2019  
 Client ID: ENE300 Contact: Tanner Holliday  
 Project: 4th Quarter Ground Water 2019 QC Level: III WO Type: Project  
 Comments: QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com and Gpalmer@energyfuels.com; Do not use "\*R\_" samples as MS/MSD.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910680-001A	MW-01_10222019	10/22/2019 1000h	10/25/2019 1014h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1910680-001B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				<i>3 SEL Analytes: CL F SO4</i>				
				ALK-W-2320B-LL		<input checked="" type="checkbox"/>	df - wc	
				<i>2 SEL Analytes: ALKB ALKC</i>				
1910680-001C				TDS-W-2540C		<input checked="" type="checkbox"/>	df - tds	
				<i>1 SEL Analytes: TDS</i>				
1910680-001D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<i>1 SEL Analytes: NH3N</i>				
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1910680-001E				200.7-DIS		<input checked="" type="checkbox"/>	df-met	
				<i>5 SEL Analytes: CA MG K NA V</i>				
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS		<input checked="" type="checkbox"/>	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		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-245.1		<input checked="" type="checkbox"/>	df-met	
				<i>1 SEL Analytes: HG</i>				
				HG-DW-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				IONBALANCE		<input checked="" type="checkbox"/>	df-met	
				<i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>				
1910680-002A	MW-02_10232019	10/23/2019 0835h	10/25/2019 1014h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1910680-002B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				<i>2 SEL Analytes: CL SO4</i>				
				ALK-W-2320B-LL		<input checked="" type="checkbox"/>	df - wc	
				<i>2 SEL Analytes: ALKB ALKC</i>				

# WORK ORDER Summary

Work Order: **1910680** Page 2 of 7.

Client: Energy Fuels Resources, Inc.

Due Date: 11/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910680-002C	MW-02_10232019	10/23/2019 0835h	10/25/2019 1014h	<b>TDS-W-2540C</b> <i>1 SEL Analytes: TDS</i>	Aqueous	<input checked="" type="checkbox"/>	df - tds	1
1910680-002D				<b>NH3-W-350.1</b> <i>1 SEL Analytes: NH3N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<b>NH3-W-PR</b>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<b>NO2/NO3-W-353.2</b> <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
1910680-002E				<b>200.7-DIS</b> <i>5 SEL Analytes: CA MG K NA V</i>		<input checked="" type="checkbox"/>	df-met	
				<b>200.7-DIS-PR</b>		<input checked="" type="checkbox"/>	df-met	
				<b>200.8-DIS</b> <i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>		<input checked="" type="checkbox"/>	df-met	
				<b>200.8-DIS-PR</b>		<input checked="" type="checkbox"/>	df-met	
				<b>HG-DW-DIS-245.1</b> <i>1 SEL Analytes: HG</i>		<input checked="" type="checkbox"/>	df-met	
				<b>HG-DW-DIS-PR</b>		<input checked="" type="checkbox"/>	df-met	
				<b>IONBALANCE</b> <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		<input checked="" type="checkbox"/>	df-met	
1910680-003A	MW-05_10232019	10/23/2019 1210h	10/25/2019 1014h	<b>8260D-W-DEN100</b> <i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1910680-003B				<b>300.0-W</b> <i>3 SEL Analytes: CL F SO4</i>		<input checked="" type="checkbox"/>	df - wc	1
				<b>ALK-W-2320B-LL</b> <i>2 SEL Analytes: ALKB ALKC</i>		<input checked="" type="checkbox"/>	df - wc	
1910680-003C				<b>TDS-W-2540C</b> <i>1 SEL Analytes: TDS</i>		<input checked="" type="checkbox"/>	df - tds	
1910680-003D				<b>NH3-W-350.1</b> <i>1 SEL Analytes: NH3N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<b>NH3-W-PR</b>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<b>NO2/NO3-W-353.2</b> <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
1910680-003E				<b>200.7-DIS</b> <i>5 SEL Analytes: CA MG K NA V</i>		<input checked="" type="checkbox"/>	df-met	
				<b>200.7-DIS-PR</b>		<input checked="" type="checkbox"/>	df-met	
				<b>200.8-DIS</b> <i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>		<input checked="" type="checkbox"/>	df-met	
				<b>200.8-DIS-PR</b>		<input checked="" type="checkbox"/>	df-met	

# WORK ORDER Summary

Work Order: **1910680** Page 3 of 7-

Client: Energy Fuels Resources, Inc.

Due Date: 11/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910680-003E	MW-05_10232019	10/23/2019 1210h	10/25/2019 1014h	HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>	Aqueous	<input checked="" type="checkbox"/>	df-met	1
				HG-DW-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				IONBALANCE <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		<input checked="" type="checkbox"/>	df-met	
1910680-004A	MW-12_10232019	10/23/2019 1445h	10/25/2019 1014h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1910680-004B				300.0-W <i>2 SEL Analytes: CL SO4</i>		<input checked="" type="checkbox"/>	df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>		<input checked="" type="checkbox"/>	df - wc	
				F-W-4500FC		<input type="checkbox"/>	df - wc	
1910680-004C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		<input checked="" type="checkbox"/>	df - tds	
1910680-004D				NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
1910680-004E				200.7-DIS <i>5 SEL Analytes: CA MG K NA V</i>		<input checked="" type="checkbox"/>	df-met	
				200.7-DIS-PR		<input checked="" type="checkbox"/>	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>		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				IONBALANCE <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		<input checked="" type="checkbox"/>	df-met	
1910680-005A	MW-17_10232019	10/23/2019 1450h	10/25/2019 1014h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1910680-005B				300.0-W <i>2 SEL Analytes: CL SO4</i>		<input checked="" type="checkbox"/>	df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>		<input checked="" type="checkbox"/>	df - wc	
				F-W-4500FC		<input type="checkbox"/>	df - wc	

# WORK ORDER Summary

Work Order: **1910680** Page 4 of 7

Client: Energy Fuels Resources, Inc.

Due Date: 11/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910680-005C	MW-17_10232019	10/23/2019 1450h	10/25/2019 1014h	TDS-W-2540C	Aqueous	<input checked="" type="checkbox"/>	df - tds	1
1910680-005D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
1910680-005E				200.7-DIS		<input checked="" type="checkbox"/>	df-met	
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-245.1		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				IONBALANCE		<input checked="" type="checkbox"/>	df-met	
1910680-006A	MW-27_10222019	10/22/2019 1030h	10/25/2019 1014h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1910680-006B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				ALK-W-2320B-LL		<input checked="" type="checkbox"/>	df - wc	
1910680-006C				TDS-W-2540C		<input checked="" type="checkbox"/>	df - tds	
1910680-006D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
1910680-006E				200.7-DIS		<input checked="" type="checkbox"/>	df-met	
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met	

# WORK ORDER Summary

Work Order: **1910680** Page 5 of 7

Client: Energy Fuels Resources, Inc.

Due Date: 11/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910680-006E	MW-27_10222019	10/22/2019 1030h	10/25/2019 1014h	HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>	Aqueous	<input checked="" type="checkbox"/>	df-met	1
				HG-DW-DIS-PR <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		<input checked="" type="checkbox"/>	df-met	
				IONBALANCE		<input checked="" type="checkbox"/>	df-met	
1910680-007A	MW-28_10222019	10/22/2019 1405h	10/25/2019 1014h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1910680-007B				300.0-W <i>3 SEL Analytes: CL F SO4</i>		<input checked="" type="checkbox"/>	df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>		<input checked="" type="checkbox"/>	df - wc	
1910680-007C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		<input checked="" type="checkbox"/>	df - tds	
1910680-007D				NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NH3-W-PR <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
1910680-007E				200.7-DIS <i>5 SEL Analytes: CA MG K NA V</i>		<input checked="" type="checkbox"/>	df-met	
				200.7-DIS-PR		<input checked="" type="checkbox"/>	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>		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-PR <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		<input checked="" type="checkbox"/>	df-met	
1910680-008A	MW-29_10222019	10/22/2019 1345h	10/25/2019 1014h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1910680-008B				300.0-W <i>3 SEL Analytes: CL F SO4</i>		<input checked="" type="checkbox"/>	df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>		<input checked="" type="checkbox"/>	df - wc	
1910680-008C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		<input checked="" type="checkbox"/>	df - tds	

# WORK ORDER Summary

Work Order: **1910680** Page 6 of 7

Client: Energy Fuels Resources, Inc.

Due Date: 11/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage
1910680-008D	MW-29_10222019	10/22/2019 1345h	10/25/2019 1014h	NH3-W-350.1	Aqueous	<input checked="" type="checkbox"/>	df - no2/no3 & nh3
				<i>1 SEL Analytes: NH3N</i>			
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3
1910680-008E				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3
				<i>1 SEL Analytes: NO3NO2N</i>			
				200.7-DIS		<input checked="" type="checkbox"/>	df-met
				<i>5 SEL Analytes: CA MG K NA V</i>			
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met
				200.8-DIS		<input checked="" type="checkbox"/>	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		<input checked="" type="checkbox"/>	df-met
				HG-DW-DIS-245.1		<input checked="" type="checkbox"/>	df-met
				<i>1 SEL Analytes: HG</i>			
1910680-009A	MW-40_10232019	10/23/2019 1025h	10/25/2019 1014h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>			
				300.0-W		<input checked="" type="checkbox"/>	df - wc
1910680-009B				ALK-W-2320B-LL		<input checked="" type="checkbox"/>	df - wc
				<i>2 SEL Analytes: ALKB ALKC</i>			
1910680-009C				TDS-W-2540C		<input checked="" type="checkbox"/>	df - tds
1910680-009D				1 SEL Analytes: TDS			
				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3
				<i>1 SEL Analytes: NH3N</i>			
1910680-009E				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3
				<i>1 SEL Analytes: NO3NO2N</i>			
				200.7-DIS		<input checked="" type="checkbox"/>	df-met
				<i>5 SEL Analytes: CA MG K NA V</i>			
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met
				200.8-DIS		<input checked="" type="checkbox"/>	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		<input checked="" type="checkbox"/>	df-met
				HG-DW-DIS-245.1		<input checked="" type="checkbox"/>	df-met
				<i>1 SEL Analytes: HG</i>			

# WORK ORDER Summary

Work Order: **1910680** Page 7 of 7.

Client: Energy Fuels Resources, Inc.

Due Date: 11/8/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910680-009E	MW-40_10232019	10/23/2019 1025h	10/25/2019 1014h	HG-DW-DIS-PR	Aqueous	<input checked="" type="checkbox"/>	df-met	1
				IONBALANCE		<input checked="" type="checkbox"/>	df-met	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1910680-010A	Trip Blank	10/22/2019 1000h	10/25/2019 1014h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCEfridge	3
Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4								



**American West  
Analytical Laboratories**

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**CHAIN OF CUSTODY**

1910680

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

Client: **Energy Fuels Resources, Inc.**  
Address: **6425 S. Hwy. 191  
Blanding, UT 84511**  
Contact: **Tanner Holliday**  
Phone #: **(435) 678-2221** Cell #:  
**gpalmer@energyfuels.com; KWeinel@energyfuels.com;**  
Email: **tholliday@energyfuels.com**  
Project Name: **4th 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.		Duc Date:								
3		Standard				11/8/19								
Laboratory Use Only		Samples Were:		For Compliance With:		Known Hazards & Sample Comments								
		<input checked="" type="checkbox"/> Include EDD: <b>LOCUS UPLOAD EXCEL</b> <input checked="" type="checkbox"/> Field Filtered For: <b>Dissolved Metals</b>		<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:		1 Shipped or hand delivered <input checked="" type="checkbox"/> 2 Ambient or Chilled <input checked="" type="checkbox"/> 3 Temperature <u>2.1</u> °C 4 Received Broken/Leaking (Improperly Sealed) Y <input checked="" type="checkbox"/> N 5 Properly Preserved Y <input checked="" type="checkbox"/> N Checked at bench Y <input checked="" type="checkbox"/> N 6 Received Within Holding Times Y <input checked="" type="checkbox"/> N								
Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	NH3 (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, Tl, Sn, U, V, Zn, Na, K, Mg, Ca	Ion Balance	VOCs (8260C)	Known Hazards & Sample Comments
1 MW-01_10222019	10/22/2019	1000	7	W	x	x	x	x	x	x	x	x	x	
2 MW-02_10232019	10/23/2019	835	7	W	x	x	x	x	x	x	x	x	x	
3 MW-05_10232019	10/23/2019	1210	7	W	x	x	x	x	x	x	x	x	x	
4 MW-12_10232019	10/23/2019	1445	7	W	x	x	x	x	x	x	x	x	x	
5 MW-17_10232019	10/23/2019	1450	7	W	x	x	x	x	x	x	x	x	x	
6 MW-27_10222019	10/22/2019	1030	7	W	x	x	x	x	x	x	x	x	x	
7 MW-28_10222019	10/22/2019	1405	7	W	x	x	x	x	x	x	x	x	x	
8 MW-29_10222019	10/22/2019	1345	7	W	x	x	x	x	x	x	x	x	x	
9 MW-40_10232019	10/23/2019	1025	7	W	x	x	x	x	x	x	x	x	x	
10 TRIP BLANK	10/22/2019	1000	3	W									x	
11														
12														

COC Tags 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: 10/24/2019	Received by: Signature <i>Amee Rust</i>	Date: 10/25/19	Special Instructions:  Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.  * MW-02 is for Cl & SO4 on this set. Fluoride was resampled on workorder 1912025. me 12/16/19
Print Name: Tanner Holliday	Time: 1130	Print Name: Amee Rust	Time: 1014	
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:	

Lab Set ID: 1910680  
 pH Lot #: 6086

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	1	2	3	4	5	6	7	8	9								
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>	Yes																
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
Cyanide	pH >12 NaOH																	
Metals	pH <2 HNO <sub>3</sub>	Yes																
NO <sub>2</sub> & NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>	Yes																
O & G	pH <2 HCL																	
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
Sulfide	pH >9 NaOH, Zn Acetate																	
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																	
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																	

- 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.



Tanner Holliday  
Energy Fuels Resources, Inc.  
6425 South Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 4th Quarter Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1910785

3440 South 700 West

Salt Lake City, UT 84119

American West Analytical Laboratories received sample(s) on 10/30/2019 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:

<b>Jose G. Rocha</b>	Digitally signed by Jose G. Rocha
	DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou=UT00031, email=jose@awal-labs.com, c=US
	Date: 2019.12.19 14:20:20 -07'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910785  
**Date Received:** 10/30/2019 1300h

**Contact:** Tanner Holliday

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 Salt Lake City, UT 84119

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910785-001A	MW-15_10282019	10/28/2019 1335h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910785-001B	MW-15_10282019	10/28/2019 1335h	Aqueous	Fluoride, Aqueous
1910785-001B	MW-15_10282019	10/28/2019 1335h	Aqueous	Anions, E300.0
1910785-001B	MW-15_10282019	10/28/2019 1335h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910785-001D	MW-15_10282019	10/28/2019 1335h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910785-001D	MW-15_10282019	10/28/2019 1335h	Aqueous	Ammonia, Aqueous
1910785-001E	MW-15_10282019	10/28/2019 1335h	Aqueous	Ion Balance
1910785-001E	MW-15_10282019	10/28/2019 1335h	Aqueous	ICP Metals, Dissolved
1910785-001E	MW-15_10282019	10/28/2019 1335h	Aqueous	ICPMS Metals, Dissolved
1910785-001E	MW-15_10282019	10/28/2019 1335h	Aqueous	Mercury, Drinking Water Dissolved
1910785-002A	MW-22_10292019	10/29/2019 1225h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910785-002B	MW-22_10292019	10/29/2019 1225h	Aqueous	Anions, E300.0
1910785-002B	MW-22_10292019	10/29/2019 1225h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910785-002C	MW-22_10292019	10/29/2019 1225h	Aqueous	Total Dissolved Solids, A2540C
1910785-002D	MW-22_10292019	10/29/2019 1225h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910785-002D	MW-22_10292019	10/29/2019 1225h	Aqueous	Ammonia, Aqueous
1910785-002E	MW-22_10292019	10/29/2019 1225h	Aqueous	Ion Balance
1910785-002E	MW-22_10292019	10/29/2019 1225h	Aqueous	ICP Metals, Dissolved
1910785-002E	MW-22_10292019	10/29/2019 1225h	Aqueous	ICPMS Metals, Dissolved
1910785-002E	MW-22_10292019	10/29/2019 1225h	Aqueous	Mercury, Drinking Water Dissolved
1910785-003A	MW-23_10292019	10/29/2019 1330h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910785-003B	MW-23_10292019	10/29/2019 1330h	Aqueous	Anions, E300.0
1910785-003B	MW-23_10292019	10/29/2019 1330h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910785-003C	MW-23_10292019	10/29/2019 1330h	Aqueous	Total Dissolved Solids, A2540C
1910785-003D	MW-23_10292019	10/29/2019 1330h	Aqueous	Ammonia, Aqueous
1910785-003D	MW-23_10292019	10/29/2019 1330h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910785-003E	MW-23_10292019	10/29/2019 1330h	Aqueous	Ion Balance
1910785-003E	MW-23_10292019	10/29/2019 1330h	Aqueous	ICP Metals, Dissolved
1910785-003E	MW-23_10292019	10/29/2019 1330h	Aqueous	ICPMS Metals, Dissolved



**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910785  
**Date Received:** 10/30/2019 1300h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1910785-003E	MW-23_10292019	10/29/2019 1330h	Aqueous	Mercury, Drinking Water Dissolved
1910785-004A	MW-39_10292019	10/29/2019 1145h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910785-004B	MW-39_10292019	10/29/2019 1145h	Aqueous	Anions, E300.0
1910785-004B	MW-39_10292019	10/29/2019 1145h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910785-004C	MW-39_10292019	10/29/2019 1145h	Aqueous	Total Dissolved Solids, A2540C
1910785-004D	MW-39_10292019	10/29/2019 1145h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910785-004D	MW-39_10292019	10/29/2019 1145h	Aqueous	Ammonia, Aqueous
1910785-004E	MW-39_10292019	10/29/2019 1145h	Aqueous	Ion Balance
1910785-004E	MW-39_10292019	10/29/2019 1145h	Aqueous	Mercury, Drinking Water Dissolved
1910785-004E	MW-39_10292019	10/29/2019 1145h	Aqueous	ICP Metals, Dissolved
1910785-004E	MW-39_10292019	10/29/2019 1145h	Aqueous	ICPMS Metals, Dissolved
1910785-005A	MW-70_10282019	10/28/2019 1335h	Aqueous	VOA by GC/MS Method 8260D/5030C
1910785-005B	MW-70_10282019	10/28/2019 1335h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1910785-005B	MW-70_10282019	10/28/2019 1335h	Aqueous	Anions, E300.0
1910785-005D	MW-70_10282019	10/28/2019 1335h	Aqueous	Nitrite/Nitrate (as N), E353.2
1910785-005D	MW-70_10282019	10/28/2019 1335h	Aqueous	Ammonia, Aqueous
1910785-005E	MW-70_10282019	10/28/2019 1335h	Aqueous	Ion Balance
1910785-005E	MW-70_10282019	10/28/2019 1335h	Aqueous	ICP Metals, Dissolved
1910785-005E	MW-70_10282019	10/28/2019 1335h	Aqueous	ICPMS Metals, Dissolved
1910785-005E	MW-70_10282019	10/28/2019 1335h	Aqueous	Mercury, Drinking Water Dissolved
1910785-006A	Trip Blank	10/28/2019 1335h	Aqueous	VOA by GC/MS Method 8260D/5030C

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910785

## Sample Receipt Information:

**Date of Receipt:** 10/30/2019  
**Date(s) of Collection:** 10/28-10/29/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation of all samples were performed within the method holding times. All 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:

**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
1910785-001D	Ammonia	MS/MSD	Sample matrix interference
1910785-002E	Calcium	MS/MSD	High analyte concentration
1910785-002E	Magnesium	MS/MSD	High analyte concentration
1910785-002E	Manganese	MS/MSD	High analyte concentration
1910785-002E	Potassium	MS/MSD	Sample matrix interference
1910785-002E	Sodium	MS/MSD	High analyte concentration
1910785-002E	Zinc	MSD	Sample matrix interference
1910785-003D	Ammonia	MS/MSD	Sample matrix interference
1911345-004A	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:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1910785

---

### Sample Receipt Information:

**Date of Receipt:** 10/30/2019  
**Date(s) of Collection:** 10/28-10/29/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8260D/5030C  
**Analysis:** Volatile Organic Compounds

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**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, with CCV exceptions noted on the reports. 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.

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-66076		Date Analyzed:		11/11/2019 1553h									
Test Code:		200.7-DIS		Date Prepared:		11/04/2019 1102h							
Calcium	10.6	mg/L	E200.7	0.102	1.00	10.00	0	106	85 - 115				
Magnesium	10.8	mg/L	E200.7	0.139	1.00	10.00	0	108	85 - 115				
Potassium	10.4	mg/L	E200.7	0.114	1.00	10.00	0	104	85 - 115				
Sodium	10.4	mg/L	E200.7	0.306	1.00	10.00	0	104	85 - 115				
<b>Lab Sample ID:</b> LCS-66076		Date Analyzed:		11/11/2019 1703h									
Test Code:		200.7-DIS		Date Prepared:		11/04/2019 1102h							
Vanadium	0.207	mg/L	E200.7	0.00167	0.00500	0.2000	0	104	85 - 115				
<b>Lab Sample ID:</b> LCS-66077		Date Analyzed:		11/06/2019 1748h									
Test Code:		200.8-DIS		Date Prepared:		11/04/2019 1102h							
Arsenic	0.211	mg/L	E200.8	0.000298	0.00200	0.2000	0	106	85 - 115				
Beryllium	0.205	mg/L	E200.8	0.000198	0.00200	0.2000	0	103	85 - 115				
Cadmium	0.203	mg/L	E200.8	0.0000858	0.000500	0.2000	0	102	85 - 115				
Chromium	0.201	mg/L	E200.8	0.00191	0.00200	0.2000	0	101	85 - 115				
Cobalt	0.200	mg/L	E200.8	0.000300	0.00400	0.2000	0	100	85 - 115				
Copper	0.203	mg/L	E200.8	0.00282	0.00200	0.2000	0	101	85 - 115				
Iron	1.03	mg/L	E200.8	0.0496	0.100	1.000	0	103	85 - 115				
Lead	0.207	mg/L	E200.8	0.000448	0.00200	0.2000	0	104	85 - 115				
Manganese	0.205	mg/L	E200.8	0.00108	0.00200	0.2000	0	103	85 - 115				
Nickel	0.203	mg/L	E200.8	0.00148	0.00200	0.2000	0	101	85 - 115				
Selenium	0.202	mg/L	E200.8	0.000574	0.00200	0.2000	0	101	85 - 115				
Silver	0.200	mg/L	E200.8	0.000232	0.00200	0.2000	0	99.9	85 - 115				
Thallium	0.211	mg/L	E200.8	0.000154	0.00200	0.2000	0	106	85 - 115				
Tin	1.06	mg/L	E200.8	0.00116	0.00400	1.000	0	106	85 - 115				
Uranium	0.214	mg/L	E200.8	0.000176	0.00200	0.2000	0	107	85 - 115				
Zinc	1.04	mg/L	E200.8	0.00418	0.00600	1.000	0	104	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:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-66077	Date Analyzed: 11/11/2019 1219h												
Test Code: 200.8-DIS	Date Prepared: 11/04/2019 1102h												
Molybdenum	0.201	mg/L	E200.8	0.000652	0.00200	0.2000	0	100	85 - 115				
<b>Lab Sample ID:</b> LCS-66090	Date Analyzed: 11/05/2019 626h												
Test Code: HG-DW-DIS-245.1	Date Prepared: 11/04/2019 1600h												
Mercury	0.00335	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	100	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:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB-66076	Date Analyzed:	11/11/2019	1551h										
Test Code:	200.7-DIS	Date Prepared:	11/04/2019	1102h									
Calcium	< 1.00	mg/L	E200.7	0.102	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.139	1.00								
Potassium	< 1.00	mg/L	E200.7	0.114	1.00								
Sodium	< 1.00	mg/L	E200.7	0.306	1.00								
<b>Lab Sample ID:</b> MB-66076	Date Analyzed:	11/11/2019	1701h										
Test Code:	200.7-DIS	Date Prepared:	11/04/2019	1102h									
Vanadium	< 0.00500	mg/L	E200.7	0.00167	0.00500								
<b>Lab Sample ID:</b> MB-66077	Date Analyzed:	11/06/2019	1745h										
Test Code:	200.8-DIS	Date Prepared:	11/04/2019	1102h									
Arsenic	< 0.000200	mg/L	E200.8	0.0000298	0.000200								
Beryllium	< 0.000200	mg/L	E200.8	0.0000198	0.000200								
Cadmium	< 0.0000500	mg/L	E200.8	0.00000858	0.0000500								
Chromium	< 0.000200	mg/L	E200.8	0.000191	0.000200								
Cobalt	< 0.000400	mg/L	E200.8	0.0000300	0.000400								
Copper	< 0.000200	mg/L	E200.8	0.000282	0.000200								
Iron	< 0.0100	mg/L	E200.8	0.00496	0.0100								
Lead	< 0.000200	mg/L	E200.8	0.0000448	0.000200								
Manganese	< 0.000200	mg/L	E200.8	0.000108	0.000200								
Nickel	< 0.000200	mg/L	E200.8	0.000148	0.000200								
Selenium	< 0.000200	mg/L	E200.8	0.0000574	0.000200								
Silver	< 0.000200	mg/L	E200.8	0.0000232	0.000200								
Thallium	< 0.000200	mg/L	E200.8	0.0000154	0.000200								
Tin	< 0.000400	mg/L	E200.8	0.000116	0.000400								
Uranium	< 0.000200	mg/L	E200.8	0.0000176	0.000200								
Zinc	< 0.000600	mg/L	E200.8	0.000418	0.000600								



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB-66077	Date Analyzed:	11/11/2019	1216h										
Test Code:	200.8-DIS	Date Prepared:	11/04/2019	1102h									
Molybdenum	< 0.00200	mg/L	E200.8	0.000326	0.00200								
<b>Lab Sample ID:</b> MB-66090	Date Analyzed:	11/05/2019	624h										
Test Code:	HG-DW-DIS-245.1	Date Prepared:	11/04/2019	1600h									
Mercury	< 0.0000900	mg/L	E245.1	0.0000396	0.0000900								



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## QC SUMMARY REPORT

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**Lab Set ID:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910785-002EMS</b>		Date Analyzed:	11/11/2019 1600h										
Test Code: 200.7-DIS		Date Prepared:	11/04/2019 1102h										
Calcium	465	mg/L	E200.7	5.10	50.0	10.00	433	315	70 - 130				2
Magnesium	1,250	mg/L	E200.7	6.95	50.0	10.00	1210	375	70 - 130				2
Sodium	313	mg/L	E200.7	15.3	50.0	10.00	292	214	70 - 130				2
<b>Lab Sample ID: 1910785-002EMS</b>		Date Analyzed:	11/11/2019 1627h										
Test Code: 200.7-DIS		Date Prepared:	11/04/2019 1102h										
Potassium	37.7	mg/L	E200.7	0.114	1.00	10.00	23.5	142	70 - 130				1
<b>Lab Sample ID: 1910785-002EMS</b>		Date Analyzed:	11/11/2019 1710h										
Test Code: 200.7-DIS		Date Prepared:	11/04/2019 1102h										
Vanadium	0.205	mg/L	E200.7	0.00167	0.00500	0.2000	0	103	70 - 130				
<b>Lab Sample ID: 1910785-002EMS</b>		Date Analyzed:	11/06/2019 1803h										
Test Code: 200.8-DIS		Date Prepared:	11/04/2019 1102h										
Arsenic	0.220	mg/L	E200.8	0.000298	0.00200	0.2000	0.00257	109	75 - 125				
Beryllium	0.215	mg/L	E200.8	0.000198	0.00200	0.2000	0.0113	102	75 - 125				
Cadmium	0.387	mg/L	E200.8	0.0000858	0.000500	0.2000	0.163	112	75 - 125				
Chromium	0.206	mg/L	E200.8	0.00191	0.00200	0.2000	0.000432	103	75 - 125				
Cobalt	0.706	mg/L	E200.8	0.000300	0.00400	0.2000	0.493	107	75 - 125				
Copper	0.309	mg/L	E200.8	0.00282	0.00200	0.2000	0.0861	112	75 - 125				
Iron	1.13	mg/L	E200.8	0.0496	0.100	1.000	0.085	104	75 - 125				
Lead	0.206	mg/L	E200.8	0.000448	0.00200	0.2000	0.00399	101	75 - 125				
Nickel	0.505	mg/L	E200.8	0.00148	0.00200	0.2000	0.28	113	75 - 125				
Selenium	0.228	mg/L	E200.8	0.000574	0.00200	0.2000	0.0183	105	75 - 125				
Silver	0.163	mg/L	E200.8	0.000232	0.00200	0.2000	0.0000359	81.6	75 - 125				
Thallium	0.209	mg/L	E200.8	0.000154	0.00200	0.2000	0.0022	103	75 - 125				
Tin	1.17	mg/L	E200.8	0.00116	0.00400	1.000	0	117	75 - 125				
Uranium	0.239	mg/L	E200.8	0.000176	0.00200	0.2000	0.0225	108	75 - 125				



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**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
<b>Lab Sample ID:</b> 1910785-002EMS <b>Test Code:</b> 200.8-DIS	Date Analyzed: Date Prepared:	11/06/2019 11/04/2019	1803h 1102h										
Zinc	2.48	mg/L	E200.8	0.00418	0.00600	1.000	1.3	118	75 - 125				
<b>Lab Sample ID:</b> 1910785-002EMS <b>Test Code:</b> 200.8-DIS	Date Analyzed: Date Prepared:	11/11/2019 11/04/2019	1228h 1102h										
Molybdenum	0.486	mg/L	E200.8	0.00163	0.00500	0.2000	0.267	110	75 - 125				
<b>Lab Sample ID:</b> 1910785-002EMS <b>Test Code:</b> 200.8-DIS	Date Analyzed: Date Prepared:	11/11/2019 11/04/2019	1302h 1102h										
Manganese	49.6	mg/L	E200.8	0.0540	0.100	0.2000	45.9	1,870	75 - 125				<sup>2</sup>
<b>Lab Sample ID:</b> 1910680-001EMS <b>Test Code:</b> HG-DW-DIS-245.1	Date Analyzed: Date Prepared:	11/05/2019 11/04/2019	634h 1600h										
Mercury	0.00338	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	102	85 - 115				
<b>Lab Sample ID:</b> 1910785-001EMS <b>Test Code:</b> HG-DW-DIS-245.1	Date Analyzed: Date Prepared:	11/05/2019 11/04/2019	704h 1600h										
Mercury	0.00335	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	101	85 - 115				

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

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



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**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910785-002EMSD</b>		Date Analyzed: 11/11/2019 1602h											
Test Code: 200.7-DIS		Date Prepared: 11/04/2019 1102h											
Calcium	451	mg/L	E200.7	5.10	50.0	10.00	433	182	70 - 130	465	2.90	20	2
Magnesium	1,210	mg/L	E200.7	6.95	50.0	10.00	1210	33.4	70 - 130	1250	2.78	20	2
Sodium	309	mg/L	E200.7	15.3	50.0	10.00	292	177	70 - 130	313	1.17	20	2
<b>Lab Sample ID: 1910785-002EMSD</b>		Date Analyzed: 11/11/2019 1629h											
Test Code: 200.7-DIS		Date Prepared: 11/04/2019 1102h											
Potassium	40.1	mg/L	E200.7	0.114	1.00	10.00	23.5	166	70 - 130	37.7	6.19	20	1
<b>Lab Sample ID: 1910785-002EMSD</b>		Date Analyzed: 11/11/2019 1713h											
Test Code: 200.7-DIS		Date Prepared: 11/04/2019 1102h											
Vanadium	0.214	mg/L	E200.7	0.00167	0.00500	0.2000	0	107	70 - 130	0.205	4.13	20	
<b>Lab Sample ID: 1910785-002EMSD</b>		Date Analyzed: 11/06/2019 1806h											
Test Code: 200.8-DIS		Date Prepared: 11/04/2019 1102h											
Arsenic	0.230	mg/L	E200.8	0.000298	0.00200	0.2000	0.00257	114	75 - 125	0.22	4.29	20	
Beryllium	0.217	mg/L	E200.8	0.000198	0.00200	0.2000	0.0113	103	75 - 125	0.215	0.997	20	
Cadmium	0.397	mg/L	E200.8	0.0000858	0.000500	0.2000	0.163	117	75 - 125	0.387	2.50	20	
Chromium	0.217	mg/L	E200.8	0.00191	0.00200	0.2000	0.000432	108	75 - 125	0.206	5.09	20	
Cobalt	0.728	mg/L	E200.8	0.000300	0.00400	0.2000	0.493	117	75 - 125	0.706	2.98	20	
Copper	0.321	mg/L	E200.8	0.00282	0.00200	0.2000	0.0861	118	75 - 125	0.309	3.82	20	
Iron	1.32	mg/L	E200.8	0.0496	0.100	1.000	0.085	124	75 - 125	1.13	16.2	20	
Lead	0.212	mg/L	E200.8	0.000448	0.00200	0.2000	0.00399	104	75 - 125	0.206	2.69	20	
Nickel	0.523	mg/L	E200.8	0.00148	0.00200	0.2000	0.28	122	75 - 125	0.505	3.62	20	
Selenium	0.231	mg/L	E200.8	0.000574	0.00200	0.2000	0.0183	107	75 - 125	0.228	1.31	20	
Silver	0.165	mg/L	E200.8	0.000232	0.00200	0.2000	0.0000359	82.3	75 - 125	0.163	0.825	20	
Thallium	0.216	mg/L	E200.8	0.000154	0.00200	0.2000	0.0022	107	75 - 125	0.209	3.15	20	
Tin	1.19	mg/L	E200.8	0.00116	0.00400	1.000	0	119	75 - 125	1.17	1.43	20	
Uranium	0.247	mg/L	E200.8	0.000176	0.00200	0.2000	0.0225	112	75 - 125	0.239	3.24	20	



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Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910785-002EMSD	Date Analyzed:	11/06/2019	1806h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/04/2019	1102h										
Zinc	2.57	mg/L	E200.8	0.00418	0.00600	1.000	1.3	126	75 - 125	2.48	3.25	20	<sup>1</sup>
<b>Lab Sample ID:</b> 1910785-002EMSD	Date Analyzed:	11/11/2019	1231h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/04/2019	1102h										
Molybdenum	0.485	mg/L	E200.8	0.00163	0.00500	0.2000	0.267	109	75 - 125	0.486	0.0657	20	
<b>Lab Sample ID:</b> 1910785-002EMSD	Date Analyzed:	11/11/2019	1305h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/04/2019	1102h										
Manganese	49.7	mg/L	E200.8	0.0540	0.100	0.2000	45.9	1,890	75 - 125	49.6	0.0952	20	<sup>2</sup>
<b>Lab Sample ID:</b> 1910680-001EMSD	Date Analyzed:	11/05/2019	636h										
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	11/04/2019	1600h										
Mercury	0.00342	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	103	85 - 115	0.00338	1.08	20	
<b>Lab Sample ID:</b> 1910785-001EMSD	Date Analyzed:	11/05/2019	707h										
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	11/04/2019	1600h										
Mercury	0.00336	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	101	85 - 115	0.00335	0.298	20	

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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910785

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1910785-001DDUP	Date Analyzed:	11/20/2019	1351h										
<b>Test Code:</b> NH3-W-350.1	Date Prepared:	11/20/2019	1104h										
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500					0	0	20	



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS-R132319</b>													
Date Analyzed: 11/07/2019 1111h													
Test Code: 300.0-W													
Sulfate	5.32	mg/L	E300.0	0.174	0.750	5.000	0	106	90 - 110				
<b>Lab Sample ID: LCS-R132517</b>													
Date Analyzed: 11/12/2019 2305h													
Test Code: 300.0-W													
Sulfate	5.18	mg/L	E300.0	0.174	0.750	5.000	0	104	90 - 110				
<b>Lab Sample ID: LCS-R131998</b>													
Date Analyzed: 10/31/2019 627h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	250	mg/L	SM2320B	0.781	1.00	250.0	0	100	90 - 110				
<b>Lab Sample ID: LCS-R132812</b>													
Date Analyzed: 11/19/2019 1040h													
Test Code: F-W-4500FC													
Fluoride	0.986	mg/L	SM4500-F-C	0.0207	0.100	1.000	0	98.6	90 - 110				
<b>Lab Sample ID: LCS-66168</b>													
Date Analyzed: 11/08/2019 1220h													
Test Code: NH3-W-350.1													
Date Prepared: 11/08/2019 950h													
Ammonia (as N)	9.46	mg/L	E350.1	0.0492	0.0500	10.00	0	94.6	90 - 110				
<b>Lab Sample ID: LCS-66428</b>													
Date Analyzed: 11/20/2019 1350h													
Test Code: NH3-W-350.1													
Date Prepared: 11/20/2019 1104h													
Ammonia (as N)	9.98	mg/L	E350.1	0.0492	0.0500	10.00	0	99.8	90 - 110				
<b>Lab Sample ID: LCS-R132001</b>													
Date Analyzed: 10/31/2019 818h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.03	mg/L	E353.2	0.00363	0.0100	1.000	0	103	90 - 110				
<b>Lab Sample ID: LCS-R132073</b>													
Date Analyzed: 10/31/2019 1125h													
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

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## QC SUMMARY REPORT

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**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB-R132319	Date Analyzed: 11/07/2019 1054h												
<b>Test Code:</b> 300.0-W													
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID:</b> MB-R132517	Date Analyzed: 11/12/2019 2248h												
<b>Test Code:</b> 300.0-W													
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID:</b> MB-R131998	Date Analyzed: 10/31/2019 627h												
<b>Test Code:</b> ALK-W-2320B-LL													
Bicarbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
Carbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
<b>Lab Sample ID:</b> MB-R132812	Date Analyzed: 11/19/2019 1040h												
<b>Test Code:</b> F-W-4500FC													
Fluoride	< 0.100	mg/L	SM4500-F-C	0.0207	0.100								
<b>Lab Sample ID:</b> MB-66168	Date Analyzed: 11/08/2019 1257h												
<b>Test Code:</b> NH3-W-350.1	Date Prepared: 11/08/2019 950h												
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
<b>Lab Sample ID:</b> MB-66428	Date Analyzed: 11/20/2019 1442h												
<b>Test Code:</b> NH3-W-350.1	Date Prepared: 11/20/2019 1104h												
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
<b>Lab Sample ID:</b> MB-R132001	Date Analyzed: 10/31/2019 816h												
<b>Test Code:</b> NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								



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**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
<b>Lab Sample ID:</b> MB-R132073	Date Analyzed: 10/31/2019 1125h												
<b>Test Code:</b> TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.00	10.0								



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**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
<b>Lab Sample ID: 1910785-002BMS</b>		Date Analyzed: 11/07/2019 1834h											
Test Code: 300.0-W													
Sulfate	17,000	mg/L	E300.0	348	1,500	10,000	6250	108	90 - 110				
<b>Lab Sample ID: 1910785-001BMS</b>		Date Analyzed: 11/11/2019 1750h											
Test Code: 300.0-W													
Chloride	144	mg/L	E300.0	0.772	2.00	100.0	40.1	104	90 - 110				
Fluoride	96.5	mg/L	E300.0	0.480	2.00	100.0	0	96.5	90 - 110				
<b>Lab Sample ID: 1910785-005BMS</b>		Date Analyzed: 11/13/2019 1323h											
Test Code: 300.0-W													
Sulfate	5,120	mg/L	E300.0	87.0	375	2,500	2490	105	90 - 110				
<b>Lab Sample ID: 1910785-001BMS</b>		Date Analyzed: 10/31/2019 627h											
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,360	mg/L	SM2320B	0.781	1.00	1,000	364	99.6	80 - 120				
<b>Lab Sample ID: 1910680-005BMS</b>		Date Analyzed: 11/19/2019 1040h											
Test Code: F-W-4500FC													
Fluoride	1.86	mg/L	SM4500-F-C	0.0207	0.100	1,000	0.742	112	80 - 120				
<b>Lab Sample ID: 1910785-003DMS</b>		Date Analyzed: 11/08/2019 1226h											
Test Code: NH3-W-350.1		Date Prepared: 11/08/2019 950h											
Ammonia (as N)	12.1	mg/L	E350.1	0.0492	0.0500	10.00	0	121	90 - 110				1
<b>Lab Sample ID: 1910785-001DMS</b>		Date Analyzed: 11/20/2019 1352h											
Test Code: NH3-W-350.1		Date Prepared: 11/20/2019 1104h											
Ammonia (as N)	14.4	mg/L	E350.1	0.0492	0.0500	10.00	0	144	90 - 110				1



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1911345-004AMS	Date Analyzed:	11/20/2019	1407h										
Test Code:	NH3-W-350.1	Date Prepared:	11/20/2019	1104h									
Ammonia (as N)	14.8	mg/L	E350.1	0.0492	0.0500	10.00	0.178	147	90 - 110				'
<b>Lab Sample ID:</b> 1910785-001DMS	Date Analyzed:	10/31/2019	827h										
Test Code:	NO2/NO3-W-353.2												
Nitrate/Nitrite (as N)	10.4	mg/L	E353.2	0.0363	0.100	10.00	0.198	102	90 - 110				

' - 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:** 1910785

**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910785-002BMSD</b> Date Analyzed: 11/07/2019 1850h													
Test Code: 300.0-W													
Sulfate	16,900	mg/L	E300.0	348	1,500	10,000	6250	106	90 - 110	17000	0.816	20	
<b>Lab Sample ID: 1910785-001BMSD</b> Date Analyzed: 11/11/2019 1806h													
Test Code: 300.0-W													
Chloride	144	mg/L	E300.0	0.772	2.00	100.0	40.1	104	90 - 110	144	0.318	20	
Fluoride	94.3	mg/L	E300.0	0.480	2.00	100.0	0	94.3	90 - 110	96.5	2.37	20	
<b>Lab Sample ID: 1910785-005BMSD</b> Date Analyzed: 11/13/2019 1340h													
Test Code: 300.0-W													
Sulfate	5,200	mg/L	E300.0	87.0	375	2,500	2490	108	90 - 110	5120	1.62	20	
<b>Lab Sample ID: 1910785-001BMSD</b> Date Analyzed: 10/31/2019 627h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	1,360	mg/L	SM2320B	0.781	1.00	1,000	364	99.2	80 - 120	1360	0.295	10	
<b>Lab Sample ID: 1910680-005BMSD</b> Date Analyzed: 11/19/2019 1040h													
Test Code: F-W-4500FC													
Fluoride	1.84	mg/L	SM4500-F-C	0.0207	0.100	1,000	0.742	110	80 - 120	1.86	1.08	10	
<b>Lab Sample ID: 1910785-003DMSD</b> Date Analyzed: 11/08/2019 1232h													
Test Code: NH3-W-350.1 Date Prepared: 11/08/2019 950h													
Ammonia (as N)	12.2	mg/L	E350.1	0.0492	0.0500	10.00	0	122	90 - 110	12.1	0.575	10	1
<b>Lab Sample ID: 1910785-001DMSD</b> Date Analyzed: 11/20/2019 1353h													
Test Code: NH3-W-350.1 Date Prepared: 11/20/2019 1104h													
Ammonia (as N)	14.0	mg/L	E350.1	0.0492	0.0500	10.00	0	140	90 - 110	14.4	3.17	10	1



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910785  
**Project:** 4th Quarter 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	
<b>Lab Sample ID:</b> 1911345-004AMSD	Date Analyzed:	11/20/2019 1408h												
Test Code:	NH3-W-350.1		Date Prepared:	11/20/2019 1104h										
Ammonia (as N)	14.5	mg/L	E350.1	0.0492	0.0500	10.00	0.178	143	90 - 110	14.8	2.11	10	1	
<b>Lab Sample ID:</b> 1910785-001DMSD	Date Analyzed:	10/31/2019 833h												
Test Code:	NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.5	mg/L	E353.2	0.0363	0.100	10.00	0.198	103	90 - 110	10.4	0.575	10		

<sup>1</sup> - 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:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS VOC-1 103119A</b>		<b>Date Analyzed: 10/31/2019 1007h</b>											
<b>Test Code: 8260D-W-DEN100</b>													
2-Butanone	33.3	µg/L	SW8260D	1.31	20.0	20.00	0	167	74 - 236				
Acetone	44.3	µg/L	SW8260D	2.87	20.0	20.00	0	221	70 - 350				
Benzene	18.4	µg/L	SW8260D	0.147	1.00	20.00	0	92.0	82 - 132				
Carbon tetrachloride	16.2	µg/L	SW8260D	0.262	1.00	20.00	0	81.0	77 - 143				
Chloroform	18.1	µg/L	SW8260D	0.166	1.00	20.00	0	90.6	85 - 124				
Chloromethane	16.3	µg/L	SW8260D	0.832	1.00	20.00	0	81.6	30 - 149				
Methylene chloride	19.1	µg/L	SW8260D	0.448	1.00	20.00	0	95.5	65 - 154				
Naphthalene	19.5	µg/L	SW8260D	0.704	1.00	20.00	0	97.7	62 - 129				
Tetrahydrofuran	19.0	µg/L	SW8260D	0.436	1.00	20.00	0	95.1	59 - 135				
Toluene	19.8	µg/L	SW8260D	0.177	1.00	20.00	0	99.2	69 - 129				
Xylenes, Total	56.1	µg/L	SW8260D	0.253	1.00	60.00	0	93.4	66 - 124				
Surr: 1,2-Dichloroethane-d4	48.3	µg/L	SW8260D			50.00		96.7	80 - 136				
Surr: 4-Bromofluorobenzene	44.6	µg/L	SW8260D			50.00		89.3	85 - 121				
Surr: Dibromofluoromethane	45.5	µg/L	SW8260D			50.00		90.9	78 - 132				
Surr: Toluene-d8	47.8	µg/L	SW8260D			50.00		95.7	81 - 123				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1910785  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB VOC-1 103119A	Date Analyzed: 10/31/2019 1027h												
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260D	1.31	20.0								
Acetone	< 20.0	µg/L	SW8260D	2.87	20.0								
Benzene	< 1.00	µg/L	SW8260D	0.147	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260D	0.262	1.00								
Chloroform	< 1.00	µg/L	SW8260D	0.166	1.00								
Chloromethane	< 1.00	µg/L	SW8260D	0.832	1.00								
Methylene chloride	< 1.00	µg/L	SW8260D	0.448	1.00								
Naphthalene	< 1.00	µg/L	SW8260D	0.704	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260D	0.436	1.00								
Toluene	< 1.00	µg/L	SW8260D	0.177	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260D	0.253	1.00								
Surr: 1,2-Dichloroethane-d4	48.5	µg/L	SW8260D			50.00		96.9	80 - 136				
Surr: 4-Bromofluorobenzene	45.3	µg/L	SW8260D			50.00		90.6	85 - 121				
Surr: Dibromofluoromethane	45.1	µg/L	SW8260D			50.00		90.2	78 - 132				
Surr: Toluene-d8	48.0	µg/L	SW8260D			50.00		96.0	81 - 123				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910785

**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910785-001AMS</b>		Date Analyzed: 10/31/2019 1129h											
<b>Test Code: 8260D-W-DEN100</b>													
2-Butanone	24.1	µg/L	SW8260D	1.31	20.0	20.00	0	120	74 - 236				
Acetone	20.7	µg/L	SW8260D	2.87	20.0	20.00	0	103	70 - 350				
Benzene	17.8	µg/L	SW8260D	0.147	1.00	20.00	0	89.1	82 - 132				
Carbon tetrachloride	16.3	µg/L	SW8260D	0.262	1.00	20.00	0	81.4	77 - 143				
Chloroform	17.8	µg/L	SW8260D	0.166	1.00	20.00	0	89.1	85 - 124				
Chloromethane	17.1	µg/L	SW8260D	0.832	1.00	20.00	0	85.6	30 - 149				
Methylene chloride	18.1	µg/L	SW8260D	0.448	1.00	20.00	0	90.5	65 - 154				
Naphthalene	17.5	µg/L	SW8260D	0.704	1.00	20.00	0	87.6	62 - 129				
Tetrahydrofuran	20.3	µg/L	SW8260D	0.436	1.00	20.00	0	102	59 - 135				
Toluene	19.2	µg/L	SW8260D	0.177	1.00	20.00	0	96.0	69 - 129				
Xylenes, Total	55.4	µg/L	SW8260D	0.253	1.00	60.00	0	92.3	66 - 124				
Surr: 1,2-Dichloroethane-d4	48.0	µg/L	SW8260D			50.00		96.1	80 - 136				
Surr: 4-Bromofluorobenzene	44.5	µg/L	SW8260D			50.00		89.0	85 - 121				
Surr: Dibromofluoromethane	44.7	µg/L	SW8260D			50.00		89.3	78 - 132				
Surr: Toluene-d8	46.4	µg/L	SW8260D			50.00		92.8	81 - 123				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1910785

**Project:** 4th Quarter 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
<b>Lab Sample ID: 1910785-001AMSD</b>		Date Analyzed: 10/31/2019 1149h											
Test Code: 8260D-W-DEN100													
2-Butanone	25.0	µg/L	SW8260D	1.31	20.0	20.00	0	125	74 - 236	24.1	3.79	35	
Acetone	21.6	µg/L	SW8260D	2.87	20.0	20.00	0	108	70 - 350	20.7	4.49	35	
Benzene	18.8	µg/L	SW8260D	0.147	1.00	20.00	0	93.8	82 - 132	17.8	5.14	35	
Carbon tetrachloride	16.8	µg/L	SW8260D	0.262	1.00	20.00	0	83.9	77 - 143	16.3	3.03	35	
Chloroform	18.8	µg/L	SW8260D	0.166	1.00	20.00	0	93.8	85 - 124	17.8	5.19	35	
Chloromethane	18.3	µg/L	SW8260D	0.832	1.00	20.00	0	91.7	30 - 149	17.1	6.88	35	
Methylene chloride	19.2	µg/L	SW8260D	0.448	1.00	20.00	0	95.8	65 - 154	18.1	5.69	35	
Naphthalene	19.2	µg/L	SW8260D	0.704	1.00	20.00	0	95.8	62 - 129	17.5	8.89	35	
Tetrahydrofuran	20.7	µg/L	SW8260D	0.436	1.00	20.00	0	103	59 - 135	20.3	1.85	35	
Toluene	19.9	µg/L	SW8260D	0.177	1.00	20.00	0	99.7	69 - 129	19.2	3.78	35	
Xylenes, Total	57.3	µg/L	SW8260D	0.253	1.00	60.00	0	95.4	66 - 124	55.4	3.30	35	
Surr: 1,2-Dichloroethane-d4	47.8	µg/L	SW8260D			50.00		95.5	80 - 136				
Surr: 4-Bromofluorobenzene	44.2	µg/L	SW8260D			50.00		88.3	85 - 121				
Surr: Dibromofluoromethane	46.1	µg/L	SW8260D			50.00		92.2	78 - 132				
Surr: Toluene-d8	46.6	µg/L	SW8260D			50.00		93.2	81 - 123				

TDS on MW-15 was removed and was resample don  
workorder 1912110. TDS on MW-70 was removed. -MC

**WORK ORDER Summary**

Work Order: **1910785** Page 1 of 4

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

Due Date: 11/13/2019

**Client ID:** ENE300

**Contact:** Tanner Holliday

**Project:** 4th Quarter Ground Water 2019

**QC Level:** III

WO Type: Project

**Comments:** QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com; Do not use "\*R\_" samples as MS/MSD.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910785-001A	MW-15_10282019	10/28/2019 1335h	10/30/2019 1300h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1910785-001B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				<i>2 SEL Analytes: CL SO4</i>				
				ALK-W-2320B-LL		<input checked="" type="checkbox"/>	df - wc	
				<i>2 SEL Analytes: ALKB ALKC</i>				
				F-W-4500FC		<input type="checkbox"/>	df - wc	
1910785-001C						<input type="checkbox"/>	df - tds	
1910785-001D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<i>1 SEL Analytes: NH3N</i>				
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1910785-001E				200.7-DIS		<input checked="" type="checkbox"/>	df-met	
				<i>5 SEL Analytes: CA MG K NA V</i>				
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS		<input checked="" type="checkbox"/>	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		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-245.1		<input checked="" type="checkbox"/>	df-met	
				<i>1 SEL Analytes: HG</i>				
				HG-DW-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				IONBALANCE		<input checked="" type="checkbox"/>	df-met	
				<i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>				
1910785-002A	MW-22_10292019	10/29/2019 1225h	10/30/2019 1300h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1910785-002B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				<i>3 SEL Analytes: CL F SO4</i>				
				ALK-W-2320B-LL		<input checked="" type="checkbox"/>	df - wc	
				<i>2 SEL Analytes: ALKB ALKC</i>				

# WORK ORDER Summary

Work Order: **1910785** Page 2 of 4

Client: Energy Fuels Resources, Inc.

Due Date: 11/13/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage				
1910785-002C	MW-22_10292019	10/29/2019 1225h	10/30/2019 1300h	TDS-W-2540C	Aqueous	<input checked="" type="checkbox"/>	df - tds	1			
1910785-002D				NH3-W-350.1				<input checked="" type="checkbox"/>	df - no2/no3 & nh3		
				NH3-W-PR				<input checked="" type="checkbox"/>	df - no2/no3 & nh3		
				NO2/NO3-W-353.2				<input checked="" type="checkbox"/>	df - no2/no3 & nh3		
1910785-002E							200.7-DIS		<input checked="" type="checkbox"/>	df-met	
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met				
				200.8-DIS		<input checked="" type="checkbox"/>	df-met				
				200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met				
				HG-DW-DIS-245.1		<input checked="" type="checkbox"/>	df-met				
				HG-DW-DIS-PR		<input checked="" type="checkbox"/>	df-met				
				IONBALANCE		<input checked="" type="checkbox"/>	df-met				
1910785-003A	MW-23_10292019	10/29/2019 1330h	10/30/2019 1300h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3			
1910785-003B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1			
				ALK-W-2320B-LL		<input checked="" type="checkbox"/>	df - wc				
1910785-003C				TDS-W-2540C		<input checked="" type="checkbox"/>	df - tds				
1910785-003D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3				
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3				
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3				
1910785-003E				200.7-DIS		<input checked="" type="checkbox"/>	df-met				
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met				
				200.8-DIS		<input checked="" type="checkbox"/>	df-met				
				200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met				

# WORK ORDER Summary

Work Order: **1910785** Page 3 of 4

Client: Energy Fuels Resources, Inc.

Due Date: 11/13/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910785-003E	MW-23_10292019	10/29/2019 1330h	10/30/2019 1300h	HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>	Aqueous	<input checked="" type="checkbox"/>	df-met	1
				HG-DW-DIS-PR <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		<input checked="" type="checkbox"/>	df-met	
				IONBALANCE		<input checked="" type="checkbox"/>	df-met	
1910785-004A	MW-39_10292019	10/29/2019 1145h	10/30/2019 1300h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1910785-004B				300.0-W <i>3 SEL Analytes: CL F SO4</i>		<input checked="" type="checkbox"/>	df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>		<input checked="" type="checkbox"/>	df - wc	
1910785-004C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		<input checked="" type="checkbox"/>	df - tds	
1910785-004D				NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NH3-W-PR <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
1910785-004E				200.7-DIS <i>5 SEL Analytes: CA MG K NA V</i>		<input checked="" type="checkbox"/>	df-met	
				200.7-DIS-PR		<input checked="" type="checkbox"/>	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>		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-PR <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		<input checked="" type="checkbox"/>	df-met	
1910785-005A	MW-70_10282019	10/28/2019 1335h	10/30/2019 1300h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1910785-005B				300.0-W <i>3 SEL Analytes: CL F SO4</i>		<input checked="" type="checkbox"/>	df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>		<input checked="" type="checkbox"/>	df - wc	
1910785-005C						<input type="checkbox"/>	df - tds	
1910785-005D				NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	

# WORK ORDER Summary

Work Order: **1910785** Page 4 of 4

Client: Energy Fuels Resources, Inc.

Due Date: 11/13/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1910785-005D	MW-70_10282019	10/28/2019 1335h	10/30/2019 1300h	NH3-W-PR	Aqueous	<input checked="" type="checkbox"/>	df - no2/no3 & nh3	1
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
1910785-005E				1 SEL Analytes: NO3NO2N				
				200.7-DIS	<input checked="" type="checkbox"/>	df-met		
				5 SEL Analytes: CA MG K NA V				
				200.7-DIS-PR	<input checked="" type="checkbox"/>	df-met		
				200.8-DIS	<input checked="" type="checkbox"/>	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	<input checked="" type="checkbox"/>	df-met		
				HG-DW-DIS-245.1	<input checked="" type="checkbox"/>	df-met		
				1 SEL Analytes: HG				
				HG-DW-DIS-PR	<input checked="" type="checkbox"/>	df-met		
IONBALANCE	<input checked="" type="checkbox"/>	df-met						
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1910785-006A	Trip Blank	10/28/2019 1335h	10/30/2019 1300h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4				



**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.

1910785

AWAL Lab Sample Set #  
 Page 1 of 1

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;tanholliday@energyfuels.com**  
 Project Name: **4th 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														
# of Containers Sample Matrix <b>NO2/NO3 (353.2)</b> <b>NH3 (4500G or 350.1)</b> <b>Fl, Cl, SO4 (4500 or 300.0)</b> <b>TDS (2540C)</b> <b>Carb/Bicarb (2320B)</b> <b>Dissolved Metals (200.7/200.8/245.1)</b> <b>As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Mo,</b> <b>Ni, Se, Ag, Tl, Sn, U, V, Zn, Na, K, Mg, Ca</b> <b>Ion Balance</b> <b>VOCs (8260C)</b>	<input checked="" type="checkbox"/> Include EDD: <b>LOCUS UPLOAD            EXCEL</b> <input checked="" type="checkbox"/> Field Filtered For: <b>Dissolved Metals</b>		<b>Laboratory Use Only</b> Samples Were: 1 Shipped or hand delivered 2 Ambient or Chilled 3 Temperature <u>2.1</u> °C 4 Received Broken/Leaking (Improperly Sealed) Y <input 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"/>													
	<b>For Compliance With:</b> <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:		<b>Known Hazards &amp; Sample Comments</b>													
	1	MW-15_10282019	10/28/2019	1335	7	W	x	x	x	x	x	x	x	x	x	
	2	MW-22_10292019	10/29/2019	1225	7	W	x	x	x	x	x	x	x	x	x	
	3	MW-23_10292019	10/29/2019	1330	7	W	x	x	x	x	x	x	x	x	x	
	4	MW-39_10292019	10/29/2019	1145	7	W	x	x	x	x	x	x	x	x	x	
	5	MW-70_10282019	10/28/2019	1335	7	W	x	x	x	x	x	x	x	x	x	
	6	Trip Blank	10/28/2019	1335	3	W									x	
	7															
	8															
	9															
	10															
11																
12																

Relinquished by: Signature	Date: 10/30/2019	Received by: Signature	Date: 10/30/19	<b>Special Instructions:</b>  Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.  * TDS for MW-15 was resampled on workorder 1912.110. - me 12/16/19  ** TDS removed per Kathy Weinel 12/16/19
Print Name: Abel Mendoza	Time:	Print Name: E. Lowe Hayward	Time: 1300	
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:	

Lab Set ID: 1910785  
 pH Lot #: 6179

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	1	2	3	4	5													
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>	Yes	Yes	Yes	Yes	Yes													
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cyanide	pH >12 NaOH																		
Metals	pH <2 HNO <sub>3</sub>	Yes	Yes	Yes	Yes	Yes													
NO <sub>2</sub> /NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>	Yes	Yes	Yes	Yes	Yes													
O & G	pH <2 HCL																		
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Sulfide	pH >9 NaOH, Zn Acetate																		
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cr VI+	pH >9 (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>																		

- 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.



Tanner Holliday  
Energy Fuels Resources, Inc.  
6425 South Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 4th Quarter Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1911206

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](mailto:awal@awal-labs.com)

web: [www.awal-labs.com](http://www.awal-labs.com)

American West Analytical Laboratories received sample(s) on 11/8/2019 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:

<b>Jose G. Rocha</b>	Digitally signed by Jose G. Rocha
	DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou=UT00031, email=jose@awal-labs.com, c=US
	Date: 2019.12.04 11:21:40 -07'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1911206  
**Date Received:** 11/8/2019 1210h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1911206-001A	MW-03A_11062019	11/6/2019 830h	Aqueous	VOA by GC/MS Method 8260D/5030C
1911206-001B	MW-03A_11062019	11/6/2019 830h	Aqueous	Anions, E300.0
1911206-001B	MW-03A_11062019	11/6/2019 830h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1911206-001C	MW-03A_11062019	11/6/2019 830h	Aqueous	Total Dissolved Solids, A2540C
1911206-001D	MW-03A_11062019	11/6/2019 830h	Aqueous	Nitrite/Nitrate (as N), E353.2
1911206-001D	MW-03A_11062019	11/6/2019 830h	Aqueous	Ammonia, Aqueous
1911206-001E	MW-03A_11062019	11/6/2019 830h	Aqueous	Ion Balance
1911206-001E	MW-03A_11062019	11/6/2019 830h	Aqueous	ICP Metals, Dissolved
1911206-001E	MW-03A_11062019	11/6/2019 830h	Aqueous	ICPMS Metals, Dissolved
1911206-001E	MW-03A_11062019	11/6/2019 830h	Aqueous	Mercury, Drinking Water Dissolved
1911206-002A	MW-24_11062019	11/6/2019 800h	Aqueous	VOA by GC/MS Method 8260D/5030C
1911206-002B	MW-24_11062019	11/6/2019 800h	Aqueous	Anions, E300.0
1911206-002B	MW-24_11062019	11/6/2019 800h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1911206-002C	MW-24_11062019	11/6/2019 800h	Aqueous	Total Dissolved Solids, A2540C
1911206-002D	MW-24_11062019	11/6/2019 800h	Aqueous	Ammonia, Aqueous
1911206-002D	MW-24_11062019	11/6/2019 800h	Aqueous	Nitrite/Nitrate (as N), E353.2
1911206-002E	MW-24_11062019	11/6/2019 800h	Aqueous	Ion Balance
1911206-002E	MW-24_11062019	11/6/2019 800h	Aqueous	ICP Metals, Dissolved
1911206-002E	MW-24_11062019	11/6/2019 800h	Aqueous	ICPMS Metals, Dissolved
1911206-002E	MW-24_11062019	11/6/2019 800h	Aqueous	Mercury, Drinking Water Dissolved
1911206-003A	MW-38_11062019	11/6/2019 900h	Aqueous	VOA by GC/MS Method 8260D/5030C
1911206-003B	MW-38_11062019	11/6/2019 900h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1911206-003B	MW-38_11062019	11/6/2019 900h	Aqueous	Anions, E300.0
1911206-003C	MW-38_11062019	11/6/2019 900h	Aqueous	Total Dissolved Solids, A2540C
1911206-003D	MW-38_11062019	11/6/2019 900h	Aqueous	Ammonia, Aqueous
1911206-003D	MW-38_11062019	11/6/2019 900h	Aqueous	Nitrite/Nitrate (as N), E353.2
1911206-003E	MW-38_11062019	11/6/2019 900h	Aqueous	Ion Balance
1911206-003E	MW-38_11062019	11/6/2019 900h	Aqueous	ICP Metals, Dissolved
1911206-003E	MW-38_11062019	11/6/2019 900h	Aqueous	ICPMS Metals, Dissolved



**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1911206  
**Date Received:** 11/8/2019 1210h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1911206-003E	MW-38_11062019	11/6/2019 900h	Aqueous	Mercury, Drinking Water Dissolved
1911206-004A	Trip Blank	11/6/2019 800h	Aqueous	VOA by GC/MS Method 8260D/5030C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1911206

## Sample Receipt Information:

3440 South 700 West  
 Salt Lake City, UT 84119

**Date of Receipt:** 11/8/2019  
**Date(s) of Collection:** 11/6/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation of all samples were performed within the method holding times. All 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:

**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
1911206-001D	Ammonia	MS/MSD	Sample matrix interference
1911206-001E	Mercury	MSD	Sample matrix interference
1911206-002E	Calcium	MS/MSD	High analyte concentration
1911206-002E	Magnesium	MS/MSD	High analyte concentration
1911206-002E	Manganese	MS/MSD	High analyte concentration
1911206-002E	Potassium	MS/MSD	Sample matrix interference
1911206-002E	Silver	MS/MSD	Sample matrix interference
1911206-002E	Sodium	MS/MSD	High analyte concentration

**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:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1911206

---

## Sample Receipt Information:

**Date of Receipt:** 11/8/2019  
**Date(s) of Collection:** 11/6/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8260D/5030C  
**Analysis:** Volatile Organic Compounds

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Salt Lake City, UT 84119

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**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, with exceptions noted on the reports. 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.

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



3440 South 700 West  
Salt Lake City, UT 84119

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS-66180</b>													
Date Analyzed:		11/18/2019 1648h											
Test Code:		200.7-DIS											
Date Prepared:		11/08/2019 1400h											
Calcium	9.72	mg/L	E200.7	0.102	1.00	10.00	0	97.2	85 - 115				
Magnesium	10.3	mg/L	E200.7	0.139	1.00	10.00	0	103	85 - 115				
Potassium	9.82	mg/L	E200.7	0.114	1.00	10.00	0	98.2	85 - 115				
Sodium	8.92	mg/L	E200.7	0.306	1.00	10.00	0	89.2	85 - 115				
<b>Lab Sample ID: LCS-66181</b>													
Date Analyzed:		11/19/2019 1158h											
Test Code:		200.8-DIS											
Date Prepared:		11/08/2019 1400h											
Arsenic	0.198	mg/L	E200.8	0.000298	0.00200	0.2000	0	99.2	85 - 115				
Beryllium	0.199	mg/L	E200.8	0.000198	0.00200	0.2000	0	99.6	85 - 115				
Cadmium	0.196	mg/L	E200.8	0.0000858	0.000500	0.2000	0	97.9	85 - 115				
Chromium	0.200	mg/L	E200.8	0.00191	0.00200	0.2000	0	100	85 - 115				
Cobalt	0.197	mg/L	E200.8	0.000300	0.00400	0.2000	0	98.6	85 - 115				
Iron	1.01	mg/L	E200.8	0.0496	0.100	1.000	0	101	85 - 115				
Lead	0.196	mg/L	E200.8	0.000448	0.00200	0.2000	0	98.2	85 - 115				
Manganese	0.201	mg/L	E200.8	0.00108	0.00200	0.2000	0	100	85 - 115				
Molybdenum	0.197	mg/L	E200.8	0.000652	0.00200	0.2000	0	98.4	85 - 115				
Nickel	0.201	mg/L	E200.8	0.00148	0.00200	0.2000	0	101	85 - 115				
Silver	0.189	mg/L	E200.8	0.000232	0.00200	0.2000	0	94.7	85 - 115				
Thallium	0.199	mg/L	E200.8	0.000154	0.00200	0.2000	0	99.5	85 - 115				
Zinc	1.00	mg/L	E200.8	0.00418	0.00600	1.000	0	100	85 - 115				
<b>Lab Sample ID: LCS-66181</b>													
Date Analyzed:		11/20/2019 1350h											
Test Code:		200.8-DIS											
Date Prepared:		11/08/2019 1400h											
Copper	0.194	mg/L	E200.8	0.00282	0.00200	0.2000	0	96.8	85 - 115				
Selenium	0.189	mg/L	E200.8	0.000574	0.00200	0.2000	0	94.4	85 - 115				
Tin	0.999	mg/L	E200.8	0.00116	0.00400	1.000	0	99.9	85 - 115				
Uranium	0.202	mg/L	E200.8	0.000176	0.00200	0.2000	0	101	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:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-66181	Date Analyzed:	11/22/2019	1421h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/08/2019	1400h										
Vanadium	0.190	mg/L	E200.8	0.00166	0.00440	0.2000	0	94.9	85 - 115				
<b>Lab Sample ID:</b> LCS-66273	Date Analyzed:	11/13/2019	945h										
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	11/12/2019	1600h										
Mercury	0.00372	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	112	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:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID: MB-66180</b>													
Date Analyzed:		11/18/2019 1646h											
Test Code:		200.7-DIS											
Date Prepared:		11/08/2019 1400h											
Calcium	< 1.00	mg/L	E200.7	0.102	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.139	1.00								
Potassium	< 1.00	mg/L	E200.7	0.114	1.00								
Sodium	< 1.00	mg/L	E200.7	0.306	1.00								
<b>Lab Sample ID: MB-66181</b>													
Date Analyzed:		11/19/2019 1155h											
Test Code:		200.8-DIS											
Date Prepared:		11/08/2019 1400h											
Arsenic	< 0.000500	mg/L	E200.8	0.0000745	0.000500								
Beryllium	< 0.000500	mg/L	E200.8	0.0000494	0.000500								
Cadmium	< 0.000125	mg/L	E200.8	0.0000214	0.000125								
Chromium	< 0.000500	mg/L	E200.8	0.000478	0.000500								
Cobalt	< 0.00100	mg/L	E200.8	0.0000750	0.00100								
Iron	< 0.0250	mg/L	E200.8	0.0124	0.0250								
Lead	< 0.000500	mg/L	E200.8	0.000112	0.000500								
Manganese	< 0.000500	mg/L	E200.8	0.000270	0.000500								
Molybdenum	< 0.000500	mg/L	E200.8	0.000163	0.000500								
Nickel	< 0.000500	mg/L	E200.8	0.000370	0.000500								
Silver	< 0.000500	mg/L	E200.8	0.0000580	0.000500								
Thallium	< 0.000500	mg/L	E200.8	0.0000384	0.000500								
Zinc	< 0.00150	mg/L	E200.8	0.00105	0.00150								
<b>Lab Sample ID: MB-66181</b>													
Date Analyzed:		11/20/2019 1346h											
Test Code:		200.8-DIS											
Date Prepared:		11/08/2019 1400h											
Copper	< 0.000200	mg/L	E200.8	0.000282	0.000200								
Selenium	< 0.000200	mg/L	E200.8	0.0000574	0.000200								
Tin	< 0.000400	mg/L	E200.8	0.000116	0.000400								
Uranium	< 0.000200	mg/L	E200.8	0.0000176	0.000200								



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QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB-66181	Date Analyzed:	11/22/2019	1418h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/08/2019	1400h										
Vanadium	< 0.00440	mg/L	E200.8	0.00166	0.00440								
<b>Lab Sample ID:</b> MB-66273	Date Analyzed:	11/13/2019	943h										
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	11/12/2019	1600h										
Mercury	< 0.0000900	mg/L	E245.1	0.0000396	0.0000900								



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1911206-002EMS</b>													
Date Analyzed:		11/18/2019 1655h											
Test Code:		200.7-DIS											
Date Prepared:		11/08/2019 1400h											
Calcium	483	mg/L	E200.7	2.04	20.0	10.00	484	-10.5	70 - 130				2
Magnesium	197	mg/L	E200.7	2.78	20.0	10.00	194	31.0	70 - 130				2
Sodium	422	mg/L	E200.7	6.12	20.0	10.00	425	-34.4	70 - 130				2
<b>Lab Sample ID: 1911206-002EMS</b>													
Date Analyzed:		11/22/2019 1247h											
Test Code:		200.7-DIS											
Date Prepared:		11/08/2019 1400h											
Potassium	33.3	mg/L	E200.7	0.114	1.00	10.00	19.4	139	70 - 130				1
<b>Lab Sample ID: 1911206-002EMS</b>													
Date Analyzed:		11/19/2019 1222h											
Test Code:		200.8-DIS											
Date Prepared:		11/08/2019 1400h											
Arsenic	0.205	mg/L	E200.8	0.000298	0.00200	0.2000	0.00244	101	75 - 125				
Beryllium	0.197	mg/L	E200.8	0.000198	0.00200	0.2000	0.00325	96.9	75 - 125				
Cadmium	0.208	mg/L	E200.8	0.0000858	0.000500	0.2000	0.00931	99.3	75 - 125				
Chromium	0.200	mg/L	E200.8	0.00191	0.00200	0.2000	0	100	75 - 125				
Cobalt	0.321	mg/L	E200.8	0.000300	0.00400	0.2000	0.126	97.5	75 - 125				
Iron	1.11	mg/L	E200.8	0.0496	0.100	1.000	0.082	103	75 - 125				
Lead	0.192	mg/L	E200.8	0.000448	0.00200	0.2000	0.003	94.7	75 - 125				
Molybdenum	0.217	mg/L	E200.8	0.000652	0.00200	0.2000	0	109	75 - 125				
Nickel	0.277	mg/L	E200.8	0.00148	0.00200	0.2000	0.0754	101	75 - 125				
Silver	0.145	mg/L	E200.8	0.000232	0.00200	0.2000	0	72.4	75 - 125				1
Thallium	0.195	mg/L	E200.8	0.000154	0.00200	0.2000	0.00288	96.2	75 - 125				
Zinc	1.19	mg/L	E200.8	0.00418	0.00600	1.000	0.177	101	75 - 125				
<b>Lab Sample ID: 1911206-002EMS</b>													
Date Analyzed:		11/20/2019 1359h											
Test Code:		200.8-DIS											
Date Prepared:		11/08/2019 1400h											
Copper	0.200	mg/L	E200.8	0.00282	0.00200	0.2000	0.0116	94.5	75 - 125				
Selenium	0.197	mg/L	E200.8	0.000574	0.00200	0.2000	0.00665	95.3	75 - 125				
Tin	1.07	mg/L	E200.8	0.00116	0.00400	1.000	0	107	75 - 125				



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1911206

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1911206-002EMS	Date Analyzed:	11/20/2019	1359h										
Test Code:	200.8-DIS	Date Prepared:	11/08/2019	1400h									
Uranium	0.206	mg/L	E200.8	0.000176	0.00200	0.2000	0.00623	99.7	75 - 125				
<b>Lab Sample ID:</b> 1911206-002EMS	Date Analyzed:	11/20/2019	1420h										
Test Code:	200.8-DIS	Date Prepared:	11/08/2019	1400h									
Manganese	7.55	mg/L	E200.8	0.0108	0.0200	0.2000	7.7	-71.1	75 - 125				2
<b>Lab Sample ID:</b> 1911206-002EMS	Date Analyzed:	11/22/2019	1430h										
Test Code:	200.8-DIS	Date Prepared:	11/08/2019	1400h									
Vanadium	0.194	mg/L	E200.8	0.00166	0.00440	0.2000	0	96.9	75 - 125				
<b>Lab Sample ID:</b> 1911206-001EMS	Date Analyzed:	11/13/2019	953h										
Test Code:	HG-DW-DIS-245.1	Date Prepared:	11/12/2019	1600h									
Mercury	0.00380	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	114	85 - 115				

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

<sup>2</sup> - 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:** 1911206

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1911206-002EMSD	Date Analyzed:	11/18/2019	1657h										
<b>Test Code:</b> 200.7-DIS	Date Prepared:	11/08/2019	1400h										
Calcium	482	mg/L	E200.7	2.04	20.0	10.00	484	-21.7	70 - 130	483	0.233	20	2
Magnesium	200	mg/L	E200.7	2.78	20.0	10.00	194	56.0	70 - 130	197	1.26	20	2
Sodium	412	mg/L	E200.7	6.12	20.0	10.00	425	-131	70 - 130	422	2.32	20	2
<b>Lab Sample ID:</b> 1911206-002EMSD	Date Analyzed:	11/22/2019	1250h										
<b>Test Code:</b> 200.7-DIS	Date Prepared:	11/08/2019	1400h										
Potassium	33.8	mg/L	E200.7	0.114	1.00	10.00	19.4	144	70 - 130	33.3	1.73	20	1
<b>Lab Sample ID:</b> 1911206-002EMSD	Date Analyzed:	11/19/2019	1234h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/08/2019	1400h										
Arsenic	0.204	mg/L	E200.8	0.000298	0.00200	0.2000	0.00244	101	75 - 125	0.205	0.157	20	
Beryllium	0.196	mg/L	E200.8	0.000198	0.00200	0.2000	0.00325	96.6	75 - 125	0.197	0.322	20	
Cadmium	0.207	mg/L	E200.8	0.0000858	0.000500	0.2000	0.00931	99.0	75 - 125	0.208	0.206	20	
Chromium	0.201	mg/L	E200.8	0.00191	0.00200	0.2000	0	100	75 - 125	0.2	0.218	20	
Cobalt	0.323	mg/L	E200.8	0.000300	0.00400	0.2000	0.126	98.4	75 - 125	0.321	0.573	20	
Iron	1.09	mg/L	E200.8	0.0496	0.100	1.000	0.082	101	75 - 125	1.11	1.49	20	
Lead	0.194	mg/L	E200.8	0.000448	0.00200	0.2000	0.003	95.3	75 - 125	0.192	0.598	20	
Molybdenum	0.215	mg/L	E200.8	0.000652	0.00200	0.2000	0	107	75 - 125	0.217	1.22	20	
Nickel	0.275	mg/L	E200.8	0.00148	0.00200	0.2000	0.0754	100	75 - 125	0.277	0.432	20	
Silver	0.133	mg/L	E200.8	0.000232	0.00200	0.2000	0	66.6	75 - 125	0.145	8.38	20	1
Thallium	0.196	mg/L	E200.8	0.000154	0.00200	0.2000	0.00288	96.5	75 - 125	0.195	0.382	20	
Zinc	1.19	mg/L	E200.8	0.00418	0.00600	1.000	0.177	101	75 - 125	1.19	0.0547	20	
<b>Lab Sample ID:</b> 1911206-002EMSD	Date Analyzed:	11/20/2019	1402h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/08/2019	1400h										
Copper	0.197	mg/L	E200.8	0.00282	0.00200	0.2000	0.0116	92.6	75 - 125	0.2	1.86	20	
Selenium	0.191	mg/L	E200.8	0.000574	0.00200	0.2000	0.00665	92.1	75 - 125	0.197	3.30	20	
Tin	1.04	mg/L	E200.8	0.00116	0.00400	1.000	0	104	75 - 125	1.07	3.00	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:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1911206-002EMSD	Date Analyzed:	11/20/2019	1402h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/08/2019	1400h										
Uranium	0.207	mg/L	E200.8	0.000176	0.00200	0.2000	0.00623	100	75 - 125	0.206	0.634	20	
<b>Lab Sample ID:</b> 1911206-002EMSD	Date Analyzed:	11/20/2019	1423h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/08/2019	1400h										
Manganese	7.46	mg/L	E200.8	0.0108	0.0200	0.2000	7.7	-117	75 - 125	7.55	1.22	20	<sup>2</sup>
<b>Lab Sample ID:</b> 1911206-002EMSD	Date Analyzed:	11/22/2019	1434h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	11/08/2019	1400h										
Vanadium	0.194	mg/L	E200.8	0.00166	0.00440	0.2000	0	96.9	75 - 125	0.194	0.0229	20	
<b>Lab Sample ID:</b> 1911206-001EMSD	Date Analyzed:	11/13/2019	955h										
<b>Test Code:</b> HG-DW-DIS-245.1	Date Prepared:	11/12/2019	1600h										
Mercury	0.00404	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	121	85 - 115	0.0038	6.17	20	<sup>1</sup>

<sup>1</sup> - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.  
<sup>2</sup> - 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:** 1911206

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1911206-001CDUP		Date Analyzed: 11/11/2019 1325h											
<b>Test Code:</b> TDS-W-2540C													
Total Dissolved Solids	5,620	mg/L	SM2540C	16.0	20.0					5580	0.571	5	



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS-R132584</b> Date Analyzed: 11/13/2019 1826h													
Test Code: 300.0-W													
Chloride	4.95	mg/L	E300.0	0.0386	0.100	5.000	0	98.9	90 - 110				
Fluoride	5.20	mg/L	E300.0	0.0240	0.100	5.000	0	104	90 - 110				
Sulfate	5.42	mg/L	E300.0	0.174	0.750	5.000	0	108	90 - 110				
<b>Lab Sample ID: LCS-R133107</b> Date Analyzed: 11/27/2019 1035h													
Test Code: 300.0-W													
Sulfate	4.83	mg/L	E300.0	0.174	0.750	5.000	0	96.5	90 - 110				
<b>Lab Sample ID: LCS-R132478</b> Date Analyzed: 11/13/2019 710h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO <sub>3</sub> )	250	mg/L	SM2320B	0.781	1.00	250.0	0	100	90 - 110				
<b>Lab Sample ID: LCS-66279</b> Date Analyzed: 11/13/2019 1346h													
Test Code: NH3-W-350.1      Date Prepared: 11/13/2019 1013h													
Ammonia (as N)	9.71	mg/L	E350.1	0.0492	0.0500	10.00	0	97.1	90 - 110				
<b>Lab Sample ID: LCS-R132481</b> Date Analyzed: 11/13/2019 833h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.06	mg/L	E353.2	0.00363	0.0100	1.000	0	106	90 - 110				
<b>Lab Sample ID: LCS-R132451</b> Date Analyzed: 11/11/2019 1325h													
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:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID: MB-R132584</b>													
Date Analyzed: 11/13/2019 1809h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID: MB-R133107</b>													
Date Analyzed: 11/27/2019 1018h													
Test Code: 300.0-W													
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID: MB-R132478</b>													
Date Analyzed: 11/13/2019 710h													
Test Code: ALK-W-2320B-LL													
Bicarbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
Carbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
<b>Lab Sample ID: MB-66279</b>													
Date Analyzed: 11/13/2019 1345h													
Test Code: NH3-W-350.1													
Date Prepared: 11/13/2019 1013h													
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
<b>Lab Sample ID: MB-R132481</b>													
Date Analyzed: 11/13/2019 831h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								
<b>Lab Sample ID: MB-R132451</b>													
Date Analyzed: 11/11/2019 1325h													
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:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1911206-003BMS		Date Analyzed:		11/13/2019 2344h									
Test Code:		300.0-W											
Chloride	2,470	mg/L	E300.0	19.3	50.0	2,500	43.7	97.0	90 - 110				
Fluoride	2,610	mg/L	E300.0	12.0	50.0	2,500	0	104	90 - 110				
Sulfate	5,490	mg/L	E300.0	87.0	375	2,500	2900	104	90 - 110				
<b>Lab Sample ID:</b> 1911206-002BMS		Date Analyzed:		11/27/2019 1159h									
Test Code:		300.0-W											
Sulfate	4,980	mg/L	E300.0	87.0	375	2,500	2630	94.0	90 - 110				
<b>Lab Sample ID:</b> 1911206-001BMS		Date Analyzed:		11/13/2019 710h									
Test Code:		ALK-W-2320B-LL											
Alkalinity (as CaCO3)	2,980	mg/L	SM2320B	0.781	1.00	2,500	480	100	80 - 120				
<b>Lab Sample ID:</b> 1911206-001DMS		Date Analyzed:		11/13/2019 1357h									
Test Code:		Date Prepared:		11/13/2019 1013h									
Ammonia (as N)	13.7	mg/L	E350.1	0.0492	0.0500	10.00	0	137	90 - 110				†
<b>Lab Sample ID:</b> 1911206-001DMS		Date Analyzed:		11/13/2019 835h									
Test Code:		NO2/NO3-W-353.2											
Nitrate/Nitrite (as N)	11.3	mg/L	E353.2	0.0363	0.100	10.00	0.758	106	90 - 110				

† - 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

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1911206-003BMSD</b> Date Analyzed: 11/14/2019 001h													
Test Code: 300.0-W													
Chloride	2,480	mg/L	E300.0	19.3	50.0	2,500	43.7	97.6	90 - 110	2470	0.665	20	
Fluoride	2,610	mg/L	E300.0	12.0	50.0	2,500	0	104	90 - 110	2610	0.192	20	
Sulfate	5,450	mg/L	E300.0	87.0	375	2,500	2900	102	90 - 110	5490	0.652	20	
<b>Lab Sample ID: 1911206-002BMSD</b> Date Analyzed: 11/27/2019 1215h													
Test Code: 300.0-W													
Sulfate	4,980	mg/L	E300.0	87.0	375	2,500	2630	94.0	90 - 110	4980	0.0171	20	
<b>Lab Sample ID: 1911206-001BMSD</b> Date Analyzed: 11/13/2019 710h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO <sub>3</sub> )	2,980	mg/L	SM2320B	0.781	1.00	2,500	480	100	80 - 120	2980	0	10	
<b>Lab Sample ID: 1911206-001DMSD</b> Date Analyzed: 11/13/2019 1358h													
Test Code: NH3-W-350.1 Date Prepared: 11/13/2019 1013h													
Ammonia (as N)	13.8	mg/L	E350.1	0.0492	0.0500	10.00	0	138	90 - 110	13.7	1.31	10	1
<b>Lab Sample ID: 1911206-001DMSD</b> Date Analyzed: 11/13/2019 837h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	11.4	mg/L	E353.2	0.0363	0.100	10.00	0.758	107	90 - 110	11.3	0.878	10	

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



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1911206

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS VOC-2 111219A		<b>Date Analyzed:</b> 11/12/2019 814h											
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	32.0	µg/L	SW8260D	1.31	20.0	20.00	0	160	74 - 236				
Acetone	26.9	µg/L	SW8260D	2.87	20.0	20.00	0	135	70 - 350				
Benzene	22.3	µg/L	SW8260D	0.147	1.00	20.00	0	112	82 - 132				
Carbon tetrachloride	22.8	µg/L	SW8260D	0.262	1.00	20.00	0	114	77 - 143				
Chloroform	22.2	µg/L	SW8260D	0.166	1.00	20.00	0	111	85 - 124				
Chloromethane	18.0	µg/L	SW8260D	0.832	1.00	20.00	0	89.8	30 - 149				
Methylene chloride	22.2	µg/L	SW8260D	0.448	1.00	20.00	0	111	65 - 154				
Naphthalene	17.9	µg/L	SW8260D	0.704	1.00	20.00	0	89.6	62 - 129				
Tetrahydrofuran	20.4	µg/L	SW8260D	0.436	1.00	20.00	0	102	59 - 135				
Toluene	21.8	µg/L	SW8260D	0.177	1.00	20.00	0	109	69 - 129				
Xylenes, Total	66.0	µg/L	SW8260D	0.253	1.00	60.00	0	110	66 - 124				
Surr: 1,2-Dichloroethane-d4	53.1	µg/L	SW8260D			50.00		106	80 - 136				
Surr: 4-Bromofluorobenzene	45.8	µg/L	SW8260D			50.00		91.6	85 - 121				
Surr: Dibromofluoromethane	51.8	µg/L	SW8260D			50.00		104	78 - 132				
Surr: Toluene-d8	49.0	µg/L	SW8260D			50.00		98.0	81 - 123				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> MB VOC-2 111219A	Date Analyzed:		11/12/2019 834h										
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260D	1.31	20.0								
Acetone	< 20.0	µg/L	SW8260D	2.87	20.0								
Benzene	< 1.00	µg/L	SW8260D	0.147	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260D	0.262	1.00								
Chloroform	< 1.00	µg/L	SW8260D	0.166	1.00								
Chloromethane	< 1.00	µg/L	SW8260D	0.832	1.00								
Methylene chloride	< 1.00	µg/L	SW8260D	0.448	1.00								
Naphthalene	< 1.00	µg/L	SW8260D	0.704	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260D	0.436	1.00								
Toluene	< 1.00	µg/L	SW8260D	0.177	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260D	0.253	1.00								
Surr: 1,2-Dichloroethane-d4	52.3	µg/L	SW8260D			50.00		105	80 - 136				
Surr: 4-Bromofluorobenzene	48.7	µg/L	SW8260D			50.00		97.3	85 - 121				
Surr: Dibromofluoromethane	50.4	µg/L	SW8260D			50.00		101	78 - 132				
Surr: Toluene-d8	49.6	µg/L	SW8260D			50.00		99.2	81 - 123				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1911206-002AMS</b>		<b>Date Analyzed: 11/12/2019 1114h</b>											
<b>Test Code: 8260D-W-DEN100</b>													
2-Butanone	26.8	µg/L	SW8260D	1.31	20.0	20.00	0	134	74 - 236				
Acetone	16.9	µg/L	SW8260D	2.87	20.0	20.00	0	84.7	70 - 350				
Benzene	24.6	µg/L	SW8260D	0.147	1.00	20.00	0	123	82 - 132				
Carbon tetrachloride	24.4	µg/L	SW8260D	0.262	1.00	20.00	0	122	77 - 143				
Chloroform	24.3	µg/L	SW8260D	0.166	1.00	20.00	0	121	85 - 124				
Chloromethane	18.1	µg/L	SW8260D	0.832	1.00	20.00	0	90.5	30 - 149				
Methylene chloride	24.6	µg/L	SW8260D	0.448	1.00	20.00	0	123	65 - 154				
Naphthalene	20.9	µg/L	SW8260D	0.704	1.00	20.00	0	105	62 - 129				
Tetrahydrofuran	22.1	µg/L	SW8260D	0.436	1.00	20.00	0	110	59 - 135				
Toluene	24.2	µg/L	SW8260D	0.177	1.00	20.00	0	121	69 - 129				
Xylenes, Total	71.9	µg/L	SW8260D	0.253	1.00	60.00	0	120	66 - 124				
Surr: 1,2-Dichloroethane-d4	53.6	µg/L	SW8260D			50.00		107	80 - 136				
Surr: 4-Bromofluorobenzene	45.6	µg/L	SW8260D			50.00		91.3	85 - 121				
Surr: Dibromofluoromethane	51.6	µg/L	SW8260D			50.00		103	78 - 132				
Surr: Toluene-d8	48.7	µg/L	SW8260D			50.00		97.4	81 - 123				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911206  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1911206-002AMSD		<b>Date Analyzed:</b> 11/12/2019 1134h											
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	27.4	µg/L	SW8260D	1.31	20.0	20.00	0	137	74 - 236	26.8	2.32	35	
Acetone	17.8	µg/L	SW8260D	2.87	20.0	20.00	0	89.0	70 - 350	16.9	4.89	35	
Benzene	22.9	µg/L	SW8260D	0.147	1.00	20.00	0	115	82 - 132	24.6	7.20	35	
Carbon tetrachloride	23.3	µg/L	SW8260D	0.262	1.00	20.00	0	116	77 - 143	24.5	4.99	35	
Chloroform	23.0	µg/L	SW8260D	0.166	1.00	20.00	0	115	85 - 124	24.3	5.46	35	
Chloromethane	18.0	µg/L	SW8260D	0.832	1.00	20.00	0	89.8	30 - 149	18.1	0.832	35	
Methylene chloride	23.2	µg/L	SW8260D	0.448	1.00	20.00	0	116	65 - 154	24.6	5.99	35	
Naphthalene	19.8	µg/L	SW8260D	0.704	1.00	20.00	0	99.0	62 - 129	20.9	5.45	35	
Tetrahydrofuran	22.0	µg/L	SW8260D	0.436	1.00	20.00	0	110	59 - 135	22.1	0.227	35	
Toluene	22.5	µg/L	SW8260D	0.177	1.00	20.00	0	113	69 - 129	24.2	7.23	35	
Xylenes, Total	67.1	µg/L	SW8260D	0.253	1.00	60.00	0	112	66 - 124	71.9	6.86	35	
Surr: 1,2-Dichloroethane-d4	54.0	µg/L	SW8260D			50.00		108	80 - 136				
Surr: 4-Bromofluorobenzene	46.6	µg/L	SW8260D			50.00		93.1	85 - 121				
Surr: Dibromofluoromethane	51.9	µg/L	SW8260D			50.00		104	78 - 132				
Surr: Toluene-d8	48.8	µg/L	SW8260D			50.00		97.6	81 - 123				

**WORK ORDER Summary**

Work Order: **1911206**

Page 1 of 3

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

Due Date: 11/22/2019

**Client ID:** ENE300

**Contact:** Tanner Holliday

**Project:** 4th Quarter Ground Water 2019

**QC Level:** III

WO Type: Project

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

*ETH/MS*

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1911206-001A	MW-03A_11062019	11/6/2019 0830h	11/8/2019 1210h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1911206-001B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				<i>3 SEL Analytes: CL F SO4</i>				
				ALK-W-2320B-LL		<input checked="" type="checkbox"/>	df - wc	
				<i>2 SEL Analytes: ALKB ALKC</i>				
1911206-001C				TDS-W-2540C		<input checked="" type="checkbox"/>	df - tds	
				<i>1 SEL Analytes: TDS</i>				
1911206-001D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<i>1 SEL Analytes: NH3N</i>				
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<i>1 SEL Analytes: NO3NO2N</i>				
1911206-001E				200.7-DIS		<input checked="" type="checkbox"/>	df-met	
				<i>4 SEL Analytes: CA MG K NA</i>				
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS		<input checked="" type="checkbox"/>	df-met	
				<i>18 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U V ZN</i>				
				200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-245.1		<input checked="" type="checkbox"/>	df-met	
				<i>1 SEL Analytes: HG</i>				
				HG-DW-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				IONBALANCE		<input checked="" type="checkbox"/>	df-met	
				<i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>				
1911206-002A	MW-24_11062019	11/6/2019 0800h	11/8/2019 1210h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>				
1911206-002B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				<i>3 SEL Analytes: CL F SO4</i>				
				ALK-W-2320B-LL		<input checked="" type="checkbox"/>	df - wc	
				<i>2 SEL Analytes: ALKB ALKC</i>				
1911206-002C				TDS-W-2540C		<input checked="" type="checkbox"/>	df - tds	
				<i>1 SEL Analytes: TDS</i>				

# WORK ORDER Summary

Work Order: **1911206** Page 2 of 3

Client: Energy Fuels Resources, Inc.

Due Date: 11/22/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1911206-002D	MW-24_11062019	11/6/2019 0800h	11/8/2019 1210h	NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>	Aqueous	<input checked="" type="checkbox"/>	df - no2/no3 & nh3	1
				NH3-W-PR NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	df - no2/no3 & nh3 df - no2/no3 & nh3	
1911206-002E				200.7-DIS <i>4 SEL Analytes: CA MG K NA</i>		<input checked="" type="checkbox"/>	df-met	
				200.7-DIS-PR 200.8-DIS <i>18 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U V ZN</i>		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	df-met df-met	
				200.8-DIS-PR HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	df-met df-met	
				HG-DW-DIS-PR IONBALANCE <i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	df-met df-met	
1911206-003A	MW-38_11062019	11/6/2019 0900h	11/8/2019 1210h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1911206-003B				300.0-W <i>3 SEL Analytes: CL F SO4</i>		<input checked="" type="checkbox"/>	df - wc	1
				ALK-W-2320B-LL <i>2 SEL Analytes: ALKB ALKC</i>		<input checked="" type="checkbox"/>	df - wc	
1911206-003C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		<input checked="" type="checkbox"/>	df - tds	
1911206-003D				NH3-W-350.1 <i>1 SEL Analytes: NH3N</i>		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NH3-W-PR NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	df - no2/no3 & nh3 df - no2/no3 & nh3	
1911206-003E				200.7-DIS <i>4 SEL Analytes: CA MG K NA</i>		<input checked="" type="checkbox"/>	df-met	
				200.7-DIS-PR 200.8-DIS <i>18 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U V ZN</i>		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	df-met df-met	
				200.8-DIS-PR HG-DW-DIS-245.1 <i>1 SEL Analytes: HG</i>		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	df-met df-met	

# WORK ORDER Summary

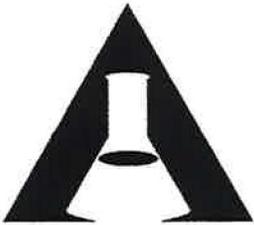
Work Order: **1911206**

Page 3 of 3

Client: Energy Fuels Resources, Inc.

Due Date: 11/22/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1911206-003E	MW-38_11062019	11/6/2019 0900h	11/8/2019 1210h	HG-DW-DIS-PR IONBALANCE	Aqueous	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	df-met df-met	1
<i>5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc</i>								
1911206-004A	Trip Blank	11/6/2019 0800h	11/8/2019 1210h	8260D-W-DEN100	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>								



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## CHAIN OF CUSTODY

1911206

AWAL Lab Sample Set #  
 Page 1 of 1

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.

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												
Sample ID	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	NH3 (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)	Known Hazards & Sample Comments	Laboratory Use Only
1 MW-03A_11062019	11/6/2019	830	7	W	x	x	x	x	x	x	x	x	x		Samples Were: 1 Shipped or hand delivered 2 Ambient or Chilled 3 Temperature 23 °C 4 Received Broken/Leaking (Improperly Sealed) Y 5 Properly Preserved Y N Checked at bench Y N 6 Received Within Holding Times Y N  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
2 MW-24_11062019	11/6/2019	800	7	W	x	x	x	x	x	x	x	x	x		
3 MW-38_11062019	11/6/2019	900	7	W	x	x	x	x	x	x	x	x	x		
4 Trip Blank	11/6/2019	800	3	W									x		
5															
6															
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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: **4th Quarter Ground Water 2019**  
 Project #:  
 PO #:  
 Sampler Name: **Tanner Holliday**

Relinquished by: Signature: <i>Tanner Holliday</i>	Date: 11/7/2019	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: Signature: <i>Elona Hayward</i>	Date: 11/8/19	
Print Name:	Time:	Print Name: Elona Hayward	Time: 1210	
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:	





Tanner Holliday  
Energy Fuels Resources, Inc.  
6425 South Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 4th Quarter Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1912025

3440 South 700 West  
Salt Lake City, UT 84119

American West Analytical Laboratories received sample(s) on 12/3/2019 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.

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e-mail: [awal@awal-labs.com](mailto:awal@awal-labs.com)

web: [www.awal-labs.com](http://www.awal-labs.com)

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:

<b>Jose G. Rocha</b>	Digitally signed by Jose G. Rocha
	DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou=UT00031, email=jose@awal-labs.com, c=US Date: 2019.12.18 13:03:08 -07'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1912025  
**Date Received:** 12/3/2019 1044h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1912025-001A	MW-37_11222019	11/22/2019 915h	Aqueous	VOA by GC/MS Method 8260D/5030C
1912025-001B	MW-37_11222019	11/22/2019 915h	Aqueous	Anions, E300.0
1912025-001B	MW-37_11222019	11/22/2019 915h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1912025-001D	MW-37_11222019	11/22/2019 915h	Aqueous	Nitrite/Nitrate (as N), E353.2
1912025-001D	MW-37_11222019	11/22/2019 915h	Aqueous	Ammonia, Aqueous
1912025-001E	MW-37_11222019	11/22/2019 915h	Aqueous	Mercury, Drinking Water Dissolved
1912025-001E	MW-37_11222019	11/22/2019 915h	Aqueous	Ion Balance
1912025-001E	MW-37_11222019	11/22/2019 915h	Aqueous	ICP Metals, Dissolved
1912025-001E	MW-37_11222019	11/22/2019 915h	Aqueous	ICPMS Metals, Dissolved
1912025-002A	MW-20_11222019	11/22/2019 1400h	Aqueous	VOA by GC/MS Method 8260D/5030C
1912025-002B	MW-20_11222019	11/22/2019 1400h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1912025-002B	MW-20_11222019	11/22/2019 1400h	Aqueous	Anions, E300.0
1912025-002D	MW-20_11222019	11/22/2019 1400h	Aqueous	Nitrite/Nitrate (as N), E353.2
1912025-002D	MW-20_11222019	11/22/2019 1400h	Aqueous	Ammonia, Aqueous
1912025-002E	MW-20_11222019	11/22/2019 1400h	Aqueous	Ion Balance
1912025-002E	MW-20_11222019	11/22/2019 1400h	Aqueous	ICP Metals, Dissolved
1912025-002E	MW-20_11222019	11/22/2019 1400h	Aqueous	ICPMS Metals, Dissolved
1912025-002E	MW-20_11222019	11/22/2019 1400h	Aqueous	Mercury, Drinking Water Dissolved
1912025-003A	Trip Blank	11/22/2019 915h	Aqueous	VOA by GC/MS Method 8260D/5030C
1912025-004A	MW-02_11222019	11/22/2019 1255h	Aqueous	Anions, E300.0

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1912025

---

## Sample Receipt Information:

3440 South 700 West  
Salt Lake City, UT 84119

**Date of Receipt:** 12/3/2019  
**Date(s) of Collection:** 11/22/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation of all samples were performed within the method holding times. All 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:

**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
1912025-001D	Ammonia	MS/MSD	Sample matrix interference
1912025-001E	Calcium	MS/MSD	High analyte concentration
1912025-001E	Magnesium	MSD	High analyte concentration
1912025-001E	Potassium	MS/MSD	Sample matrix interference
1912025-001E	Silver	MS/MSD	Sample matrix interference
1912025-001E	Sodium	MS/MSD	High analyte concentration
1912109-004B	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:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1912025

---

### Sample Receipt Information:

<b>Date of Receipt:</b>	12/3/2019
<b>Date(s) of Collection:</b>	11/22/2019
<b>Sample Condition:</b>	Intact
<b>C-O-C Discrepancies:</b>	None
<b>Method:</b>	SW-846 8260D/5030C
<b>Analysis:</b>	Volatile Organic Compounds

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**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.

Kyle F. Gross  
Laboratory Director

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

Jose Rocha  
QA Officer

**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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Salt Lake City, UT 84119

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912025  
**Project:** 4th Quarter 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
<b>Lab Sample ID: LCS-66655</b>		Date Analyzed:	12/13/2019 1445h										
<b>Test Code: 200.7-DIS</b>		Date Prepared:	12/03/2019 1144h										
Calcium	9.33	mg/L	E200.7	0.102	1.00	10.00	0	93.3	85 - 115				
Magnesium	9.52	mg/L	E200.7	0.139	1.00	10.00	0	95.2	85 - 115				
Potassium	9.46	mg/L	E200.7	0.114	1.00	10.00	0	94.6	85 - 115				
<b>Lab Sample ID: LCS-66655</b>		Date Analyzed:	12/13/2019 1704h										
<b>Test Code: 200.7-DIS</b>		Date Prepared:	12/03/2019 1144h										
Sodium	9.82	mg/L	E200.7	0.306	1.00	10.00	0	98.2	85 - 115				
<b>Lab Sample ID: LCS-66656</b>		Date Analyzed:	12/12/2019 1738h										
<b>Test Code: 200.8-DIS</b>		Date Prepared:	12/03/2019 1144h										
Arsenic	0.196	mg/L	E200.8	0.000298	0.00200	0.2000	0	97.9	85 - 115				
Cadmium	0.188	mg/L	E200.8	0.0000858	0.000500	0.2000	0	94.0	85 - 115				
Chromium	0.199	mg/L	E200.8	0.00191	0.00200	0.2000	0	99.3	85 - 115				
Cobalt	0.199	mg/L	E200.8	0.000300	0.00400	0.2000	0	99.6	85 - 115				
Copper	0.201	mg/L	E200.8	0.00282	0.00200	0.2000	0	101	85 - 115				
Iron	1.01	mg/L	E200.8	0.0496	0.100	1.000	0	101	85 - 115				
Lead	0.181	mg/L	E200.8	0.000448	0.00200	0.2000	0	90.4	85 - 115				
Molybdenum	0.187	mg/L	E200.8	0.000652	0.00400	0.2000	0	93.5	85 - 115				
Nickel	0.196	mg/L	E200.8	0.00148	0.00200	0.2000	0	98.0	85 - 115				
Silver	0.177	mg/L	E200.8	0.000232	0.00200	0.2000	0	88.7	85 - 115				
Thallium	0.179	mg/L	E200.8	0.000154	0.00200	0.2000	0	89.3	85 - 115				
Tin	0.936	mg/L	E200.8	0.00116	0.00400	1.000	0	93.6	85 - 115				
Uranium	0.198	mg/L	E200.8	0.000176	0.00200	0.2000	0	99.1	85 - 115				
Vanadium	0.203	mg/L	E200.8	0.00166	0.00440	0.2000	0	102	85 - 115				
<b>Lab Sample ID: LCS-66656</b>		Date Analyzed:	12/13/2019 1614h										
<b>Test Code: 200.8-DIS</b>		Date Prepared:	12/03/2019 1144h										
Beryllium	0.195	mg/L	E200.8	0.000198	0.00200	0.2000	0	97.3	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:** 1912025  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-66656	Date Analyzed: 12/13/2019 1614h												
Test Code: 200.8-DIS	Date Prepared: 12/03/2019 1144h												
Manganese	0.192	mg/L	E200.8	0.00108	0.00200	0.2000	0	95.9	85 - 115				
Selenium	0.215	mg/L	E200.8	0.000574	0.00200	0.2000	0	107	85 - 115				
Zinc	0.951	mg/L	E200.8	0.00418	0.00600	1.000	0	95.1	85 - 115				
<b>Lab Sample ID:</b> LCS-66718	Date Analyzed: 12/06/2019 1634h												
Test Code: HG-DW-DIS-245.1	Date Prepared: 12/05/2019 1454h												
Mercury	0.00336	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	101	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:** 1912025

**Project:** 4th Quarter 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
<b>Lab Sample ID: MB-66655</b>		Date Analyzed:	12/13/2019 1443h										
<b>Test Code: 200.7-DIS</b>		Date Prepared:	12/03/2019 1144h										
Calcium	< 1.00	mg/L	E200.7	0.102	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.139	1.00								
Potassium	< 1.00	mg/L	E200.7	0.114	1.00								
<b>Lab Sample ID: MB-66655</b>		Date Analyzed:	12/13/2019 1702h										
<b>Test Code: 200.7-DIS</b>		Date Prepared:	12/03/2019 1144h										
Sodium	< 1.00	mg/L	E200.7	0.306	1.00								
<b>Lab Sample ID: MB-66656</b>		Date Analyzed:	12/12/2019 1735h										
<b>Test Code: 200.8-DIS</b>		Date Prepared:	12/03/2019 1144h										
Arsenic	< 0.000200	mg/L	E200.8	0.0000298	0.000200								
Cadmium	< 0.0000500	mg/L	E200.8	0.00000858	0.0000500								
Chromium	< 0.000200	mg/L	E200.8	0.000191	0.000200								
Cobalt	< 0.000400	mg/L	E200.8	0.0000300	0.000400								
Copper	< 0.000200	mg/L	E200.8	0.000282	0.000200								
Iron	< 0.0100	mg/L	E200.8	0.00496	0.0100								
Lead	< 0.000200	mg/L	E200.8	0.0000448	0.000200								
Molybdenum	< 0.000400	mg/L	E200.8	0.0000652	0.000400								
Nickel	< 0.000200	mg/L	E200.8	0.000148	0.000200								
Silver	< 0.000200	mg/L	E200.8	0.0000232	0.000200								
Thallium	< 0.000200	mg/L	E200.8	0.0000154	0.000200								
Tin	< 0.000400	mg/L	E200.8	0.000116	0.000400								
Uranium	< 0.000200	mg/L	E200.8	0.0000176	0.000200								
Vanadium	< 0.000440	mg/L	E200.8	0.000166	0.000440								
<b>Lab Sample ID: MB-66656</b>		Date Analyzed:	12/13/2019 1611h										
<b>Test Code: 200.8-DIS</b>		Date Prepared:	12/03/2019 1144h										
Beryllium	< 0.000500	mg/L	E200.8	0.0000494	0.000500								



**American West**  
ANALYTICAL LABORATORIES

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912025  
**Project:** 4th Quarter 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	
<b>Lab Sample ID:</b> MB-66656	Date Analyzed:	12/13/2019 1611h												
Test Code:	200.8-DIS		Date Prepared:	12/03/2019 1144h										
Manganese	< 0.000500	mg/L	E200.8	0.000270	0.000500									
Selenium	< 0.000500	mg/L	E200.8	0.000144	0.000500									
Zinc	< 0.00150	mg/L	E200.8	0.00105	0.00150									
<b>Lab Sample ID:</b> MB-66718	Date Analyzed:	12/06/2019 1632h												
Test Code:	HG-DW-DIS-245.1		Date Prepared:	12/05/2019 1454h										
Mercury	< 0.0000900	mg/L	E245.1	0.0000396	0.0000900									



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912025  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1912025-001EMS	Date Analyzed:	12/13/2019 1449h											
Test Code:	200.7-DIS		Date Prepared:	12/03/2019 1144h									
Calcium	488	mg/L	E200.7	2.04	20.0	10.00	467	212	70 - 130				2
Magnesium	144	mg/L	E200.7	2.78	20.0	10.00	131	125	70 - 130				
<b>Lab Sample ID:</b> 1912025-001EMS	Date Analyzed:	12/13/2019 1515h											
Test Code:	200.7-DIS		Date Prepared:	12/03/2019 1144h									
Potassium	40.1	mg/L	E200.7	0.114	1.00	10.00	16.2	239	70 - 130				1
<b>Lab Sample ID:</b> 1912025-001EMS	Date Analyzed:	12/13/2019 1709h											
Test Code:	200.7-DIS		Date Prepared:	12/03/2019 1144h									
Sodium	468	mg/L	E200.7	15.3	50.0	10.00	506	-376	70 - 130				2
<b>Lab Sample ID:</b> 1912025-001EMS	Date Analyzed:	12/12/2019 1744h											
Test Code:	200.8-DIS		Date Prepared:	12/03/2019 1144h									
Arsenic	0.210	mg/L	E200.8	0.000298	0.00200	0.2000	0.000374	105	75 - 125				
Cadmium	0.191	mg/L	E200.8	0.0000858	0.000500	0.2000	0.000426	95.3	75 - 125				
Chromium	0.200	mg/L	E200.8	0.00191	0.00200	0.2000	0.000206	100	75 - 125				
Cobalt	0.195	mg/L	E200.8	0.000300	0.00400	0.2000	0.0000673	97.4	75 - 125				
Copper	0.197	mg/L	E200.8	0.00282	0.00200	0.2000	0.00084	98.3	75 - 125				
Iron	0.993	mg/L	E200.8	0.0496	0.100	1.000	0	99.3	75 - 125				
Lead	0.177	mg/L	E200.8	0.000448	0.00200	0.2000	0	88.5	75 - 125				
Molybdenum	0.198	mg/L	E200.8	0.000652	0.00400	0.2000	0.000593	98.5	75 - 125				
Nickel	0.202	mg/L	E200.8	0.00148	0.00200	0.2000	0.00588	98.1	75 - 125				
Silver	0.140	mg/L	E200.8	0.000232	0.00200	0.2000	0.0000278	70.0	75 - 125				1
Thallium	0.177	mg/L	E200.8	0.000154	0.00200	0.2000	0.000608	88.2	75 - 125				
Tin	0.985	mg/L	E200.8	0.00116	0.00400	1.000	0.000141	98.4	75 - 125				
Uranium	0.210	mg/L	E200.8	0.000176	0.00200	0.2000	0.0116	99.1	75 - 125				
Vanadium	0.203	mg/L	E200.8	0.00166	0.00440	0.2000	0.000543	101	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:** 1912025

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1912025-001EMS	Date Analyzed:	12/13/2019 1624h											
Test Code:	200.8-DIS		Date Prepared:	12/03/2019 1144h									
Beryllium	0.202	mg/L	E200.8	0.000198	0.00200	0.2000	0.0000786	101	75 - 125				
Manganese	0.226	mg/L	E200.8	0.00108	0.00200	0.2000	0.0124	107	75 - 125				
Selenium	0.240	mg/L	E200.8	0.000574	0.00200	0.2000	0.00487	118	75 - 125				
Zinc	1.15	mg/L	E200.8	0.00418	0.00600	1.000	0.0403	111	75 - 125				
<b>Lab Sample ID:</b> 1912025-002EMS	Date Analyzed:	12/06/2019 1642h											
Test Code:	HG-DW-DIS-245.1		Date Prepared:	12/05/2019 1454h									
Mercury	0.00338	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	101	85 - 115				

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

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



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Salt Lake City, UT 84119

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1912025

**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1912025-001EMSD	Date Analyzed:	12/13/2019 1452h											
<b>Test Code:</b> 200.7-DIS	Date Prepared:	12/03/2019 1144h											
Calcium	501	mg/L	E200.7	2.04	20.0	10.00	467	337	70 - 130	488	2.53	20	2
Magnesium	147	mg/L	E200.7	2.78	20.0	10.00	131	155	70 - 130	144	2.07	20	2
<b>Lab Sample ID:</b> 1912025-001EMSD	Date Analyzed:	12/13/2019 1518h											
<b>Test Code:</b> 200.7-DIS	Date Prepared:	12/03/2019 1144h											
Potassium	38.9	mg/L	E200.7	0.114	1.00	10.00	16.2	227	70 - 130	40.1	3.19	20	1
<b>Lab Sample ID:</b> 1912025-001EMSD	Date Analyzed:	12/13/2019 1711h											
<b>Test Code:</b> 200.7-DIS	Date Prepared:	12/03/2019 1144h											
Sodium	465	mg/L	E200.7	15.3	50.0	10.00	506	-406	70 - 130	468	0.647	20	2
<b>Lab Sample ID:</b> 1912025-001EMSD	Date Analyzed:	12/12/2019 1747h											
<b>Test Code:</b> 200.8-DIS	Date Prepared:	12/03/2019 1144h											
Arsenic	0.207	mg/L	E200.8	0.000298	0.00200	0.2000	0.000374	104	75 - 125	0.21	1.45	20	
Cadmium	0.192	mg/L	E200.8	0.0000858	0.000500	0.2000	0.000426	95.6	75 - 125	0.191	0.313	20	
Chromium	0.199	mg/L	E200.8	0.00191	0.00200	0.2000	0.000206	99.6	75 - 125	0.2	0.434	20	
Cobalt	0.201	mg/L	E200.8	0.000300	0.00400	0.2000	0.0000673	100	75 - 125	0.195	2.97	20	
Copper	0.200	mg/L	E200.8	0.00282	0.00200	0.2000	0.00084	99.4	75 - 125	0.197	1.10	20	
Iron	1.01	mg/L	E200.8	0.0496	0.100	1.000	0	101	75 - 125	0.993	1.57	20	
Lead	0.175	mg/L	E200.8	0.000448	0.00200	0.2000	0	87.4	75 - 125	0.177	1.31	20	
Molybdenum	0.198	mg/L	E200.8	0.000652	0.00400	0.2000	0.000593	98.9	75 - 125	0.198	0.382	20	
Nickel	0.205	mg/L	E200.8	0.00148	0.00200	0.2000	0.00588	99.5	75 - 125	0.202	1.44	20	
Silver	0.139	mg/L	E200.8	0.000232	0.00200	0.2000	0.0000278	69.4	75 - 125	0.14	0.887	20	
Thallium	0.174	mg/L	E200.8	0.000154	0.00200	0.2000	0.000608	86.8	75 - 125	0.177	1.57	20	
Tin	0.976	mg/L	E200.8	0.00116	0.00400	1.000	0.000141	97.6	75 - 125	0.985	0.887	20	
Uranium	0.209	mg/L	E200.8	0.000176	0.00200	0.2000	0.0116	98.5	75 - 125	0.21	0.606	20	
Vanadium	0.208	mg/L	E200.8	0.00166	0.00440	0.2000	0.000543	103	75 - 125	0.203	2.28	20	



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912025  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1912025-001EMSD		Date Analyzed:		12/13/2019 1627h									
Test Code:		Date Prepared:		200.8-DIS 12/03/2019 1144h									
Beryllium	0.194	mg/L	E200.8	0.000198	0.00200	0.2000	0.0000786	97.1	75 - 125	0.202	3.85	20	
Manganese	0.199	mg/L	E200.8	0.00108	0.00200	0.2000	0.0124	93.2	75 - 125	0.226	12.6	20	
Selenium	0.235	mg/L	E200.8	0.000574	0.00200	0.2000	0.00487	115	75 - 125	0.24	2.26	20	
Zinc	0.994	mg/L	E200.8	0.00418	0.00600	1.000	0.0403	95.4	75 - 125	1.15	14.4	20	
<b>Lab Sample ID:</b> 1912025-002EMSD		Date Analyzed:		12/06/2019 1644h									
Test Code:		Date Prepared:		HG-DW-DIS-245.1 12/05/2019 1454h									
Mercury	0.00338	mg/L	E245.1	0.0000396	0.0000900	0.003330	0	102	85 - 115	0.00338	0.197	20	

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

<sup>2</sup> - 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:** 1912025  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-R133473		Date Analyzed: 12/10/2019 1304h											
Test Code: 300.0-W													
Chloride	5.05	mg/L	E300.0	0.0386	0.100	5.000	0	101	90 - 110				
Fluoride	5.01	mg/L	E300.0	0.0240	0.100	5.000	0	100	90 - 110				
Sulfate	5.08	mg/L	E300.0	0.174	0.750	5.000	0	102	90 - 110				
<b>Lab Sample ID:</b> LCS-R133198		Date Analyzed: 12/04/2019 943h											
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	250	mg/L	SM2320B	0.781	1.00	250.0	0	100	90 - 110				
<b>Lab Sample ID:</b> LCS-66916		Date Analyzed: 12/15/2019 1503h											
Test Code: NH3-W-350.1		Date Prepared: 12/15/2019 1031h											
Ammonia (as N)	10.2	mg/L	E350.1	0.0492	0.0500	10.00	0	102	90 - 110				
<b>Lab Sample ID:</b> LCS-R133156		Date Analyzed: 12/03/2019 1041h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.07	mg/L	E353.2	0.00363	0.0100	1.000	0	107	90 - 110				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1912025

**Project:** 4th Quarter 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
<b>Lab Sample ID: MB-R133473</b>		Date Analyzed: 12/10/2019 1247h											
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID: MB-R133198</b>		Date Analyzed: 12/04/2019 943h											
Test Code: ALK-W-2320B-LL													
Bicarbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
Carbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.781	1.00								
<b>Lab Sample ID: MB-66916</b>		Date Analyzed: 12/15/2019 1439h											
Test Code: NH3-W-350.1		Date Prepared: 12/15/2019 1031h											
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
<b>Lab Sample ID: MB-R133156</b>		Date Analyzed: 12/03/2019 1038h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912025  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> 1912025-002BMS		Date Analyzed:		12/10/2019 2053h									
Test Code:		300.0-W											
Chloride	2,470	mg/L	E300.0	19.3	50.0	2,500	58.7	96.5	90 - 110				
Fluoride	2,520	mg/L	E300.0	12.0	50.0	2,500	0	101	90 - 110				
Sulfate	5,460	mg/L	E300.0	87.0	375	2,500	3030	97.3	90 - 110				
<b>Lab Sample ID:</b> 1912025-001BMS		Date Analyzed:		12/04/2019 943h									
Test Code:		ALK-W-2320B-LL											
Alkalinity (as CaCO3)	736	mg/L	SM2320B	0.781	1.00	500.0	235	100	80 - 120				
<b>Lab Sample ID:</b> 1912025-001DMS		Date Analyzed:		12/15/2019 1441h									
Test Code:		Date Prepared:		12/15/2019 1031h									
Ammonia (as N)	13.9	mg/L	E350.1	0.0492	0.0500	10.00	0.149	137	90 - 110				1
<b>Lab Sample ID:</b> 1912109-004BMS		Date Analyzed:		12/15/2019 1455h									
Test Code:		Date Prepared:		12/15/2019 1031h									
Ammonia (as N)	14.2	mg/L	E350.1	0.0492	0.0500	10.00	0.207	140	90 - 110				1
<b>Lab Sample ID:</b> 1912025-001DMS		Date Analyzed:		12/03/2019 1125h									
Test Code:		NO2/NO3-W-353.2											
Nitrate/Nitrite (as N)	10.6	mg/L	E353.2	0.0363	0.100	10.00	0.148	104	90 - 110				

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



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## QC SUMMARY REPORT

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**Lab Set ID:** 1912025  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1912025-002BMSD</b>		Date Analyzed: 12/10/2019 2109h											
Test Code: 300.0-W													
Chloride	2,470	mg/L	E300.0	19.3	50.0	2,500	58.7	96.5	90 - 110	2470	0.0156	20	
Fluoride	2,500	mg/L	E300.0	12.0	50.0	2,500	0	99.8	90 - 110	2520	0.947	20	
Sulfate	5,410	mg/L	E300.0	87.0	375	2,500	3030	95.4	90 - 110	5460	0.854	20	
<b>Lab Sample ID: 1912025-001BMSD</b>		Date Analyzed: 12/04/2019 943h											
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	736	mg/L	SM2320B	0.781	1.00	500.0	235	100	80 - 120	736	0	10	
<b>Lab Sample ID: 1912025-001DMSD</b>		Date Analyzed: 12/15/2019 1443h											
Test Code: NH3-W-350.1		Date Prepared: 12/15/2019 1031h											
Ammonia (as N)	13.8	mg/L	E350.1	0.0492	0.0500	10.00	0.149	137	90 - 110	13.9	0.650	10	1
<b>Lab Sample ID: 1912109-004BMSD</b>		Date Analyzed: 12/15/2019 1456h											
Test Code: NH3-W-350.1		Date Prepared: 12/15/2019 1031h											
Ammonia (as N)	14.2	mg/L	E350.1	0.0492	0.0500	10.00	0.207	140	90 - 110	14.2	0.352	10	1
<b>Lab Sample ID: 1912025-001DMSD</b>		Date Analyzed: 12/03/2019 1126h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	10.8	mg/L	E353.2	0.0363	0.100	10.00	0.148	107	90 - 110	10.6	2.43	10	

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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912025  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS VOC-2 120319A		<b>Date Analyzed:</b> 12/03/2019 753h											
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	34.4	µg/L	SW8260D	1.31	20.0	20.00	0	172	74 - 236				
Acetone	32.5	µg/L	SW8260D	2.87	20.0	20.00	0	162	70 - 350				
Benzene	23.7	µg/L	SW8260D	0.147	1.00	20.00	0	119	82 - 132				
Carbon tetrachloride	24.3	µg/L	SW8260D	0.262	1.00	20.00	0	121	77 - 143				
Chloroform	23.0	µg/L	SW8260D	0.166	1.00	20.00	0	115	85 - 124				
Chloromethane	18.6	µg/L	SW8260D	0.832	1.00	20.00	0	93.0	30 - 149				
Methylene chloride	23.2	µg/L	SW8260D	0.448	1.00	20.00	0	116	65 - 154				
Naphthalene	16.3	µg/L	SW8260D	0.704	1.00	20.00	0	81.4	55 - 128				
Tetrahydrofuran	23.1	µg/L	SW8260D	0.436	1.00	20.00	0	116	59 - 135				
Toluene	23.8	µg/L	SW8260D	0.177	1.00	20.00	0	119	69 - 129				
Xylenes, Total	69.5	µg/L	SW8260D	0.253	1.00	60.00	0	116	66 - 124				
Surr: 1,2-Dichloroethane-d4	52.0	µg/L	SW8260D			50.00		104	80 - 136				
Surr: 4-Bromofluorobenzene	55.3	µg/L	SW8260D			50.00		111	85 - 121				
Surr: Dibromofluoromethane	51.3	µg/L	SW8260D			50.00		103	78 - 132				
Surr: Toluene-d8	53.1	µg/L	SW8260D			50.00		106	81 - 123				



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**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
<b>Lab Sample ID: MB VOC-2 120319A</b>		<b>Date Analyzed:</b> 12/03/2019 813h											
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260D	1.31	20.0								
Acetone	< 20.0	µg/L	SW8260D	2.87	20.0								
Benzene	< 1.00	µg/L	SW8260D	0.147	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260D	0.262	1.00								
Chloroform	< 1.00	µg/L	SW8260D	0.166	1.00								
Chloromethane	< 1.00	µg/L	SW8260D	0.832	1.00								
Methylene chloride	< 1.00	µg/L	SW8260D	0.448	1.00								
Naphthalene	< 1.00	µg/L	SW8260D	0.704	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260D	0.436	1.00								
Toluene	< 1.00	µg/L	SW8260D	0.177	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260D	0.253	1.00								
Surr: 1,2-Dichloroethane-d4	51.6	µg/L	SW8260D			50.00		103	80 - 136				
Surr: 4-Bromofluorobenzene	59.9	µg/L	SW8260D			50.00		120	85 - 121				
Surr: Dibromofluoromethane	50.0	µg/L	SW8260D			50.00		99.9	78 - 132				
Surr: Toluene-d8	53.5	µg/L	SW8260D			50.00		107	81 - 123				



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**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
<b>Lab Sample ID:</b> 1912025-001AMS		<b>Date Analyzed:</b> 12/03/2019 1414h											
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	29.6	µg/L	SW8260D	1.31	20.0	20.00	0	148	74 - 236				
Acetone	24.0	µg/L	SW8260D	2.87	20.0	20.00	0	120	70 - 350				
Benzene	23.5	µg/L	SW8260D	0.147	1.00	20.00	0	118	82 - 132				
Carbon tetrachloride	23.6	µg/L	SW8260D	0.262	1.00	20.00	0	118	77 - 143				
Chloroform	22.6	µg/L	SW8260D	0.166	1.00	20.00	0	113	85 - 124				
Chloromethane	16.8	µg/L	SW8260D	0.832	1.00	20.00	0	84.0	30 - 149				
Methylene chloride	23.4	µg/L	SW8260D	0.448	1.00	20.00	0	117	65 - 154				
Naphthalene	20.0	µg/L	SW8260D	0.704	1.00	20.00	0	100	55 - 128				
Tetrahydrofuran	21.5	µg/L	SW8260D	0.436	1.00	20.00	0	107	59 - 135				
Toluene	23.6	µg/L	SW8260D	0.177	1.00	20.00	0	118	69 - 129				
Xylenes, Total	67.2	µg/L	SW8260D	0.253	1.00	60.00	0	112	66 - 124				
Surr: 1,2-Dichloroethane-d4	50.5	µg/L	SW8260D			50.00		101	80 - 136				
Surr: 4-Bromofluorobenzene	51.8	µg/L	SW8260D			50.00		104	85 - 121				
Surr: Dibromofluoromethane	49.3	µg/L	SW8260D			50.00		98.6	78 - 132				
Surr: Toluene-d8	50.3	µg/L	SW8260D			50.00		101	81 - 123				



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**QC Type:** MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID:</b> 1912025-001AMSD		<b>Date Analyzed:</b> 12/03/2019 1434h											
<b>Test Code:</b> 8260D-W-DEN100													
2-Butanone	29.5	µg/L	SW8260D	1.31	20.0	20.00	0	148	74 - 236	29.6	0.271	35	
Acetone	23.9	µg/L	SW8260D	2.87	20.0	20.00	0	120	70 - 350	24	0.417	35	
Benzene	23.2	µg/L	SW8260D	0.147	1.00	20.00	0	116	82 - 132	23.5	1.33	35	
Carbon tetrachloride	23.5	µg/L	SW8260D	0.262	1.00	20.00	0	117	77 - 143	23.6	0.637	35	
Chloroform	22.4	µg/L	SW8260D	0.166	1.00	20.00	0	112	85 - 124	22.6	0.622	35	
Chloromethane	18.0	µg/L	SW8260D	0.832	1.00	20.00	0	89.8	30 - 149	16.8	6.68	35	
Methylene chloride	23.1	µg/L	SW8260D	0.448	1.00	20.00	0	116	65 - 154	23.4	1.12	35	
Naphthalene	19.2	µg/L	SW8260D	0.704	1.00	20.00	0	95.8	55 - 128	20	4.24	35	
Tetrahydrofuran	22.9	µg/L	SW8260D	0.436	1.00	20.00	0	114	59 - 135	21.5	6.22	35	
Toluene	23.1	µg/L	SW8260D	0.177	1.00	20.00	0	116	69 - 129	23.6	2.14	35	
Xylenes, Total	66.3	µg/L	SW8260D	0.253	1.00	60.00	0	110	66 - 124	67.2	1.38	35	
Surr: 1,2-Dichloroethane-d4	51.6	µg/L	SW8260D			50.00		103	80 - 136				
Surr: 4-Bromofluorobenzene	50.6	µg/L	SW8260D			50.00		101	85 - 121				
Surr: Dibromofluoromethane	49.8	µg/L	SW8260D			50.00		99.6	78 - 132				
Surr: Toluene-d8	50.0	µg/L	SW8260D			50.00		99.9	81 - 123				

**WORK ORDER Summary**

Work Order: **1912025**

Page 1 of 2

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

Due Date: 12/17/2019

**Client ID:** ENE300

**Contact:** Tanner Holliday

**Project:** 4th Quarter Ground Water 2019

**QC Level:** III

**WO Type:** Project

**Comments:** QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com & gpalmer@energyfuels.com.; (USE PROJECT for special DLs). Do not use "\*R\_" samples as MS/MSD.;

DB

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel Storage	
1912025-001A	MW-37_11222019	11/22/2019 0915h	12/3/2019 1044h	8260D-W-DEN100	Aqueous	VOCFridge	3
<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>							
1912025-001B				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>							
1912025-001C						No Sample	
1912025-001D				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>							
1912025-001E				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>							
1912025-002A	MW-20_11222019	11/22/2019 1400h	12/3/2019 1044h	8260D-W-DEN100	Aqueous	VOCFridge	3
<i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>							
1912025-002B				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>							
1912025-002C						No Sample	

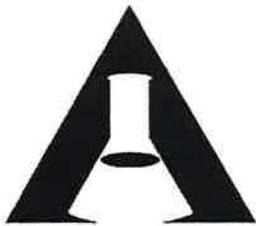
# WORK ORDER Summary

Work Order: **1912025** Page 2 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 12/17/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1912025-002D	MW-20_11222019	11/22/2019 1400h	12/3/2019 1044h	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	
1912025-002E				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	
1912025-003A	Trip Blank	11/22/2019 0915h	12/3/2019 1044h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 11 / # of Surr: 4</i>	Aqueous		VOCFridge	3
1912025-004A	MW-02_11222019	11/22/2019 1255h	12/3/2019 1044h	300.0-W <i>1 SEL Analytes: F</i>	Aqueous		df - wc	1



**American West  
Analytical Laboratories**

463 W. 3600 S. Salt Lake City, UT 84115  
Phone # (801) 263-8686 Toll Free # (888) 263-8686

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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.

1912025

AWAL Lab Sample Set #  
Page 1 of 2

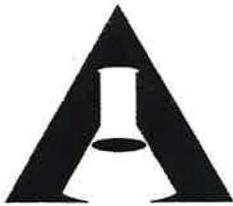
<b>QC Level:</b> 3		<b>Turn Around Time:</b> Standard		Unless other arrangements have been made, signed reports will be emailed by 5:00 pm on the day they are due.		<b>Due Date:</b> 12/17/19	
				<input checked="" type="checkbox"/> Include EDD: <b>LOCUS UPLOAD EXCEL</b> <input checked="" type="checkbox"/> Field Filtered For: <b>Dissolved Metals</b>		<b>Laboratory Use Only</b>	
				<b>For Compliance With:</b> <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:		Samples Were: <b>WPS</b> 1 Shipped or hand delivered 2 Ambient or Chilled 3 Temperature <b>2,3</b> °C 4 Received Broken/Leaking (Improperly Sealed) Y <input checked="" type="checkbox"/> N 5 Properly Preserved Y <input checked="" type="checkbox"/> N Checked at bench Y <input type="checkbox"/> N 6 Received Within Holding Times Y <input checked="" type="checkbox"/> N	
				<b>Known Hazards &amp; Sample Comments</b>			
						<b>COC Tape Was:</b> 1 Present on Outer Package Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA 2 Unbroken on Outer Package Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA 3 Present on Sample Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA 4 Unbroken on Sample Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA <b>Discrepancies Between Sample Labels and COC Record?</b> Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

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: **4th Quarter Ground Water 2019**  
 Project #:  
 PO #:  
 Sampler Name: **Tanner Holliday**

Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	NH3 (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, Tl, Sn, U, V, Zn, Na, K, Mg, Ca	Ion Balance	VOCs (8260C)	Known Hazards & Sample Comments
1 MW-37_11222019	11/22/2019	915	6	W	x	x	x		x	x	x	x	x	x	
2 MW-20_11222019	11/22/2019	1400	6	W	x	x	x		x	x	x	x	x	x	
3 Trip Blank	11/22/2019	0915	3	W										X	
4															
5															
6															
7															
8															
9															
10															
11															
12															

Relinquished by: Signature: <i>Tanner Holliday</i>	Date: 12/2/2019	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: 12/3/19
Print Name: _____	Time: _____	Print Name: <i>Denise Bruun</i>	Time: 10:44

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



**American West  
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[www.awal-labs.com](http://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.

1912025

AWAL Lab Sample Set #  
 Page 2 of 2

Due Date:  
 12/17/19

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.

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: **4th Quarter Ground Water 2019**  
 Project #:  
 PO #:  
 Sampler Name: **Tanner Holliday**

Include EDD:  
**LOCUS UPLOAD  
 EXCEL**  
 Field Filtered For:  
**Dissolved Metals**

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

Known Hazards  
 &  
 Sample Comments

Laboratory Use Only

Samples Were: **WPS**  
 Shipped or hand delivered  
 Ambient or Chilled  
 Temperature **2.3 °C**  
 Received Broken/Leaking (Improperly Sealed)  
 Y  N  
 Properly Preserved  
 Y  N  
 Checked at bench  
 Y  N  
 Received Within Holding Times  
 Y  N  
 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 Records?  
 Y  N

Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NOS (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)	Fl (4500 or 300.0)	Dissolved Beryllium (200.7/200.8)	Ammonia (350.1)	Dissolved Nickel (200.7/200.8)	Sample Comments
MW-02_11222019	11/22/2019	1255	1	W													X

Relinquished by: Signature <i>Tanner Holliday</i>	Date: 12/2/19	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: 11:38	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 Brun</i>	Date: 12/3/19	
Print Name:	Time:	Print Name: Denise Brun	Time: 10:44	

Lab Set ID: 1912025  
 pH Lot #: 6179

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	-001	-002																
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>	yes	yes																
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cyanide	pH >12 NaOH																		
Metals	pH <2 HNO <sub>3</sub>	yes	yes																
NO <sub>2</sub> /NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>	yes	yes																
O & G	pH <2 HCL																		
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Sulfide	pH >9 NaOH, Zn Acetate																		
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cr VI+	pH >9 (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>																		

- 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.



Tanner Holliday  
Energy Fuels Resources, Inc.  
6425 South Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: 4th Quarter Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1912110

3440 South 700 West  
Salt Lake City, UT 84119

American West Analytical Laboratories received sample(s) on 12/5/2019 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.

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

e-mail: [awal@awal-labs.com](mailto:awal@awal-labs.com)

web: [www.awal-labs.com](http://www.awal-labs.com)

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=UT00031,  
email=jose@awal-labs.com,  
c=US  
Date: 2019.12.17 14:26:48  
-07'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1912110  
**Date Received:** 12/5/2019 1143h

**Contact:** Tanner Holliday

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Date Collected</u>	<u>Matrix</u>	<u>Analysis</u>
1912110-001A	MW-15_12042019	12/4/2019 1115h	Aqueous	Total Dissolved Solids, A2540C
1912110-002A	MW-20_12042019	12/4/2019 1000h	Aqueous	Total Dissolved Solids, A2540C
1912110-003A	MW-37_12042019	12/4/2019 930h	Aqueous	Total Dissolved Solids, A2540C
1912110-004A	MW-70_12042019	12/4/2019 1115h	Aqueous	Total Dissolved Solids, A2540C

3440 South 700 West

Salt Lake City, UT 84119

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web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** 4th Quarter Ground Water 2019  
**Lab Set ID:** 1912110

---

### Sample Receipt Information:

3440 South 700 West  
Salt Lake City, UT 84119

**Date of Receipt:** 12/5/2019  
**Date(s) of Collection:** 12/4/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation of all samples were performed within the method holding times. All 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, RPD:

**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.

**Duplicate (DUP):** The parameters that required a duplicate analysis had RPDs within the control limits, with the following exception: the RPD for Total Dissolved Solids on sample 1912110-001A 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



3440 South 700 West  
Salt Lake City, UT 84119

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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912110  
**Project:** 4th Quarter 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
<b>Lab Sample ID: 1912109-006CDUP</b> Date Analyzed: 12/06/2019 1110h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	2,080	mg/L	SM2540C	16.0	20.0					2030	2.72	5	
<b>Lab Sample ID: 1912110-001ADUP</b> Date Analyzed: 12/06/2019 1110h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	3,780	mg/L	SM2540C	16.0	20.0					3340	12.3	5	@

@ - High RPD due to suspected sample non-homogeneity or matrix interference.



American West  
ANALYTICAL LABORATORIES

3440 South 700 West  
Salt Lake City, UT 84119

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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912110  
**Project:** 4th Quarter 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
<b>Lab Sample ID:</b> LCS-R133390		Date Analyzed: 12/06/2019 1110h											
<b>Test Code:</b> TDS-W-2540C													
Total Dissolved Solids	182	mg/L	SM2540C	8.00	10.0	205.0	0	88.8	80 - 120				

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 this report by 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



3440 South 700 West  
 Salt Lake City, UT 84119

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 e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912110  
**Project:** 4th Quarter 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
<b>Lab Sample ID: MB-R133390</b>													
Date Analyzed: 12/06/2019 1110h													
<b>Test Code: TDS-W-2540C</b>													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.00	10.0								

**WORK ORDER Summary**

Work Order: **1912110**

Page 1 of 1

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

Due Date: 12/19/2019

**Client ID:** ENE300

**Contact:** Tanner Holliday

**Project:** 4th Quarter Ground Water 2019

**QC Level:** III

WO Type: Project

**Comments:** QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com; (USE PROJECT for special DLs). Do not use "\*R\_" samples as MS/MSD.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1912110-001A	MW-15_12042019	12/4/2019 1115h	12/5/2019 1143h	TDS-W-2540C <i>1 SEL Analytes: TDS</i>	Aqueous		df-tds	1
1912110-002A	MW-20_12042019	12/4/2019 1000h	12/5/2019 1143h	TDS-W-2540C <i>1 SEL Analytes: TDS</i>	Aqueous		df-tds	1
1912110-003A	MW-37_12042019	12/4/2019 0930h	12/5/2019 1143h	TDS-W-2540C <i>1 SEL Analytes: TDS</i>	Aqueous		df-tds	1
1912110-004A	MW-70_12042019	12/4/2019 1115h	12/5/2019 1143h	TDS-W-2540C <i>1 SEL Analytes: TDS</i>	Aqueous		df-tds	1



**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.

1912110

AWAL Lab Sample Set #  
 Page 1 of 1

Client: **Energy Fuels Resources, Inc.**  
 Address: **6425 S. Hwy. 191  
 Blanding, UT 84511**  
 Contact: **Garrin Palmer**  
 Phone #: **(435) 678-2221** Cell #:  
**gpalmex@energyfuels.com; kWeinl@energyfuels.com;**  
**tholliday@energyfuels.com**  
 Project Name: **4TH 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				12/19/19						
# 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)	Laboratory Use Only	
											Samples Were:	
											1 Shipped or hand delivered	
											2 Ambient or Chilled	
											3 Temperature 1.0 °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	
											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	

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)	Known Hazards & Sample Comments
1 MW-15_12042019	12/4/2019	1115	1	W				X						
2 MW-20_12042019	12/4/2019	1000	1	W				X						
3 MW-37_12042019	12/4/2019	930	1	W				X						
4 MW-70_12042019	12/4/2019	1115	1	W				X						
5 70 int														
6														
7														
8														
9														
10														
11														
12														

Relinquished by: Signature: <i>[Signature]</i>	Date: 12/5/2019	Received by: Signature: <i>[Signature]</i>	Date: 12/5/19
Print Name: Abel Mendoza	Time: 11:43	Print Name: Aimee Rbst	Time: 11:43
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:	Date:
Print Name:	Time:	Print Name:	Time:

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



November 11, 2019

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

Re: White Mesa Mill GW  
Work Order: 493013

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 15, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

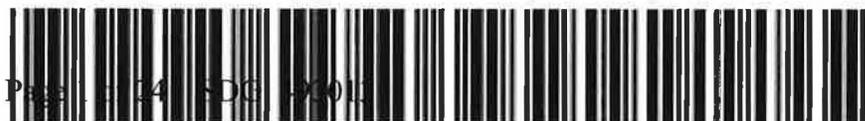
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

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



**Energy Fuels Resources (USA), Inc.  
White Mesa Mill GW  
SDG: 493013**

**Receipt Narrative  
for  
Energy Fuels Resources (USA), Inc.  
SDG: 493013**

November 11, 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 October 15, 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.

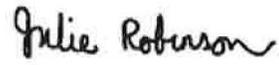
**Sample Identification:** The laboratory received the following samples:

<b><u>Laboratory ID</u></b>	<b><u>Client ID</u></b>
493013001	MW-14_10092019
493013002	MW-25_10092019
493013003	MW-26_10092019
493013004	MW-30_10082019
493013005	MW-31_10092019
493013006	MW-32_10082019
493013007	MW-35_10082019
493013008	MW-36_10082019
493013009	MW-65_10092019
493013010	TW4-24_10092019

**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.

A handwritten signature in black ink that reads "Julie Robinson". The signature is written in a cursive, flowing style.

Julie Robinson  
Project Manager

493013



# CHAIN OF CUSTODY

**Samples Shipped to:** GEL Laboratories, LLC **Contact:** Tanner Holliday  
2040 Savage Road Ph: 435 678 2221  
Charleston, SC 29407 gpalmer@energyfuels.com  
(843) 556 8171

## Chain of Custody/Sampling Analysis Request

Project	Samplers Name		Samplers Signature
Q4 Ground Water 2019	Tanner Holliday		<i>Tanner Holliday</i>
Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
MW-14 10092019	10/9/2019	1345	Gross Alpha
MW-25 10092019	10/9/2019	1030	Gross Alpha
MW-26 10092019	10/9/2019	1000	Gross Alpha
MW-30 10082019	10/8/2019	1120	Gross Alpha
MW-31 10092019	10/9/2019	1315	Gross Alpha
MW-32 10082019	10/8/2019	1240	Gross Alpha
MW-35 10082019	10/8/2019	1315	Gross Alpha
MW-36 10082019	10/8/2019	1415	Gross Alpha
MW-65 10092019	10/9/2019	1345	Gross Alpha
TW4-24 10092019	10/9/2019	1230	Gross Alpha
Comments: Please send report to Kathy Weinel at kweinel@energyfuels.com			

Relinquished By:(Signature) <i>Tanner Holliday</i> Tanner Holliday	Date/Time 10/10/2019 1130	Received By:(Signature) <i>A. Palmer</i>	Date/Time 10/15/19 900
Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time



# GEL Laboratories LLC – Login Review Report

Report Date: 11-NOV-19

Work Order: 493013

Page 1 of 2

GEL Work Order/SDG: 493013      Q4 Ground Water 2019  
 Client SDG: 493013  
 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: 12-NOV-19  
 Package Due Date: 10-NOV-19  
 EDD Due Date: 12-NOV-19  
 Due Date: 12-NOV-19  
 JAR1

Collector: C  
 Prelogin #: 20190487484  
 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
493013001	MW-14_10092019		09-OCT-19 13:45	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		
493013002	MW-25_10092019		09-OCT-19 10:30	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		
493013003	MW-26_10092019		09-OCT-19 10:00	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		
493013004	MW-30_10082019		08-OCT-19 11:20	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		
493013005	MW-31_10092019		09-OCT-19 13:15	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		
493013006	MW-32_10082019		08-OCT-19 12:40	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		
493013007	MW-35_10082019		08-OCT-19 13:15	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		
493013008	MW-36_10082019		08-OCT-19 14:15	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		
493013009	MW-65_10092019		09-OCT-19 13:45	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		
493013010	TW4-24_10092019		09-OCT-19 12:30	15-OCT-19 09:35	-2	1	GROUND WATER		20		1		

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data	Receive Codes
-001 MW-14_10092019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-002 MW-25_10092019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-003 MW-26_10092019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-004 MW-30_10082019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-005 MW-31_10092019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-006 MW-32_10082019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-007 MW-35_10082019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-008 MW-36_10082019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-009 MW-65_10092019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-010 TW4-24_10092019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				

# GEL Laboratories LLC – Login Review Report

Report Date: 11-NOV-19

Work Order: 493013

Page 2 of 2

**Product:** GFCTORAL    **Workdef ID:** 1458614    **In Product Group?** No    **Group Name:**    **Group Reference:**  
**Method:** EPA 903.0    **Path:** Drinking Water (903.0 or 9315)  
**Product Description:** GFPC, Total Alpha Radium, Liquid    **Product Reference:** Gross Alpha  
**Samples:** 001, 002, 003, 004, 005, 006, 007, 008, 009, 010    **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	No

Action	Product Name	Description	Samples
Contingent Tests			

**Login Requirements:**

Requirement	Include?	Comments

Peer Review by: \_\_\_\_\_ Work Order (SDG#), PO# Checked? \_\_\_\_\_ C of C signed in receiver location? \_\_\_\_\_

**List of current GEL Certifications as of 11 November 2019**

<b>State</b>	<b>Certification</b>
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-29
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

**Radiochemistry  
 Technical Case Narrative  
 Energy Fuels Resources  
 SDG #: 493013**

**Product:** GFPC, Total Alpha Radium, Liquid  
**Analytical Method:** EPA 903.0  
**Analytical Procedure:** GL-RAD-A-044 REV# 10  
**Analytical Batch:** 1929579

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
493013001	MW-14_10092019
493013002	MW-25_10092019
493013003	MW-26_10092019
493013004	MW-30_10082019
493013005	MW-31_10092019
493013006	MW-32_10082019
493013007	MW-35_10082019
493013008	MW-36_10082019
493013009	MW-65_10092019
493013010	TW4-24_10092019
1204410863	Method Blank (MB)
1204410864	493013008(MW-36_10082019) Sample Duplicate (DUP)
1204410865	493013008(MW-36_10082019) Matrix Spike (MS)
1204410866	493013008(MW-36_10082019) Matrix Spike Duplicate (MSD)
1204410867	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.

**Preparation Information**

**Aliquot Reduced**

aliquots were reduced due to limited sample volume.

**Procedure Variations**

The MSD may have double carrier, and the MSD and LCS may be double spiked 1204410866 (MW-36\_10082019MSD) and 1204410867 (LCS).

**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
--------	---------	-------

1204410865MS and 1204410866MSD (MW-36_10082019)	Gross Radium Alpha	RPD 69* (0%-20%) RER 5.38 (0-)
--	-----------------------	-----------------------------------

**Technical Information**

**Recounts**

Samples 1204410865 (MW-36\_10082019MS) and 1204410866 (MW-36\_10082019MSD) were recounted due to low recovery. The recounts are reported.

**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: 493013 GEL Work Order: 493013

#### 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: **Kate Gellatly**

Date: **09 NOV 2019**

Title: **Analyst I**

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: November 9, 2019

Page 1 of

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

Contact: Ms. Kathy Weinel

Workorder: 493013

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1929579										
QC1204410864	493013008	DUP									
Gross Radium Alpha		1.33		1.03	pCi/L	24.7		(0% - 100%)	BXF1	11/01/19	14:0
	Uncertainty	+/-0.383		+/-0.377							
QC1204410867	LCS										
Gross Radium Alpha	1110			915	pCi/L		82.5	(75%-125%)		11/01/19	14:1
	Uncertainty			+/-8.41							
QC1204410863	MB										
Gross Radium Alpha			U	-0.205	pCi/L					11/01/19	14:0
	Uncertainty			+/-0.211							
QC1204410865	493013008	MS									
Gross Radium Alpha	2240	1.33		1740	pCi/L		77.3	(75%-125%)		11/04/19	10:1
	Uncertainty	+/-0.383		+/-18.1							
QC1204410866	493013008	MSD									
Gross Radium Alpha	4490	1.33		3560	pCi/L	69*	79.4	(0%-20%)		11/05/19	08:1
	Uncertainty	+/-0.383		+/-29.6							

**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: 493013

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.



November 25, 2019

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

Re: White Mesa Mill GW  
Work Order: 494487

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 29, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

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



**Energy Fuels Resources (USA), Inc.  
White Mesa Mill GW  
SDG: 494487**

**Receipt Narrative  
for  
Energy Fuels Resources (USA), Inc.  
SDG: 494487**

**November 25, 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 October 29, 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:

<b><u>Laboratory ID</u></b>	<b><u>Client ID</u></b>
494487001	MW-11_10152019
494487002	MW-18_10152019
494487003	MW-19_10142019
494487004	MW-01_10222019
494487005	MW-02_10232019
494487006	MW-05_10232019
494487007	MW-12_10232019
494487008	MW-17_10232019
494487009	MW-27_10222019
494487010	MW-28_10222019
494487011	MW-29_10222019
494487012	MW-40_10232019

**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.

A handwritten signature in black ink that reads "Julie Robinson". The script is cursive and fluid.

Julie Robinson  
Project Manager

494 487



# CHAIN OF CUSTODY

**Samples Shipped to:** GEL Laboratories, LLC **Contact:** Tanner Holliday  
2040 Savage Road Ph: 435 678 2221  
Charleston, SC 29407 tholliday@energyfuels.com  
(843) 556 8171

## Chain of Custody/Sampling Analysis Request

Project	Samplers Name		Samplers Signature
Q4 Ground Water 2019	Tanner Holliday		<i>Tanner Holliday</i>
Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
MW-11_10152019	10/15/2019	1400	Gross Alpha
MW-18_10152019	10/15/2019	1240	Gross Alpha
MW-19_10142019	10/14/2019	1530	Gross Alpha
MW-01_10222019	10/22/2019	1000	Gross Alpha
MW-02_10232019	10/23/2019	835	Gross Alpha
MW-05_10232019	10/23/2019	1210	Gross Alpha
MW-12_10232019	10/23/2019	1445	Gross Alpha
MW-17_10232019	10/23/2019	1450	Gross Alpha
MW-27_10222019	10/22/2019	1030	Gross Alpha
MW-28_10222019	10/22/2019	1405	Gross Alpha
MW-29_10222019	10/22/2019	1345	Gross Alpha
MW-40_10232019	10/23/2019	1025	Gross Alpha
Comments: Please send report to Kathy Weinel at <a href="mailto:kweinel@energyfuels.com">kweinel@energyfuels.com</a>			

Relinquished By:(Signature) <i>Tanner Holliday</i> Tanner Holliday	Date/Time 10/24/2019 1130	Received By:(Signature) <i>R. Almon</i>	Date/Time 10/24/2019 9:35
Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time

494 487

Client: <b>DNMI</b>	SDG/AR/COC/Work Order:
Received By: <b>JA</b>	Date Received: <b>10/29/19</b>
Carrier and Tracking Number	Circle Applicable: FedEx Express    FedEx Ground <b>UPS</b> Field Services    Courier    Other <b>1Z 187 Y4Y 12 9759 3139</b>

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 <b>None</b> Other: *all temperatures are recorded in Celsius    TEMP: <b>23°</b>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <b>784-16</b> 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: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?			<input checked="" type="checkbox"/>	If Yes, are Encorus 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: 25-NOV-19

Work Order: 494487

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GEL Work Order/SDG: 494487      Q4 Ground Water 2019  
 Client SDG: 494487  
 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: 26-NOV-19  
 Package Due Date: 24-NOV-19  
 EDD Due Date: 26-NOV-19  
 Due Date: 26-NOV-19  
 JAR1

Collector: C  
 Prelogin #: 20190487484  
 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
494487001	MW-11_10152019		15-OCT-19 14:00	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487002	MW-18_10152019		15-OCT-19 12:40	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487003	MW-19_10142019		14-OCT-19 15:30	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487004	MW-01_10222019		22-OCT-19 10:00	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487005	MW-02_10232019		23-OCT-19 08:35	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487006	MW-05_10232019		23-OCT-19 12:10	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487007	MW-12_10232019		23-OCT-19 14:45	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487008	MW-17_10232019		23-OCT-19 14:50	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487009	MW-27_10222019		22-OCT-19 10:30	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487010	MW-28_10222019		22-OCT-19 14:05	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487011	MW-29_10222019		22-OCT-19 13:45	29-OCT-19 09:35	-2	1	GROUND WATER		20		1		
494487012	MW-40_10232019		23-OCT-19 10:25	29-OCT-19 09:35	-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_10152019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-002 MW-18_10152019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-003 MW-19_10142019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-004 MW-01_10222019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-005 MW-02_10232019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-006 MW-05_10232019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-007 MW-12_10232019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-008 MW-17_10232019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-009 MW-27_10222019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-010 MW-28_10222019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-011 MW-29_10222019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-012 MW-40_10232019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				

# GEL Laboratories LLC – Login Review Report

Report Date: 25-NOV-19  
 Work Order: 494487  
 Page 2 of 2

<b>Product:</b> GFCTORAL	<b>Workdef ID:</b> 1458614	<b>In Product Group?</b> No	<b>Group Name:</b>	<b>Group Reference:</b>
<b>Method:</b> EPA 903.0				<b>Path:</b> Drinking Water (903.0 or 9315)
<b>Product Description:</b> GFPC, Total Alpha Radium, Liquid				<b>Product Reference:</b> Gross Alpha
<b>Samples:</b> 001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012				<b>Moisture Correction:</b> "As Received"
<b>Parmname Check:</b> 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	No

Action	Product Name	Description	Samples
Contingent Tests			

Requirement	Include?	Comments

Peer Review by: \_\_\_\_\_ Work Order (SDG#), PO# Checked? \_\_\_\_\_ C of C signed in receiver location? \_\_\_\_\_

**List of current GEL Certifications as of 25 November 2019**

<b>State</b>	<b>Certification</b>
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-29
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

**Radiochemistry  
Technical Case Narrative  
Energy Fuels Resources  
SDG #: 494487**

**Product:** GFPC, Total Alpha Radium, Liquid

**Analytical Method:** EPA 903.0

**Analytical Procedure:** GL-RAD-A-044 REV# 10

**Analytical Batch:** 1934418

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
494487001	MW-11_10152019
494487002	MW-18_10152019
494487003	MW-19_10142019
494487004	MW-01_10222019
494487005	MW-02_10232019
494487006	MW-05_10232019
494487007	MW-12_10232019
494487008	MW-17_10232019
494487009	MW-27_10222019
494487010	MW-28_10222019
494487011	MW-29_10222019
494487012	MW-40_10232019
1204422161	Method Blank (MB)
1204422162	Laboratory Control Sample (LCS)
1204422163	494487003(MW-19_10142019) Sample Duplicate (DUP)
1204422164	494487010(MW-28_10222019) Sample Duplicate (DUP)
1204422165	494487003(MW-19_10142019) Matrix Spike (MS)
1204422166	494487003(MW-19_10142019) Matrix Spike Duplicate (MSD)

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.

**Preparation Information**

**Aliquot Reduced**

aliquots were reduced due to limited sample volume.

**Technical Information**

**Recounts**

Sample 1204422166 (MW-19\_10142019MSD) was recounted due to low recovery. The recount is reported.

Sample 494487010 (MW-28\_10222019) was recounted to decrease uncertainty. The recount is reported.

**Miscellaneous Information**

**Additional Comments**

The matrix spike and matrix spike duplicate, 1204422165 (MW-19\_10142019MS) and 1204422166 (MW-19\_10142019MSD), 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: 494487 GEL Work Order: 494487

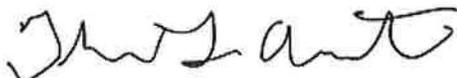
**The Qualifiers in this report are defined as follows:**

- \* 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:** Theresa Austin

**Date:** 22 NOV 2019

**Title:** Group Leader

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: November 22, 2019

Page 1 of

**Energy Fuels Resources (USA), Inc.**  
**225 Union Boulevard**  
**Suite 600**  
**Lakewood, Colorado**

**Contact: Ms. Kathy Weinel**

**Workorder: 494487**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1934418										
QC1204422163	494487003	DUP									
Gross Radium Alpha	U	0.226	U	0.780	pCi/L	N/A		N/A	KSD1	11/15/19	16:1
	Uncertainty	+/-0.252		+/-0.341							
QC1204422164	494487010	DUP									
Gross Radium Alpha	U	0.637		1.55	pCi/L	83.3		(0% - 100%)		11/15/19	16:1
	Uncertainty	+/-0.266		+/-0.423							
QC1204422162	LCS										
Gross Radium Alpha	554			534	pCi/L		96.3	(75%-125%)		11/15/19	16:1
	Uncertainty			+/-5.98							
QC1204422161	MB										
Gross Radium Alpha			U	-0.158	pCi/L					11/15/19	16:1
	Uncertainty			+/-0.156							
QC1204422165	494487003	MS									
Gross Radium Alpha	4500 U	0.226		4120	pCi/L		91.6	(75%-125%)		11/15/19	16:1
	Uncertainty	+/-0.252		+/-45.6							
QC1204422166	494487003	MSD									
Gross Radium Alpha	4500 U	0.226		3550	pCi/L	14.9	78.9	(0%-20%)		11/18/19	12:2
	Uncertainty	+/-0.252		+/-37.2							

**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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 494487

Page 2 of

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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									
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.



December 06, 2019

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

Re: White Mesa Mill GW  
Work Order: 495672

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 08, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

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



**Energy Fuels Resources (USA), Inc.**  
**White Mesa Mill GW**  
**SDG: 495672**

**Receipt Narrative  
for  
Energy Fuels Resources (USA), Inc.  
SDG: 495672**

**December 06, 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 November 08, 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:

<b><u>Laboratory ID</u></b>	<b><u>Client ID</u></b>
495672001	MW-15_10282019
495672002	MW-22_10292019
495672003	MW-23_10292019
495672004	MW-39_10292019
495672005	MW-70_10282019
495672006	MW-03A_11062019
495672007	MW-24_11062019
495672008	MW-38_11062019

**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.

A handwritten signature in black ink that reads "Julie Robinson". The signature is written in a cursive, flowing style.

Julie Robinson  
Project Manager

495672



# CHAIN OF CUSTODY

**Samples Shipped to:** GEL Laboratories, LLC **Contact:** Tanner Holliday  
2040 Savage Road Ph: 435 678 2221  
Charleston, SC 29407 tholliday@energyfuels.com  
(843) 556 8171

## Chain of Custody/Sampling Analysis Request

Project	Samplers Name		Samplers Signature
Q4 Ground Water 2019	Tanner Holliday		<i>Tanner Holliday</i>
Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
MW-15_10282019	10/28/2019	1335	Gross Alpha
MW-22_10292019	10/29/2019	1225	Gross Alpha
MW-23_10292019	10/29/2019	1330	Gross Alpha
MW-39_10292019	10/29/2019	1145	Gross Alpha
MW-70_10282019	10/28/2019	1335	Gross Alpha
MW-03A_11062019	11/6/2019	830	Gross Alpha
MW-24_11062019	11/6/2019	800	Gross Alpha
MW-38_11062019	11/6/2019	900	Gross Alpha
Comments: Please send report to Kathy Weinel at kweinel@energyfuels.com			

Relinquished By:(Signature) <i>Tanner Holliday</i> Tanner Holliday	Date/Time 11/7/2019 1130	Received By:(Signature) <i>[Signature]</i>	Date/Time <i>11/8/19</i> 9:55
Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time

SAMPLE RECEIPT & REVIEW FORM

495672

Client: <u>DINM 1</u>		SDG/AR/COC/Work Order:		
Received By: <u>ZKW</u>		Date Received: <u>11/8/19</u>		
Carrier and Tracking Number		FedEx Express   FedEx Ground <u>UPS</u> Field Services   Courier   Other <u>1Z 187Y4Y 01 9801 7575</u>		
Suspected Hazard Information	Yes <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.		
A) Shipped as a DOT Hazardous?	Yes <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?	Yes <input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation		
C) Did the RSO classify the samples as radioactive?	Yes <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?	Yes <input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation		
E) Did the RSO identify possible hazards?	Yes <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"/>	<input checked="" type="checkbox"/>	<input 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"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC   COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Wet Ice   Ice Packs   Dry ice <u>None</u> Other: _____ *all temperatures are recorded in Celsius <b>TEMP: <u>20c</u></b>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>IR3-18</u> Secondary Temperature Device Serial # (If Applicable): _____
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>	<input 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"/>	<input 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"/>	<input 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"/>	<input 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"/>	<input 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"/>	<input 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"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished   Other (describe)
Comments (Use Continuation Form if needed):				

PM (or PMA) review: Initials SH Date 11/8/19 Page 1 of 1

# GEL Laboratories LLC – Login Review Report

Report Date: 06-DEC-19

Work Order: 495672

Page 1 of 2

GEL Work Order/SDG: 495672      Q4 Ground Water 2019  
 Client SDG: 495672  
 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: 09-DEC-19  
 Package Due Date: 07-DEC-19  
 EDD Due Date: 09-DEC-19  
 Due Date: 09-DEC-19  
 JAR1

Collector: C  
 Prelogin #: 20190487484  
 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
495672001	MW-15_10282019		28-OCT-19 13:35	08-NOV-19 09:55	-2	1	GROUND WATER		20		1		
495672002	MW-22_10292019		29-OCT-19 12:25	08-NOV-19 09:55	-2	1	GROUND WATER		20		1		
495672003	MW-23_10292019		29-OCT-19 13:30	08-NOV-19 09:55	-2	1	GROUND WATER		20		1		
495672004	MW-39_10292019		29-OCT-19 11:45	08-NOV-19 09:55	-2	1	GROUND WATER		20		1		
495672005	MW-70_10282019		28-OCT-19 13:35	08-NOV-19 09:55	-2	1	GROUND WATER		20		1		
495672006	MW-03A_11062019		06-NOV-19 08:30	08-NOV-19 09:55	-2	1	GROUND WATER		20		1		
495672007	MW-24_11062019		06-NOV-19 08:00	08-NOV-19 09:55	-2	1	GROUND WATER		20		1		
495672008	MW-38_11062019		06-NOV-19 09:00	08-NOV-19 09:55	-2	1	GROUND WATER		20		1		

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data	Receive Codes
-001 MW-15_10282019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-002 MW-22_10292019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-003 MW-23_10292019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-004 MW-39_10292019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-005 MW-70_10282019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-006 MW-03A_11062019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-007 MW-24_11062019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-008 MW-38_11062019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				

# GEL Laboratories LLC – Login Review Report

Report Date: 06-DEC-19

Work Order: 495672

Page 2 of 2

**Product:** GFCTORAL    **Workdef ID:** 1458614    **In Product Group?** No    **Group Name:**    **Group Reference:**  
**Method:** EPA 903.0    **Path:** Drinking Water (903.0 or 9315)  
**Product Description:** GFPC, Total Alpha Radium, Liquid    **Product Reference:** Gross Alpha  
**Samples:** 001, 002, 003, 004, 005, 006, 007, 008    **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	No

Action	Product Name	Description	Samples
Contingent Tests			

**Login Requirements:**

Requirement	Include?	Comments

Peer Review by: \_\_\_\_\_ Work Order (SDG#), PO# Checked? \_\_\_\_\_ C of C signed in receiver location? \_\_\_\_\_

**List of current GEL Certifications as of 06 December 2019**

<b>State</b>	<b>Certification</b>
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-29
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

**Radiochemistry  
Technical Case Narrative  
Energy Fuels Resources  
SDG #: 495672**

**Product:** GFPC, Total Alpha Radium, Liquid  
**Analytical Method:** EPA 903.0  
**Analytical Procedure:** GL-RAD-A-044 REV# 10  
**Analytical Batch:** 1939966

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
495672001	MW-15_10282019
495672002	MW-22_10292019
495672003	MW-23_10292019
495672004	MW-39_10292019
495672005	MW-70_10282019
495672006	MW-03A_11062019
495672007	MW-24_11062019
495672008	MW-38_11062019
1204434704	Method Blank (MB)
1204434705	495672008(MW-38_11062019) Sample Duplicate (DUP)
1204434706	495672008(MW-38_11062019) Matrix Spike (MS)
1204434707	495672008(MW-38_11062019) Matrix Spike Duplicate (MSD)
1204434708	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**

**Matrix Spike (MS) Recovery**

Matrix Spike (See Below) did not meet the recovery requirement; however the Matrix Spike Duplicate did meet the recovery requirement. The Matrix Spike and Matrix Spike Duplicate also meet the relative percent difference requirement.

Sample	Analyte	Value
1204434706 (MW-38_11062019MS)	Gross Radium Alpha	73.6* (75%-125%)

**Technical Information**

**Recounts**

Samples 1204434706 (MW-38\_11062019MS) and 1204434707 (MW-38\_11062019MSD) were recounted due to low recovery. The recounts are reported.

### **Miscellaneous Information**

#### **Additional Comments**

The matrix spike and matrix spike duplicate, 1204434706 (MW-38\_11062019MS) and 1204434707 (MW-38\_11062019MSD), 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: 495672 GEL Work Order: 495672

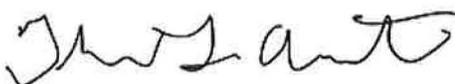
#### The Qualifiers in this report are defined as follows:

- \* 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: Theresa Austin

Date: 05 DEC 2019

Title: Group Leader

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: December 4, 2019

Page 1 of

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

Lakewood, Colorado

Contact: Ms. Kathy Weinel

Workorder: 495672

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1939966										
QC1204434705	495672008	DUP									
Gross Radium Alpha	U	0.606		1.42	pCi/L	80.2		(0% - 100%)	KSD1	12/03/19	16:2
	Uncertainty	+/-0.309		+/-0.404							
QC1204434708	LCS										
Gross Radium Alpha	554			453	pCi/L		81.6	(75%-125%)		12/03/19	16:2
	Uncertainty			+/-5.83							
QC1204434704	MB										
Gross Radium Alpha			U	0.386	pCi/L					12/03/19	16:2
	Uncertainty			+/-0.262							
QC1204434706	495672008	MS									
Gross Radium Alpha	4490	U	0.606	3310	pCi/L		73.6*	(75%-125%)		12/04/19	10:0
	Uncertainty	+/-0.309		+/-43.6							
QC1204434707	495672008	MSD									
Gross Radium Alpha	4490	U	0.606	3550	pCi/L	7.25	79.1	(0%-20%)		12/04/19	08:3
	Uncertainty	+/-0.309		+/-42.4							

**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: 495672

Page 2 of

Parname	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.



January 02, 2020

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

Re: White Mesa Mill GW  
Work Order: 498014

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 04, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

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,

Katelyn Gray for  
Julie Robinson  
Project Manager

Purchase Order: DW16138  
Enclosures



**Energy Fuels Resources (USA), Inc.  
White Mesa Mill GW  
SDG: 498014**

**Receipt Narrative  
for  
Energy Fuels Resources (USA), Inc.  
SDG: 498014**

January 02, 2020

**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 December 04, 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:

<b><u>Laboratory ID</u></b>	<b><u>Client ID</u></b>
498014001	MW-37_11222019
498014002	MW-20_11222019

**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.



Katelyn Gray for  
Julie Robinson  
Project Manager



SAMPLE RECEIPT & REVIEW FORM

498014

Client: <b>DNMI</b>		SDG/AR/COC/Work Order:	
Received By: <b>NRG</b>		Date Received: <b>12/4/19</b>	
Carrier and Tracking Number		FedEx Express   FedEx Ground <u>UPS</u> Field Services   Courier   Other <b>17 187 Y4Y 12 9,90 5473</b>	
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 to be received as radioactive?			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?			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. 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?	✓	Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
2	Chain of custody documents included with shipment?	✓	Circle Applicable: Client contacted and provided COC   COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓	Preservation Method: Wet Ice   Ice Packs   Dry Ice <u>None</u> Other: *all temperatures are recorded in Celsius      TEMP: <u>16°C</u>
4	Daily check performed and passed on IR temperature gun?	✓	Temperature Device Serial #: <u>IR3-18</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓	Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓	Sample ID's and Containers Affected: If Preservation added, lot#:
7	Do any samples require Volatile Analysis?	✓	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?	✓	ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓	ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓	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?	✓	Circle Applicable: No container count on COC   Other (describe)
12	Are sample containers identifiable as GEL provided?	✓	
13	COC form is properly signed in relinquished/received sections?	✓	Circle Applicable: Not relinquished   Other (describe)
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials SH Date 12/5/19 Page 1 of 1

# GEL Laboratories LLC – Login Review Report

Report Date: 02-JAN-20

Work Order: 498014

Page 1 of 2

GEL Work Order/SDG: 498014      Q4 Ground Water 2019  
 Client SDG: 498014  
 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: 03-JAN-20  
 Package Due Date: 01-JAN-20  
 EDD Due Date: 03-JAN-20  
 Due Date: 03-JAN-20  
 JAR1

Collector: C  
 Prelogin #: 20190487484  
 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
498014001	MW-37_11222019		22-NOV-19 09:15	04-DEC-19 10:00	-2	1	GROUND WATER		20		1		
498014002	MW-20_11222019		22-NOV-19 14:00	04-DEC-19 10:00	-2	1	GROUND WATER		20		1		

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data	Receive Codes
-001 MW-37_11222019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				
-002 MW-20_11222019	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha				

Product: GFCTORAL      Workdef ID: 1458614      In Product Group? No      Group Name:      Group Reference:  
 Method: EPA 903.0      Path: Drinking Water (903.0 or 9315)  
 Product Description: GFPC, Total Alpha Radium, Liquid      Product Reference: Gross Alpha  
 Samples: 001, 002      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	No

Action	Product Name	Description	Samples
Contingent Tests			

**Login Requirements:**

Requirement	Include?	Comments

# GEL Laboratories LLC – Login Review Report

Report Date: 02-JAN-20

Work Order: 498014

Page 2 of 2

Peer Review by: \_\_\_\_\_ Work Order (SDG#), PO# Checked? \_\_\_\_\_ C of C signed in receiver location? \_\_\_\_\_

**List of current GEL Certifications as of 02 January 2020**

<b>State</b>	<b>Certification</b>
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-30
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

**Radiochemistry  
Technical Case Narrative  
Energy Fuels Resources  
SDG #: 498014**

**Product:** GFPC, Total Alpha Radium, Liquid

**Analytical Method:** EPA 903.0

**Analytical Procedure:** GL-RAD-A-044 REV# 10

**Analytical Batch:** 1950311

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498014001	MW-37_11222019
498014002	MW-20_11222019
1204455467	Method Blank (MB)
1204455468	498014002(MW-20_11222019) Sample Duplicate (DUP)
1204455469	498014002(MW-20_11222019) Matrix Spike (MS)
1204455470	498014002(MW-20_11222019) Matrix Spike Duplicate (MSD)
1204455471	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.

**Technical Information**

**Recounts**

Samples 1204455469 (MW-20\_11222019MS) and 1204455470 (MW-20\_11222019MSD) were recounted due to low recovery. The recounts are reported.

**Miscellaneous Information**

**Additional Comments**

The matrix spike and matrix spike duplicate, 1204455469 (MW-20\_11222019MS) and 1204455470 (MW-20\_11222019MSD), 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: 498014 GEL Work Order: 498014

**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: Theresa Austin**

**Date: 24 DEC 2019**

**Title: Group Leader**

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: December 24, 2019

Page 1 of

**Energy Fuels Resources (USA), Inc.**  
**225 Union Boulevard**  
**Suite 600**  
**Lakewood, Colorado**

**Contact: Ms. Kathy Weinel**

**Workorder: 498014**

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1950311										
QC1204455468	498014002	DUP									
Gross Radium Alpha	U	0.348	U	0.0777	pCi/L	N/A		N/A	KSD1	12/19/19	13:5
	Uncertainty	+/-0.276		+/-0.238							
QC1204455471	LCS										
Gross Radium Alpha	554			452	pCi/L		81.5	(75%-125%)		12/19/19	13:5
	Uncertainty			+/-6.05							
QC1204455467	MB										
Gross Radium Alpha			U	0.0494	pCi/L					12/19/19	13:5
	Uncertainty			+/-0.221							
QC1204455469	498014002	MS									
Gross Radium Alpha	4490 U	0.348		3450	pCi/L		76.9	(75%-125%)		12/20/19	07:2
	Uncertainty	+/-0.276		+/-44.7							
QC1204455470	498014002	MSD									
Gross Radium Alpha	4490 U	0.348		3430	pCi/L	0.683	76.3	(0%-20%)		12/20/19	07:2
	Uncertainty	+/-0.276		+/-43.7							

**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: 498014

Page 2 of

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
M											
N/A											
N1											
ND											
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

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

November 2019



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-001  
**Client Sample ID:** MW-11\_11122019  
**Collection Date:** 11/12/2019 1230h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Manganese	mg/L	11/15/2019 1213h	11/15/2019 2013h	E200.8	0.0100	<b>0.206</b>	

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web: [www.awal-labs.com](http://www.awal-labs.com)

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-001  
**Client Sample ID:** MW-11\_11122019  
**Collection Date:** 11/12/2019 1230h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

## Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		11/26/2019 1929h	E300.0	1.00	<b>39.1</b>	
Sulfate	mg/L		11/26/2019 2109h	E300.0	75.0	<b>1,140</b>	

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Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-002  
**Client Sample ID:** MW-14\_11132019  
**Collection Date:** 11/13/2019 1345h  
**Received Date:** 11/14/2019 1354h

**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>
Fluoride	mg/L		11/26/2019 1912h	E300.0	0.100	<b>0.127</b>	
Sulfate	mg/L		11/26/2019 2159h	E300.0	150	<b>2,110</b>	

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Laboratory Director

Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-003  
**Client Sample ID:** MW-25\_11132019  
**Collection Date:** 11/13/2019 1110h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	11/15/2019 1213h	11/15/2019 2016h	E200.8	0.000500	0.00136	

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Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-004  
**Client Sample ID:** MW-26\_11132019  
**Collection Date:** 11/13/2019 1300h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	11/20/2019 1104h	11/20/2019 1406h	E350.1	0.0500	<b>0.178</b>	'
Chloride	mg/L		11/26/2019 1945h	E300.0	1.00	<b>62.3</b>	
Nitrate/Nitrite (as N)	mg/L		11/15/2019 1154h	E353.2	0.100	<b>2.90</b>	

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

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# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-004C  
**Client Sample ID:** MW-26\_11132019  
**Collection Date:** 11/13/2019 1300h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 11/15/2019 1123h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 20                      **Method:** SW8260D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Chloroform	67-66-3	20.0	1,280	~

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	1,160	1,000	116	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	1,130	1,000	113	80-152	
Surr: Dibromofluoromethane		1868-53-7	1,110	1,000	111	72-135	
Surr: Toluene-d8		2037-26-5	1,130	1,000	113	80-124	

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

**Analyzed:** 11/15/2019 1003h    **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Methylene chloride	75-09-2	1.00	1.73	^

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	58.6	50.00	117	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	56.1	50.00	112	80-152	
Surr: Dibromofluoromethane		1868-53-7	56.7	50.00	113	72-135	
Surr: Toluene-d8		2037-26-5	57.3	50.00	115	80-124	

^ - Reissue of a previously generated report. Information has been added, updated, or revised. Information herein supersedes that of the previously issued reports.

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QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-005  
**Client Sample ID:** MW-30\_11132019  
**Collection Date:** 11/13/2019 1025h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Selenium	mg/L	11/15/2019 1213h	11/15/2019 2032h	E200.8	0.00500	<b>0.0478</b>	
Uranium	mg/L	11/15/2019 1213h	11/15/2019 2119h	E200.8	0.000300	<b>0.00929</b>	

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QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-005  
**Client Sample ID:** MW-30\_11132019  
**Collection Date:** 11/13/2019 1025h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

### Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		11/26/2019 2002h	E300.0	2.00	<b>180</b>	
Nitrate/Nitrite (as N)	mg/L		11/15/2019 1157h	E353.2	0.100	<b>17.2</b>	

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QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-006  
**Client Sample ID:** MW-31\_11122019  
**Collection Date:** 11/12/2019 1355h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		11/26/2019 2216h	E300.0	10.0	<b>338</b>	
Nitrate/Nitrite (as N)	mg/L		11/15/2019 1159h	E353.2	0.100	<b>18.8</b>	
Sulfate	mg/L		11/26/2019 2216h	E300.0	75.0	<b>990</b>	
Total Dissolved Solids	mg/L		11/14/2019 1500h	SM2540C	20.0	<b>2,650</b>	@

@ - 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:** November Ground Water 2019  
**Lab Sample ID:** 1911345-007  
**Client Sample ID:** MW-36\_11132019  
**Collection Date:** 11/13/2019 1230h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

## Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Sulfate	mg/L		11/26/2019 2233h	E300.0	150	<b>2,590</b>	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-008  
**Client Sample ID:** MW-65\_11132019  
**Collection Date:** 11/13/2019 1025h  
**Received Date:** 11/14/2019 1354h

**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	11/15/2019 1213h	11/15/2019 2035h	E200.8	0.00500	<b>0.0509</b>	
Uranium	mg/L	11/15/2019 1213h	11/15/2019 2122h	E200.8	0.000300	<b>0.00914</b>	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-008  
**Client Sample ID:** MW-65\_11132019  
**Collection Date:** 11/13/2019 1025h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

## Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		11/26/2019 2019h	E300.0	2.00	<b>179</b>	
Nitrate/Nitrite (as N)	mg/L		11/15/2019 1200h	E353.2	0.100	<b>17.8</b>	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Sample ID:** 1911345-009A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 11/13/2019 1300h  
**Received Date:** 11/14/2019 1354h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

## Analytical Results

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 11/15/2019 1023h    **Extracted:**  
**Units:** µg/L    **Dilution Factor:** 1    **Method:** SW8260D

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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	58.6	50.00	117	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	55.7	50.00	111	80-152	
Surr: Dibromofluoromethane		1868-53-7	55.9	50.00	112	72-135	
Surr: Toluene-d8		2037-26-5	56.9	50.00	114	80-124	

^ - Reissue of a previously generated report. Information has been added, updated, or revised. Information herein supersedes that of the previously issued reports.

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: November Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1911345

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American West Analytical Laboratories received sample(s) on 11/14/2019 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

This is a revision to a report originally issued 12/4/2019. Information herein supersedes that of the previously issued reports. Pages 1, 16-17, and 27-30 have been revised. The list of analytes has been corrected.

Thank You,

Approved by:

**Jose G.  
Rocha**  
Digitally signed by Jose G. Rocha  
DN: cn=Jose G. Rocha,  
o=American West Analytical  
Laboratories, ou=UT00031,  
email=jose@awal-labs.com,  
c=US  
Date: 2020.01.08 14:36:05  
-07'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** November Ground Water 2019  
**Lab Set ID:** 1911345  
**Date Received:** 11/14/2019 1354h

**Contact:** Tanner Holliday

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1911345-001A	MW-11_11122019	11/12/2019 1230h	Aqueous	ICPMS Metals, Dissolved
1911345-001B	MW-11_11122019	11/12/2019 1230h	Aqueous	Anions, E300.0
1911345-002A	MW-14_11132019	11/13/2019 1345h	Aqueous	Anions, E300.0
1911345-003A	MW-25_11132019	11/13/2019 1110h	Aqueous	ICPMS Metals, Dissolved
1911345-004A	MW-26_11132019	11/13/2019 1300h	Aqueous	Nitrite/Nitrate (as N), E353.2
1911345-004A	MW-26_11132019	11/13/2019 1300h	Aqueous	Ammonia, Aqueous
1911345-004B	MW-26_11132019	11/13/2019 1300h	Aqueous	Anions, E300.0
1911345-004C	MW-26_11132019	11/13/2019 1300h	Aqueous	VOA by GC/MS Method 8260D/5030C
1911345-005A	MW-30_11132019	11/13/2019 1025h	Aqueous	Nitrite/Nitrate (as N), E353.2
1911345-005B	MW-30_11132019	11/13/2019 1025h	Aqueous	Anions, E300.0
1911345-005C	MW-30_11132019	11/13/2019 1025h	Aqueous	ICPMS Metals, Dissolved
1911345-006A	MW-31_11122019	11/12/2019 1355h	Aqueous	Nitrite/Nitrate (as N), E353.2
1911345-006B	MW-31_11122019	11/12/2019 1355h	Aqueous	Anions, E300.0
1911345-006C	MW-31_11122019	11/12/2019 1355h	Aqueous	Total Dissolved Solids, A2540C
1911345-007A	MW-36_11132019	11/13/2019 1230h	Aqueous	Anions, E300.0
1911345-008A	MW-65_11132019	11/13/2019 1025h	Aqueous	Nitrite/Nitrate (as N), E353.2
1911345-008B	MW-65_11132019	11/13/2019 1025h	Aqueous	Anions, E300.0
1911345-008C	MW-65_11132019	11/13/2019 1025h	Aqueous	ICPMS Metals, Dissolved
1911345-009A	Trip Blank	11/13/2019 1300h	Aqueous	VOA by GC/MS Method 8260D/5030C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** November Ground Water 2019  
**Lab Set ID:** 1911345

---

## Sample Receipt Information:

3440 South 700 West  
Salt Lake City, UT 84119

**Date of Receipt:** 11/14/2019  
**Date(s) of Collection:** 11/12-11/13/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation of all samples were performed within the method holding times. All 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:

**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
1910785-001D	Ammonia	MS/MSD	Sample matrix interference
1911345-004A	Ammonia	MS/MSD	Sample matrix interference

**Duplicate (DUP):** The parameters that required a duplicate analysis had RPDs within the control limits, with the following exception: the RPD for Total Dissolved Solids on sample 1911345-006C was outside of the control limits due to suspected sample non-homogeneity or sample matrix interference.

**Corrective Action:** None required.



## Volatile Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** November Ground Water 2019  
**Lab Set ID:** 1911345

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### Sample Receipt Information:

**Date of Receipt:** 11/14/2019  
**Date(s) of Collection:** 11/12-11/13/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8260D/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:** 1911345  
**Project:** November 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
<b>Lab Sample ID:</b> LCS-66339	Date Analyzed:		11/15/2019 1916h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:		11/15/2019 1213h										
Cadmium	0.197	mg/L	E200.8	0.0000858	0.000500	0.2000	0	98.7	85 - 115				
Manganese	0.204	mg/L	E200.8	0.00108	0.00200	0.2000	0	102	85 - 115				
Selenium	0.200	mg/L	E200.8	0.000574	0.00200	0.2000	0	100	85 - 115				
Uranium	0.196	mg/L	E200.8	0.000176	0.00200	0.2000	0	97.9	85 - 115				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911345  
**Project:** November 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
<b>Lab Sample ID: MB-66339</b>		Date Analyzed: 11/15/2019 1913h											
Test Code: 200.8-DIS		Date Prepared: 11/15/2019 1213h											
Cadmium	< 0.000500	mg/L	E200.8	0.0000858	0.000500								
Manganese	< 0.00200	mg/L	E200.8	0.00108	0.00200								
Selenium	< 0.00200	mg/L	E200.8	0.000574	0.00200								
<b>Lab Sample ID: MB-FILTER-66329</b>		Date Analyzed: 11/15/2019 2103h											
Test Code: 200.8-DIS		Date Prepared: 11/15/2019 1213h											
Cadmium	< 0.000500	mg/L	E200.8	0.0000858	0.000500								
Manganese	< 0.00200	mg/L	E200.8	0.00108	0.00200								
Selenium	< 0.00200	mg/L	E200.8	0.000574	0.00200								
Uranium	< 0.00200	mg/L	E200.8	0.000176	0.00200								
<b>Lab Sample ID: MB-66339</b>		Date Analyzed: 11/15/2019 2116h											
Test Code: 200.8-DIS		Date Prepared: 11/15/2019 1213h											
Uranium	< 0.000200	mg/L	E200.8	0.0000176	0.000200								



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1911345

**Project:** November 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
<b>Lab Sample ID:</b> 1911345-003AMS	Date Analyzed:		11/15/2019 2025h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:		11/15/2019 1213h										
Cadmium	0.204	mg/L	E200.8	0.0000858	0.000500	0.2000	0.00136	102	75 - 125				
Manganese	1.58	mg/L	E200.8	0.00108	0.00200	0.2000	1.39	96.7	75 - 125				
Selenium	0.198	mg/L	E200.8	0.000574	0.00200	0.2000	0	99.1	75 - 125				
Uranium	0.213	mg/L	E200.8	0.000176	0.00200	0.2000	0.00673	103	75 - 125				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1911345

**Project:** November 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
<b>Lab Sample ID:</b> 1911345-003AMSD	Date Analyzed:		11/15/2019 2028h										
Test Code:	Date Prepared:		11/15/2019 1213h										
Cadmium	0.191	mg/L	E200.8	0.0000858	0.000500	0.2000	0.00136	94.9	75 - 125	0.204	6.67	20	
Manganese	1.57	mg/L	E200.8	0.00108	0.00200	0.2000	1.39	93.0	75 - 125	1.58	0.479	20	
Selenium	0.194	mg/L	E200.8	0.000574	0.00200	0.2000	0	97.1	75 - 125	0.198	2.05	20	
Uranium	0.207	mg/L	E200.8	0.000176	0.00200	0.2000	0.00673	100	75 - 125	0.213	2.54	20	



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911345  
**Project:** November 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
<b>Lab Sample ID:</b> 1910785-001DDUP	Date Analyzed:	11/20/2019	1351h										
Test Code:	NH3-W-350.1	Date Prepared:	11/20/2019	1104h									
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500					0	0	20	
<b>Lab Sample ID:</b> 1911345-006CDUP	Date Analyzed:	11/14/2019	1500h										
Test Code:	TDS-W-2540C												
Total Dissolved Solids	2,430	mg/L	SM2540C	16.0	20.0					2650	8.67	5	@
<b>Lab Sample ID:</b> 1910785-001CDUP	Date Analyzed:	11/14/2019	1000h										
Test Code:	TDS-W-2540C												
Total Dissolved Solids	3,130	mg/L	SM2540C	16.0	20.0					3130	0	5	H

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

H - The original analysis performed within the holding time yielded an anomalous result; thus, the sample was reanalyzed outside the holding time.



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911345  
**Project:** November 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
<b>Lab Sample ID:</b> LCS-R133031		Date Analyzed:		11/26/2019 1255h									
Test Code:		300.0-W											
Chloride	4.94	mg/L	E300.0	0.0386	0.100	5.000	0	98.9	90 - 110				
Fluoride	5.03	mg/L	E300.0	0.0240	0.100	5.000	0	101	90 - 110				
Sulfate	4.97	mg/L	E300.0	0.174	0.750	5.000	0	99.3	90 - 110				
<b>Lab Sample ID:</b> LCS-66428		Date Analyzed:		11/20/2019 1350h									
Test Code:		NH3-W-350.1											
Ammonia (as N)	9.98	mg/L	E350.1	0.0492	0.0500	10.00	0	99.8	90 - 110				
<b>Lab Sample ID:</b> LCS-R132611		Date Analyzed:		11/15/2019 1153h									
Test Code:		NO2/NO3-W-353.2											
Nitrate/Nitrite (as N)	1.01	mg/L	E353.2	0.00363	0.0100	1.000	0	101	90 - 110				
<b>Lab Sample ID:</b> LCS-R132625		Date Analyzed:		11/14/2019 1000h									
Test Code:		TDS-W-2540C											
Total Dissolved Solids	198	mg/L	SM2540C	8.00	10.0	205.0	0	96.6	80 - 120				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911345  
**Project:** November 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
<b>Lab Sample ID: MB-R133031</b>		Date Analyzed: 11/26/2019 1238h											
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID: MB-66428</b>		Date Analyzed: 11/20/2019 1442h											
Test Code: NH3-W-350.1		Date Prepared: 11/20/2019 1104h											
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
<b>Lab Sample ID: MB-R132611</b>		Date Analyzed: 11/15/2019 1151h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								
<b>Lab Sample ID: MB-R132625</b>		Date Analyzed: 11/14/2019 1000h											
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:** 1911345  
**Project:** November 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
<b>Lab Sample ID: 1911345-001BMS</b>		Date Analyzed: 11/26/2019 2126h											
Test Code: 300.0-W													
Chloride	989	mg/L	E300.0	7.72	20.0	1,000	39.1	95.0	90 - 110				
Fluoride	984	mg/L	E300.0	4.80	20.0	1,000	0	98.4	90 - 110				
Sulfate	2,170	mg/L	E300.0	34.8	150	1,000	1140	103	90 - 110				
<b>Lab Sample ID: 1910785-001DMS</b>		Date Analyzed: 11/20/2019 1352h											
Test Code: NH3-W-350.1		Date Prepared: 11/20/2019 1104h											
Ammonia (as N)	14.4	mg/L	E350.1	0.0492	0.0500	10.00	0	144	90 - 110				1
<b>Lab Sample ID: 1911345-004AMS</b>		Date Analyzed: 11/20/2019 1407h											
Test Code: NH3-W-350.1		Date Prepared: 11/20/2019 1104h											
Ammonia (as N)	14.8	mg/L	E350.1	0.0492	0.0500	10.00	0.178	147	90 - 110				1
<b>Lab Sample ID: 1911345-004AMS</b>		Date Analyzed: 11/15/2019 1155h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	13.0	mg/L	E353.2	0.0363	0.100	10.00	2.9	101	90 - 110				

<sup>1</sup> - 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:** 1911345  
**Project:** November 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
<b>Lab Sample ID:</b> 1911345-001BMSD		Date Analyzed:		11/26/2019 2142h									
Test Code:		300.0-W											
Chloride	991	mg/L	E300.0	7.72	20.0	1,000	39.1	95.2	90 - 110	989	0.214	20	
Fluoride	987	mg/L	E300.0	4.80	20.0	1,000	0	98.7	90 - 110	984	0.260	20	
Sulfate	2,160	mg/L	E300.0	34.8	150	1,000	1140	101	90 - 110	2170	0.750	20	
<b>Lab Sample ID:</b> 1910785-001DMSD		Date Analyzed:		11/20/2019 1353h									
Test Code:		NH3-W-350.1											
		Date Prepared:		11/20/2019 1104h									
Ammonia (as N)	14.0	mg/L	E350.1	0.0492	0.0500	10.00	0	140	90 - 110	14.4	3.17	10	1
<b>Lab Sample ID:</b> 1911345-004AMSD		Date Analyzed:		11/20/2019 1408h									
Test Code:		NH3-W-350.1											
		Date Prepared:		11/20/2019 1104h									
Ammonia (as N)	14.5	mg/L	E350.1	0.0492	0.0500	10.00	0.178	143	90 - 110	14.8	2.11	10	1
<b>Lab Sample ID:</b> 1911345-004AMSD		Date Analyzed:		11/15/2019 1156h									
Test Code:		NO2/NO3-W-353.2											
Nitrate/Nitrite (as N)	13.0	mg/L	E353.2	0.0363	0.100	10.00	2.9	101	90 - 110	13.1	0.538	10	

<sup>1</sup> - 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:** 1911345  
**Project:** November 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
<b>Lab Sample ID:</b> LCS VOC-1 111519A	<b>Date Analyzed:</b> 11/15/2019 844h												
<b>Test Code:</b> 8260D-W-DEN100													
Chloroform	22.5	µg/L	SW8260D	0.166	1.00	20.00	0	113	85 - 124				
Methylene chloride	24.0	µg/L	SW8260D	0.448	1.00	20.00	0	120	65 - 154				
Surr: 1,2-Dichloroethane-d4	59.0	µg/L	SW8260D			50.00		118	80 - 136				
Surr: 4-Bromofluorobenzene	56.0	µg/L	SW8260D			50.00		112	85 - 121				
Surr: Dibromofluoromethane	57.0	µg/L	SW8260D			50.00		114	78 - 132				
Surr: Toluene-d8	58.2	µg/L	SW8260D			50.00		116	81 - 123				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1911345

**Project:** November 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
<b>Lab Sample ID:</b> MB VOC-1 111519A	<b>Date Analyzed:</b> 11/15/2019 904h												
<b>Test Code:</b> 8260D-W-DEN100													
Chloroform	< 1.00	µg/L	SW8260D	0.166	1.00								
Methylene chloride	< 1.00	µg/L	SW8260D	0.448	1.00								
Surr: 1,2-Dichloroethane-d4	59.1	µg/L	SW8260D			50.00		118	80 - 136				
Surr: 4-Bromofluorobenzene	56.0	µg/L	SW8260D			50.00		112	85 - 121				
Surr: Dibromofluoromethane	55.8	µg/L	SW8260D			50.00		112	78 - 132				
Surr: Toluene-d8	57.1	µg/L	SW8260D			50.00		114	81 - 123				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1911345  
**Project:** November 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
<b>Lab Sample ID:</b> 1911345-004CMS		<b>Date Analyzed:</b> 11/15/2019 1143h											
<b>Test Code:</b> 8260D-W-DEN100													
Chloroform	1,750	µg/L	SW8260D	3.32	20.0	400.0	1280	119	85 - 124				
Methylene chloride	496	µg/L	SW8260D	8.96	20.0	400.0	1.73	124	65 - 154				
Surr: 1,2-Dichloroethane-d4	1,170	µg/L	SW8260D			1,000		117	80 - 136				
Surr: 4-Bromofluorobenzene	1,110	µg/L	SW8260D			1,000		111	85 - 121				
Surr: Dibromofluoromethane	1,130	µg/L	SW8260D			1,000		113	78 - 132				
Surr: Toluene-d8	1,140	µg/L	SW8260D			1,000		114	81 - 123				



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## QC SUMMARY REPORT

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**Project:** November 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
<b>Lab Sample ID:</b> 1911345-004CMSD		<b>Date Analyzed:</b> 11/15/2019 1202h											
<b>Test Code:</b> 8260D-W-DEN100													
Chloroform	1,680	µg/L	SW8260D	3.32	20.0	400.0	1280	102	85 - 124	1750	4.04	35	
Methylene chloride	481	µg/L	SW8260D	8.96	20.0	400.0	1.73	120	65 - 154	496	3.07	35	
Surr: 1,2-Dichloroethane-d4	1,160	µg/L	SW8260D			1,000		116	80 - 136				
Surr: 4-Bromofluorobenzene	1,090	µg/L	SW8260D			1,000		109	85 - 121				
Surr: Dibromofluoromethane	1,130	µg/L	SW8260D			1,000		113	78 - 132				
Surr: Toluene-d8	1,130	µg/L	SW8260D			1,000		113	81 - 123				

**WORK ORDER Summary**

Work Order: **1911345**

Page 1 of 2

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

Due Date: 12/2/2019

**Client ID:** ENE300

**Contact:** Tanner Holliday

**Project:** November Ground Water 2019

**QC Level:** III

WO Type: Project

**Comments:** QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com; Do not use "\*R\_" samples as MS/MSD.;

*UB*

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1911345-001A	MW-11_11122019	11/12/2019 1230h	11/14/2019 1354h	200.8-DIS <i>1 SEL Analytes: MN</i>	Aqueous	df - dis met		1
				200.8-DIS-PR		df - dis met		
1911345-001B				300.0-W <i>2 SEL Analytes: CL SO4</i>		df - wc		
1911345-002A	MW-14_11132019	11/13/2019 1345h	11/14/2019 1354h	300.0-W <i>2 SEL Analytes: F SO4</i>	Aqueous	df - wc		1
1911345-003A	MW-25_11132019	11/13/2019 1110h	11/14/2019 1354h	200.8-DIS <i>1 SEL Analytes: CD</i>	Aqueous	df - dis met		1
				200.8-DIS-PR		df - dis met		
1911345-004A	MW-26_11132019	11/13/2019 1300h	11/14/2019 1354h	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		
1911345-004B				300.0-W <i>1 SEL Analytes: CL</i>		df - wc		
1911345-004C				8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 2 / # of Surr: 4</i>		VOCFridge		3
1911345-005A	MW-30_11132019	11/13/2019 1025h	11/14/2019 1354h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	df - no2/no3		1
1911345-005B				300.0-W <i>1 SEL Analytes: CL</i>		df - wc		
1911345-005C				200.8-DIS <i>2 SEL Analytes: SE U</i>		df - dis met		
				200.8-DIS-PR		df - dis met		
1911345-006A	MW-31_11122019	11/12/2019 1355h	11/14/2019 1354h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	df - no2/no3		1

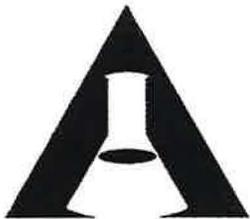
# WORK ORDER Summary

Work Order: **1911345** Page 2 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 12/2/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1911345-006B	MW-31_11122019	11/12/2019 1355h	11/14/2019 1354h	300.0-W <i>2 SEL Analytes: CL SO4</i>	Aqueous	df - wc		1
1911345-006C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>		df - tds		
1911345-007A	MW-36_11132019	11/13/2019 1230h	11/14/2019 1354h	300.0-W <i>1 SEL Analytes: SO4</i>	Aqueous	df - wc		1
1911345-008A	MW-65_11132019	11/13/2019 1025h	11/14/2019 1354h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous	df - no2/no3		1
1911345-008B				300.0-W <i>1 SEL Analytes: CL</i>		df - wc		
1911345-008C				200.8-DIS <i>2 SEL Analytes: SE U</i>		df - dis met		
				200.8-DIS-PR		df - dis met		
1911345-009A	Trip Blank	11/13/2019 1300h	11/14/2019 1354h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 2 / # of Surr: 4</i>	Aqueous	VOCfridge		3



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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 (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

DB 11/14/19  
 19113475  
 AWAL Lab Sample Set #  
 Page 1 of 1

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: **November 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				12/2/19	
		Laboratory Use Only					
		Samples Were:					
			1 Shipped or hand delivered				
			2 Ambient or Chilled				
			3 Temperature		1.6°C		
			4 Received Broken/Leaking (Improperly Sealed)		Y	N	
			5 Properly Preserved		Y	N	
			6 Checked at bench		Y	N	
			7 Received Within Holding Times		Y	N	
			8 Present on Outer Package		Y	N	NA
			9 Unbroken on Outer Package		Y	N	NA
			10 Present on Sample		Y	N	NA
			11 Unbroken on Sample		Y	N	NA
			12 Discrepancies Between Sample Labels and COC Record?		Y	N	

Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (953.2)	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 (A4500-F C or 300.0)	SO4 (4500 or 300.0)	Ammonia as N (350.1)	VOCs Chloroform, Dichloromethane, (8260C)	Known Hazards & Sample Comments
MW-11_11122019	11/12/2019	1230	2	W		X	X					X	X			
MW-14_11132019	11/13/2019	1345	1	W								X	X			
MW-25_11132019	11/13/2019	1110	1	W					X							
MW-26_11132019	11/13/2019	1300	5	W	X	X								X	X	
MW-30_11132019	11/13/2019	1025	3	W	X	X		X	X							
MW-31_11122019	11/12/2019	1355	3	W	X	X	X					X				
MW-36_11132019	11/13/2019	1230	1	W								X				
MW-65_11132019	11/13/2019	1025	3	W	X	X		X	X							
Trip Blank	11/13/2019	1300	3	W											X	

Relinquished by: Signature:	Date: 11/14/2019	Received by: Signature:	Date: 11/14/19
Print Name: Abel Mendoza	Time: 1354	Print Name: Denise Bruhn	Time: 1354
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:	Date:
Print Name:	Time:	Print Name:	Time:

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: 1911345  
 pH Lot #: 6179

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	-001	-003	-004	-005	-006	-008												
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>			yes															
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cyanide	pH >12 NaOH																		
Metals	pH <2 HNO <sub>3</sub>	yes	yes		yes		yes												
NO <sub>2</sub> /NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>			yes	yes	yes	yes												
O & G	pH <2 HCL																		
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Sulfide	pH >9 NaOH, Zn Acetate																		
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cr VI+	pH >9 (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>																		

- 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

December 2019



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-001  
**Client Sample ID:** MW-11\_12032019  
**Collection Date:** 12/3/2019 1200h  
**Received Date:** 12/5/2019 1143h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Manganese	mg/L	12/5/2019 1337h	12/13/2019 1830h	E200.8	0.0100	<b>0.167</b>	

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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:** December Ground Water 2019  
**Lab Sample ID:** 1912109-001  
**Client Sample ID:** MW-11\_12032019  
**Collection Date:** 12/3/2019 1200h  
**Received Date:** 12/5/2019 1143h

**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		12/17/2019 158h	E300.0	1.00	<b>35.4</b>	
Sulfate	mg/L		12/16/2019 2109h	E300.0	75.0	<b>1,100</b>	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-002  
**Client Sample ID:** MW-14\_12032019  
**Collection Date:** 12/3/2019 1455h  
**Received Date:** 12/5/2019 1143h

**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>
Fluoride	mg/L		12/17/2019 123h	E300.0	0.100	<b>0.120</b>	
Sulfate	mg/L		12/16/2019 2125h	E300.0	150	<b>2,120</b>	

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Laboratory Director

Jose Rocha

QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-003  
**Client Sample ID:** MW-25\_12042019  
**Collection Date:** 12/4/2019 1145h  
**Received Date:** 12/5/2019 1143h

**Contact:** Tanner Holliday

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/5/2019 1337h	12/13/2019 1833h	E200.8	0.000500	<b>0.00145</b>	

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QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-004C  
**Client Sample ID:** MW-26\_12042019  
**Collection Date:** 12/4/2019 900h  
**Received Date:** 12/5/2019 1143h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 12/5/2019 1524h      **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 20                      **Method:** SW8260D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Chloroform	67-66-3	20.0	1,110	~ <sup>1</sup>

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	1,030	1,000	103	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	1,140	1,000	114	80-152	
Surr: Dibromofluoromethane		1868-53-7	1,000	1,000	100	72-135	
Surr: Toluene-d8		2037-26-5	1,050	1,000	105	80-124	

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

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

**Analyzed:** 12/5/2019 1324h      **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Methylene chloride	75-09-2	1.00	2.64	

Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	52.3	50.00	105	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	55.4	50.00	111	80-152	
Surr: Dibromofluoromethane		1868-53-7	51.4	50.00	103	72-135	
Surr: Toluene-d8		2037-26-5	52.8	50.00	106	80-124	

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Laboratory Director

Jose Rocha  
QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Tanner Holliday  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-004  
**Client Sample ID:** MW-26\_12042019  
**Collection Date:** 12/4/2019 900h  
**Received Date:** 12/5/2019 1143h

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	12/15/2019 1031h	12/15/2019 1454h	E350.1	0.0500	<b>0.207</b>	1
Chloride	mg/L		12/17/2019 232h	E300.0	2.00	<b>57.7</b>	
Nitrate/Nitrite (as N)	mg/L		12/5/2019 1432h	E353.2	0.100	<b>2.32</b>	

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

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# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Tanner Holliday  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-005  
**Client Sample ID:** MW-30\_12042019  
**Collection Date:** 12/4/2019 1535h  
**Received Date:** 12/5/2019 1143h

## Analytical Results

## DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Selenium	mg/L	12/5/2019 1337h	12/13/2019 1837h	E200.8	0.00500	<b>0.0564</b>	
Uranium	mg/L	12/5/2019 1337h	12/13/2019 1827h	E200.8	0.000300	<b>0.00899</b>	

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# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-005  
**Client Sample ID:** MW-30\_12042019  
**Collection Date:** 12/4/2019 1535h  
**Received Date:** 12/5/2019 1143h

**Contact:** Tanner Holliday

## Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Chloride	mg/L		12/17/2019 249h	E300.0	2.00	<b>185</b>	
Nitrate/Nitrite (as N)	mg/L		12/5/2019 1436h	E353.2	0.100	<b>17.8</b>	

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# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-006  
**Client Sample ID:** MW-31\_12032019  
**Collection Date:** 12/3/2019 1325h  
**Received Date:** 12/5/2019 1143h

**Contact:** Tanner Holliday

## Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Chloride	mg/L		12/16/2019 2142h	E300.0	10.0	<b>343</b>	
Nitrate/Nitrite (as N)	mg/L		12/5/2019 1437h	E353.2	0.100	<b>18.3</b>	
Sulfate	mg/L		12/16/2019 2142h	E300.0	75.0	<b>1,020</b>	
Total Dissolved Solids	mg/L		12/6/2019 1110h	SM2540C	20.0	<b>2,030</b>	

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QA Officer



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-007  
**Client Sample ID:** MW-36\_12032019  
**Collection Date:** 12/3/2019 1515h  
**Received Date:** 12/5/2019 1143h

**Contact:** Tanner Holliday

## Analytical Results

<b>Compound</b>	<b>Units</b>	<b>Date Prepared</b>	<b>Date Analyzed</b>	<b>Method Used</b>	<b>Reporting Limit</b>	<b>Analytical Result</b>	<b>Qual</b>
Sulfate	mg/L		12/16/2019 2249h	E300.0	375	<b>2,710</b>	

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# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-008  
**Client Sample ID:** MW-65\_12032019  
**Collection Date:** 12/3/2019 1325h  
**Received Date:** 12/5/2019 1143h

**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		12/17/2019 306h	E300.0	5.00	<b>358</b>	
Nitrate/Nitrite (as N)	mg/L		12/5/2019 1438h	E353.2	0.100	<b>18.8</b>	
Sulfate	mg/L		12/16/2019 2232h	E300.0	150	<b>1,030</b>	
Total Dissolved Solids	mg/L		12/6/2019 1110h	SM2540C	20.0	<b>2,150</b>	

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# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Sample ID:** 1912109-009A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 12/4/2019 900h  
**Received Date:** 12/5/2019 1143h

**Contact:** Tanner Holliday

Test Code: 8260D-W-DEN100

**Analytical Results**

VOAs by GC/MS Method 8260D/5030C

**Analyzed:** 12/5/2019 1344h      **Extracted:**  
**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260D

3440 South 700 West  
Salt Lake City, UT 84119

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	

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Surrogate	Units: µg/L	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4		17060-07-0	51.9	50.00	104	72-151	
Surr: 4-Bromofluorobenzene		460-00-4	58.7	50.00	117	80-152	
Surr: Dibromofluoromethane		1868-53-7	49.6	50.00	99.2	72-135	
Surr: Toluene-d8		2037-26-5	53.1	50.00	106	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: December Ground Water 2019

Dear Tanner Holliday:

Lab Set ID: 1912109

3440 South 700 West

Salt Lake City, UT 84119

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American West Analytical Laboratories received sample(s) on 12/5/2019 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=UT00031,  
email=jose@awal-labs.com,  
c=US  
Date: 2019.12.19 14:16:28  
-07'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** December Ground Water 2019  
**Lab Set ID:** 1912109  
**Date Received:** 12/5/2019 1143h

**Contact:** Tanner Holliday

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Salt Lake City, UT 84119

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Laboratory Director

Jose Rocha  
QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1912109-001A	MW-11_12032019	12/3/2019 1200h	Aqueous	Anions, E300.0
1912109-001B	MW-11_12032019	12/3/2019 1200h	Aqueous	ICPMS Metals, Dissolved
1912109-002A	MW-14_12032019	12/3/2019 1455h	Aqueous	Anions, E300.0
1912109-003A	MW-25_12042019	12/4/2019 1145h	Aqueous	ICPMS Metals, Dissolved
1912109-004A	MW-26_12042019	12/4/2019 900h	Aqueous	Anions, E300.0
1912109-004B	MW-26_12042019	12/4/2019 900h	Aqueous	Nitrite/Nitrate (as N), E353.2
1912109-004B	MW-26_12042019	12/4/2019 900h	Aqueous	Ammonia, Aqueous
1912109-004C	MW-26_12042019	12/4/2019 900h	Aqueous	VOA by GC/MS Method 8260D/5030C
1912109-005A	MW-30_12042019	12/4/2019 1535h	Aqueous	Anions, E300.0
1912109-005B	MW-30_12042019	12/4/2019 1535h	Aqueous	Nitrite/Nitrate (as N), E353.2
1912109-005C	MW-30_12042019	12/4/2019 1535h	Aqueous	ICPMS Metals, Dissolved
1912109-006A	MW-31_12032019	12/3/2019 1325h	Aqueous	Anions, E300.0
1912109-006B	MW-31_12032019	12/3/2019 1325h	Aqueous	Nitrite/Nitrate (as N), E353.2
1912109-006C	MW-31_12032019	12/3/2019 1325h	Aqueous	Total Dissolved Solids, A2540C
1912109-007A	MW-36_12032019	12/3/2019 1515h	Aqueous	Anions, E300.0
1912109-008A	MW-65_12032019	12/3/2019 1325h	Aqueous	Anions, E300.0
1912109-008B	MW-65_12032019	12/3/2019 1325h	Aqueous	Nitrite/Nitrate (as N), E353.2
1912109-008C	MW-65_12032019	12/3/2019 1325h	Aqueous	Total Dissolved Solids, A2540C
1912109-009A	Trip Blank	12/4/2019 900h	Aqueous	VOA by GC/MS Method 8260D/5030C



# Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** December Ground Water 2019  
**Lab Set ID:** 1912109

---

## Sample Receipt Information:

3440 South 700 West  
Salt Lake City, UT 84119

**Date of Receipt:** 12/5/2019  
**Date(s) of Collection:** 12/3-12/4/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation of all samples were performed within the method holding times. All 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:

**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
1912025-001D	Ammonia	MS/MSD	Sample matrix interference
1912109-004B	Ammonia	MS/MSD	Sample matrix interference

**Duplicate (DUP):** The parameters that required a duplicate analysis had RPDs within the control limits, with the following exception: the RPD for Total Dissolved Solids on sample 1912110-001A was outside of the control limits due to suspected sample non-homogeneity or sample matrix interference.

**Corrective Action:** None required.



# Volatile Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Tanner Holliday  
**Project:** December Ground Water 2019  
**Lab Set ID:** 1912109

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## Sample Receipt Information:

**Date of Receipt:** 12/5/2019  
**Date(s) of Collection:** 12/3-12/4/2019  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8260D/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, with the following exceptions: the MS percent recovery for Chloroform on sample 1912109-004C was outside of the control limits due to sample matrix interference.

**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



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1912109

**Project:** December 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
<b>Lab Sample ID:</b> LCS-66712	Date Analyzed:		12/13/2019 1824h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:		12/05/2019 1337h										
Cadmium	0.190	mg/L	E200.8	0.0000858	0.000500	0.2000	0	95.2	85 - 115				
Manganese	0.194	mg/L	E200.8	0.00108	0.00200	0.2000	0	96.9	85 - 115				
Selenium	0.218	mg/L	E200.8	0.000574	0.00200	0.2000	0	109	85 - 115				
Uranium	0.203	mg/L	E200.8	0.000176	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:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> MB-66712	Date Analyzed:		12/13/2019 1820h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:		12/05/2019 1337h										
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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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> 1912109-005CMS	Date Analyzed:		12/13/2019 1846h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:		12/05/2019 1337h										
Cadmium	0.189	mg/L	E200.8	0.0000858	0.000500	0.2000	0.000102	94.3	75 - 125				
Manganese	0.200	mg/L	E200.8	0.00108	0.00200	0.2000	0.00936	95.3	75 - 125				
Selenium	0.280	mg/L	E200.8	0.000574	0.00200	0.2000	0.0564	112	75 - 125				
Uranium	0.211	mg/L	E200.8	0.000176	0.00200	0.2000	0.00899	101	75 - 125				



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Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> 1912109-005CMSD	Date Analyzed: 12/13/2019 1849h												
Test Code: 200.8-DIS	Date Prepared: 12/05/2019 1337h												
Cadmium	0.188	mg/L	E200.8	0.0000858	0.000500	0.2000	0.000102	94.2	75 - 125	0.189	0.138	20	
Manganese	0.202	mg/L	E200.8	0.00108	0.00200	0.2000	0.00936	96.1	75 - 125	0.2	0.852	20	
Selenium	0.285	mg/L	E200.8	0.000574	0.00200	0.2000	0.0564	114	75 - 125	0.28	1.61	20	
Uranium	0.209	mg/L	E200.8	0.000176	0.00200	0.2000	0.00899	100	75 - 125	0.211	0.793	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:** 1912109  
**Project:** December 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
<b>Lab Sample ID: 1912109-006CDUP</b> Date Analyzed: 12/06/2019 1110h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	2,080	mg/L	SM2540C	16.0	20.0					2030	2.72	5	
<b>Lab Sample ID: 1912110-001ADUP</b> Date Analyzed: 12/06/2019 1110h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	3,780	mg/L	SM2540C	16.0	20.0					3340	12.3	5	@

@ - High RPD due to suspected sample non-homogeneity or matrix interference.



**American West**  
ANALYTICAL LABORATORIES

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> LCS-R133671		Date Analyzed: 12/16/2019 1804h											
Test Code: 300.0-W													
Chloride	4.96	mg/L	E300.0	0.0386	0.100	5.000	0	99.2	90 - 110				
Fluoride	5.04	mg/L	E300.0	0.0240	0.100	5.000	0	101	90 - 110				
Sulfate	4.89	mg/L	E300.0	0.174	0.750	5.000	0	97.8	90 - 110				
<b>Lab Sample ID:</b> LCS-66916		Date Analyzed: 12/15/2019 1503h											
Test Code: NH3-W-350.1		Date Prepared: 12/15/2019 1031h											
Ammonia (as N)	10.2	mg/L	E350.1	0.0492	0.0500	10.00	0	102	90 - 110				
<b>Lab Sample ID:</b> LCS-R133266		Date Analyzed: 12/05/2019 1351h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.05	mg/L	E353.2	0.00363	0.0100	1.000	0	105	90 - 110				
<b>Lab Sample ID:</b> LCS-R133390		Date Analyzed: 12/06/2019 1110h											
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:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> MB-R133671	Date Analyzed:		12/16/2019 1748h										
Test Code:	300.0-W												
Chloride	< 0.100	mg/L	E300.0	0.0386	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0240	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.174	0.750								
<b>Lab Sample ID:</b> MB-66916	Date Analyzed:		12/15/2019 1439h										
Test Code:	Date Prepared:		12/15/2019 1031h										
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0492	0.0500								
<b>Lab Sample ID:</b> MB-R133266	Date Analyzed:		12/05/2019 1349h										
Test Code:	NO2/NO3-W-353.2												
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00363	0.0100								
<b>Lab Sample ID:</b> MB-R133390	Date Analyzed:		12/06/2019 1110h										
Test Code:	TDS-W-2540C												
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.00	10.0								



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> 1912109-006AMS		Date Analyzed:		12/16/2019 2159h									
Test Code:		300.0-W											
Chloride	1,370	mg/L	E300.0	7.72	20.0	1,000	343	103	90 - 110				
Fluoride	1,010	mg/L	E300.0	4.80	20.0	1,000	0	101	90 - 110				
Sulfate	2,040	mg/L	E300.0	34.8	150	1,000	1020	102	90 - 110				
<b>Lab Sample ID:</b> 1912025-001DMS		Date Analyzed:		12/15/2019 1441h									
Test Code:		NH3-W-350.1											
Date Prepared:		12/15/2019 1031h											
Ammonia (as N)	13.9	mg/L	E350.1	0.0492	0.0500	10.00	0.149	137	90 - 110				†
<b>Lab Sample ID:</b> 1912109-004BMS		Date Analyzed:		12/15/2019 1455h									
Test Code:		NH3-W-350.1											
Date Prepared:		12/15/2019 1031h											
Ammonia (as N)	14.2	mg/L	E350.1	0.0492	0.0500	10.00	0.207	140	90 - 110				†
<b>Lab Sample ID:</b> 1912109-004BMS		Date Analyzed:		12/05/2019 1433h									
Test Code:		NO2/NO3-W-353.2											
Nitrate/Nitrite (as N)	12.7	mg/L	E353.2	0.0363	0.100	10.00	2.32	104	90 - 110				

† - 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:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> 1912109-006AMSD		Date Analyzed:		12/16/2019 2216h									
Test Code:		300.0-W											
Chloride	1,370	mg/L	E300.0	7.72	20.0	1,000	343	103	90 - 110	1370	0.288	20	
Fluoride	995	mg/L	E300.0	4.80	20.0	1,000	0	99.5	90 - 110	1010	1.68	20	
Sulfate	2,060	mg/L	E300.0	34.8	150	1,000	1020	104	90 - 110	2040	1.17	20	
<b>Lab Sample ID:</b> 1912025-001DMSD		Date Analyzed:		12/15/2019 1443h									
Test Code:		Date Prepared:		NH3-W-350.1 12/15/2019 1031h									
Ammonia (as N)	13.8	mg/L	E350.1	0.0492	0.0500	10.00	0.149	137	90 - 110	13.9	0.650	10	†
<b>Lab Sample ID:</b> 1912109-004BMSD		Date Analyzed:		12/15/2019 1456h									
Test Code:		Date Prepared:		NH3-W-350.1 12/15/2019 1031h									
Ammonia (as N)	14.2	mg/L	E350.1	0.0492	0.0500	10.00	0.207	140	90 - 110	14.2	0.352	10	†
<b>Lab Sample ID:</b> 1912109-004BMSD		Date Analyzed:		12/05/2019 1434h									
Test Code:		NO2/NO3-W-353.2											
Nitrate/Nitrite (as N)	12.8	mg/L	E353.2	0.0363	0.100	10.00	2.32	105	90 - 110	12.7	0.549	10	

† - 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

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> LCS VOC-2 120519A		<b>Date Analyzed:</b> 12/05/2019 759h											
<b>Test Code:</b> 8260D-W-DEN100													
Chloroform	23.0	µg/L	SW8260D	0.166	1.00	20.00	0	115	85 - 124				
Methylene chloride	23.7	µg/L	SW8260D	0.448	1.00	20.00	0	119	65 - 154				
Surr: 1,2-Dichloroethane-d4	52.3	µg/L	SW8260D			50.00		105	80 - 136				
Surr: 4-Bromofluorobenzene	52.8	µg/L	SW8260D			50.00		106	85 - 121				
Surr: Dibromofluoromethane	50.7	µg/L	SW8260D			50.00		101	78 - 132				
Surr: Toluene-d8	52.0	µg/L	SW8260D			50.00		104	81 - 123				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> MB VOC-2 120519A		<b>Date Analyzed:</b> 12/05/2019 819h											
<b>Test Code:</b> 8260D-W-DEN100													
Chloroform	< 1.00	µg/L	SW8260D	0.166	1.00								
Methylene chloride	< 1.00	µg/L	SW8260D	0.448	1.00								
Surr: 1,2-Dichloroethane-d4	51.3	µg/L	SW8260D			50.00		103	80 - 136				
Surr: 4-Bromofluorobenzene	57.8	µg/L	SW8260D			50.00		116	85 - 121				
Surr: Dibromofluoromethane	48.9	µg/L	SW8260D			50.00		97.8	78 - 132				
Surr: Toluene-d8	51.4	µg/L	SW8260D			50.00		103	81 - 123				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> 1912109-004CMS		<b>Date Analyzed:</b> 12/05/2019 1544h											
<b>Test Code:</b> 8260D-W-DEN100													
Chloroform	1,650	µg/L	SW8260D	3.32	20.0	400.0	1110	135	85 - 124				1
Methylene chloride	539	µg/L	SW8260D	8.96	20.0	400.0	2.64	134	65 - 154				
Surr: 1,2-Dichloroethane-d4	1,020	µg/L	SW8260D			1,000		102	80 - 136				
Surr: 4-Bromofluorobenzene	1,060	µg/L	SW8260D			1,000		106	85 - 121				
Surr: Dibromofluoromethane	1,010	µg/L	SW8260D			1,000		101	78 - 132				
Surr: Toluene-d8	1,020	µg/L	SW8260D			1,000		102	81 - 123				

<sup>1</sup> - 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

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1912109  
**Project:** December 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
<b>Lab Sample ID:</b> 1912109-004CMSD		<b>Date Analyzed:</b> 12/05/2019 1604h											
<b>Test Code:</b> 8260D-W-DEN100													
Chloroform	1,600	µg/L	SW8260D	3.32	20.0	400.0	1110	124	85 - 124	1650	2.70	35	
Methylene chloride	525	µg/L	SW8260D	8.96	20.0	400.0	2.64	131	65 - 154	539	2.63	35	
Surr: 1,2-Dichloroethane-d4	1,030	µg/L	SW8260D			1,000		103	80 - 136				
Surr: 4-Bromofluorobenzene	1,050	µg/L	SW8260D			1,000		105	85 - 121				
Surr: Dibromofluoromethane	1,010	µg/L	SW8260D			1,000		101	78 - 132				
Surr: Toluene-d8	1,020	µg/L	SW8260D			1,000		102	81 - 123				

**WORK ORDER Summary**

Work Order: **1912109**

Page 1 of 2

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

Due Date: 12/19/2019

**Client ID:** ENE300

**Contact:** Tanner Holliday

**Project:** December Ground Water 2019

**QC Level:** III

**WO Type:** Project

**Comments:** QC 3 (no chromatograms). EDD-Denison. CC KWeinel@energyfuels.com; (USE PROJECT for special DLs). Do not use "\*R\_" samples as MS/MSD.; 

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1912109-001A	MW-11_12032019	12/3/2019 1200h	12/5/2019 1143h	300.0-W 2 SEL Analytes: CL SO4	Aqueous		df - wc	1
1912109-001B				200.8-DIS 1 SEL Analytes: MN 200.8-DIS-PR			df-met	
1912109-002A	MW-14_12032019	12/3/2019 1455h	12/5/2019 1143h	300.0-W 2 SEL Analytes: F SO4	Aqueous		DF-WC	1
1912109-003A	MW-25_12042019	12/4/2019 1145h	12/5/2019 1143h	200.8-DIS 1 SEL Analytes: CD 200.8-DIS-PR	Aqueous		df-met	1
1912109-004A	MW-26_12042019	12/4/2019 0900h	12/5/2019 1143h	300.0-W 1 SEL Analytes: CL	Aqueous		DF-WC	1
1912109-004B				NH3-W-350.1 1 SEL Analytes: NH3N NH3-W-PR			DF-NH3	
1912109-004C				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N 8260D-W-DEN100 Test Group: 8260D-W-DEN100; # of Analytes: 2 / # of Surr: 4			DF-NH3	3
1912109-005A	MW-30_12042019	12/4/2019 1535h	12/5/2019 1143h	300.0-W 1 SEL Analytes: CL	Aqueous		DF-WC	1
1912109-005B				NO2/NO3-W-353.2 1 SEL Analytes: NO3NO2N			DF-NH3	
1912109-005C				200.8-DIS 2 SEL Analytes: SE U 200.8-DIS-PR			df-met	
1912109-006A	MW-31_12032019	12/3/2019 1325h	12/5/2019 1143h	300.0-W 2 SEL Analytes: CL SO4	Aqueous		DF-WC	1

# WORK ORDER Summary

Work Order: **1912109**

Page 2 of 2

Client: Energy Fuels Resources, Inc.

Due Date: 12/19/2019

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1912109-006B	MW-31_12032019	12/3/2019 1325h	12/5/2019 1143h	NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>	Aqueous		DF-NH3	1
1912109-006C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>			DF-tds	
1912109-007A	MW-36_12032019	12/3/2019 1515h	12/5/2019 1143h	300.0-W <i>1 SEL Analytes: SO4</i>	Aqueous		DF-WC	1
1912109-008A	MW-65_12032019	12/3/2019 1325h	12/5/2019 1143h	300.0-W <i>2 SEL Analytes: CL SO4</i>	Aqueous		DF-WC	1
1912109-008B				NO2/NO3-W-353.2 <i>1 SEL Analytes: NO3NO2N</i>			DF-NH3	
1912109-008C				TDS-W-2540C <i>1 SEL Analytes: TDS</i>			DF-tds	
1912109-009A	Trip Blank	12/4/2019 0900h	12/5/2019 1143h	8260D-W-DEN100 <i>Test Group: 8260D-W-DEN100; # of Analytes: 2 / # of Surr: 4</i>	Aqueous		Purge	3

AWAL Use Only - Close Hold Times

Test Code	# Samps	Min. days left
TDS-W-2540C	2	1.06



**American West  
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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 (PQL) unless specifically requested otherwise on this Chain of Custody and/or attached documentation.

1912109  
 AWAL Lab Sample Set #  
 Page 1 of 1

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: **December 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				12/19/19										
		Laboratory Use Only														
		Samples Were:														
		1 Shipped or hand delivered														
		2 Ambient or Chilled														
		3 Temperature		L.O		°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										
		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										
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-F C or 300.0)	SO4 (4500 or 300.0)	Ammonia as N (350.1)	VOCs Chloroform, Dichloromethane, (8260C)	Known Hazards & Sample Comments
1 MW-11_12032019	12/3/2019	1200	2	W		X	X					X				
2 MW-14_12032019	12/3/2019	1455	1	W								X	X			
3 MW-25_12042019	12/4/2019	1145	1	W					X							
4 MW-26_12042019	12/4/2019	900	5	W	X	X								X	X	
5 MW-30_12042019	12/4/2019	1535	3	W	X	X		X	X							
6 MW-31_12032019	12/3/2019	1325	3	W	X	X	X					X				
7 MW-36_12032019	12/3/2019	1515	1	W								X				
8 MW-65_12032019	12/3/2019	1325	3	W	X	X	X					X				
9 Trip Blank	12/4/2019	900	3	W											X	
10																
11																
12																
13																

Relinquished by: Signature:	Date: 12/5/2019	Received by: Signature:	Date: 12/5/19	Special Instructions:  Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.
Print Name: Abel Mandoza	Time: 11:43	Print Name: Airnee Rust	Time: 1143	
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:	Date:	
Print Name:	Time:	Print Name:	Time:	

Lab Set ID: 1912109

pH Lot #: 6179

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	1	3	4	5	6	8												
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>			Yes															
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cyanide	pH >12 NaOH																		
Metals	pH <2 HNO <sub>3</sub>	Yes	Yes		Yes														
NO <sub>2</sub> /NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>			Yes	Yes	Yes	Yes												
O & G	pH <2 HCL																		
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Sulfide	pH >9 NaOH, Zn Acetate																		
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																		
Cr VI+	pH >9 (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub>																		

- 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

G1 A: 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	Dissolved Oxygen		RPD
MW-01	19.41	39.06	38.82	okay	1775	1773	0.11	7.32	7.32	0.00	14.35	14.32	0.21	246	245	0.41	1.5	1.5	0.00	12.1	12.0	0.83
MW-02	12.42	26.04	24.84	okay	3574	3574	0.00	7.30	7.29	0.14	14.13	14.06	0.50	407	406	0.25	0	0	0.00	36.7	36.5	0.55
MW-02 Resample	12.50	26.04	25.00	okay	3604	3605	0.03	7.37	7.36	0.14	13.96	13.96	0.00	425	425	0.00	0	0	0.00	26.8	26.6	0.75
MW-03A	7.01	14.56	14.02	Pumped Dry	5785	5791	0.10	6.76	6.81	0.74	14.33	14.31	0.14	NM	NC	NC	NM	NC	NM	NC	NC	NC
MW-05	21.45	43.40	42.90	okay	2804	2804	0.00	7.65	7.65	0.00	14.71	14.70	0.07	345	339	1.75	0	0	0.00	11.9	11.9	0.00
MW-11	29.05	58.59	58.10	okay	2881	2880	0.03	7.63	7.64	0.13	14.95	14.97	0.13	385	378	1.83	0	0	0.00	7.0	6.9	1.44
MW-12	14.69	30.38	29.38	okay	4099	4097	0.05	6.78	6.79	0.15	15.01	15.02	0.07	404	403	0.25	0	0	0.00	14.7	14.8	0.68
MW-14	17.41	39.06	34.82	okay	3806	3809	0.08	6.79	6.79	0.00	15.00	14.99	0.07	386	385	0.26	4.9	4.9	0.00	1.3	1.3	0.00
MW-15	20.54	43.40	41.08	okay	4152	4149	0.07	7.01	7.02	0.14	14.71	14.70	0.07	425	426	0.24	0	0	0.00	19.9	19.8	0.50
MW-15 Resample	20.45	43.40	40.90	okay	4101	4103	0.05	6.98	6.98	0.00	14.40	14.42	0.14	395	394	0.25	0	0	0.00	25.0	24.8	0.80
MW-17	26.15	53.16	52.30	okay	3613	3614	0.03	7.04	7.04	0.00	14.76	14.75	0.07	398	398	0.00	0	0	0.00	8.1	8.1	0.00
MW-18	39.53	80.29	79.06	okay	55.2	56.3	1.97	6.70	6.71	0.15	14.95	14.97	0.13	372	370	0.54	5.8	5.9	1.71	1.0	1.0	0.00
MW-19	54.88	117.18	109.76	okay	1281	1271	0.78	7.11	7.11	0.00	15.05	15.05	0.00	383	388	1.30	110	111	0.90	105.6	103.4	2.11
MW-20	5.19	7.00	10.38	Pumped Dry	5437	5440	0.06	7.50	7.48	0.27	14.30	14.27	0.21	NM	NC	NC	NM	NC	NM	NC	NC	NC
MW-20 Resample	N/A	N/A	N/A	Pumped Dry	5433	5446	0.24	7.64	7.69	0.65	14.00	13.95	0.36	NM	NC	NC	NM	NC	NM	NC	NC	NC
MW-22	31.13	65.10	62.26	okay	7379	7358	0.28	4.83	4.84	0.21	14.80	14.79	0.07	459	472	2.79	2.5	2.4	4.08	8.0	7.9	1.26
MW-23	11.8	24.96	23.6	Pumped Dry	1538	1535	0.20	7.06	7.04	0.28	14.30	14.23	0.49	NM	NC	NC	NM	NC	NM	NC	NC	NC
MW-24	5.62	11.00	11.24	Pumped Dry	4419	4410	0.20	5.20	5.19	0.19	15.20	15.23	0.20	NM	NC	NC	NM	NC	NM	NC	NC	NC
MW-25	23.01	47.74	46.02	okay	3095	3096	0.03	6.87	6.87	0.00	14.86	14.81	0.34	338	339	0.30	805	814	1.11	3.3	3.2	3.08
MW-26	NA	Continuously Pumped well	--	--	3419	NC	6.75	NC	16.60	NC	374	NC	5.1	NC	33.0	NC	NC	NC	33.0	NC	NC	NC
MW-27	24.76	52.08	49.52	okay	1081	1083	0.18	7.60	7.60	0.00	15.03	15.02	0.07	405	409	0.98	0	0	0.00	106.5	106.5	0.00
MW-28	22.85	47.74	45.70	okay	4061	4067	0.15	6.36	6.37	0.16	15.17	15.20	0.20	390	390	0.00	0	0	0.00	33.5	33.1	1.20
MW-29	17.63	36.89	35.26	okay	4472	4471	0.02	6.63	6.63	0.00	14.62	14.62	0.00	284	282	0.71	8.0	8.1	1.24	6.8	6.8	0.00
MW-30	22.82	47.74	45.64	okay	2118	2121	0.14	7.14	7.16	0.28	14.78	14.80	0.14	356	356	0.00	4.6	4.6	0.00	55.8	55.8	0.00
MW-31	40.02	81.37	80.04	okay	2995	2969	0.87	7.23	7.23	0.00	15.08	15.14	0.40	340	340	0.00	5.1	5.2	1.94	118.5	116.8	1.44
MW-32	32.68	66.18	65.36	okay	3664	3664	0.00	6.51	6.51	0.00	14.85	14.79	0.40	306	310	1.30	120	123	2.47	4.5	4.4	2.25
MW-35	7.95	16.27	15.90	okay	17.9	18.0	0.56	6.96	7.00	0.57	14.94	14.90	0.27	362	356	1.67	4.9	5.0	2.02	3.9	4.0	2.53
MW-36	7.24	16.27	14.48	okay	4760	4776	0.34	7.04	7.05	0.14	15.82	15.85	0.19	436	437	0.23	5.3	5.3	0.00	84.0	83.4	0.72
MW-37	10.11	14.50	20.22	Pumped Dry	4425	4415	0.23	6.83	6.84	0.15	14.80	14.77	0.20	NM	NC	NC	NM	NC	NM	NC	NC	NC
MW-37 Resample	5.87	9.00	11.74	Pumped Dry	4300	4297	0.07	7.03	7.02	0.14	14.15	14.14	0.07	NM	NC	NC	NM	NC	NM	NC	NC	NC
MW-38	2.44	5.00	4.88	Pumped Dry	4550	4541	0.20	7.45	7.45	0.00	15.40	15.36	0.26	NM	NC	NC	NM	NC	NM	NC	NC	NC
MW-39	24.46	52.08	48.92	okay	4490	4493	0.07	4.19	4.20	0.24	14.48	14.48	0.00	548	548	0.00	131.0	133.0	1.52	8.0	8.1	1.24
MW-40	26.12	53.16	52.24	okay	3853	3855	0.05	7.04	7.04	0.00	14.19	14.16	0.21	406	406	0.00	0	0	0.00	108.8	107.9	0.83
TW4-24	NA	Continuously Pumped well	--	--	7178	NC	6.66	NC	17.21	NC	341	NC	5.3	NC	18.1	NC	NC	NC	18.1	NC	NC	NC

MW-03A, MW-20, MW-24, MW-37, MW-38 were pumped dry and sampled after recovery.

MW-26, TW4-24 are continually pumped wells.

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

Accelerated November Monthly																						
Location	1x Casing Volume	Volume Pumped	2x Casing Volume	Volume Check	Conductivity		RPD	pH		RPD	Temperature		RPD	Redox		RPD	Turbidity		RPD	Dissolved Oxygen		RPD
MW-11	28.96	58.59	57.92	okay	2881	2885	0.14	7.57	7.57	0.00	14.39	14.36	0.21	364	360	1.10	207.5	209.3	0.86	3.1	3.1	0.00
MW-14	17.28	39.06	34.56	okay	3788	3788	0.00	6.81	6.81	0.00	14.41	14.42	0.07	319	319	0.00	0	0	0.00	5.0	5.0	0.00
MW-25	22.82	52.08	45.64	okay	3102	3074	0.91	6.89	6.89	0.00	14.65	14.64	0.07	395	395	0.00	263	269	2.26	5.0	5.0	0.00
MW-26	NA	Continuously Pumped well	--		3324		NC	6.96		NC	18.20		NC	349		NC	0		NC	15.9		NC
MW-30	22.75	46.65	45.5	okay	2110	2107	0.14	7.21	7.21	0.00	14.64	14.62	0.14	393	394	0.25	0	0	0.00	59.7	59.4	0.50
MW-31	39.69	80.29	79.38	okay	2974	2953	0.71	7.31	7.33	0.27	14.78	14.80	0.14	395	395	0.00	4.9	5.1	4.00	118.0	117.0	0.85
MW-36	7.11	19.53	14.22	okay	4643	4645	0.04	7.25	7.24	0.14	14.00	13.97	0.21	424	425	0.24	0	0	0.00	83.0	82.7	0.36
Accelerated December Monthly																						
MW-11	29.04	58.59	58.08	okay	2837	2839	0.07	7.62	7.63	0.13	14.25	14.26	0.07	367	362	1.37	0	0	0.00	1.9	1.9	0.00
MW-14	17.21	34.72	34.42	okay	3780	3779	0.03	6.92	6.95	0.43	14.23	14.24	0.07	422	424	0.47	0	0	0.00	6.0	5.9	1.68
MW-25	22.82	47.74	45.64	okay	2726	2779	1.93	7.00	6.99	0.14	14.41	14.40	0.07	387	387	0.00	2.7	2.6	3.77	5.0	4.9	2.02
MW-26	NA	Continuously Pumped well	--		3408		NC	6.84		NC	15.96		NC	325		NC	0		NC	15.2		NC
MW-30	22.82	46.65	45.64	okay	2106	2104	0.10	7.22	7.22	0.00	14.37	14.38	0.07	396	396	0.00	0	0	0.00	58.6	58.5	0.17
MW-31	39.76	80.29	79.52	okay	2978	2976	0.07	7.29	7.29	0.00	14.51	14.53	0.14	409	408	0.24	11.2	12.0	6.90	121.3	121.3	0.00
MW-36	7.24	15.19	14.48	okay	4744	4743	0.02	7.09	7.09	0.00	14.40	14.39	0.07	400	400	0.00	0	0	0.00	83.3	83.2	0.12

MW-26 is a continuously 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	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Tetrahydrofuran	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Xylenes, Total	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Carbon tetrachloride	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Acetone	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Chloroform	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Benzene	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Chloromethane	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Methylene chloride	10/8/2019	10/15/2019	7	14	OK
Trip Blank	2-Butanone	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Naphthalene	10/8/2019	10/15/2019	7	14	OK
Trip Blank	Toluene	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Tetrahydrofuran	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Xylenes, Total	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Carbon tetrachloride	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Acetone	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Chloroform	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Benzene	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Chloromethane	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Methylene chloride	10/14/2019	10/21/2019	7	14	OK
Trip Blank	2-Butanone	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Naphthalene	10/14/2019	10/21/2019	7	14	OK
Trip Blank	Toluene	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Tetrahydrofuran	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Xylenes, Total	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Carbon tetrachloride	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Acetone	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Chloroform	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Benzene	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Chloromethane	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Methylene chloride	10/22/2019	10/28/2019	6	14	OK
Trip Blank	2-Butanone	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Naphthalene	10/22/2019	10/28/2019	6	14	OK
Trip Blank	Toluene	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Tetrahydrofuran	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Xylenes, Total	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Carbon tetrachloride	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Acetone	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Chloroform	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Benzene	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Chloromethane	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Methylene chloride	10/28/2019	10/31/2019	3	14	OK
Trip Blank	2-Butanone	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Naphthalene	10/28/2019	10/31/2019	3	14	OK
Trip Blank	Toluene	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Tetrahydrofuran	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Xylenes, Total	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Carbon tetrachloride	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Acetone	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Chloroform	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Benzene	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Chloromethane	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Methylene chloride	11/6/2019	11/12/2019	6	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
Trip Blank	2-Butanone	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Naphthalene	11/6/2019	11/12/2019	6	14	OK
Trip Blank	Toluene	11/22/2019	12/3/2019	11	14	OK
Trip Blank	Tetrahydrofuran	11/22/2019	12/3/2019	11	14	OK
Trip Blank	Xylenes, Total	11/22/2019	12/3/2019	11	14	OK
Trip Blank	Carbon tetrachloride	11/22/2019	12/3/2019	11	14	OK
Trip Blank	Acetone	11/22/2019	12/3/2019	11	14	OK
Trip Blank	Chloroform	11/22/2019	12/3/2019	11	14	OK
Trip Blank	Benzene	11/22/2019	12/3/2019	11	14	OK
Trip Blank	Chloromethane	11/22/2019	12/3/2019	11	14	OK
Trip Blank	Methylene chloride	11/22/2019	12/3/2019	11	14	OK
Trip Blank	2-Butanone	11/22/2019	12/3/2019	11	14	OK
Trip Blank	Naphthalene	11/22/2019	12/3/2019	11	14	OK
MW-01	Toluene	10/22/2019	10/25/2019	3	14	OK
MW-01	Tetrahydrofuran	10/22/2019	10/25/2019	3	14	OK
MW-01	Xylenes, Total	10/22/2019	10/25/2019	3	14	OK
MW-01	Sulfate	10/22/2019	11/5/2019	14	28	OK
MW-01	Chloride	10/22/2019	11/5/2019	14	28	OK
MW-01	Fluoride	10/22/2019	11/6/2019	15	28	OK
MW-01	Carbon tetrachloride	10/22/2019	10/25/2019	3	14	OK
MW-01	Acetone	10/22/2019	10/25/2019	3	14	OK
MW-01	Chloroform	10/22/2019	10/25/2019	3	14	OK
MW-01	Benzene	10/22/2019	10/25/2019	3	14	OK
MW-01	Chloromethane	10/22/2019	10/25/2019	3	14	OK
MW-01	Iron	10/22/2019	11/5/2019	14	180	OK
MW-01	Lead	10/22/2019	11/5/2019	14	180	OK
MW-01	Magnesium	10/22/2019	11/4/2019	13	180	OK
MW-01	Manganese	10/22/2019	11/5/2019	14	180	OK
MW-01	Mercury	10/22/2019	11/5/2019	14	180	OK
MW-01	Molybdenum	10/22/2019	11/6/2019	15	180	OK
MW-01	Nickel	10/22/2019	11/6/2019	15	180	OK
MW-01	Potassium	10/22/2019	11/6/2019	15	180	OK
MW-01	Silver	10/22/2019	11/5/2019	14	180	OK
MW-01	Sodium	10/22/2019	11/4/2019	13	180	OK
MW-01	Thallium	10/22/2019	11/5/2019	14	180	OK
MW-01	Tin	10/22/2019	11/5/2019	14	180	OK
MW-01	Arsenic	10/22/2019	11/5/2019	14	180	OK
MW-01	Beryllium	10/22/2019	11/5/2019	14	180	OK
MW-01	Cadmium	10/22/2019	11/5/2019	14	180	OK
MW-01	Chromium	10/22/2019	11/5/2019	14	180	OK
MW-01	Cobalt	10/22/2019	11/5/2019	14	180	OK
MW-01	Copper	10/22/2019	11/5/2019	14	180	OK
MW-01	Uranium	10/22/2019	11/5/2019	14	180	OK
MW-01	Vanadium	10/22/2019	11/4/2019	13	180	OK
MW-01	Zinc	10/22/2019	11/5/2019	14	180	OK
MW-01	Calcium	10/22/2019	11/4/2019	13	180	OK
MW-01	Methylene chloride	10/22/2019	10/25/2019	3	14	OK
MW-01	Ammonia (as N)	10/22/2019	11/7/2019	16	28	OK
MW-01	Selenium	10/22/2019	11/5/2019	14	180	OK
MW-01	2-Butanone	10/22/2019	10/25/2019	3	14	OK
MW-01	Naphthalene	10/22/2019	10/25/2019	3	14	OK
MW-01	Bicarbonate (as CaCO3)	10/22/2019	10/28/2019	6	14	OK
MW-01	Carbonate (as CaCO3)	10/22/2019	10/28/2019	6	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-01	Gross Radium Alpha	10/22/2019	11/15/2019	24	180	OK
MW-01	Nitrate/Nitrite (as N)	10/22/2019	10/28/2019	6	28	OK
MW-01	Total Dissolved Solids	10/22/2019	10/28/2019	6	7	OK
MW-02	Toluene	10/23/2019	10/25/2019	2	14	OK
MW-02	Tetrahydrofuran	10/23/2019	10/25/2019	2	14	OK
MW-02	Xylenes, Total	10/23/2019	10/25/2019	2	14	OK
MW-02	Sulfate	10/23/2019	11/5/2019	13	28	OK
MW-02	Chloride	10/23/2019	11/7/2019	15	28	OK
MW-02	Carbon tetrachloride	10/23/2019	10/25/2019	2	14	OK
MW-02	Acetone	10/23/2019	10/25/2019	2	14	OK
MW-02	Chloroform	10/23/2019	10/25/2019	2	14	OK
MW-02	Benzene	10/23/2019	10/25/2019	2	14	OK
MW-02	Chloromethane	10/23/2019	10/25/2019	2	14	OK
MW-02	Iron	10/23/2019	11/5/2019	13	180	OK
MW-02	Lead	10/23/2019	11/5/2019	13	180	OK
MW-02	Magnesium	10/23/2019	11/4/2019	12	180	OK
MW-02	Manganese	10/23/2019	11/5/2019	13	180	OK
MW-02	Mercury	10/23/2019	11/5/2019	13	180	OK
MW-02	Molybdenum	10/23/2019	11/6/2019	14	180	OK
MW-02	Nickel	10/23/2019	11/6/2019	14	180	OK
MW-02	Potassium	10/23/2019	11/6/2019	14	180	OK
MW-02	Silver	10/23/2019	11/5/2019	13	180	OK
MW-02	Sodium	10/23/2019	11/4/2019	12	180	OK
MW-02	Thallium	10/23/2019	11/5/2019	13	180	OK
MW-02	Tin	10/23/2019	11/5/2019	13	180	OK
MW-02	Arsenic	10/23/2019	11/5/2019	13	180	OK
MW-02	Beryllium	10/23/2019	11/5/2019	13	180	OK
MW-02	Cadmium	10/23/2019	11/5/2019	13	180	OK
MW-02	Chromium	10/23/2019	11/5/2019	13	180	OK
MW-02	Cobalt	10/23/2019	11/5/2019	13	180	OK
MW-02	Copper	10/23/2019	11/5/2019	13	180	OK
MW-02	Uranium	10/23/2019	11/5/2019	13	180	OK
MW-02	Vanadium	10/23/2019	11/4/2019	12	180	OK
MW-02	Zinc	10/23/2019	11/5/2019	13	180	OK
MW-02	Calcium	10/23/2019	11/4/2019	12	180	OK
MW-02	Methylene chloride	10/23/2019	10/25/2019	2	14	OK
MW-02	Ammonia (as N)	10/23/2019	11/7/2019	15	28	OK
MW-02	Selenium	10/23/2019	11/5/2019	13	180	OK
MW-02	2-Butanone	10/23/2019	10/25/2019	2	14	OK
MW-02	Naphthalene	10/23/2019	10/25/2019	2	14	OK
MW-02	Bicarbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-02	Carbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-02	Gross Radium Alpha	10/23/2019	11/15/2019	23	180	OK
MW-02	Nitrate/Nitrite (as N)	10/23/2019	10/28/2019	5	28	OK
MW-02	Total Dissolved Solids	10/23/2019	10/28/2019	5	7	OK
MW-02 Resample	Fluoride	11/22/2019	12/11/2019	19	28	OK
MW-03A	Toluene	11/6/2019	11/12/2019	6	14	OK
MW-03A	Tetrahydrofuran	11/6/2019	11/12/2019	6	14	OK
MW-03A	Xylenes, Total	11/6/2019	11/12/2019	6	14	OK
MW-03A	Sulfate	11/6/2019	11/13/2019	7	28	OK
MW-03A	Chloride	11/6/2019	11/14/2019	8	28	OK
MW-03A	Fluoride	11/6/2019	11/14/2019	8	28	OK
MW-03A	Carbon tetrachloride	11/6/2019	11/12/2019	6	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-03A	Acetone	11/6/2019	11/12/2019	6	14	OK
MW-03A	Chloroform	11/6/2019	11/12/2019	6	14	OK
MW-03A	Benzene	11/6/2019	11/12/2019	6	14	OK
MW-03A	Chloromethane	11/6/2019	11/12/2019	6	14	OK
MW-03A	Iron	11/6/2019	11/19/2019	13	180	OK
MW-03A	Lead	11/6/2019	11/19/2019	13	180	OK
MW-03A	Magnesium	11/6/2019	11/18/2019	12	180	OK
MW-03A	Manganese	11/6/2019	11/19/2019	13	180	OK
MW-03A	Mercury	11/6/2019	11/13/2019	7	180	OK
MW-03A	Molybdenum	11/6/2019	11/19/2019	13	180	OK
MW-03A	Nickel	11/6/2019	11/19/2019	13	180	OK
MW-03A	Potassium	11/6/2019	11/18/2019	12	180	OK
MW-03A	Silver	11/6/2019	11/19/2019	13	180	OK
MW-03A	Sodium	11/6/2019	11/18/2019	12	180	OK
MW-03A	Thallium	11/6/2019	11/19/2019	13	180	OK
MW-03A	Tin	11/6/2019	11/20/2019	14	180	OK
MW-03A	Arsenic	11/6/2019	11/19/2019	13	180	OK
MW-03A	Beryllium	11/6/2019	11/19/2019	13	180	OK
MW-03A	Cadmium	11/6/2019	11/19/2019	13	180	OK
MW-03A	Chromium	11/6/2019	11/19/2019	13	180	OK
MW-03A	Cobalt	11/6/2019	11/19/2019	13	180	OK
MW-03A	Copper	11/6/2019	11/20/2019	14	180	OK
MW-03A	Uranium	11/6/2019	11/20/2019	14	180	OK
MW-03A	Vanadium	11/6/2019	11/22/2019	16	180	OK
MW-03A	Zinc	11/6/2019	11/19/2019	13	180	OK
MW-03A	Calcium	11/6/2019	11/18/2019	12	180	OK
MW-03A	Methylene chloride	11/6/2019	11/12/2019	6	14	OK
MW-03A	Ammonia (as N)	11/6/2019	11/13/2019	7	28	OK
MW-03A	Selenium	11/6/2019	11/20/2019	14	180	OK
MW-03A	2-Butanone	11/6/2019	11/12/2019	6	14	OK
MW-03A	Naphthalene	11/6/2019	11/12/2019	6	14	OK
MW-03A	Bicarbonate (as CaCO3)	11/6/2019	11/13/2019	7	14	OK
MW-03A	Carbonate (as CaCO3)	11/6/2019	11/13/2019	7	14	OK
MW-03A	Gross Radium Alpha	11/6/2019	12/3/2019	27	180	OK
MW-03A	Nitrate/Nitrite (as N)	11/6/2019	11/13/2019	7	28	OK
MW-03A	Total Dissolved Solids	11/6/2019	11/11/2019	5	7	OK
MW-05	Toluene	10/23/2019	10/25/2019	2	14	OK
MW-05	Tetrahydrofuran	10/23/2019	10/25/2019	2	14	OK
MW-05	Xylenes, Total	10/23/2019	10/25/2019	2	14	OK
MW-05	Sulfate	10/23/2019	11/5/2019	13	28	OK
MW-05	Chloride	10/23/2019	11/5/2019	13	28	OK
MW-05	Fluoride	10/23/2019	11/6/2019	14	28	OK
MW-05	Carbon tetrachloride	10/23/2019	10/25/2019	2	14	OK
MW-05	Acetone	10/23/2019	10/25/2019	2	14	OK
MW-05	Chloroform	10/23/2019	10/25/2019	2	14	OK
MW-05	Benzene	10/23/2019	10/25/2019	2	14	OK
MW-05	Chloromethane	10/23/2019	10/25/2019	2	14	OK
MW-05	Iron	10/23/2019	11/5/2019	13	180	OK
MW-05	Lead	10/23/2019	11/5/2019	13	180	OK
MW-05	Magnesium	10/23/2019	11/4/2019	12	180	OK
MW-05	Manganese	10/23/2019	11/5/2019	13	180	OK
MW-05	Mercury	10/23/2019	11/5/2019	13	180	OK
MW-05	Molybdenum	10/23/2019	11/6/2019	14	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-05	Nickel	10/23/2019	11/6/2019	14	180	OK
MW-05	Potassium	10/23/2019	11/6/2019	14	180	OK
MW-05	Silver	10/23/2019	11/5/2019	13	180	OK
MW-05	Sodium	10/23/2019	11/4/2019	12	180	OK
MW-05	Thallium	10/23/2019	11/5/2019	13	180	OK
MW-05	Tin	10/23/2019	11/5/2019	13	180	OK
MW-05	Arsenic	10/23/2019	11/5/2019	13	180	OK
MW-05	Beryllium	10/23/2019	11/5/2019	13	180	OK
MW-05	Cadmium	10/23/2019	11/5/2019	13	180	OK
MW-05	Chromium	10/23/2019	11/5/2019	13	180	OK
MW-05	Cobalt	10/23/2019	11/5/2019	13	180	OK
MW-05	Copper	10/23/2019	11/5/2019	13	180	OK
MW-05	Uranium	10/23/2019	11/5/2019	13	180	OK
MW-05	Vanadium	10/23/2019	11/4/2019	12	180	OK
MW-05	Zinc	10/23/2019	11/5/2019	13	180	OK
MW-05	Calcium	10/23/2019	11/4/2019	12	180	OK
MW-05	Methylene chloride	10/23/2019	10/25/2019	2	14	OK
MW-05	Ammonia (as N)	10/23/2019	11/7/2019	15	28	OK
MW-05	Selenium	10/23/2019	11/5/2019	13	180	OK
MW-05	2-Butanone	10/23/2019	10/25/2019	2	14	OK
MW-05	Naphthalene	10/23/2019	10/25/2019	2	14	OK
MW-05	Bicarbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-05	Carbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-05	Gross Radium Alpha	10/23/2019	11/15/2019	23	180	OK
MW-05	Nitrate/Nitrite (as N)	10/23/2019	10/28/2019	5	28	OK
MW-05	Total Dissolved Solids	10/23/2019	10/28/2019	5	7	OK
MW-11	Toluene	10/15/2019	10/21/2019	6	14	OK
MW-11	Tetrahydrofuran	10/15/2019	10/21/2019	6	14	OK
MW-11	Xylenes, Total	10/15/2019	10/21/2019	6	14	OK
MW-11	Sulfate	10/15/2019	10/30/2019	15	28	OK
MW-11	Chloride	10/15/2019	10/31/2019	16	28	OK
MW-11	Fluoride	10/15/2019	11/1/2019	17	28	OK
MW-11	Carbon tetrachloride	10/15/2019	10/21/2019	6	14	OK
MW-11	Acetone	10/15/2019	10/21/2019	6	14	OK
MW-11	Chloroform	10/15/2019	10/21/2019	6	14	OK
MW-11	Benzene	10/15/2019	10/21/2019	6	14	OK
MW-11	Chloromethane	10/15/2019	10/21/2019	6	14	OK
MW-11	Iron	10/15/2019	10/28/2019	13	180	OK
MW-11	Lead	10/15/2019	10/28/2019	13	180	OK
MW-11	Magnesium	10/15/2019	11/1/2019	17	180	OK
MW-11	Manganese	10/15/2019	10/28/2019	13	180	OK
MW-11	Mercury	10/15/2019	10/29/2019	14	180	OK
MW-11	Molybdenum	10/15/2019	10/28/2019	13	180	OK
MW-11	Nickel	10/15/2019	10/28/2019	13	180	OK
MW-11	Potassium	10/15/2019	11/5/2019	21	180	OK
MW-11	Silver	10/15/2019	10/28/2019	13	180	OK
MW-11	Sodium	10/15/2019	11/1/2019	17	180	OK
MW-11	Thallium	10/15/2019	10/28/2019	13	180	OK
MW-11	Tin	10/15/2019	10/28/2019	13	180	OK
MW-11	Arsenic	10/15/2019	10/28/2019	13	180	OK
MW-11	Beryllium	10/15/2019	10/28/2019	13	180	OK
MW-11	Cadmium	10/15/2019	10/28/2019	13	180	OK
MW-11	Chromium	10/15/2019	10/28/2019	13	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-11	Cobalt	10/15/2019	10/28/2019	13	180	OK
MW-11	Copper	10/15/2019	10/30/2019	15	180	OK
MW-11	Uranium	10/15/2019	10/28/2019	13	180	OK
MW-11	Vanadium	10/15/2019	11/6/2019	22	180	OK
MW-11	Zinc	10/15/2019	10/30/2019	15	180	OK
MW-11	Calcium	10/15/2019	11/1/2019	17	180	OK
MW-11	Methylene chloride	10/15/2019	10/21/2019	6	14	OK
MW-11	Ammonia (as N)	10/15/2019	10/29/2019	14	28	OK
MW-11	Selenium	10/15/2019	10/28/2019	13	180	OK
MW-11	2-Butanone	10/15/2019	10/21/2019	6	14	OK
MW-11	Naphthalene	10/15/2019	10/21/2019	6	14	OK
MW-11	Bicarbonate (as CaCO3)	10/15/2019	10/21/2019	6	14	OK
MW-11	Carbonate (as CaCO3)	10/15/2019	10/21/2019	6	14	OK
MW-11	Gross Radium Alpha	10/15/2019	11/15/2019	31	180	OK
MW-11	Nitrate/Nitrite (as N)	10/15/2019	10/21/2019	6	28	OK
MW-11	Total Dissolved Solids	10/15/2019	10/21/2019	6	7	OK
MW-12	Toluene	10/23/2019	10/25/2019	2	14	OK
MW-12	Tetrahydrofuran	10/23/2019	10/25/2019	2	14	OK
MW-12	Xylenes, Total	10/23/2019	10/25/2019	2	14	OK
MW-12	Sulfate	10/23/2019	11/14/2019	22	28	OK
MW-12	Chloride	10/23/2019	11/5/2019	13	28	OK
MW-12	Fluoride	10/23/2019	11/19/2019	27	28	OK
MW-12	Carbon tetrachloride	10/23/2019	10/25/2019	2	14	OK
MW-12	Acetone	10/23/2019	10/25/2019	2	14	OK
MW-12	Chloroform	10/23/2019	10/25/2019	2	14	OK
MW-12	Benzene	10/23/2019	10/25/2019	2	14	OK
MW-12	Chloromethane	10/23/2019	10/25/2019	2	14	OK
MW-12	Iron	10/23/2019	11/5/2019	13	180	OK
MW-12	Lead	10/23/2019	11/5/2019	13	180	OK
MW-12	Magnesium	10/23/2019	11/4/2019	12	180	OK
MW-12	Manganese	10/23/2019	11/5/2019	13	180	OK
MW-12	Mercury	10/23/2019	11/5/2019	13	180	OK
MW-12	Molybdenum	10/23/2019	11/6/2019	14	180	OK
MW-12	Nickel	10/23/2019	11/6/2019	14	180	OK
MW-12	Potassium	10/23/2019	11/6/2019	14	180	OK
MW-12	Silver	10/23/2019	11/5/2019	13	180	OK
MW-12	Sodium	10/23/2019	11/4/2019	12	180	OK
MW-12	Thallium	10/23/2019	11/5/2019	13	180	OK
MW-12	Tin	10/23/2019	11/5/2019	13	180	OK
MW-12	Arsenic	10/23/2019	11/5/2019	13	180	OK
MW-12	Beryllium	10/23/2019	11/5/2019	13	180	OK
MW-12	Cadmium	10/23/2019	11/5/2019	13	180	OK
MW-12	Chromium	10/23/2019	11/5/2019	13	180	OK
MW-12	Cobalt	10/23/2019	11/5/2019	13	180	OK
MW-12	Copper	10/23/2019	11/5/2019	13	180	OK
MW-12	Uranium	10/23/2019	11/5/2019	13	180	OK
MW-12	Vanadium	10/23/2019	11/4/2019	12	180	OK
MW-12	Zinc	10/23/2019	11/5/2019	13	180	OK
MW-12	Calcium	10/23/2019	11/4/2019	12	180	OK
MW-12	Methylene chloride	10/23/2019	10/25/2019	2	14	OK
MW-12	Ammonia (as N)	10/23/2019	11/7/2019	15	28	OK
MW-12	Selenium	10/23/2019	11/5/2019	13	180	OK
MW-12	2-Butanone	10/23/2019	10/25/2019	2	14	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-12	Naphthalene	10/23/2019	10/25/2019	2	14	OK
MW-12	Bicarbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-12	Carbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-12	Gross Radium Alpha	10/23/2019	11/15/2019	23	180	OK
MW-12	Nitrate/Nitrite (as N)	10/23/2019	10/28/2019	5	28	OK
MW-12	Total Dissolved Solids	10/23/2019	10/28/2019	5	7	OK
MW-14	Toluene	10/9/2019	10/15/2019	6	14	OK
MW-14	Tetrahydrofuran	10/9/2019	10/15/2019	6	14	OK
MW-14	Xylenes, Total	10/9/2019	10/15/2019	6	14	OK
MW-14	Sulfate	10/9/2019	10/26/2019	17	28	OK
MW-14	Chloride	10/9/2019	10/29/2019	20	28	OK
MW-14	Fluoride	10/9/2019	10/27/2019	18	28	OK
MW-14	Carbon tetrachloride	10/9/2019	10/15/2019	6	14	OK
MW-14	Acetone	10/9/2019	10/15/2019	6	14	OK
MW-14	Chloroform	10/9/2019	10/15/2019	6	14	OK
MW-14	Benzene	10/9/2019	10/15/2019	6	14	OK
MW-14	Chloromethane	10/9/2019	10/15/2019	6	14	OK
MW-14	Iron	10/9/2019	10/26/2019	17	180	OK
MW-14	Lead	10/9/2019	10/26/2019	17	180	OK
MW-14	Magnesium	10/9/2019	10/24/2019	15	180	OK
MW-14	Manganese	10/9/2019	10/26/2019	17	180	OK
MW-14	Mercury	10/9/2019	10/22/2019	13	180	OK
MW-14	Molybdenum	10/9/2019	10/27/2019	18	180	OK
MW-14	Nickel	10/9/2019	10/26/2019	17	180	OK
MW-14	Potassium	10/9/2019	10/25/2019	16	180	OK
MW-14	Silver	10/9/2019	10/26/2019	17	180	OK
MW-14	Sodium	10/9/2019	10/24/2019	15	180	OK
MW-14	Thallium	10/9/2019	10/26/2019	17	180	OK
MW-14	Tin	10/9/2019	10/26/2019	17	180	OK
MW-14	Arsenic	10/9/2019	10/26/2019	17	180	OK
MW-14	Beryllium	10/9/2019	10/26/2019	17	180	OK
MW-14	Cadmium	10/9/2019	10/26/2019	17	180	OK
MW-14	Chromium	10/9/2019	10/26/2019	17	180	OK
MW-14	Cobalt	10/9/2019	10/26/2019	17	180	OK
MW-14	Copper	10/9/2019	10/26/2019	17	180	OK
MW-14	Uranium	10/9/2019	10/26/2019	17	180	OK
MW-14	Vanadium	10/9/2019	10/25/2019	16	180	OK
MW-14	Zinc	10/9/2019	10/26/2019	17	180	OK
MW-14	Calcium	10/9/2019	10/24/2019	15	180	OK
MW-14	Methylene chloride	10/9/2019	10/15/2019	6	14	OK
MW-14	Ammonia (as N)	10/9/2019	10/22/2019	13	28	OK
MW-14	Selenium	10/9/2019	10/26/2019	17	180	OK
MW-14	2-Butanone	10/9/2019	10/15/2019	6	14	OK
MW-14	Naphthalene	10/9/2019	10/15/2019	6	14	OK
MW-14	Bicarbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK
MW-14	Carbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK
MW-14	Gross Radium Alpha	10/9/2019	11/1/2019	23	180	OK
MW-14	Nitrate/Nitrite (as N)	10/9/2019	10/15/2019	6	28	OK
MW-14	Total Dissolved Solids	10/9/2019	10/14/2019	5	7	OK
MW-15	Toluene	10/28/2019	10/31/2019	3	14	OK
MW-15	Tetrahydrofuran	10/28/2019	10/31/2019	3	14	OK
MW-15	Xylenes, Total	10/28/2019	10/31/2019	3	14	OK
MW-15	Sulfate	10/28/2019	11/7/2019	10	28	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-15	Chloride	10/28/2019	11/11/2019	14	28	OK
MW-15	Fluoride	10/28/2019	11/19/2019	22	28	OK
MW-15	Carbon tetrachloride	10/28/2019	10/31/2019	3	14	OK
MW-15	Acetone	10/28/2019	10/31/2019	3	14	OK
MW-15	Chloroform	10/28/2019	10/31/2019	3	14	OK
MW-15	Benzene	10/28/2019	10/31/2019	3	14	OK
MW-15	Chloromethane	10/28/2019	10/31/2019	3	14	OK
MW-15	Iron	10/28/2019	11/6/2019	9	180	OK
MW-15	Lead	10/28/2019	11/6/2019	9	180	OK
MW-15	Magnesium	10/28/2019	11/11/2019	14	180	OK
MW-15	Manganese	10/28/2019	11/6/2019	9	180	OK
MW-15	Mercury	10/28/2019	11/5/2019	8	180	OK
MW-15	Molybdenum	10/28/2019	11/11/2019	14	180	OK
MW-15	Nickel	10/28/2019	11/6/2019	9	180	OK
MW-15	Potassium	10/28/2019	11/11/2019	14	180	OK
MW-15	Silver	10/28/2019	11/6/2019	9	180	OK
MW-15	Sodium	10/28/2019	11/11/2019	14	180	OK
MW-15	Thallium	10/28/2019	11/6/2019	9	180	OK
MW-15	Tin	10/28/2019	11/6/2019	9	180	OK
MW-15	Arsenic	10/28/2019	11/6/2019	9	180	OK
MW-15	Beryllium	10/28/2019	11/6/2019	9	180	OK
MW-15	Cadmium	10/28/2019	11/6/2019	9	180	OK
MW-15	Chromium	10/28/2019	11/6/2019	9	180	OK
MW-15	Cobalt	10/28/2019	11/6/2019	9	180	OK
MW-15	Copper	10/28/2019	11/6/2019	9	180	OK
MW-15	Uranium	10/28/2019	11/6/2019	9	180	OK
MW-15	Vanadium	10/28/2019	11/11/2019	14	180	OK
MW-15	Zinc	10/28/2019	11/6/2019	9	180	OK
MW-15	Calcium	10/28/2019	11/11/2019	14	180	OK
MW-15	Methylene chloride	10/28/2019	10/31/2019	3	14	OK
MW-15	Ammonia (as N)	10/28/2019	11/20/2019	23	28	OK
MW-15	Selenium	10/28/2019	11/6/2019	9	180	OK
MW-15	2-Butanone	10/28/2019	10/31/2019	3	14	OK
MW-15	Naphthalene	10/28/2019	10/31/2019	3	14	OK
MW-15	Bicarbonate (as CaCO3)	10/28/2019	10/31/2019	3	14	OK
MW-15	Carbonate (as CaCO3)	10/28/2019	10/31/2019	3	14	OK
MW-15	Gross Radium Alpha	10/28/2019	12/3/2019	36	180	OK
MW-15	Nitrate/Nitrite (as N)	10/28/2019	10/31/2019	3	28	OK
MW-15 Resample	Total Dissolved Solids	12/4/2019	12/6/2019	2	7	OK
MW-17	Toluene	10/23/2019	10/25/2019	2	14	OK
MW-17	Tetrahydrofuran	10/23/2019	10/25/2019	2	14	OK
MW-17	Xylenes, Total	10/23/2019	10/25/2019	2	14	OK
MW-17	Sulfate	10/23/2019	11/5/2019	13	28	OK
MW-17	Chloride	10/23/2019	11/5/2019	13	28	OK
MW-17	Fluoride	10/23/2019	11/19/2019	27	28	OK
MW-17	Carbon tetrachloride	10/23/2019	10/25/2019	2	14	OK
MW-17	Acetone	10/23/2019	10/25/2019	2	14	OK
MW-17	Chloroform	10/23/2019	10/25/2019	2	14	OK
MW-17	Benzene	10/23/2019	10/25/2019	2	14	OK
MW-17	Chloromethane	10/23/2019	10/25/2019	2	14	OK
MW-17	Iron	10/23/2019	11/5/2019	13	180	OK
MW-17	Lead	10/23/2019	11/5/2019	13	180	OK
MW-17	Magnesium	10/23/2019	11/4/2019	12	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-17	Manganese	10/23/2019	11/5/2019	13	180	OK
MW-17	Mercury	10/23/2019	11/5/2019	13	180	OK
MW-17	Molybdenum	10/23/2019	11/6/2019	14	180	OK
MW-17	Nickel	10/23/2019	11/6/2019	14	180	OK
MW-17	Potassium	10/23/2019	11/6/2019	14	180	OK
MW-17	Silver	10/23/2019	11/5/2019	13	180	OK
MW-17	Sodium	10/23/2019	11/4/2019	12	180	OK
MW-17	Thallium	10/23/2019	11/5/2019	13	180	OK
MW-17	Tin	10/23/2019	11/5/2019	13	180	OK
MW-17	Arsenic	10/23/2019	11/5/2019	13	180	OK
MW-17	Beryllium	10/23/2019	11/5/2019	13	180	OK
MW-17	Cadmium	10/23/2019	11/5/2019	13	180	OK
MW-17	Chromium	10/23/2019	11/5/2019	13	180	OK
MW-17	Cobalt	10/23/2019	11/5/2019	13	180	OK
MW-17	Copper	10/23/2019	11/5/2019	13	180	OK
MW-17	Uranium	10/23/2019	11/5/2019	13	180	OK
MW-17	Vanadium	10/23/2019	11/4/2019	12	180	OK
MW-17	Zinc	10/23/2019	11/5/2019	13	180	OK
MW-17	Calcium	10/23/2019	11/4/2019	12	180	OK
MW-17	Methylene chloride	10/23/2019	10/25/2019	2	14	OK
MW-17	Ammonia (as N)	10/23/2019	11/7/2019	15	28	OK
MW-17	Selenium	10/23/2019	11/5/2019	13	180	OK
MW-17	2-Butanone	10/23/2019	10/25/2019	2	14	OK
MW-17	Naphthalene	10/23/2019	10/25/2019	2	14	OK
MW-17	Bicarbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-17	Carbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-17	Gross Radium Alpha	10/23/2019	11/15/2019	23	180	OK
MW-17	Nitrate/Nitrite (as N)	10/23/2019	10/28/2019	5	28	OK
MW-17	Total Dissolved Solids	10/23/2019	10/28/2019	5	7	OK
MW-18	Toluene	10/15/2019	10/21/2019	6	14	OK
MW-18	Tetrahydrofuran	10/15/2019	10/21/2019	6	14	OK
MW-18	Xylenes, Total	10/15/2019	10/21/2019	6	14	OK
MW-18	Sulfate	10/15/2019	10/30/2019	15	28	OK
MW-18	Chloride	10/15/2019	10/31/2019	16	28	OK
MW-18	Fluoride	10/15/2019	11/1/2019	17	28	OK
MW-18	Carbon tetrachloride	10/15/2019	10/21/2019	6	14	OK
MW-18	Acetone	10/15/2019	10/21/2019	6	14	OK
MW-18	Chloroform	10/15/2019	10/21/2019	6	14	OK
MW-18	Benzene	10/15/2019	10/21/2019	6	14	OK
MW-18	Chloromethane	10/15/2019	10/21/2019	6	14	OK
MW-18	Iron	10/15/2019	10/28/2019	13	180	OK
MW-18	Lead	10/15/2019	10/28/2019	13	180	OK
MW-18	Magnesium	10/15/2019	11/1/2019	17	180	OK
MW-18	Manganese	10/15/2019	10/28/2019	13	180	OK
MW-18	Mercury	10/15/2019	10/29/2019	14	180	OK
MW-18	Molybdenum	10/15/2019	10/28/2019	13	180	OK
MW-18	Nickel	10/15/2019	10/28/2019	13	180	OK
MW-18	Potassium	10/15/2019	11/5/2019	21	180	OK
MW-18	Silver	10/15/2019	10/28/2019	13	180	OK
MW-18	Sodium	10/15/2019	11/1/2019	17	180	OK
MW-18	Thallium	10/15/2019	10/28/2019	13	180	OK
MW-18	Tin	10/15/2019	10/28/2019	13	180	OK
MW-18	Arsenic	10/15/2019	10/28/2019	13	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-18	Beryllium	10/15/2019	10/28/2019	13	180	OK
MW-18	Cadmium	10/15/2019	10/28/2019	13	180	OK
MW-18	Chromium	10/15/2019	10/28/2019	13	180	OK
MW-18	Cobalt	10/15/2019	10/28/2019	13	180	OK
MW-18	Copper	10/15/2019	10/30/2019	15	180	OK
MW-18	Uranium	10/15/2019	10/28/2019	13	180	OK
MW-18	Vanadium	10/15/2019	11/6/2019	22	180	OK
MW-18	Zinc	10/15/2019	10/30/2019	15	180	OK
MW-18	Calcium	10/15/2019	11/1/2019	17	180	OK
MW-18	Methylene chloride	10/15/2019	10/21/2019	6	14	OK
MW-18	Ammonia (as N)	10/15/2019	10/29/2019	14	28	OK
MW-18	Selenium	10/15/2019	10/28/2019	13	180	OK
MW-18	2-Butanone	10/15/2019	10/21/2019	6	14	OK
MW-18	Naphthalene	10/15/2019	10/21/2019	6	14	OK
MW-18	Bicarbonate (as CaCO3)	10/15/2019	10/21/2019	6	14	OK
MW-18	Carbonate (as CaCO3)	10/15/2019	10/21/2019	6	14	OK
MW-18	Gross Radium Alpha	10/15/2019	11/15/2019	31	180	OK
MW-18	Nitrate/Nitrite (as N)	10/15/2019	10/21/2019	6	28	OK
MW-18	Total Dissolved Solids	10/15/2019	10/21/2019	6	7	OK
MW-19	Toluene	10/14/2019	10/21/2019	7	14	OK
MW-19	Tetrahydrofuran	10/14/2019	10/21/2019	7	14	OK
MW-19	Xylenes, Total	10/14/2019	10/21/2019	7	14	OK
MW-19	Sulfate	10/14/2019	10/30/2019	16	28	OK
MW-19	Chloride	10/14/2019	10/31/2019	17	28	OK
MW-19	Fluoride	10/14/2019	11/1/2019	18	28	OK
MW-19	Carbon tetrachloride	10/14/2019	10/21/2019	7	14	OK
MW-19	Acetone	10/14/2019	10/21/2019	7	14	OK
MW-19	Chloroform	10/14/2019	10/21/2019	7	14	OK
MW-19	Benzene	10/14/2019	10/21/2019	7	14	OK
MW-19	Chloromethane	10/14/2019	10/21/2019	7	14	OK
MW-19	Iron	10/14/2019	10/28/2019	14	180	OK
MW-19	Lead	10/14/2019	10/28/2019	14	180	OK
MW-19	Magnesium	10/14/2019	11/1/2019	18	180	OK
MW-19	Manganese	10/14/2019	10/28/2019	14	180	OK
MW-19	Mercury	10/14/2019	10/29/2019	15	180	OK
MW-19	Molybdenum	10/14/2019	10/28/2019	14	180	OK
MW-19	Nickel	10/14/2019	10/28/2019	14	180	OK
MW-19	Potassium	10/14/2019	11/5/2019	22	180	OK
MW-19	Silver	10/14/2019	10/28/2019	14	180	OK
MW-19	Sodium	10/14/2019	11/1/2019	18	180	OK
MW-19	Thallium	10/14/2019	10/28/2019	14	180	OK
MW-19	Tin	10/14/2019	10/28/2019	14	180	OK
MW-19	Arsenic	10/14/2019	10/28/2019	14	180	OK
MW-19	Beryllium	10/14/2019	10/28/2019	14	180	OK
MW-19	Cadmium	10/14/2019	10/28/2019	14	180	OK
MW-19	Chromium	10/14/2019	10/28/2019	14	180	OK
MW-19	Cobalt	10/14/2019	10/28/2019	14	180	OK
MW-19	Copper	10/14/2019	10/30/2019	16	180	OK
MW-19	Uranium	10/14/2019	10/28/2019	14	180	OK
MW-19	Vanadium	10/14/2019	11/6/2019	23	180	OK
MW-19	Zinc	10/14/2019	10/30/2019	16	180	OK
MW-19	Calcium	10/14/2019	11/1/2019	18	180	OK
MW-19	Methylene chloride	10/14/2019	10/21/2019	7	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-19	Ammonia (as N)	10/14/2019	10/29/2019	15	28	OK
MW-19	Selenium	10/14/2019	10/28/2019	14	180	OK
MW-19	2-Butanone	10/14/2019	10/21/2019	7	14	OK
MW-19	Naphthalene	10/14/2019	10/21/2019	7	14	OK
MW-19	Bicarbonate (as CaCO3)	10/14/2019	10/21/2019	7	14	OK
MW-19	Carbonate (as CaCO3)	10/14/2019	10/21/2019	7	14	OK
MW-19	Gross Radium Alpha	10/14/2019	11/15/2019	32	180	OK
MW-19	Nitrate/Nitrite (as N)	10/14/2019	10/21/2019	7	28	OK
MW-19	Total Dissolved Solids	10/14/2019	10/21/2019	7	7	OK
MW-20	Toluene	11/22/2019	12/3/2019	11	14	OK
MW-20	Tetrahydrofuran	11/22/2019	12/3/2019	11	14	OK
MW-20	Xylenes, Total	11/22/2019	12/3/2019	11	14	OK
MW-20	Sulfate	11/22/2019	12/10/2019	18	28	OK
MW-20	Chloride	11/22/2019	12/11/2019	19	28	OK
MW-20	Fluoride	11/22/2019	12/11/2019	19	28	OK
MW-20	Carbon tetrachloride	11/22/2019	12/3/2019	11	14	OK
MW-20	Acetone	11/22/2019	12/3/2019	11	14	OK
MW-20	Chloroform	11/22/2019	12/3/2019	11	14	OK
MW-20	Benzene	11/22/2019	12/3/2019	11	14	OK
MW-20	Chloromethane	11/22/2019	12/3/2019	11	14	OK
MW-20	Iron	11/22/2019	12/12/2019	20	180	OK
MW-20	Lead	11/22/2019	12/12/2019	20	180	OK
MW-20	Magnesium	11/22/2019	12/13/2019	21	180	OK
MW-20	Manganese	11/22/2019	12/13/2019	21	180	OK
MW-20	Mercury	11/22/2019	12/6/2019	14	180	OK
MW-20	Molybdenum	11/22/2019	12/12/2019	20	180	OK
MW-20	Nickel	11/22/2019	12/12/2019	20	180	OK
MW-20	Potassium	11/22/2019	12/13/2019	21	180	OK
MW-20	Silver	11/22/2019	12/12/2019	20	180	OK
MW-20	Sodium	11/22/2019	12/13/2019	21	180	OK
MW-20	Thallium	11/22/2019	12/12/2019	20	180	OK
MW-20	Tin	11/22/2019	12/12/2019	20	180	OK
MW-20	Arsenic	11/22/2019	12/12/2019	20	180	OK
MW-20	Beryllium	11/22/2019	12/13/2019	21	180	OK
MW-20	Cadmium	11/22/2019	12/12/2019	20	180	OK
MW-20	Chromium	11/22/2019	12/12/2019	20	180	OK
MW-20	Cobalt	11/22/2019	12/12/2019	20	180	OK
MW-20	Copper	11/22/2019	12/12/2019	20	180	OK
MW-20	Uranium	11/22/2019	12/12/2019	20	180	OK
MW-20	Vanadium	11/22/2019	12/12/2019	20	180	OK
MW-20	Zinc	11/22/2019	12/13/2019	21	180	OK
MW-20	Calcium	11/22/2019	12/13/2019	21	180	OK
MW-20	Methylene chloride	11/22/2019	12/3/2019	11	14	OK
MW-20	Ammonia (as N)	11/22/2019	12/15/2019	23	28	OK
MW-20	Selenium	11/22/2019	12/13/2019	21	180	OK
MW-20	2-Butanone	11/22/2019	12/3/2019	11	14	OK
MW-20	Naphthalene	11/22/2019	12/3/2019	11	14	OK
MW-20	Bicarbonate (as CaCO3)	11/22/2019	12/4/2019	12	14	OK
MW-20	Carbonate (as CaCO3)	11/22/2019	12/4/2019	12	14	OK
MW-20	Gross Radium Alpha	11/22/2019	12/19/2019	27	180	OK
MW-20	Nitrate/Nitrite (as N)	11/22/2019	12/3/2019	11	28	OK
MW-20 Resample	Total Dissolved Solids	12/4/2019	12/6/2019	2	7	OK
MW-22	Toluene	10/29/2019	10/31/2019	2	14	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-22	Tetrahydrofuran	10/29/2019	10/31/2019	2	14	OK
MW-22	Xylenes, Total	10/29/2019	10/31/2019	2	14	OK
MW-22	Sulfate	10/29/2019	11/7/2019	9	28	OK
MW-22	Chloride	10/29/2019	11/11/2019	13	28	OK
MW-22	Fluoride	10/29/2019	11/11/2019	13	28	OK
MW-22	Carbon tetrachloride	10/29/2019	10/31/2019	2	14	OK
MW-22	Acetone	10/29/2019	10/31/2019	2	14	OK
MW-22	Chloroform	10/29/2019	10/31/2019	2	14	OK
MW-22	Benzene	10/29/2019	10/31/2019	2	14	OK
MW-22	Chloromethane	10/29/2019	10/31/2019	2	14	OK
MW-22	Iron	10/29/2019	11/6/2019	8	180	OK
MW-22	Lead	10/29/2019	11/6/2019	8	180	OK
MW-22	Magnesium	10/29/2019	11/11/2019	13	180	OK
MW-22	Manganese	10/29/2019	11/11/2019	13	180	OK
MW-22	Mercury	10/29/2019	11/5/2019	7	180	OK
MW-22	Molybdenum	10/29/2019	11/11/2019	13	180	OK
MW-22	Nickel	10/29/2019	11/6/2019	8	180	OK
MW-22	Potassium	10/29/2019	11/11/2019	13	180	OK
MW-22	Silver	10/29/2019	11/6/2019	8	180	OK
MW-22	Sodium	10/29/2019	11/11/2019	13	180	OK
MW-22	Thallium	10/29/2019	11/6/2019	8	180	OK
MW-22	Tin	10/29/2019	11/6/2019	8	180	OK
MW-22	Arsenic	10/29/2019	11/6/2019	8	180	OK
MW-22	Beryllium	10/29/2019	11/6/2019	8	180	OK
MW-22	Cadmium	10/29/2019	11/6/2019	8	180	OK
MW-22	Chromium	10/29/2019	11/6/2019	8	180	OK
MW-22	Cobalt	10/29/2019	11/6/2019	8	180	OK
MW-22	Copper	10/29/2019	11/6/2019	8	180	OK
MW-22	Uranium	10/29/2019	11/6/2019	8	180	OK
MW-22	Vanadium	10/29/2019	11/11/2019	13	180	OK
MW-22	Zinc	10/29/2019	11/11/2019	13	180	OK
MW-22	Calcium	10/29/2019	11/11/2019	13	180	OK
MW-22	Methylene chloride	10/29/2019	10/31/2019	2	14	OK
MW-22	Ammonia (as N)	10/29/2019	11/8/2019	10	28	OK
MW-22	Selenium	10/29/2019	11/6/2019	8	180	OK
MW-22	2-Butanone	10/29/2019	10/31/2019	2	14	OK
MW-22	Naphthalene	10/29/2019	10/31/2019	2	14	OK
MW-22	Bicarbonate (as CaCO3)	10/29/2019	10/31/2019	2	14	OK
MW-22	Carbonate (as CaCO3)	10/29/2019	10/31/2019	2	14	OK
MW-22	Gross Radium Alpha	10/29/2019	12/3/2019	35	180	OK
MW-22	Nitrate/Nitrite (as N)	10/29/2019	10/31/2019	2	28	OK
MW-22	Total Dissolved Solids	10/29/2019	10/31/2019	2	7	OK
MW-23	Toluene	10/29/2019	10/31/2019	2	14	OK
MW-23	Tetrahydrofuran	10/29/2019	10/31/2019	2	14	OK
MW-23	Xylenes, Total	10/29/2019	10/31/2019	2	14	OK
MW-23	Sulfate	10/29/2019	11/7/2019	9	28	OK
MW-23	Chloride	10/29/2019	11/11/2019	13	28	OK
MW-23	Fluoride	10/29/2019	11/11/2019	13	28	OK
MW-23	Carbon tetrachloride	10/29/2019	10/31/2019	2	14	OK
MW-23	Acetone	10/29/2019	10/31/2019	2	14	OK
MW-23	Chloroform	10/29/2019	10/31/2019	2	14	OK
MW-23	Benzene	10/29/2019	10/31/2019	2	14	OK
MW-23	Chloromethane	10/29/2019	10/31/2019	2	14	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-23	Iron	10/29/2019	11/6/2019	8	180	OK
MW-23	Lead	10/29/2019	11/6/2019	8	180	OK
MW-23	Magnesium	10/29/2019	11/11/2019	13	180	OK
MW-23	Manganese	10/29/2019	11/6/2019	8	180	OK
MW-23	Mercury	10/29/2019	11/5/2019	7	180	OK
MW-23	Molybdenum	10/29/2019	11/11/2019	13	180	OK
MW-23	Nickel	10/29/2019	11/6/2019	8	180	OK
MW-23	Potassium	10/29/2019	11/11/2019	13	180	OK
MW-23	Silver	10/29/2019	11/6/2019	8	180	OK
MW-23	Sodium	10/29/2019	11/11/2019	13	180	OK
MW-23	Thallium	10/29/2019	11/6/2019	8	180	OK
MW-23	Tin	10/29/2019	11/6/2019	8	180	OK
MW-23	Arsenic	10/29/2019	11/6/2019	8	180	OK
MW-23	Beryllium	10/29/2019	11/6/2019	8	180	OK
MW-23	Cadmium	10/29/2019	11/6/2019	8	180	OK
MW-23	Chromium	10/29/2019	11/6/2019	8	180	OK
MW-23	Cobalt	10/29/2019	11/6/2019	8	180	OK
MW-23	Copper	10/29/2019	11/6/2019	8	180	OK
MW-23	Uranium	10/29/2019	11/6/2019	8	180	OK
MW-23	Vanadium	10/29/2019	11/11/2019	13	180	OK
MW-23	Zinc	10/29/2019	11/6/2019	8	180	OK
MW-23	Calcium	10/29/2019	11/11/2019	13	180	OK
MW-23	Methylene chloride	10/29/2019	10/31/2019	2	14	OK
MW-23	Ammonia (as N)	10/29/2019	11/8/2019	10	28	OK
MW-23	Selenium	10/29/2019	11/6/2019	8	180	OK
MW-23	2-Butanone	10/29/2019	10/31/2019	2	14	OK
MW-23	Naphthalene	10/29/2019	10/31/2019	2	14	OK
MW-23	Bicarbonate (as CaCO3)	10/29/2019	10/31/2019	2	14	OK
MW-23	Carbonate (as CaCO3)	10/29/2019	10/31/2019	2	14	OK
MW-23	Gross Radium Alpha	10/29/2019	12/3/2019	35	180	OK
MW-23	Nitrate/Nitrite (as N)	10/29/2019	10/31/2019	2	28	OK
MW-23	Total Dissolved Solids	10/29/2019	10/31/2019	2	7	OK
MW-24	Toluene	11/6/2019	11/12/2019	6	14	OK
MW-24	Tetrahydrofuran	11/6/2019	11/12/2019	6	14	OK
MW-24	Xylenes, Total	11/6/2019	11/12/2019	6	14	OK
MW-24	Sulfate	11/6/2019	11/27/2019	21	28	OK
MW-24	Chloride	11/6/2019	11/14/2019	8	28	OK
MW-24	Fluoride	11/6/2019	11/14/2019	8	28	OK
MW-24	Carbon tetrachloride	11/6/2019	11/12/2019	6	14	OK
MW-24	Acetone	11/6/2019	11/12/2019	6	14	OK
MW-24	Chloroform	11/6/2019	11/12/2019	6	14	OK
MW-24	Benzene	11/6/2019	11/12/2019	6	14	OK
MW-24	Chloromethane	11/6/2019	11/12/2019	6	14	OK
MW-24	Iron	11/6/2019	11/19/2019	13	180	OK
MW-24	Lead	11/6/2019	11/20/2019	14	180	OK
MW-24	Magnesium	11/6/2019	11/18/2019	12	180	OK
MW-24	Manganese	11/6/2019	11/20/2019	14	180	OK
MW-24	Mercury	11/6/2019	11/13/2019	7	180	OK
MW-24	Molybdenum	11/6/2019	11/19/2019	13	180	OK
MW-24	Nickel	11/6/2019	11/19/2019	13	180	OK
MW-24	Potassium	11/6/2019	11/18/2019	12	180	OK
MW-24	Silver	11/6/2019	11/19/2019	13	180	OK
MW-24	Sodium	11/6/2019	11/18/2019	12	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-24	Thallium	11/6/2019	11/20/2019	14	180	OK
MW-24	Tin	11/6/2019	11/20/2019	14	180	OK
MW-24	Arsenic	11/6/2019	11/19/2019	13	180	OK
MW-24	Beryllium	11/6/2019	11/19/2019	13	180	OK
MW-24	Cadmium	11/6/2019	11/19/2019	13	180	OK
MW-24	Chromium	11/6/2019	11/19/2019	13	180	OK
MW-24	Cobalt	11/6/2019	11/19/2019	13	180	OK
MW-24	Copper	11/6/2019	11/20/2019	14	180	OK
MW-24	Uranium	11/6/2019	11/20/2019	14	180	OK
MW-24	Vanadium	11/6/2019	11/22/2019	16	180	OK
MW-24	Zinc	11/6/2019	11/19/2019	13	180	OK
MW-24	Calcium	11/6/2019	11/18/2019	12	180	OK
MW-24	Methylene chloride	11/6/2019	11/12/2019	6	14	OK
MW-24	Ammonia (as N)	11/6/2019	11/13/2019	7	28	OK
MW-24	Selenium	11/6/2019	11/20/2019	14	180	OK
MW-24	2-Butanone	11/6/2019	11/12/2019	6	14	OK
MW-24	Naphthalene	11/6/2019	11/12/2019	6	14	OK
MW-24	Bicarbonate (as CaCO3)	11/6/2019	11/13/2019	7	14	OK
MW-24	Carbonate (as CaCO3)	11/6/2019	11/13/2019	7	14	OK
MW-24	Gross Radium Alpha	11/6/2019	12/3/2019	27	180	OK
MW-24	Nitrate/Nitrite (as N)	11/6/2019	11/13/2019	7	28	OK
MW-24	Total Dissolved Solids	11/6/2019	11/11/2019	5	7	OK
MW-25	Toluene	10/9/2019	10/15/2019	6	14	OK
MW-25	Tetrahydrofuran	10/9/2019	10/15/2019	6	14	OK
MW-25	Xylenes, Total	10/9/2019	10/15/2019	6	14	OK
MW-25	Sulfate	10/9/2019	10/26/2019	17	28	OK
MW-25	Chloride	10/9/2019	10/27/2019	18	28	OK
MW-25	Fluoride	10/9/2019	10/29/2019	20	28	OK
MW-25	Carbon tetrachloride	10/9/2019	10/15/2019	6	14	OK
MW-25	Acetone	10/9/2019	10/15/2019	6	14	OK
MW-25	Chloroform	10/9/2019	10/15/2019	6	14	OK
MW-25	Benzene	10/9/2019	10/15/2019	6	14	OK
MW-25	Chloromethane	10/9/2019	10/15/2019	6	14	OK
MW-25	Iron	10/9/2019	10/26/2019	17	180	OK
MW-25	Lead	10/9/2019	10/26/2019	17	180	OK
MW-25	Magnesium	10/9/2019	10/24/2019	15	180	OK
MW-25	Manganese	10/9/2019	10/26/2019	17	180	OK
MW-25	Mercury	10/9/2019	10/22/2019	13	180	OK
MW-25	Molybdenum	10/9/2019	10/27/2019	18	180	OK
MW-25	Nickel	10/9/2019	10/26/2019	17	180	OK
MW-25	Potassium	10/9/2019	10/25/2019	16	180	OK
MW-25	Silver	10/9/2019	10/26/2019	17	180	OK
MW-25	Sodium	10/9/2019	10/24/2019	15	180	OK
MW-25	Thallium	10/9/2019	10/26/2019	17	180	OK
MW-25	Tin	10/9/2019	10/26/2019	17	180	OK
MW-25	Arsenic	10/9/2019	10/26/2019	17	180	OK
MW-25	Beryllium	10/9/2019	10/26/2019	17	180	OK
MW-25	Cadmium	10/9/2019	10/26/2019	17	180	OK
MW-25	Chromium	10/9/2019	10/26/2019	17	180	OK
MW-25	Cobalt	10/9/2019	10/26/2019	17	180	OK
MW-25	Copper	10/9/2019	10/26/2019	17	180	OK
MW-25	Uranium	10/9/2019	10/26/2019	17	180	OK
MW-25	Vanadium	10/9/2019	10/25/2019	16	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-25	Zinc	10/9/2019	10/26/2019	17	180	OK
MW-25	Calcium	10/9/2019	10/24/2019	15	180	OK
MW-25	Methylene chloride	10/9/2019	10/15/2019	6	14	OK
MW-25	Ammonia (as N)	10/9/2019	10/22/2019	13	28	OK
MW-25	Selenium	10/9/2019	10/26/2019	17	180	OK
MW-25	2-Butanone	10/9/2019	10/15/2019	6	14	OK
MW-25	Naphthalene	10/9/2019	10/15/2019	6	14	OK
MW-25	Bicarbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK
MW-25	Carbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK
MW-25	Nitrate/Nitrite (as N)	10/9/2019	10/15/2019	6	28	OK
MW-25	Total Dissolved Solids	10/9/2019	10/14/2019	5	7	OK
MW-26	Toluene	10/9/2019	10/15/2019	6	14	OK
MW-26	Tetrahydrofuran	10/9/2019	10/15/2019	6	14	OK
MW-26	Xylenes, Total	10/9/2019	10/15/2019	6	14	OK
MW-26	Sulfate	10/9/2019	10/26/2019	17	28	OK
MW-26	Chloride	10/9/2019	10/27/2019	18	28	OK
MW-26	Fluoride	10/9/2019	10/29/2019	20	28	OK
MW-26	Carbon tetrachloride	10/9/2019	10/15/2019	6	14	OK
MW-26	Acetone	10/9/2019	10/15/2019	6	14	OK
MW-26	Chloroform	10/9/2019	10/16/2019	7	14	OK
MW-26	Benzene	10/9/2019	10/15/2019	6	14	OK
MW-26	Chloromethane	10/9/2019	10/15/2019	6	14	OK
MW-26	Iron	10/9/2019	10/26/2019	17	180	OK
MW-26	Lead	10/9/2019	10/26/2019	17	180	OK
MW-26	Magnesium	10/9/2019	10/24/2019	15	180	OK
MW-26	Manganese	10/9/2019	10/26/2019	17	180	OK
MW-26	Mercury	10/9/2019	10/22/2019	13	180	OK
MW-26	Molybdenum	10/9/2019	10/27/2019	18	180	OK
MW-26	Nickel	10/9/2019	10/26/2019	17	180	OK
MW-26	Potassium	10/9/2019	10/25/2019	16	180	OK
MW-26	Silver	10/9/2019	10/26/2019	17	180	OK
MW-26	Sodium	10/9/2019	10/24/2019	15	180	OK
MW-26	Thallium	10/9/2019	10/26/2019	17	180	OK
MW-26	Tin	10/9/2019	10/26/2019	17	180	OK
MW-26	Arsenic	10/9/2019	10/26/2019	17	180	OK
MW-26	Beryllium	10/9/2019	10/26/2019	17	180	OK
MW-26	Cadmium	10/9/2019	10/26/2019	17	180	OK
MW-26	Chromium	10/9/2019	10/26/2019	17	180	OK
MW-26	Cobalt	10/9/2019	10/26/2019	17	180	OK
MW-26	Copper	10/9/2019	10/26/2019	17	180	OK
MW-26	Uranium	10/9/2019	10/26/2019	17	180	OK
MW-26	Vanadium	10/9/2019	10/25/2019	16	180	OK
MW-26	Zinc	10/9/2019	10/26/2019	17	180	OK
MW-26	Calcium	10/9/2019	10/24/2019	15	180	OK
MW-26	Methylene chloride	10/9/2019	10/15/2019	6	14	OK
MW-26	Ammonia (as N)	10/9/2019	10/22/2019	13	28	OK
MW-26	Selenium	10/9/2019	10/26/2019	17	180	OK
MW-26	2-Butanone	10/9/2019	10/15/2019	6	14	OK
MW-26	Naphthalene	10/9/2019	10/15/2019	6	14	OK
MW-26	Bicarbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK
MW-26	Carbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK
MW-26	Gross Radium Alpha	10/9/2019	11/1/2019	23	180	OK
MW-26	Nitrate/Nitrite (as N)	10/9/2019	10/15/2019	6	28	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-26	Total Dissolved Solids	10/9/2019	10/14/2019	5	7	OK
MW-27	Toluene	10/22/2019	10/25/2019	3	14	OK
MW-27	Tetrahydrofuran	10/22/2019	10/25/2019	3	14	OK
MW-27	Xylenes, Total	10/22/2019	10/25/2019	3	14	OK
MW-27	Sulfate	10/22/2019	11/5/2019	14	28	OK
MW-27	Chloride	10/22/2019	11/5/2019	14	28	OK
MW-27	Fluoride	10/22/2019	11/7/2019	16	28	OK
MW-27	Carbon tetrachloride	10/22/2019	10/25/2019	3	14	OK
MW-27	Acetone	10/22/2019	10/25/2019	3	14	OK
MW-27	Chloroform	10/22/2019	10/25/2019	3	14	OK
MW-27	Benzene	10/22/2019	10/25/2019	3	14	OK
MW-27	Chloromethane	10/22/2019	10/25/2019	3	14	OK
MW-27	Iron	10/22/2019	11/5/2019	14	180	OK
MW-27	Lead	10/22/2019	11/5/2019	14	180	OK
MW-27	Magnesium	10/22/2019	11/4/2019	13	180	OK
MW-27	Manganese	10/22/2019	11/5/2019	14	180	OK
MW-27	Mercury	10/22/2019	11/5/2019	14	180	OK
MW-27	Molybdenum	10/22/2019	11/6/2019	15	180	OK
MW-27	Nickel	10/22/2019	11/6/2019	15	180	OK
MW-27	Potassium	10/22/2019	11/6/2019	15	180	OK
MW-27	Silver	10/22/2019	11/5/2019	14	180	OK
MW-27	Sodium	10/22/2019	11/4/2019	13	180	OK
MW-27	Thallium	10/22/2019	11/5/2019	14	180	OK
MW-27	Tin	10/22/2019	11/5/2019	14	180	OK
MW-27	Arsenic	10/22/2019	11/5/2019	14	180	OK
MW-27	Beryllium	10/22/2019	11/5/2019	14	180	OK
MW-27	Cadmium	10/22/2019	11/5/2019	14	180	OK
MW-27	Chromium	10/22/2019	11/5/2019	14	180	OK
MW-27	Cobalt	10/22/2019	11/5/2019	14	180	OK
MW-27	Copper	10/22/2019	11/5/2019	14	180	OK
MW-27	Uranium	10/22/2019	11/5/2019	14	180	OK
MW-27	Vanadium	10/22/2019	11/4/2019	13	180	OK
MW-27	Zinc	10/22/2019	11/5/2019	14	180	OK
MW-27	Calcium	10/22/2019	11/4/2019	13	180	OK
MW-27	Methylene chloride	10/22/2019	10/25/2019	3	14	OK
MW-27	Ammonia (as N)	10/22/2019	11/7/2019	16	28	OK
MW-27	Selenium	10/22/2019	11/5/2019	14	180	OK
MW-27	2-Butanone	10/22/2019	10/25/2019	3	14	OK
MW-27	Naphthalene	10/22/2019	10/25/2019	3	14	OK
MW-27	Bicarbonate (as CaCO3)	10/22/2019	10/28/2019	6	14	OK
MW-27	Carbonate (as CaCO3)	10/22/2019	10/28/2019	6	14	OK
MW-27	Gross Radium Alpha	10/22/2019	11/15/2019	24	180	OK
MW-27	Nitrate/Nitrite (as N)	10/22/2019	10/28/2019	6	28	OK
MW-27	Total Dissolved Solids	10/22/2019	10/28/2019	6	7	OK
MW-28	Toluene	10/22/2019	10/25/2019	3	14	OK
MW-28	Tetrahydrofuran	10/22/2019	10/25/2019	3	14	OK
MW-28	Xylenes, Total	10/22/2019	10/25/2019	3	14	OK
MW-28	Sulfate	10/22/2019	11/5/2019	14	28	OK
MW-28	Chloride	10/22/2019	11/5/2019	14	28	OK
MW-28	Fluoride	10/22/2019	11/7/2019	16	28	OK
MW-28	Carbon tetrachloride	10/22/2019	10/25/2019	3	14	OK
MW-28	Acetone	10/22/2019	10/25/2019	3	14	OK
MW-28	Chloroform	10/22/2019	10/25/2019	3	14	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-28	Benzene	10/22/2019	10/25/2019	3	14	OK
MW-28	Chloromethane	10/22/2019	10/25/2019	3	14	OK
MW-28	Iron	10/22/2019	11/5/2019	14	180	OK
MW-28	Lead	10/22/2019	11/5/2019	14	180	OK
MW-28	Magnesium	10/22/2019	11/4/2019	13	180	OK
MW-28	Manganese	10/22/2019	11/5/2019	14	180	OK
MW-28	Mercury	10/22/2019	11/5/2019	14	180	OK
MW-28	Molybdenum	10/22/2019	11/6/2019	15	180	OK
MW-28	Nickel	10/22/2019	11/6/2019	15	180	OK
MW-28	Potassium	10/22/2019	11/6/2019	15	180	OK
MW-28	Silver	10/22/2019	11/5/2019	14	180	OK
MW-28	Sodium	10/22/2019	11/4/2019	13	180	OK
MW-28	Thallium	10/22/2019	11/5/2019	14	180	OK
MW-28	Tin	10/22/2019	11/5/2019	14	180	OK
MW-28	Arsenic	10/22/2019	11/5/2019	14	180	OK
MW-28	Beryllium	10/22/2019	11/5/2019	14	180	OK
MW-28	Cadmium	10/22/2019	11/5/2019	14	180	OK
MW-28	Chromium	10/22/2019	11/5/2019	14	180	OK
MW-28	Cobalt	10/22/2019	11/5/2019	14	180	OK
MW-28	Copper	10/22/2019	11/5/2019	14	180	OK
MW-28	Uranium	10/22/2019	11/5/2019	14	180	OK
MW-28	Vanadium	10/22/2019	11/4/2019	13	180	OK
MW-28	Zinc	10/22/2019	11/5/2019	14	180	OK
MW-28	Calcium	10/22/2019	11/4/2019	13	180	OK
MW-28	Methylene chloride	10/22/2019	10/25/2019	3	14	OK
MW-28	Ammonia (as N)	10/22/2019	11/7/2019	16	28	OK
MW-28	Selenium	10/22/2019	11/5/2019	14	180	OK
MW-28	2-Butanone	10/22/2019	10/25/2019	3	14	OK
MW-28	Naphthalene	10/22/2019	10/25/2019	3	14	OK
MW-28	Bicarbonate (as CaCO3)	10/22/2019	10/28/2019	6	14	OK
MW-28	Carbonate (as CaCO3)	10/22/2019	10/28/2019	6	14	OK
MW-28	Gross Radium Alpha	10/22/2019	11/18/2019	27	180	OK
MW-28	Nitrate/Nitrite (as N)	10/22/2019	10/28/2019	6	28	OK
MW-28	Total Dissolved Solids	10/22/2019	10/28/2019	6	7	OK
MW-29	Toluene	10/22/2019	10/28/2019	6	14	OK
MW-29	Tetrahydrofuran	10/22/2019	10/28/2019	6	14	OK
MW-29	Xylenes, Total	10/22/2019	10/28/2019	6	14	OK
MW-29	Sulfate	10/22/2019	11/5/2019	14	28	OK
MW-29	Chloride	10/22/2019	11/5/2019	14	28	OK
MW-29	Fluoride	10/22/2019	11/7/2019	16	28	OK
MW-29	Carbon tetrachloride	10/22/2019	10/28/2019	6	14	OK
MW-29	Acetone	10/22/2019	10/28/2019	6	14	OK
MW-29	Chloroform	10/22/2019	10/28/2019	6	14	OK
MW-29	Benzene	10/22/2019	10/28/2019	6	14	OK
MW-29	Chloromethane	10/22/2019	10/28/2019	6	14	OK
MW-29	Iron	10/22/2019	11/5/2019	14	180	OK
MW-29	Lead	10/22/2019	11/5/2019	14	180	OK
MW-29	Magnesium	10/22/2019	11/4/2019	13	180	OK
MW-29	Manganese	10/22/2019	11/7/2019	16	180	OK
MW-29	Mercury	10/22/2019	11/5/2019	14	180	OK
MW-29	Molybdenum	10/22/2019	11/6/2019	15	180	OK
MW-29	Nickel	10/22/2019	11/6/2019	15	180	OK
MW-29	Potassium	10/22/2019	11/6/2019	15	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-29	Silver	10/22/2019	11/5/2019	14	180	OK
MW-29	Sodium	10/22/2019	11/4/2019	13	180	OK
MW-29	Thallium	10/22/2019	11/5/2019	14	180	OK
MW-29	Tin	10/22/2019	11/5/2019	14	180	OK
MW-29	Arsenic	10/22/2019	11/5/2019	14	180	OK
MW-29	Beryllium	10/22/2019	11/5/2019	14	180	OK
MW-29	Cadmium	10/22/2019	11/5/2019	14	180	OK
MW-29	Chromium	10/22/2019	11/5/2019	14	180	OK
MW-29	Cobalt	10/22/2019	11/5/2019	14	180	OK
MW-29	Copper	10/22/2019	11/5/2019	14	180	OK
MW-29	Uranium	10/22/2019	11/5/2019	14	180	OK
MW-29	Vanadium	10/22/2019	11/4/2019	13	180	OK
MW-29	Zinc	10/22/2019	11/5/2019	14	180	OK
MW-29	Calcium	10/22/2019	11/4/2019	13	180	OK
MW-29	Methylene chloride	10/22/2019	10/28/2019	6	14	OK
MW-29	Ammonia (as N)	10/22/2019	11/7/2019	16	28	OK
MW-29	Selenium	10/22/2019	11/5/2019	14	180	OK
MW-29	2-Butanone	10/22/2019	10/28/2019	6	14	OK
MW-29	Naphthalene	10/22/2019	10/28/2019	6	14	OK
MW-29	Bicarbonate (as CaCO3)	10/22/2019	10/28/2019	6	14	OK
MW-29	Carbonate (as CaCO3)	10/22/2019	10/28/2019	6	14	OK
MW-29	Gross Radium Alpha	10/22/2019	11/15/2019	24	180	OK
MW-29	Nitrate/Nitrite (as N)	10/22/2019	10/28/2019	6	28	OK
MW-29	Total Dissolved Solids	10/22/2019	10/28/2019	6	7	OK
MW-30	Toluene	10/8/2019	10/15/2019	7	14	OK
MW-30	Tetrahydrofuran	10/8/2019	10/15/2019	7	14	OK
MW-30	Xylenes, Total	10/8/2019	10/15/2019	7	14	OK
MW-30	Sulfate	10/8/2019	10/27/2019	19	28	OK
MW-30	Chloride	10/8/2019	10/27/2019	19	28	OK
MW-30	Fluoride	10/8/2019	10/27/2019	19	28	OK
MW-30	Carbon tetrachloride	10/8/2019	10/15/2019	7	14	OK
MW-30	Acetone	10/8/2019	10/15/2019	7	14	OK
MW-30	Chloroform	10/8/2019	10/15/2019	7	14	OK
MW-30	Benzene	10/8/2019	10/15/2019	7	14	OK
MW-30	Chloromethane	10/8/2019	10/15/2019	7	14	OK
MW-30	Iron	10/8/2019	10/26/2019	18	180	OK
MW-30	Lead	10/8/2019	10/26/2019	18	180	OK
MW-30	Magnesium	10/8/2019	10/24/2019	16	180	OK
MW-30	Manganese	10/8/2019	10/26/2019	18	180	OK
MW-30	Mercury	10/8/2019	10/22/2019	14	180	OK
MW-30	Molybdenum	10/8/2019	10/27/2019	19	180	OK
MW-30	Nickel	10/8/2019	10/26/2019	18	180	OK
MW-30	Potassium	10/8/2019	10/25/2019	17	180	OK
MW-30	Silver	10/8/2019	10/26/2019	18	180	OK
MW-30	Sodium	10/8/2019	10/24/2019	16	180	OK
MW-30	Thallium	10/8/2019	10/26/2019	18	180	OK
MW-30	Tin	10/8/2019	10/26/2019	18	180	OK
MW-30	Arsenic	10/8/2019	10/26/2019	18	180	OK
MW-30	Beryllium	10/8/2019	10/26/2019	18	180	OK
MW-30	Cadmium	10/8/2019	10/26/2019	18	180	OK
MW-30	Chromium	10/8/2019	10/26/2019	18	180	OK
MW-30	Cobalt	10/8/2019	10/26/2019	18	180	OK
MW-30	Copper	10/8/2019	10/26/2019	18	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-30	Uranium	10/8/2019	10/26/2019	18	180	OK
MW-30	Vanadium	10/8/2019	10/25/2019	17	180	OK
MW-30	Zinc	10/8/2019	10/26/2019	18	180	OK
MW-30	Calcium	10/8/2019	10/24/2019	16	180	OK
MW-30	Methylene chloride	10/8/2019	10/15/2019	7	14	OK
MW-30	Ammonia (as N)	10/8/2019	10/22/2019	14	28	OK
MW-30	Selenium	10/8/2019	10/26/2019	18	180	OK
MW-30	2-Butanone	10/8/2019	10/15/2019	7	14	OK
MW-30	Naphthalene	10/8/2019	10/15/2019	7	14	OK
MW-30	Bicarbonate (as CaCO3)	10/8/2019	10/14/2019	6	14	OK
MW-30	Carbonate (as CaCO3)	10/8/2019	10/14/2019	6	14	OK
MW-30	Gross Radium Alpha	10/8/2019	11/1/2019	24	180	OK
MW-30	Nitrate/Nitrite (as N)	10/8/2019	10/15/2019	7	28	OK
MW-30	Total Dissolved Solids	10/8/2019	10/14/2019	6	7	OK
MW-31	Toluene	10/9/2019	10/15/2019	6	14	OK
MW-31	Tetrahydrofuran	10/9/2019	10/15/2019	6	14	OK
MW-31	Xylenes, Total	10/9/2019	10/15/2019	6	14	OK
MW-31	Sulfate	10/9/2019	10/27/2019	18	28	OK
MW-31	Chloride	10/9/2019	10/27/2019	18	28	OK
MW-31	Fluoride	10/9/2019	10/27/2019	18	28	OK
MW-31	Carbon tetrachloride	10/9/2019	10/15/2019	6	14	OK
MW-31	Acetone	10/9/2019	10/15/2019	6	14	OK
MW-31	Chloroform	10/9/2019	10/15/2019	6	14	OK
MW-31	Benzene	10/9/2019	10/15/2019	6	14	OK
MW-31	Chloromethane	10/9/2019	10/15/2019	6	14	OK
MW-31	Iron	10/9/2019	10/26/2019	17	180	OK
MW-31	Lead	10/9/2019	10/26/2019	17	180	OK
MW-31	Magnesium	10/9/2019	10/24/2019	15	180	OK
MW-31	Manganese	10/9/2019	10/26/2019	17	180	OK
MW-31	Mercury	10/9/2019	10/22/2019	13	180	OK
MW-31	Molybdenum	10/9/2019	10/27/2019	18	180	OK
MW-31	Nickel	10/9/2019	10/26/2019	17	180	OK
MW-31	Potassium	10/9/2019	10/25/2019	16	180	OK
MW-31	Silver	10/9/2019	10/26/2019	17	180	OK
MW-31	Sodium	10/9/2019	10/24/2019	15	180	OK
MW-31	Thallium	10/9/2019	10/26/2019	17	180	OK
MW-31	Tin	10/9/2019	10/26/2019	17	180	OK
MW-31	Arsenic	10/9/2019	10/26/2019	17	180	OK
MW-31	Beryllium	10/9/2019	10/26/2019	17	180	OK
MW-31	Cadmium	10/9/2019	10/26/2019	17	180	OK
MW-31	Chromium	10/9/2019	10/26/2019	17	180	OK
MW-31	Cobalt	10/9/2019	10/26/2019	17	180	OK
MW-31	Copper	10/9/2019	10/26/2019	17	180	OK
MW-31	Uranium	10/9/2019	10/26/2019	17	180	OK
MW-31	Vanadium	10/9/2019	10/25/2019	16	180	OK
MW-31	Zinc	10/9/2019	10/26/2019	17	180	OK
MW-31	Calcium	10/9/2019	10/24/2019	15	180	OK
MW-31	Methylene chloride	10/9/2019	10/15/2019	6	14	OK
MW-31	Ammonia (as N)	10/9/2019	10/22/2019	13	28	OK
MW-31	Selenium	10/9/2019	10/26/2019	17	180	OK
MW-31	2-Butanone	10/9/2019	10/15/2019	6	14	OK
MW-31	Naphthalene	10/9/2019	10/15/2019	6	14	OK
MW-31	Bicarbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-31	Carbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK
MW-31	Gross Radium Alpha	10/9/2019	11/1/2019	23	180	OK
MW-31	Nitrate/Nitrite (as N)	10/9/2019	10/15/2019	6	28	OK
MW-31	Total Dissolved Solids	10/9/2019	10/14/2019	5	7	OK
MW-32	Toluene	10/8/2019	10/15/2019	7	14	OK
MW-32	Tetrahydrofuran	10/8/2019	10/15/2019	7	14	OK
MW-32	Xylenes, Total	10/8/2019	10/15/2019	7	14	OK
MW-32	Sulfate	10/8/2019	10/27/2019	19	28	OK
MW-32	Chloride	10/8/2019	10/27/2019	19	28	OK
MW-32	Fluoride	10/8/2019	10/27/2019	19	28	OK
MW-32	Carbon tetrachloride	10/8/2019	10/15/2019	7	14	OK
MW-32	Acetone	10/8/2019	10/15/2019	7	14	OK
MW-32	Chloroform	10/8/2019	10/15/2019	7	14	OK
MW-32	Benzene	10/8/2019	10/15/2019	7	14	OK
MW-32	Chloromethane	10/8/2019	10/15/2019	7	14	OK
MW-32	Iron	10/8/2019	10/26/2019	18	180	OK
MW-32	Lead	10/8/2019	10/26/2019	18	180	OK
MW-32	Magnesium	10/8/2019	10/24/2019	16	180	OK
MW-32	Manganese	10/8/2019	10/26/2019	18	180	OK
MW-32	Mercury	10/8/2019	10/22/2019	14	180	OK
MW-32	Molybdenum	10/8/2019	10/27/2019	19	180	OK
MW-32	Nickel	10/8/2019	10/26/2019	18	180	OK
MW-32	Potassium	10/8/2019	10/25/2019	17	180	OK
MW-32	Silver	10/8/2019	10/26/2019	18	180	OK
MW-32	Sodium	10/8/2019	10/24/2019	16	180	OK
MW-32	Thallium	10/8/2019	10/26/2019	18	180	OK
MW-32	Tin	10/8/2019	10/26/2019	18	180	OK
MW-32	Arsenic	10/8/2019	10/26/2019	18	180	OK
MW-32	Beryllium	10/8/2019	10/26/2019	18	180	OK
MW-32	Cadmium	10/8/2019	10/26/2019	18	180	OK
MW-32	Chromium	10/8/2019	10/26/2019	18	180	OK
MW-32	Cobalt	10/8/2019	10/26/2019	18	180	OK
MW-32	Copper	10/8/2019	10/26/2019	18	180	OK
MW-32	Uranium	10/8/2019	10/26/2019	18	180	OK
MW-32	Vanadium	10/8/2019	10/25/2019	17	180	OK
MW-32	Zinc	10/8/2019	10/26/2019	18	180	OK
MW-32	Calcium	10/8/2019	10/24/2019	16	180	OK
MW-32	Methylene chloride	10/8/2019	10/15/2019	7	14	OK
MW-32	Ammonia (as N)	10/8/2019	10/22/2019	14	28	OK
MW-32	Selenium	10/8/2019	10/26/2019	18	180	OK
MW-32	2-Butanone	10/8/2019	10/15/2019	7	14	OK
MW-32	Naphthalene	10/8/2019	10/15/2019	7	14	OK
MW-32	Bicarbonate (as CaCO3)	10/8/2019	10/14/2019	6	14	OK
MW-32	Carbonate (as CaCO3)	10/8/2019	10/14/2019	6	14	OK
MW-32	Gross Radium Alpha	10/8/2019	11/1/2019	24	180	OK
MW-32	Nitrate/Nitrite (as N)	10/8/2019	10/15/2019	7	28	OK
MW-32	Total Dissolved Solids	10/8/2019	10/14/2019	6	7	OK
MW-35	Toluene	10/8/2019	10/15/2019	7	14	OK
MW-35	Tetrahydrofuran	10/8/2019	10/15/2019	7	14	OK
MW-35	Xylenes, Total	10/8/2019	10/15/2019	7	14	OK
MW-35	Sulfate	10/8/2019	10/27/2019	19	28	OK
MW-35	Chloride	10/8/2019	10/27/2019	19	28	OK
MW-35	Fluoride	10/8/2019	10/29/2019	21	28	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-35	Carbon tetrachloride	10/8/2019	10/15/2019	7	14	OK
MW-35	Acetone	10/8/2019	10/15/2019	7	14	OK
MW-35	Chloroform	10/8/2019	10/15/2019	7	14	OK
MW-35	Benzene	10/8/2019	10/15/2019	7	14	OK
MW-35	Chloromethane	10/8/2019	10/15/2019	7	14	OK
MW-35	Iron	10/8/2019	10/26/2019	18	180	OK
MW-35	Lead	10/8/2019	10/26/2019	18	180	OK
MW-35	Magnesium	10/8/2019	10/24/2019	16	180	OK
MW-35	Manganese	10/8/2019	10/26/2019	18	180	OK
MW-35	Mercury	10/8/2019	10/22/2019	14	180	OK
MW-35	Molybdenum	10/8/2019	10/27/2019	19	180	OK
MW-35	Nickel	10/8/2019	10/26/2019	18	180	OK
MW-35	Potassium	10/8/2019	10/25/2019	17	180	OK
MW-35	Silver	10/8/2019	10/26/2019	18	180	OK
MW-35	Sodium	10/8/2019	10/24/2019	16	180	OK
MW-35	Thallium	10/8/2019	10/26/2019	18	180	OK
MW-35	Tin	10/8/2019	10/26/2019	18	180	OK
MW-35	Arsenic	10/8/2019	10/26/2019	18	180	OK
MW-35	Beryllium	10/8/2019	10/26/2019	18	180	OK
MW-35	Cadmium	10/8/2019	10/26/2019	18	180	OK
MW-35	Chromium	10/8/2019	10/26/2019	18	180	OK
MW-35	Cobalt	10/8/2019	10/26/2019	18	180	OK
MW-35	Copper	10/8/2019	10/26/2019	18	180	OK
MW-35	Uranium	10/8/2019	10/26/2019	18	180	OK
MW-35	Vanadium	10/8/2019	10/25/2019	17	180	OK
MW-35	Zinc	10/8/2019	10/26/2019	18	180	OK
MW-35	Calcium	10/8/2019	10/24/2019	16	180	OK
MW-35	Methylene chloride	10/8/2019	10/15/2019	7	14	OK
MW-35	Ammonia (as N)	10/8/2019	10/22/2019	14	28	OK
MW-35	Selenium	10/8/2019	10/26/2019	18	180	OK
MW-35	2-Butanone	10/8/2019	10/15/2019	7	14	OK
MW-35	Naphthalene	10/8/2019	10/15/2019	7	14	OK
MW-35	Bicarbonate (as CaCO3)	10/8/2019	10/14/2019	6	14	OK
MW-35	Carbonate (as CaCO3)	10/8/2019	10/14/2019	6	14	OK
MW-35	Gross Radium Alpha	10/8/2019	11/1/2019	24	180	OK
MW-35	Nitrate/Nitrite (as N)	10/8/2019	10/15/2019	7	28	OK
MW-35	Total Dissolved Solids	10/8/2019	10/14/2019	6	7	OK
MW-36	Toluene	10/8/2019	10/15/2019	7	14	OK
MW-36	Tetrahydrofuran	10/8/2019	10/15/2019	7	14	OK
MW-36	Xylenes, Total	10/8/2019	10/15/2019	7	14	OK
MW-36	Sulfate	10/8/2019	10/28/2019	20	28	OK
MW-36	Chloride	10/8/2019	10/29/2019	21	28	OK
MW-36	Fluoride	10/8/2019	11/2/2019	25	28	OK
MW-36	Carbon tetrachloride	10/8/2019	10/15/2019	7	14	OK
MW-36	Acetone	10/8/2019	10/15/2019	7	14	OK
MW-36	Chloroform	10/8/2019	10/15/2019	7	14	OK
MW-36	Benzene	10/8/2019	10/15/2019	7	14	OK
MW-36	Chloromethane	10/8/2019	10/15/2019	7	14	OK
MW-36	Iron	10/8/2019	10/26/2019	18	180	OK
MW-36	Lead	10/8/2019	10/26/2019	18	180	OK
MW-36	Magnesium	10/8/2019	10/24/2019	16	180	OK
MW-36	Manganese	10/8/2019	10/26/2019	18	180	OK
MW-36	Mercury	10/8/2019	10/22/2019	14	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-36	Molybdenum	10/8/2019	10/27/2019	19	180	OK
MW-36	Nickel	10/8/2019	10/26/2019	18	180	OK
MW-36	Potassium	10/8/2019	10/25/2019	17	180	OK
MW-36	Silver	10/8/2019	10/26/2019	18	180	OK
MW-36	Sodium	10/8/2019	10/24/2019	16	180	OK
MW-36	Thallium	10/8/2019	10/26/2019	18	180	OK
MW-36	Tin	10/8/2019	10/26/2019	18	180	OK
MW-36	Arsenic	10/8/2019	10/26/2019	18	180	OK
MW-36	Beryllium	10/8/2019	10/26/2019	18	180	OK
MW-36	Cadmium	10/8/2019	10/26/2019	18	180	OK
MW-36	Chromium	10/8/2019	10/26/2019	18	180	OK
MW-36	Cobalt	10/8/2019	10/26/2019	18	180	OK
MW-36	Copper	10/8/2019	10/26/2019	18	180	OK
MW-36	Uranium	10/8/2019	10/26/2019	18	180	OK
MW-36	Vanadium	10/8/2019	10/25/2019	17	180	OK
MW-36	Zinc	10/8/2019	10/26/2019	18	180	OK
MW-36	Calcium	10/8/2019	10/24/2019	16	180	OK
MW-36	Methylene chloride	10/8/2019	10/15/2019	7	14	OK
MW-36	Ammonia (as N)	10/8/2019	10/22/2019	14	28	OK
MW-36	Selenium	10/8/2019	10/26/2019	18	180	OK
MW-36	2-Butanone	10/8/2019	10/15/2019	7	14	OK
MW-36	Naphthalene	10/8/2019	10/15/2019	7	14	OK
MW-36	Bicarbonate (as CaCO3)	10/8/2019	10/14/2019	6	14	OK
MW-36	Carbonate (as CaCO3)	10/8/2019	10/14/2019	6	14	OK
MW-36	Gross Radium Alpha	10/8/2019	11/1/2019	24	180	OK
MW-36	Nitrate/Nitrite (as N)	10/8/2019	10/15/2019	7	28	OK
MW-36	Total Dissolved Solids	10/8/2019	10/14/2019	6	7	OK
MW-37	Toluene	11/22/2019	12/3/2019	11	14	OK
MW-37	Tetrahydrofuran	11/22/2019	12/3/2019	11	14	OK
MW-37	Xylenes, Total	11/22/2019	12/3/2019	11	14	OK
MW-37	Sulfate	11/22/2019	12/10/2019	18	28	OK
MW-37	Chloride	11/22/2019	12/11/2019	19	28	OK
MW-37	Fluoride	11/22/2019	12/11/2019	19	28	OK
MW-37	Carbon tetrachloride	11/22/2019	12/3/2019	11	14	OK
MW-37	Acetone	11/22/2019	12/3/2019	11	14	OK
MW-37	Chloroform	11/22/2019	12/3/2019	11	14	OK
MW-37	Benzene	11/22/2019	12/3/2019	11	14	OK
MW-37	Chloromethane	11/22/2019	12/3/2019	11	14	OK
MW-37	Iron	11/22/2019	12/12/2019	20	180	OK
MW-37	Lead	11/22/2019	12/12/2019	20	180	OK
MW-37	Magnesium	11/22/2019	12/13/2019	21	180	OK
MW-37	Manganese	11/22/2019	12/13/2019	21	180	OK
MW-37	Mercury	11/22/2019	12/6/2019	14	180	OK
MW-37	Molybdenum	11/22/2019	12/12/2019	20	180	OK
MW-37	Nickel	11/22/2019	12/12/2019	20	180	OK
MW-37	Potassium	11/22/2019	12/13/2019	21	180	OK
MW-37	Silver	11/22/2019	12/12/2019	20	180	OK
MW-37	Sodium	11/22/2019	12/13/2019	21	180	OK
MW-37	Thallium	11/22/2019	12/12/2019	20	180	OK
MW-37	Tin	11/22/2019	12/12/2019	20	180	OK
MW-37	Arsenic	11/22/2019	12/12/2019	20	180	OK
MW-37	Beryllium	11/22/2019	12/13/2019	21	180	OK
MW-37	Cadmium	11/22/2019	12/12/2019	20	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-37	Chromium	11/22/2019	12/12/2019	20	180	OK
MW-37	Cobalt	11/22/2019	12/12/2019	20	180	OK
MW-37	Copper	11/22/2019	12/12/2019	20	180	OK
MW-37	Uranium	11/22/2019	12/12/2019	20	180	OK
MW-37	Vanadium	11/22/2019	12/12/2019	20	180	OK
MW-37	Zinc	11/22/2019	12/13/2019	21	180	OK
MW-37	Calcium	11/22/2019	12/13/2019	21	180	OK
MW-37	Methylene chloride	11/22/2019	12/3/2019	11	14	OK
MW-37	Ammonia (as N)	11/22/2019	12/15/2019	23	28	OK
MW-37	Selenium	11/22/2019	12/13/2019	21	180	OK
MW-37	2-Butanone	11/22/2019	12/3/2019	11	14	OK
MW-37	Naphthalene	11/22/2019	12/3/2019	11	14	OK
MW-37	Bicarbonate (as CaCO3)	11/22/2019	12/4/2019	12	14	OK
MW-37	Carbonate (as CaCO3)	11/22/2019	12/4/2019	12	14	OK
MW-37	Gross Radium Alpha	11/22/2019	12/19/2019	27	180	OK
MW-37	Nitrate/Nitrite (as N)	11/22/2019	12/3/2019	11	28	OK
MW-37 Resample	Total Dissolved Solids	12/4/2019	12/6/2019	2	7	OK
MW-38	Toluene	11/6/2019	11/12/2019	6	14	OK
MW-38	Tetrahydrofuran	11/6/2019	11/12/2019	6	14	OK
MW-38	Xylenes, Total	11/6/2019	11/12/2019	6	14	OK
MW-38	Sulfate	11/6/2019	11/13/2019	7	28	OK
MW-38	Chloride	11/6/2019	11/14/2019	8	28	OK
MW-38	Fluoride	11/6/2019	11/14/2019	8	28	OK
MW-38	Carbon tetrachloride	11/6/2019	11/12/2019	6	14	OK
MW-38	Acetone	11/6/2019	11/12/2019	6	14	OK
MW-38	Chloroform	11/6/2019	11/12/2019	6	14	OK
MW-38	Benzene	11/6/2019	11/12/2019	6	14	OK
MW-38	Chloromethane	11/6/2019	11/12/2019	6	14	OK
MW-38	Iron	11/6/2019	11/19/2019	13	180	OK
MW-38	Lead	11/6/2019	11/19/2019	13	180	OK
MW-38	Magnesium	11/6/2019	11/18/2019	12	180	OK
MW-38	Manganese	11/6/2019	11/19/2019	13	180	OK
MW-38	Mercury	11/6/2019	11/13/2019	7	180	OK
MW-38	Molybdenum	11/6/2019	11/19/2019	13	180	OK
MW-38	Nickel	11/6/2019	11/19/2019	13	180	OK
MW-38	Potassium	11/6/2019	11/18/2019	12	180	OK
MW-38	Silver	11/6/2019	11/19/2019	13	180	OK
MW-38	Sodium	11/6/2019	11/18/2019	12	180	OK
MW-38	Thallium	11/6/2019	11/19/2019	13	180	OK
MW-38	Tin	11/6/2019	11/20/2019	14	180	OK
MW-38	Arsenic	11/6/2019	11/19/2019	13	180	OK
MW-38	Beryllium	11/6/2019	11/19/2019	13	180	OK
MW-38	Cadmium	11/6/2019	11/19/2019	13	180	OK
MW-38	Chromium	11/6/2019	11/19/2019	13	180	OK
MW-38	Cobalt	11/6/2019	11/19/2019	13	180	OK
MW-38	Copper	11/6/2019	11/20/2019	14	180	OK
MW-38	Uranium	11/6/2019	11/20/2019	14	180	OK
MW-38	Vanadium	11/6/2019	11/22/2019	16	180	OK
MW-38	Zinc	11/6/2019	11/19/2019	13	180	OK
MW-38	Calcium	11/6/2019	11/18/2019	12	180	OK
MW-38	Methylene chloride	11/6/2019	11/12/2019	6	14	OK
MW-38	Ammonia (as N)	11/6/2019	11/13/2019	7	28	OK
MW-38	Selenium	11/6/2019	11/20/2019	14	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-38	2-Butanone	11/6/2019	11/12/2019	6	14	OK
MW-38	Naphthalene	11/6/2019	11/12/2019	6	14	OK
MW-38	Bicarbonate (as CaCO3)	11/6/2019	11/13/2019	7	14	OK
MW-38	Carbonate (as CaCO3)	11/6/2019	11/13/2019	7	14	OK
MW-38	Gross Radium Alpha	11/6/2019	12/3/2019	27	180	OK
MW-38	Nitrate/Nitrite (as N)	11/6/2019	11/13/2019	7	28	OK
MW-38	Total Dissolved Solids	11/6/2019	11/11/2019	5	7	OK
MW-39	Toluene	10/29/2019	10/31/2019	2	14	OK
MW-39	Tetrahydrofuran	10/29/2019	10/31/2019	2	14	OK
MW-39	Xylenes, Total	10/29/2019	10/31/2019	2	14	OK
MW-39	Sulfate	10/29/2019	11/7/2019	9	28	OK
MW-39	Chloride	10/29/2019	11/11/2019	13	28	OK
MW-39	Fluoride	10/29/2019	11/11/2019	13	28	OK
MW-39	Carbon tetrachloride	10/29/2019	10/31/2019	2	14	OK
MW-39	Acetone	10/29/2019	10/31/2019	2	14	OK
MW-39	Chloroform	10/29/2019	10/31/2019	2	14	OK
MW-39	Benzene	10/29/2019	10/31/2019	2	14	OK
MW-39	Chloromethane	10/29/2019	10/31/2019	2	14	OK
MW-39	Iron	10/29/2019	11/11/2019	13	180	OK
MW-39	Lead	10/29/2019	11/6/2019	8	180	OK
MW-39	Magnesium	10/29/2019	11/11/2019	13	180	OK
MW-39	Manganese	10/29/2019	11/11/2019	13	180	OK
MW-39	Mercury	10/29/2019	11/5/2019	7	180	OK
MW-39	Molybdenum	10/29/2019	11/11/2019	13	180	OK
MW-39	Nickel	10/29/2019	11/6/2019	8	180	OK
MW-39	Potassium	10/29/2019	11/11/2019	13	180	OK
MW-39	Silver	10/29/2019	11/6/2019	8	180	OK
MW-39	Sodium	10/29/2019	11/11/2019	13	180	OK
MW-39	Thallium	10/29/2019	11/6/2019	8	180	OK
MW-39	Tin	10/29/2019	11/6/2019	8	180	OK
MW-39	Arsenic	10/29/2019	11/6/2019	8	180	OK
MW-39	Beryllium	10/29/2019	11/6/2019	8	180	OK
MW-39	Cadmium	10/29/2019	11/6/2019	8	180	OK
MW-39	Chromium	10/29/2019	11/6/2019	8	180	OK
MW-39	Cobalt	10/29/2019	11/6/2019	8	180	OK
MW-39	Copper	10/29/2019	11/6/2019	8	180	OK
MW-39	Uranium	10/29/2019	11/6/2019	8	180	OK
MW-39	Vanadium	10/29/2019	11/11/2019	13	180	OK
MW-39	Zinc	10/29/2019	11/6/2019	8	180	OK
MW-39	Calcium	10/29/2019	11/11/2019	13	180	OK
MW-39	Methylene chloride	10/29/2019	10/31/2019	2	14	OK
MW-39	Ammonia (as N)	10/29/2019	11/8/2019	10	28	OK
MW-39	Selenium	10/29/2019	11/6/2019	8	180	OK
MW-39	2-Butanone	10/29/2019	10/31/2019	2	14	OK
MW-39	Naphthalene	10/29/2019	10/31/2019	2	14	OK
MW-39	Bicarbonate (as CaCO3)	10/29/2019	10/31/2019	2	14	OK
MW-39	Carbonate (as CaCO3)	10/29/2019	10/31/2019	2	14	OK
MW-39	Gross Radium Alpha	10/29/2019	12/3/2019	35	180	OK
MW-39	Nitrate/Nitrite (as N)	10/29/2019	10/31/2019	2	28	OK
MW-39	Total Dissolved Solids	10/29/2019	10/31/2019	2	7	OK
MW-40	Toluene	10/23/2019	10/28/2019	5	14	OK
MW-40	Tetrahydrofuran	10/23/2019	10/28/2019	5	14	OK
MW-40	Xylenes, Total	10/23/2019	10/28/2019	5	14	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-40	Sulfate	10/23/2019	11/5/2019	13	28	OK
MW-40	Chloride	10/23/2019	11/5/2019	13	28	OK
MW-40	Fluoride	10/23/2019	11/7/2019	15	28	OK
MW-40	Carbon tetrachloride	10/23/2019	10/28/2019	5	14	OK
MW-40	Acetone	10/23/2019	10/28/2019	5	14	OK
MW-40	Chloroform	10/23/2019	10/28/2019	5	14	OK
MW-40	Benzene	10/23/2019	10/28/2019	5	14	OK
MW-40	Chloromethane	10/23/2019	10/28/2019	5	14	OK
MW-40	Iron	10/23/2019	11/5/2019	13	180	OK
MW-40	Lead	10/23/2019	11/5/2019	13	180	OK
MW-40	Magnesium	10/23/2019	11/4/2019	12	180	OK
MW-40	Manganese	10/23/2019	11/5/2019	13	180	OK
MW-40	Mercury	10/23/2019	11/5/2019	13	180	OK
MW-40	Molybdenum	10/23/2019	11/6/2019	14	180	OK
MW-40	Nickel	10/23/2019	11/6/2019	14	180	OK
MW-40	Potassium	10/23/2019	11/6/2019	14	180	OK
MW-40	Silver	10/23/2019	11/5/2019	13	180	OK
MW-40	Sodium	10/23/2019	11/4/2019	12	180	OK
MW-40	Thallium	10/23/2019	11/5/2019	13	180	OK
MW-40	Tin	10/23/2019	11/5/2019	13	180	OK
MW-40	Arsenic	10/23/2019	11/5/2019	13	180	OK
MW-40	Beryllium	10/23/2019	11/5/2019	13	180	OK
MW-40	Cadmium	10/23/2019	11/5/2019	13	180	OK
MW-40	Chromium	10/23/2019	11/5/2019	13	180	OK
MW-40	Cobalt	10/23/2019	11/5/2019	13	180	OK
MW-40	Copper	10/23/2019	11/5/2019	13	180	OK
MW-40	Uranium	10/23/2019	11/5/2019	13	180	OK
MW-40	Vanadium	10/23/2019	11/4/2019	12	180	OK
MW-40	Zinc	10/23/2019	11/5/2019	13	180	OK
MW-40	Calcium	10/23/2019	11/4/2019	12	180	OK
MW-40	Methylene chloride	10/23/2019	10/28/2019	5	14	OK
MW-40	Ammonia (as N)	10/23/2019	11/7/2019	15	28	OK
MW-40	Selenium	10/23/2019	11/5/2019	13	180	OK
MW-40	2-Butanone	10/23/2019	10/28/2019	5	14	OK
MW-40	Naphthalene	10/23/2019	10/28/2019	5	14	OK
MW-40	Bicarbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-40	Carbonate (as CaCO3)	10/23/2019	10/28/2019	5	14	OK
MW-40	Gross Radium Alpha	10/23/2019	11/15/2019	23	180	OK
MW-40	Nitrate/Nitrite (as N)	10/23/2019	10/28/2019	5	28	OK
MW-40	Total Dissolved Solids	10/23/2019	10/28/2019	5	7	OK
MW-65	Toluene	10/9/2019	10/15/2019	6	14	OK
MW-65	Tetrahydrofuran	10/9/2019	10/15/2019	6	14	OK
MW-65	Xylenes, Total	10/9/2019	10/15/2019	6	14	OK
MW-65	Sulfate	10/9/2019	10/28/2019	19	28	OK
MW-65	Chloride	10/9/2019	10/29/2019	20	28	OK
MW-65	Fluoride	10/9/2019	10/29/2019	20	28	OK
MW-65	Carbon tetrachloride	10/9/2019	10/15/2019	6	14	OK
MW-65	Acetone	10/9/2019	10/15/2019	6	14	OK
MW-65	Chloroform	10/9/2019	10/15/2019	6	14	OK
MW-65	Benzene	10/9/2019	10/15/2019	6	14	OK
MW-65	Chloromethane	10/9/2019	10/15/2019	6	14	OK
MW-65	Iron	10/9/2019	10/26/2019	17	180	OK
MW-65	Lead	10/9/2019	10/26/2019	17	180	OK

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Location ID	Parameter Name	Sample Date	Analysis Date	Hold Time (Days)	Allowed Hold Time (Days)	Hold Time Check
MW-65	Magnesium	10/9/2019	10/24/2019	15	180	OK
MW-65	Manganese	10/9/2019	10/26/2019	17	180	OK
MW-65	Mercury	10/9/2019	10/22/2019	13	180	OK
MW-65	Molybdenum	10/9/2019	10/27/2019	18	180	OK
MW-65	Nickel	10/9/2019	10/26/2019	17	180	OK
MW-65	Potassium	10/9/2019	10/25/2019	16	180	OK
MW-65	Silver	10/9/2019	10/26/2019	17	180	OK
MW-65	Sodium	10/9/2019	10/24/2019	15	180	OK
MW-65	Thallium	10/9/2019	10/26/2019	17	180	OK
MW-65	Tin	10/9/2019	10/26/2019	17	180	OK
MW-65	Arsenic	10/9/2019	10/26/2019	17	180	OK
MW-65	Beryllium	10/9/2019	10/26/2019	17	180	OK
MW-65	Cadmium	10/9/2019	10/26/2019	17	180	OK
MW-65	Chromium	10/9/2019	10/26/2019	17	180	OK
MW-65	Cobalt	10/9/2019	10/26/2019	17	180	OK
MW-65	Copper	10/9/2019	10/26/2019	17	180	OK
MW-65	Uranium	10/9/2019	10/26/2019	17	180	OK
MW-65	Vanadium	10/9/2019	10/25/2019	16	180	OK
MW-65	Zinc	10/9/2019	10/26/2019	17	180	OK
MW-65	Calcium	10/9/2019	10/24/2019	15	180	OK
MW-65	Methylene chloride	10/9/2019	10/15/2019	6	14	OK
MW-65	Ammonia (as N)	10/9/2019	10/22/2019	13	28	OK
MW-65	Selenium	10/9/2019	10/26/2019	17	180	OK
MW-65	2-Butanone	10/9/2019	10/15/2019	6	14	OK
MW-65	Naphthalene	10/9/2019	10/15/2019	6	14	OK
MW-65	Bicarbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK
MW-65	Carbonate (as CaCO3)	10/9/2019	10/14/2019	5	14	OK
MW-65	Gross Radium Alpha	10/9/2019	11/1/2019	23	180	OK
MW-65	Nitrate/Nitrite (as N)	10/9/2019	10/15/2019	6	28	OK
MW-65	Total Dissolved Solids	10/9/2019	10/14/2019	5	7	OK
MW-70	Toluene	10/28/2019	10/31/2019	3	14	OK
MW-70	Tetrahydrofuran	10/28/2019	10/31/2019	3	14	OK
MW-70	Xylenes, Total	10/28/2019	10/31/2019	3	14	OK
MW-70	Sulfate	10/28/2019	11/13/2019	16	28	OK
MW-70	Chloride	10/28/2019	11/11/2019	14	28	OK
MW-70	Fluoride	10/28/2019	11/11/2019	14	28	OK
MW-70	Carbon tetrachloride	10/28/2019	10/31/2019	3	14	OK
MW-70	Acetone	10/28/2019	10/31/2019	3	14	OK
MW-70	Chloroform	10/28/2019	10/31/2019	3	14	OK
MW-70	Benzene	10/28/2019	10/31/2019	3	14	OK
MW-70	Chloromethane	10/28/2019	10/31/2019	3	14	OK
MW-70	Iron	10/28/2019	11/6/2019	9	180	OK
MW-70	Lead	10/28/2019	11/6/2019	9	180	OK
MW-70	Magnesium	10/28/2019	11/11/2019	14	180	OK
MW-70	Manganese	10/28/2019	11/6/2019	9	180	OK
MW-70	Mercury	10/28/2019	11/5/2019	8	180	OK
MW-70	Molybdenum	10/28/2019	11/11/2019	14	180	OK
MW-70	Nickel	10/28/2019	11/6/2019	9	180	OK
MW-70	Potassium	10/28/2019	11/11/2019	14	180	OK
MW-70	Silver	10/28/2019	11/6/2019	9	180	OK
MW-70	Sodium	10/28/2019	11/11/2019	14	180	OK
MW-70	Thallium	10/28/2019	11/6/2019	9	180	OK
MW-70	Tin	10/28/2019	11/6/2019	9	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-70	Arsenic	10/28/2019	11/6/2019	9	180	OK
MW-70	Beryllium	10/28/2019	11/6/2019	9	180	OK
MW-70	Cadmium	10/28/2019	11/6/2019	9	180	OK
MW-70	Chromium	10/28/2019	11/6/2019	9	180	OK
MW-70	Cobalt	10/28/2019	11/6/2019	9	180	OK
MW-70	Copper	10/28/2019	11/6/2019	9	180	OK
MW-70	Uranium	10/28/2019	11/6/2019	9	180	OK
MW-70	Vanadium	10/28/2019	11/11/2019	14	180	OK
MW-70	Zinc	10/28/2019	11/6/2019	9	180	OK
MW-70	Calcium	10/28/2019	11/11/2019	14	180	OK
MW-70	Methylene chloride	10/28/2019	10/31/2019	3	14	OK
MW-70	Ammonia (as N)	10/28/2019	11/8/2019	11	28	OK
MW-70	Selenium	10/28/2019	11/6/2019	9	180	OK
MW-70	2-Butanone	10/28/2019	10/31/2019	3	14	OK
MW-70	Naphthalene	10/28/2019	10/31/2019	3	14	OK
MW-70	Bicarbonate (as CaCO3)	10/28/2019	10/31/2019	3	14	OK
MW-70	Carbonate (as CaCO3)	10/28/2019	10/31/2019	3	14	OK
MW-70	Gross Radium Alpha	10/28/2019	12/3/2019	36	180	OK
MW-70	Nitrate/Nitrite (as N)	10/28/2019	10/31/2019	3	28	OK
MW-70	Total Dissolved Solids	10/28/2019	10/31/2019	3	7	OK
MW-70 Resample	Total Dissolved Solids	12/4/2019	12/6/2019	2	7	OK
TW4-24	Toluene	10/9/2019	10/15/2019	6	14	OK
TW4-24	Tetrahydrofuran	10/9/2019	10/15/2019	6	14	OK
TW4-24	Xylenes, Total	10/9/2019	10/15/2019	6	14	OK
TW4-24	Sulfate	10/9/2019	10/27/2019	18	28	OK
TW4-24	Chloride	10/9/2019	10/27/2019	18	28	OK
TW4-24	Fluoride	10/9/2019	10/27/2019	18	28	OK
TW4-24	Carbon tetrachloride	10/9/2019	10/15/2019	6	14	OK
TW4-24	Acetone	10/9/2019	10/15/2019	6	14	OK
TW4-24	Chloroform	10/9/2019	10/15/2019	6	14	OK
TW4-24	Benzene	10/9/2019	10/15/2019	6	14	OK
TW4-24	Chloromethane	10/9/2019	10/15/2019	6	14	OK
TW4-24	Iron	10/9/2019	10/26/2019	17	180	OK
TW4-24	Lead	10/9/2019	10/26/2019	17	180	OK
TW4-24	Magnesium	10/9/2019	10/24/2019	15	180	OK
TW4-24	Manganese	10/9/2019	10/26/2019	17	180	OK
TW4-24	Mercury	10/9/2019	10/22/2019	13	180	OK
TW4-24	Molybdenum	10/9/2019	10/28/2019	19	180	OK
TW4-24	Nickel	10/9/2019	10/26/2019	17	180	OK
TW4-24	Potassium	10/9/2019	10/25/2019	16	180	OK
TW4-24	Silver	10/9/2019	10/26/2019	17	180	OK
TW4-24	Sodium	10/9/2019	10/24/2019	15	180	OK
TW4-24	Thallium	10/9/2019	10/26/2019	17	180	OK
TW4-24	Tin	10/9/2019	10/26/2019	17	180	OK
TW4-24	Arsenic	10/9/2019	10/26/2019	17	180	OK
TW4-24	Beryllium	10/9/2019	10/26/2019	17	180	OK
TW4-24	Cadmium	10/9/2019	10/26/2019	17	180	OK
TW4-24	Chromium	10/9/2019	10/26/2019	17	180	OK
TW4-24	Cobalt	10/9/2019	10/26/2019	17	180	OK
TW4-24	Copper	10/9/2019	10/26/2019	17	180	OK
TW4-24	Uranium	10/9/2019	10/30/2019	21	180	OK
TW4-24	Vanadium	10/9/2019	10/25/2019	16	180	OK
TW4-24	Zinc	10/9/2019	10/26/2019	17	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
TW4-24	Calcium	10/9/2019	10/24/2019	15	180	OK
TW4-24	Methylene chloride	10/9/2019	10/15/2019	6	14	OK
TW4-24	Ammonia (as N)	10/9/2019	10/22/2019	13	28	OK
TW4-24	Selenium	10/9/2019	10/26/2019	17	180	OK
TW4-24	2-Butanone	10/9/2019	10/15/2019	6	14	OK
TW4-24	Naphthalene	10/9/2019	10/15/2019	6	14	OK
TW4-24	Bicarbonate (as CaCO <sub>3</sub> )	10/9/2019	10/14/2019	5	14	OK
TW4-24	Carbonate (as CaCO <sub>3</sub> )	10/9/2019	10/14/2019	5	14	OK
TW4-24	Gross Radium Alpha	10/9/2019	11/1/2019	23	180	OK
TW4-24	Nitrate/Nitrite (as N)	10/9/2019	10/15/2019	6	28	OK
TW4-24	Total Dissolved Solids	10/9/2019	10/14/2019	5	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	11/13/2019	11/15/2019	2	14	OK
Trip Blank	Methylene chloride	11/13/2019	11/15/2019	2	14	OK
Trip Blank	Chloroform	12/4/2019	12/5/2019	1	14	OK
Trip Blank	Methylene chloride	12/4/2019	12/5/2019	1	14	OK
MW-11	Sulfate	11/12/2019	11/26/2019	14	28	OK
MW-11	Chloride	11/12/2019	11/26/2019	14	28	OK
MW-11	Manganese	11/12/2019	11/15/2019	3	180	OK
MW-11	Sulfate	12/3/2019	12/16/2019	13	28	OK
MW-11	Chloride	12/3/2019	12/17/2019	14	28	OK
MW-11	Manganese	12/3/2019	12/13/2019	10	180	OK
MW-14	Sulfate	11/13/2019	11/26/2019	13	28	OK
MW-14	Fluoride	11/13/2019	11/26/2019	13	27	OK
MW-14	Sulfate	12/3/2019	12/16/2019	13	28	OK
MW-14	Fluoride	12/3/2019	12/17/2019	14	27	OK
MW-25	Cadmium	11/13/2019	11/15/2019	2	180	OK
MW-25	Cadmium	12/4/2019	12/13/2019	9	180	OK
MW-26	Chloride	11/13/2019	11/26/2019	13	28	OK
MW-26	Chloroform	11/13/2019	11/15/2019	2	14	OK
MW-26	Methylene chloride	11/13/2019	11/15/2019	2	14	OK
MW-26	Ammonia (as N)	11/13/2019	11/20/2019	7	28	OK
MW-26	Nitrate/Nitrite (as N)	11/13/2019	11/15/2019	2	28	OK
MW-26	Chloride	12/4/2019	12/17/2019	13	28	OK
MW-26	Chloroform	12/4/2019	12/5/2019	1	14	OK
MW-26	Methylene chloride	12/4/2019	12/5/2019	1	14	OK
MW-26	Ammonia (as N)	12/4/2019	12/15/2019	11	28	OK
MW-26	Nitrate/Nitrite (as N)	12/4/2019	12/5/2019	1	28	OK
MW-30	Chloride	11/13/2019	11/26/2019	13	28	OK
MW-30	Uranium	11/13/2019	11/15/2019	2	180	OK
MW-30	Selenium	11/13/2019	11/15/2019	2	180	OK
MW-30	Nitrate/Nitrite (as N)	11/13/2019	11/15/2019	2	28	OK
MW-30	Chloride	12/4/2019	12/17/2019	13	28	OK
MW-30	Uranium	12/4/2019	12/13/2019	9	180	OK
MW-30	Selenium	12/4/2019	12/13/2019	9	180	OK
MW-30	Nitrate/Nitrite (as N)	12/4/2019	12/5/2019	1	28	OK
MW-31	Sulfate	11/12/2019	11/26/2019	14	28	OK
MW-31	Chloride	11/12/2019	11/26/2019	14	28	OK
MW-31	Nitrate/Nitrite (as N)	11/12/2019	11/15/2019	3	28	OK
MW-31	Total Dissolved Solids	11/12/2019	11/14/2019	2	7	OK
MW-31	Sulfate	12/3/2019	12/16/2019	13	28	OK
MW-31	Chloride	12/3/2019	12/16/2019	13	28	OK
MW-31	Nitrate/Nitrite (as N)	12/3/2019	12/5/2019	2	28	OK
MW-31	Total Dissolved Solids	12/3/2019	12/6/2019	3	7	OK
MW-36	Sulfate	11/13/2019	11/26/2019	13	28	OK
MW-36	Sulfate	12/3/2019	12/16/2019	13	28	OK
MW-65	Chloride	11/13/2019	11/26/2019	13	28	OK
MW-65	Uranium	11/13/2019	11/15/2019	2	180	OK
MW-65	Selenium	11/13/2019	11/15/2019	2	180	OK
MW-65	Nitrate/Nitrite (as N)	11/13/2019	11/15/2019	2	28	OK
MW-65	Sulfate	12/3/2019	12/16/2019	13	28	OK
MW-65	Chloride	12/3/2019	12/17/2019	14	28	OK
MW-65	Nitrate/Nitrite (as N)	12/3/2019	12/5/2019	2	28	OK
MW-65	Total Dissolved Solids	12/3/2019	12/6/2019	3	7	OK

G-3A: Laboratory Receipt Temperature Check

Sample Batch	Wells in Batch	Temperature
AWAL 1910332	MW-14, MW-25, MW-26, MW-30, MW-31, MW-32, MW-35, MW-36, TW4-24, MW-65, Trip Blank	0.9 °C
AWAL 1910514	MW-11, MW-18, MW-19, Trip Blank	3.9 °C
AWAL 1910680	MW-01, MW-02, MW-05, MW-12, MW-17, MW-27, MW-28, MW-29, MW-40, Trip Blank	2.1 °C
AWAL 1910785	MW-15, MW-22, MW-23, MW-39, MW-70, Trip Blank	2.1 °C
AWAL 1911206	MW-03A, MW-24, MW-38, Trip Blank	2.3 °C
AWAL 1912025	MW-02 Resample, MW-20, MW-37, Trip Blank	2.3 °C
AWAL 1912110	MW-15 Resample, MW-20 Resample, MW-37 Resample, MW-70 Resample	1.0 °C
GEL 493013	MW-14, MW-25, MW-26, MW-30, MW-31, MW-32, MW-35, MW-36, TW4-24, MW-65	N/A
GEL 494487	MW-01, MW-02, MW-05, MW-11, MW-12, MW-17, MW-18, MW-19, MW-27, MW-28, MW-29, MW-40	N/A
GEL 495672	MW-03A, MW-15, MW-22, MW-23, MW-24, MW-38, MW-39, MW-70	N/A
GEL 498014	MW-20, MW-37	N/A

N/A = These shipments contained samples for the analysis of gross alpha or metals only. Per Table 1 in the approved QAP, samples submitted for gross alpha and metals analyses do not have a sample temperature requirement.

G-3B: Laboratory Receipt Temperature Check - Accelerated Samples

Sample Batch	Wells in Batch	Temperature
AWAL 1911345	MW-11, MW-14, MW-25, MW-26, MW-30, MW-31, MW-36, MW-65, Trip Blank	1.6°C
AWAL 1912109	MW-11, MW-14, MW-25, MW-26, MW-30, MW-31, MW-36, MW-65, Trip Blank	1.0 °C

G-4A: 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 or SW8260D	SW8260D
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	A2540C
Carbonate as CO <sub>3</sub> , Bicarbonate as HCO <sub>3</sub>	A2320 B	A2320B
Calcium, Magnesium, Potassium, Sodium	E200.7	E200.7

G-4B: Analytical Method Check - Accelerated Samples

Parameter	QAP Method*	Method Used by Lab
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 or SW8260D	SW8260D
Chloride	A4500-Cl B or A4500-Cl E or E300.0	E300.0
Sulfate	A4500-SO4 E or E300.0	E300.0
TDS	A2540 C	A2540 C
Fluoride	A4500-F C or E300.0	E300.0

## 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
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
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

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
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-01	Toluene	1	ug/L	U	1	1	OK
MW-01	Tetrahydrofuran	1	ug/L		1	1	OK
MW-01	Xylenes, Total	1	ug/L	U	1	1	OK
MW-01	Sulfate	75	mg/L		100	1	OK
MW-01	Chloride	1	mg/L		10	1	OK
MW-01	Fluoride	0.1	mg/L		1	0.1	OK
MW-01	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-01	Acetone	20	ug/L	U	1	20	OK
MW-01	Chloroform	1	ug/L	U	1	1	OK
MW-01	Benzene	1	ug/L	U	1	1	OK
MW-01	Chloromethane	1	ug/L	U	1	1	OK
MW-01	Iron	100	ug/L		20	30	OK
MW-01	Lead	1	ug/L	U	2	1	OK
MW-01	Magnesium	20	mg/L		20	0.5	OK
MW-01	Manganese	10	ug/L		20	10	OK
MW-01	Mercury	0.5	ug/L	U	1	0.5	OK
MW-01	Molybdenum	10	ug/L	U	20	10	OK
MW-01	Nickel	20	ug/L	U	20	20	OK
MW-01	Potassium	2	mg/L		2	0.5	OK
MW-01	Silver	10	ug/L	U	20	10	OK
MW-01	Sodium	20	mg/L		20	0.5	OK
MW-01	Thallium	0.5	ug/L	U	2	0.5	OK
MW-01	Tin	100	ug/L	U	20	100	OK
MW-01	Arsenic	5	ug/L	U	20	5	OK
MW-01	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-01	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-01	Chromium	25	ug/L	U	20	25	OK
MW-01	Cobalt	10	ug/L	U	20	10	OK
MW-01	Copper	10	ug/L	U	20	10	OK
MW-01	Uranium	0.3	ug/L	U	2	0.3	OK
MW-01	Vanadium	15	ug/L	U	1	15	OK
MW-01	Zinc	10	ug/L	U	20	10	OK
MW-01	Calcium	20	mg/L		20	0.5	OK
MW-01	Methylene chloride	1	ug/L	U	1	1	OK
MW-01	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-01	Selenium	5	ug/L	U	20	5	OK
MW-01	2-Butanone	20	ug/L	U	1	20	OK
MW-01	Naphthalene	1	ug/L	U	1	1	OK
MW-01	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-01	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-01	Gross Radium Alpha	0.915	pCi/L	U	1	1	OK
MW-01	Nitrate/Nitrite (as N)	0.1	mg/L	U	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-01	Total Dissolved Solids	20	MG/L		2	10	OK
MW-02	Toluene	1	ug/L	U	1	1	OK
MW-02	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-02	Xylenes, Total	1	ug/L	U	1	1	OK
MW-02	Sulfate	150	mg/L		200	1	OK
MW-02	Chloride	1	mg/L		1	1	OK
MW-02	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-02	Acetone	20	ug/L	U	1	20	OK
MW-02	Chloroform	1	ug/L	U	1	1	OK
MW-02	Benzene	1	ug/L	U	1	1	OK
MW-02	Chloromethane	1	ug/L	U	1	1	OK
MW-02	Iron	30	ug/L	U	2	30	OK
MW-02	Lead	1	ug/L	U	2	1	OK
MW-02	Magnesium	20	mg/L		20	0.5	OK
MW-02	Manganese	10	ug/L	U	20	10	OK
MW-02	Mercury	0.5	ug/L	U	1	0.5	OK
MW-02	Molybdenum	10	ug/L	U	20	10	OK
MW-02	Nickel	20	ug/L	U	20	20	OK
MW-02	Potassium	2	mg/L		2	0.5	OK
MW-02	Silver	10	ug/L	U	20	10	OK
MW-02	Sodium	20	mg/L		20	0.5	OK
MW-02	Thallium	0.5	ug/L	U	2	0.5	OK
MW-02	Tin	100	ug/L	U	20	100	OK
MW-02	Arsenic	5	ug/L	U	20	5	OK
MW-02	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-02	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-02	Chromium	25	ug/L	U	20	25	OK
MW-02	Cobalt	10	ug/L	U	20	10	OK
MW-02	Copper	10	ug/L	U	20	10	OK
MW-02	Uranium	0.3	ug/L		2	0.3	OK
MW-02	Vanadium	15	ug/L	U	1	15	OK
MW-02	Zinc	10	ug/L	U	20	10	OK
MW-02	Calcium	20	mg/L		20	0.5	OK
MW-02	Methylene chloride	1	ug/L	U	1	1	OK
MW-02	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-02	Selenium	5	ug/L		20	5	OK
MW-02	2-Butanone	20	ug/L	U	1	20	OK
MW-02	Naphthalene	1	ug/L	U	1	1	OK
MW-02	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-02	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-02	Gross Radium Alpha	0.913	pCi/L	U	1	1	OK
MW-02	Nitrate/Nitrite (as N)	0.1	mg/L	U	1	0.1	OK
MW-02	Total Dissolved Solids	20	MG/L		2	10	OK
MW-02 Resample	Fluoride	0.1	mg/L		1	0.1	OK
MW-03A	Toluene	1	ug/L	U	1	1	OK
MW-03A	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-03A	Xylenes, Total	1	ug/L	U	1	1	OK
MW-03A	Sulfate	375	mg/L		500	1	OK
MW-03A	Chloride	1	mg/L		10	1	OK
MW-03A	Fluoride	0.2	mg/L		2	0.1	OK
MW-03A	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-03A	Acetone	20	ug/L	U	1	20	OK
MW-03A	Chloroform	1	ug/L	U	1	1	OK
MW-03A	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-03A	Chloromethane	1	ug/L	U	1	1	OK
MW-03A	Iron	30	ug/L	U	5	30	OK
MW-03A	Lead	1	ug/L	U	5	1	OK
MW-03A	Magnesium	20	mg/L		20	0.5	OK
MW-03A	Manganese	10	ug/L		20	10	OK
MW-03A	Mercury	0.5	ug/L	U	1	0.5	OK
MW-03A	Molybdenum	10	ug/L	U	20	10	OK
MW-03A	Nickel	20	ug/L	U	20	20	OK
MW-03A	Potassium	1	mg/L		1	0.5	OK
MW-03A	Silver	10	ug/L	U	20	10	OK
MW-03A	Sodium	20	mg/L		20	0.5	OK
MW-03A	Thallium	0.5	ug/L	U	5	0.5	OK
MW-03A	Tin	100	ug/L	U	20	100	OK
MW-03A	Arsenic	5	ug/L	U	20	5	OK
MW-03A	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-03A	Cadmium	0.5	ug/L		20	0.5	OK
MW-03A	Chromium	25	ug/L	U	20	25	OK
MW-03A	Cobalt	10	ug/L	U	20	10	OK
MW-03A	Copper	10	ug/L	U	20	10	OK
MW-03A	Uranium	0.3	ug/L		2	0.3	OK
MW-03A	Vanadium	15	ug/L	U	20	15	OK
MW-03A	Zinc	10	ug/L		20	10	OK
MW-03A	Calcium	20	mg/L		20	0.5	OK
MW-03A	Methylene chloride	1	ug/L	U	1	1	OK
MW-03A	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-03A	Selenium	5	ug/L		20	5	OK
MW-03A	2-Butanone	20	ug/L	U	1	20	OK
MW-03A	Naphthalene	1	ug/L	U	1	1	OK
MW-03A	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-03A	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-03A	Gross Radium Alpha	0.929	pCi/L	U	1	1	OK
MW-03A	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-03A	Total Dissolved Solids	20	MG/L		2	10	OK
MW-05	Toluene	1	ug/L	U	1	1	OK
MW-05	Tetrahydrofuran	1	ug/L		1	1	OK
MW-05	Xylenes, Total	1	ug/L	U	1	1	OK
MW-05	Sulfate	150	mg/L		200	1	OK
MW-05	Chloride	1	mg/L		10	1	OK
MW-05	Fluoride	0.2	mg/L		2	0.1	OK
MW-05	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-05	Acetone	20	ug/L	U	1	20	OK
MW-05	Chloroform	1	ug/L	U	1	1	OK
MW-05	Benzene	1	ug/L	U	1	1	OK
MW-05	Chloromethane	1	ug/L	U	1	1	OK
MW-05	Iron	30	ug/L	U	2	30	OK
MW-05	Lead	1	ug/L	U	2	1	OK
MW-05	Magnesium	20	mg/L		20	0.5	OK
MW-05	Manganese	10	ug/L		20	10	OK
MW-05	Mercury	0.5	ug/L	U	1	0.5	OK
MW-05	Molybdenum	10	ug/L	U	20	10	OK
MW-05	Nickel	20	ug/L	U	20	20	OK
MW-05	Potassium	2	mg/L		2	0.5	OK
MW-05	Silver	10	ug/L	U	20	10	OK
MW-05	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-05	Thallium	0.5	ug/L	U	2	0.5	OK
MW-05	Tin	100	ug/L	U	20	100	OK
MW-05	Arsenic	5	ug/L	U	20	5	OK
MW-05	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-05	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-05	Chromium	25	ug/L	U	20	25	OK
MW-05	Cobalt	10	ug/L	U	20	10	OK
MW-05	Copper	10	ug/L	U	20	10	OK
MW-05	Uranium	0.3	ug/L		2	0.3	OK
MW-05	Vanadium	15	ug/L	U	1	15	OK
MW-05	Zinc	10	ug/L	U	20	10	OK
MW-05	Calcium	20	mg/L		20	0.5	OK
MW-05	Methylene chloride	1	ug/L	U	1	1	OK
MW-05	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-05	Selenium	5	ug/L	U	20	5	OK
MW-05	2-Butanone	20	ug/L	U	1	20	OK
MW-05	Naphthalene	1	ug/L	U	1	1	OK
MW-05	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-05	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-05	Gross Radium Alpha	0.814	pCi/L	U	1	1	OK
MW-05	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-05	Total Dissolved Solids	20	MG/L		2	10	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	2	30	OK
MW-11	Lead	1	ug/L	U	10	1	OK
MW-11	Magnesium	10	mg/L		1	0.5	OK
MW-11	Manganese	10	ug/L		10	10	OK
MW-11	Mercury	0.5	ug/L	U	1	0.5	OK
MW-11	Molybdenum	10	ug/L	U	10	10	OK
MW-11	Nickel	20	ug/L	U	10	20	OK
MW-11	Potassium	1	mg/L		1	0.5	OK
MW-11	Silver	10	ug/L	U	10	10	OK
MW-11	Sodium	10	mg/L		1	0.5	OK
MW-11	Thallium	0.5	ug/L	U	2	0.5	OK
MW-11	Tin	100	ug/L	U	10	100	OK
MW-11	Arsenic	5	ug/L	U	10	5	OK
MW-11	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-11	Cadmium	0.5	ug/L	U	10	0.5	OK
MW-11	Chromium	25	ug/L	U	10	25	OK
MW-11	Cobalt	10	ug/L	U	10	10	OK
MW-11	Copper	10	ug/L	U	20	10	OK
MW-11	Uranium	1	ug/L		10	0.3	OK
MW-11	Vanadium	15	ug/L	U	1	15	OK
MW-11	Zinc	10	ug/L	U	20	10	OK

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-11	Calcium	10	mg/L		1	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	10	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	0.827	pCi/L	U	1	1	OK
MW-11	Nitrate/Nitrite (as N)	0.1	mg/L		1	0.1	OK
MW-11	Total Dissolved Solids	20	MG/L		2	10	OK
MW-12	Toluene	1	ug/L	U	1	1	OK
MW-12	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-12	Xylenes, Total	1	ug/L	U	1	1	OK
MW-12	Sulfate	150	mg/L		200	1	OK
MW-12	Chloride	1	mg/L		10	1	OK
MW-12	Fluoride	0.1	mg/L		1	0.1	OK
MW-12	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-12	Acetone	20	ug/L	U	1	20	OK
MW-12	Chloroform	1	ug/L	U	1	1	OK
MW-12	Benzene	1	ug/L	U	1	1	OK
MW-12	Chloromethane	1	ug/L	U	1	1	OK
MW-12	Iron	30	ug/L	U	2	30	OK
MW-12	Lead	1	ug/L	U	2	1	OK
MW-12	Magnesium	20	mg/L		20	0.5	OK
MW-12	Manganese	10	ug/L	U	20	10	OK
MW-12	Mercury	0.5	ug/L	U	1	0.5	OK
MW-12	Molybdenum	10	ug/L	U	20	10	OK
MW-12	Nickel	20	ug/L	U	20	20	OK
MW-12	Potassium	2	mg/L		2	0.5	OK
MW-12	Silver	10	ug/L	U	20	10	OK
MW-12	Sodium	20	mg/L		20	0.5	OK
MW-12	Thallium	0.5	ug/L	U	2	0.5	OK
MW-12	Tin	100	ug/L	U	20	100	OK
MW-12	Arsenic	5	ug/L	U	20	5	OK
MW-12	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-12	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-12	Chromium	25	ug/L	U	20	25	OK
MW-12	Cobalt	10	ug/L	U	20	10	OK
MW-12	Copper	10	ug/L	U	20	10	OK
MW-12	Uranium	0.3	ug/L		2	0.3	OK
MW-12	Vanadium	15	ug/L	U	1	15	OK
MW-12	Zinc	10	ug/L	U	20	10	OK
MW-12	Calcium	20	mg/L		20	0.5	OK
MW-12	Methylene chloride	1	ug/L	U	1	1	OK
MW-12	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-12	Selenium	5	ug/L		20	5	OK
MW-12	2-Butanone	20	ug/L	U	1	20	OK
MW-12	Naphthalene	1	ug/L	U	1	1	OK
MW-12	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-12	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-12	Gross Radium Alpha	0.83	pCi/L	U	1	1	OK
MW-12	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-12	Total Dissolved Solids	20	MG/L		2	10	OK

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
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		2	1	OK
MW-14	Fluoride	0.1	mg/L	U	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	2	30	OK
MW-14	Lead	1	ug/L	U	2	1	OK
MW-14	Magnesium	20	mg/L		20	0.5	OK
MW-14	Manganese	10	ug/L		50	10	OK
MW-14	Mercury	0.5	ug/L	U	1	0.5	OK
MW-14	Molybdenum	10	ug/L	U	10	10	OK
MW-14	Nickel	20	ug/L	U	2	20	OK
MW-14	Potassium	1	mg/L		1	0.5	OK
MW-14	Silver	10	ug/L	U	2	10	OK
MW-14	Sodium	20	mg/L		20	0.5	OK
MW-14	Thallium	0.5	ug/L	U	2	0.5	OK
MW-14	Tin	100	ug/L	U	2	100	OK
MW-14	Arsenic	5	ug/L	U	2	5	OK
MW-14	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-14	Cadmium	0.5	ug/L		2	0.5	OK
MW-14	Chromium	25	ug/L	U	2	25	OK
MW-14	Cobalt	10	ug/L	U	2	10	OK
MW-14	Copper	10	ug/L	U	2	10	OK
MW-14	Uranium	0.5	ug/L		5	0.3	OK
MW-14	Vanadium	15	ug/L	U	1	15	OK
MW-14	Zinc	10	ug/L		2	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	2	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	0.687	pCi/L	U	1	1	OK
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-15	Toluene	1	ug/L	U	1	1	OK
MW-15	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-15	Xylenes, Total	1	ug/L	U	1	1	OK
MW-15	Sulfate	150	mg/L		200	1	OK
MW-15	Chloride	1	mg/L		10	1	OK
MW-15	Fluoride	0.1	mg/L		1	0.1	OK
MW-15	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-15	Acetone	20	ug/L	U	1	20	OK
MW-15	Chloroform	1	ug/L	U	1	1	OK
MW-15	Benzene	1	ug/L	U	1	1	OK
MW-15	Chloromethane	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-15	Iron	30	ug/L	U	2	30	OK
MW-15	Lead	1	ug/L	U	2	1	OK
MW-15	Magnesium	50	mg/L		50	0.5	OK
MW-15	Manganese	10	ug/L	U	2	10	OK
MW-15	Mercury	0.5	ug/L	U	1	0.5	OK
MW-15	Molybdenum	10	ug/L	U	50	10	OK
MW-15	Nickel	20	ug/L	U	2	20	OK
MW-15	Potassium	1	mg/L		1	0.5	OK
MW-15	Silver	10	ug/L	U	2	10	OK
MW-15	Sodium	50	mg/L		50	0.5	OK
MW-15	Thallium	0.5	ug/L	U	2	0.5	OK
MW-15	Tin	100	ug/L	U	2	100	OK
MW-15	Arsenic	5	ug/L	U	2	5	OK
MW-15	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-15	Cadmium	0.5	ug/L	U	2	0.5	OK
MW-15	Chromium	25	ug/L	U	2	25	OK
MW-15	Cobalt	10	ug/L	U	2	10	OK
MW-15	Copper	10	ug/L	U	2	10	OK
MW-15	Uranium	0.3	ug/L		2	0.3	OK
MW-15	Vanadium	15	ug/L	U	1	15	OK
MW-15	Zinc	10	ug/L	U	2	10	OK
MW-15	Calcium	50	mg/L		50	0.5	OK
MW-15	Methylene chloride	1	ug/L	U	1	1	OK
MW-15	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-15	Selenium	5	ug/L		2	5	OK
MW-15	2-Butanone	20	ug/L	U	1	20	OK
MW-15	Naphthalene	1	ug/L	U	1	1	OK
MW-15	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-15	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-15	Gross Radium Alpha	0.967	pCi/L	U	1	1	OK
MW-15	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-15 Resample	Total Dissolved Solids	20	MG/L		2	10	OK
MW-17	Toluene	1	ug/L	U	1	1	OK
MW-17	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-17	Xylenes, Total	1	ug/L	U	1	1	OK
MW-17	Sulfate	150	mg/L		200	1	OK
MW-17	Chloride	1	mg/L		10	1	OK
MW-17	Fluoride	0.1	mg/L		1	0.1	OK
MW-17	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-17	Acetone	20	ug/L	U	1	20	OK
MW-17	Chloroform	1	ug/L	U	1	1	OK
MW-17	Benzene	1	ug/L	U	1	1	OK
MW-17	Chloromethane	1	ug/L	U	1	1	OK
MW-17	Iron	30	ug/L	U	2	30	OK
MW-17	Lead	1	ug/L	U	2	1	OK
MW-17	Magnesium	20	mg/L		20	0.5	OK
MW-17	Manganese	10	ug/L		20	10	OK
MW-17	Mercury	0.5	ug/L	U	1	0.5	OK
MW-17	Molybdenum	10	ug/L	U	20	10	OK
MW-17	Nickel	20	ug/L	U	20	20	OK
MW-17	Potassium	2	mg/L		2	0.5	OK
MW-17	Silver	10	ug/L	U	20	10	OK
MW-17	Sodium	20	mg/L		20	0.5	OK
MW-17	Thallium	0.5	ug/L	U	2	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-17	Tin	100	ug/L	U	20	100	OK
MW-17	Arsenic	5	ug/L	U	20	5	OK
MW-17	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-17	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-17	Chromium	25	ug/L	U	20	25	OK
MW-17	Cobalt	10	ug/L	U	20	10	OK
MW-17	Copper	10	ug/L	U	20	10	OK
MW-17	Uranium	0.3	ug/L		2	0.3	OK
MW-17	Vanadium	15	ug/L	U	1	15	OK
MW-17	Zinc	10	ug/L	U	20	10	OK
MW-17	Calcium	20	mg/L		20	0.5	OK
MW-17	Methylene chloride	1	ug/L	U	1	1	OK
MW-17	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-17	Selenium	5	ug/L		20	5	OK
MW-17	2-Butanone	20	ug/L	U	1	20	OK
MW-17	Naphthalene	1	ug/L	U	1	1	OK
MW-17	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-17	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-17	Gross Radium Alpha	0.84	pCi/L	U	1	1	OK
MW-17	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-17	Total Dissolved Solids	20	MG/L		2	10	OK
MW-18	Toluene	1	ug/L	U	1	1	OK
MW-18	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-18	Xylenes, Total	1	ug/L	U	1	1	OK
MW-18	Sulfate	150	mg/L		200	1	OK
MW-18	Chloride	1	mg/L		10	1	OK
MW-18	Fluoride	0.1	mg/L	U	1	0.1	OK
MW-18	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-18	Acetone	20	ug/L	U	1	20	OK
MW-18	Chloroform	1	ug/L	U	1	1	OK
MW-18	Benzene	1	ug/L	U	1	1	OK
MW-18	Chloromethane	1	ug/L	U	1	1	OK
MW-18	Iron	30	ug/L	U	2	30	OK
MW-18	Lead	1	ug/L	U	10	1	OK
MW-18	Magnesium	10	mg/L		1	0.5	OK
MW-18	Manganese	10	ug/L		10	10	OK
MW-18	Mercury	0.5	ug/L	U	1	0.5	OK
MW-18	Molybdenum	10	ug/L	U	10	10	OK
MW-18	Nickel	20	ug/L	U	10	20	OK
MW-18	Potassium	1	mg/L		1	0.5	OK
MW-18	Silver	10	ug/L	U	10	10	OK
MW-18	Sodium	10	mg/L		1	0.5	OK
MW-18	Thallium	1	ug/L		10	0.5	OK
MW-18	Tin	100	ug/L	U	10	100	OK
MW-18	Arsenic	5	ug/L	U	10	5	OK
MW-18	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-18	Cadmium	0.5	ug/L	U	10	0.5	OK
MW-18	Chromium	25	ug/L	U	10	25	OK
MW-18	Cobalt	10	ug/L	U	10	10	OK
MW-18	Copper	10	ug/L	U	20	10	OK
MW-18	Uranium	1	ug/L		10	0.3	OK
MW-18	Vanadium	15	ug/L	U	1	15	OK
MW-18	Zinc	10	ug/L	U	20	10	OK
MW-18	Calcium	10	mg/L		1	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-18	Methylene chloride	1	ug/L	U	1	1	OK
MW-18	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-18	Selenium	5	ug/L	U	10	5	OK
MW-18	2-Butanone	20	ug/L	U	1	20	OK
MW-18	Naphthalene	1	ug/L	U	1	1	OK
MW-18	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-18	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-18	Gross Radium Alpha	0.805	pCi/L	U	1	1	OK
MW-18	Nitrate/Nitrite (as N)	0.1	mg/L	U	1	0.1	OK
MW-18	Total Dissolved Solids	20	MG/L		2	10	OK
MW-19	Toluene	1	ug/L	U	1	1	OK
MW-19	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-19	Xylenes, Total	1	ug/L	U	1	1	OK
MW-19	Sulfate	75	mg/L		100	1	OK
MW-19	Chloride	1	mg/L		10	1	OK
MW-19	Fluoride	0.1	mg/L		1	0.1	OK
MW-19	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-19	Acetone	20	ug/L	U	1	20	OK
MW-19	Chloroform	1	ug/L	U	1	1	OK
MW-19	Benzene	1	ug/L	U	1	1	OK
MW-19	Chloromethane	1	ug/L	U	1	1	OK
MW-19	Iron	30	ug/L	U	2	30	OK
MW-19	Lead	1	ug/L	U	10	1	OK
MW-19	Magnesium	1	mg/L		1	0.5	OK
MW-19	Manganese	10	ug/L	U	10	10	OK
MW-19	Mercury	0.5	ug/L	U	1	0.5	OK
MW-19	Molybdenum	10	ug/L	U	10	10	OK
MW-19	Nickel	20	ug/L	U	10	20	OK
MW-19	Potassium	1	mg/L		1	0.5	OK
MW-19	Silver	10	ug/L	U	10	10	OK
MW-19	Sodium	20	mg/L		20	0.5	OK
MW-19	Thallium	0.5	ug/L	U	2	0.5	OK
MW-19	Tin	100	ug/L	U	10	100	OK
MW-19	Arsenic	5	ug/L	U	10	5	OK
MW-19	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-19	Cadmium	0.5	ug/L	U	10	0.5	OK
MW-19	Chromium	25	ug/L	U	10	25	OK
MW-19	Cobalt	10	ug/L	U	10	10	OK
MW-19	Copper	10	ug/L	U	20	10	OK
MW-19	Uranium	1	ug/L		10	0.3	OK
MW-19	Vanadium	15	ug/L	U	1	15	OK
MW-19	Zinc	10	ug/L	U	20	10	OK
MW-19	Calcium	20	mg/L		20	0.5	OK
MW-19	Methylene chloride	1	ug/L	U	1	1	OK
MW-19	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-19	Selenium	5	ug/L		10	5	OK
MW-19	2-Butanone	20	ug/L	U	1	20	OK
MW-19	Naphthalene	1	ug/L	U	1	1	OK
MW-19	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-19	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-19	Gross Radium Alpha	0.929	pCi/L	U	1	1	OK
MW-19	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-19	Total Dissolved Solids	20	MG/L		2	10	OK
MW-20	Toluene	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-20	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-20	Xylenes, Total	1	ug/L	U	1	1	OK
MW-20	Sulfate	375	mg/L		500	1	OK
MW-20	Chloride	1	mg/L		10	1	OK
MW-20	Fluoride	0.1	mg/L	U	1	0.1	OK
MW-20	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-20	Acetone	20	ug/L	U	1	20	OK
MW-20	Chloroform	1	ug/L	U	1	1	OK
MW-20	Benzene	1	ug/L	U	1	1	OK
MW-20	Chloromethane	1	ug/L	U	1	1	OK
MW-20	Iron	30	ug/L	U	2	30	OK
MW-20	Lead	1	ug/L	U	2	1	OK
MW-20	Magnesium	20	mg/L		20	0.5	OK
MW-20	Manganese	10	ug/L	U	5	10	OK
MW-20	Mercury	0.5	ug/L	U	1	0.5	OK
MW-20	Molybdenum	10	ug/L		2	10	OK
MW-20	Nickel	20	ug/L	U	2	20	OK
MW-20	Potassium	1	mg/L		1	0.5	OK
MW-20	Silver	10	ug/L	U	2	10	OK
MW-20	Sodium	50	mg/L		50	0.5	OK
MW-20	Thallium	0.5	ug/L	U	2	0.5	OK
MW-20	Tin	100	ug/L	U	2	100	OK
MW-20	Arsenic	5	ug/L	U	2	5	OK
MW-20	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-20	Cadmium	0.5	ug/L	U	2	0.5	OK
MW-20	Chromium	25	ug/L	U	2	25	OK
MW-20	Cobalt	10	ug/L	U	2	10	OK
MW-20	Copper	10	ug/L	U	2	10	OK
MW-20	Uranium	0.3	ug/L		2	0.3	OK
MW-20	Vanadium	15	ug/L	U	2	15	OK
MW-20	Zinc	10	ug/L	U	5	10	OK
MW-20	Calcium	20	mg/L		20	0.5	OK
MW-20	Methylene chloride	1	ug/L	U	1	1	OK
MW-20	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-20	Selenium	5	ug/L	U	5	5	OK
MW-20	2-Butanone	20	ug/L	U	1	20	OK
MW-20	Naphthalene	1	ug/L	U	1	1	OK
MW-20	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-20	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-20	Gross Radium Alpha	0.969	pCi/L	U	1	1	OK
MW-20	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-20 Resample	Total Dissolved Solids	20	MG/L		2	10	OK
MW-22	Toluene	1	ug/L	U	1	1	OK
MW-22	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-22	Xylenes, Total	1	ug/L	U	1	1	OK
MW-22	Sulfate	750	mg/L		1000	1	OK
MW-22	Chloride	1	mg/L		10	1	OK
MW-22	Fluoride	1	mg/L		10	0.1	OK
MW-22	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-22	Acetone	20	ug/L	U	1	20	OK
MW-22	Chloroform	1	ug/L	U	1	1	OK
MW-22	Benzene	1	ug/L	U	1	1	OK
MW-22	Chloromethane	1	ug/L	U	1	1	OK
MW-22	Iron	30	ug/L		2	30	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-22	Lead	2	ug/L		20	1	OK
MW-22	Magnesium	50	mg/L		50	0.5	OK
MW-22	Manganese	100	ug/L		1000	10	OK
MW-22	Mercury	0.5	ug/L	U	1	0.5	OK
MW-22	Molybdenum	10	ug/L		50	10	OK
MW-22	Nickel	20	ug/L		5	20	OK
MW-22	Potassium	1	mg/L		1	0.5	OK
MW-22	Silver	10	ug/L	U	2	10	OK
MW-22	Sodium	50	mg/L		50	0.5	OK
MW-22	Thallium	2	ug/L		20	0.5	OK
MW-22	Tin	100	ug/L	U	2	100	OK
MW-22	Arsenic	5	ug/L	U	2	5	OK
MW-22	Beryllium	0.5	ug/L		5	0.5	OK
MW-22	Cadmium	0.5	ug/L		2	0.5	OK
MW-22	Chromium	25	ug/L	U	2	25	OK
MW-22	Cobalt	10	ug/L		5	10	OK
MW-22	Copper	10	ug/L		2	10	OK
MW-22	Uranium	2	ug/L		20	0.3	OK
MW-22	Vanadium	15	ug/L	U	1	15	OK
MW-22	Zinc	12	ug/L		40	10	OK
MW-22	Calcium	50	mg/L		50	0.5	OK
MW-22	Methylene chloride	1	ug/L	U	1	1	OK
MW-22	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-22	Selenium	5	ug/L		2	5	OK
MW-22	2-Butanone	20	ug/L	U	1	20	OK
MW-22	Naphthalene	1	ug/L	U	1	1	OK
MW-22	Bicarbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-22	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-22	Gross Radium Alpha	0.941	pCi/L		1	1	OK
MW-22	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-22	Total Dissolved Solids	50	MG/L		5	10	OK
MW-23	Toluene	1	ug/L	U	1	1	OK
MW-23	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-23	Xylenes, Total	1	ug/L	U	1	1	OK
MW-23	Sulfate	150	mg/L		200	1	OK
MW-23	Chloride	1	mg/L		1	1	OK
MW-23	Fluoride	0.2	mg/L		2	0.1	OK
MW-23	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-23	Acetone	20	ug/L	U	1	20	OK
MW-23	Chloroform	1	ug/L	U	1	1	OK
MW-23	Benzene	1	ug/L	U	1	1	OK
MW-23	Chloromethane	1	ug/L	U	1	1	OK
MW-23	Iron	30	ug/L	U	2	30	OK
MW-23	Lead	1	ug/L	U	2	1	OK
MW-23	Magnesium	50	mg/L		50	0.5	OK
MW-23	Manganese	10	ug/L	U	2	10	OK
MW-23	Mercury	0.5	ug/L	U	1	0.5	OK
MW-23	Molybdenum	10	ug/L	U	50	10	OK
MW-23	Nickel	20	ug/L	U	2	20	OK
MW-23	Potassium	1	mg/L		1	0.5	OK
MW-23	Silver	10	ug/L	U	2	10	OK
MW-23	Sodium	50	mg/L		50	0.5	OK
MW-23	Thallium	0.5	ug/L	U	2	0.5	OK
MW-23	Tin	100	ug/L	U	2	100	OK

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-23	Arsenic	5	ug/L	U	2	5	OK
MW-23	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-23	Cadmium	0.5	ug/L	U	2	0.5	OK
MW-23	Chromium	25	ug/L	U	2	25	OK
MW-23	Cobalt	10	ug/L	U	2	10	OK
MW-23	Copper	10	ug/L	U	2	10	OK
MW-23	Uranium	0.3	ug/L		2	0.3	OK
MW-23	Vanadium	15	ug/L	U	1	15	OK
MW-23	Zinc	10	ug/L	U	2	10	OK
MW-23	Calcium	50	mg/L		50	0.5	OK
MW-23	Methylene chloride	1	ug/L	U	1	1	OK
MW-23	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-23	Selenium	5	ug/L	U	2	5	OK
MW-23	2-Butanone	20	ug/L	U	1	20	OK
MW-23	Naphthalene	1	ug/L	U	1	1	OK
MW-23	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-23	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-23	Gross Radium Alpha	0.979	pCi/L	U	1	1	OK
MW-23	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-23	Total Dissolved Solids	20	MG/L		2	10	OK
MW-24	Toluene	1	ug/L	U	1	1	OK
MW-24	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-24	Xylenes, Total	1	ug/L	U	1	1	OK
MW-24	Sulfate	375	mg/L		500	1	OK
MW-24	Chloride	1	mg/L		10	1	OK
MW-24	Fluoride	0.2	mg/L		2	0.1	OK
MW-24	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-24	Acetone	20	ug/L	U	1	20	OK
MW-24	Chloroform	1	ug/L	U	1	1	OK
MW-24	Benzene	1	ug/L	U	1	1	OK
MW-24	Chloromethane	1	ug/L	U	1	1	OK
MW-24	Iron	30	ug/L		5	30	OK
MW-24	Lead	1	ug/L		5	1	OK
MW-24	Magnesium	20	mg/L		20	0.5	OK
MW-24	Manganese	20	ug/L		200	10	OK
MW-24	Mercury	0.5	ug/L	U	1	0.5	OK
MW-24	Molybdenum	10	ug/L	U	20	10	OK
MW-24	Nickel	20	ug/L		20	20	OK
MW-24	Potassium	1	mg/L		1	0.5	OK
MW-24	Silver	10	ug/L	U	20	10	OK
MW-24	Sodium	20	mg/L		20	0.5	OK
MW-24	Thallium	0.5	ug/L		5	0.5	OK
MW-24	Tin	100	ug/L	U	20	100	OK
MW-24	Arsenic	5	ug/L	U	20	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-24	Chromium	25	ug/L	U	20	25	OK
MW-24	Cobalt	10	ug/L		20	10	OK
MW-24	Copper	10	ug/L		20	10	OK
MW-24	Uranium	0.3	ug/L		2	0.3	OK
MW-24	Vanadium	15	ug/L	U	20	15	OK
MW-24	Zinc	10	ug/L		20	10	OK
MW-24	Calcium	20	mg/L		20	0.5	OK
MW-24	Methylene chloride	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-24	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-24	Selenium	5	ug/L		20	5	OK
MW-24	2-Butanone	20	ug/L	U	1	20	OK
MW-24	Naphthalene	1	ug/L	U	1	1	OK
MW-24	Bicarbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-24	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-24	Gross Radium Alpha	0.96	pCi/L		1	1	OK
MW-24	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-24	Total Dissolved Solids	20	MG/L		2	10	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		5	1	OK
MW-25	Fluoride	0.2	mg/L		2	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	2	30	OK
MW-25	Lead	1	ug/L	U	2	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		10	10	OK
MW-25	Nickel	20	ug/L	U	2	20	OK
MW-25	Potassium	1	mg/L		1	0.5	OK
MW-25	Silver	10	ug/L	U	2	10	OK
MW-25	Sodium	20	mg/L		20	0.5	OK
MW-25	Thallium	0.5	ug/L		2	0.5	OK
MW-25	Tin	100	ug/L	U	2	100	OK
MW-25	Arsenic	5	ug/L	U	2	5	OK
MW-25	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-25	Cadmium	0.5	ug/L		2	0.5	OK
MW-25	Chromium	25	ug/L	U	2	25	OK
MW-25	Cobalt	10	ug/L	U	2	10	OK
MW-25	Copper	10	ug/L	U	2	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	2	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	2	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	0.65	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

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
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	0.2	mg/L		2	0.1	OK
MW-26	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-26	Acetone	20	ug/L	U	1	20	OK
MW-26	Chloroform	20	ug/L		20	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	50	ug/L		10	30	OK
MW-26	Lead	1	ug/L	U	2	1	OK
MW-26	Magnesium	20	mg/L		20	0.5	OK
MW-26	Manganese	10	ug/L		10	10	OK
MW-26	Mercury	0.5	ug/L	U	1	0.5	OK
MW-26	Molybdenum	10	ug/L	U	10	10	OK
MW-26	Nickel	20	ug/L	U	2	20	OK
MW-26	Potassium	1	mg/L		1	0.5	OK
MW-26	Silver	10	ug/L	U	2	10	OK
MW-26	Sodium	20	mg/L		20	0.5	OK
MW-26	Thallium	0.5	ug/L	U	2	0.5	OK
MW-26	Tin	100	ug/L	U	2	100	OK
MW-26	Arsenic	5	ug/L	U	2	5	OK
MW-26	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-26	Cadmium	0.5	ug/L	U	2	0.5	OK
MW-26	Chromium	25	ug/L	U	2	25	OK
MW-26	Cobalt	10	ug/L	U	2	10	OK
MW-26	Copper	10	ug/L	U	2	10	OK
MW-26	Uranium	0.5	ug/L		5	0.3	OK
MW-26	Vanadium	15	ug/L	U	1	15	OK
MW-26	Zinc	10	ug/L	U	2	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		2	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	0.872	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	Toluene	1	ug/L	U	1	1	OK
MW-27	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-27	Xylenes, Total	1	ug/L	U	1	1	OK
MW-27	Sulfate	37.5	mg/L		50	1	OK
MW-27	Chloride	1	mg/L		10	1	OK
MW-27	Fluoride	0.1	mg/L		1	0.1	OK
MW-27	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-27	Acetone	20	ug/L	U	1	20	OK
MW-27	Chloroform	1	ug/L	U	1	1	OK
MW-27	Benzene	1	ug/L	U	1	1	OK
MW-27	Chloromethane	1	ug/L	U	1	1	OK
MW-27	Iron	30	ug/L	U	2	30	OK
MW-27	Lead	1	ug/L	U	2	1	OK

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-27	Magnesium	20	mg/L		20	0.5	OK
MW-27	Manganese	10	ug/L	U	20	10	OK
MW-27	Mercury	0.5	ug/L	U	1	0.5	OK
MW-27	Molybdenum	10	ug/L	U	20	10	OK
MW-27	Nickel	20	ug/L	U	20	20	OK
MW-27	Potassium	2	mg/L		2	0.5	OK
MW-27	Silver	10	ug/L	U	20	10	OK
MW-27	Sodium	20	mg/L		20	0.5	OK
MW-27	Thallium	0.5	ug/L	U	2	0.5	OK
MW-27	Tin	100	ug/L	U	20	100	OK
MW-27	Arsenic	5	ug/L	U	20	5	OK
MW-27	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-27	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-27	Chromium	25	ug/L	U	20	25	OK
MW-27	Cobalt	10	ug/L	U	20	10	OK
MW-27	Copper	10	ug/L	U	20	10	OK
MW-27	Uranium	0.3	ug/L		2	0.3	OK
MW-27	Vanadium	15	ug/L	U	1	15	OK
MW-27	Zinc	10	ug/L	U	20	10	OK
MW-27	Calcium	20	mg/L		20	0.5	OK
MW-27	Methylene chloride	1	ug/L	U	1	1	OK
MW-27	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-27	Selenium	5	ug/L		20	5	OK
MW-27	2-Butanone	20	ug/L	U	1	20	OK
MW-27	Naphthalene	1	ug/L	U	1	1	OK
MW-27	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-27	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-27	Gross Radium Alpha	0.949	pCi/L	U	1	1	OK
MW-27	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-27	Total Dissolved Solids	20	MG/L		2	10	OK
MW-28	Toluene	1	ug/L	U	1	1	OK
MW-28	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-28	Xylenes, Total	1	ug/L	U	1	1	OK
MW-28	Sulfate	150	mg/L		200	1	OK
MW-28	Chloride	2	mg/L		20	1	OK
MW-28	Fluoride	0.2	mg/L		2	0.1	OK
MW-28	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-28	Acetone	20	ug/L	U	1	20	OK
MW-28	Chloroform	1	ug/L	U	1	1	OK
MW-28	Benzene	1	ug/L	U	1	1	OK
MW-28	Chloromethane	1	ug/L	U	1	1	OK
MW-28	Iron	30	ug/L	U	2	30	OK
MW-28	Lead	1	ug/L	U	2	1	OK
MW-28	Magnesium	20	mg/L		20	0.5	OK
MW-28	Manganese	10	ug/L		20	10	OK
MW-28	Mercury	0.5	ug/L	U	1	0.5	OK
MW-28	Molybdenum	10	ug/L	U	20	10	OK
MW-28	Nickel	20	ug/L		20	20	OK
MW-28	Potassium	2	mg/L		2	0.5	OK
MW-28	Silver	10	ug/L	U	20	10	OK
MW-28	Sodium	20	mg/L		20	0.5	OK
MW-28	Thallium	0.5	ug/L		2	0.5	OK
MW-28	Tin	100	ug/L	U	20	100	OK
MW-28	Arsenic	5	ug/L		20	5	OK

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-28	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-28	Cadmium	0.5	ug/L		20	0.5	OK
MW-28	Chromium	25	ug/L	U	20	25	OK
MW-28	Cobalt	10	ug/L		20	10	OK
MW-28	Copper	10	ug/L	U	20	10	OK
MW-28	Uranium	0.3	ug/L		2	0.3	OK
MW-28	Vanadium	15	ug/L	U	1	15	OK
MW-28	Zinc	10	ug/L		20	10	OK
MW-28	Calcium	20	mg/L		20	0.5	OK
MW-28	Methylene chloride	1	ug/L	U	1	1	OK
MW-28	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-28	Selenium	5	ug/L		20	5	OK
MW-28	2-Butanone	20	ug/L	U	1	20	OK
MW-28	Naphthalene	1	ug/L	U	1	1	OK
MW-28	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-28	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-28	Gross Radium Alpha	0.768	pCi/L	U	1	1	OK
MW-28	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-28	Total Dissolved Solids	20	MG/L		2	10	OK
MW-29	Toluene	1	ug/L	U	1	1	OK
MW-29	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-29	Xylenes, Total	1	ug/L	U	1	1	OK
MW-29	Sulfate	150	mg/L		200	1	OK
MW-29	Chloride	1	mg/L		10	1	OK
MW-29	Fluoride	0.2	mg/L		2	0.1	OK
MW-29	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-29	Acetone	20	ug/L	U	1	20	OK
MW-29	Chloroform	1	ug/L	U	1	1	OK
MW-29	Benzene	1	ug/L	U	1	1	OK
MW-29	Chloromethane	1	ug/L	U	1	1	OK
MW-29	Iron	100	ug/L		20	30	OK
MW-29	Lead	1	ug/L	U	2	1	OK
MW-29	Magnesium	20	mg/L		20	0.5	OK
MW-29	Manganese	10	ug/L		100	10	OK
MW-29	Mercury	0.5	ug/L	U	1	0.5	OK
MW-29	Molybdenum	10	ug/L	U	20	10	OK
MW-29	Nickel	20	ug/L	U	20	20	OK
MW-29	Potassium	2	mg/L		2	0.5	OK
MW-29	Silver	10	ug/L	U	20	10	OK
MW-29	Sodium	20	mg/L		20	0.5	OK
MW-29	Thallium	0.5	ug/L	U	2	0.5	OK
MW-29	Tin	100	ug/L	U	20	100	OK
MW-29	Arsenic	5	ug/L	U	20	5	OK
MW-29	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-29	Cadmium	0.5	ug/L	U	20	0.5	OK
MW-29	Chromium	25	ug/L	U	20	25	OK
MW-29	Cobalt	10	ug/L	U	20	10	OK
MW-29	Copper	10	ug/L	U	20	10	OK
MW-29	Uranium	0.3	ug/L		2	0.3	OK
MW-29	Vanadium	15	ug/L	U	1	15	OK
MW-29	Zinc	10	ug/L	U	20	10	OK
MW-29	Calcium	20	mg/L		20	0.5	OK
MW-29	Methylene chloride	1	ug/L	U	1	1	OK
MW-29	Ammonia (as N)	0.05	mg/L		1	0.05	OK

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-29	Selenium	5	ug/L	U	20	5	OK
MW-29	2-Butanone	20	ug/L	U	1	20	OK
MW-29	Naphthalene	1	ug/L	U	1	1	OK
MW-29	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-29	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-29	Gross Radium Alpha	0.801	pCi/L	U	1	1	OK
MW-29	Nitrate/Nitrite (as N)	0.1	mg/L	U	1	0.1	OK
MW-29	Total Dissolved Solids	20	MG/L		2	10	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	37.5	mg/L		50	1	OK
MW-30	Chloride	5	mg/L		50	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	2	30	OK
MW-30	Lead	1	ug/L	U	2	1	OK
MW-30	Magnesium	20	mg/L		20	0.5	OK
MW-30	Manganese	10	ug/L	U	2	10	OK
MW-30	Mercury	0.5	ug/L	U	1	0.5	OK
MW-30	Molybdenum	10	ug/L	U	10	10	OK
MW-30	Nickel	20	ug/L	U	2	20	OK
MW-30	Potassium	1	mg/L		1	0.5	OK
MW-30	Silver	10	ug/L	U	2	10	OK
MW-30	Sodium	20	mg/L		20	0.5	OK
MW-30	Thallium	0.5	ug/L	U	2	0.5	OK
MW-30	Tin	100	ug/L	U	2	100	OK
MW-30	Arsenic	5	ug/L	U	2	5	OK
MW-30	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-30	Cadmium	0.5	ug/L	U	2	0.5	OK
MW-30	Chromium	25	ug/L	U	2	25	OK
MW-30	Cobalt	10	ug/L	U	2	10	OK
MW-30	Copper	10	ug/L	U	2	10	OK
MW-30	Uranium	0.3	ug/L		2	0.3	OK
MW-30	Vanadium	15	ug/L	U	1	15	OK
MW-30	Zinc	10	ug/L	U	2	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		2	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	0.811	pCi/L	U	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

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
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	2	30	OK
MW-31	Lead	1	ug/L	U	2	1	OK
MW-31	Magnesium	20	mg/L		20	0.5	OK
MW-31	Manganese	10	ug/L	U	2	10	OK
MW-31	Mercury	0.5	ug/L	U	1	0.5	OK
MW-31	Molybdenum	10	ug/L	U	10	10	OK
MW-31	Nickel	20	ug/L	U	2	20	OK
MW-31	Potassium	1	mg/L		1	0.5	OK
MW-31	Silver	10	ug/L	U	2	10	OK
MW-31	Sodium	20	mg/L		20	0.5	OK
MW-31	Thallium	0.5	ug/L	U	2	0.5	OK
MW-31	Tin	100	ug/L	U	2	100	OK
MW-31	Arsenic	5	ug/L	U	2	5	OK
MW-31	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-31	Cadmium	0.5	ug/L	U	2	0.5	OK
MW-31	Chromium	25	ug/L	U	2	25	OK
MW-31	Cobalt	10	ug/L	U	2	10	OK
MW-31	Copper	10	ug/L	U	2	10	OK
MW-31	Uranium	0.3	ug/L		2	0.3	OK
MW-31	Vanadium	15	ug/L	U	1	15	OK
MW-31	Zinc	10	ug/L	U	2	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		2	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	0.568	pCi/L		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	Toluene	1	ug/L	U	1	1	OK
MW-32	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-32	Xylenes, Total	1	ug/L	U	1	1	OK
MW-32	Sulfate	150	mg/L		200	1	OK
MW-32	Chloride	1	mg/L		10	1	OK
MW-32	Fluoride	0.1	mg/L	U	1	0.1	OK
MW-32	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-32	Acetone	20	ug/L	U	1	20	OK
MW-32	Chloroform	1	ug/L	U	1	1	OK
MW-32	Benzene	1	ug/L	U	1	1	OK
MW-32	Chloromethane	1	ug/L	U	1	1	OK
MW-32	Iron	500	ug/L		100	30	OK
MW-32	Lead	1	ug/L	U	2	1	OK
MW-32	Magnesium	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-32	Manganese	10	ug/L		100	10	OK
MW-32	Mercury	0.5	ug/L	U	1	0.5	OK
MW-32	Molybdenum	10	ug/L	U	10	10	OK
MW-32	Nickel	20	ug/L		2	20	OK
MW-32	Potassium	1	mg/L		1	0.5	OK
MW-32	Silver	10	ug/L	U	2	10	OK
MW-32	Sodium	20	mg/L		20	0.5	OK
MW-32	Thallium	0.5	ug/L	U	2	0.5	OK
MW-32	Tin	100	ug/L	U	2	100	OK
MW-32	Arsenic	5	ug/L	U	2	5	OK
MW-32	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-32	Cadmium	0.5	ug/L		2	0.5	OK
MW-32	Chromium	25	ug/L	U	2	25	OK
MW-32	Cobalt	10	ug/L		2	10	OK
MW-32	Copper	10	ug/L	U	2	10	OK
MW-32	Uranium	0.3	ug/L		2	0.3	OK
MW-32	Vanadium	15	ug/L	U	1	15	OK
MW-32	Zinc	10	ug/L		2	10	OK
MW-32	Calcium	20	mg/L		20	0.5	OK
MW-32	Methylene chloride	1	ug/L	U	1	1	OK
MW-32	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-32	Selenium	5	ug/L	U	2	5	OK
MW-32	2-Butanone	20	ug/L	U	1	20	OK
MW-32	Naphthalene	1	ug/L	U	1	1	OK
MW-32	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-32	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-32	Gross Radium Alpha	0.731	pCi/L		1	1	OK
MW-32	Nitrate/Nitrite (as N)	0.1	mg/L	U	1	0.1	OK
MW-32	Total Dissolved Solids	20	MG/L		2	10	OK
MW-35	Toluene	1	ug/L	U	1	1	OK
MW-35	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-35	Xylenes, Total	1	ug/L	U	1	1	OK
MW-35	Sulfate	150	mg/L		200	1	OK
MW-35	Chloride	1	mg/L		10	1	OK
MW-35	Fluoride	0.4	mg/L		4	0.1	OK
MW-35	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-35	Acetone	20	ug/L	U	1	20	OK
MW-35	Chloroform	1	ug/L	U	1	1	OK
MW-35	Benzene	1	ug/L	U	1	1	OK
MW-35	Chloromethane	1	ug/L	U	1	1	OK
MW-35	Iron	30	ug/L		2	30	OK
MW-35	Lead	1	ug/L	U	2	1	OK
MW-35	Magnesium	20	mg/L		20	0.5	OK
MW-35	Manganese	10	ug/L		5	10	OK
MW-35	Mercury	0.5	ug/L	U	1	0.5	OK
MW-35	Molybdenum	10	ug/L	U	10	10	OK
MW-35	Nickel	20	ug/L	U	2	20	OK
MW-35	Potassium	2	mg/L		2	0.5	OK
MW-35	Silver	10	ug/L	U	2	10	OK
MW-35	Sodium	20	mg/L		20	0.5	OK
MW-35	Thallium	0.5	ug/L	U	2	0.5	OK
MW-35	Tin	100	ug/L	U	2	100	OK
MW-35	Arsenic	5	ug/L	U	2	5	OK
MW-35	Beryllium	0.5	ug/L	U	2	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-35	Cadmium	0.5	ug/L	U	2	0.5	OK
MW-35	Chromium	25	ug/L	U	2	25	OK
MW-35	Cobalt	10	ug/L	U	2	10	OK
MW-35	Copper	10	ug/L	U	2	10	OK
MW-35	Uranium	0.5	ug/L		5	0.3	OK
MW-35	Vanadium	15	ug/L	U	2	15	OK
MW-35	Zinc	10	ug/L	U	2	10	OK
MW-35	Calcium	20	mg/L		20	0.5	OK
MW-35	Methylene chloride	1	ug/L	U	1	1	OK
MW-35	Ammonia (as N)	0.05	mg/L	U	1	0.05	OK
MW-35	Selenium	5	ug/L		5	5	OK
MW-35	2-Butanone	20	ug/L	U	1	20	OK
MW-35	Naphthalene	1	ug/L	U	1	1	OK
MW-35	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-35	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-35	Gross Radium Alpha	0.824	pCi/L		1	1	OK
MW-35	Nitrate/Nitrite (as N)	0.1	mg/L	U	1	0.1	OK
MW-35	Total Dissolved Solids	20	MG/L		2	10	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	150	mg/L		200	1	OK
MW-36	Chloride	1	mg/L		10	1	OK
MW-36	Fluoride	0.2	mg/L		2	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	2	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	10	10	OK
MW-36	Nickel	20	ug/L	U	2	20	OK
MW-36	Potassium	2	mg/L		2	0.5	OK
MW-36	Silver	10	ug/L	U	2	10	OK
MW-36	Sodium	20	mg/L		20	0.5	OK
MW-36	Thallium	0.5	ug/L		2	0.5	OK
MW-36	Tin	100	ug/L	U	2	100	OK
MW-36	Arsenic	5	ug/L	U	2	5	OK
MW-36	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-36	Cadmium	0.5	ug/L	U	2	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	0.5	ug/L		5	0.3	OK
MW-36	Vanadium	15	ug/L	U	2	15	OK
MW-36	Zinc	10	ug/L	U	2	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		5	5	OK

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
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	0.881	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-37	Toluene	1	ug/L	U	1	1	OK
MW-37	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-37	Xylenes, Total	1	ug/L	U	1	1	OK
MW-37	Sulfate	375	mg/L		500	1	OK
MW-37	Chloride	1	mg/L		10	1	OK
MW-37	Fluoride	0.1	mg/L		1	0.1	OK
MW-37	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-37	Acetone	20	ug/L	U	1	20	OK
MW-37	Chloroform	1	ug/L	U	1	1	OK
MW-37	Benzene	1	ug/L	U	1	1	OK
MW-37	Chloromethane	1	ug/L	U	1	1	OK
MW-37	Iron	30	ug/L	U	2	30	OK
MW-37	Lead	1	ug/L	U	2	1	OK
MW-37	Magnesium	20	mg/L		20	0.5	OK
MW-37	Manganese	10	ug/L		5	10	OK
MW-37	Mercury	0.5	ug/L	U	1	0.5	OK
MW-37	Molybdenum	10	ug/L	U	2	10	OK
MW-37	Nickel	20	ug/L	U	2	20	OK
MW-37	Potassium	1	mg/L		1	0.5	OK
MW-37	Silver	10	ug/L	U	2	10	OK
MW-37	Sodium	50	mg/L		50	0.5	OK
MW-37	Thallium	0.5	ug/L		2	0.5	OK
MW-37	Tin	100	ug/L	U	2	100	OK
MW-37	Arsenic	5	ug/L	U	2	5	OK
MW-37	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-37	Cadmium	0.5	ug/L	U	2	0.5	OK
MW-37	Chromium	25	ug/L	U	2	25	OK
MW-37	Cobalt	10	ug/L	U	2	10	OK
MW-37	Copper	10	ug/L	U	2	10	OK
MW-37	Uranium	0.3	ug/L		2	0.3	OK
MW-37	Vanadium	15	ug/L	U	2	15	OK
MW-37	Zinc	10	ug/L		5	10	OK
MW-37	Calcium	20	mg/L		20	0.5	OK
MW-37	Methylene chloride	1	ug/L	U	1	1	OK
MW-37	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-37	Selenium	5	ug/L	U	5	5	OK
MW-37	2-Butanone	20	ug/L	U	1	20	OK
MW-37	Naphthalene	1	ug/L	U	1	1	OK
MW-37	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-37	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-37	Gross Radium Alpha	0.997	pCi/L	U	1	1	OK
MW-37	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-37 Resample	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	375	mg/L		500	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	Chloride	1	mg/L		10	1	OK
MW-38	Fluoride	0.2	mg/L		2	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	5	1	OK
MW-38	Magnesium	20	mg/L		20	0.5	OK
MW-38	Manganese	10	ug/L	U	20	10	OK
MW-38	Mercury	0.5	ug/L	U	1	0.5	OK
MW-38	Molybdenum	10	ug/L		20	10	OK
MW-38	Nickel	20	ug/L	U	20	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	20	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	20	25	OK
MW-38	Cobalt	10	ug/L	U	20	10	OK
MW-38	Copper	10	ug/L	U	20	10	OK
MW-38	Uranium	0.3	ug/L		2	0.3	OK
MW-38	Vanadium	15	ug/L	U	20	15	OK
MW-38	Zinc	10	ug/L	U	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		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	0.959	pCi/L	U	1	1	OK
MW-38	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
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	150	mg/L		200	1	OK
MW-39	Chloride	1	mg/L		10	1	OK
MW-39	Fluoride	0.2	mg/L		2	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	1000	ug/L		200	30	OK
MW-39	Lead	1	ug/L	U	2	1	OK
MW-39	Magnesium	50	mg/L		50	0.5	OK
MW-39	Manganese	10	ug/L		40	10	OK

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
MW-39	Mercury	0.5	ug/L	U	1	0.5	OK
MW-39	Molybdenum	10	ug/L	U	50	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	2	10	OK
MW-39	Sodium	50	mg/L		50	0.5	OK
MW-39	Thallium	0.5	ug/L		2	0.5	OK
MW-39	Tin	100	ug/L	U	2	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		2	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		5	10	OK
MW-39	Calcium	50	mg/L		50	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	2	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	0.929	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	150	mg/L		200	1	OK
MW-40	Chloride	1	mg/L		10	1	OK
MW-40	Fluoride	0.2	mg/L		2	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
MW-40	Chloromethane	1	ug/L	U	1	1	OK
MW-40	Iron	30	ug/L	U	2	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		20	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	20	20	OK
MW-40	Potassium	2	mg/L		2	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	U	2	0.5	OK
MW-40	Tin	100	ug/L	U	20	100	OK
MW-40	Arsenic	5	ug/L	U	20	5	OK
MW-40	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-40	Cadmium	0.5	ug/L	U	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-40	Chromium	25	ug/L	U	20	25	OK
MW-40	Cobalt	10	ug/L	U	20	10	OK
MW-40	Copper	10	ug/L	U	20	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	0.783	pCi/L	U	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	150	mg/L		200	1	OK
MW-65	Chloride	2	mg/L		20	1	OK
MW-65	Fluoride	0.1	mg/L	U	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	2	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		50	10	OK
MW-65	Mercury	0.5	ug/L	U	1	0.5	OK
MW-65	Molybdenum	10	ug/L	U	10	10	OK
MW-65	Nickel	20	ug/L	U	2	20	OK
MW-65	Potassium	2	mg/L		2	0.5	OK
MW-65	Silver	10	ug/L	U	2	10	OK
MW-65	Sodium	20	mg/L		20	0.5	OK
MW-65	Thallium	0.5	ug/L	U	2	0.5	OK
MW-65	Tin	100	ug/L	U	2	100	OK
MW-65	Arsenic	5	ug/L	U	2	5	OK
MW-65	Beryllium	0.5	ug/L	U	2	0.5	OK
MW-65	Cadmium	0.5	ug/L		2	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	0.5	ug/L		5	0.3	OK
MW-65	Vanadium	15	ug/L	U	2	15	OK
MW-65	Zinc	10	ug/L		2	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	U	2	5	OK
MW-65	2-Butanone	20	ug/L	U	1	20	OK

## G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
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	0.594	pCi/L	U	1	1	OK
MW-65	Nitrate/Nitrite (as N)	0.1	mg/L	U	1	0.1	OK
MW-65	Total Dissolved Solids	20	MG/L		2	10	OK
MW-70	Toluene	1	ug/L	U	1	1	OK
MW-70	Tetrahydrofuran	1	ug/L	U	1	1	OK
MW-70	Xylenes, Total	1	ug/L	U	1	1	OK
MW-70	Sulfate	375	mg/L		500	1	OK
MW-70	Chloride	1	mg/L		10	1	OK
MW-70	Fluoride	0.1	mg/L	U	1	0.1	OK
MW-70	Carbon tetrachloride	1	ug/L	U	1	1	OK
MW-70	Acetone	20	ug/L	U	1	20	OK
MW-70	Chloroform	1	ug/L	U	1	1	OK
MW-70	Benzene	1	ug/L	U	1	1	OK
MW-70	Chloromethane	1	ug/L	U	1	1	OK
MW-70	Iron	30	ug/L	U	2	30	OK
MW-70	Lead	1	ug/L	U	2	1	OK
MW-70	Magnesium	50	mg/L		50	0.5	OK
MW-70	Manganese	10	ug/L	U	2	10	OK
MW-70	Mercury	0.5	ug/L	U	1	0.5	OK
MW-70	Molybdenum	10	ug/L	U	50	10	OK
MW-70	Nickel	20	ug/L	U	2	20	OK
MW-70	Potassium	1	mg/L		1	0.5	OK
MW-70	Silver	10	ug/L	U	2	10	OK
MW-70	Sodium	50	mg/L		50	0.5	OK
MW-70	Thallium	0.5	ug/L	U	2	0.5	OK
MW-70	Tin	100	ug/L	U	2	100	OK
MW-70	Arsenic	5	ug/L	U	2	5	OK
MW-70	Beryllium	0.5	ug/L	U	5	0.5	OK
MW-70	Cadmium	0.5	ug/L	U	2	0.5	OK
MW-70	Chromium	25	ug/L	U	2	25	OK
MW-70	Cobalt	10	ug/L	U	2	10	OK
MW-70	Copper	10	ug/L	U	2	10	OK
MW-70	Uranium	0.3	ug/L		2	0.3	OK
MW-70	Vanadium	15	ug/L	U	1	15	OK
MW-70	Zinc	10	ug/L	U	2	10	OK
MW-70	Calcium	50	mg/L		50	0.5	OK
MW-70	Methylene chloride	1	ug/L	U	1	1	OK
MW-70	Ammonia (as N)	0.05	mg/L		1	0.05	OK
MW-70	Selenium	5	ug/L		2	5	OK
MW-70	2-Butanone	20	ug/L	U	1	20	OK
MW-70	Naphthalene	1	ug/L	U	1	1	OK
MW-70	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
MW-70	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
MW-70	Gross Radium Alpha	0.917	pCi/L	U	1	1	OK
MW-70	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-70	Total Dissolved Solids	50	MG/L		5	10	OK
MW-70 Resample	Total Dissolved Solids	50	MG/L		5	10	OK
TW4-24	Toluene	1	ug/L	U	1	1	OK
TW4-24	Tetrahydrofuran	1	ug/L		1	1	OK
TW4-24	Xylenes, Total	1	ug/L	U	1	1	OK
TW4-24	Sulfate	150	mg/L		200	1	OK

G-5A Quarterly Sample Reporting Limit Check

Location	Analyte	Lab Reporting Limit	Units	Qualifier	Dilution Factor	Required Reporting Limit	RL Check
TW4-24	Chloride	20	mg/L		200	1	OK
TW4-24	Fluoride	0.1	mg/L	U	1	0.1	OK
TW4-24	Carbon tetrachloride	1	ug/L	U	1	1	OK
TW4-24	Acetone	20	ug/L	U	1	20	OK
TW4-24	Chloroform	1	ug/L		1	1	OK
TW4-24	Benzene	1	ug/L	U	1	1	OK
TW4-24	Chloromethane	1	ug/L	U	1	1	OK
TW4-24	Iron	30	ug/L	U	2	30	OK
TW4-24	Lead	1	ug/L	U	2	1	OK
TW4-24	Magnesium	20	mg/L		20	0.5	OK
TW4-24	Manganese	10	ug/L		20	10	OK
TW4-24	Mercury	0.5	ug/L	U	1	0.5	OK
TW4-24	Molybdenum	10	ug/L		50	10	OK
TW4-24	Nickel	20	ug/L	U	2	20	OK
TW4-24	Potassium	2	mg/L		2	0.5	OK
TW4-24	Silver	10	ug/L	U	2	10	OK
TW4-24	Sodium	20	mg/L		20	0.5	OK
TW4-24	Thallium	0.5	ug/L		2	0.5	OK
TW4-24	Tin	100	ug/L	U	2	100	OK
TW4-24	Arsenic	5	ug/L	U	5	5	OK
TW4-24	Beryllium	0.5	ug/L	U	2	0.5	OK
TW4-24	Cadmium	0.5	ug/L		2	0.5	OK
TW4-24	Chromium	25	ug/L	U	2	25	OK
TW4-24	Cobalt	10	ug/L		2	10	OK
TW4-24	Copper	10	ug/L	U	2	10	OK
TW4-24	Uranium	2	ug/L		20	0.3	OK
TW4-24	Vanadium	15	ug/L	U	2	15	OK
TW4-24	Zinc	10	ug/L	U	2	10	OK
TW4-24	Calcium	20	mg/L		20	0.5	OK
TW4-24	Methylene chloride	1	ug/L	U	1	1	OK
TW4-24	Ammonia (as N)	0.05	mg/L		1	0.05	OK
TW4-24	Selenium	5	ug/L		20	5	OK
TW4-24	2-Butanone	20	ug/L	U	1	20	OK
TW4-24	Naphthalene	1	ug/L	U	1	1	OK
TW4-24	Bicarbonate (as CaCO3)	1	mg/L		1	1	OK
TW4-24	Carbonate (as CaCO3)	1	mg/L	U	1	1	OK
TW4-24	Gross Radium Alpha	0.608	pCi/L	U	1	1	OK
TW4-24	Nitrate/Nitrite (as N)	0.5	mg/L		50	0.1	OK
TW4-24	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	Sulfate	75	mg/L		100	1	OK
MW-11	Chloride	1	mg/L		10	1	OK
MW-11	Manganese	10	ug/L		20	10	OK
MW-11	Sulfate	75	mg/L		100	1	OK
MW-11	Chloride	1	mg/L		10	1	OK
MW-11	Manganese	10	ug/L		20	10	OK
MW-14	Sulfate	150	mg/L		200	1	OK
MW-14	Fluoride	0.1	mg/L		1	0.1	OK
MW-14	Sulfate	150	mg/L		200	1	OK
MW-14	Fluoride	0.1	mg/L		1	0.1	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	20	ug/L		20	1	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	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-26	Chloride	2	mg/L		20	1	OK
MW-26	Chloroform	20	ug/L		20	1	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	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	Selenium	5	ug/L		20	5	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	Selenium	5	ug/L		20	5	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	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	Nitrate/Nitrite (as N)	0.1	mg/L		10	0.1	OK
MW-31	Total Dissolved Solids	20	MG/L		2	10	OK
MW-36	Sulfate	150	mg/L		200	1	OK
MW-36	Sulfate	375	mg/L		500	1	OK
MW-65	Chloride	2	mg/L		20	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	Sulfate	150	mg/L		200	1	OK
MW-65	Chloride	5	mg/L		50	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-6A: Trip Blank Evaluation

All trip blanks for the Quarter were non detect.

<b>Blank</b>	<b>Sample Date</b>	<b>Laboratory</b>
AWAL 1910332	10/08/19	American West Analytical Laboratories
AWAL 1910514	10/14/19	American West Analytical Laboratories
AWAL 1910680	10/22/19	American West Analytical Laboratories
AWAL 1910785	10/28/19	American West Analytical Laboratories
AWAL 1911206	11/06/19	American West Analytical Laboratories
AWAL 1912025	11/22/19	American West Analytical Laboratories

G-6B: Trip Blank Evaluation

All trip blanks for the Accelerated samples were non detect.

<b>Blank</b>	<b>Sample Date</b>	<b>Laboratory</b>
AWAL 1911345	11/13/2019	American West Analytical Laboratories
AWAL 1912109	12/4/2019	American West Analytical Laboratories

G-7A: QA/QC Evaluation for Routine Sample Duplicates

Constituent	MW-14 10/9/19	MW-65 10/9/19	%RPD
Bicarbonate as HCO <sub>3</sub> (mg/L)	436	402	8.11
Cadmium	0.00131	0.00127	3.10
Calcium (mg/L)	546	488	11.22
Chloride (mg/L)	18.7	18.6	0.54
Magnesium (mg/L)	168	151	10.66
Manganese (mg/L)	1.92	1.94	1.04
Potassium (mg/L)	11.4	12.3	7.59
Sodium (mg/L)	388	348	10.87
Sulfate (mg/L)	2180	2340	7.08
TDS (mg/L)	3340	3440	2.95
Uranium (mg/L)	0.0486	0.0470	3.35

**Radiologic Duplicate Tests**

Gross Alpha minus Rn & U*	1.0U	1.0U	NC
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\* Duplicate checks reported for gross alpha minus RN and U are not %RPD. Calculated values are based on the formula in the approved QAP.

Constituent	MW-15 10/28/19	MW-70 10/28/19	%RPD
Ammonia (as N) (mg/L)	<0.0500	0.119	NC
Bicarbonate as CaCO <sub>3</sub>	364	372	2.17
Calcium (mg/L)	447	454	1.55
Chloride (mg/L)	40.1	40.9	1.98
Fluoride (mg/L)	0.485	<0.100	NC
Magnesium (mg/L)	167	172	2.95
Nitrate + Nitrite (as N) (mg/L)	0.198	0.192	3.08
Potassium (mg/L)	11.8	9.8	18.72
Selenium (mg/L)	0.122	0.125	2.43
Sodium (mg/L)	518	510	1.56
Sulfate (mg/L)	2390	2490	4.10
TDS (mg/L)	3340	3370	0.89
Uranium (mg/L)	0.0482	0.0479	0.62

**Radiologic Duplicate Tests**

Gross Alpha minus Rn & U MDC	1.0U	1.0U	NC
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\* 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.  
RPD exceeds the QAP limit of 20%.

G-7B: QA/QC Evaluation for Accelerated Sample Duplicates

Constituent	MW-30 11/13/2019	MW-65 11/13/2019	%RPD*
Nitrate + Nitrite (as N) (mg/L)	17.2	17.8	3.43
Chloride (mg/L)	180	179	0.56
Selenium (mg/L)	0.0478	0.0509	6.28
Uranium (mg/L)	0.00929	0.00914	1.63
Constituent	MW-31 12/3/19	MW-65 12/3/19	%RPD*
Nitrate/Nitrite (as N) (mg/L)	18.3	18.8	2.70
Chloride (mg/L)	343	358	4.28
Sulfate (mg/L)	1020	1030	0.98
TDS (mg/L)	2030	2150	5.74

\* 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.

RPD exceeds the QAP limit of 20%.

G-8A: Radiologics Counting Error

Well	Sample Date	Gross Alpha minus Rn & U	Gross Alpha minus Rn and U Precision (+/-)	Counting Error ≤ 20%	GWCL	Within GWCL?
MW-01	10/22/2019	1.0 U	0.252	NC	-	
MW-02	10/23/2019	1.0 U	0.314	NC	3.2	NC
MW-03A	11/6/2019	1.0 U	0.270	NC	7.5	NC
MW-05	10/23/2019	1.0 U	0.240	NC	3.75	NC
MW-11	10/15/2019	1.0 U	0.298	NC	3.75	NC
MW-12	10/23/2019	1.0 U	0.234	NC	7.5	NC
MW-14	10/9/2019	1.0 U	0.217	NC	7.5	NC
MW-15	10/28/2019	1.0 U	0.314	NC	7.5	NC
MW-17	10/23/2019	1.0 U	0.263	NC	2.8	NC
MW-18	10/15/2019	1.0 U	0.259	NC	-	
MW-19	10/14/2019	1.0 U	0.259	NC	-	
MW-20	11/22/2019	1.0 U	0.276	NC	-	
MW-22	10/29/2019	1.17	0.941	N	-	
MW-23	10/29/2019	1.0 U	0.334	NC	2.86	NC
MW-24	11/6/2019	2.86	0.513	Y	7.5	N/A
MW-25	10/9/2019	1.0 U	0.271	NC	2.86	NC
MW-26	10/9/2019	3.60	0.557	Y	4.69	N/A
MW-27	10/22/2019	1.0 U	0.295	NC	4.69	NC
MW-28	10/22/2019	1.0 U	0.266	NC	2.42	NC
MW-29	10/22/2019	1.0 U	0.300	NC	2.42	NC
MW-30	10/8/2019	1.0 U	0.277	NC	3.75	NC
MW-31	10/9/2019	1.20	0.276	N	7.5	Y
MW-32	10/8/2019	3.03	0.433	Y	3.33	N/A
MW-35	10/8/2019	5.93	0.661	Y	7.5	N/A
MW-36	10/8/2019	1.33	0.383	N	7.5	Y
MW-37	11/22/2019	1.0 U	0.252	NC	4.2	NC
MW-38	11/6/2019	1.0 U	0.309	NC	-	
MW-39	10/29/2019	2.59	0.493	Y	-	
MW-40	10/23/2019	1.0 U	0.287	NC	-	
TW4-24	10/9/2019	1.0 U	0.186	NC	-	
MW-65	10/9/2019	1.0 U	0.217	NC	7.5	NC
MW-70	10/28/2019	1.0 U	0.245	NC	7.5	NC

N/A = the counting error is less than 20% of the activity as required by the GWDP and/or the value is above the GWCL and this check column is not applicable.

NC = Not calculated. The sample results are nondetect and the check is not applicable.

**G-8B: Radiologies Counting Error for Accelerated Samples**

There are no accelerated samples collected for Gross Alpha.

G-9A: Laboratory Matrix QC

**Matrix Spike % Recovery Comparison**

Lab Report	Well	Analyte	MS %REC	MSD %REC	REC Range	RPD	RPD Range
1910332	MW-14	Ammonia (as N)	135	138	90-110	2.25	10
1910680	MW-11	Sodium	62.7	58.4	70-130	0.744	20
1910514	MW-11	Sodium	62.7	58.4	70-130	0.744	20
1910514	MW-18	Ammonia (as N)	132	132	90-110	0.076	10
1910514	MW-18	Acetone	76.3	66.8	70-350	13.3	35
1910680	MW-01	Ammonia (as N)	124	126	90-110	2.24	10
1910785	MW-22	Magnesium*	NC	NC	70-130	NC	20
1910785	MW-22	Calcium*	NC	NC	70-130	NC	20
1910785	MW-22	Sodium*	NC	NC	70-130	NC	20
1910785	MW-22	Potassium	142	166	70-130	6.19	20
1910785	MW-22	Maganese*	NC	NC	75-125	NC	20
1910785	MW-22	Zinc	118	126	75-125	3.25	20
1910785	MW-23	Ammonia (as N)	121	122	90-110	0.575	10
1910785	MW-15	Ammonia (as N)	144	140	90-110	3.17	10
1910785	N/A	Ammonia (as N)	147	143	90-110	2.11	10
1911206	MW-24	Magnesium*	NC	NC	70-130	NC	20
1911206	MW-24	Calcium*	NC	NC	70-130	NC	20
1911206	MW-24	Sodium*	NC	NC	70-130	NC	20
1911206	MW-24	Potassium	139	144	70-130	1.73	20
1911206	MW-24	Silver	72.4	66.6	75-125	8.38	20
1911206	MW-24	Maganese*	NC	NC	75-125	NC	20
1911206	MW-03A	Mercury	114	121	85-115	6.17	20
1911206	MW-03A	Ammonia (as N)	137	138	90-110	1.31	10
1912025	MW-37	Calcium*	NC	NC	70-130	NC	20
1912025	MW-37	Magnesium*	NC	NC	70-130	NC	20
1912025	MW-37	Potassium	239	227	70-130	3.19	20
1912025	MW-37	Sodium*	NC	NC	70-130	NC	20
1912025	MW-37	Silver	70.0	69.4	75-125	0.887	20
1912025	MW-37	Ammonia (as N)	137	137	90-110	0.650	10
1912025	N/A	Ammonia (as N)	140	140	90-110	0.352	10
493013	MW-36	Gross Radium Alpha	77.3	79.4	75-125	69	20
495672	MW-38	Gross Radium Alpha	73.6	79.1	75-125	7.25	20

N/A = QC was not performed on an EFRI sample.

\* Recovery was not calculated as the analyte level in the sample was greater than 4 times the spike amount

**LCS % Recovery Comparison**

All LCS recoveries were within acceptance limits for the quarter.

**Surrogate % Recovery**

All Surrogate recoveries were within acceptance limits for the quarter.

**Laboratory Duplicate % Recovery Comparison**

Lab Report	Well	Analyte	Sample Result (mg/L)	Lab Duplicate Result (mg/L)	RPD %	RPD Range %
1910680	MW-01	TDS	1290	1390	7.16	5
1910514	MW-18	TDS	3290	3060	7.18	5
1912110	MW-15	TDS	3780	3340	12.3	5

\*\* High RPD due to low analyte concentrations. In this range, high RPDs are expected.

N/A = QC was not performed on an EFRI sample.

**Method Blank Detections**

All Method Blanks were within laboratory established acceptance limits.

G-9B: Accelerated Laboratory Matrix QC

**Matrix Spike % Recovery Comparison**

Lab Report	Well	Analyte	MS %REC	MSD %REC	REC Range	RPD	RPD Range
1911345	MW-15	Ammonia (as N)	144	140	90-110	3.17	10
1911345	MW-26	Ammonia (as N)	147	143	90-110	2.11	10
1912109	MW-37	Ammonia (as N)	137	137	90-110	0.650	10
1912109	MW-26	Ammonia (as N)	140	140	90-110	0.352	10
1912109	MW-26	Chloroform	135	124	85-124	2.70	35

N/A = QC was not performed on an EFRI sample.

\* Recovery was not calculated as the analyte level in the sample was greater than 4 times the spike amount

**LCS % Recovery Comparison**

All LCS recoveries were within labroatory established acceptance limits.

**Method Blank Results**

The method blanks were non-detect.

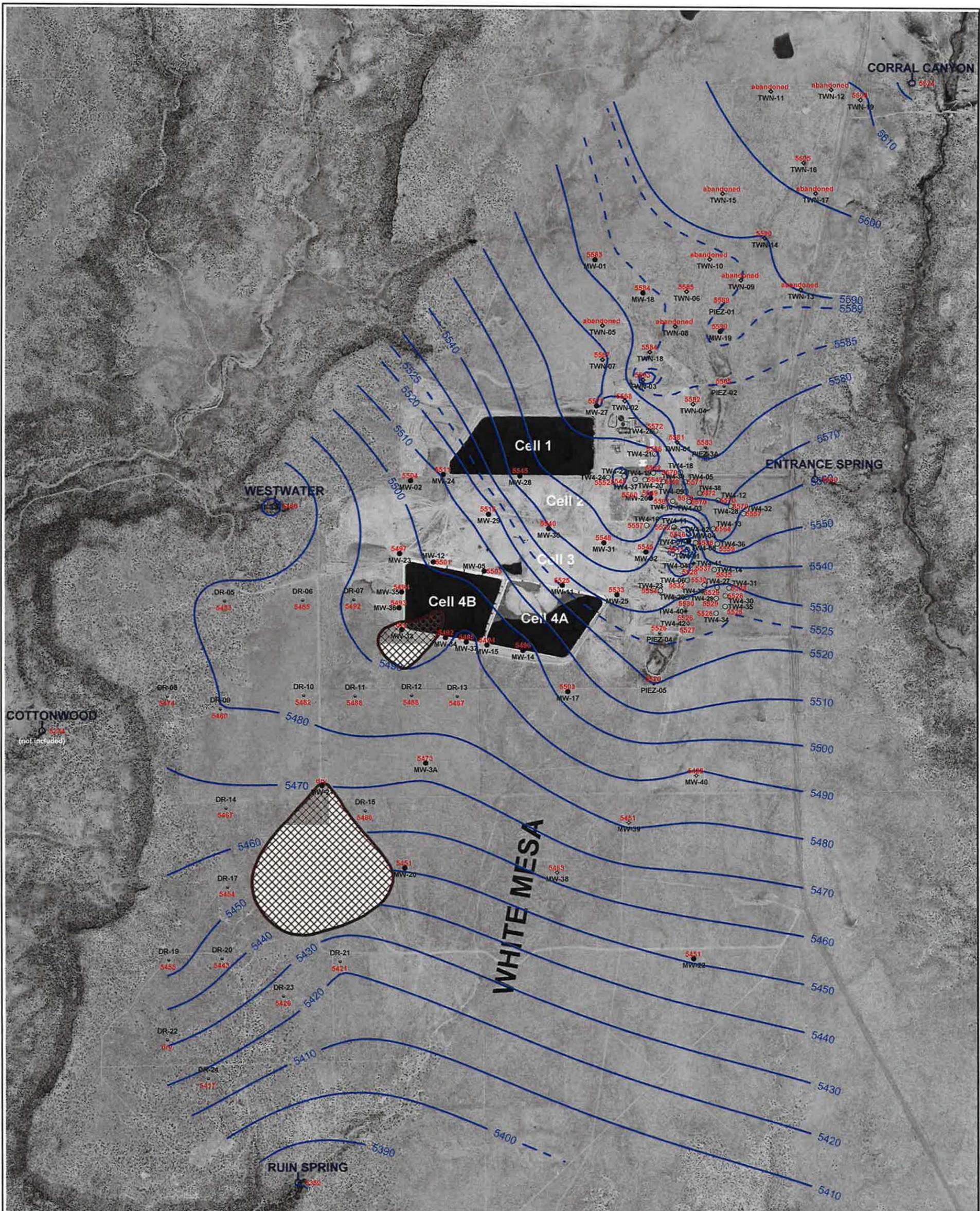
**Laboratory Duplicate % Recovery Comparison**

Lab Report	Well	Analyte	Sample Result (mg/L)	Lab Duplicate Result (mg/L)	RPD %	RPD Range %
1911345	MW-31	TDS	2430	2650	8.67	5
1912109	MW-11	TDS	3780	3340	12.3	5

N/A = QC was not performed on an EFRI sample.

Tab H

Kriged Current Quarterly Groundwater Contour Map



**EXPLANATION**

-  estimated dry area
- TW4-42**  
 5527 temporary perched monitoring well installed April, 2019 showing elevation in feet amsl
- MW-38**  
 5463 perched monitoring well installed February, 2018 showing elevation in feet amsl
- TW4-40**  
 5526 temporary perched monitoring well installed February, 2018 showing elevation in feet amsl
- MW-5**  
 5503 perched monitoring well showing elevation in feet amsl
- TW4-12**  
 5570 temporary perched monitoring well showing elevation in feet amsl
- TWN-7**  
 5567 temporary perched nitrate monitoring well showing elevation in feet amsl
- PIEZ-1**  
 5589 perched piezometer showing elevation in feet amsl
- RUI-01**  
 5380 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, TW4-40 and TW4-41 are chloroform pumping wells; TW4-22, TW4-24, TW4-25 and TWN-2 are nitrate pumping wells; TW4-1, TW4-2 and TW4-11 water levels are below the base of the Burro Canyon Formation



**HYDRO  
GEO  
CHEM, INC.**

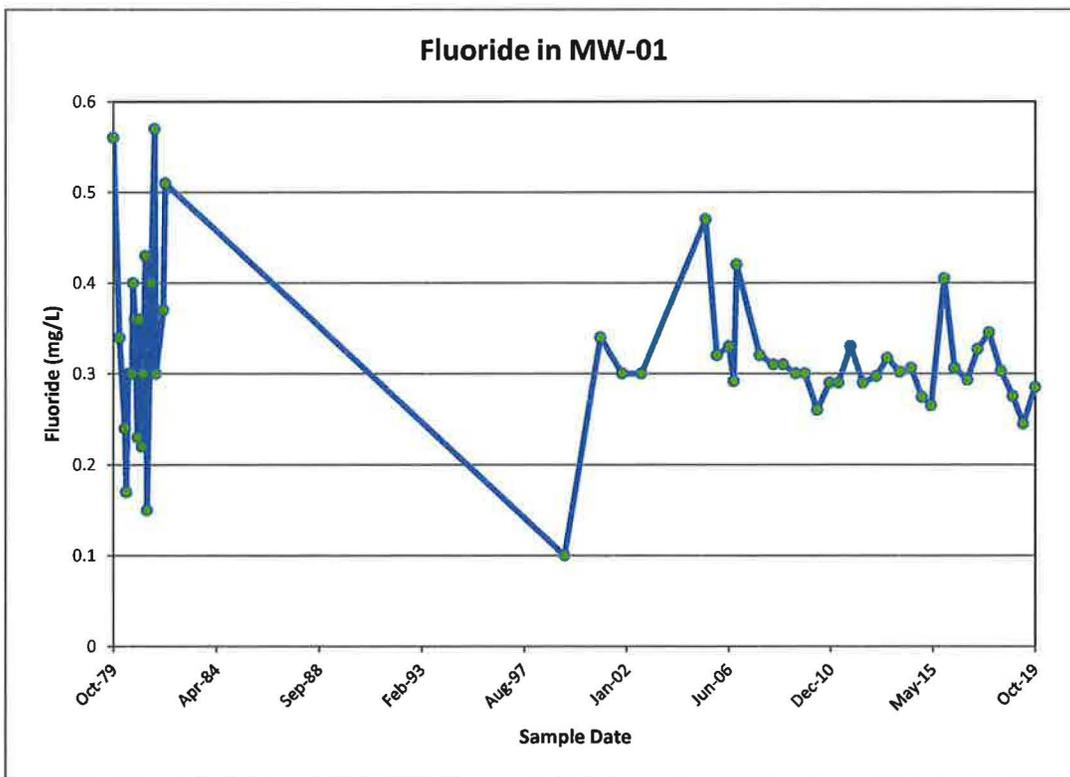
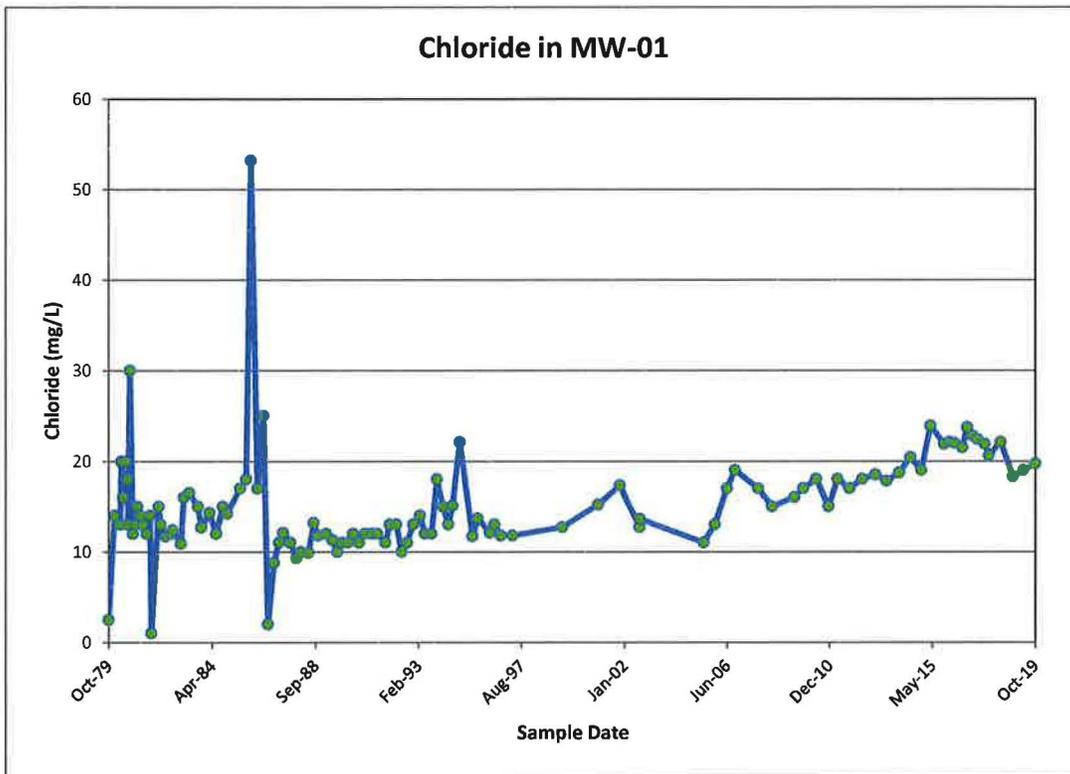
**KRIGED 4th QUARTER, 2019 WATER LEVELS  
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/feb20/WL/Uw1219.srf	H-1

Tab I

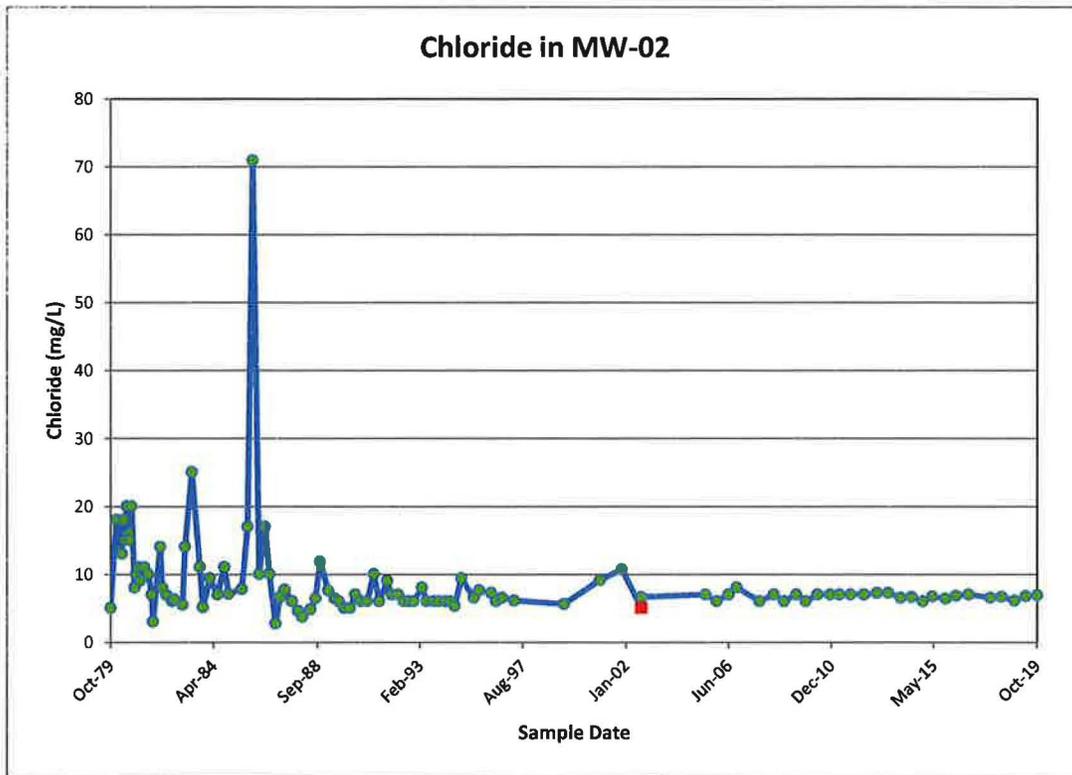
Groundwater Time Concentration Plots

### Time concentration plots for MW-01

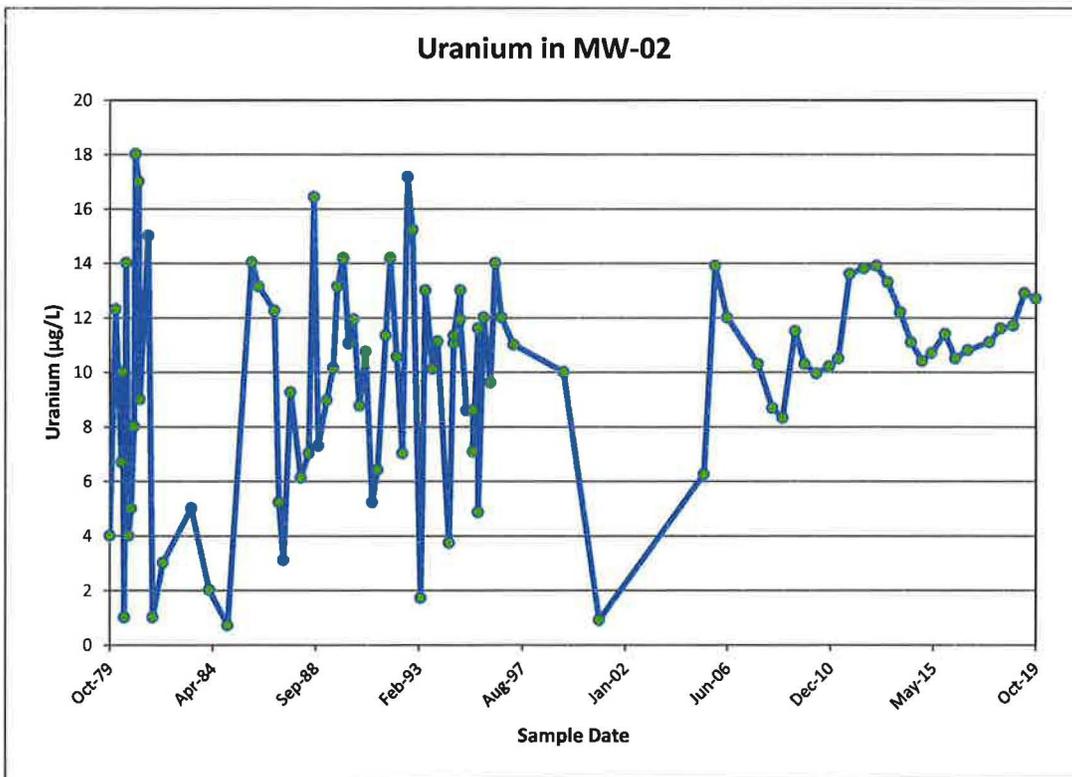
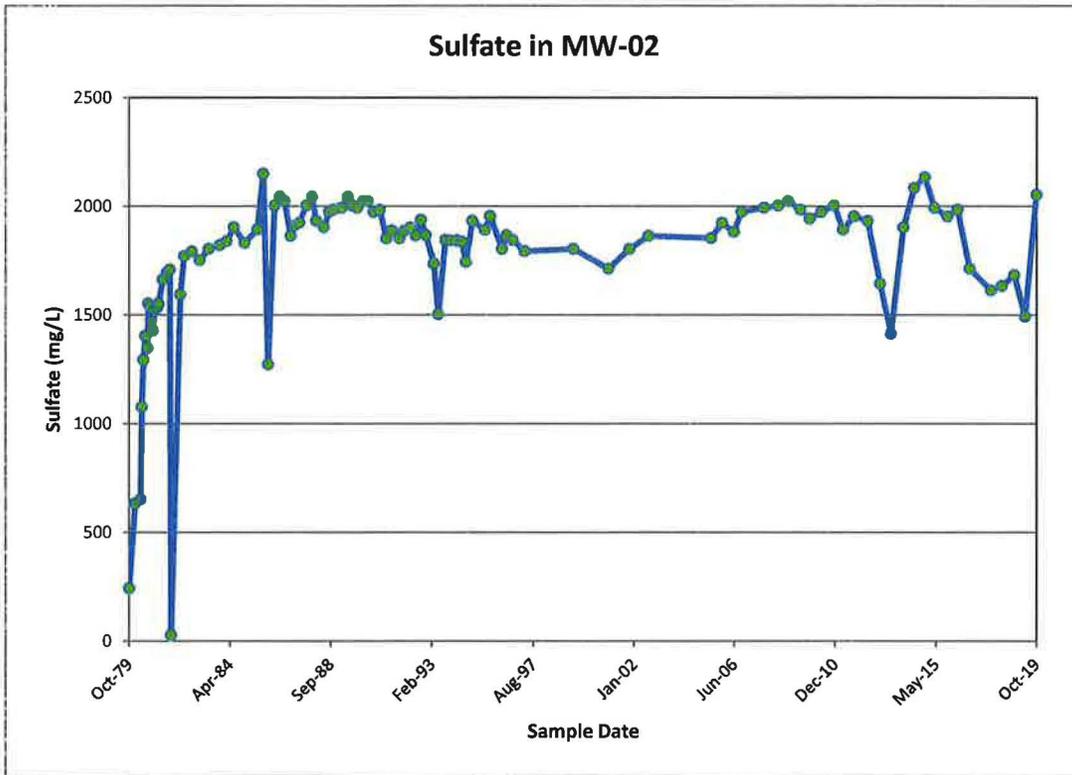




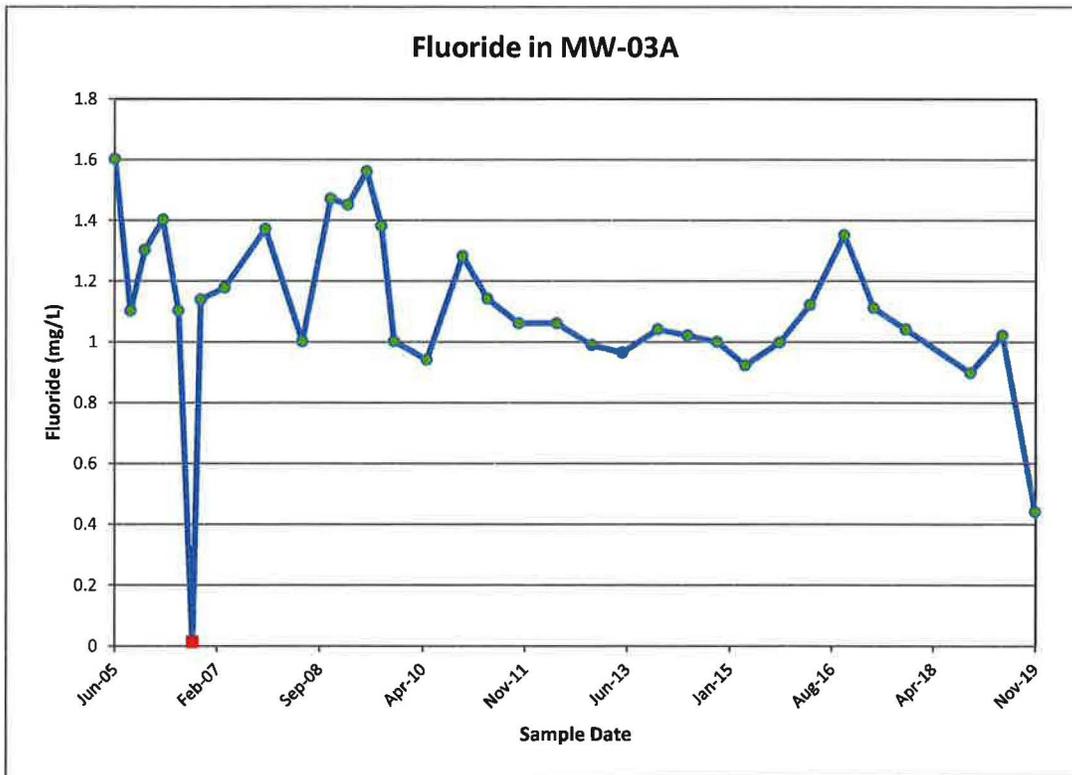
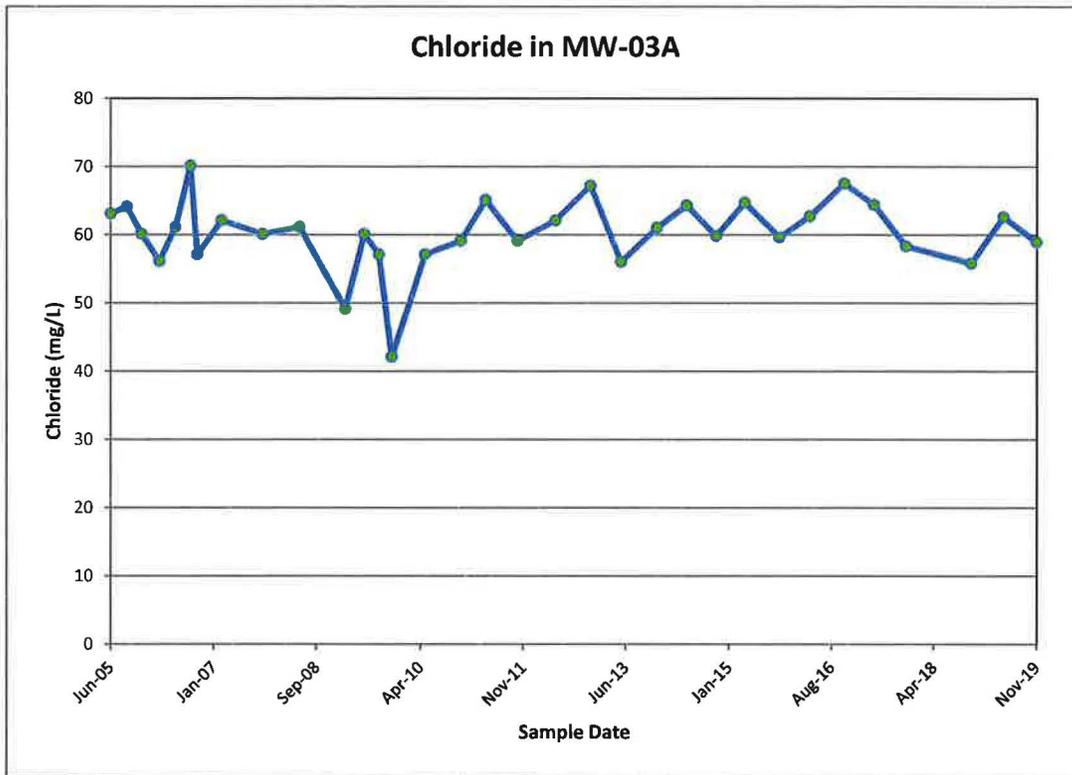
## Time concentration plots for MW-02



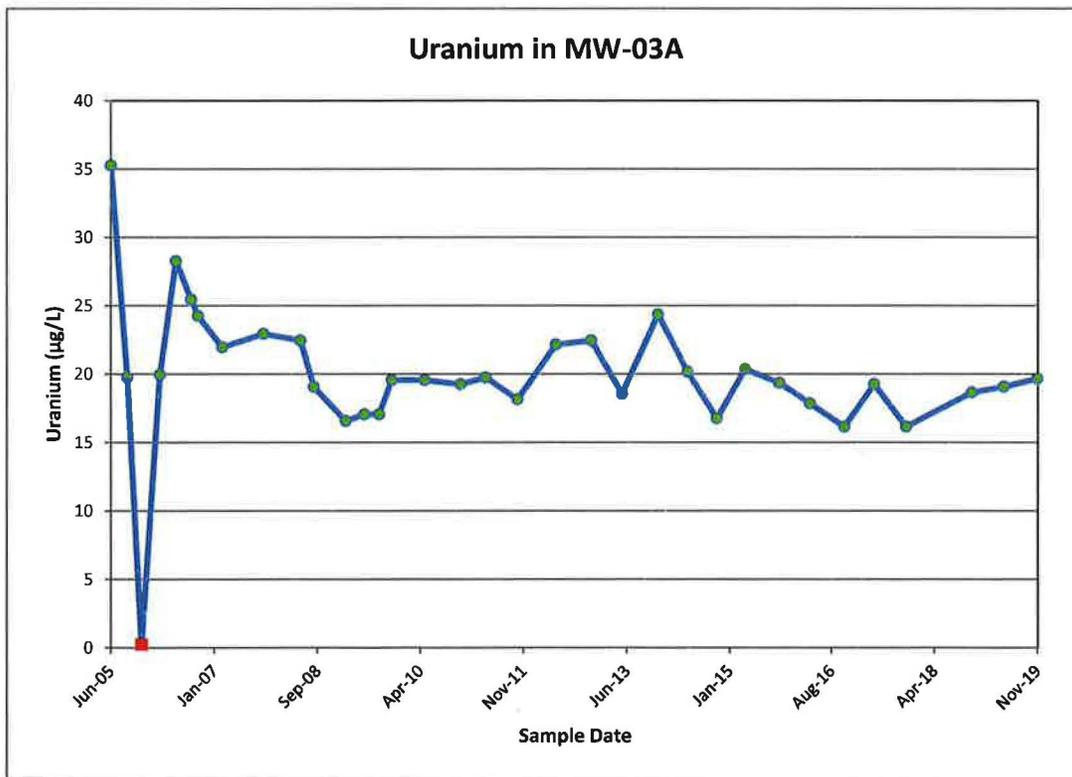
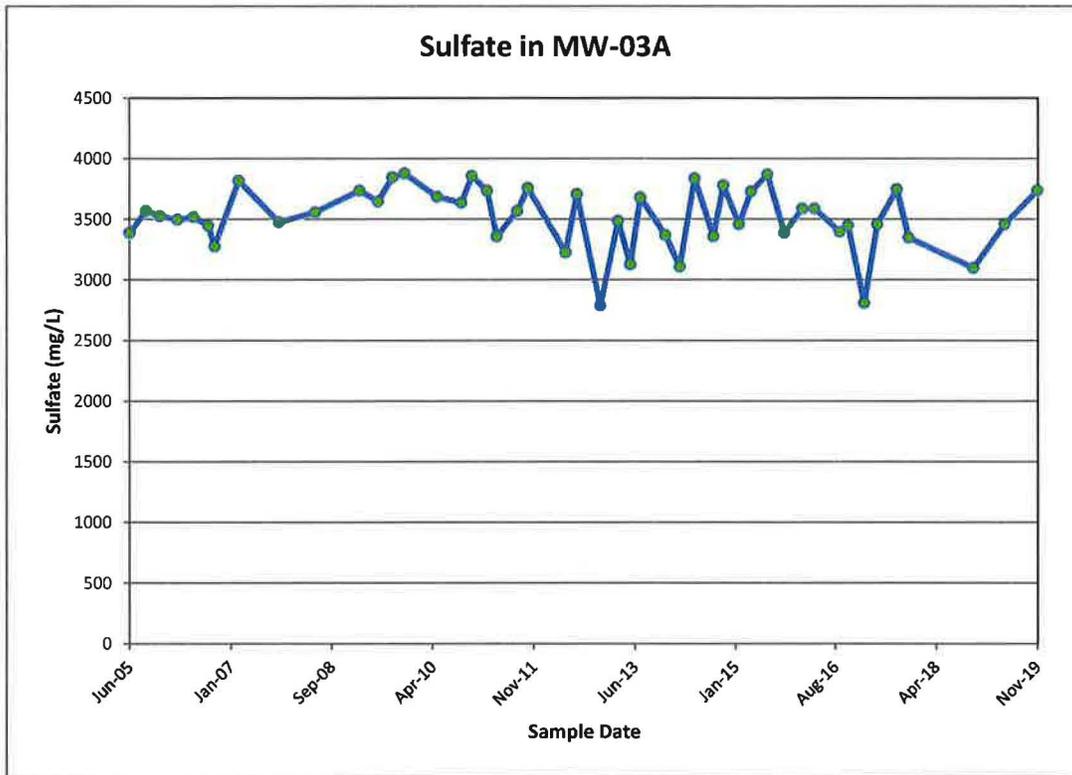
### Time concentration plots for MW-02



### Time concentration plots for MW-03A

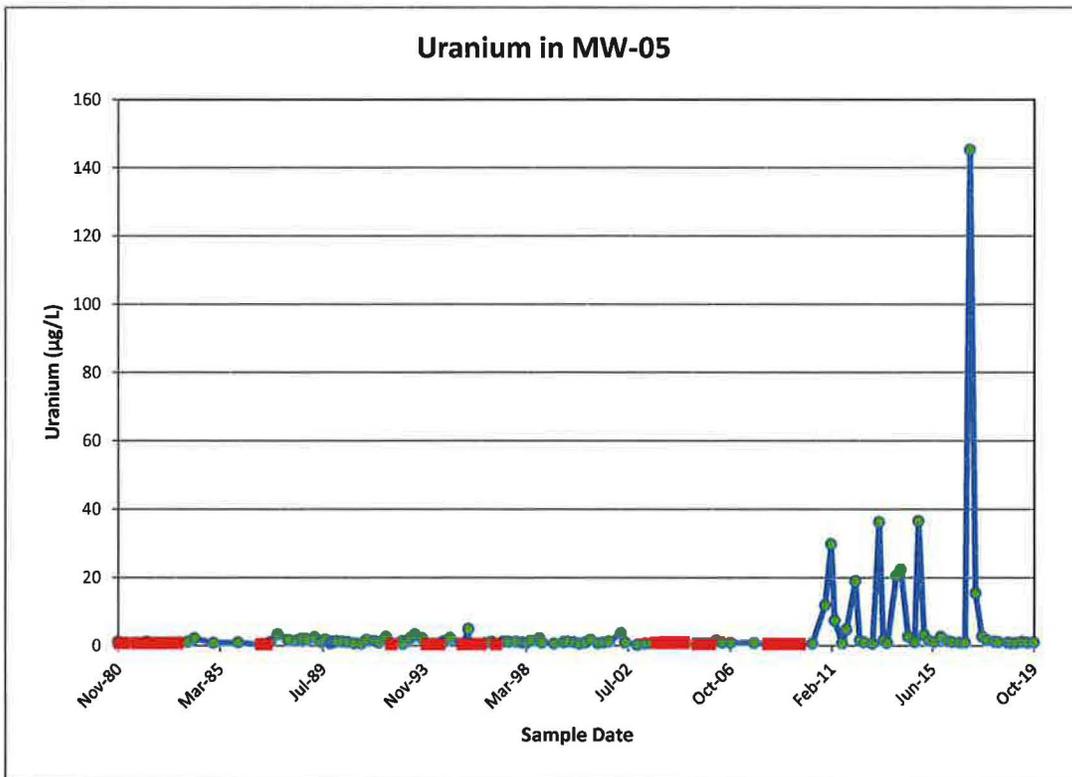
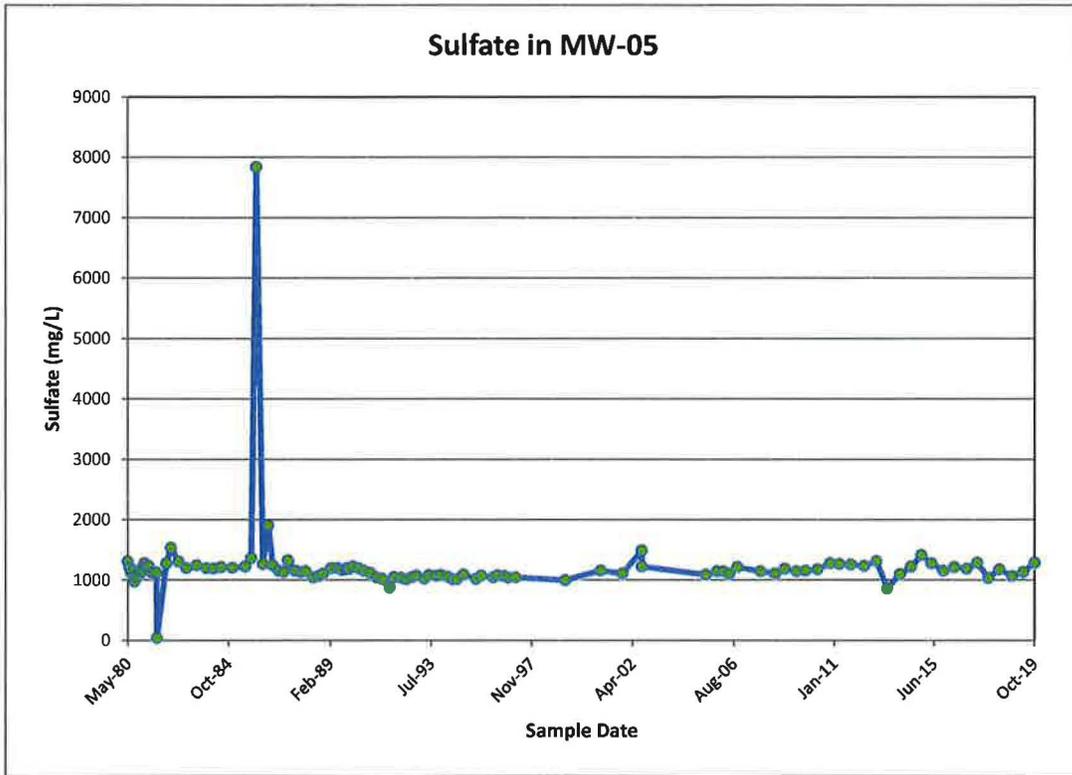


## Time concentration plots for MW-03A

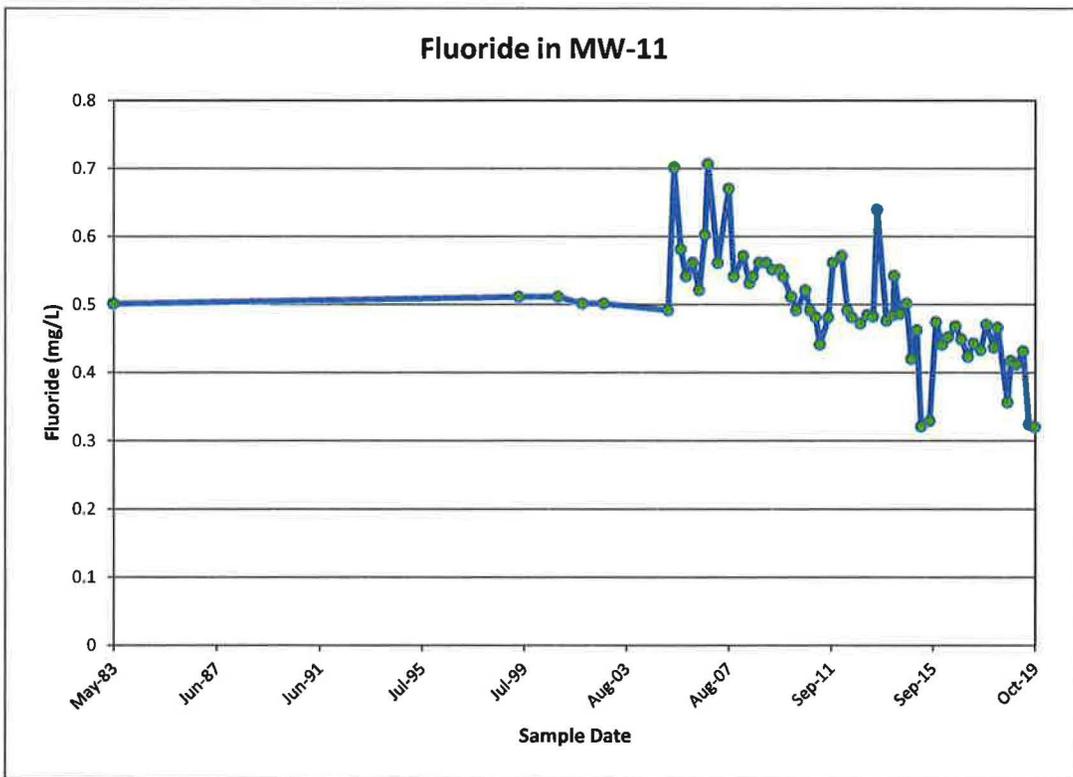
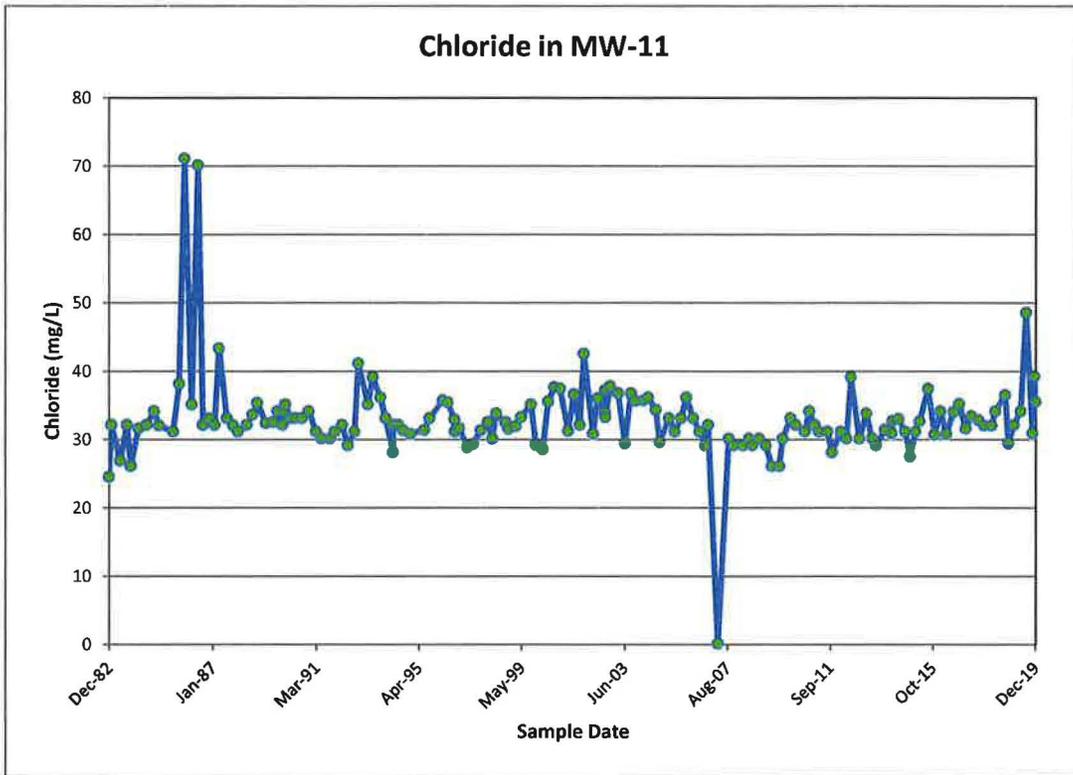




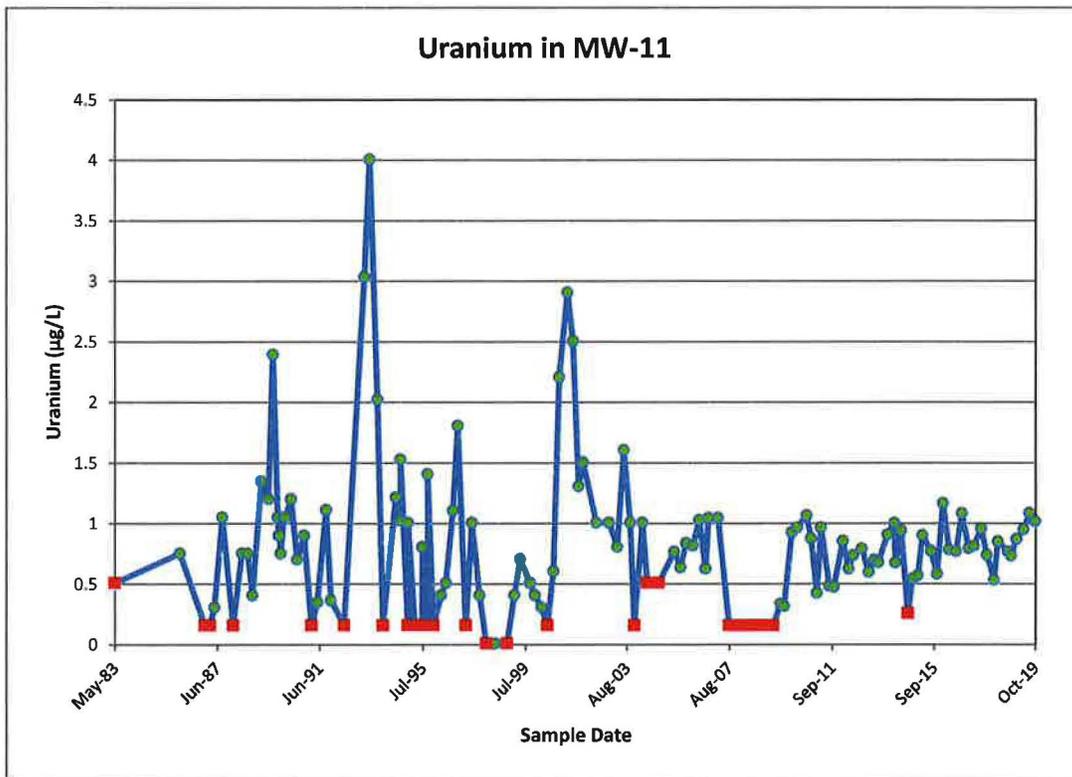
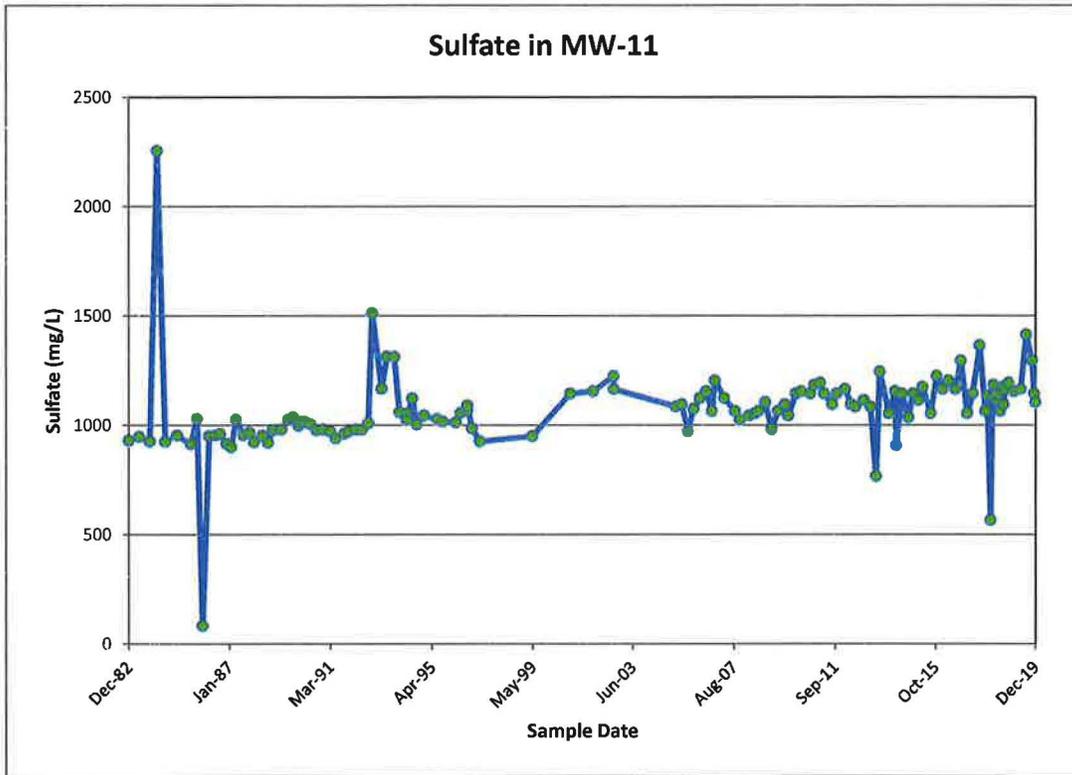
### Time concentration plots for MW-05



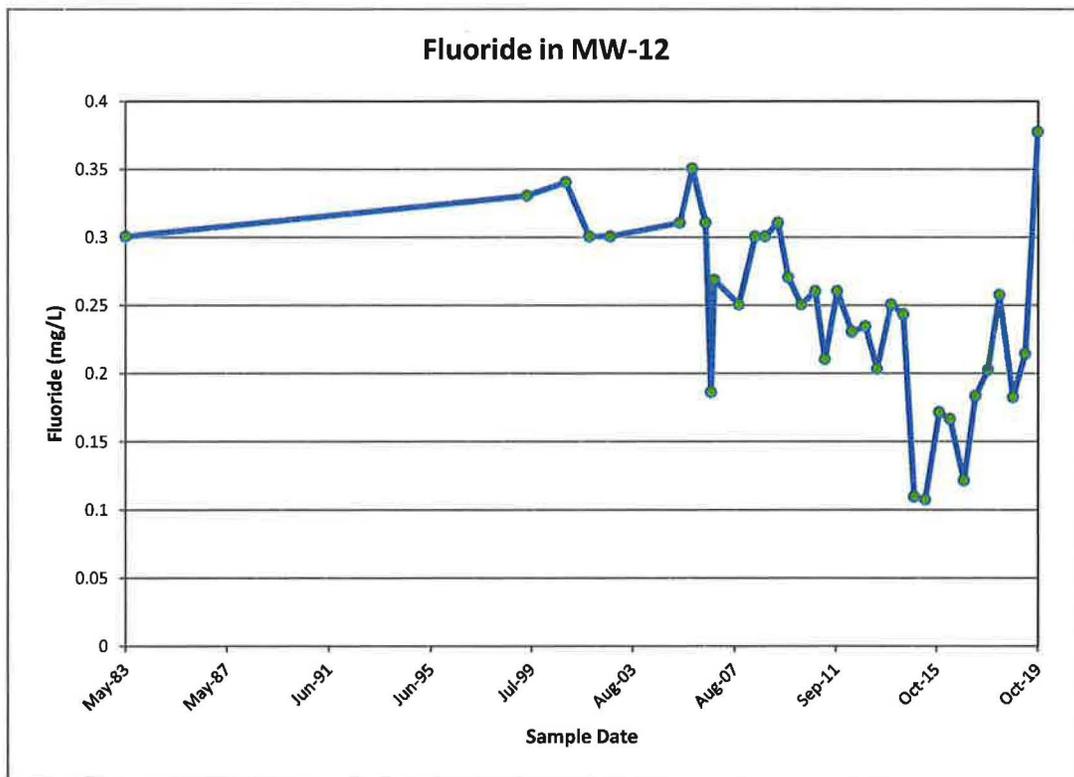
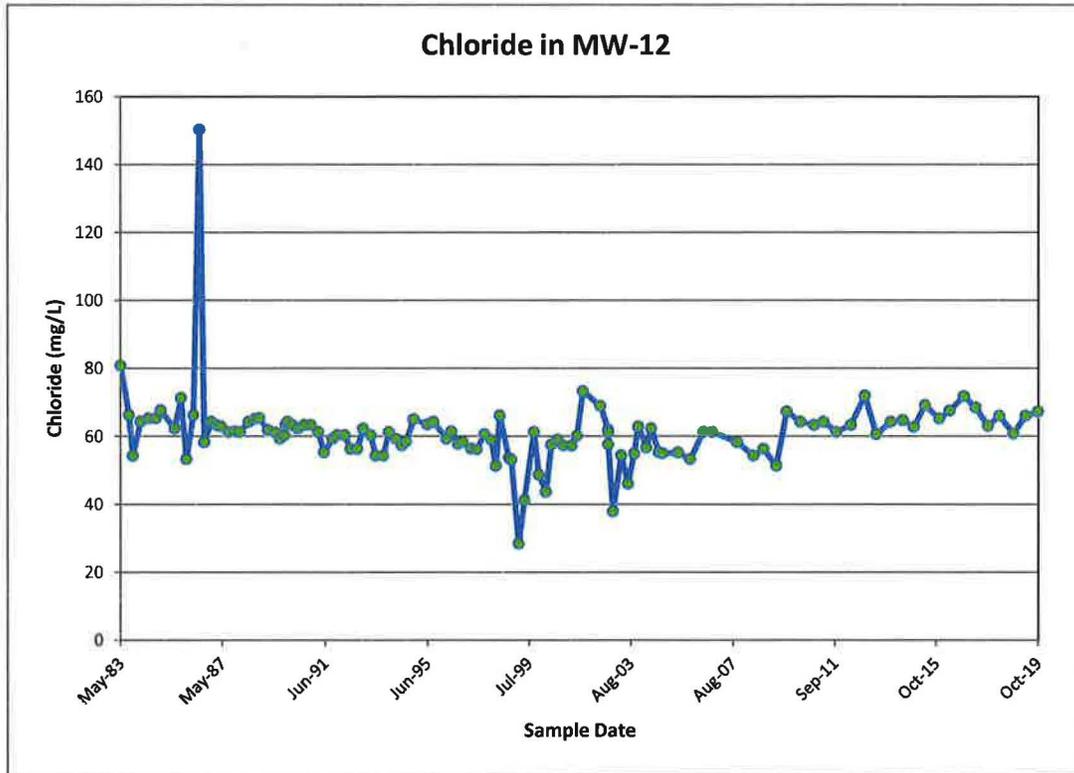
### Time concentration plots for MW-11



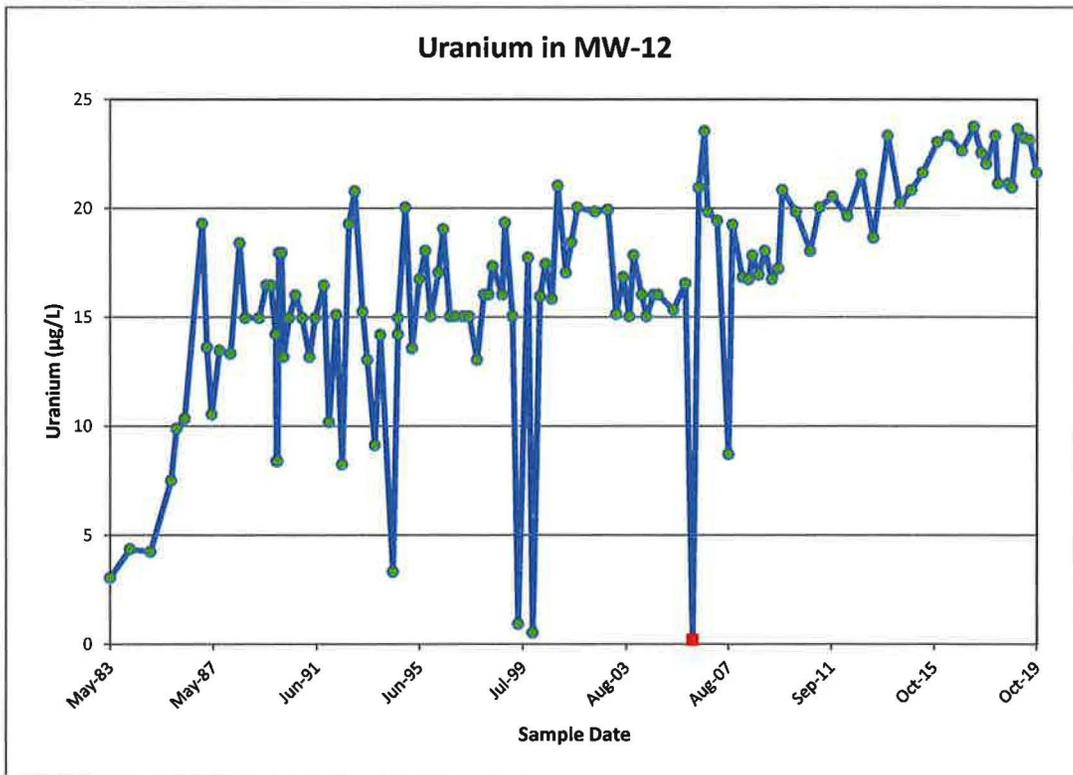
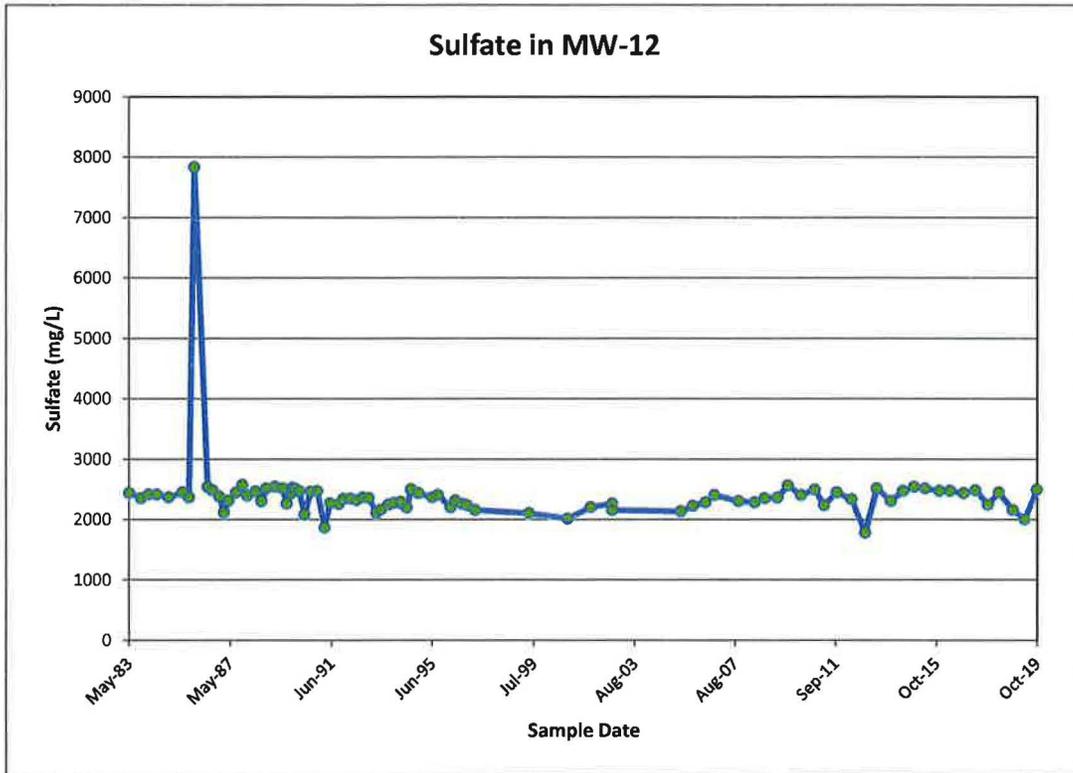
### Time concentration plots for MW-11



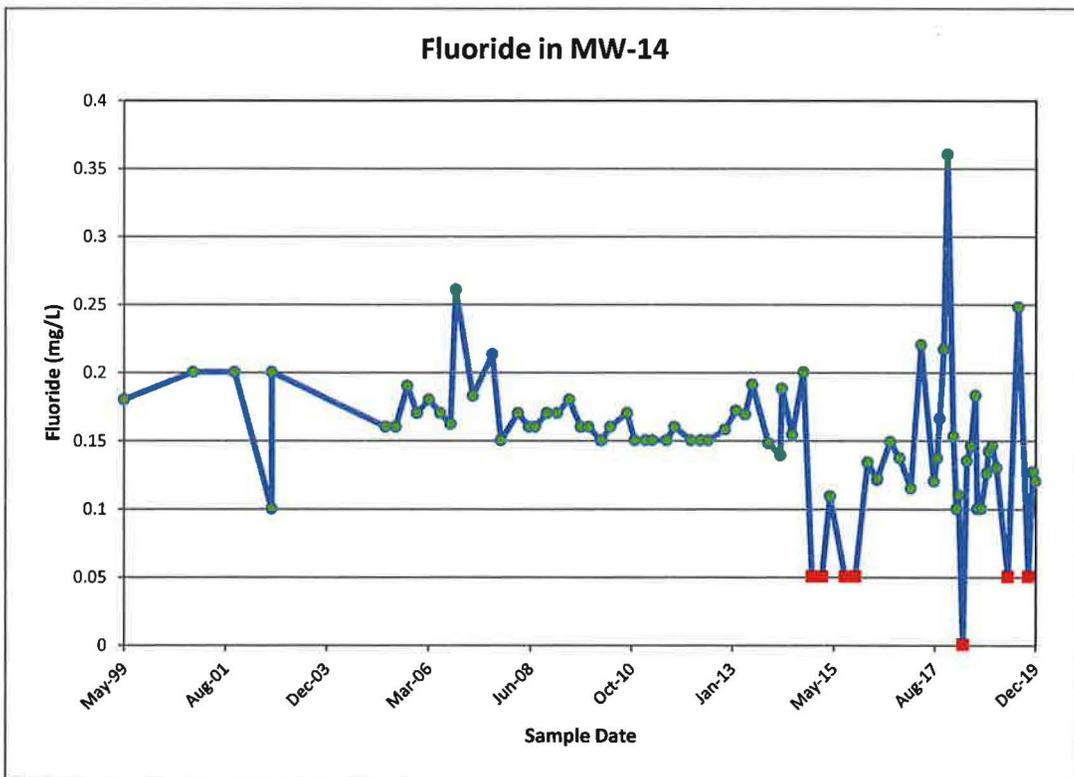
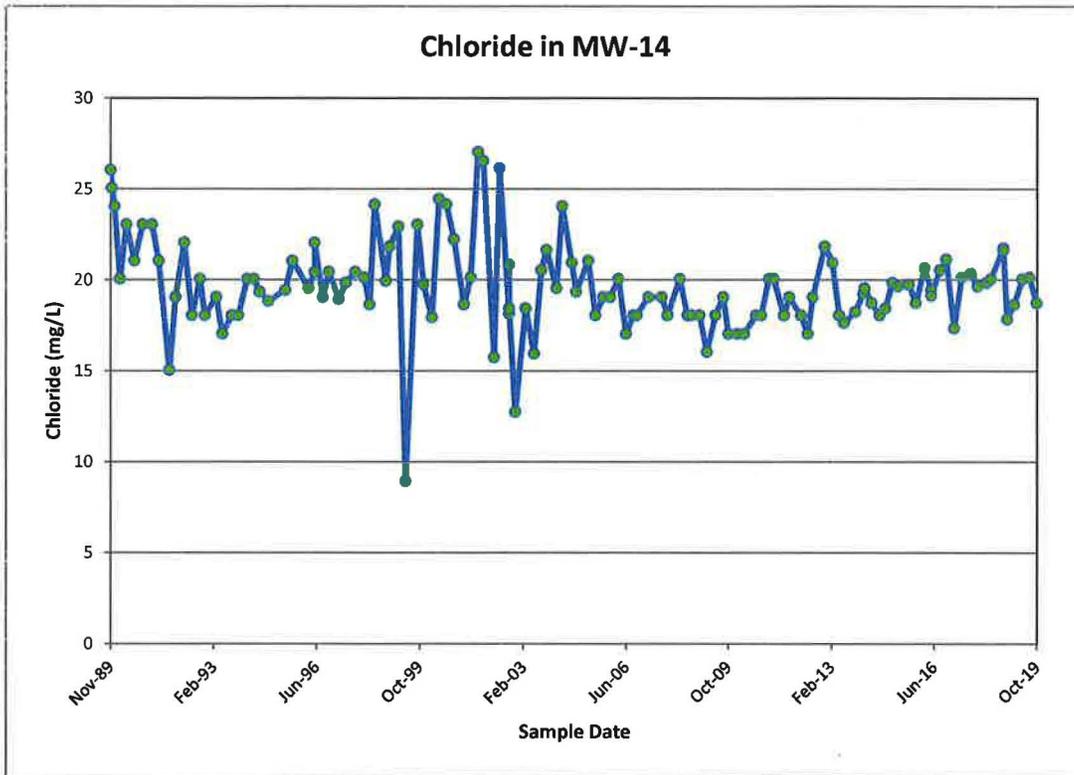
## Time concentration plots for MW-12



## Time concentration plots for MW-12

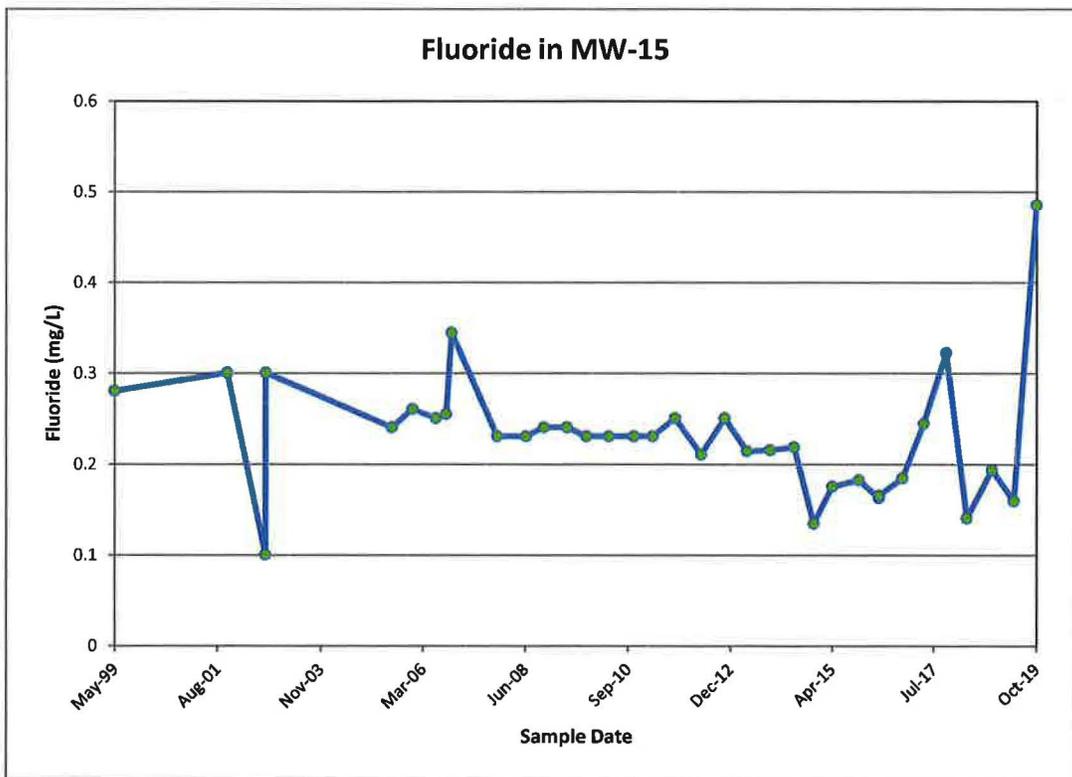
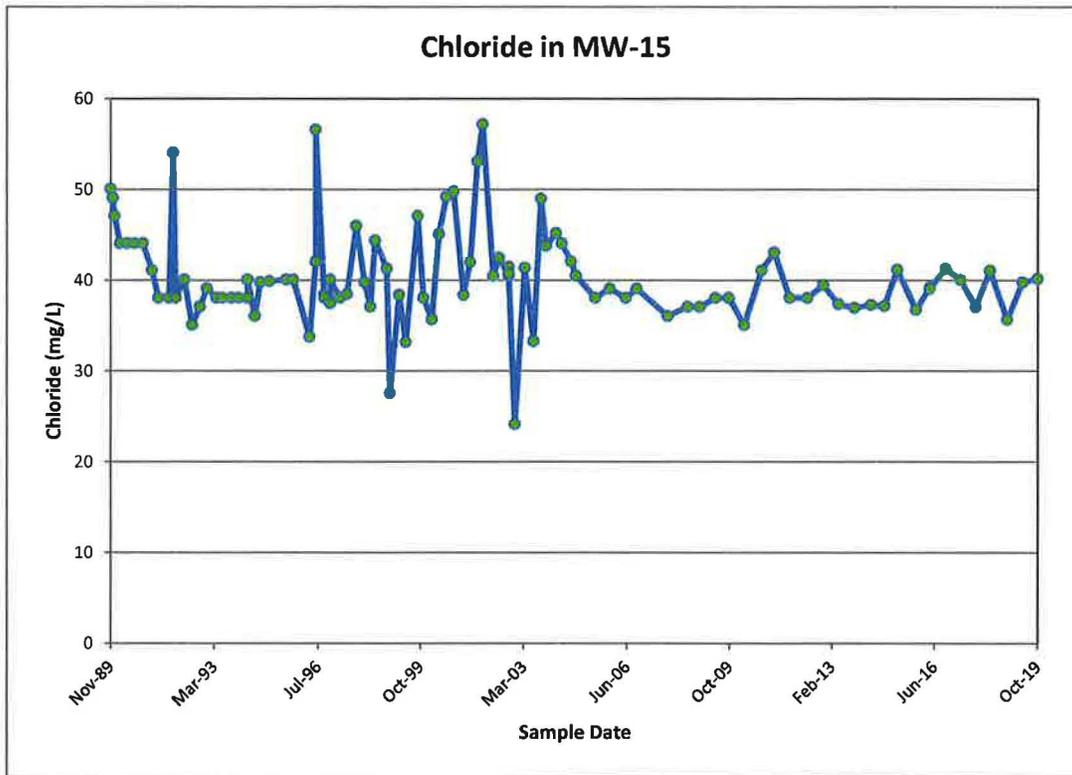


## Time concentration plots for MW-14

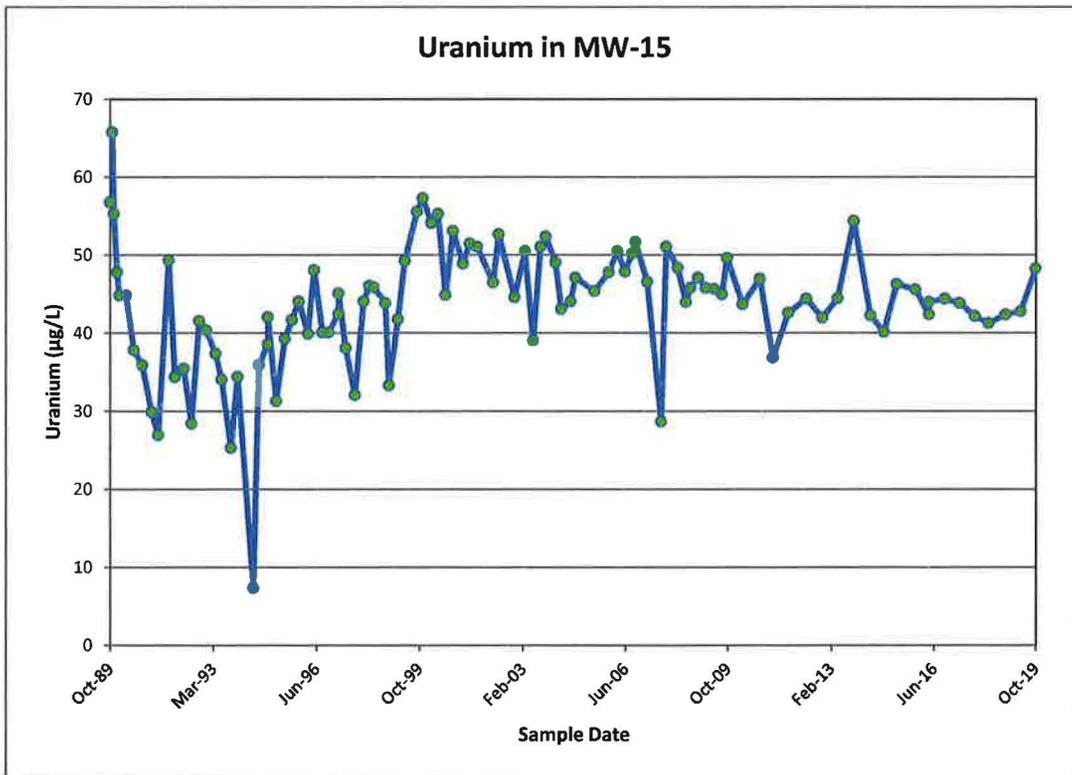
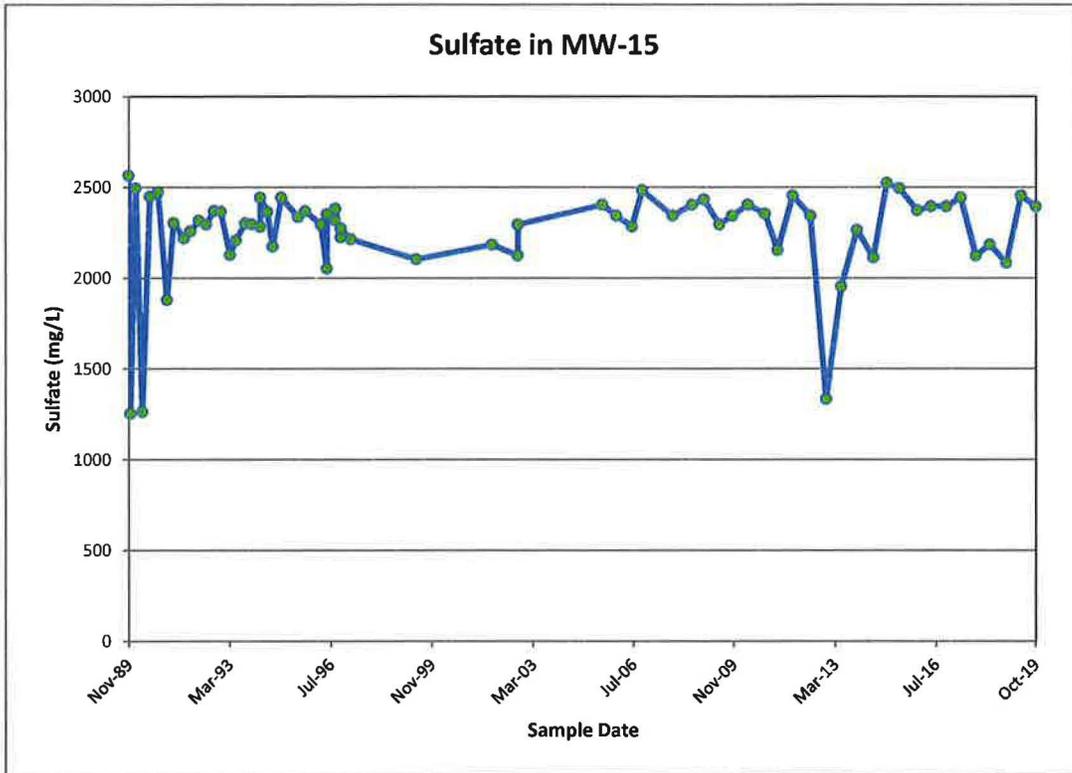




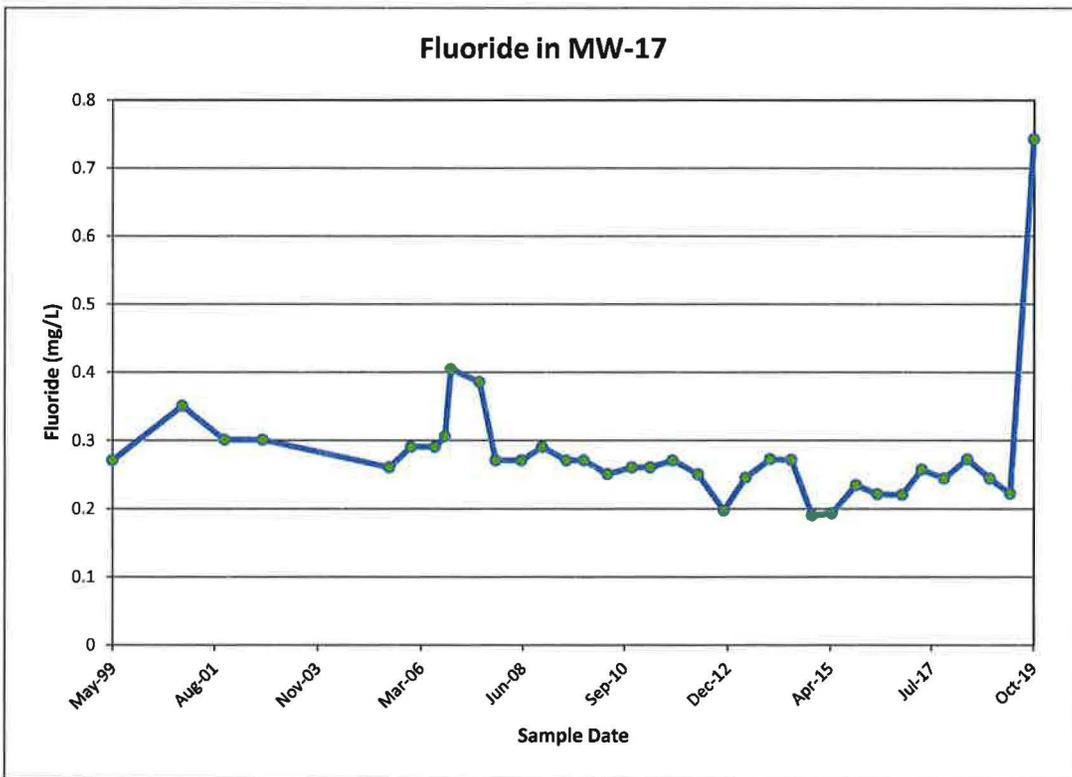
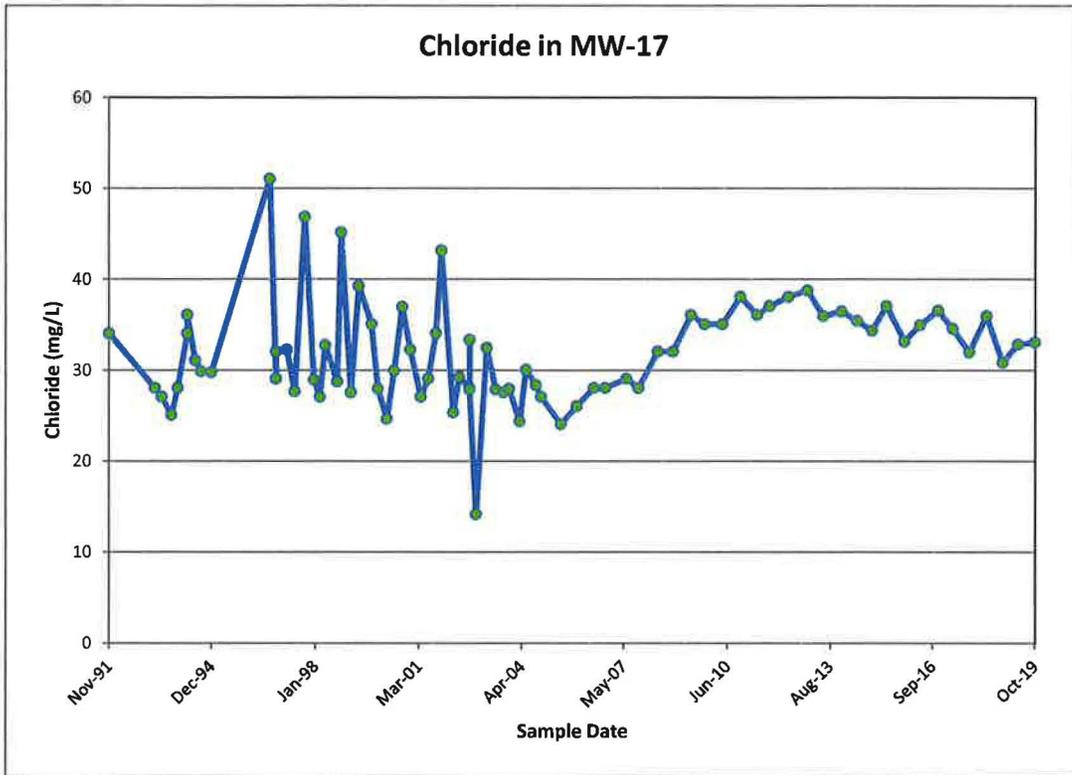
## Time concentration plots for MW-15



## Time concentration plots for MW-15

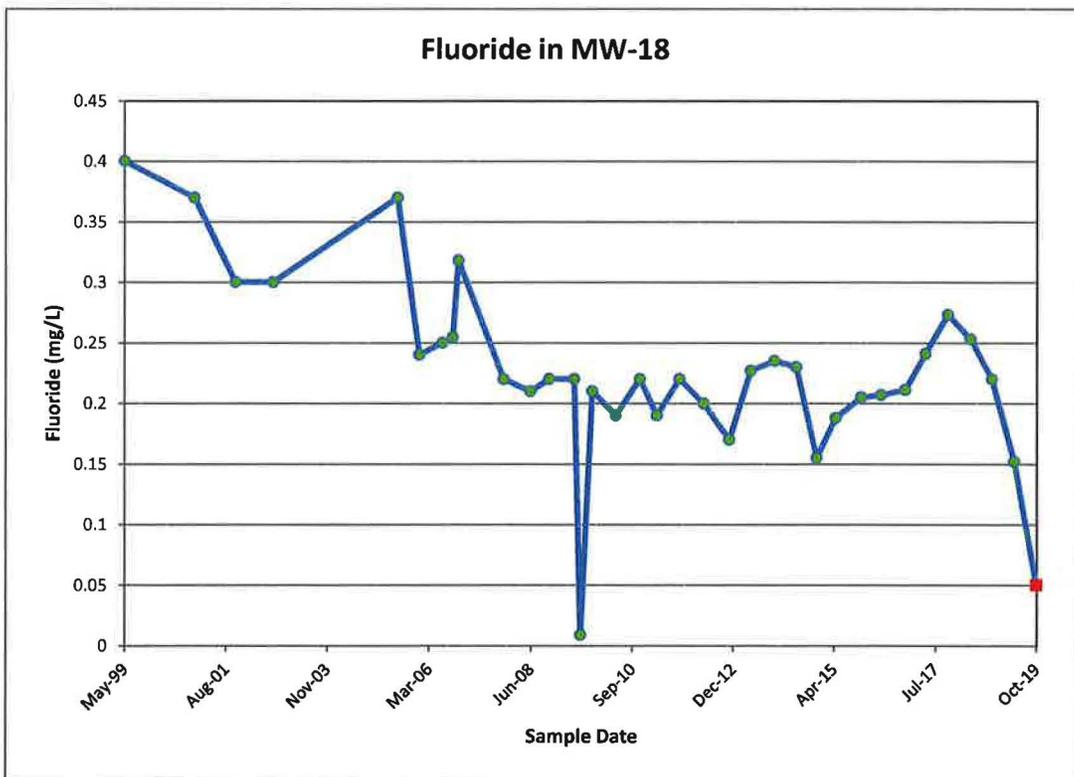
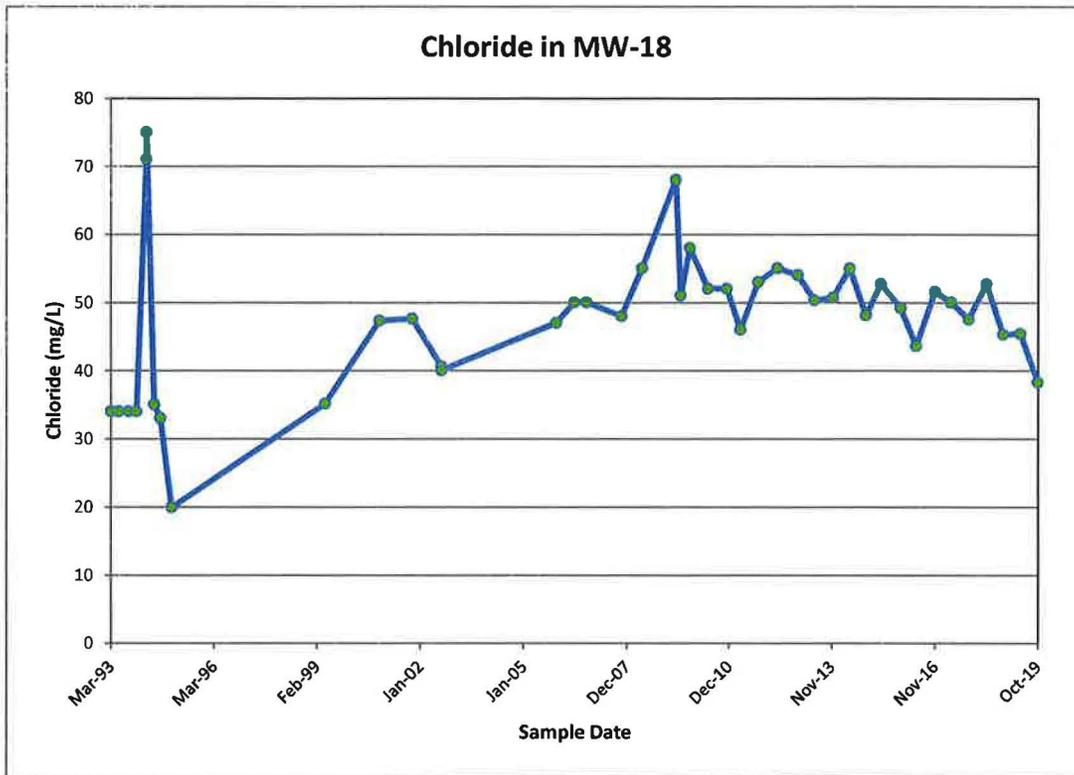


### Time concentration plots for MW-17

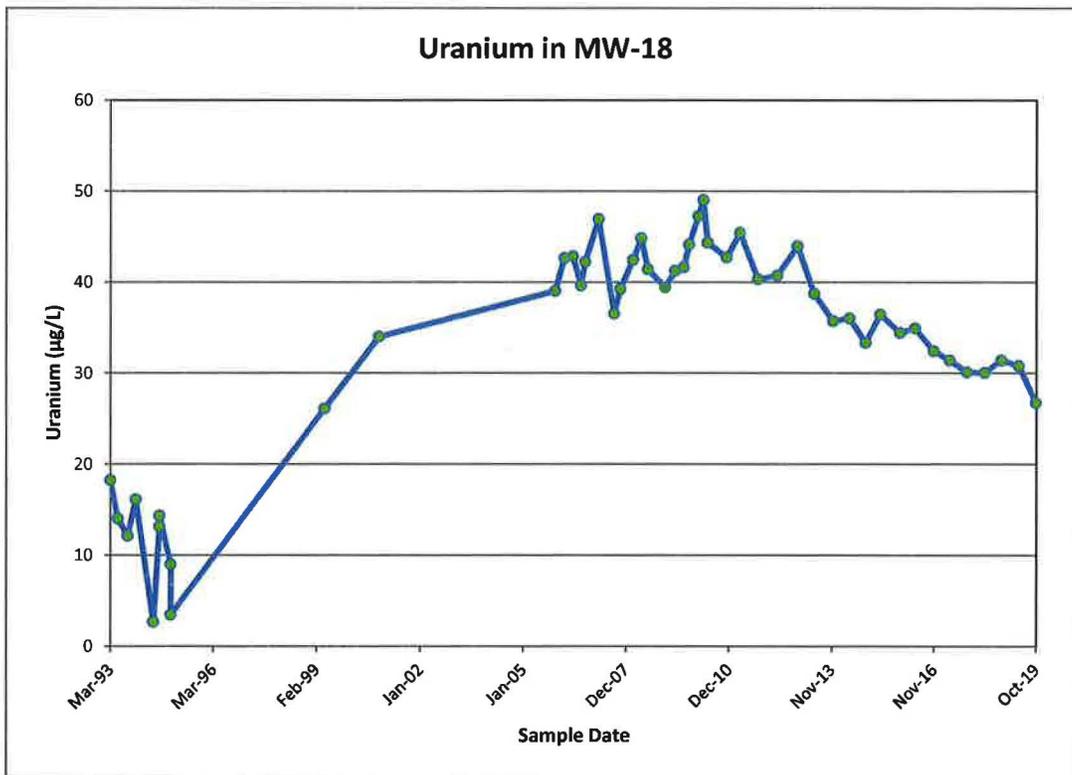
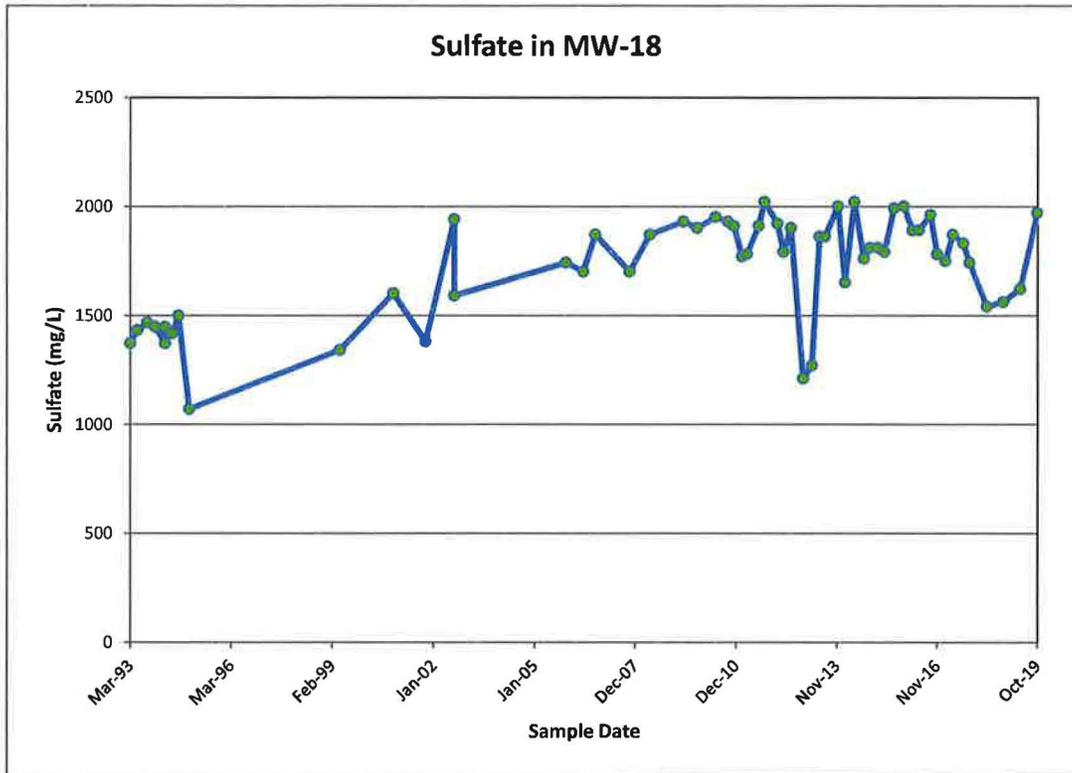




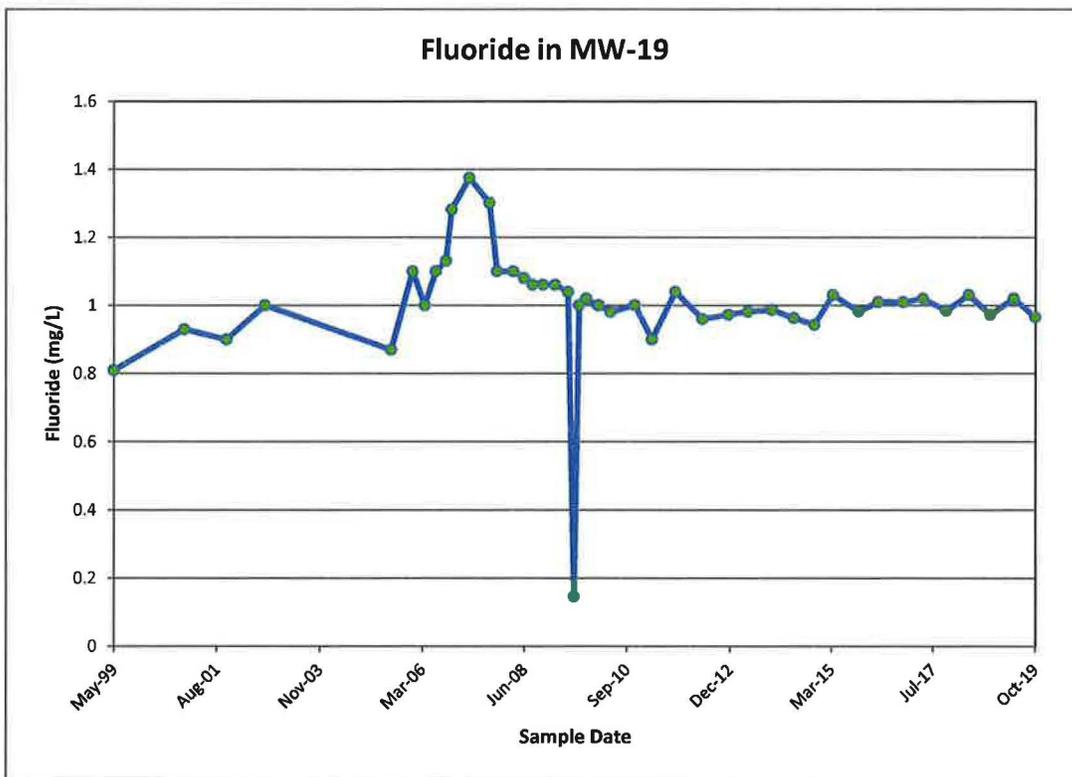
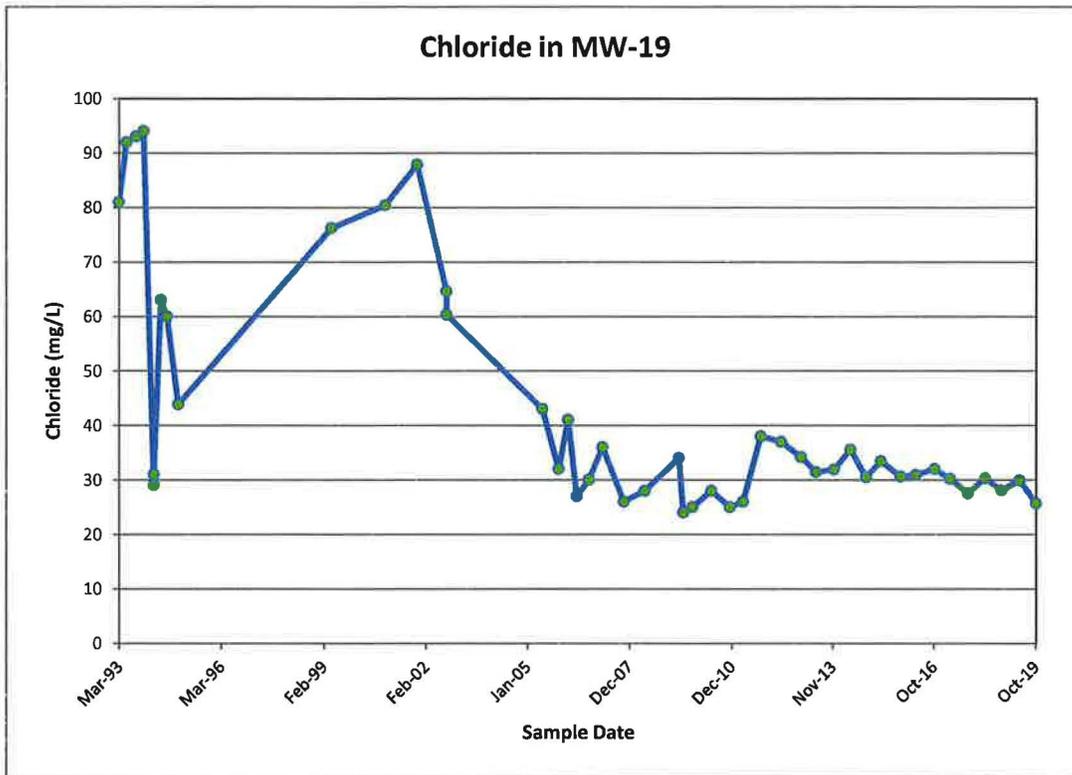
### Time concentration plots for MW-18



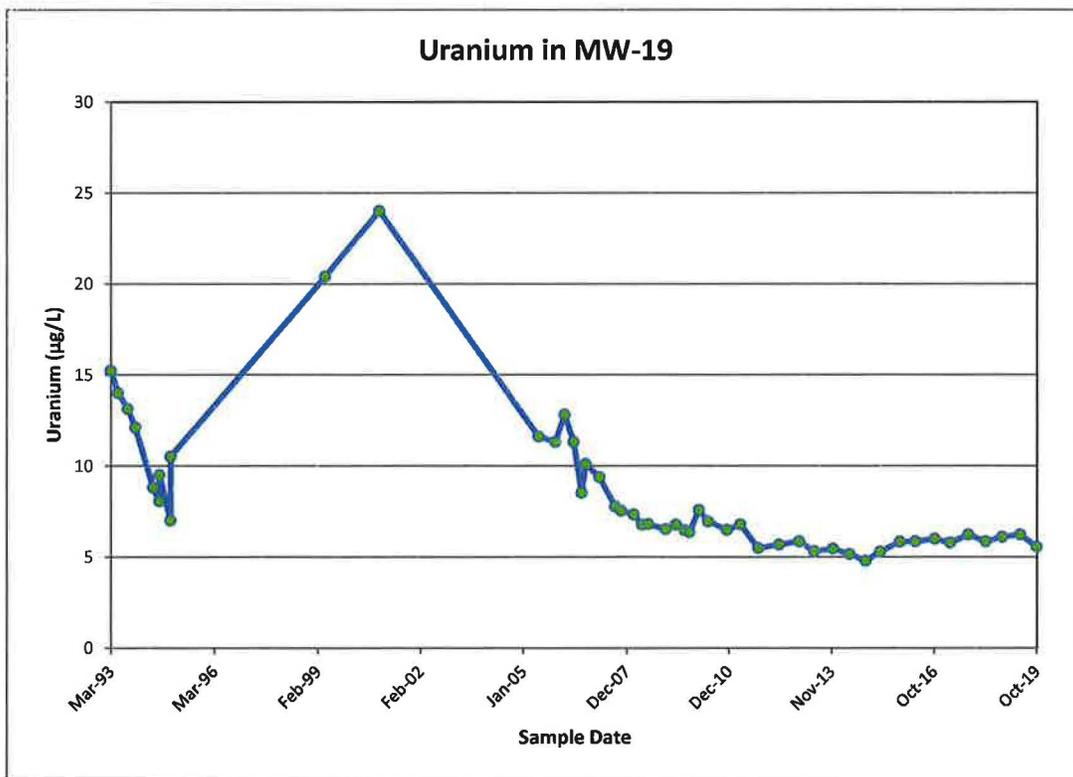
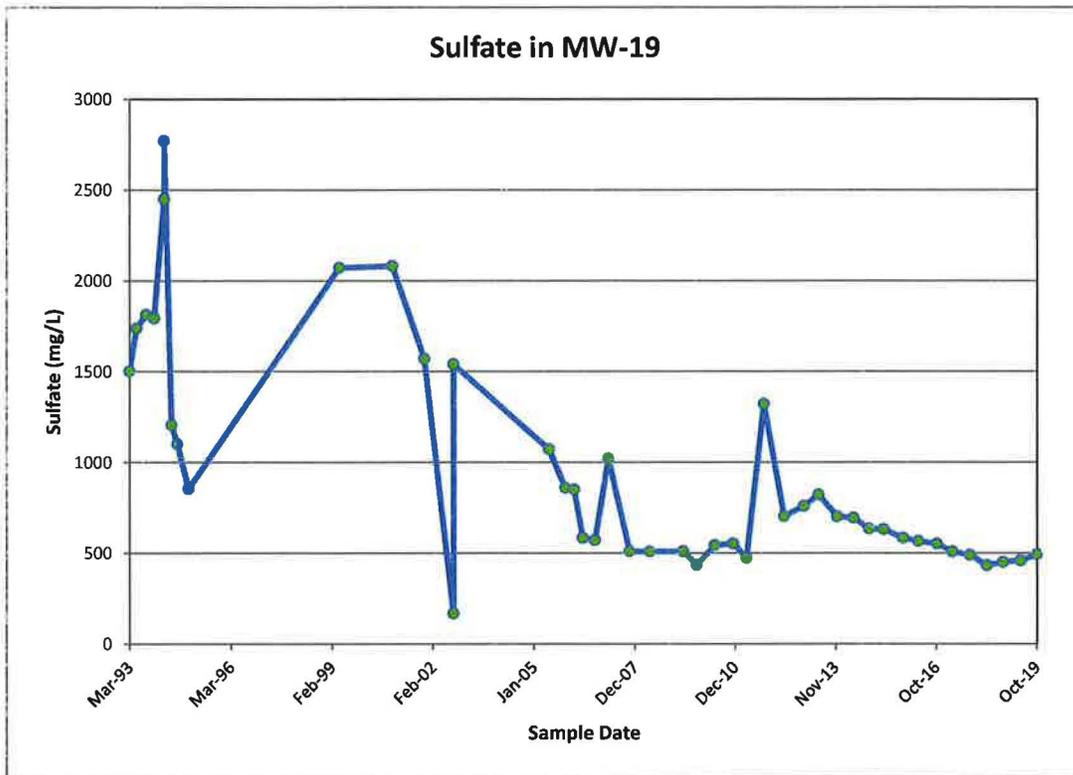
## Time concentration plots for MW-18



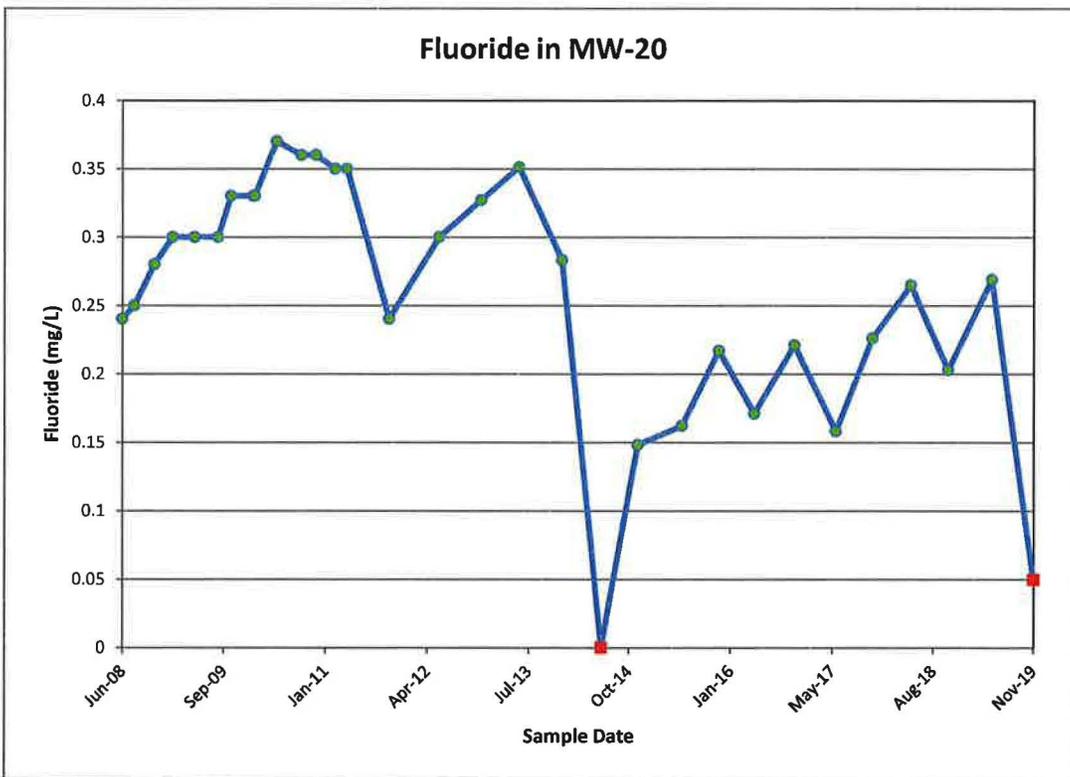
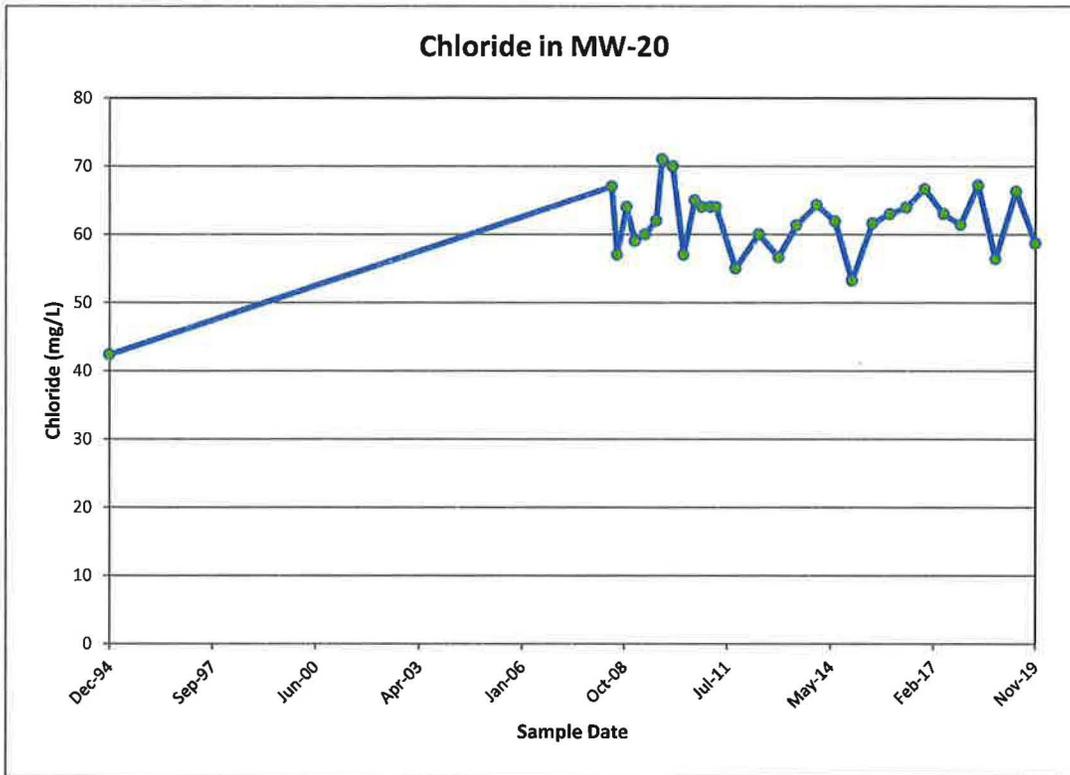
## Time concentration plots for MW-19



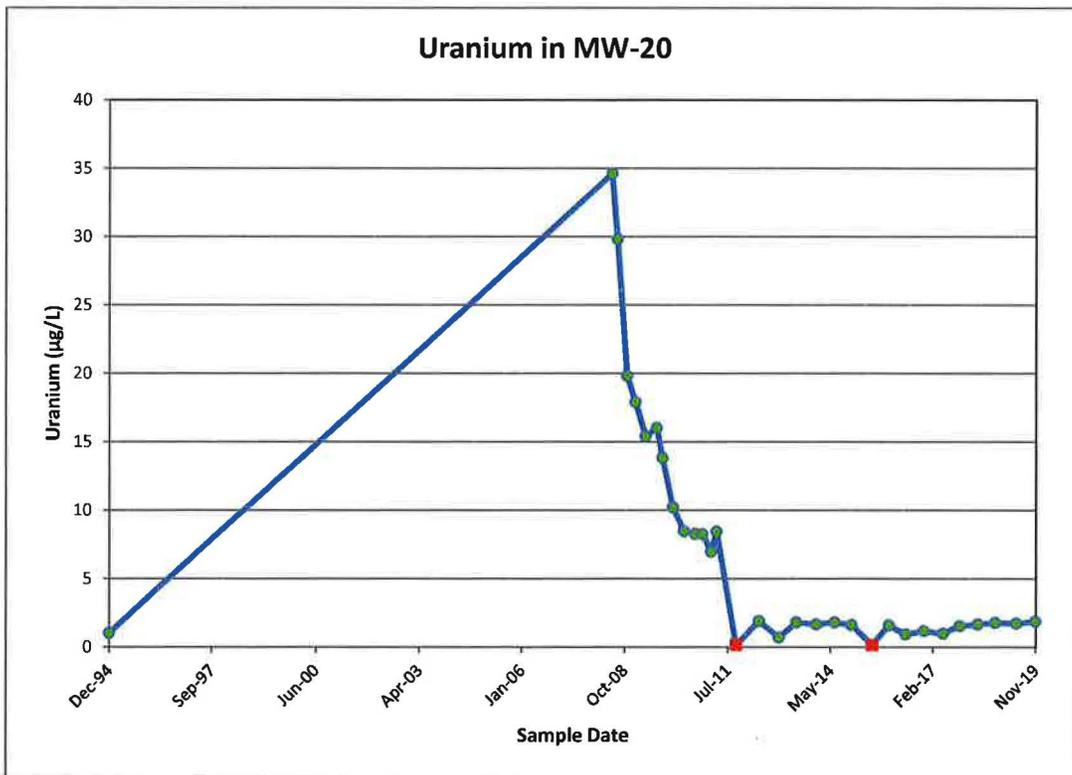
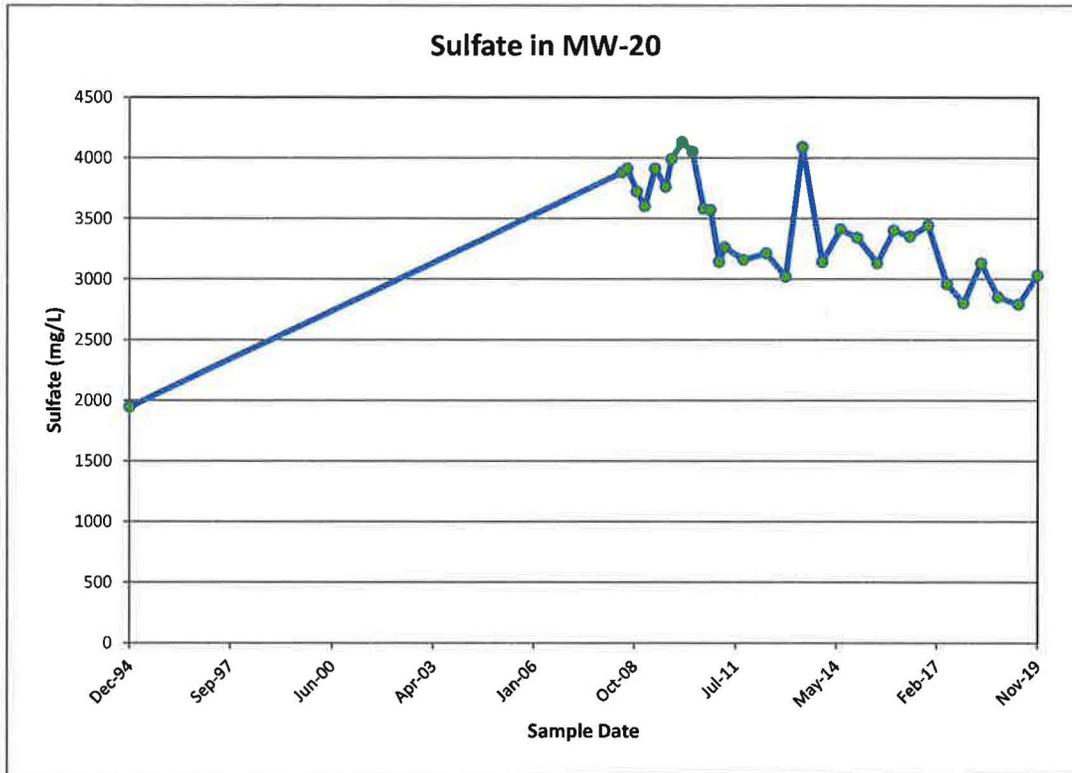
## Time concentration plots for MW-19



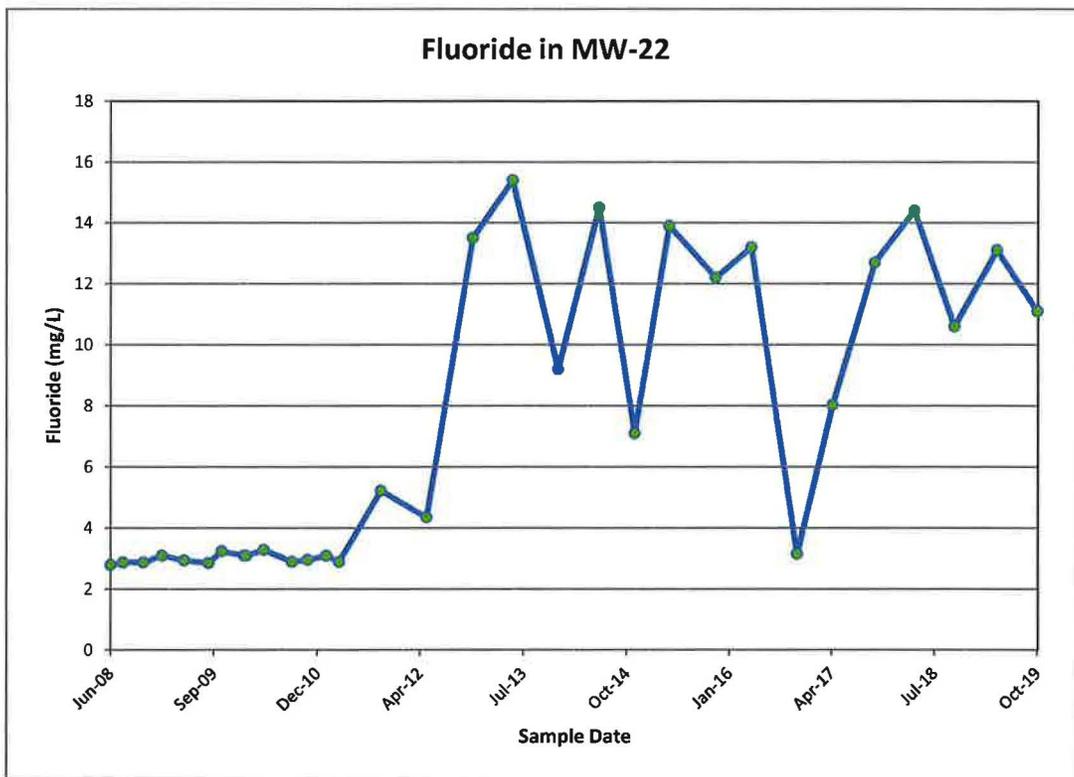
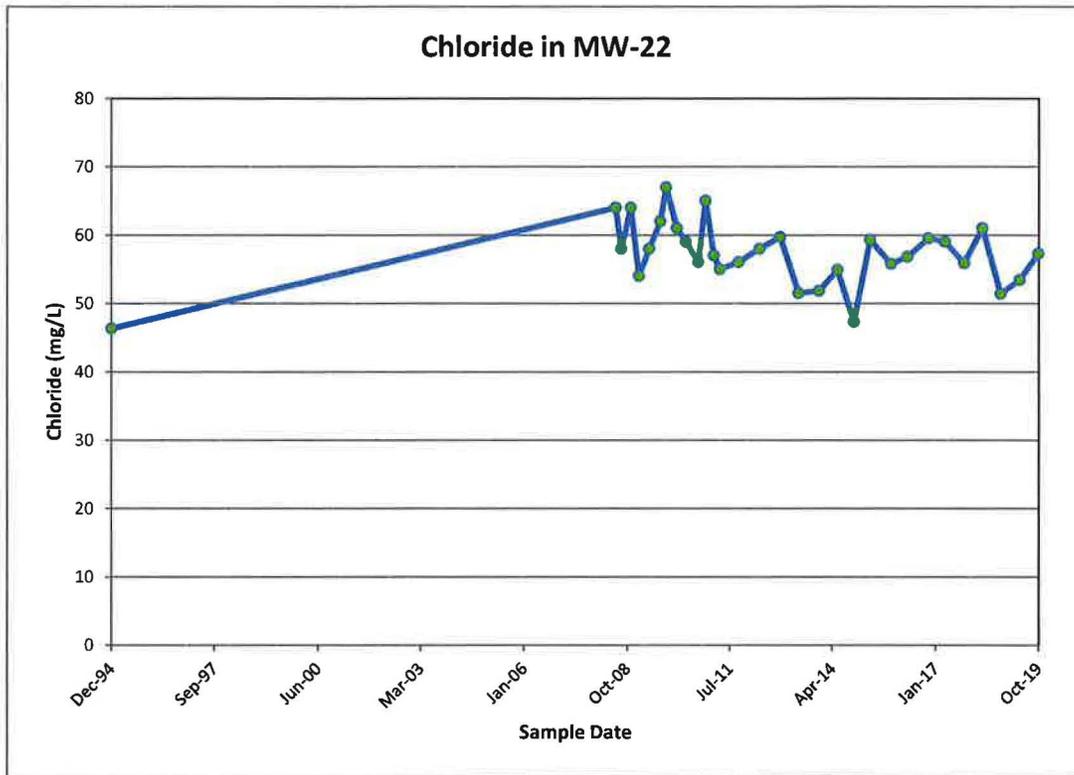
### Time concentration plots for MW-20



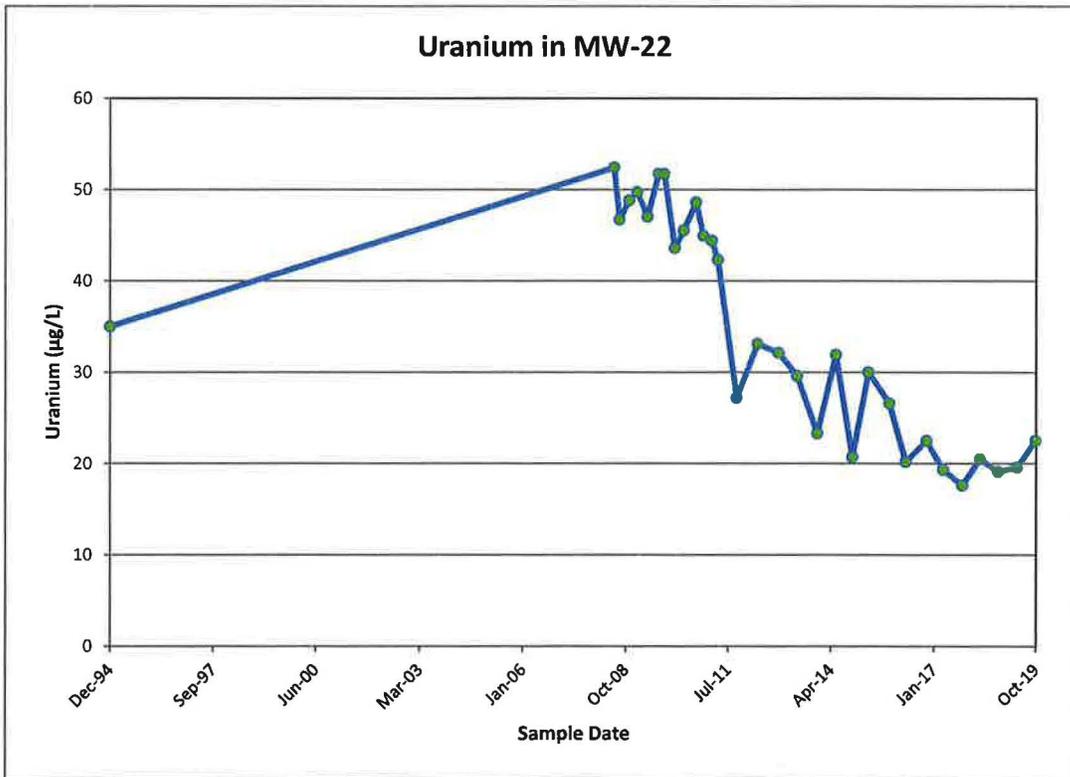
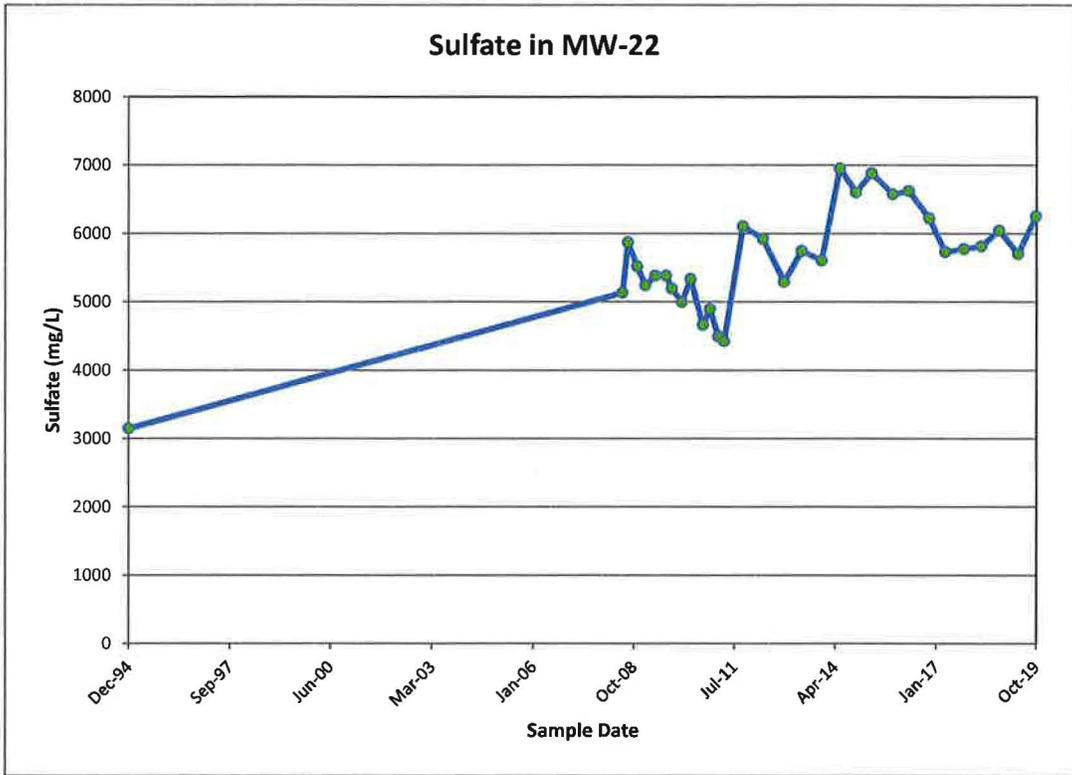
## Time concentration plots for MW-20



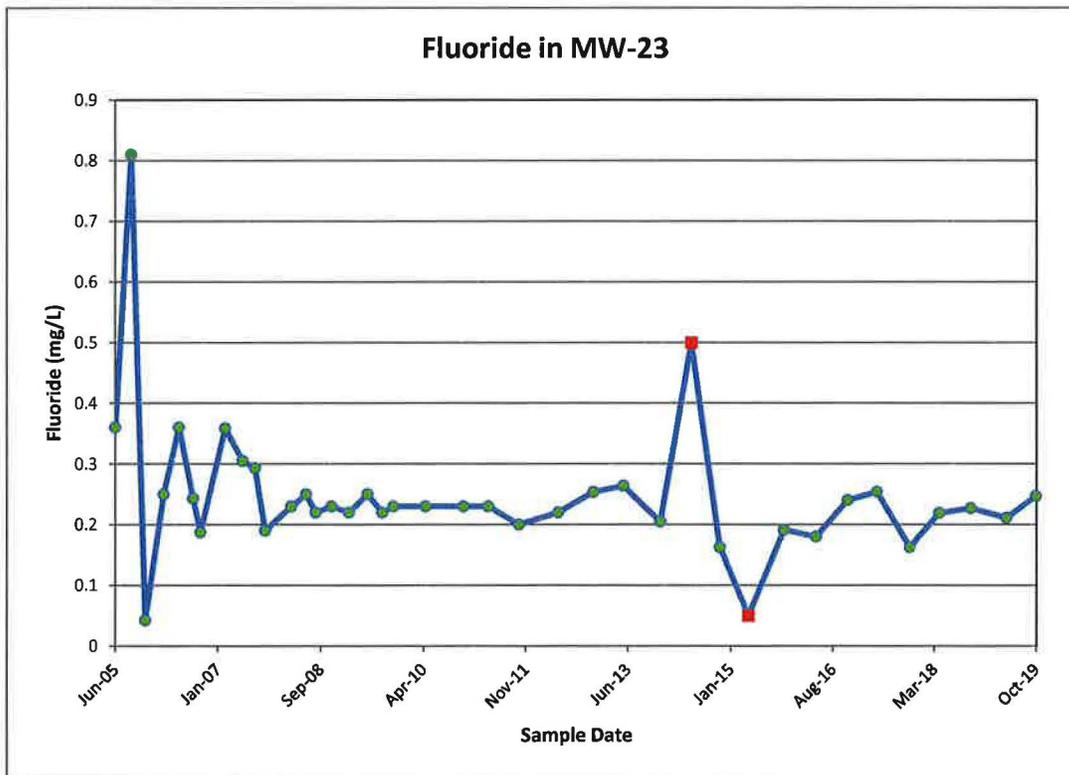
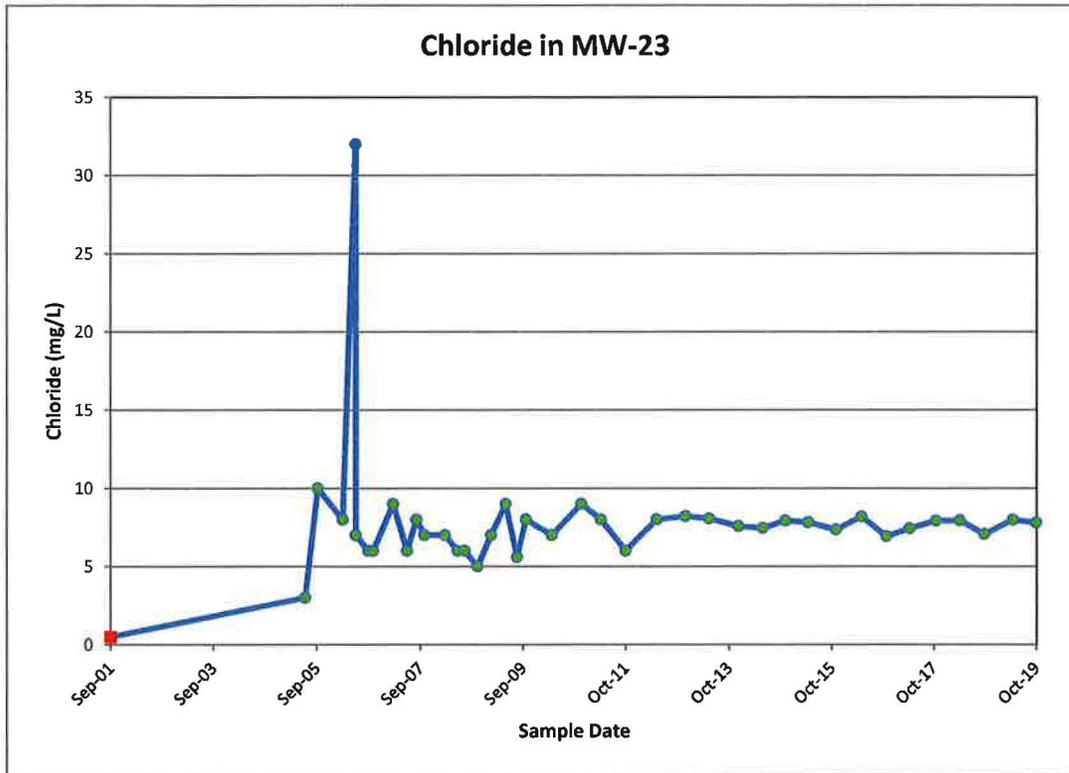
## Time concentration plots for MW-22



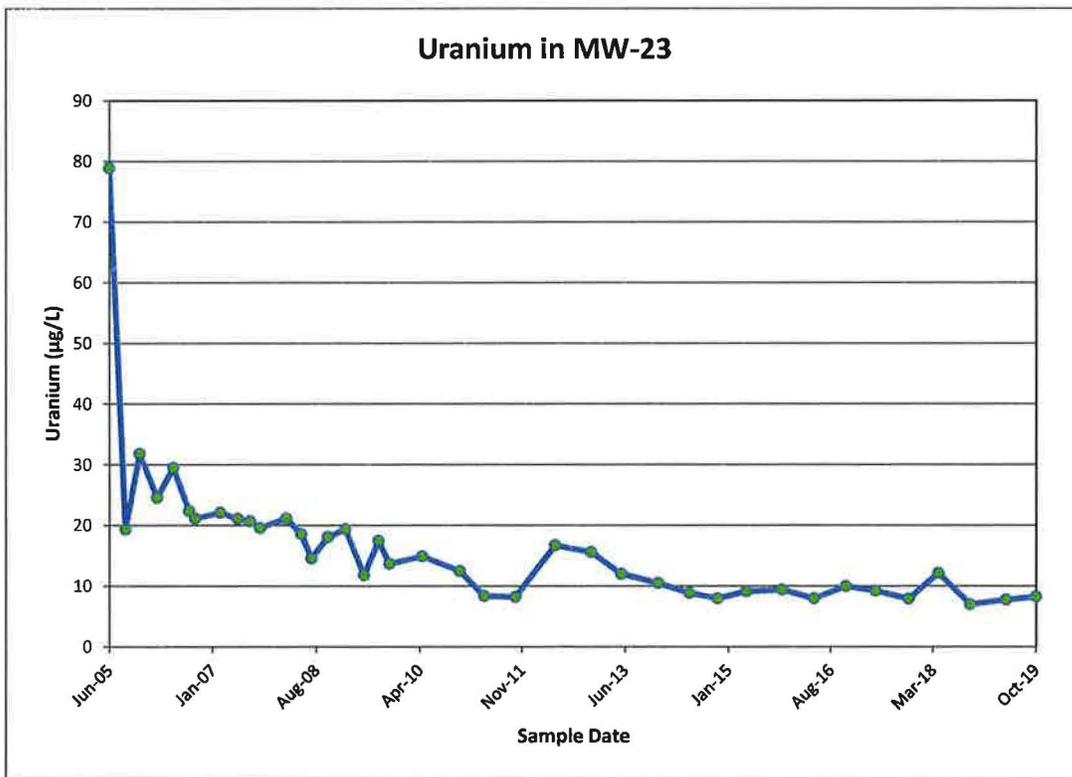
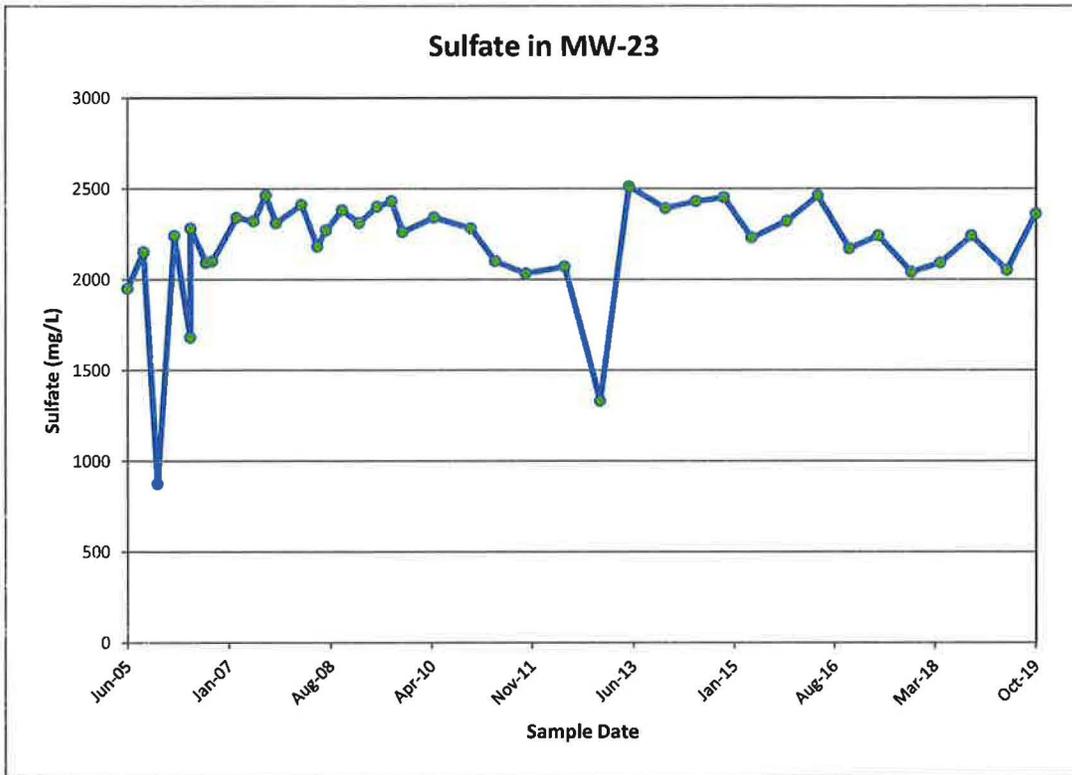
## Time concentration plots for MW-22



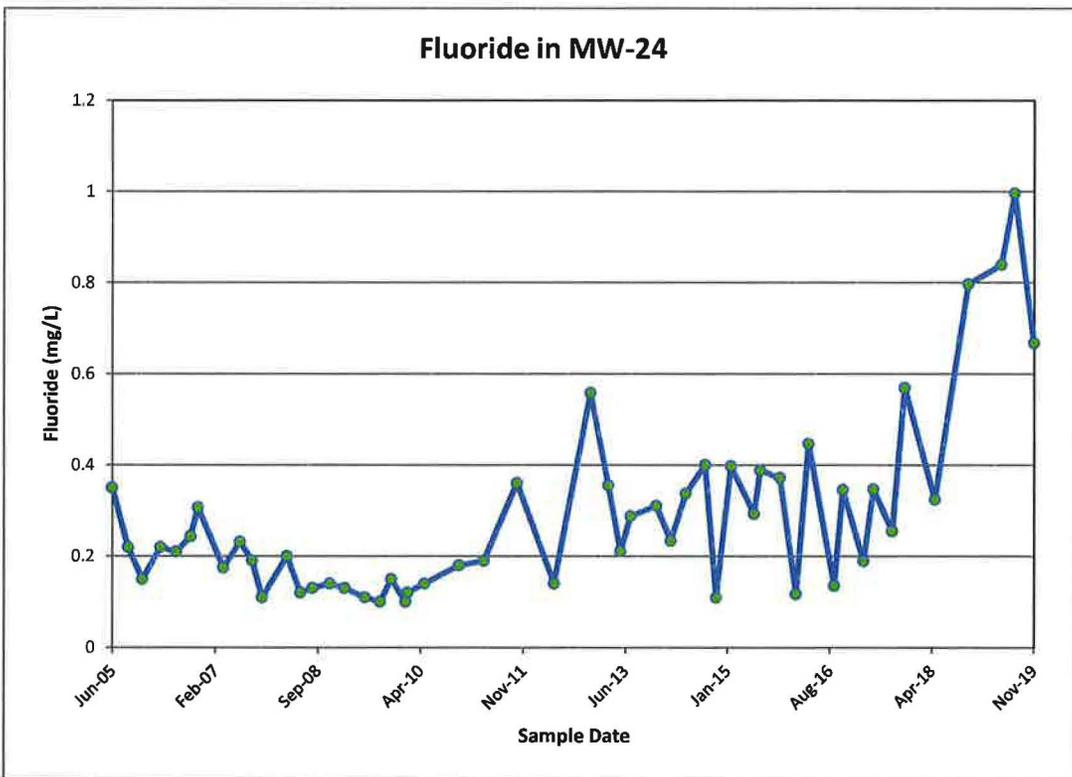
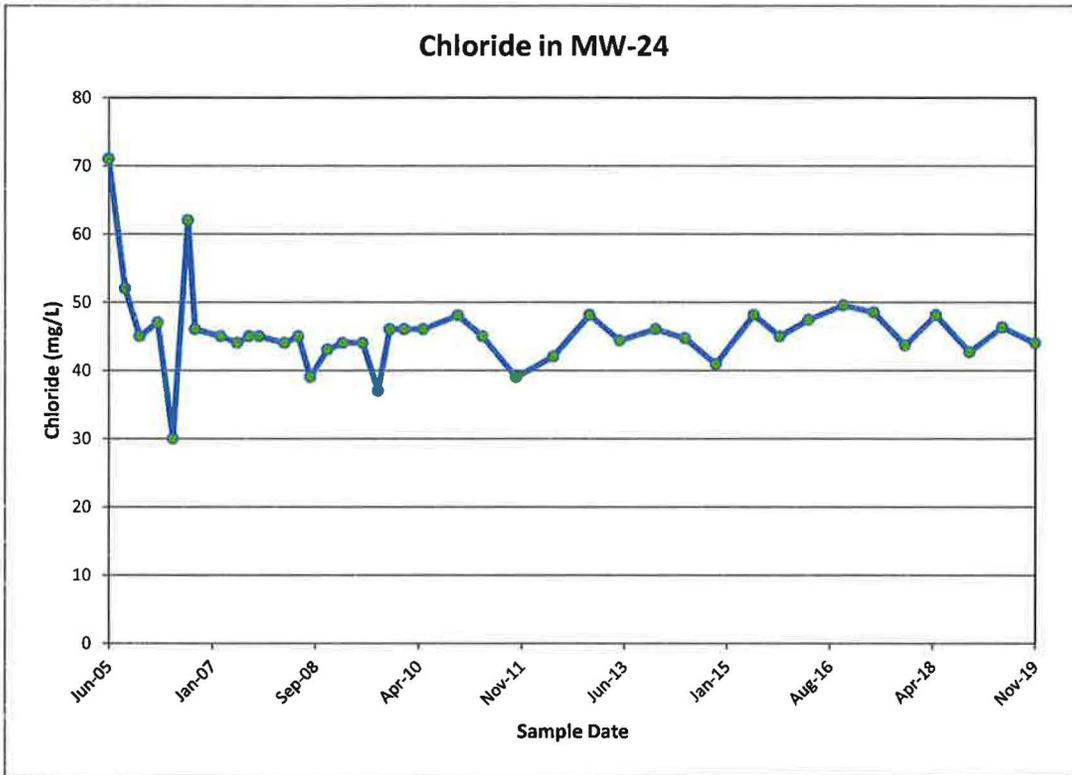
### Time concentration plots for MW-23



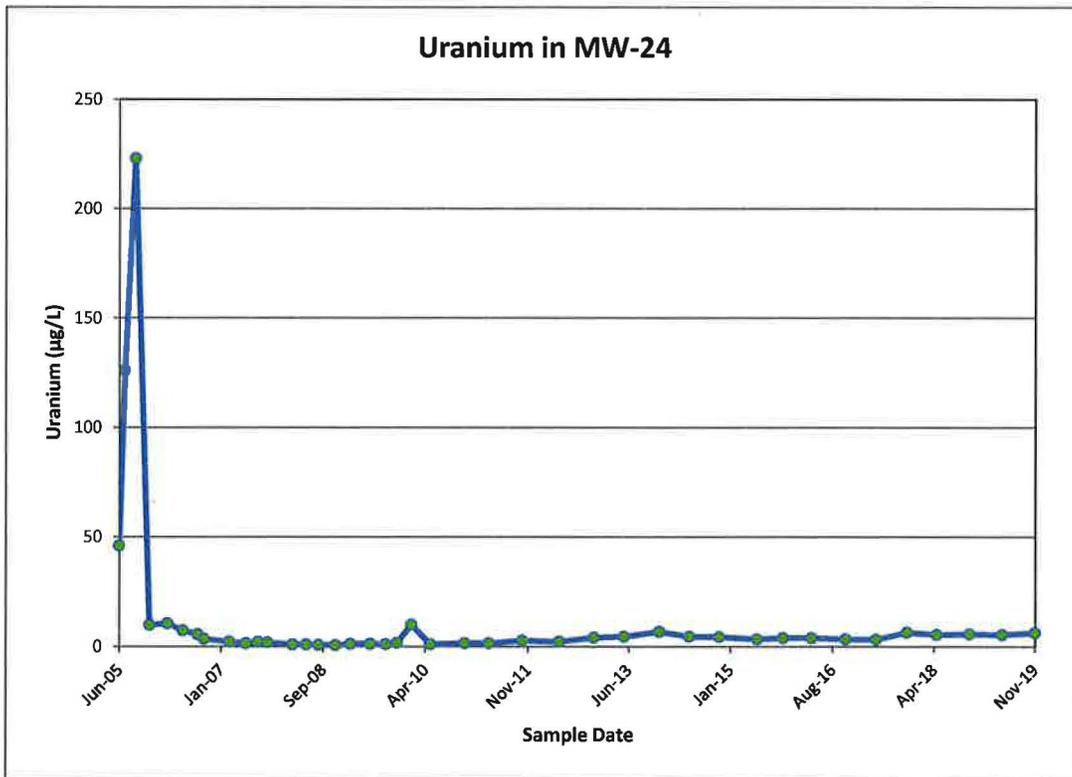
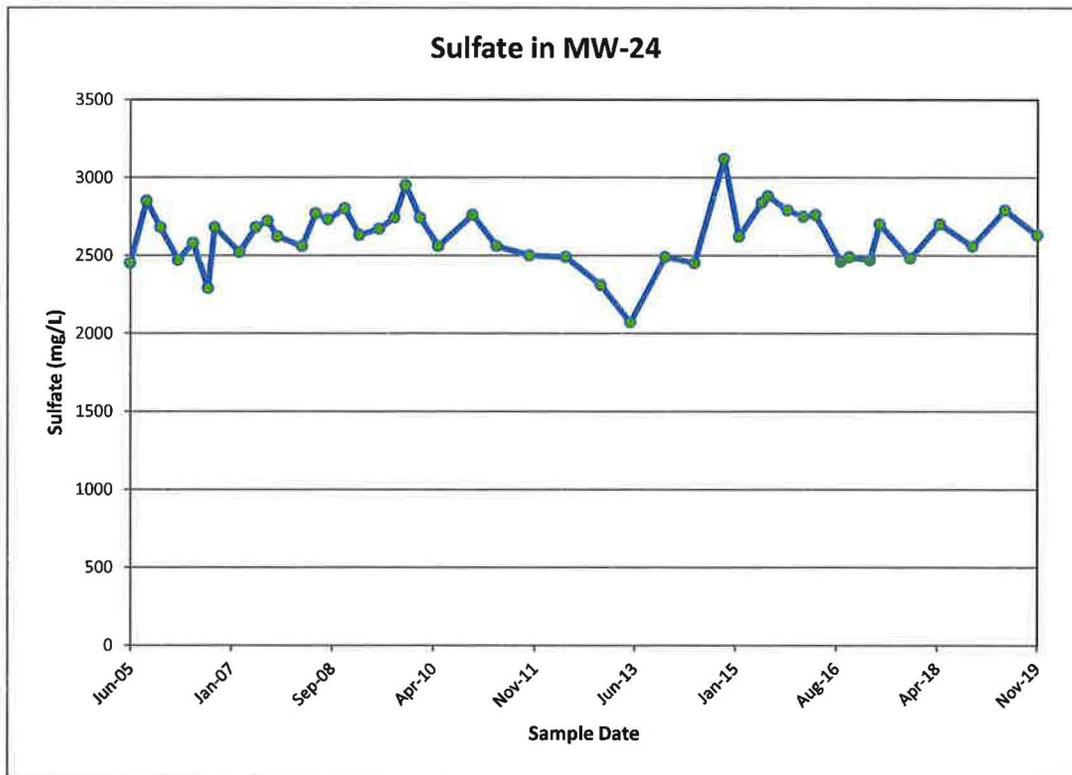
### Time concentration plots for MW-23



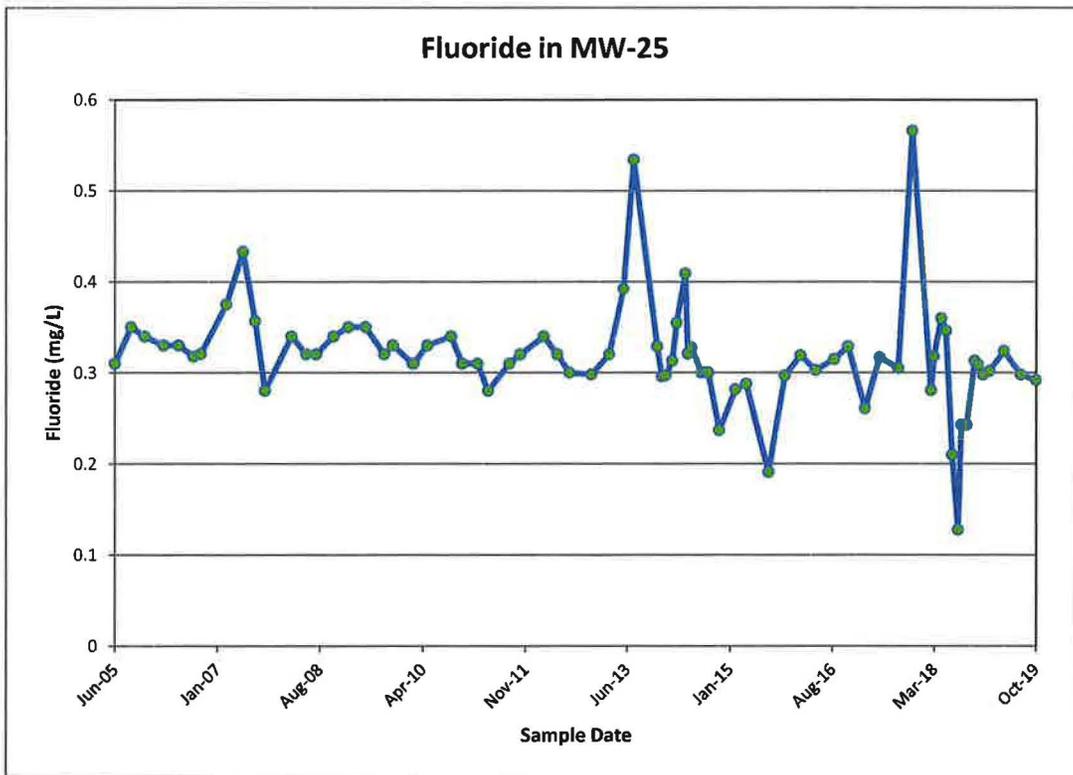
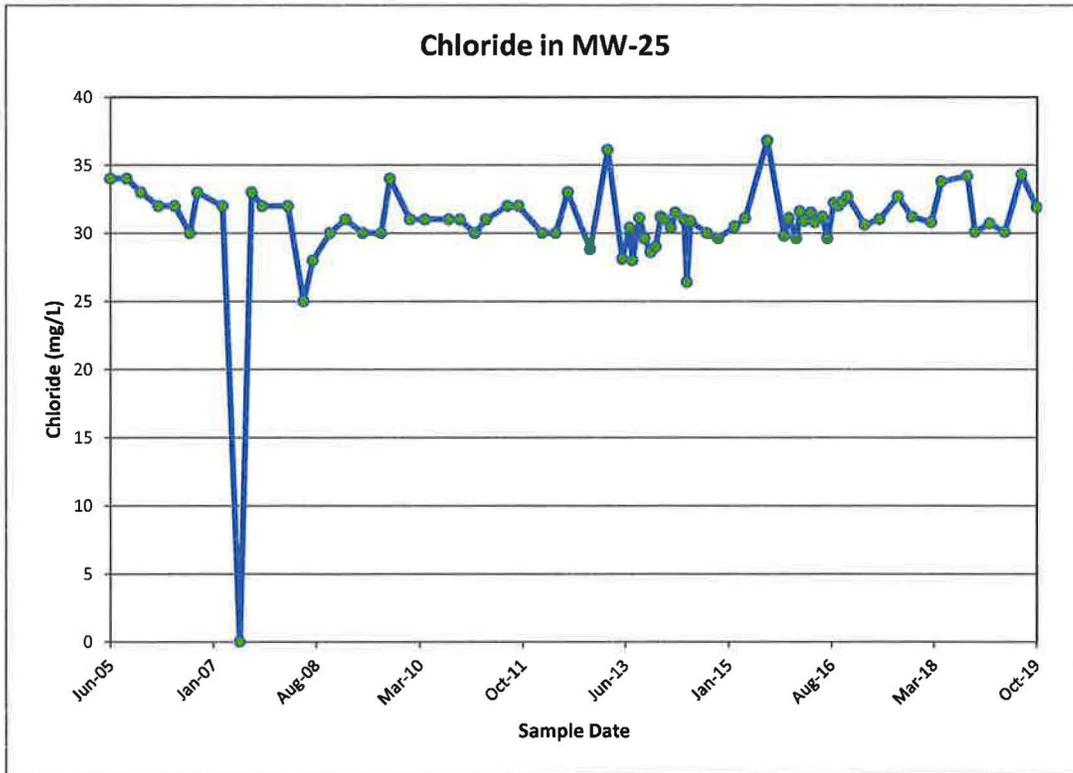
### Time concentration plots for MW-24



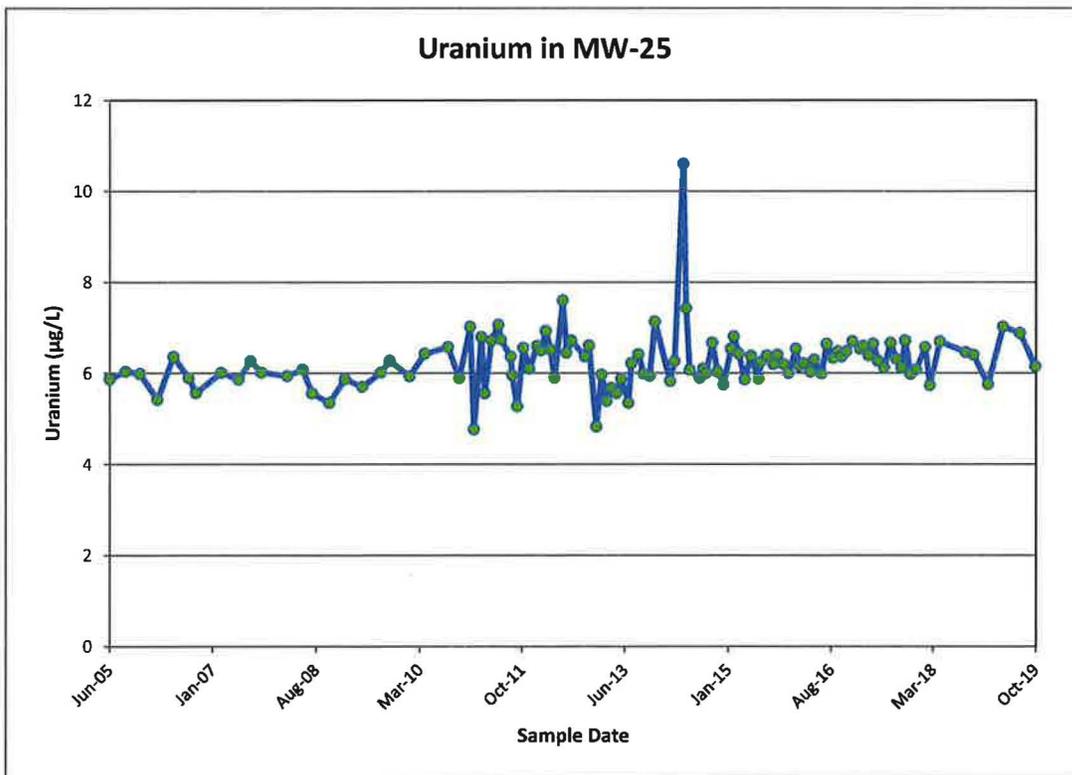
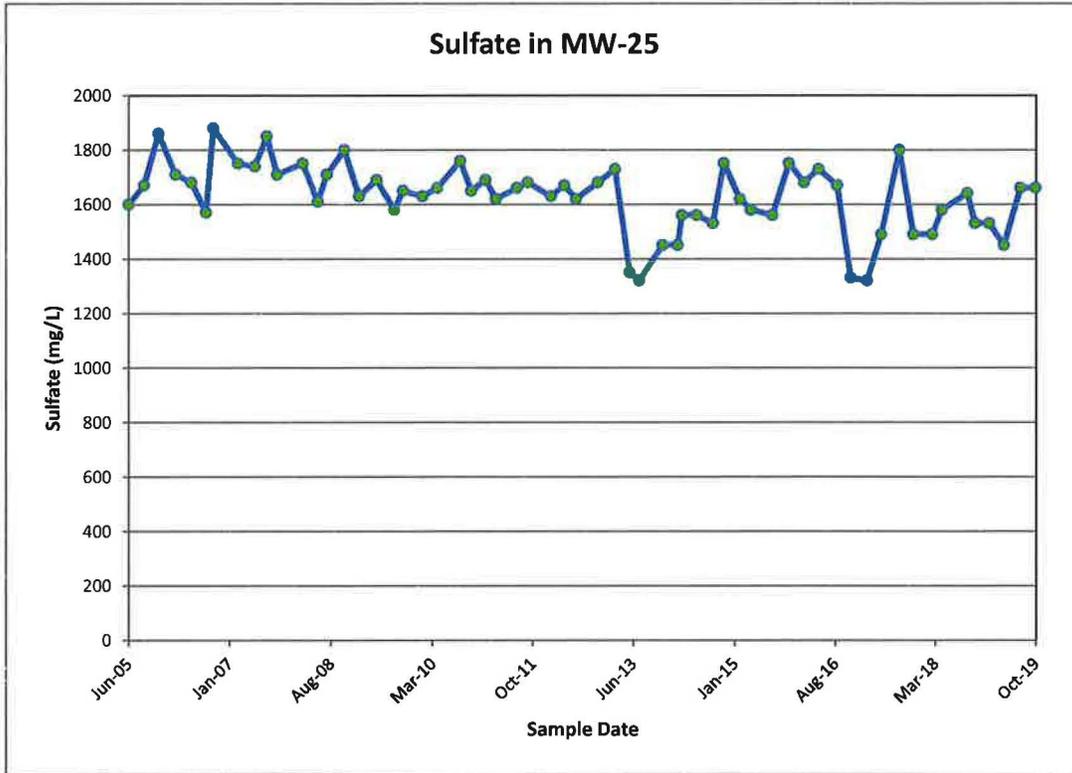
### Time concentration plots for MW-24



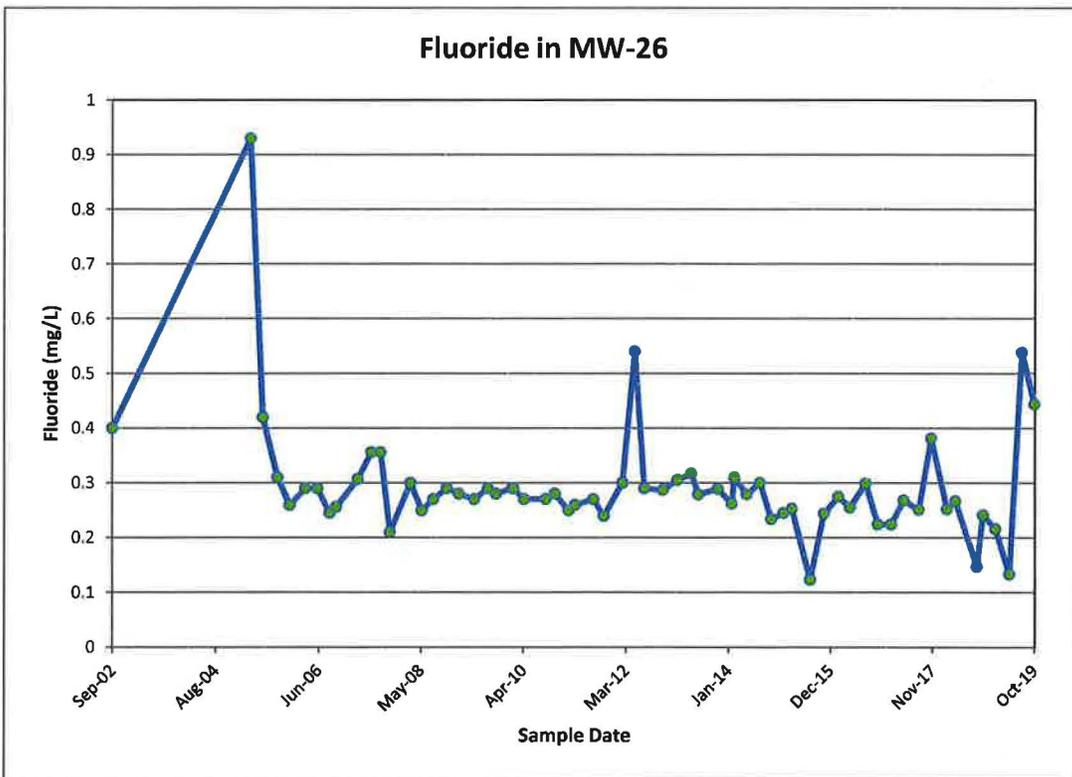
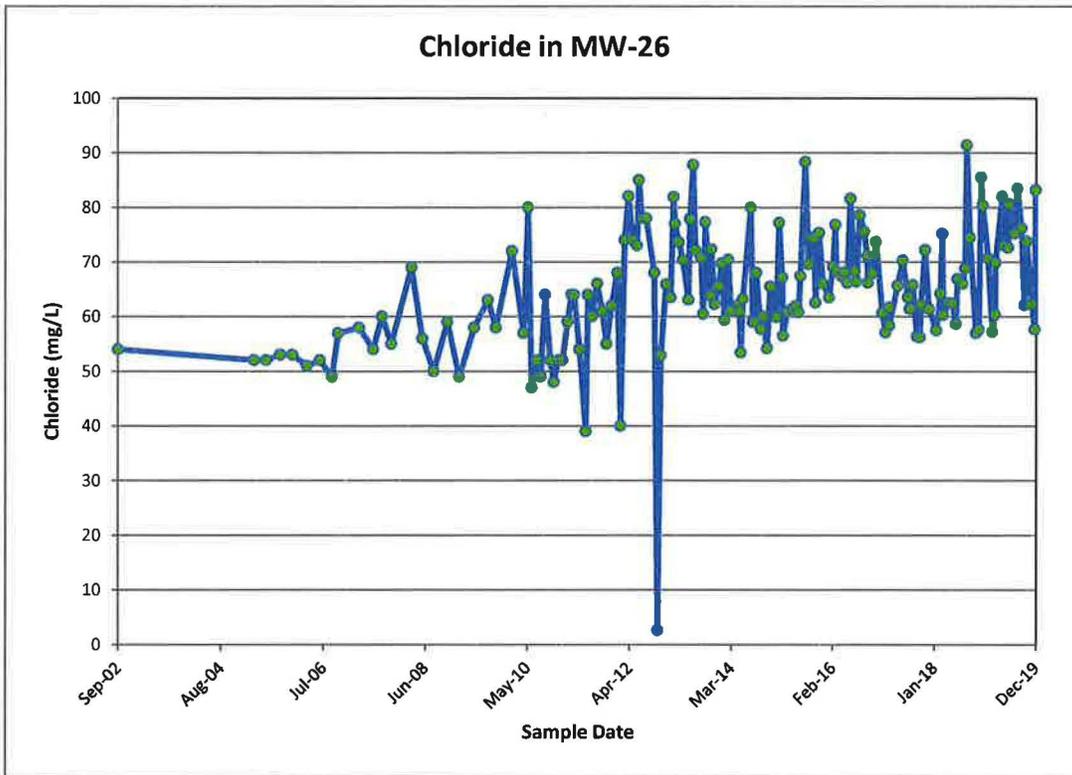
### Time concentration plots for MW-25



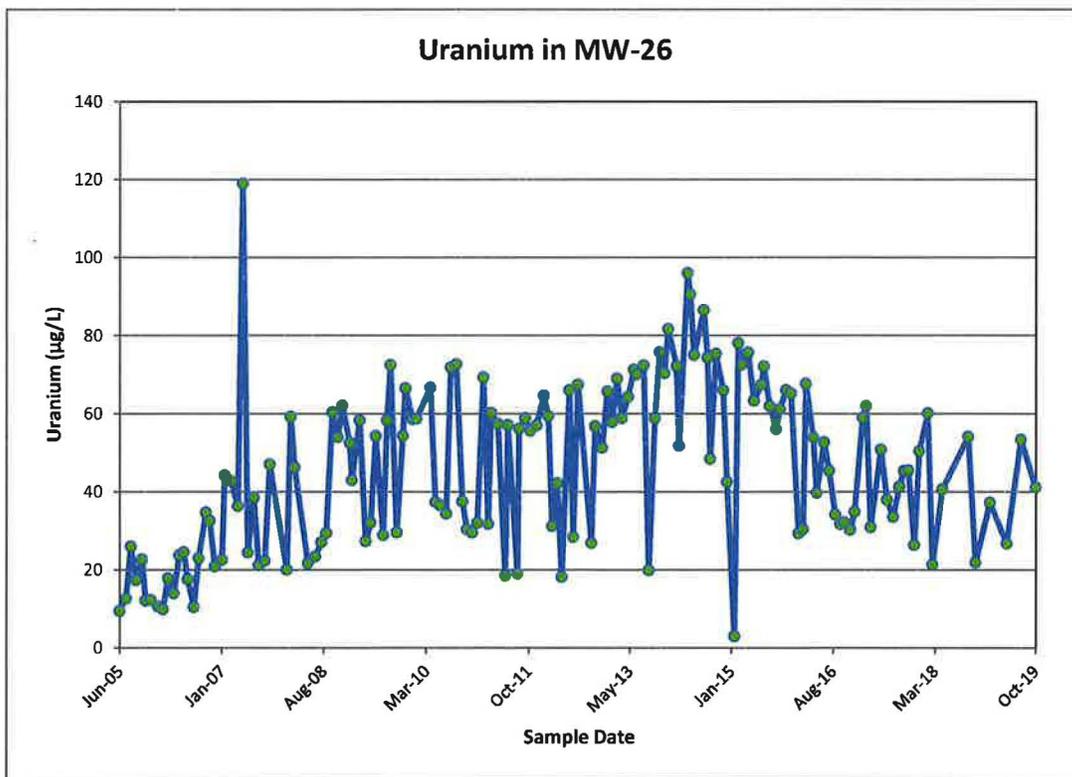
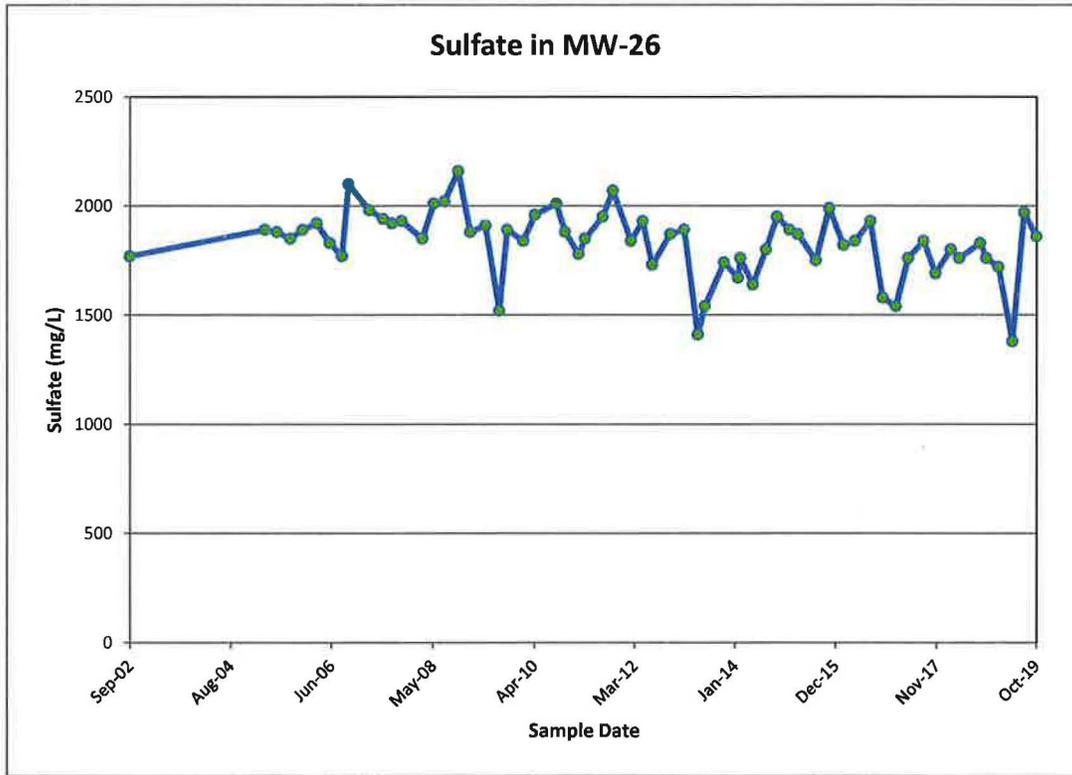
### Time concentration plots for MW-25



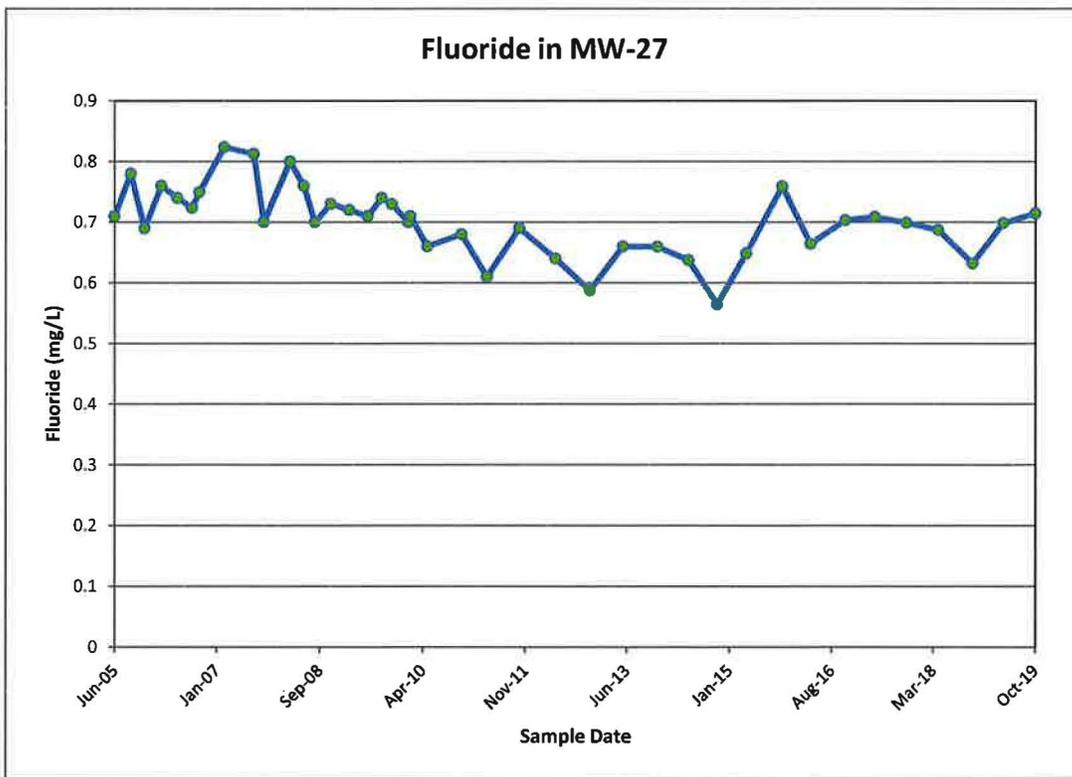
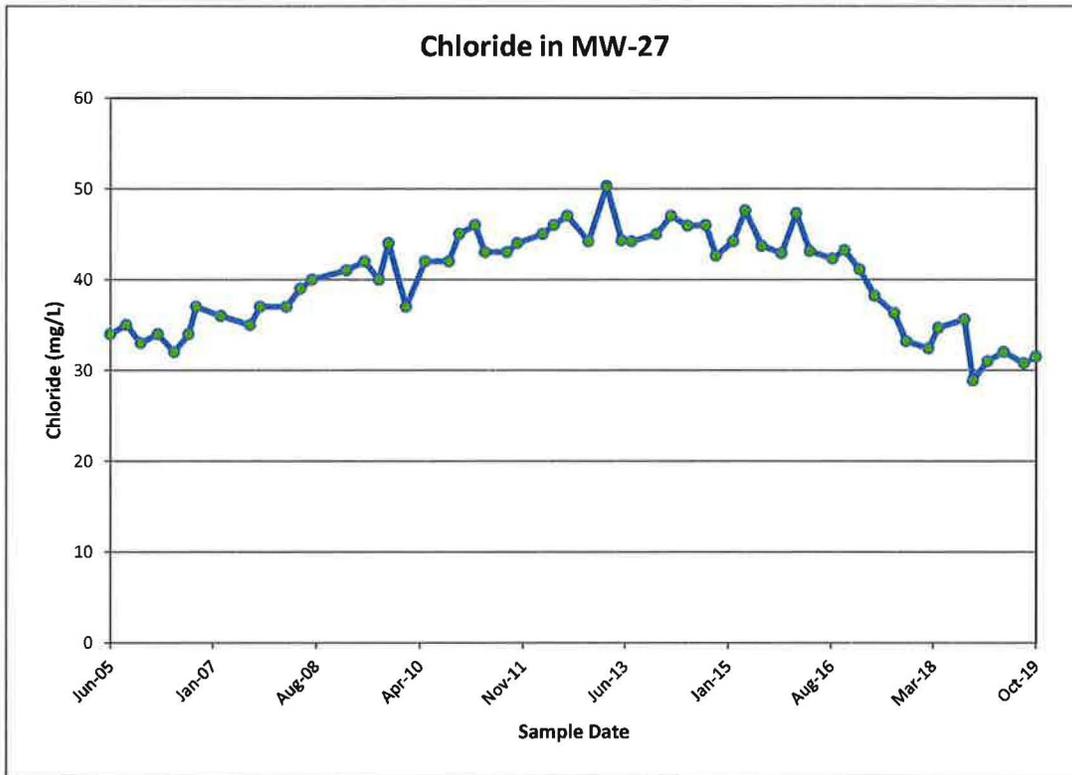
## Time concentration plots for MW-26



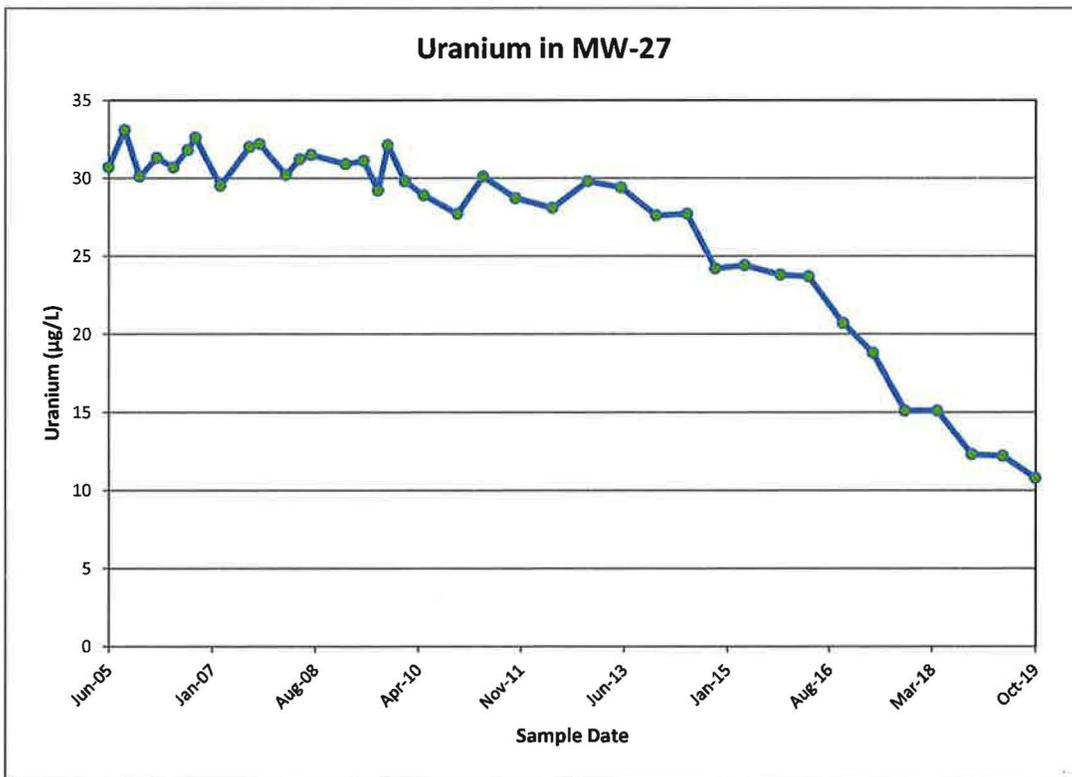
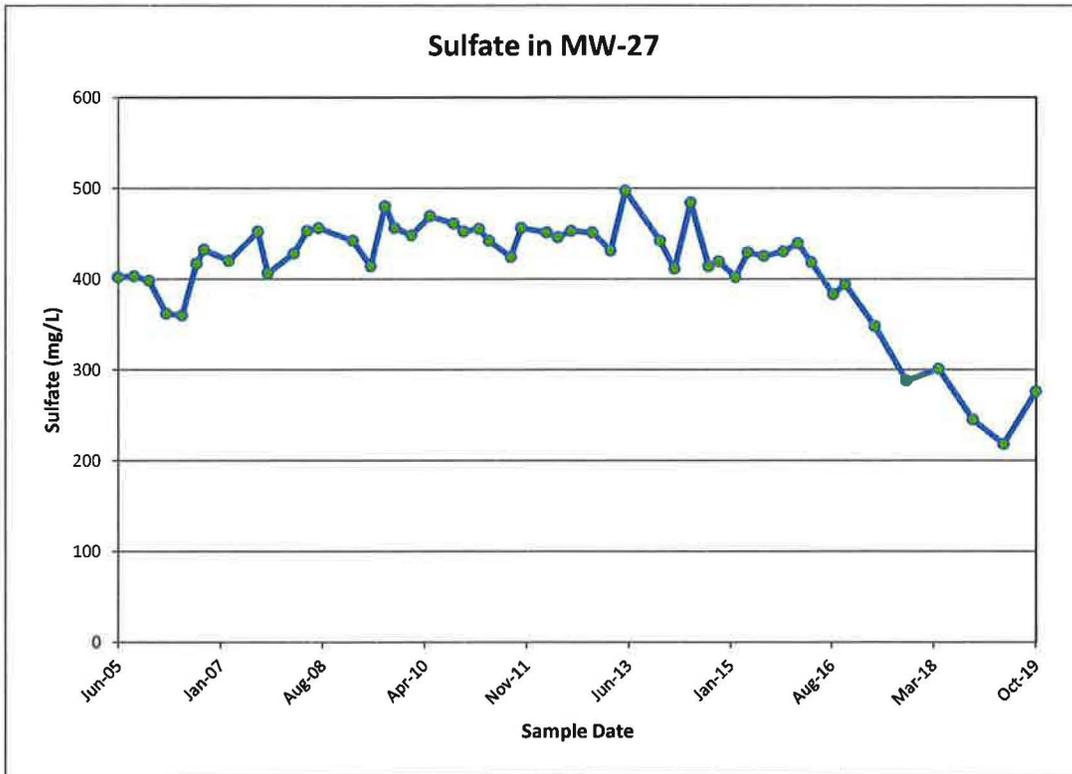
### Time concentration plots for MW-26



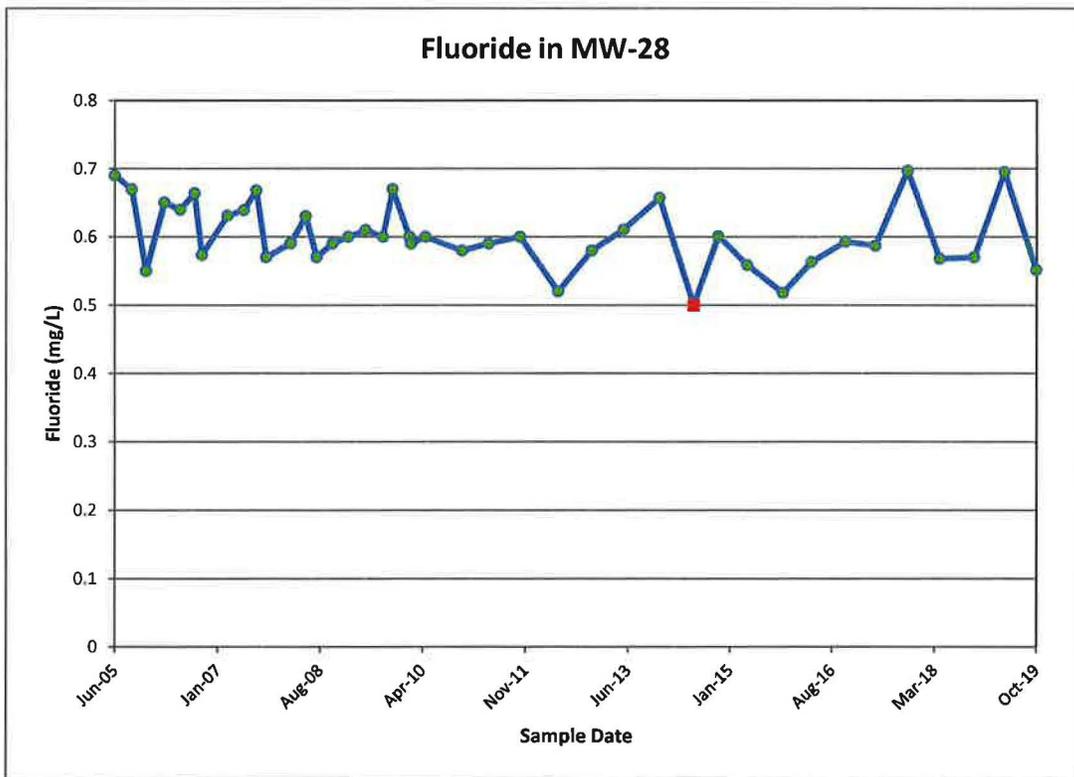
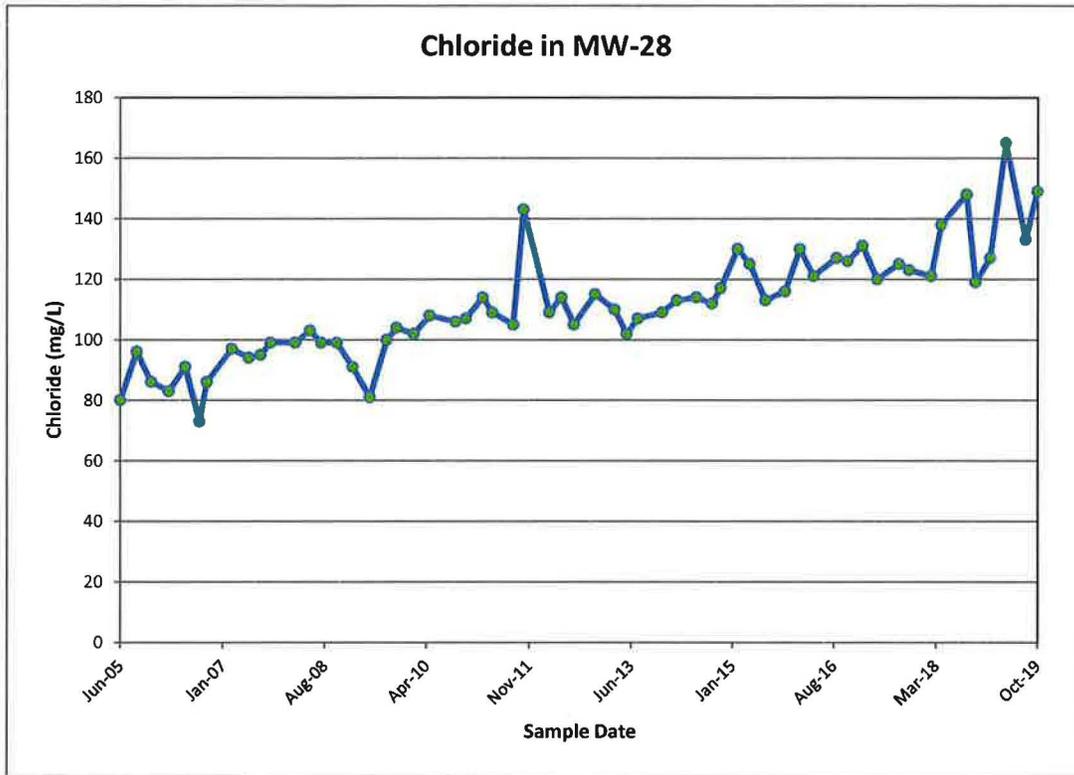
### Time concentration plots for MW-27



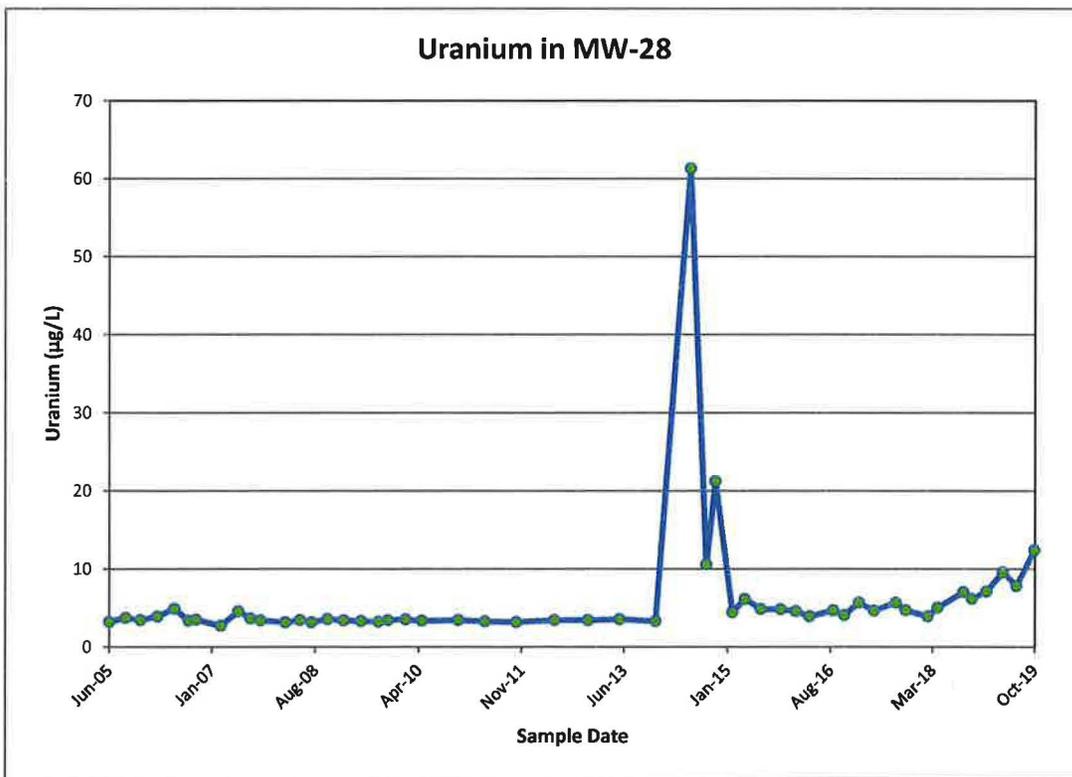
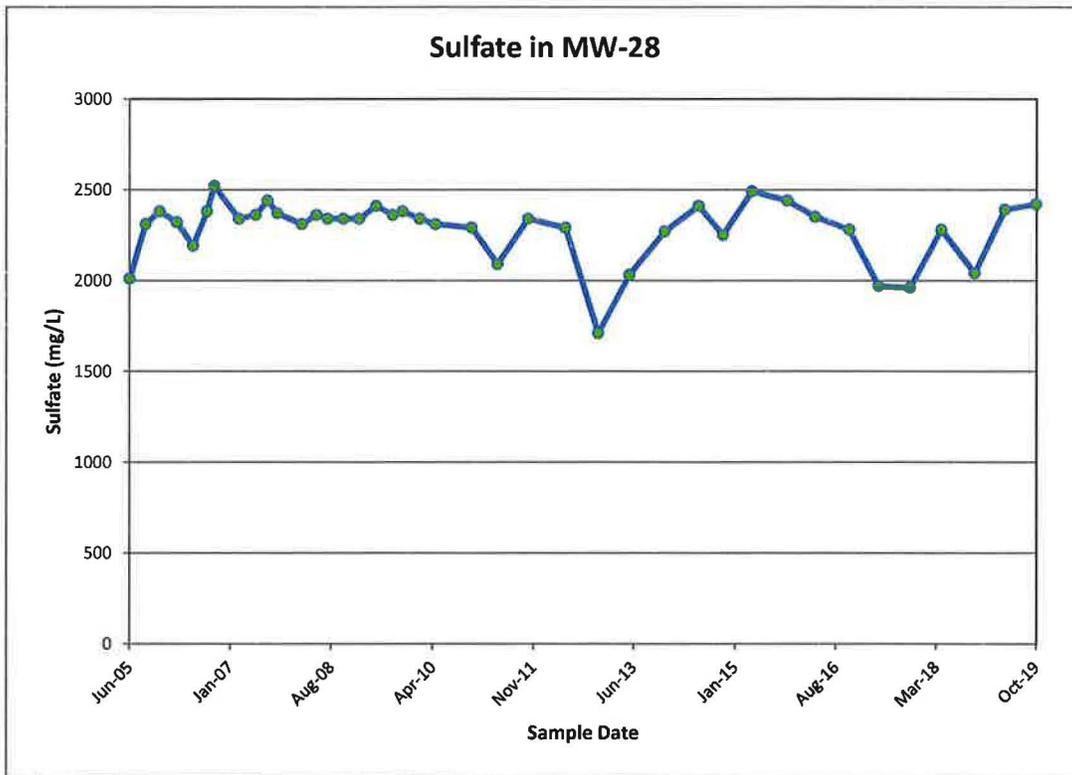
### Time concentration plots for MW-27



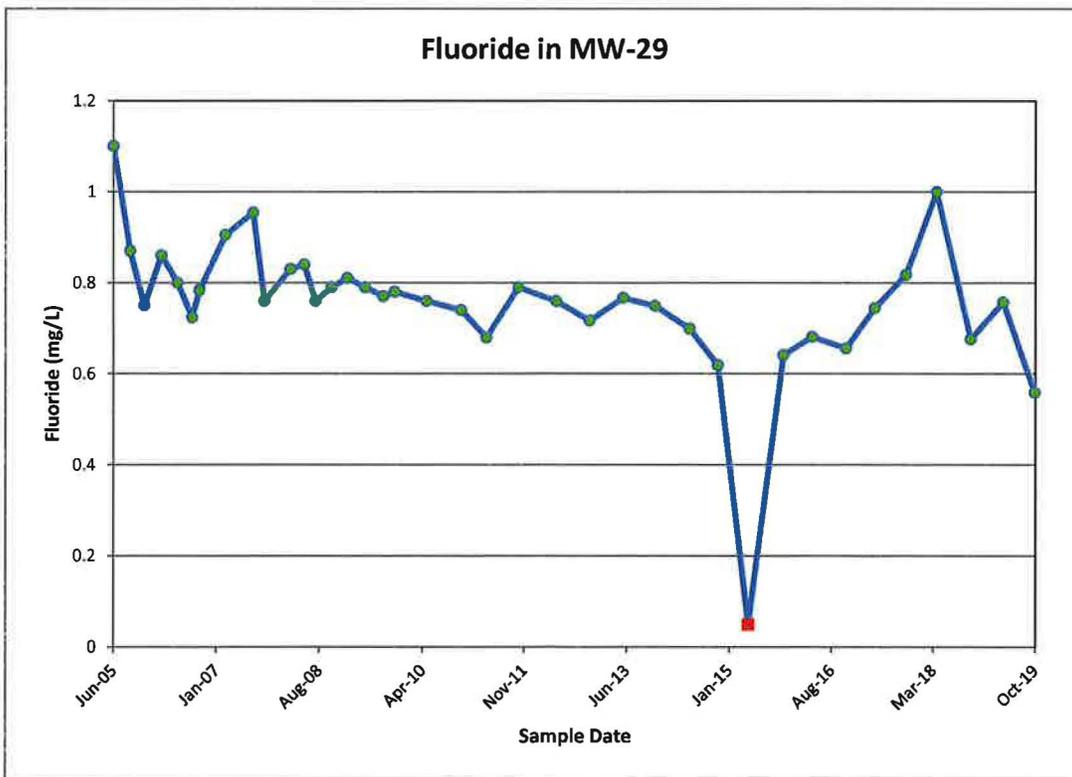
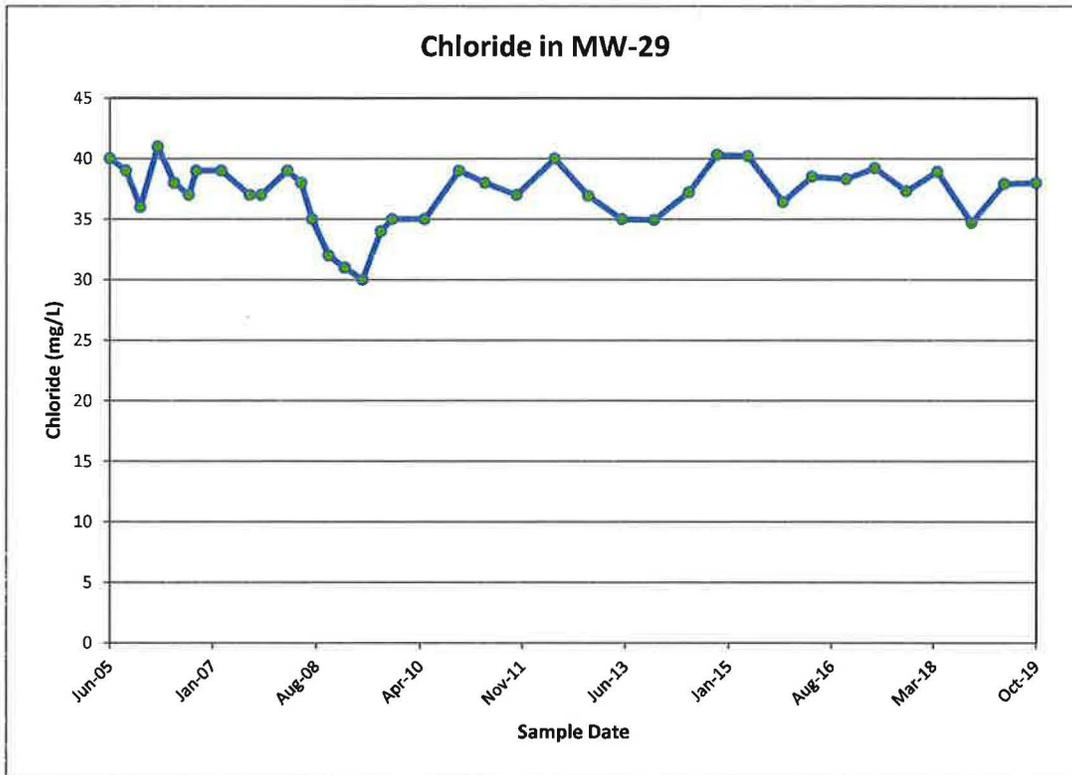
## Time concentration plots for MW-28



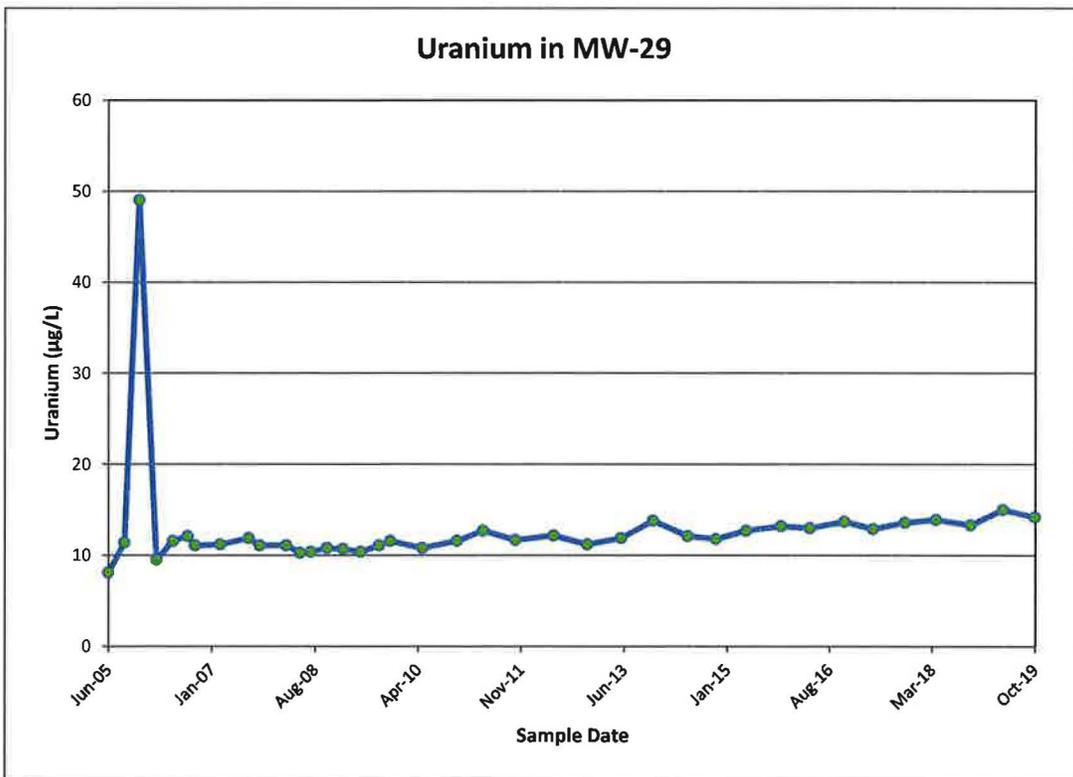
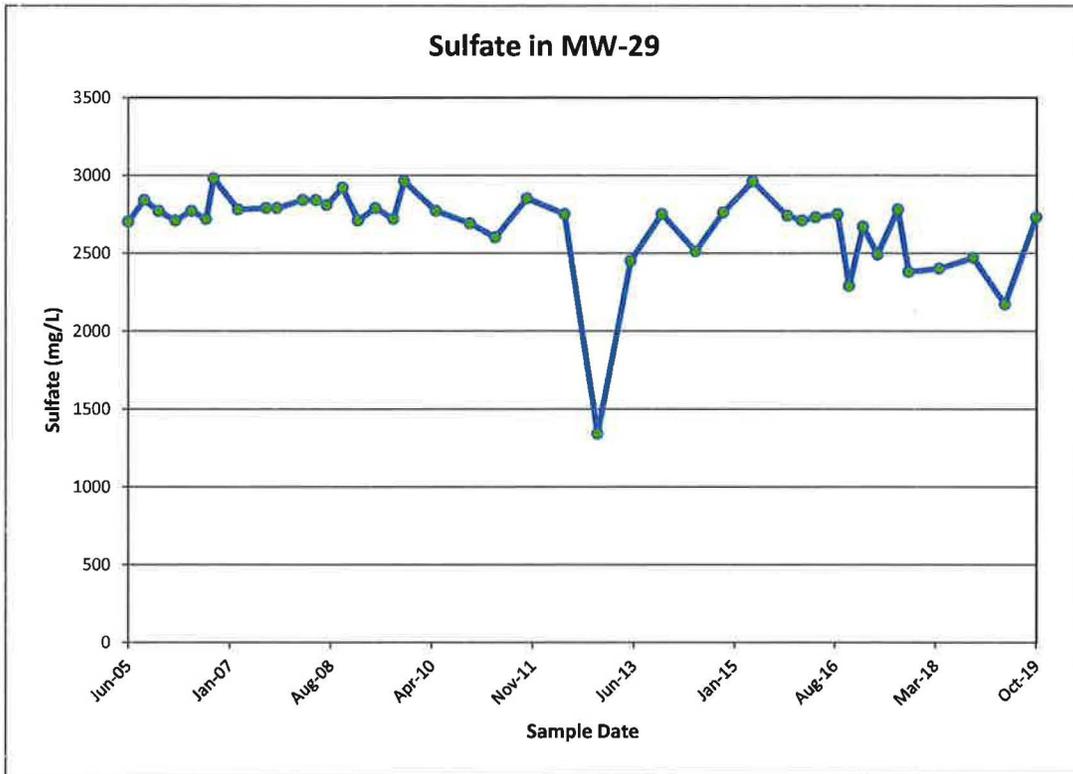
### Time concentration plots for MW-28



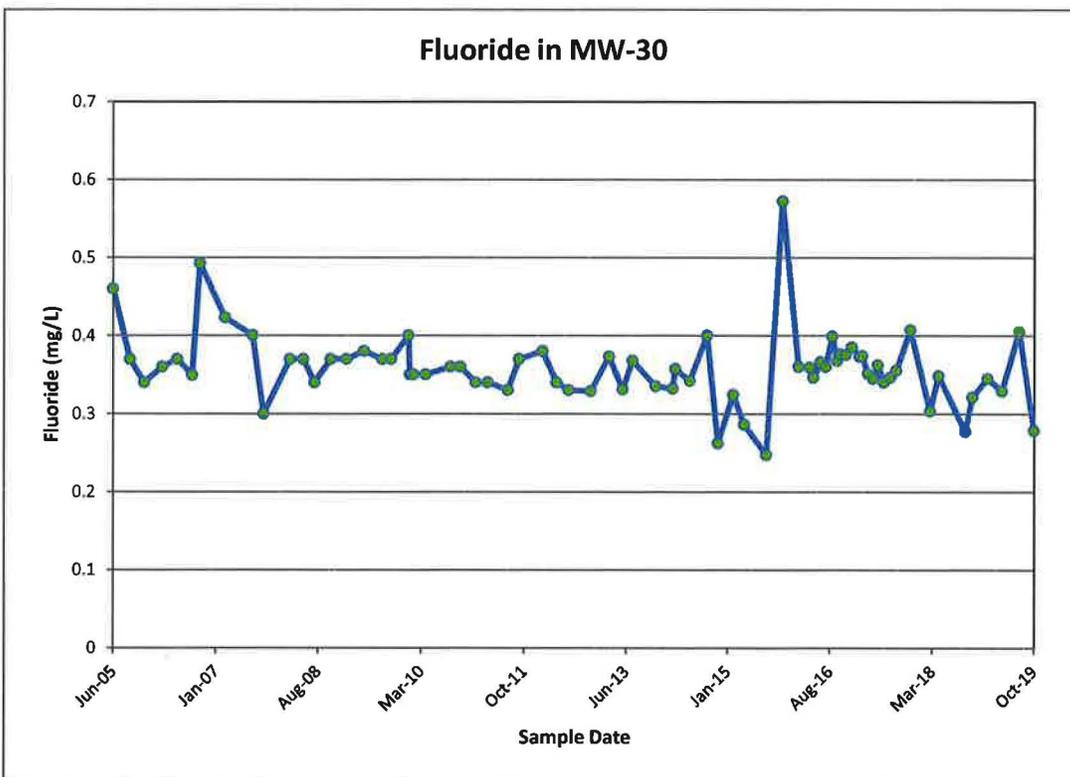
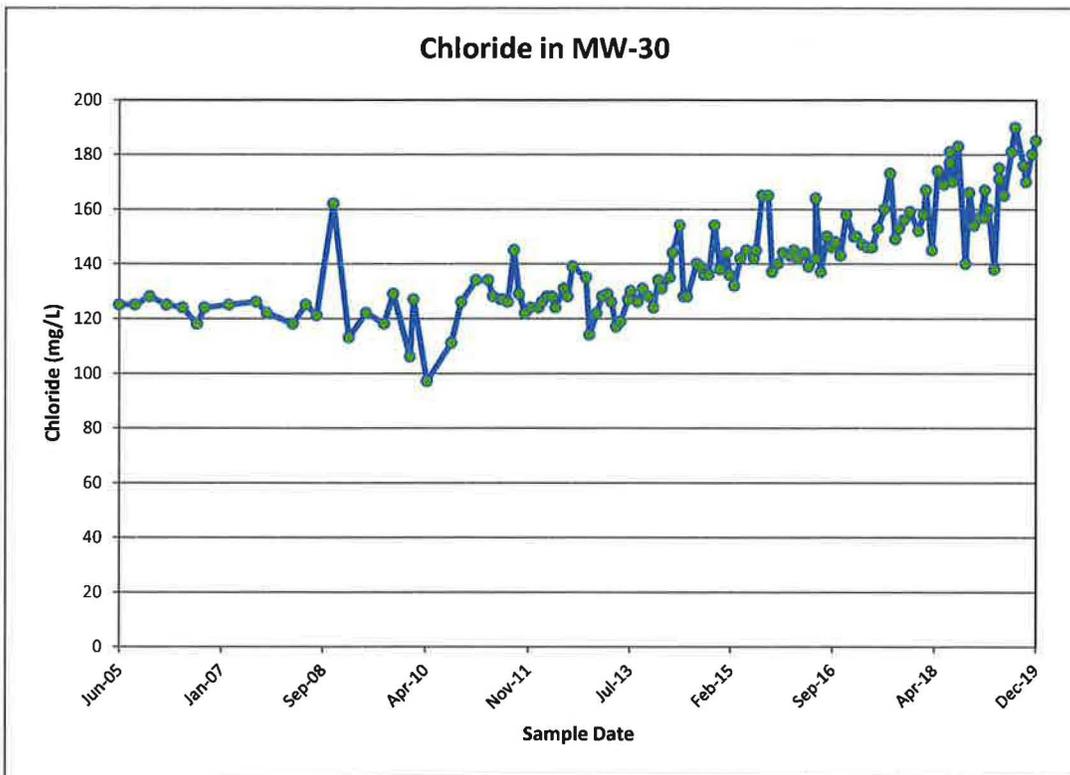
### Time concentration plots for MW-29



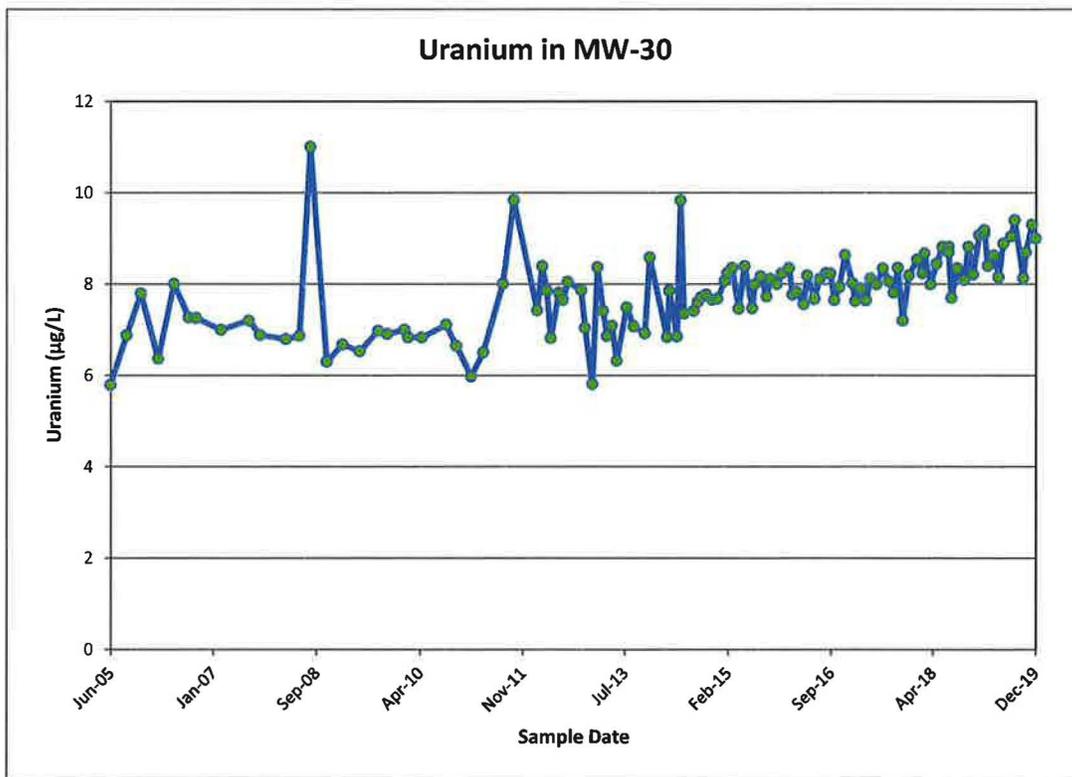
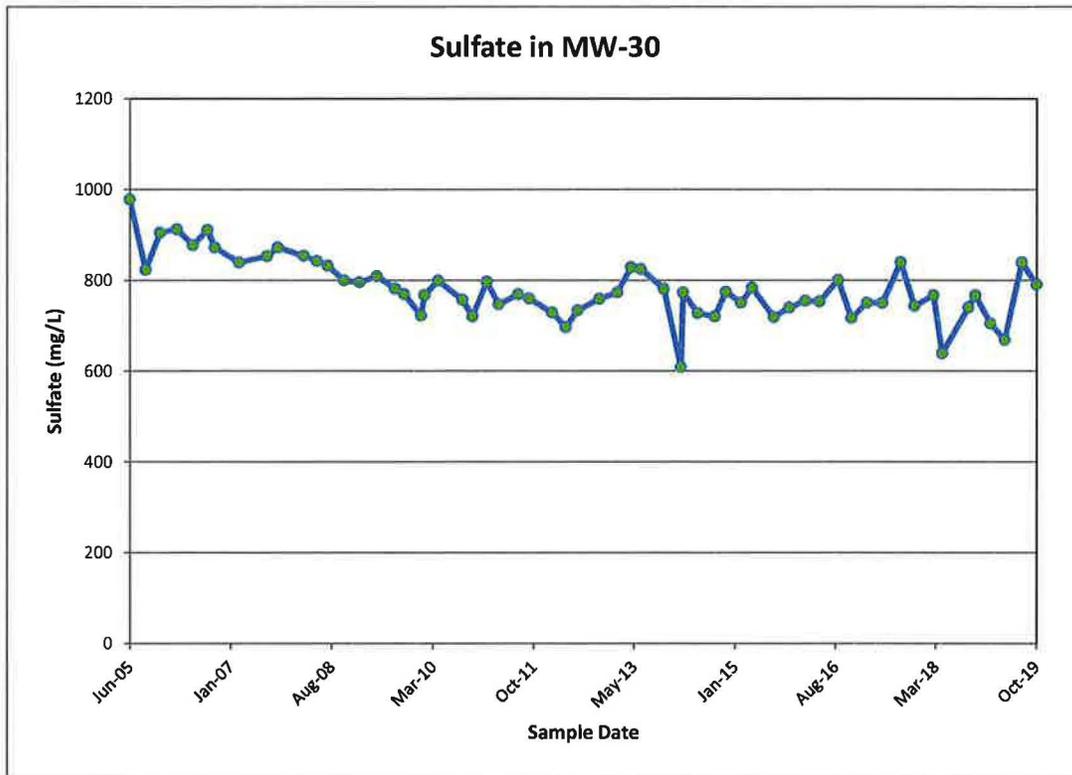
### Time concentration plots for MW-29



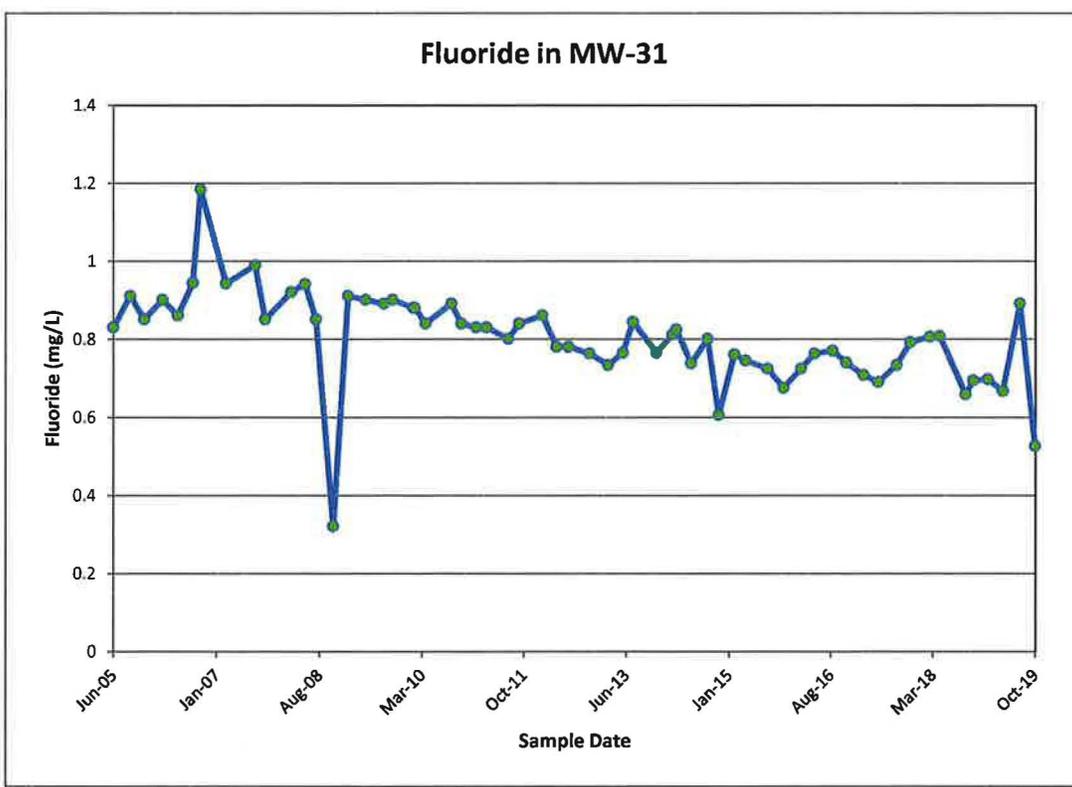
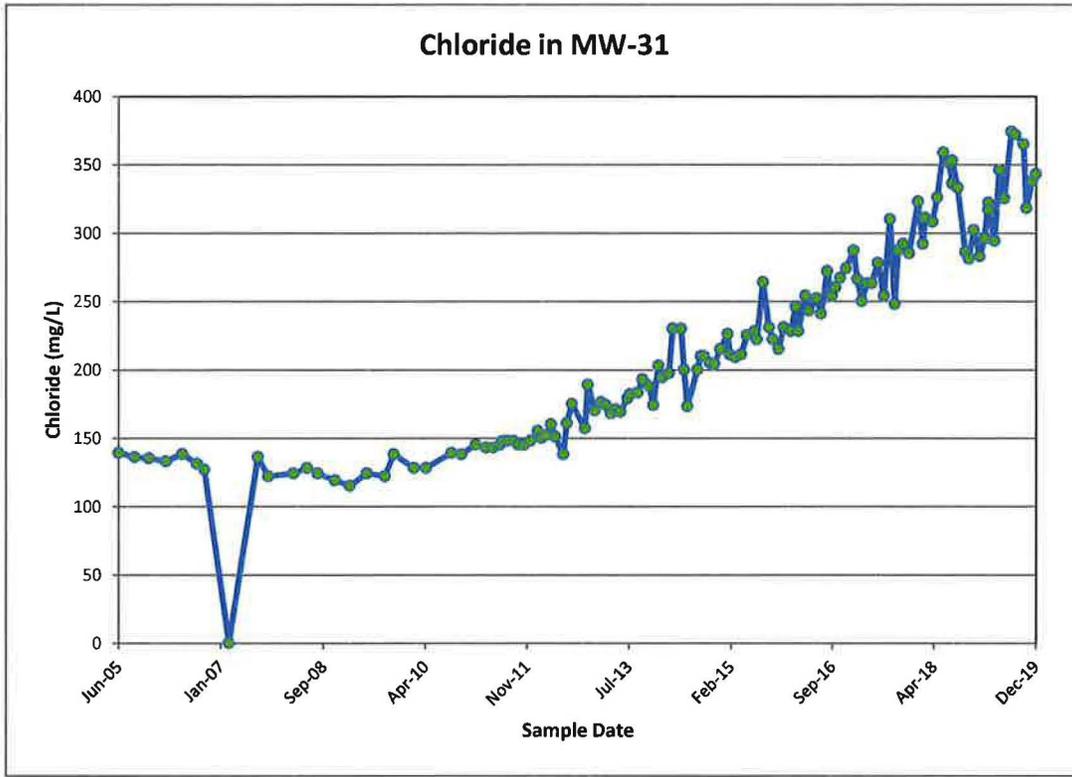
### Time concentration plots for MW-30



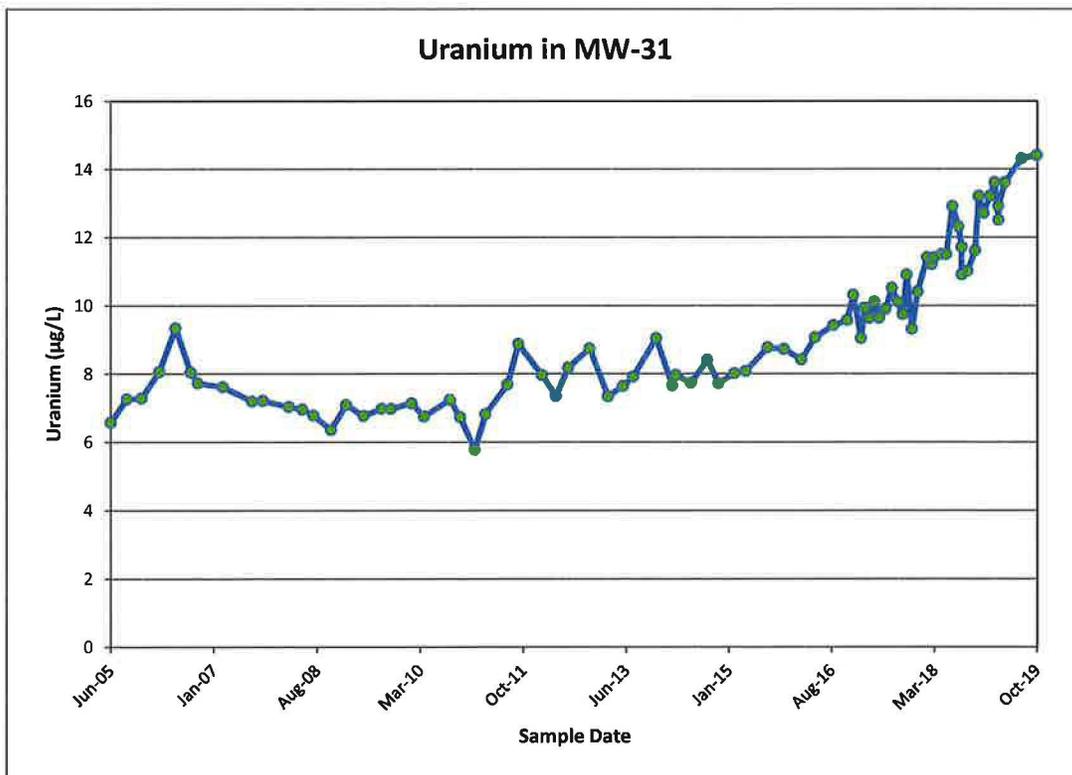
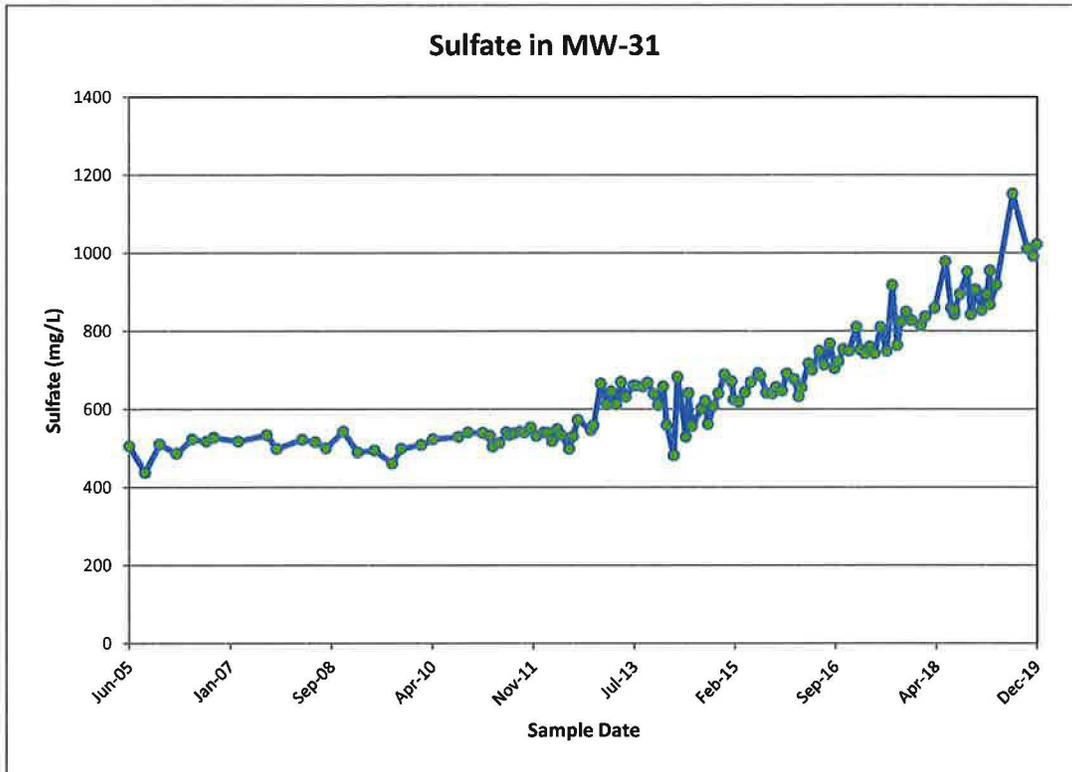
### Time concentration plots for MW-30



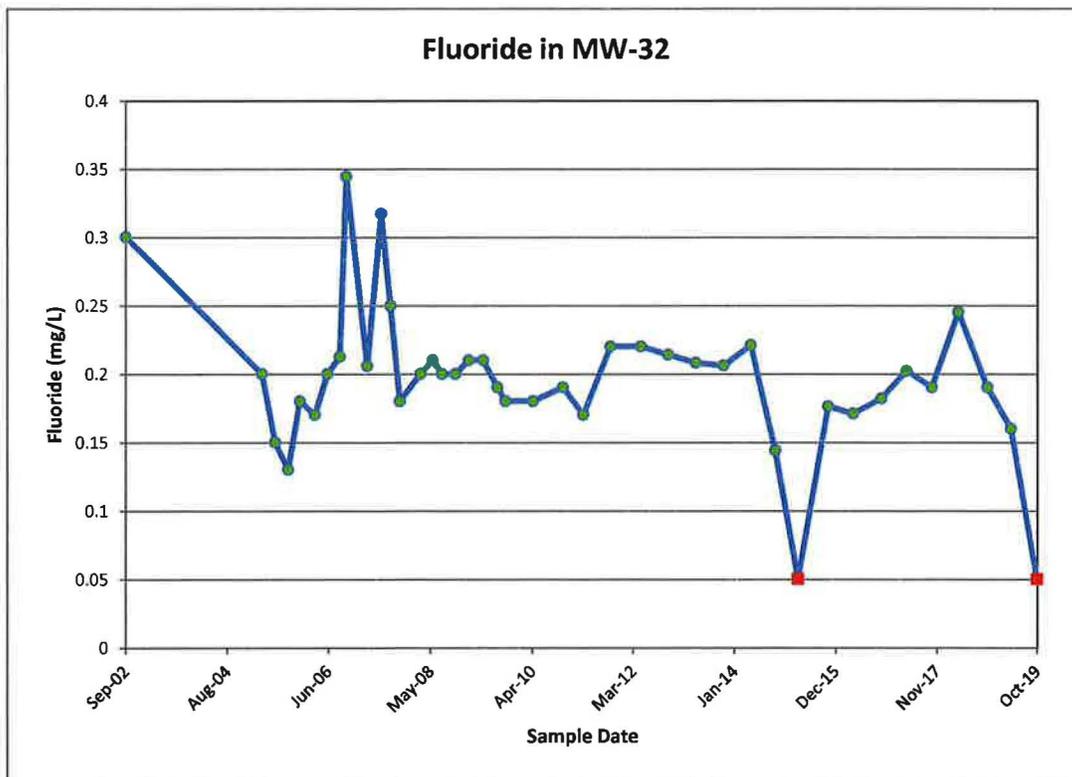
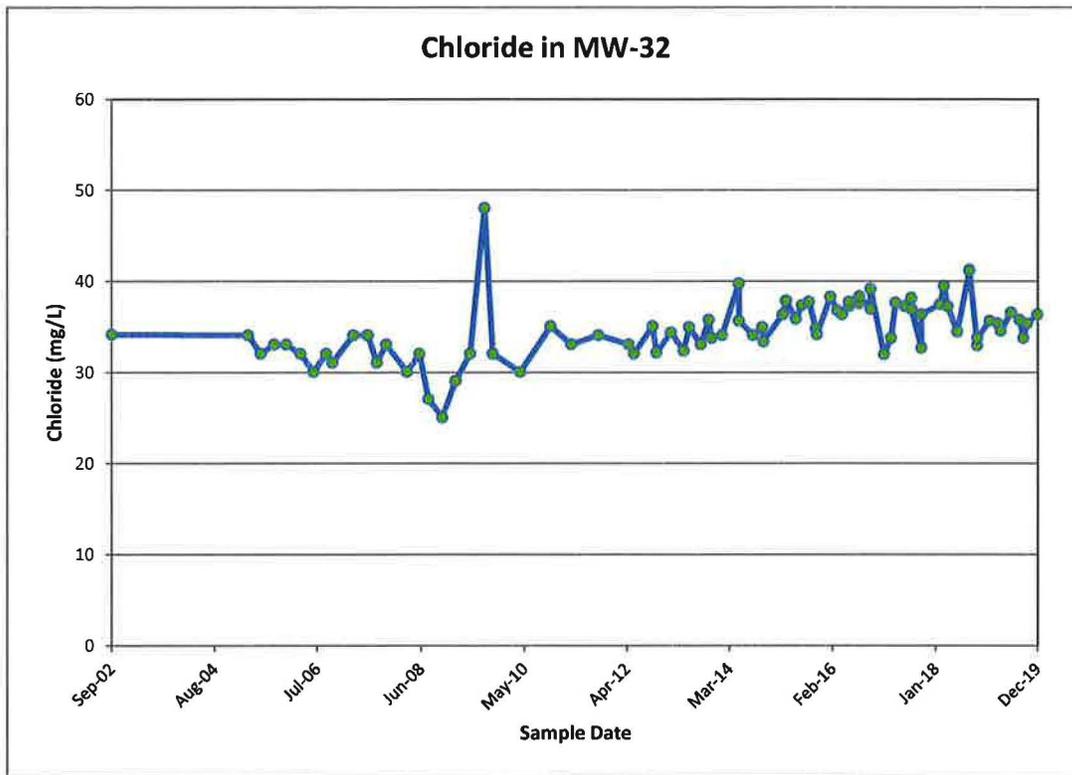
### Time concentration plots for MW-31



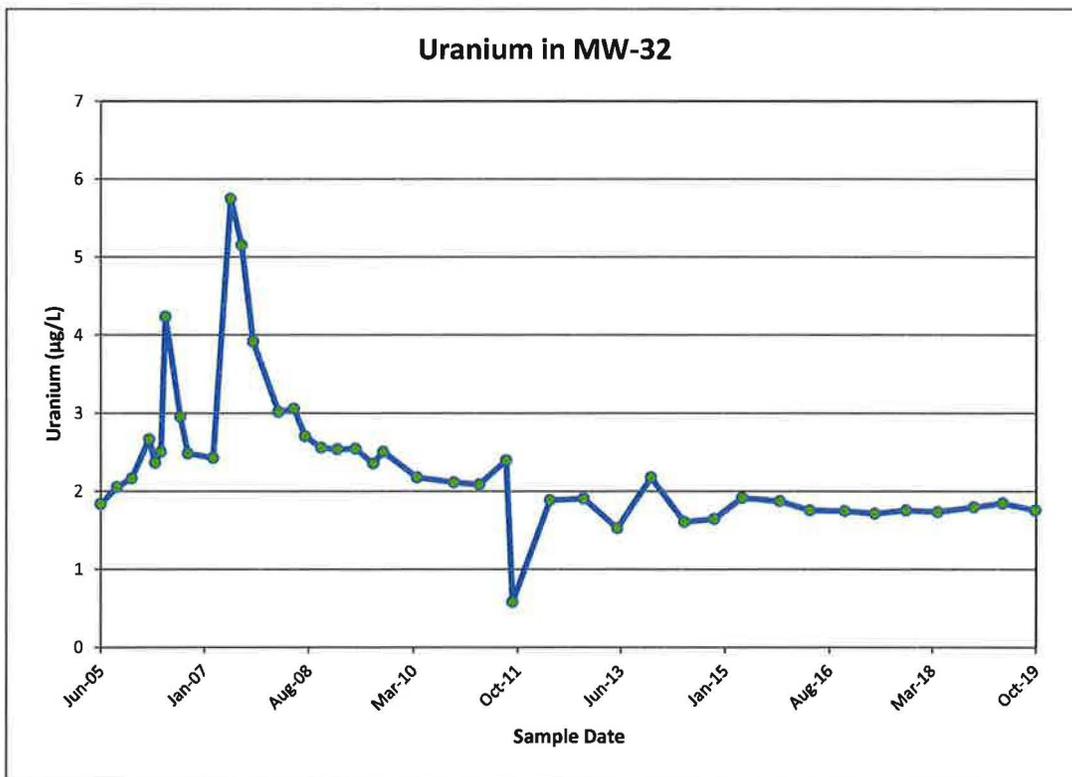
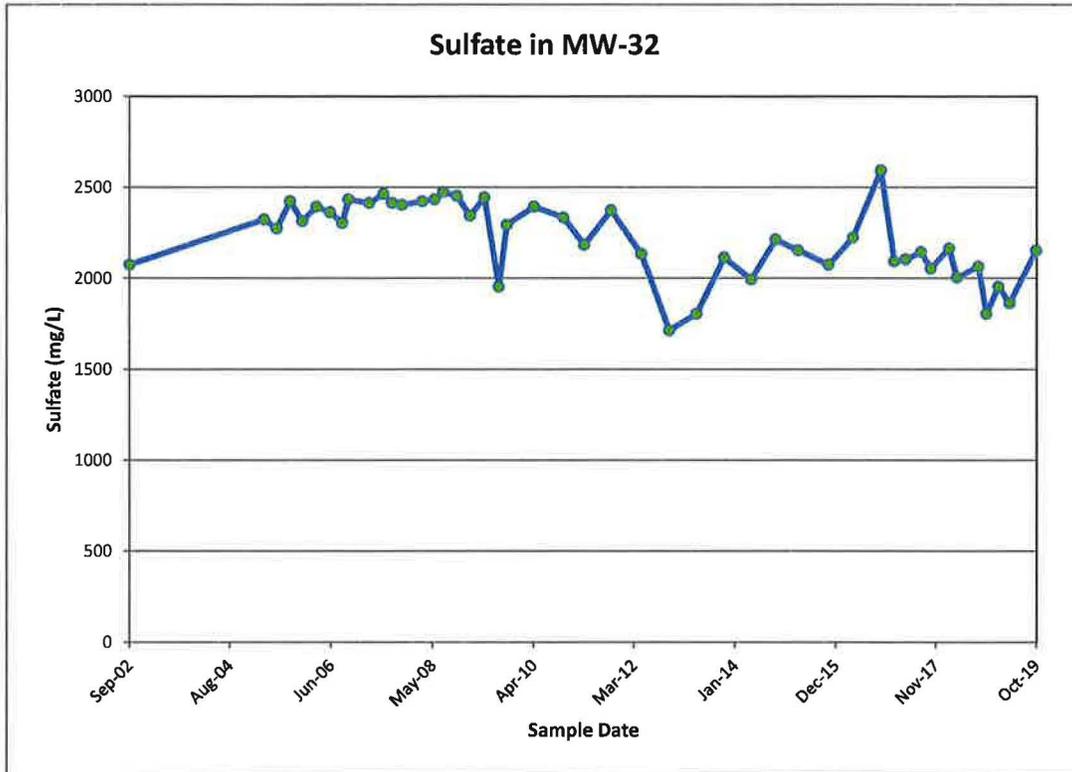
## Time concentration plots for MW-31



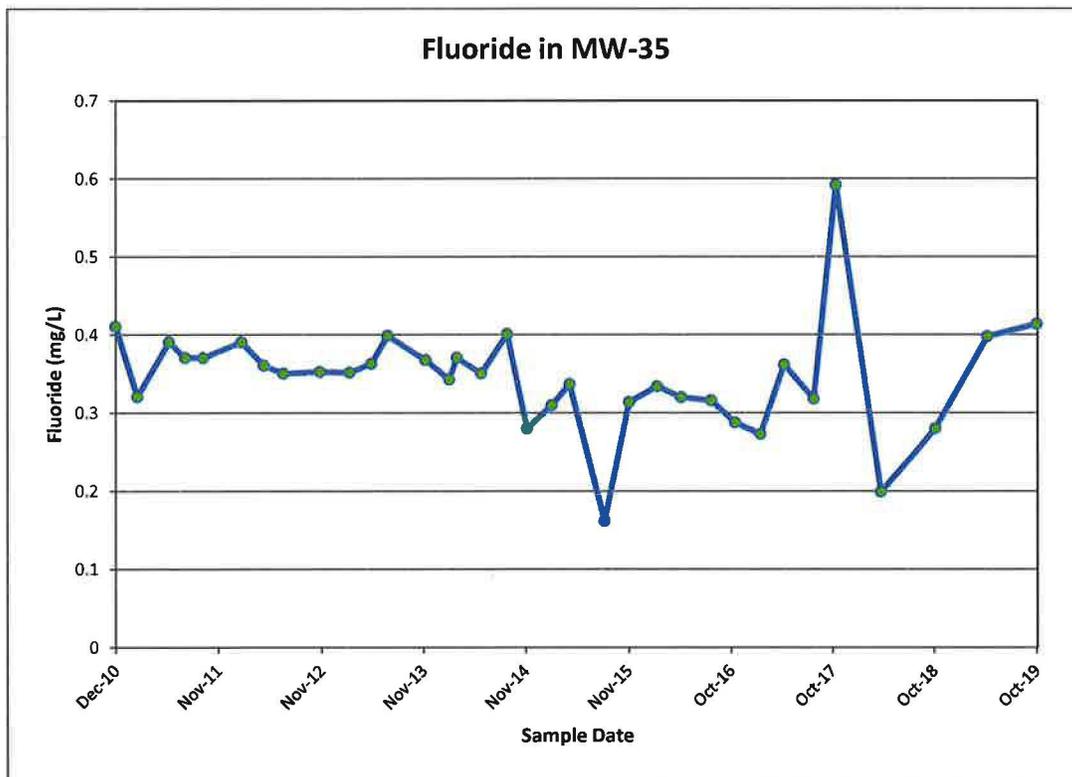
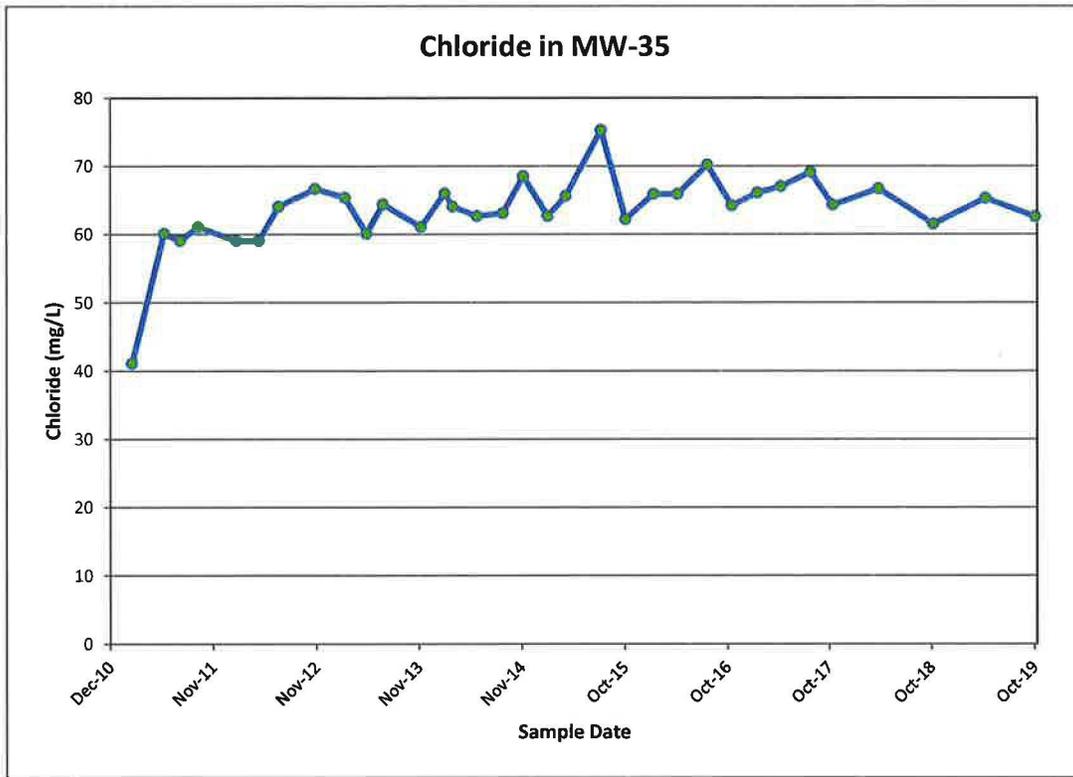
### Time concentration plots for MW-32



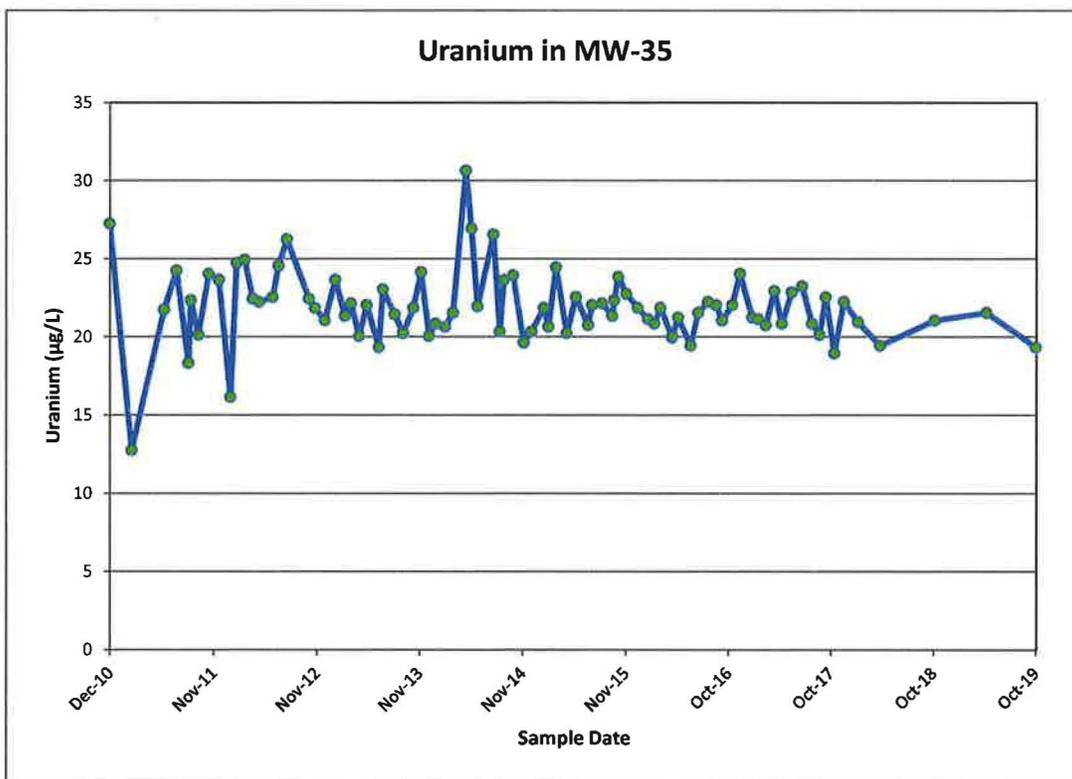
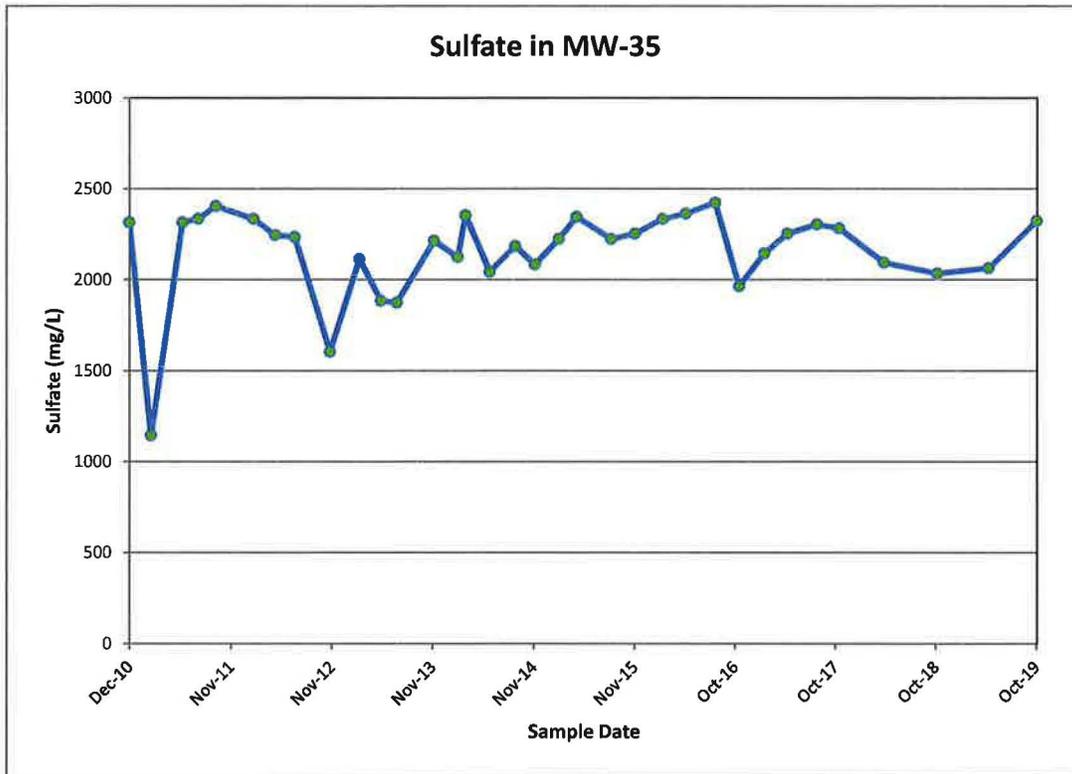
### Time concentration plots for MW-32



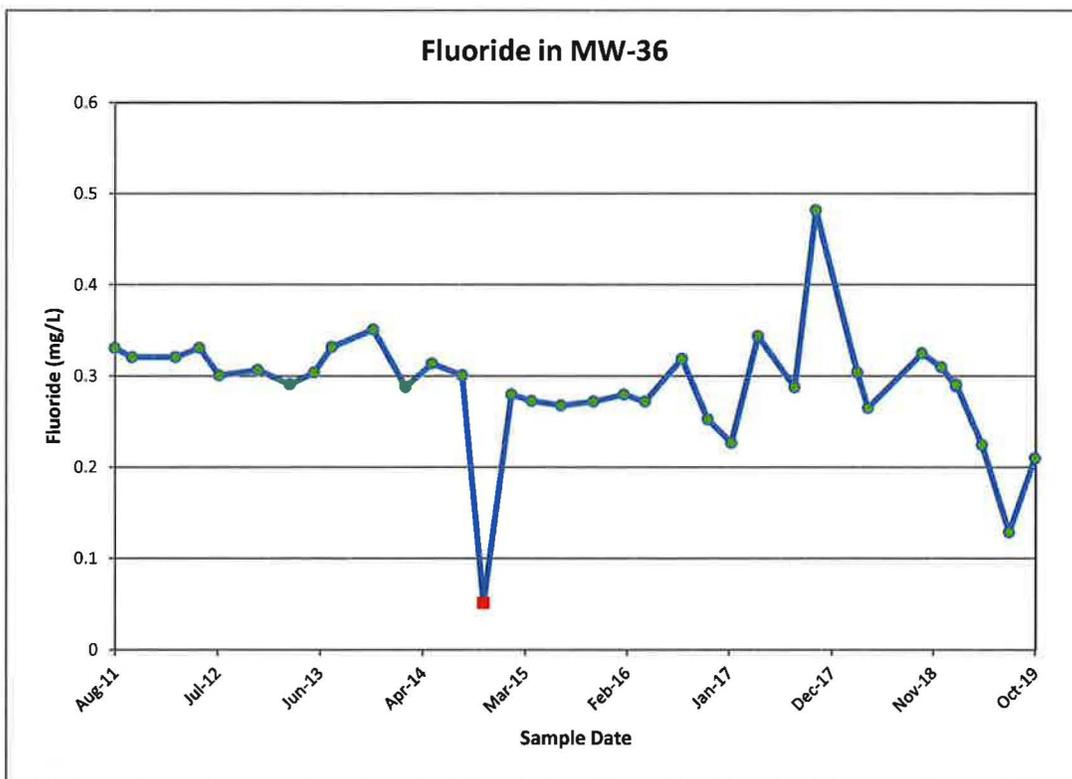
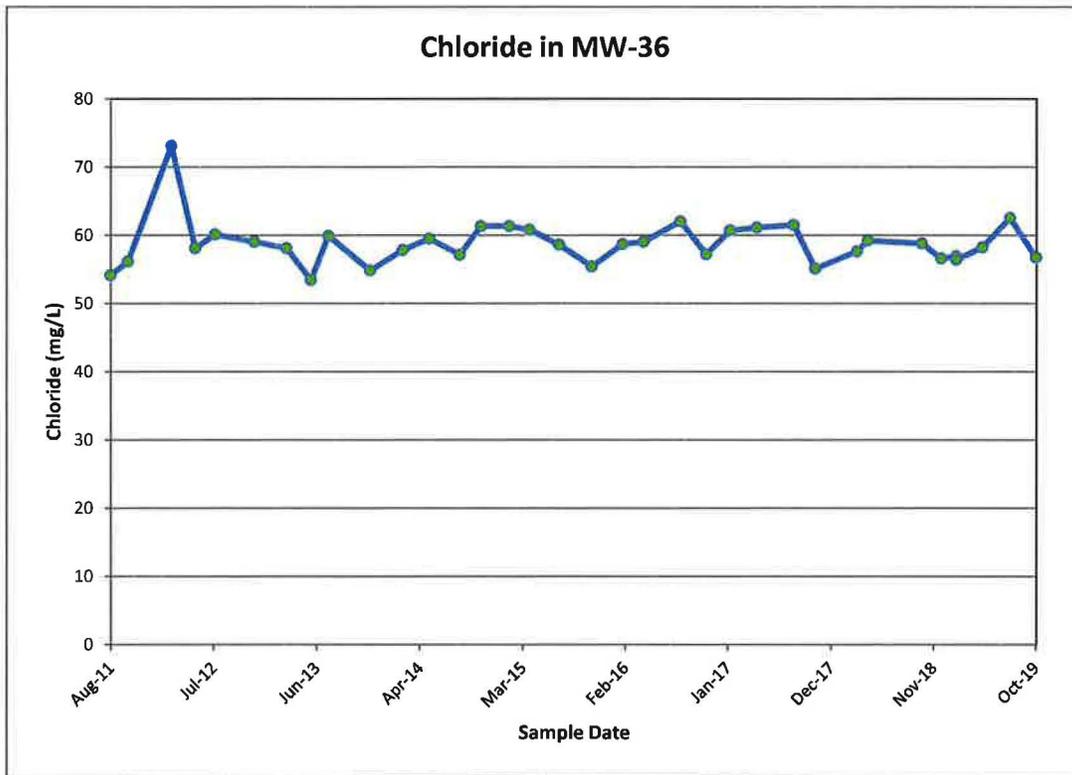
### Time concentration plots for MW-35



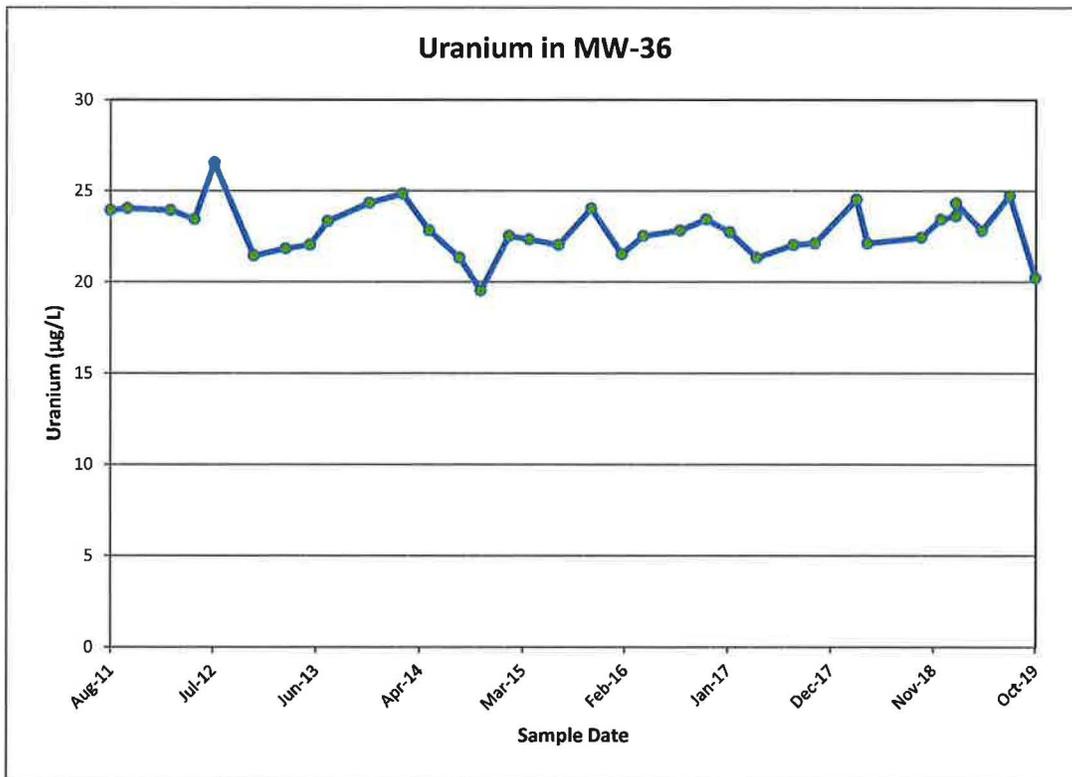
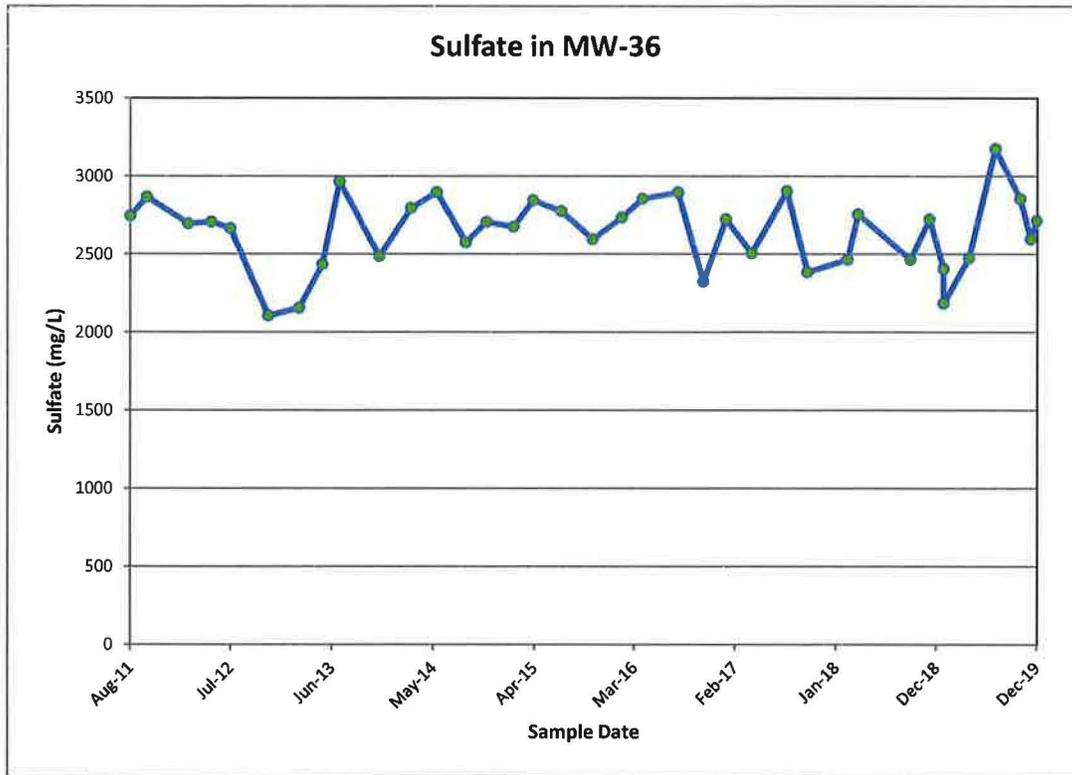
### Time concentration plots for MW-35



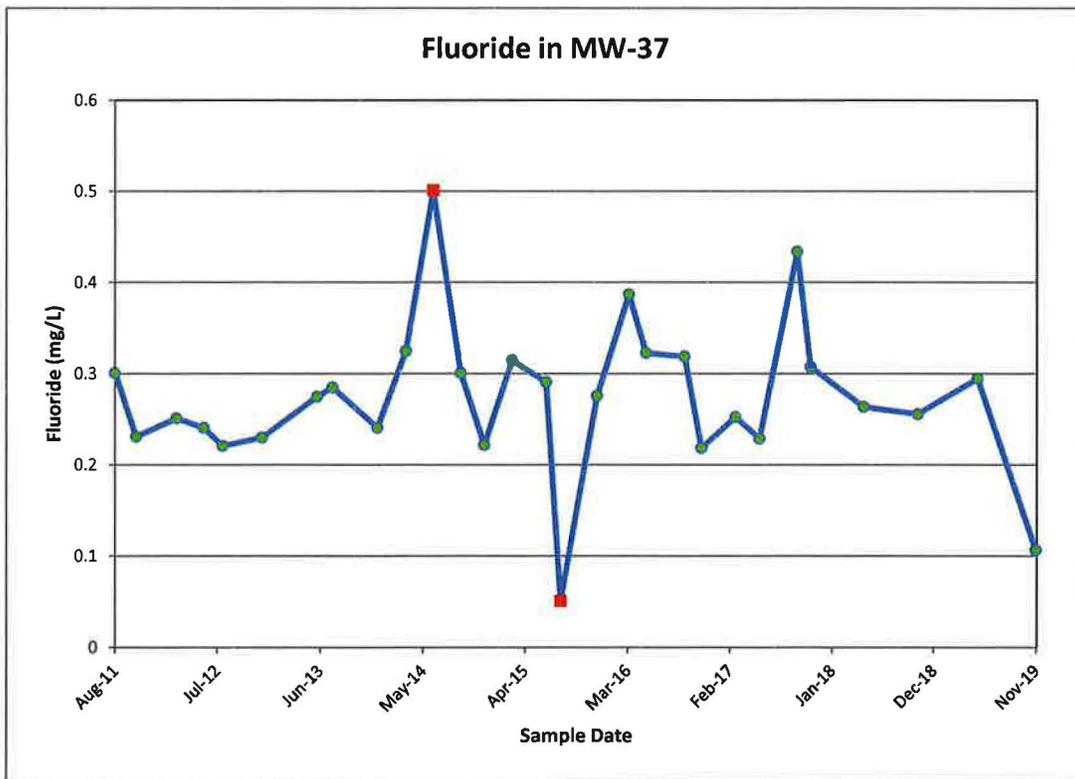
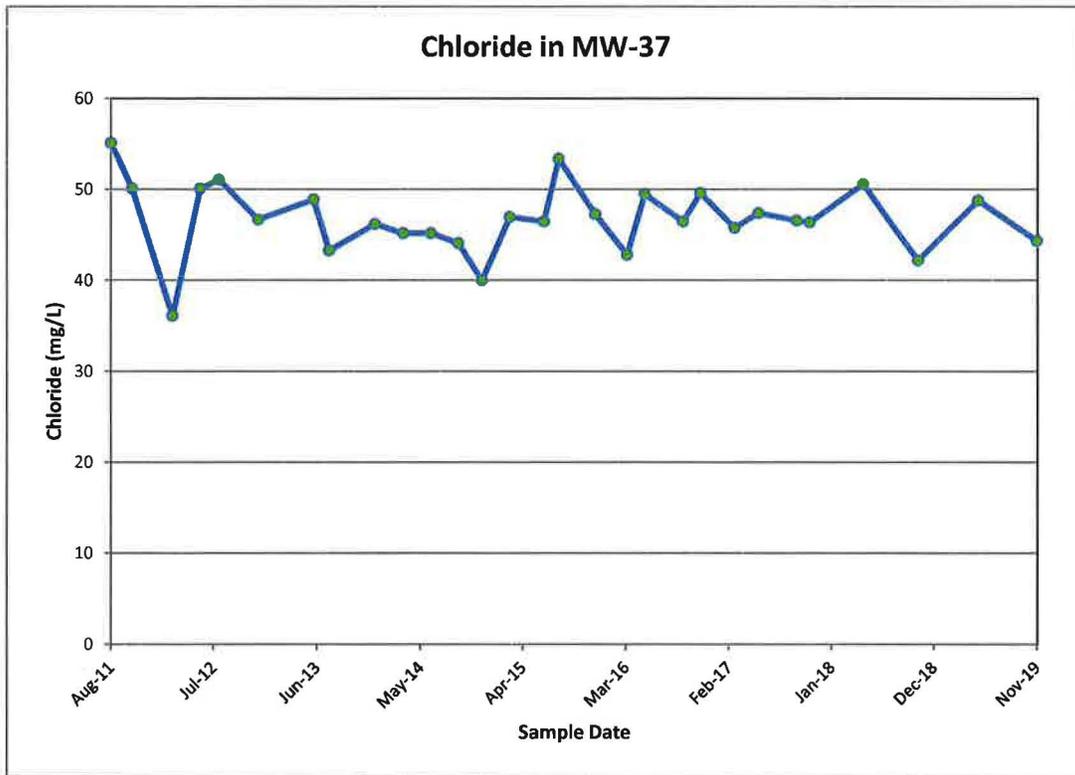
### Time concentration plots for MW-36



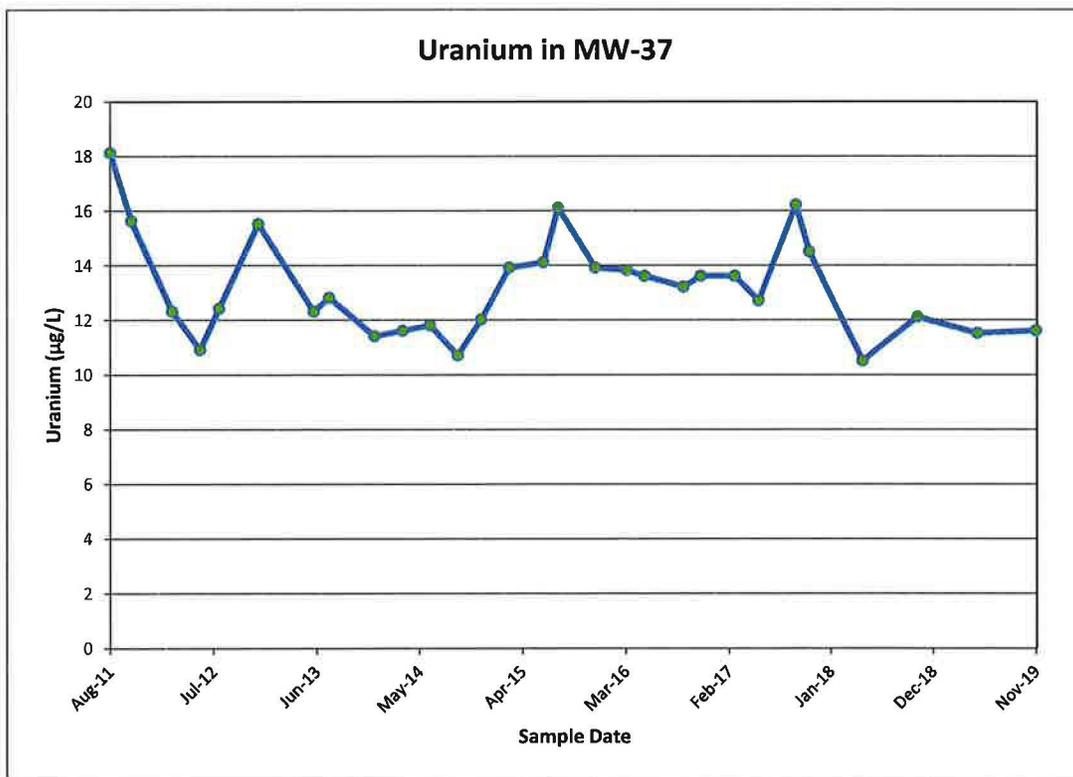
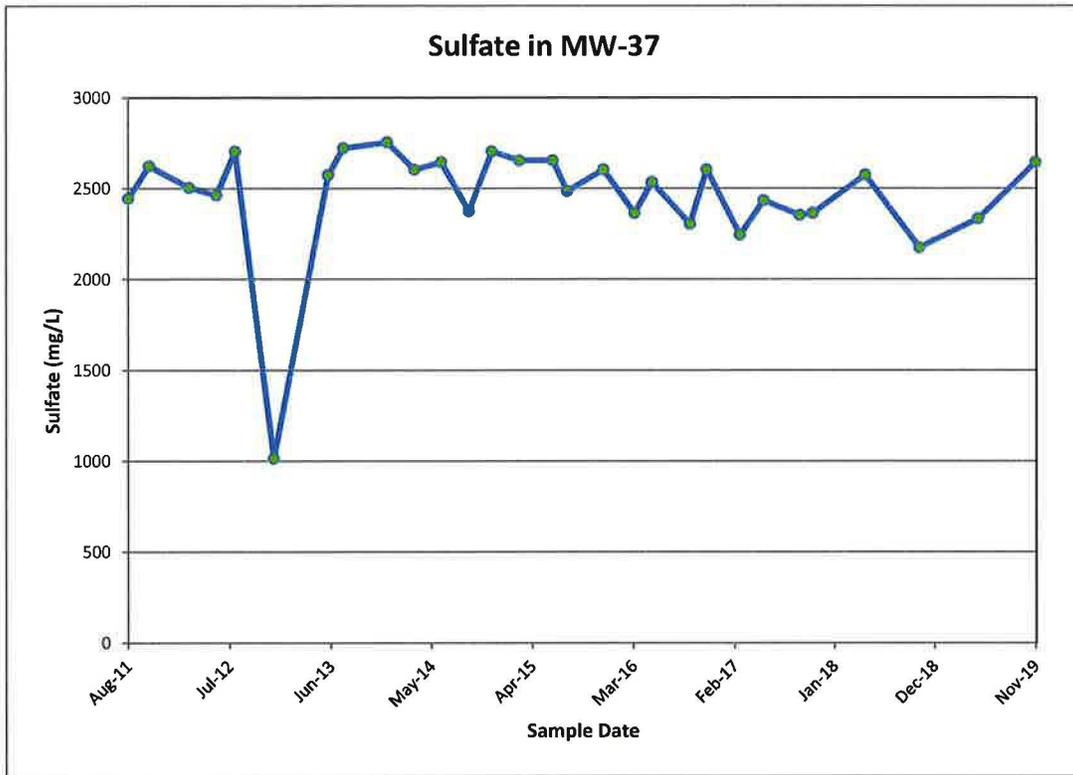
### Time concentration plots for MW-36



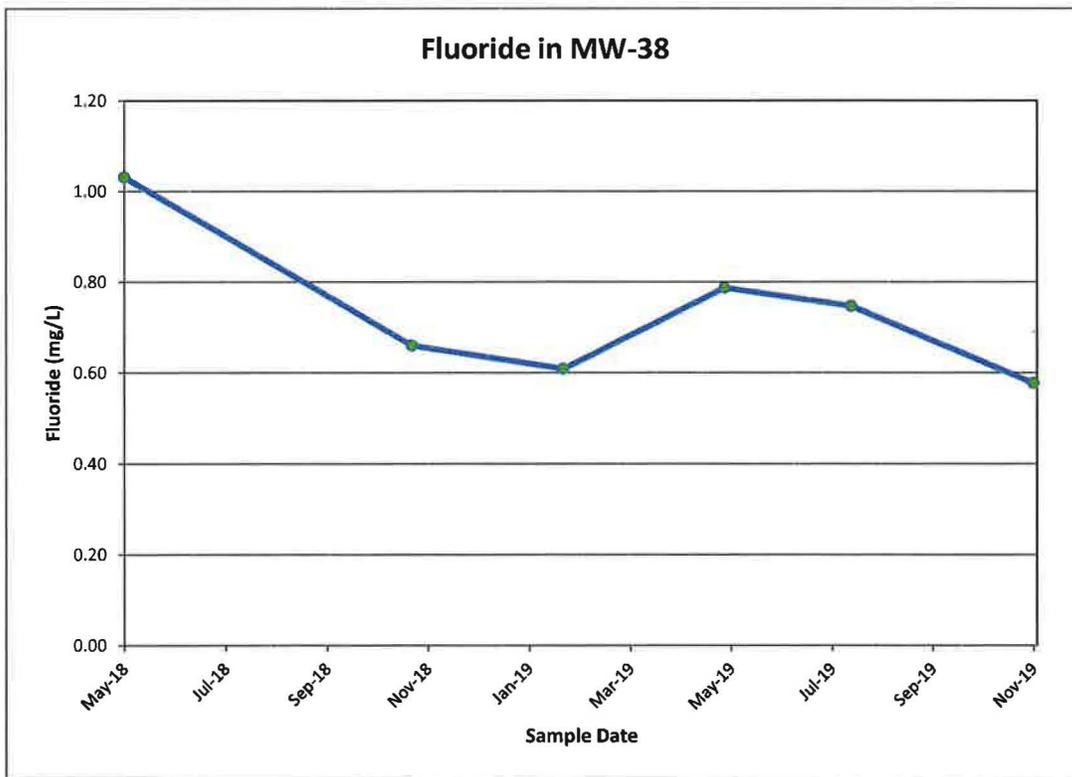
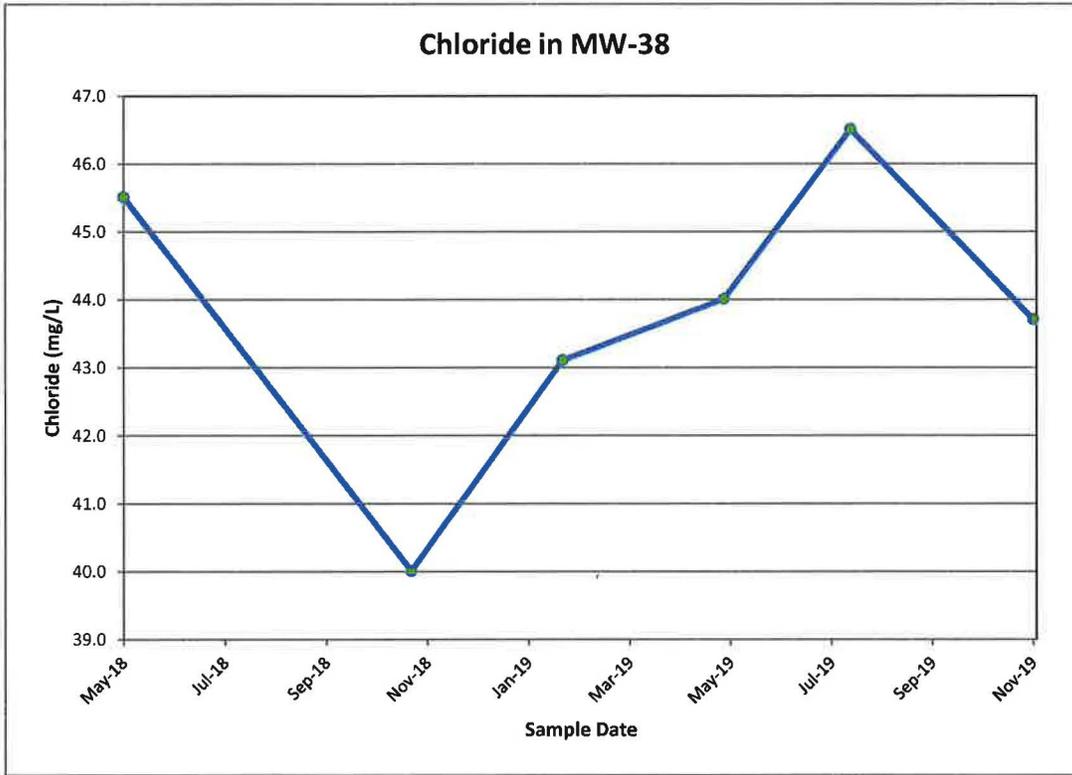
### Time concentration plots for MW-37



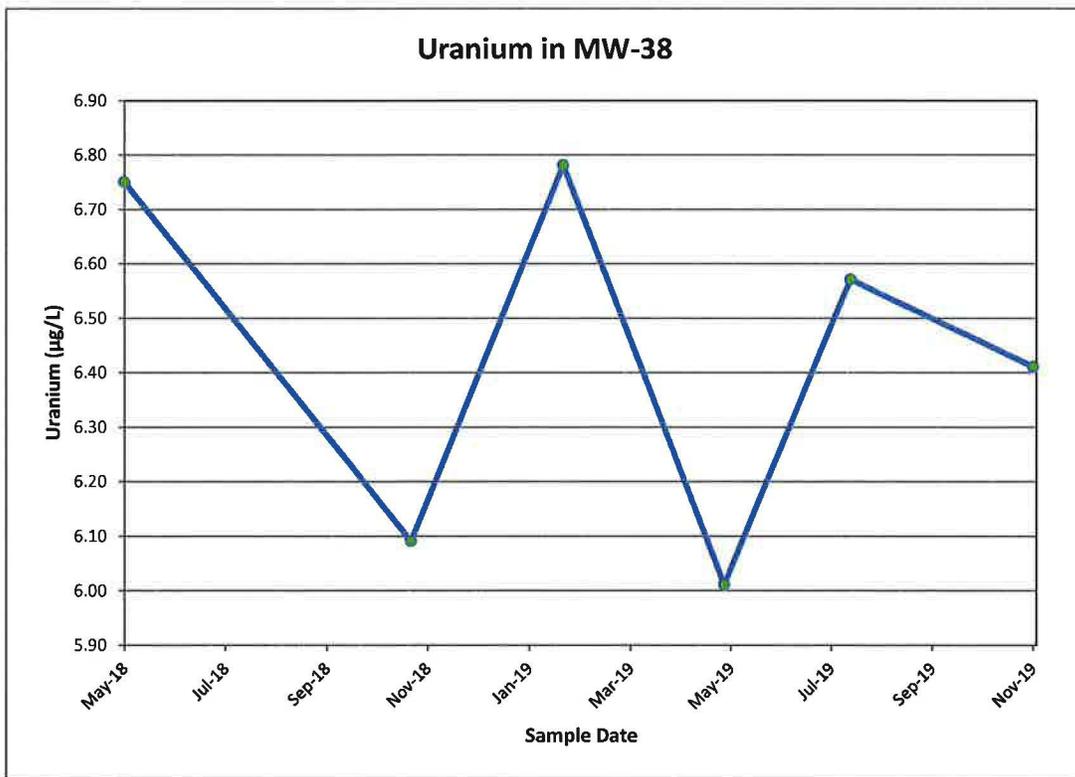
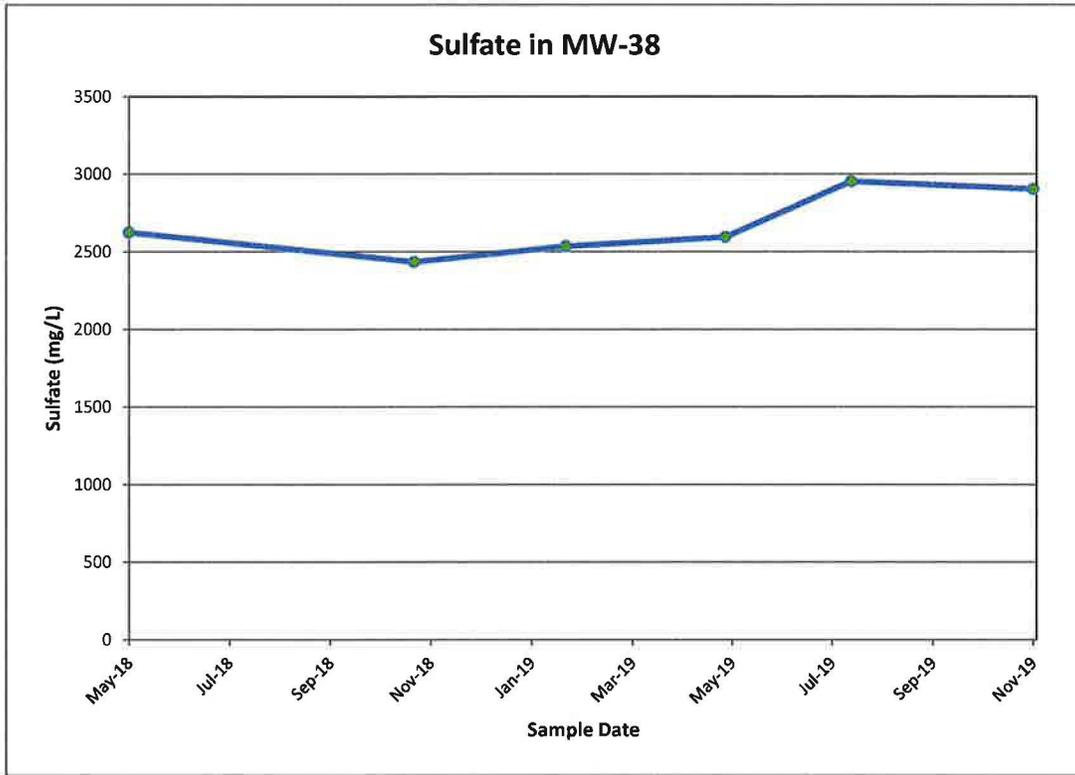
### Time concentration plots for MW-37



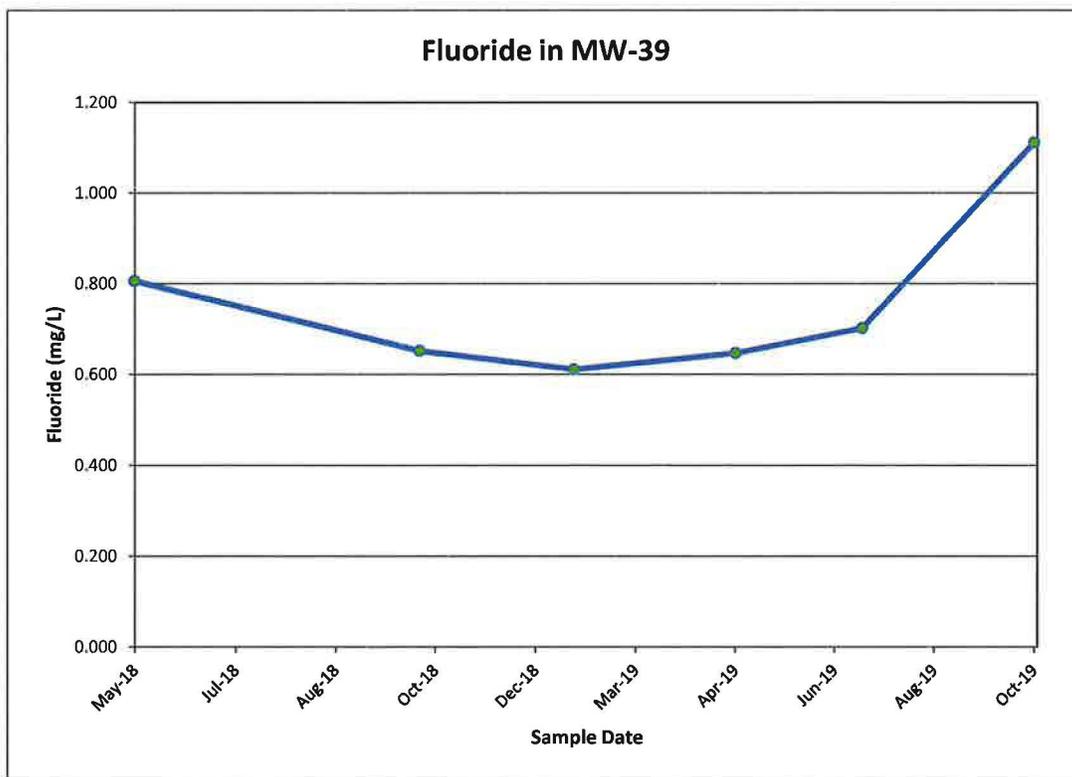
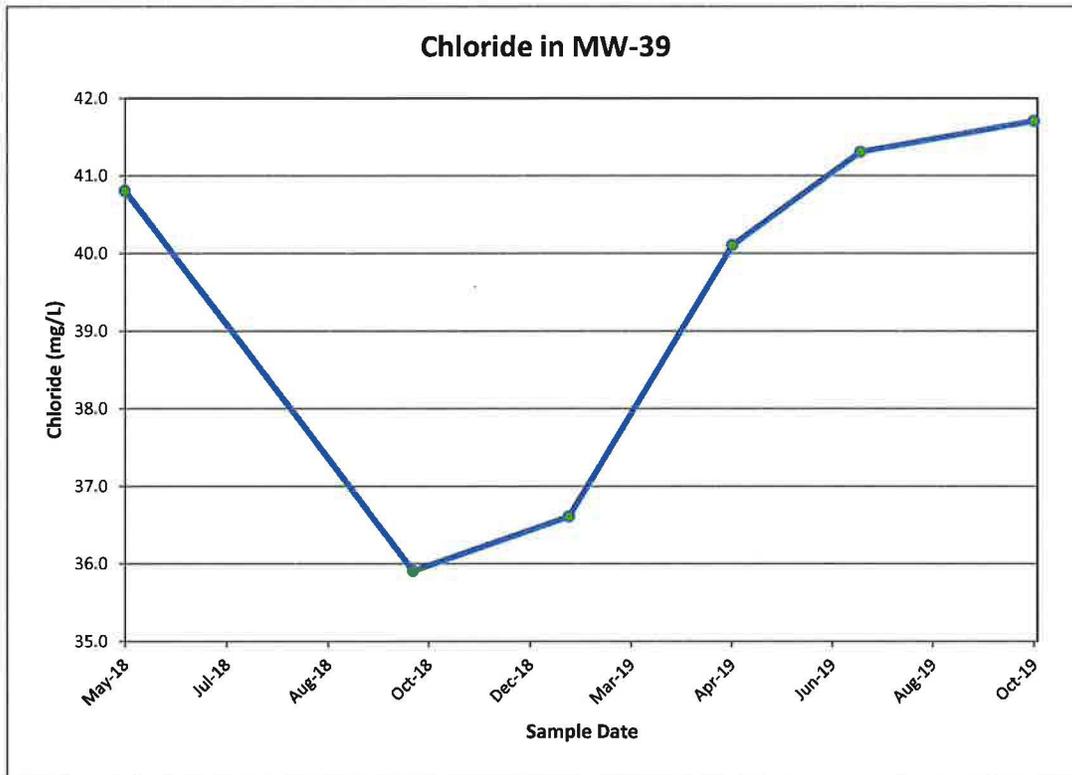
### Time concentration plots for MW-38



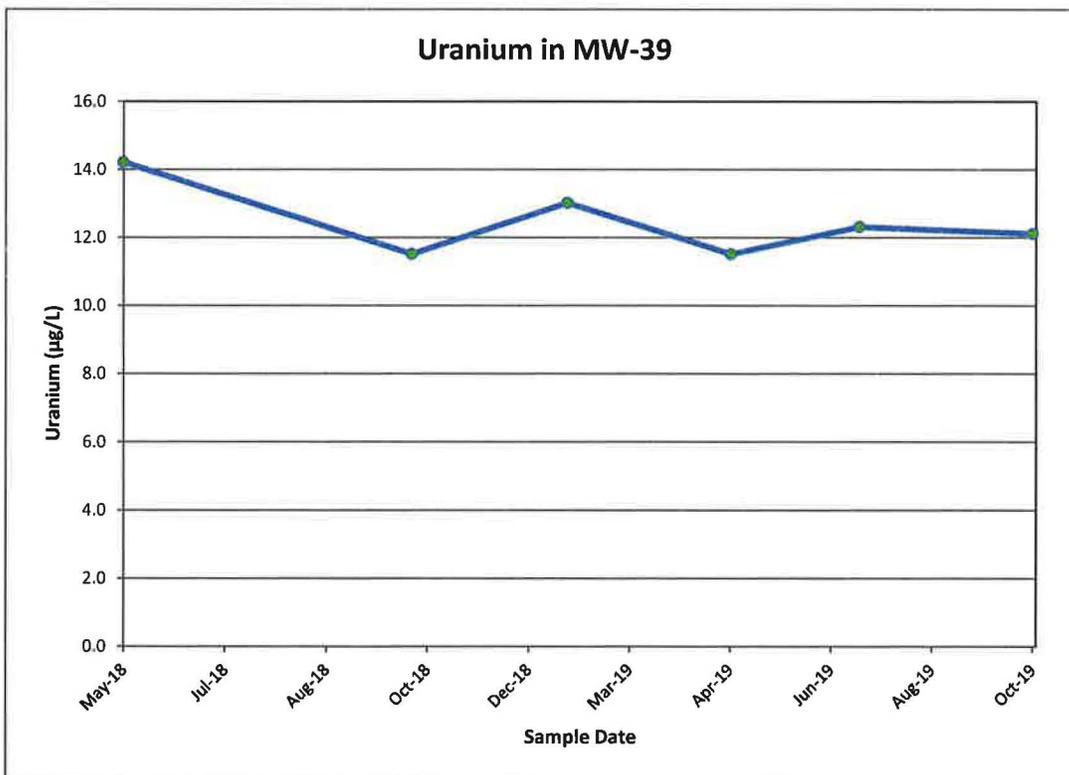
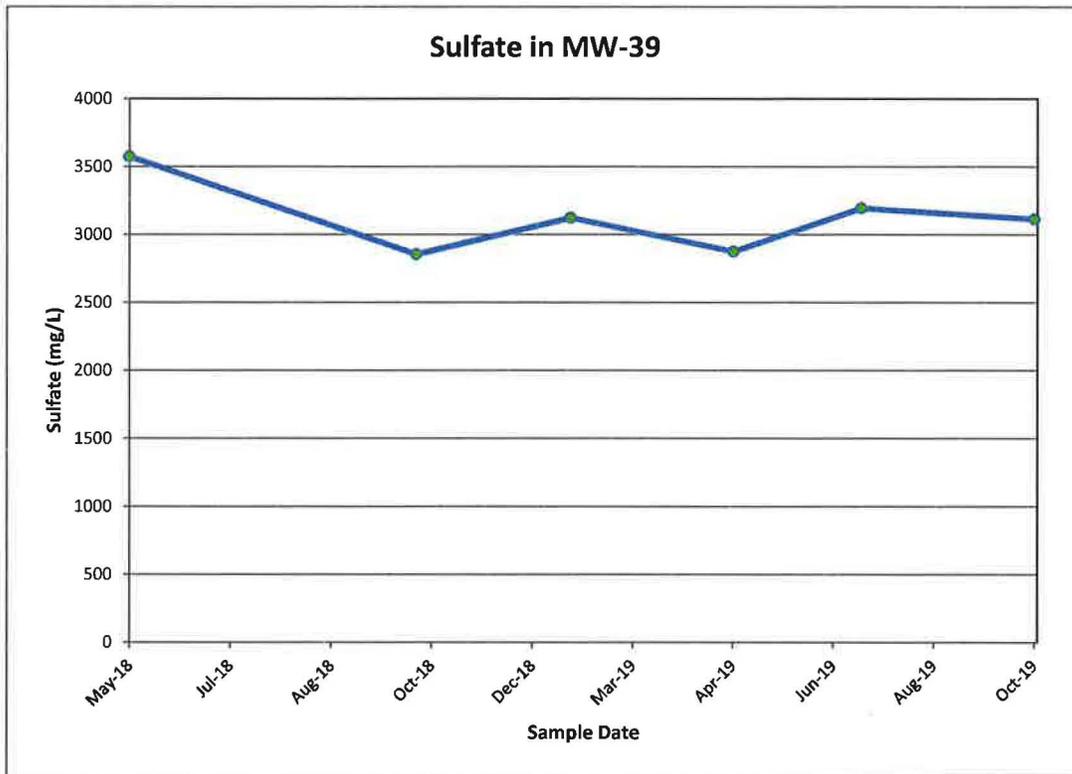
### Time concentration plots for MW-38



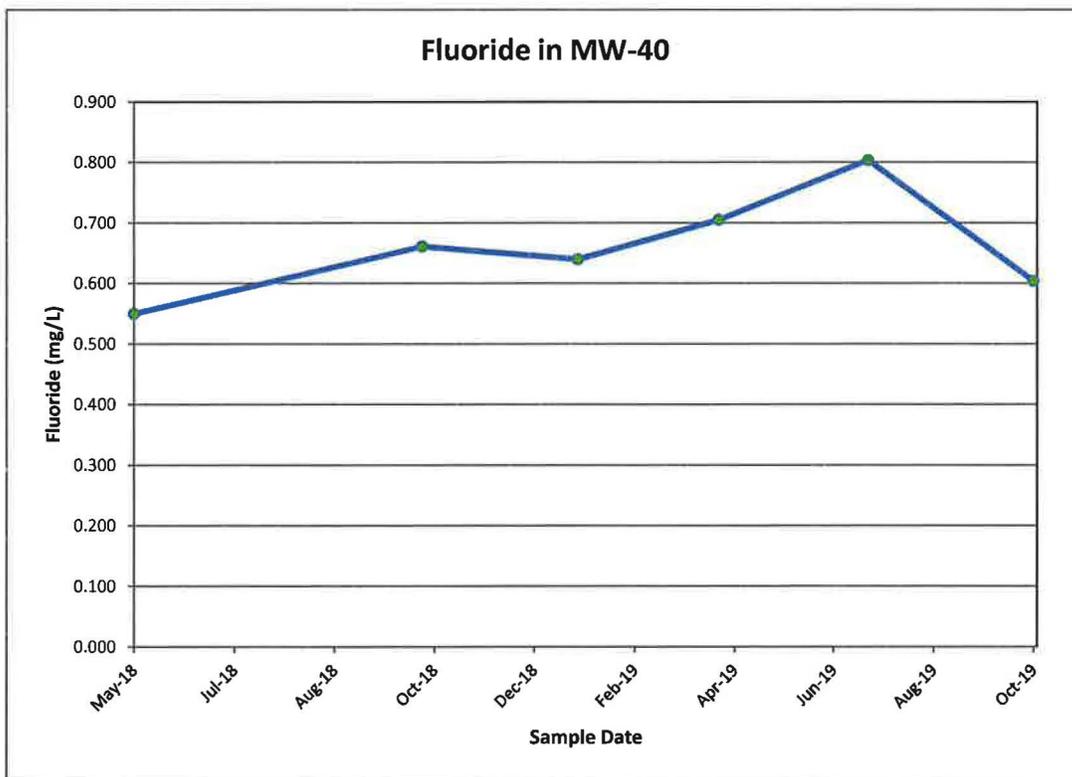
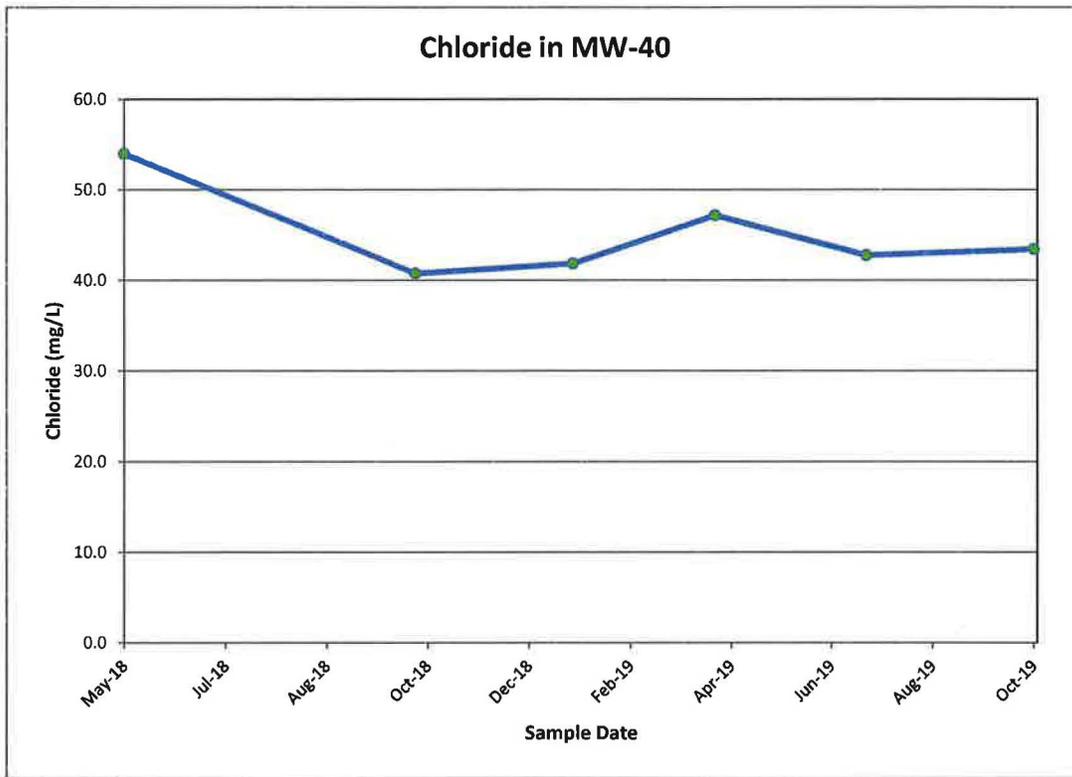
### Time concentration plots for MW-39



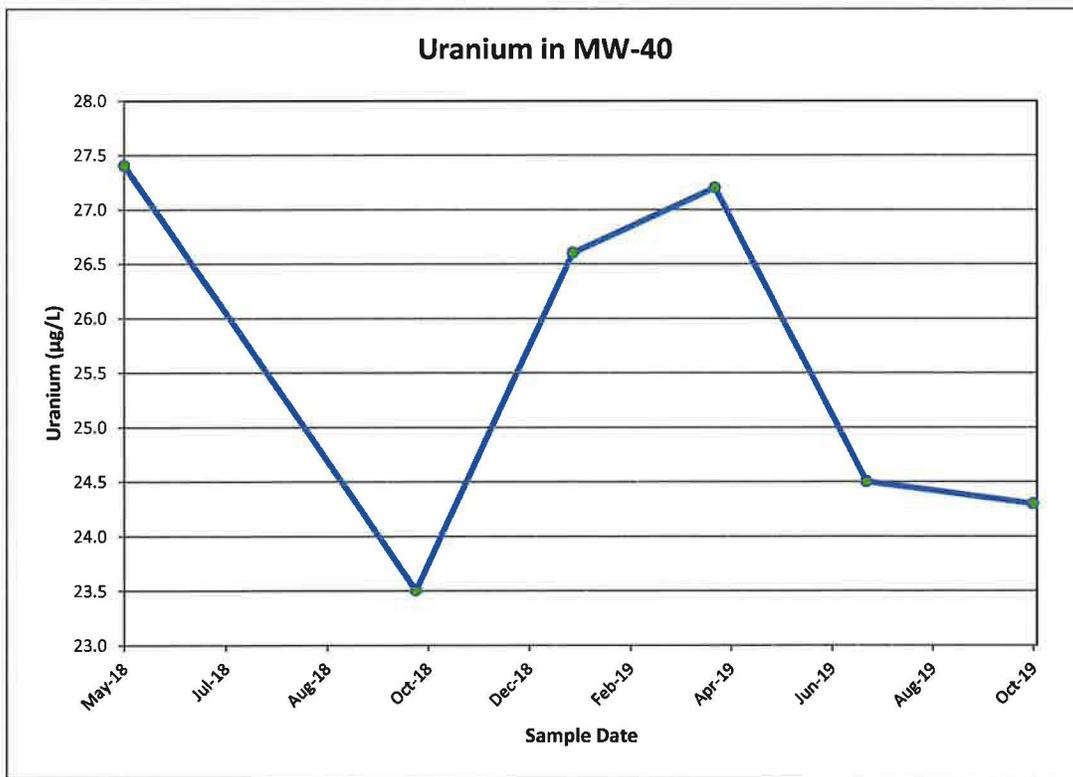
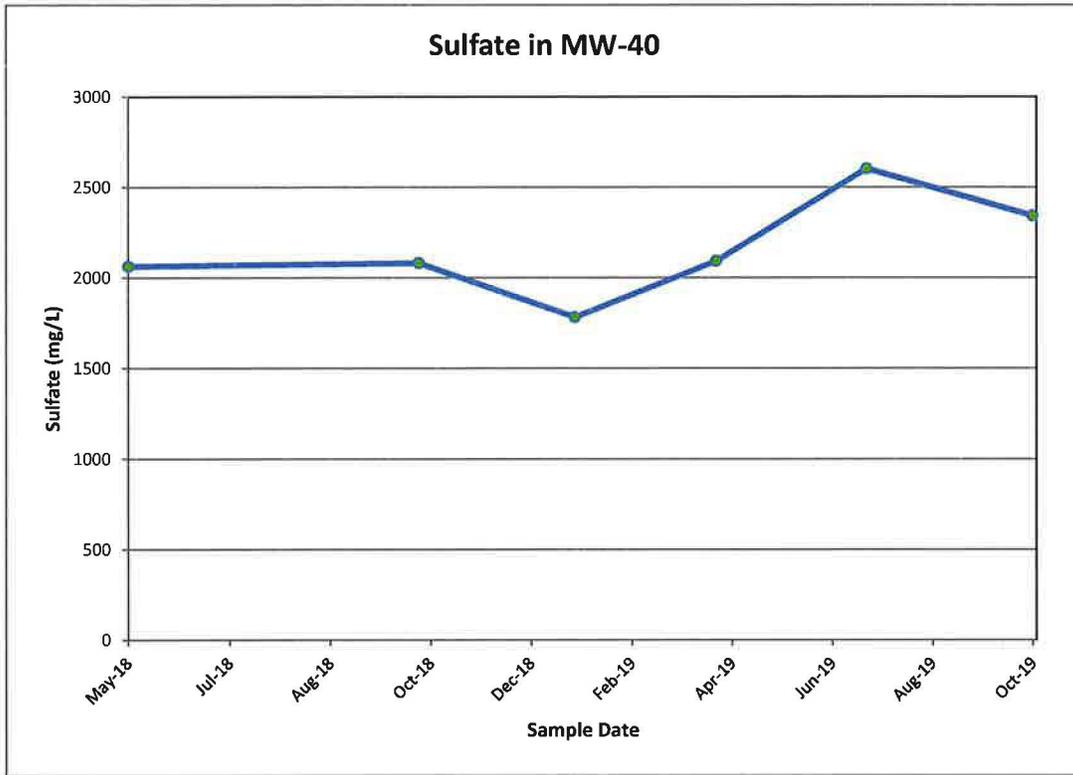
## Time concentration plots for MW-39



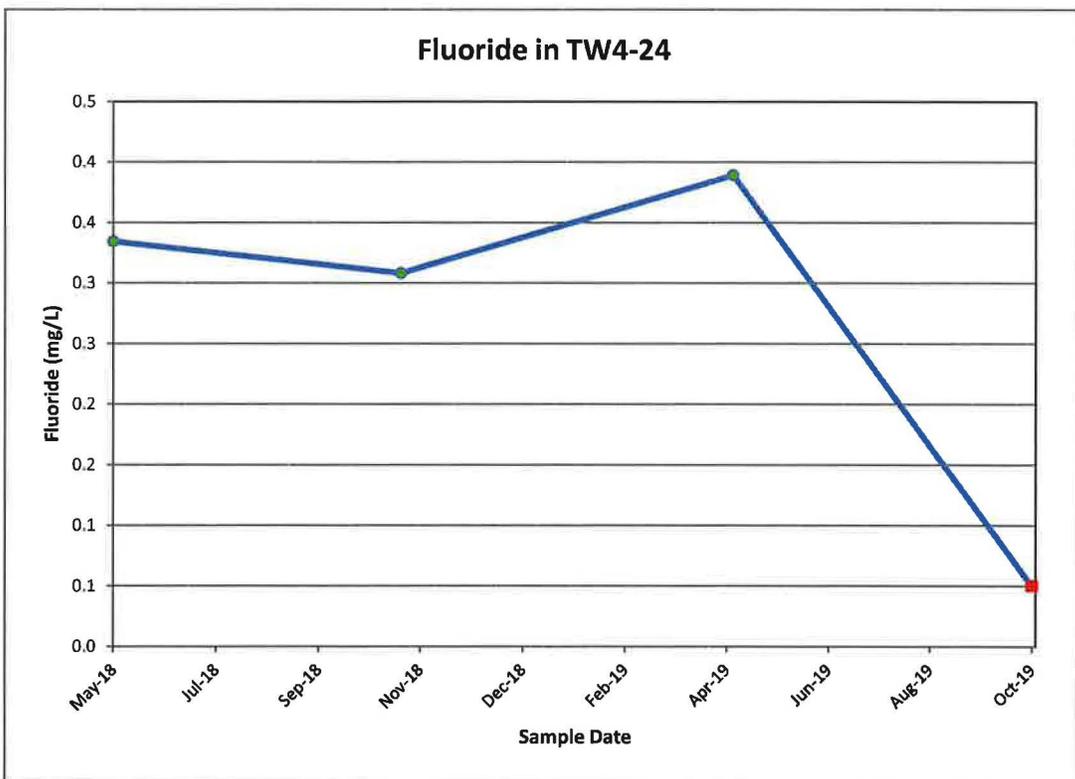
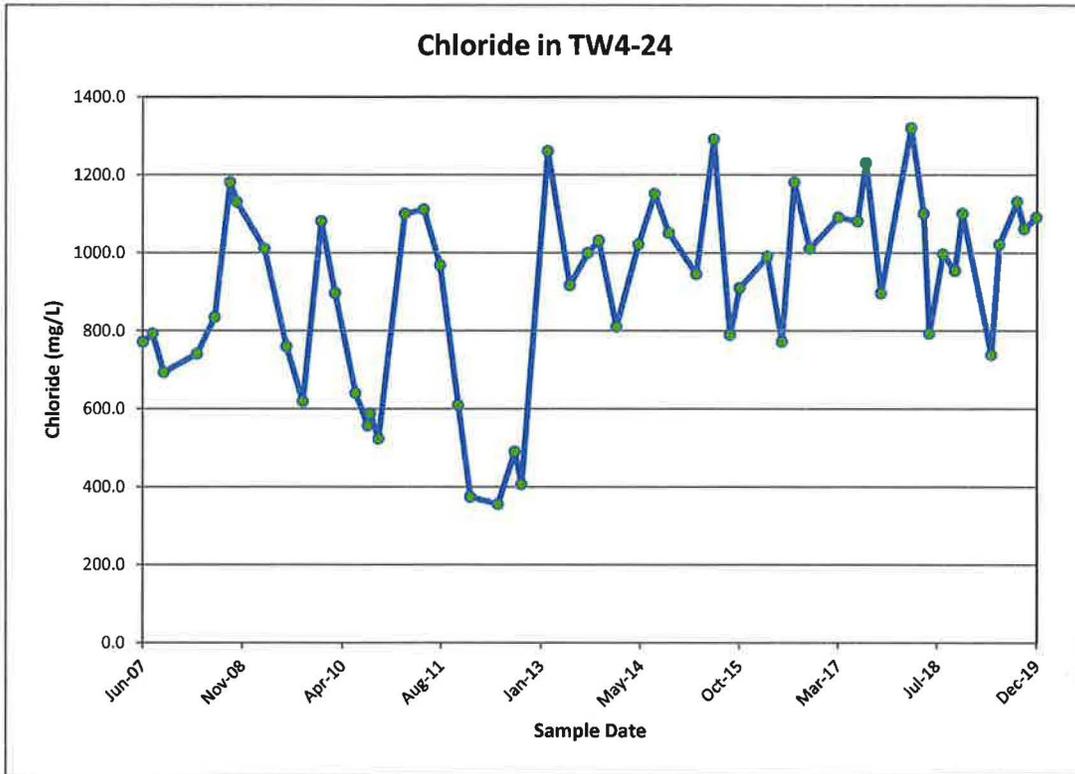
### Time concentration plots for MW-40



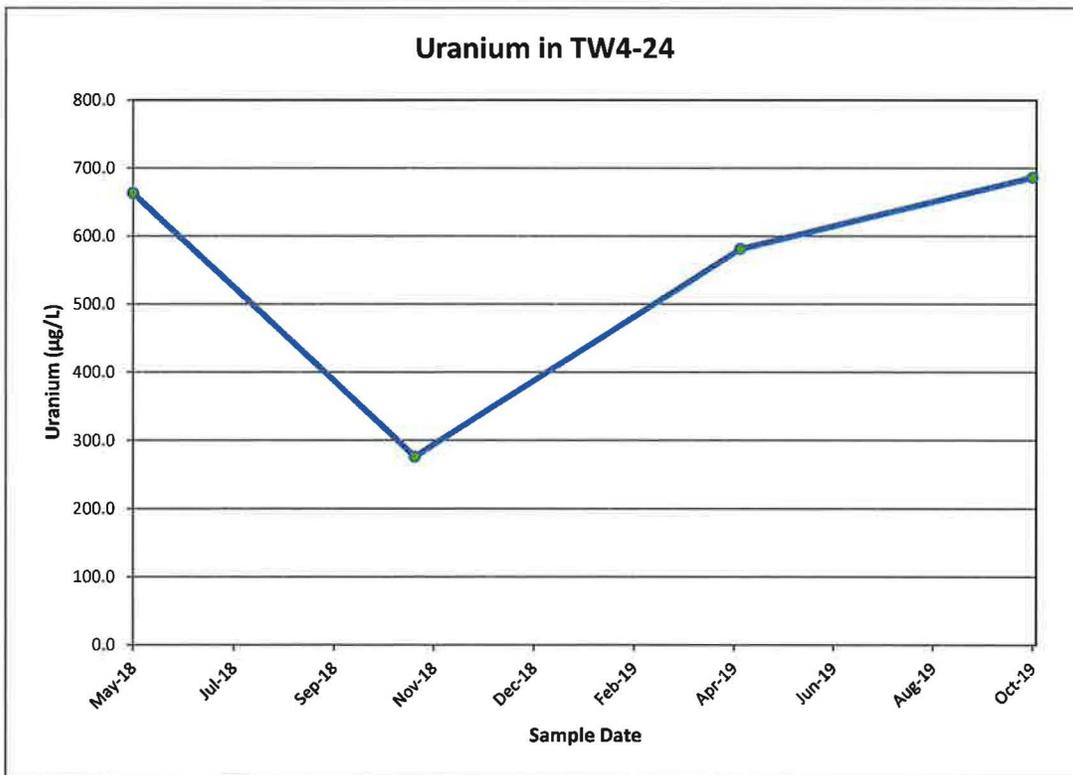
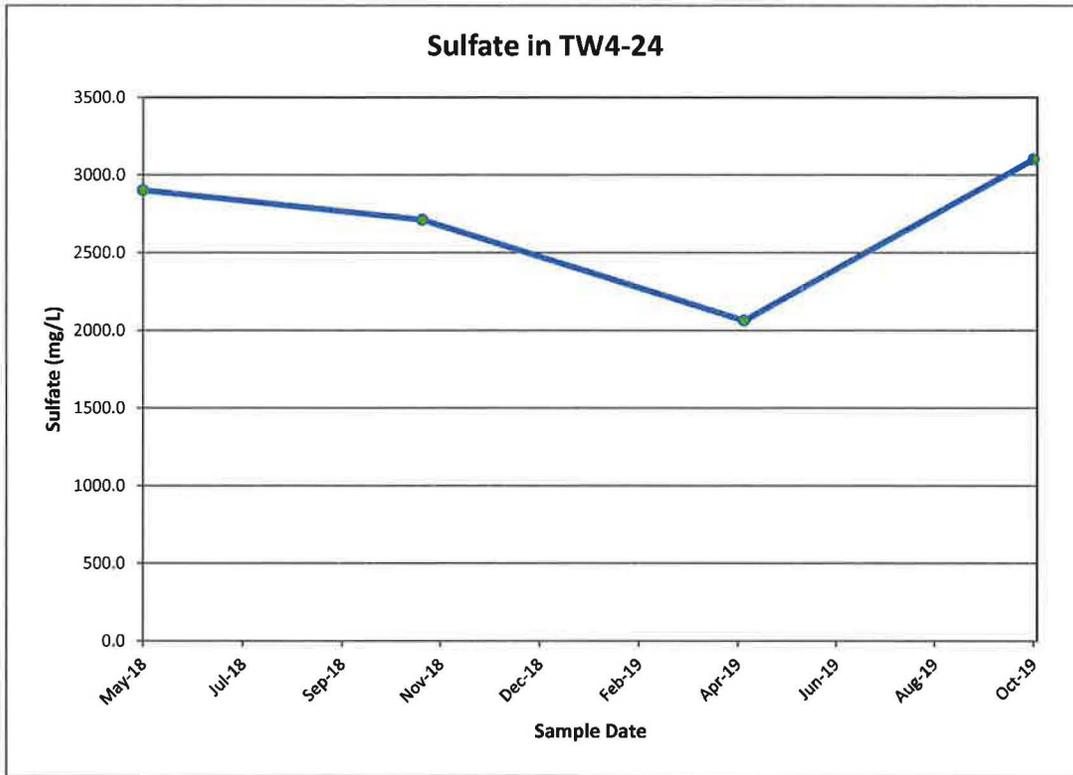
### Time concentration plots for MW-40



### Time concentration plots for TW4-24



### Time concentration plots for TW4-24



Tab J

CSV Transmittal Letter

## Kathy Weinel

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**From:** Kathy Weinel  
**Sent:** Tuesday, February 18, 2020 8:44 AM  
**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 Q4 Groundwater Monitoring  
**Attachments:** Q4 2019 DTW all programs.csv; Q4 2019 GW Analytical.csv; Q4 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 fourth 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



**Energy Fuels Resources (USA) Inc.**

---

Kathy Weinel

*Quality Assurance Manager*

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