



Energy Fuels Resources (USA) Inc.  
225 Union Blvd. Suite 600  
Lakewood, CO, US, 80228  
303 974 2140  
[www.energyfuels.com](http://www.energyfuels.com)

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**VIA Overnight Delivery**

October 20, 2014

Mr. Rusty Lundberg  
Director of the Utah Division of Radiation Control  
Utah Department of Environmental Quality  
195 North 1950 West  
P.O. Box 144810  
Salt Lake City, UT 84114-4820

**Re: Transmittal of Annual Seeps and Springs Monitoring Report  
Groundwater Quality Discharge Permit UGW370004 White Mesa Uranium Mill**

Dear Mr. Lundberg:

Enclosed are two copies of the White Mesa Uranium Mill Annual Seeps and Springs Monitoring Report for 2014 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 at 303-389-4134.

Yours very truly,

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

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

CC: David C. Frydenlund  
Scott A. Bakken  
Harold R. Roberts  
David E. Turk  
Jaime J. Massey

**White Mesa Uranium Mill**  
**2014 Annual Seeps and Springs Sampling Report**

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

Prepared by:



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

**October 20, 2014**



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## ACRONYM LIST

AWAL	American West Analytical Laboratory
DR	Dry Ridge Piezometers
DRC	Utah Division of Radiation Control
EFRI	Energy Fuels Resources (USA) Inc.
GEL	GEL Laboratories, Inc.
GWQS	Groundwater Quality Standard
LCS	Laboratory Control Spike
Mill	White Mesa Mill
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Permit	State of Utah Groundwater Discharge Permit No. UGW370004
QA	Quality Assurance
QAP	Groundwater Monitoring Quality Assurance Plan
QC	Quality Control
RPD	Relative Percent Difference
TDS	Total Dissolved Solids
VOCs	Volatile Organic Compounds

## **2014 ANNUAL SEEPS AND SPRINGS SAMPLING REPORT**

### **1.0 INTRODUCTION**

This is the 2014 Annual Seeps and Springs Sampling Report for the Energy Fuels Resources (USA) Inc. (“EFRI”) White Mesa Mill (the “Mill”), as required under Part I.F.7 of the Mill’s State of Utah Groundwater Discharge Permit No. UGW370004 (the “Permit”) and Section 6.0 of the Mill’s *Sampling Plan for Seeps and Springs in the Vicinity of the White Mesa Uranium Mill*, Revision: 0, March 17, 2009 (the “Sampling Plan”) and Revision 1, June 10, 2011 (“Draft Sampling Plan”).

The *Sampling Plan for Seeps and Springs in the Vicinity of the White Mesa Uranium Mill*, was revised during the 2011 reporting period. The revisions were completed to address corrective actions delineated in the 2010 Annual Seeps and Springs Sampling Report for the Mill. The Draft Sampling Plan was submitted to the Utah Division of Radiation Control (“DRC”) via e-mail for review on June 10, 2011. Per conversations with DRC personnel on June 28, 2011 regarding the July 2011 sampling event, EFRI used the 2011 Draft Sampling Plan field forms for the July 2011, the June 2012, July 2013, and June 2014 sampling events. To date comments have not been received from DRC on the 2011 Draft Sampling Plan.

### **2.0 SAMPLING EVENTS**

Seeps and springs which were identified near the Mill in the 1978 Environmental Report (Plate 2.6-10, Dames and Moore, January 30, 1978) are to be sampled annually in accordance with the Sampling Plan and Part I.E.6 of the Permit. The Sampling Plan specifies the following sample locations: Corral Canyon Seep, Corral Springs, Ruin Spring, Cottonwood Seep, Westwater Seep and Entrance Spring (also referred to as Entrance Seep).

#### **2.1 June 2014 Sampling**

In accordance with the Permit and the Sampling Plan, DRC was notified of the sampling. The DRC representative was present for this sampling event. On June 17, 2014, EFRI collected seeps and springs samples from Cottonwood Seep, Ruin Spring, Back Spring (duplicate sample of Cottonwood Spring), and Entrance Spring. The DRC representative collected a “split” sample on June 17, 2014 at Ruin Spring from the EFRI sampling equipment, using sample containers he provided. Corral Canyon Seep, Westwater Seep, and Corral Springs were dry in 2014. The data from the June sampling event are included as Attachment D in this report.

#### **2.2 Repeat Visits to Dry Seeps and Springs.**

During the June 17, 2014 sampling event, Westwater Seep, Corral Canyon Seep and Corral Springs were dry, could not be sampled, and did not warrant development attempts with limited hand tool excavation at that time. Additional visits were made to these locations on June 26, 2014 and July 9, 2014 to determine if development attempts with hand tool excavation would yield enough water for sampling. The additional two visits did not indicate any changes; i.e., there was no indication that development attempts would be successful.

## 2.3 Sampling Procedures

Samples were collected and analyzed for the parameters listed in Table 2 of the Permit.

During the July sampling event, samples were collected from the locations indicated in Table 1. Sampling procedures for each seep or spring are determined by the site location and access.

The DRC-approved sampling procedures for seeps and springs at the Mill are contained in Sampling Plan, Revision 0. Samples collected under this plan were collected either by direct collection which involves collecting the sample directly into the sample container from the surface water feature or from spring out-flow, or by using a stainless steel ladle to collect water until a sufficient volume is contained in the ladle for transfer to the sample bottle.

Sampling Plan Revision 0, was revised in 2011 to provide flexibility in sampling procedures to address differing site conditions as well as to correct several inconsistencies noted during the 2010 report preparation and review. EFRI provided detailed descriptions of the sampling procedures used in 2010 in the 2010 Annual Seeps and Springs Sampling Report for the Mill, which was accepted by DRC. EFRI determined a revision to Sampling Plan, Revision 0 was necessary, because the procedures in Sampling Plan, Revision 0 do not match the site conditions and do not include the use of a peristaltic pump for sampling or filtering samples for metals and gross alpha analyses. EFRI submitted a Draft Sampling Plan to DRC in 2011. The procedures in the Draft Sampling Plan are consistent with the sampling procedures employed in 2010, 2011, 2012, and 2013. Samples collected under this plan are collected by direct collection, stainless steel sample ladle, or by use of a peristaltic pump which involves collecting the sample from the source or out-flow using the peristaltic pump. The peristaltic pump is used to deliver the sample from the source or out-flow to the sample bottles. Filtered parameters are pumped through a 0.45 micron filter prior to delivery to the sample bottle.

EFRI employed the previous sampling procedures again in 2014, because the 2010, 2011, 2012, and 2013 Annual Seeps and Springs Sampling Reports for the Mill were inspected by DRC and determined to be in compliance with the GWDP. Additionally, DRC was present during the 2010, 2011, 2012, 2013, and 2014 sampling events and did not provide comments or recommendations to modify the procedures. Since DRC has not commented on the seeps and springs sampling procedures that were used in 2010, 2011, 2012, 2013, and 2014, EFRI has concluded the 2010 procedures are acceptable and has continued using the procedures implemented in 2010.

### Ruin Spring

In the case of Ruin Spring, sample bottles for the analytes collected during the June sampling event (except gross alpha and heavy metals) were filled directly from the spring out-flow which is a pipe. Samples for heavy metals and gross alpha were collected by means of a peristaltic pump and delivered directly to the sample containers through a 0.45 micron filter. The appropriate preservatives for the analytical technique were added to the samples.

## Cottonwood Seep and Entrance Spring

Cottonwood Seep and Entrance Spring were “developed” prior to the sampling event by Field Personnel. Development was completed by removing surrounding vegetation and clearing the sampling location in the spring or seep area. For the June samples collected from Cottonwood Seep and Entrance Spring, the samples for Volatile Organic Compounds (“VOCs”) were collected by means of a peristaltic pump and delivered directly to the sample containers. In the case of the samples for heavy metals and gross alpha, the samples were delivered by a peristaltic pump directly to the sample containers through a 0.45 micron filter. The other samples were filled by dipping the bottles into the developed and cleared sample depression. The samples were preserved by the addition of the appropriate preservative for the analytical technique.

The tubing on the peristaltic pump that comes into contact with the sample water was disposed of between each sampling. As a result, no equipment required decontamination, and no rinsate samples were collected.

### **2.4 Field Data**

Attached under Tab A are copies of the field data sheets recorded in association with the June 2014 seeps and springs monitoring events. Photographic documentation of the sampling sites is also included in Tab A. Sampling dates are listed in Table 1 and field parameters collected during the sampling program are included in Tab B.

### **2.5 Field QC Samples**

The field Quality Control (“QC”) samples generated during this sampling event included one duplicate per sampling event and one trip blank per shipment to each laboratory which received samples for VOCs. The duplicate samples (Back Spring) were submitted blind to the analytical laboratory. As previously stated, no rinsate blanks were collected during this sampling event as only disposable equipment was used for sample collection.

## **3.0 SEEPS AND SPRINGS SURVEY AND CONTOUR MAP**

Part I.F.7(c) of the Permit requires that a water table contour map that includes the elevations for each well at the facility and the elevations of the phreatic surfaces observed for each of the seeps and springs sampled be submitted with this annual report. Tab C includes two contour maps. The contour map labeled C-1, shows the water table without the water level data associated with the dry ridge (“DR”) investigation piezometers. The contour map labeled C-2 shows the water table with the water level data associated with the DR investigation piezometers. It is important to note that Cottonwood Seep is not included in any of the perched water level contouring, because there is no evidence to establish a hydraulic connection between Cottonwood Seep and the perched water system. Cottonwood Seep is located near the Brushy Basin Member/Westwater Canyon Member contact, approximately 230 feet below the base of the perched water system defined by the Burro Canyon Formation/Brushy Basin Member contact. The stratigraphic position of Cottonwood Seep indicates that its elevation is not representative of

the perched potentiometric surface. Exclusion of the Cottonwood Seep from water level contouring is consistent with previous submissions. The contour map includes the corrected survey data from December 2009 as discussed below.

Part I.F.7 (g) of the Permit requires that survey data for the seeps and springs be collected prior to the collection of samples. DRC previously clarified that the requirement to submit survey data applies only to the first sampling event and not on an annual basis. The December 2009 and July 2010 seeps and springs survey data shown in Tab C will be used for reporting where seeps and springs locations and elevations are relevant.

A full discussion of the survey data and the hydrogeology of seeps and springs at the margins of White Mesa in the vicinity of the Mill and the relationship of these seeps and springs to the hydrogeology of the site, in particular to the occurrence of a relatively shallow perched groundwater zone beneath the site, is contained in *Hydrogeology of the Perched Groundwater Zone and Associated Seeps and Springs Near the White Mesa Uranium Mill Site*, dated November 12, 2010, prepared by Hydro Geo Chem, Inc. and submitted to the Director on November 15, 2010. Additional information is also contained in the *Second Revision Hydrogeology of the Perched Groundwater Zone in the Area Southwest of the Tailings Cells While Mesa Mill Site*, dated November 7, 2012, prepared by Hydro Geo Chem, Inc. and submitted to the Director on November 7, 2012.

## **4.0 QUALITY ASSURANCE AND QUALITY CONTROL**

### **4.1 Laboratory Results**

Analytical results are provided by the Mill's two contract analytical laboratories GEL Laboratories, Inc., ("GEL") and American West Analytical Laboratory ("AWAL").

The laboratories utilized during this investigation were certified under the Environmental Lab Certification Program administered by UDEQ Bureau of Lab Improvement for the analyses they completed.

The analytical data as well as the laboratory Quality Assurance ("QA")/QC summaries are included under Tab D.

### **4.2 DATA EVALUATION**

The Permit requires that the annual seeps and springs sampling program be conducted in compliance with the requirements specified in the Mill's approved White Mesa Uranium Mill Groundwater Monitoring Quality Assurance Plan ("QAP"), Revision 7.2, dated June 6, 2012, the approved Sampling Plan and the Permit. To meet this requirement, the data validation completed for the seeps and springs sampling program verified that the program met the requirements outlined in the QAP, the Permit and the approved Sampling Plan. The 2010 Annual Seeps and Springs Monitoring Report noted that in several places the requirements in the QAP and Sampling Plan, Revision 0, were in conflict. To address these inconsistencies, the Sampling Plan, Revision 0 was revised and, as previously stated, submitted to DRC for review in



June 2011. For the purposes of this data review, the Permit and the QAP requirements were used to determine compliance. The Mill QA Manager performed a QA/QC review to confirm compliance of the monitoring program with requirements of the Permit and the 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 4.5.1. Discussion of adherence to the Sampling Plan is provided in Section 4.3. Analytical completeness review results are provided in Section 4.4. The steps and tests applied to check laboratory data QA/QC are discussed in Sections 4.5.1 through 4.5.9 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 Chain of Custody and Analytical Request Record forms for each set of analytical results, follow the analytical results under Tab D. Results of the review of the laboratory QA/QC information are provided under Tab E and discussed in Section 4.5 below.

### **4.3 Adherence to Sampling Plan and Permit Requirements**

On a review of adherence by Mill personnel to the Permit, the QA Manager observed that QA/QC requirements established in the Permit and the QAP were met and that the requirements were implemented as required except, as noted below.

Sampling procedures varied from those contemplated in the Revision 0, Sampling Plan as discussed in the 2010 Annual Seeps and Springs Sampling Report for the Mill. As previously stated, the Sampling Plan, Revision 0 was revised in June 2011 to accurately reflect the sampling procedures used during the 2009, 2010, 2011, 2012, 2013, and 2014 sampling events. DRC has not provided comments on the Sampling Plan to date; however, the DRC representative was present for the 2010, 2011, 2012, 2013, and 2014 sampling programs and observed the sampling procedures used. The DRC representative accepted the procedures and made no comments regarding the sampling strategies employed. No further discussions regarding the changes to the Revision 0 Sampling Plan sampling procedures are included.

The Permit only requires the measurement of the field parameters pH, conductivity and temperature. Field parameter measurements collected during this sampling event included pH, conductivity, temperature, redox potential, and turbidity. The collection of additional field parameters resulted in no effect on the usability of the data.

### **4.4 Analyte Completeness Review**

The analyses required by the Permit Table 2 were completed.



## **4.5 Data Validation**

The QAP and the Permit identify the data validation steps and data quality control checks required for the seeps and springs monitoring program. Consistent with these requirements, the QA Manager performed 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 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 E.

### **4.5.1 Field Data QA/QC Evaluation**

The QA Manager performs a review of field recorded parameters to assess their adherence with QAP and Permit requirements. The assessment involved review of the Field Data sheets. Review of the Field Data Sheets noted that the requirements for field data collection were met.

### **4.5.2 Holding Time Evaluation**

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

### **4.5.3 Laboratory Receipt Temperature Check**

Chain of Custody sheets were reviewed to confirm compliance with the sample receipt requirements specified in the QAP. Sample receipt temperature checks are provided under Tab E. The samples were received within the QAP required temperature limit.

### **4.5.4 Analytical Method Check**

The analytical methods reported by both laboratories were checked against the required methods specified in Table 1 of the QAP. Analytical method check results are provided in Tab E.

### **4.5.5 Reporting Limit Evaluation**

Reporting limits utilized by the laboratory were required to be equal to or lower than the GWQSS set out in Table 2 of the Permit. For Total Dissolved Solids ("TDS"), sulfate and chloride, for which Ground Water Quality Standards are not set out in Table 2 of the Permit, reporting limits specified in Part 1.E.6.e).(1) were used. Those reporting limits are 10 mg/L for TDS, and 1 mg/L for Sulfate and Chloride. The analytical method reporting limits reported by both laboratories were checked against the reporting limits specified in the Permit. Reporting limit evaluations are provided in Tab E. All analytes were measured and reported to the required reporting limits except the sample results that had the reporting limit raised due to sample dilution necessary to accommodate the analyte concentrations in the samples. In all cases the reported value for the analyte was higher than the increased detection limit.

#### **4.5.6 Trip Blank Evaluation**

The trip blank results were reviewed to identify any blank contamination. Trip blank evaluation is provided in Tab E. The trip blank results associated with the samples were less than reporting limit for the VOCs.

#### **4.5.7 QA/QC Evaluation for Sample Duplicates**

Section 9.1.4 a) of the QAP states that the Relative Percent Difference (“RPD”) 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 (described as activities in the QAP) are less than 5 times the required detection limit. This standard is based on the United States Environmental Protection Agency 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 duplicate pairs for the 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%. RPDs are also only calculated when both the sample and the duplicate report a detection for any given analyte. If only one of the pair reports a detection, the RPD cannot be calculated. The additional duplicate information is provided for information purposes.

The duplicate results were within a 20% RPD in the seeps and springs samples.

#### **4.5.8 Radiologics Counting Error**

Section 9.14 of the QAP requires that all gross alpha analysis reported with an activity equal to or greater than the Groundwater Compliance Limits set out in the Permit (for the seeps and springs samples the Groundwater Quality Standards [“GWQS”] will be used), shall have a counting variance that is equal to or less than 20% of the reported activity concentration. An error term may be greater than 20% of the reported activity concentration when the sum of the activity concentration and error term is less than or equal to the GWQS.

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 radiological results were reported as non-detect in 2014. Results of routine radiologic sample QC are provided under Tab E.

#### **4.5.9 Laboratory Matrix QC Evaluation**

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 E. The lab QA/QC results from both GEL and AWAL met these requirements except as described below.

A number of the seeps and springs samples had the reporting limit raised due to matrix interference and/or sample dilution. In all cases where the detection limit was increased, the concentration for the analyte was higher than the increased detection limit.

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.
- For method E900.1, used to determine gross alpha, a sample duplicate was used instead of a MSD.

The qualifiers, and the corresponding explanations reported in the QA/QC Summary Reports for any of the check samples for any of 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 QAP requirement to analyze a MS/MSD pair with each analytical batch was met. While the QAP does not require it, the recoveries were reviewed for compliance with each laboratory's 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 seeps and springs samples were within acceptable laboratory limits except as noted in Tab E. Eleven MS/MSD recoveries were outside the laboratory established acceptance limits. These results 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 QAPs 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 analytical data associated with the routine quarterly sampling met the requirement specified in the QAP. The information from the Laboratory QA/QC Summary Reports indicates that the surrogate recoveries for the seeps and springs samples were within acceptable laboratory limits for all surrogate compounds.

The QAP Section 8.1.2 requires that each analytical batch shall be accompanied by a reagent blank. Contamination detected in analysis of reagent blanks/method blanks will be used to evaluate any analytical laboratory contamination of environmental samples. The QAP specified process for evaluation of reagent/method blanks states that nonconformance will exist when blanks are within an order of magnitude of the sample results. No analytes were reported above the reporting limit in the reagent/method blanks from either laboratory.

## **5.0 EVALUATION OF ANALYTICAL DATA**

### **Analytical Results**

As previously stated, the samples were analyzed for the groundwater compliance parameters found on Table 2 of the Permit. In addition to these laboratory parameters, the pH, temperature, conductivity, (and although not required, redox and turbidity) were measured and recorded in the field.

The samples were not analyzed for semivolatile organic compounds. Although the Sampling Plan, Revision 0, currently states that the samples will also be analyzed for semivolatile organic compounds, the Permit was revised to eliminate the requirement for semivolatile analysis. The requirement to analyze the seeps and springs samples for semivolatile organic compounds has also been eliminated from the Draft Sampling Plan, Revision 1.

### **5.1 Evaluation of Analytical Results**

The results of the June sampling event show no evidence of Mill influence in the water produced by the seeps and springs sampled. The lack of Mill influence on seeps and springs is indicated by the fact that the parameters detected are within the ranges of concentrations for the on-site monitoring wells and for available historic data for the seeps and springs themselves. For those detected analytes, concentrations are shown in Tables 2A, 2B, 2C, and 2D. The data are compared to available historic data for each seep and spring as well as to on-site monitoring well data. Specific discussions about each seep or spring are included below.

#### **5.1.1 Ruin Spring**

No VOCs or radiologics were detected. Metals and major ions were the only analytes detected. The metals detections were minimal with only molybdenum, selenium and uranium having positive detections. A comparison of the 2009, 2010, 2011, 2012, and 2013 data to the 2014 data shows that the concentrations of most detected analytes remained approximately the same with only minor changes within the limits of normal analytical deviation. The reported values for calcium, fluoride, magnesium, selenium, chloride, and uranium increased from the 2013 sample results, but they are below the upper range of historic values for the on-site monitoring wells.

The differences are not significant and are most likely due to normal fluctuations due to flow rates or seasonal variations due to annual precipitation. Overall, the data reported for Ruin Spring are typical for a surface water sample with no indication of Mill influence.

### **5.1.2 Cottonwood Spring**

No VOCs or radiologics were detected. Metals and major ions were the only analytes detected. The metals detections were minimal with only uranium having a positive detection. A comparison of the 2009, 2010, 2011, 2012, and 2013 data to the 2014 data shows that the concentrations of most detected analytes remained approximately the same with only minor changes within the limits of normal analytical deviation. The reported values for fluoride, calcium, magnesium, potassium, sodium, uranium, and sulfate increased from the 2013 sample results, but they are below the upper range of historic values for the on-site monitoring wells. The differences are not significant and are most likely due to normal fluctuations due to flow rates or seasonal variations due to annual precipitation. Overall, the data reported for Cottonwood Spring are typical for a surface water sample with no indication of Mill influence.

### **5.1.3 Entrance Spring**

No radiologics were detected. Toluene, metals and major ions were the only analytes detected. The metals detections were minimal with only iron, manganese, selenium, and uranium having positive detections, with the concentration of selenium increasing compared to the 2013 sample results. The reported values for fluoride, and nitrate increased from the 2013 sample results. Toluene was detected for the first time at 1.32 ug/L, which is likely due to contamination either during sampling or at the laboratory, but still significantly below the GWQS of 1,000 ug/L. The detected concentrations are below the upper range of historic values for the on-site monitoring wells. The differences are not significant and are most likely due to normal fluctuations due to flow rates or seasonal variations due to annual precipitation. Overall, the data reported for Entrance Spring are typical for a surface water sample with no indication of Mill influence.

## **6.0 CORRECTIVE ACTION REPORT**

No corrective action reports are required for the 2014 annual sampling event.

### **6.1 Assessment of Corrective Actions from Previous Period**

No corrective action reports were required for the 2013 annual sampling event.

## **7.0 ELECTRONIC DATA FILES AND FORMAT**

EFRI has provided to the Director electronic copies of the laboratory results as part of the annual seeps and springs monitoring in Comma Separated Values, from the laboratory. A copy of the transmittal e-mail is included under Tab F.

## **8.0 SIGNATURE AND CERTIFICATION**

This document was prepared by Energy Fuels Resources (USA) Inc. on October 20, 2014.

Energy Fuels Resources (USA) Inc.


By:

A handwritten signature in dark ink, appearing to read 'S. Bakken', with a long horizontal flourish extending to the right.

Scott A. Bakken  
Director, Permitting & Environmental Affairs

### 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  
Director, Permitting & Environmental Affairs  
Energy Fuels Resources (USA) Inc.

**Table 1: Summary of Seeps and Springs Sampling**

<b>Location</b>	<b>Sample Date</b>	<b>Work Order No./Lab Set ID</b>	<b>Date of Lab Report</b>
Entrance Seep	6/17/2014	AWAL = 1406403 GEL = 351092	AWAL = 6/30/14 GEL = 7/16/14
Cottonwood Spring	6/17/2014	AWAL = 1406403 GEL = 351092	AWAL = 6/30/14 GEL = 7/16/14
Back Spring (Duplicate of Cottonwood Spring)	6/17/2014	AWAL = 1406403 GEL = 351092	AWAL = 6/30/14 GEL = 7/16/14
Ruin Spring	6/17/2014	AWAL = 1406403 GEL = 351092	AWAL = 6/30/14 GEL = 7/16/14
Westwater Seep	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry
Corral Spring	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry
Corral Canyon Seep	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry



Table2A Detected Constituents and Comparison to Historic Values and Mill Site Monitoring Wells

Ruin Spring									
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	2014	Range of Average Historic Values for Monitoring Wells <sup>1*</sup>	Ave 2003-2004 <sup>2</sup>
Major Ions (mg/l)									
Carbonate	<1	<1	<1	1	<1	<1	<1	--	--
Bicarbonate	233	254	241	239	237	208	204	--	--
Calcium	151	136	145	148	147	149	150	--	--
Chloride	28	23	25	44	28	26.3	27.1	ND - 213	27
Fluoride	0.5	0.53	0.45	0.5	0.52	0.538	<1	ND - 1.3	0.6
Magnesium	32.3	29.7	30.6	31.1	31.9	32.1	35.4	--	--
Nitrogen-Ammonia	0.09	<0.05	ND	<0.05	<0.05	<0.05	<0.05	--	--
Nitrogen-Nitrate	1.4	1.7	1.7	1.6	1.6	1.56	1.54	--	--
Potassium	3.3	3.07	3.2	3.3	3.5	3.46	3.24	--	--
Sodium	104	93.4	110	111	115	118	119	--	--
Sulfate	528	447	486	484	464	553	553	ND - 3455	521
TDS	1010	903	942	905	1000	952	984	1019 - 5548	1053
Metals (ug/l)									
Arsenic	<5	<5	<5	<5	<5	<5	<5	--	--
Beryllium	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<0.5	<0.5	--	--
Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND - 4.78	0.01
Chromium	<25	<25	<25	<25	<25	<25	<25	--	--
Cobalt	<10	<10	<10	<10	<10	<10	<10	--	--
Copper	<10	<10	<10	<10	<10	<10	<10	--	--
Iron	<30	<30	<30	<30	<30	<30	<30	ND - 7942	25
Lead	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Manganese	<10	<10	<10	<10	<10	<10	<10	ND - 34,550	5
Mercury	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
Molybdenum	17	17	16	17	16	16.1	16.0	--	--
Nickel	<20	<20	<20	<20	<20	<20	<20	ND - 61	0.05
Selenium	12.2	10	11.8	10.2	10.8	10.2	12.0	ND - 106.5	12.1
Silver	<10	<10	<10	<10	<10	<10	<10	--	--
Thallium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
Tin	<100	<100	<100	<100	<100	<100	<100	--	--
Uranium	9.11	8.47	9.35	8.63	8.68	9.12	9.61	ND - 59.8	10
Vanadium	<15	<15	<15	<15	<15	<15	<15	--	--
Zinc	<10	<10	<10	<10	<10	<10	<10	--	--
Radiologics (pCi/l)									
Gross Alpha	<0.2	<0.2	<-0.3	<-0.05	<-0.09	<1.0	<1	ND - 36	0.28

Ruin Spring									
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	2014	Range of Average Historic Values for Monitoring Wells <sup>1</sup> *	Ave 2003-2004 <sup>2</sup>
VOCS (ug/L)									
Acetone	<20	<20	<20	<20	<20	<20	<20	--	--
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Chloroform	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Chloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
MEK	<20	<20	<20	<20	<20	<20	<20	--	--
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Naphthalene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Tetrahydrofuran	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Xylenes	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--

<sup>1</sup> From Figure 3, Table 10 and Appendix B of the *Revised Addendum, Background Groundwater Quality Report: New Wells for Denison Mines (USA) Corp.'s White Mesa Mill Site, San Juan County, Utah*, April 30, 2008, prepared by INTERA, Inc. and Table 16 and Appendix D of the *Revised Background Groundwater Quality Report: Existing Wells for Denison Mines (USA) Corp.'s White Mesa Uranium Mill Site, San Juan County, Utah*, October 2007, prepared by

<sup>2</sup> From Figure 9 of the *Revised Addendum, Evaluation of Available Pre-Operational and Regional Background Data, Background Groundwater Quality Report: Existing Wells for Denison Mines (USA) Corp.'s White Mesa Mill Site, San Juan County, Utah*, November 16, 2007, prepared by INTERA, Inc.

\*Range of average historic values for On-Site Monitoring Wells as reported on April 30, 2008 (MW-1, MW-2, MW-3, MW-3A, MW-4, MW-5, MW-11, MW-12, MW-14, MW-15, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-24, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31 and MW-32)<sup>2</sup>

Table2B Detected Constituents and Comparison to Historic Values and Mill Site Monitoring Wells

Cottonwood Spring									
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	2014	Range of Average Historic Values for Monitoring Wells <sup>1*</sup>	Ave 1977 - 1982 <sup>1</sup>
Major Ions (mg/l)									
Carbonate	<1	<1	<1	6	<1	<1	<1	--	--
Bicarbonate	316	340	330	316	326	280	251	--	--
Calcium	90.3	92.2	95.4	94.2	101	87.9	99.7	--	--
Chloride	124	112	113	134	149	118	128	ND - 213	31
Fluoride	0.4	0.38	0.34	0.38	0.38	0.417	<1	ND - 1.3	0.8
Magnesium	25	24.8	25.2	25.2	27.7	23.6	29.0	--	--
Nitrogen-Ammonia	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	--	--
Nitrogen-Nitrate	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	--	--
Potassium	5.7	5.77	6	5.9	6.2	5.53	6.18	--	--
Sodium	205	214	229	227	247	217	227	--	--
Sulfate	383	389	394	389	256	403	417	ND - 3455	230
TDS	1010	900	1030	978	1040	996	968	1019 - 5548	811
Metals (ug/l)									
Arsenic	<5	<5	<5	<5	<5	<5	<5	--	--
Beryllium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
Cadmium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND - 4.78	--
Chromium	<25	<25	<25	<25	<25	<25	<25	--	--
Cobalt	<10	<10	<10	<10	<10	<10	<10	--	--
Copper	<10	<10	<10	<10	<10	<10	<10	--	--
Iron	<30	<30	53	<30	<30	<30	<30	ND - 7942	150
Lead	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Manganese	<10	<10	<10	<10	<10	<10	<10	ND - 34,550	580
Mercury	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
Molybdenum	<10	<10	<10	<10	<10	<10	<10	--	--
Nickel	<20	<20	<20	<20	<20	<20	<20	ND - 61	--
Selenium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	ND - 106.5	--
Silver	<10	<10	<10	<10	<10	<10	<10	--	--
Thallium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
Tin	<100	<100	<100	<100	<100	<100	<100	--	--
Uranium	8.42	8.24	7.87	8.68	8.17	8.95	9.62	ND - 59.8	--
Vanadium	<15	<15	<15	<15	<15	<15	<15	--	--
Zinc	<10	<10	<10	<10	<10	<10	<10	--	--
Radiologics (pCi/l)									
Gross Alpha	<0.2	<0.2	<0.1	<0.1	<0.2	<1.0	<1.0	ND - 36	7.2

Table2B Detected Constituents and Comparison to Historic Values and Mill Site Monitoring Wells

Cottonwood Spring									
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	2014	Range of Average Historic Values for Monitoring Wells <sup>1*</sup>	Ave 1977 - 1982 <sup>1</sup>
VOCS (ug/L)									
Acetone	<20	<20	<20	<20	<20	<20	<20	--	--
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Chloroform	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Chloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
MEK	<20	<20	<20	<20	<20	<20	<20	--	--
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Naphthalene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Tetrahydrofuran	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
Xylenes	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--

<sup>1</sup> From Figure 3, Table 10 and Appendix B of the *Revised Addendum, Background Groundwater Quality Report: New Wells for Denison Mines (USA) Corp's White Mesa Mill Site, San Juan County, Utah*, April 30, 2008, prepared by INTERA, Inc. and Table 16 and Appendix D of the *Revised Background Groundwater Quality Report: Existing Wells for Denison Mines (USA) Corp.'s White Mesa Uranium Mill Site, San Juan County, Utah*, October 2007, prepared by INTERA, Inc.

\*Range of average historic values for On-Site Monitoring Wells as reported on April 30, 2008 (MW-1, MW-2, MW-3, MW-3A, MW-4, MW-5, MW-11, MW-12, MW-14, MW-15, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-24, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31 and MW-32)

Table2C Detected Constituents and Comparison to Historic Values and Mill Site Monitoring Wells

Westwater Seep								
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	2014	Range of Average Historic Values for Monitoring Wells <sup>1</sup> *
Major Ions (mg/l)								
Carbonate	<1	<1	<1	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry	--
Bicarbonate	465	450	371					--
Calcium	191	179	247					--
Chloride	41	40	21					ND - 213
Fluoride	0.7	0.6	0.54					ND - 1.3
Magnesium	45.9	44.7	34.7					--
Nitrogen-Ammonia	<0.05	0.5	0.06					--
Nitrogen-Nitrate	0.8	<0.1	<0.1					--
Potassium	1.19	6.57	3.9					--
Sodium	196	160	112					--
Sulfate	646	607	354					ND - 3455
pH (s.u.)	8.01	7.38	7.2					6.7 - 8.9
TDS	1370	1270	853					1019 - 5548
Metals (ug/l)								
Arsenic	<5	<5	12.3	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry	--
Beryllium	<0.5	<0.5	0.91					--
Cadmium	<0.5	<0.5	0.9					ND - 4.78
Chromium	<25	<25	<25					--
Cobalt	<10	<10	<10					--
Copper	<10	<10	16					--
Iron	89	56	4540					ND - 7942
Lead	<1.0	<1.0	41.4					--
Manganese	37	87	268					ND - 34,550
Mercury	<0.5	<0.5	<0.5					--
Molybdenum	29	29	<10					--
Nickel	<20	<20	29					ND - 61
Selenium	<5.0	<5.0	<5.0					ND - 106.5
Silver	<10	<10	<10					--
Thallium	<0.5	<0.5	<0.5					--
Tin	<100	<100	<100					--
Uranium	15.1	46.6	6.64					ND - 59.8
Vanadium	<15	<15	34					--
Zinc	<10	<10	28					--
Radiologics (pCi/l)								
Gross Alpha	< -0.1	<0.3	0.5	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry	ND - 36

Table2C Detected Constituents and Comparison to Historic Values and Mill Site Monitoring Wells

Westwater Seep								
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	2014	Range of Average Historic Values for Monitoring Wells <sup>1</sup> *
VOCS (ug/L)								
Acetone	<20	<20	ND	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry	--
Benzene	<1.0	<1.0	ND					--
Carbon tetrachloride	<1.0	<1.0	ND					--
Chloroform	<1.0	<1.0	ND					--
Chloromethane	<1.0	<1.0	ND					--
MEK	<20	<20	ND					--
Methylene Chloride	<1.0	<1.0	ND					--
Naphthalene	<1.0	<1.0	ND					--
Tetrahydrofuran	<1.0	<1.0	ND					--
Toluene	<1.0	<1.0	ND					--
Xylenes	<1.0	<1.0	ND					--

<sup>1</sup> From Figure 3, Table 10 and Appendix B of the *Revised Addendum, Background Groundwater Quality Report: New Wells for Denison Mines (USA) Corp's White Mesa Mill Site, San Juan County, Utah*, April 30, 2008, prepared by INTERA, Inc. and Table 16 and Appendix D of the *Revised Background Groundwater Quality Report: Existing Wells for Denison Mines (USA) Corp.'s White Mesa Uranium Mill Site, San Juan County, Utah*, October 2007, prepared by INTERA, Inc.

\*Range of average historic values for On-Site Monitoring Wells as reported on April 30, 2008 (MW-1, MW-2, MW-3, MW-3A, MW-4, MW-5, MW-11, MW-12, MW-14, MW-15, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-24, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31 and MW-32)

Table2D Detected Constituents and Comparison to Historic Values and Mill Site Monitoring Wells

[illegible]



Table2D Detected Constituents and Comparison to Historic Values and Mill Site Monitoring Wells

Entrance Spring								
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	2014	Range of Average Historic Values for Monitoring Wells <sup>1*</sup>
Radiologics (pCi/l)								
Gross Alpha	0.9	<0.5	1.5	1.6	0.5	2.3	<1	ND - 36
VOCS (ug/L)								
Acetone	<20	<20	<20	<20	<20	<20	<20	--
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--
Carbon tetrachloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--
Chloroform	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--
Chloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--
MEK	<20	<20	<20	<20	<20	<20	<20	--
Methylene Chloride	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--
Naphthalene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--
Tetrahydrofuran	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.32	--
Xylenes	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--

<sup>1</sup> From Figure 3, Table 10 and Appendix B of the *Revised Addendum, Background Groundwater Quality Report: New Wells for Denison Mines (USA) Corp's White Mesa Mill Site, San Juan County, Utah*, April 30, 2008, prepared by INTERA, Inc. and Table 16 and Appendix D of the *Revised Background Groundwater Quality Report: Existing Wells for Denison Mines (USA) Corp.'s White Mesa Uranium Mill Site, San Juan County, Utah*, October 2007, prepared by INTERA, Inc.

\*Range of average historic values for On-Site Monitoring Wells as reported on April 30, 2008 (MW-1, MW-2, MW-3, MW-3A, MW-4, MW-5, MW-11, MW-12, MW-14, MW-15, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-24, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31 and MW-32)



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Tab A

Seeps and Springs Field Data Sheets and Photographic Documentation

### Field Data Record-Seeps and Springs Sampling

Seep or Spring Location: Corral Spring

Date For Initial Sampling Visit: 6/17/2014 Time: 1105

Sample Collected: ☐ Yes ☒ No

Date For Second Sampling Visit: 6/26/14 Time: 0830

Sample Collected: ☐ Yes ☒ No

Date For Third Sampling Visit: 7/9/14 Time: 0830

Sample Collected: ☐ Yes ☒ No

Sampling Personnel: \_\_\_\_\_

Weather Conditions at Time of Sampling: \_\_\_\_\_

Estimated Seep or Spring Flow Rate: \_\_\_\_\_

#### Field Parameter Measurements:

- pH \_\_\_\_\_
- Temperature (°C) \_\_\_\_\_
- Conductivity  $\mu$ MHOC/cm \_\_\_\_\_
- Turbidity (NTU) (if measured) \_\_\_\_\_
- Redox Potential Eh (mV) (if measured) \_\_\_\_\_

#### Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			
					Direct	Peristaltic Pump	Ladle	Other (describe in notes section)
VOCs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THF	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Non Radiologics	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: \_\_\_\_\_

Notes: Spring was dry. See photo.

6/26/14 Arrived on site at 0830. Spring was dry, see photo.

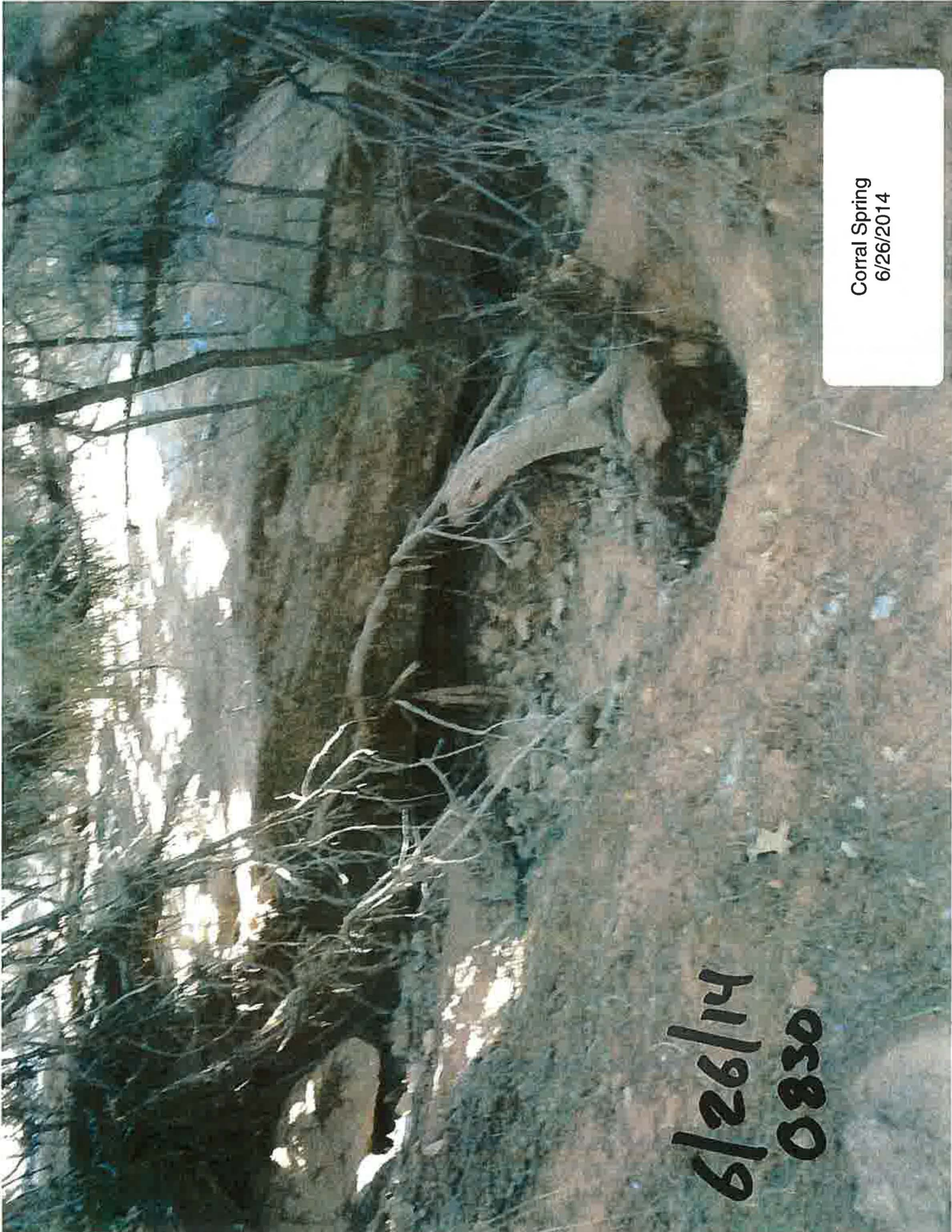
7/9/14 Creek was dry. See photo.



Corral Spring  
6/17/2014

501  
6/17/14





Corral Spring  
6/26/2014

6/26/14  
0830





Corral Spring  
7/9/2014



### Field Data Record-Seeps and Springs Sampling

Seep or Spring Location: Coral Canyon Seep

Date For Initial Sampling Visit: 6/17/2014 Time: 1130

Sample Collected: ☐ Yes ☒ No

Date For Second Sampling Visit: 6/26/14 Time: 0800

Sample Collected: ☐ Yes ☒ No

Date For Third Sampling Visit: 7/9/14 Time: 0800

Sample Collected: ☐ Yes ☒ No

Sampling Personnel: \_\_\_\_\_

Weather Conditions at Time of Sampling: \_\_\_\_\_

Estimated Seep or Spring Flow Rate: \_\_\_\_\_

#### Field Parameter Measurements:

- pH \_\_\_\_\_
- Temperature (°C) \_\_\_\_\_
- Conductivity  $\mu$ MHOC/cm \_\_\_\_\_
- Turbidity (NTU) (if measured) \_\_\_\_\_
- Redox Potential Eh (mV) (if measured) \_\_\_\_\_

#### Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			
					Direct	Peristaltic Pump	Ladle	Other (describe in notes section)
VOCs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THF	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Non Radiologics	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: \_\_\_\_\_

Notes: Made 3 attempts to sample seep. Seep was dry.  
See photos.



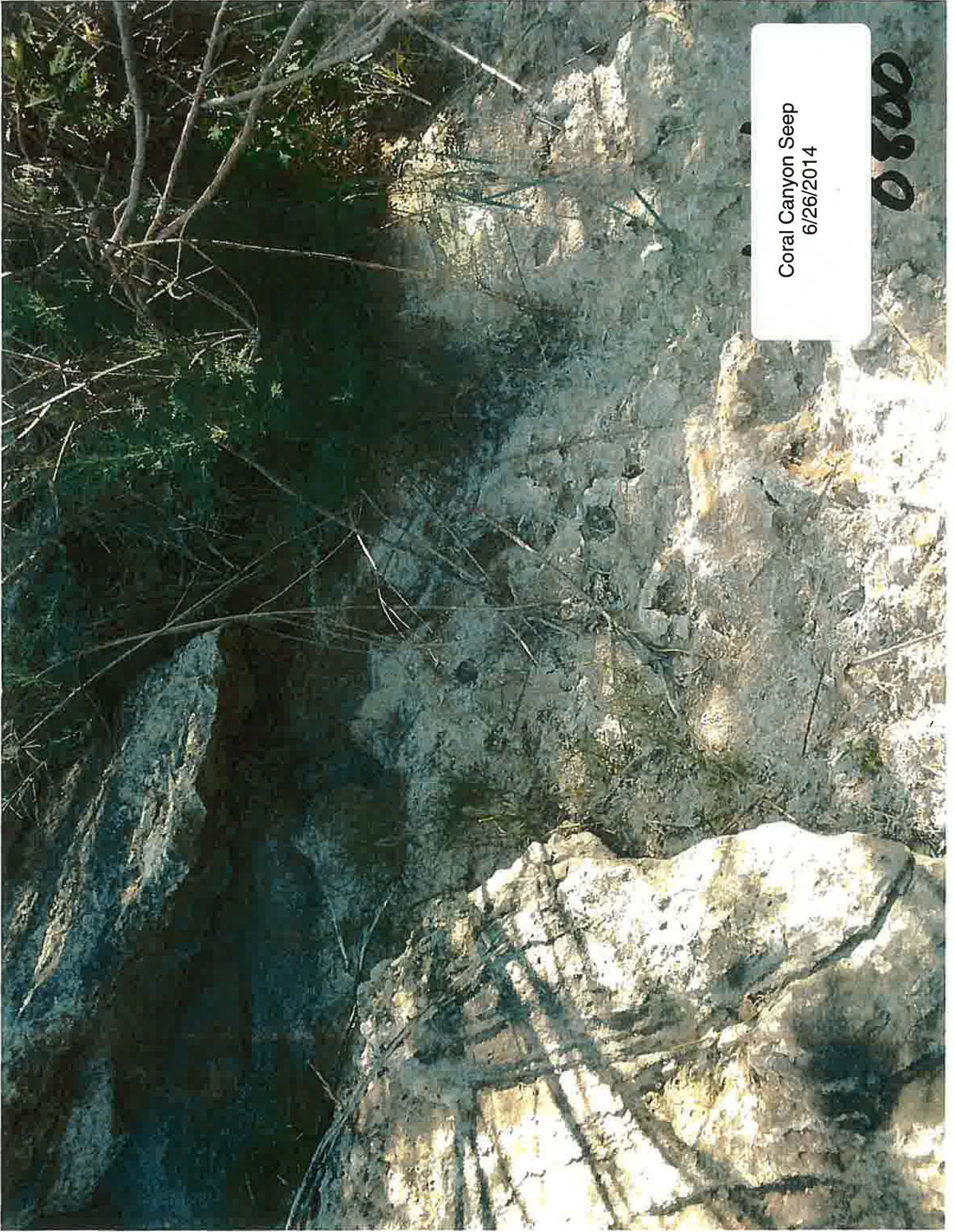
Coral Canyon Seep  
6/17/2014

0511  
6/17/14

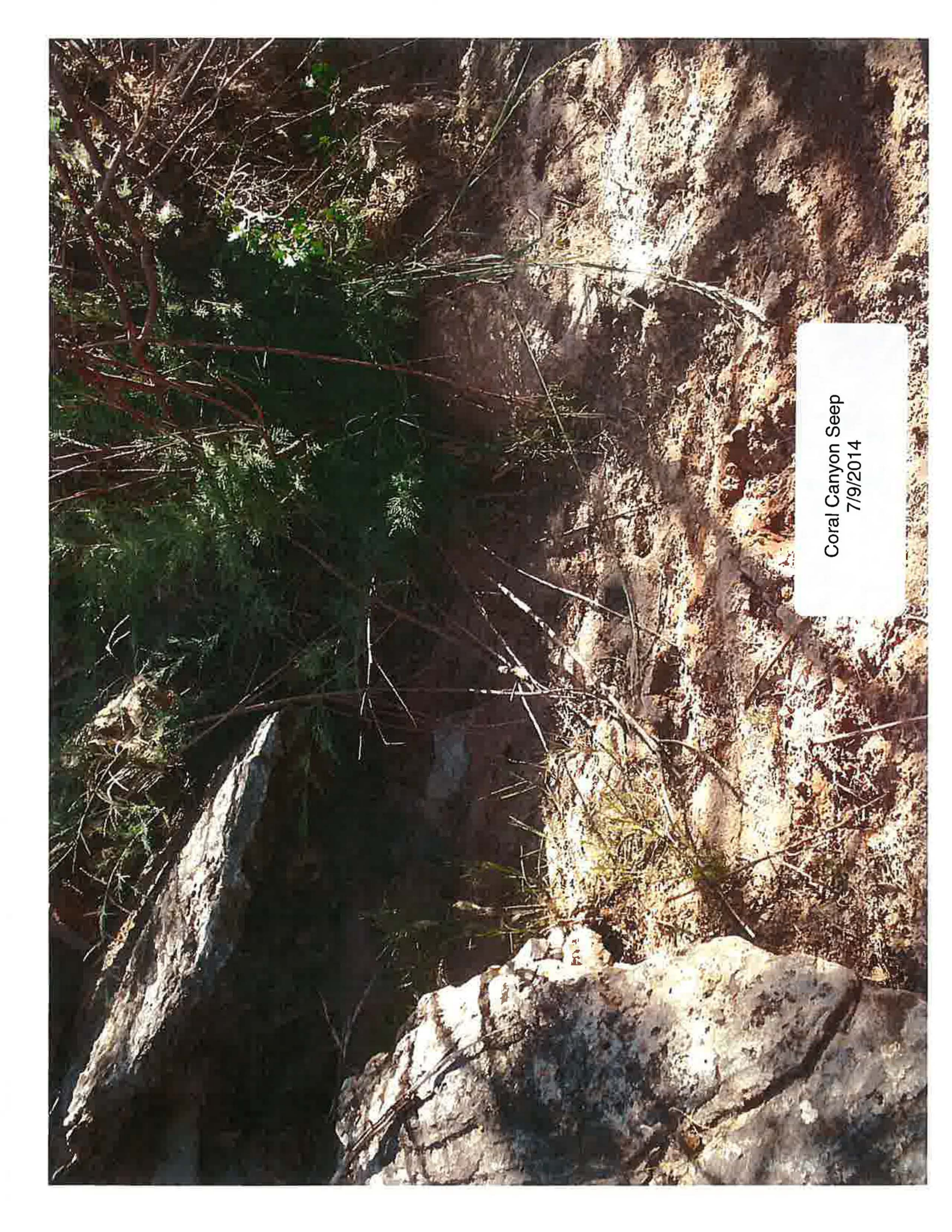


Coral Canyon Seep  
6/26/2014

0800





A photograph of a rocky cliff face. The rock is light-colored with some darker patches and textures. There are some thin, dry branches and some green foliage on the left side of the image. A white label is in the bottom right corner.

Coral Canyon Seep  
7/9/2014



### Field Data Record-Seeps and Springs Sampling

Seep or Spring Location: Cottonwood Spring

Date For Initial Sampling Visit: 6/17/2014 Time: 1010

Sample Collected: ☒ Yes ☐ No

Date For Second Sampling Visit: \_\_\_\_\_ Time: \_\_\_\_\_

Sample Collected: ☐ Yes ☐ No

Date For Third Sampling Visit: \_\_\_\_\_ Time: \_\_\_\_\_

Sample Collected: ☐ Yes ☐ No

Sampling Personnel: Tanner Holliday, Garrin Palmer, Deen Henderson, Phil Goble

Weather Conditions at Time of Sampling: Clear and Windy

Estimated Seep or Spring Flow Rate: 0.25 GPM (estimate)

#### Field Parameter Measurements:

-pH 7.18

-Temperature (°C) 16.90

-Conductivity  $\mu$ MHOC/cm 1677

-Turbidity (NTU) (if measured) 0

-Redox Potential Eh (mV) (if measured) 238

#### Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			
					Direct	Peristaltic Pump	Ladle	Other (describe in notes section)
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Non Radiologics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### QC Samples Associated with this Location:

☐ Rinsate Blank

☒ Duplicate

Duplicate Sample Name: back spring

Notes: Arrived on site at 0956. Tanner, Garrin, Deen, Phil all present for sampling event. Samples collected at 1010 Left site at 1022





Cottonwood Spring  
6/17/2014



### Field Data Record-Seeps and Springs Sampling

Seep or Spring Location: Back Spring

Date For Initial Sampling Visit: 6/17/2014 Time: 1010

Sample Collected: ☒ Yes ☐ No

Date For Second Sampling Visit: \_\_\_\_\_ Time: \_\_\_\_\_

Sample Collected: ☐ Yes ☐ No

Date For Third Sampling Visit: \_\_\_\_\_ Time: \_\_\_\_\_

Sample Collected: ☐ Yes ☐ No

Sampling Personnel: Tanner Holliday, Garin Palmer, Deen Henderson, Phil Goble

Weather Conditions at Time of Sampling: clear and windy

Estimated Seep or Spring Flow Rate: \_\_\_\_\_

#### Field Parameter Measurements:

-pH 7.18  
-Temperature (°C) 16.90  
-Conductivity  $\mu$ MHOC/cm 1677  
-Turbidity (NTU) (if measured) 0  
-Redox Potential Eh (mV) (if measured) 238

#### Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			
					Direct	Peristaltic Pump	Ladle	Other (describe in notes section)
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Non Radiologics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: Back spring

Notes: Duplicate of Cottonwood spring

## Field Data Record-Seeps and Springs Sampling

Seep or Spring Location: Entrance Seep

Date For Initial Sampling Visit: 6/17/2014 Time: 0825

Sample Collected: ☒ Yes ☐ No

Date For Second Sampling Visit: \_\_\_\_\_ Time: \_\_\_\_\_

Sample Collected: ☐ Yes ☐ No

Date For Third Sampling Visit: \_\_\_\_\_ Time: \_\_\_\_\_

Sample Collected: ☐ Yes ☐ No

Sampling Personnel: Tanner Holliday, Garrin Palmer, Deen Henderson, Phil Gable

Weather Conditions at Time of Sampling: Clear with some wind gusts

Estimated Seep or Spring Flow Rate: 0.1-2 GPM (estimate) 1.0 GPM

### Field Parameter Measurements:

-pH 6.16  
 -Temperature (°C) 17.62  
 -Conductivity  $\mu$ MHOC/cm 1095  
 -Turbidity (NTU) (if measured) 1.7  
 -Redox Potential Eh (mV) (if measured) 268

### Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			
					Direct	Peristaltic Pump	Ladle	Other (describe in notes section)
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Non Radiologics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Grab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: \_\_\_\_\_

Notes: Arrived on site at 0819. Tanner, Garrin, Phil, Deen all present to collect samples. State of Utah to split sampling event. Samples collected at 0825 Left site at 0850



0805 71/2

Entrance Seep  
6/17/2014









Ruin Spring  
6/17/2014



### Field Data Record-Seeps and Springs Sampling

Seep or Spring Location: Westwater Seep

Date For Initial Sampling Visit: 6/17/2014 Time: 1045

Sample Collected: ☐ Yes ☒ No

Date For Second Sampling Visit: 6/26/14 Time: 0900

Sample Collected: ☐ Yes ☒ No

Date For Third Sampling Visit: 7/9/14 Time: 0945

Sample Collected: ☐ Yes ☒ No

Sampling Personnel: \_\_\_\_\_

Weather Conditions at Time of Sampling: \_\_\_\_\_

Estimated Seep or Spring Flow Rate: \_\_\_\_\_

#### Field Parameter Measurements:

- pH \_\_\_\_\_
- Temperature (°C) \_\_\_\_\_
- Conductivity  $\mu$ MHOC/cm \_\_\_\_\_
- Turbidity (NTU) (if measured) \_\_\_\_\_
- Redox Potential Eh (mV) (if measured) \_\_\_\_\_

#### Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			
					Direct	Peristaltic Pump	Ladle	Other (describe in notes section)
VOCs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THF	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nutrients	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Non Radiologics	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gross Alpha	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: \_\_\_\_\_

Notes: Made 3 attempts to sample. Seep was dry. See photos



A photograph of a rocky, shaded area, possibly a crevice or a small cave entrance. The ground is covered with small, light-colored rocks and debris. There are some green plants and moss growing in the shaded areas. A bright light source is visible on the left, creating a strong glare. A white label is in the top right corner.


Westwater Seep  
6/17/2014





Westwater Seep  
6/26/2014





Westwater Seep  
7/9/2014

Tab B

Field Parameter Measurement Data

# Field parameters

Location	pH	Conductivity	Turbidity	Redox	Temperature
Date	6/17/2014	6/17/2014	6/17/2014	6/17/2014	6/17/2014
Entrance Seep	6.16	1095	1.7	268	17.62
Cottonwood Spring	7.18	1677	0.0	238	16.90
Back Spring (Duplicate of Cottonwood Spring)	7.18	1677	0.0	238	16.90
Ruin Spring	7.08	1450	17.0	234	14.44



Tab C

Survey Data and Contour Map

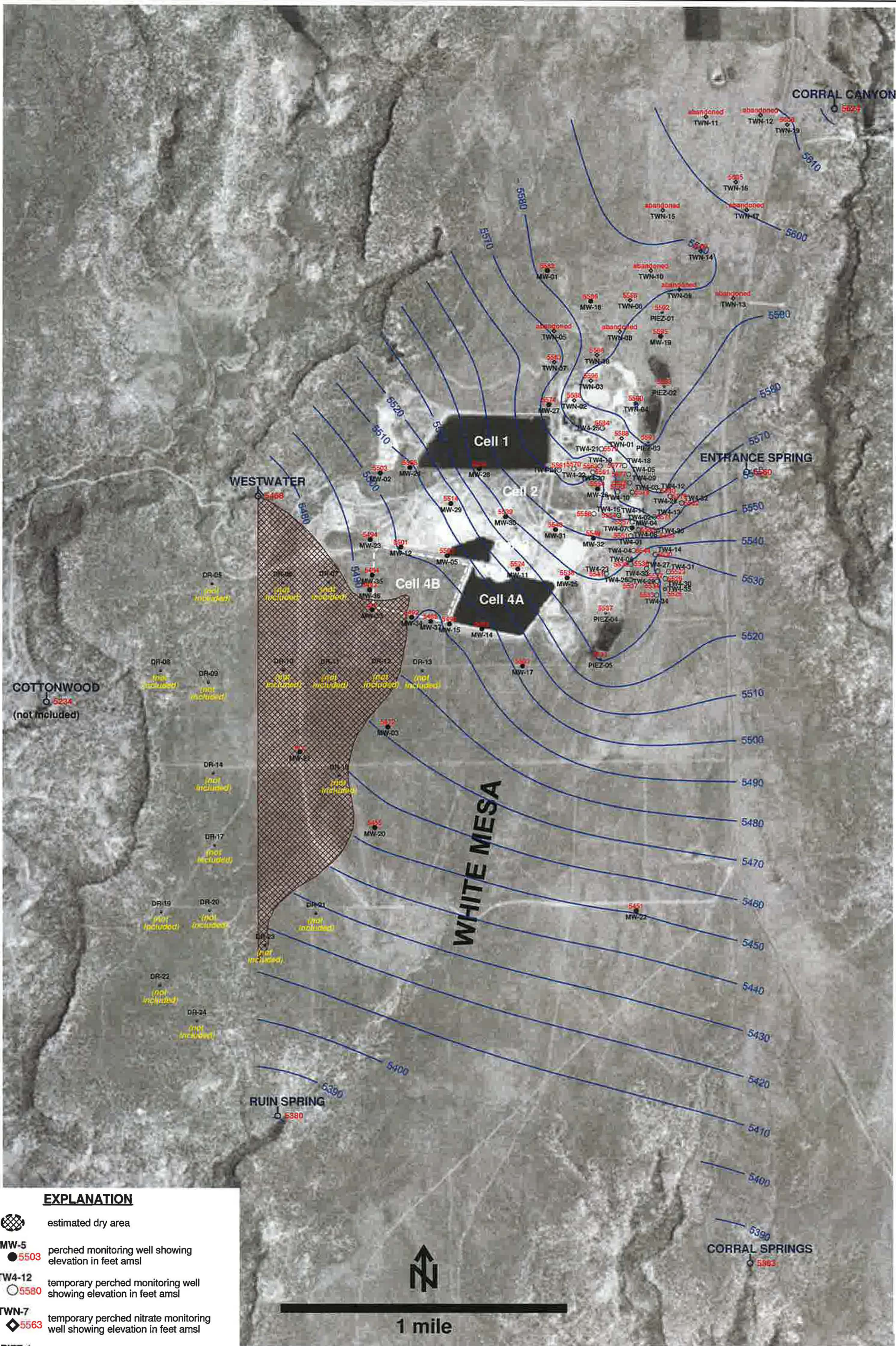
1



### Seeps and Springs Survey Locations

Mid-December 2009 Survey			
Location	Latitude (N)	Longitude (W)	Elevation
FROG POND	37°33'03.5358"	109°29'04.9552"	5589.56
CORRAL CANYON	37°33'07.1392"	109°29'12.3907"	5623.97
ENTRANCE SPRING	37°32'01.6487"	109°29'33.7005"	5559.71
CORRAL SPRINGS	37°29'37.9192"	109°29'35.8201"	5383.35
RUIN SPRING	37°30'06.0448"	109°31'23.4300"	5380.03
COTTONWOOD	37°31'21.7002"	109°32'14.7923"	5234.33
WESTWATER	37°31'58.5020"	109°31'25.7345"	5468.23
Verification Survey July 2010			
RUIN SPRING	37°30'06.0456"	109°31'23.4181"	5380.01
COTTONWOOD	37°31'21.6987"	109°32'14.7927"	5234.27
WESTWATER	37°31'58.5013"	109°31'25.7357"	5468.32





**EXPLANATION**

- estimated dry area
- MW-5**  
 5503 perched monitoring well showing elevation in feet amsl
- TW4-12**  
 5580 temporary perched monitoring well showing elevation in feet amsl
- TWN-7**  
 5563 temporary perched nitrate monitoring well showing elevation in feet amsl
- PIEZ-1**  
 5592 perched piezometer showing elevation in feet amsl
- TW4-35**  
 5526 temporary perched monitoring well installed May, 2014 showing approximate elevation in feet amsl
- RUIN SPRING**  
 5380 seep or spring showing elevation in feet amsl

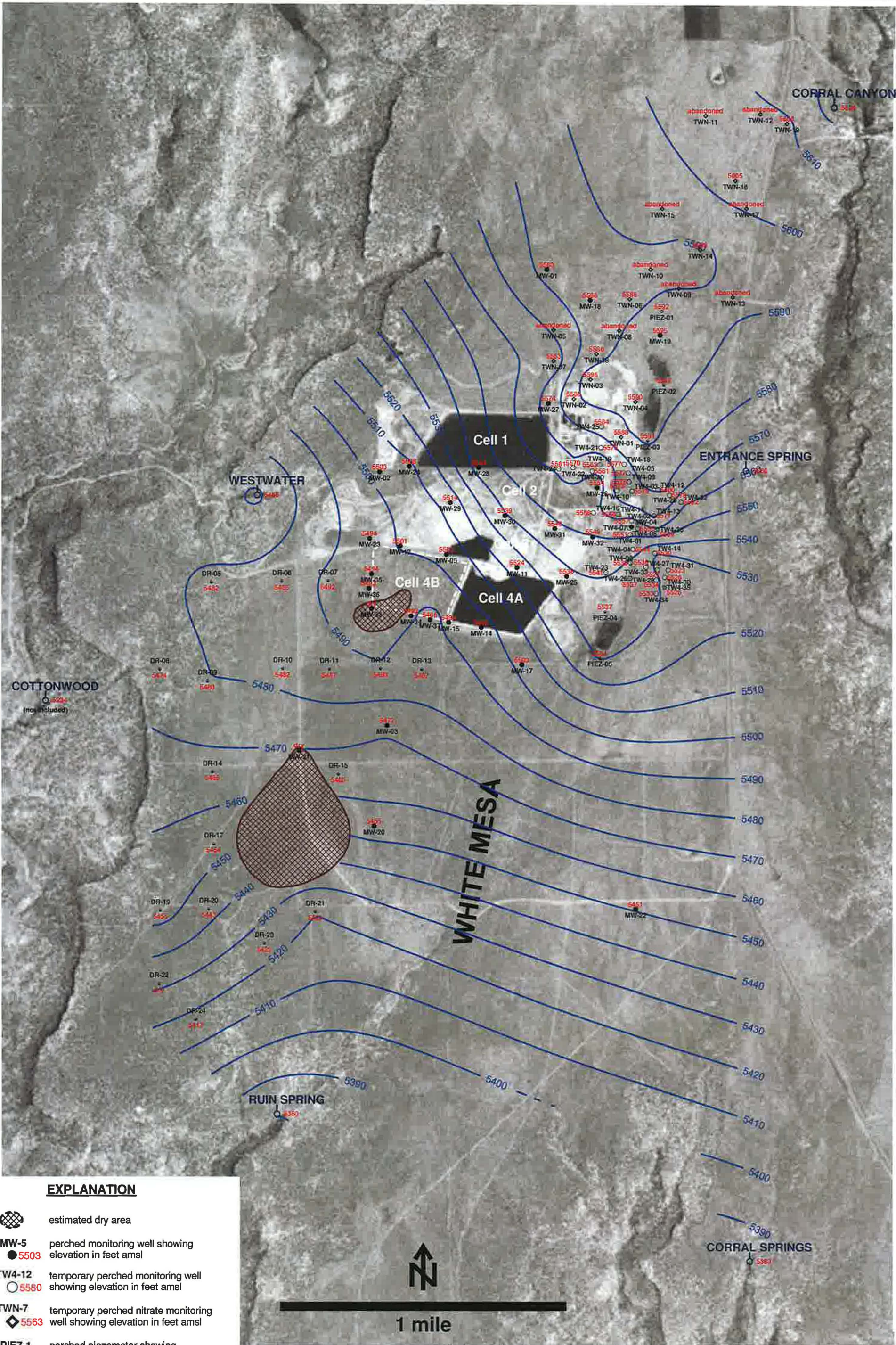


HYDRO  
GEO  
CHEM, INC.








**KRIGED 3rd QUARTER, 2014 WATER LEVELS  
(DR-SERIES PIEZOMETERS NOT INCLUDED)  
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/nov14/ springs_report/Uwl0914sp_nodr.srf	C-1

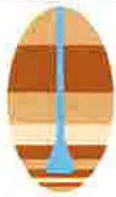




**EXPLANATION**

-  estimated dry area
- MW-5**  
 5503 perched monitoring well showing elevation in feet amsl
- TW4-12**  
 5580 temporary perched monitoring well showing elevation in feet amsl
- TWN-7**  
 5563 temporary perched nitrate monitoring well showing elevation in feet amsl
- PIEZ-1**  
 5592 perched piezometer showing elevation in feet amsl
- TW4-35**  
 5526 temporary perched monitoring well installed May, 2014 showing elevation in feet amsl
- RUIN SPRING**  
 5380 seep or spring showing elevation in feet amsl

NOTE: MW-4, MW-26, TW4-4, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells

	<b>HYDRO GEO CHEM, INC.</b>	<b>KRIGED 3rd QUARTER, 2014 WATER LEVELS WHITE MESA SITE</b>	
		APPROVED	DATE
		REFERENCE	FIGURE
		H:/718000/nov14/ springs_report/Uwl0914sp.srf	C-2



Tab D

Analytical Laboratory Data



## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2014  
**Lab Sample ID:** 1406403-003  
**Client Sample ID:** Cottonwood Spring  
**Collection Date:** 6/17/2014 1010h  
**Received Date:** 6/19/2014 900h

**Contact:** Garrin Palmer

### Analytical Results

### DISSOLVED METALS

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	6/19/2014	1230h	6/20/2014	1825h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	6/19/2014	1230h	6/25/2014	1009h	E200.7	10.0	<b>99.7</b>	
Chromium	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.0100	< 0.0100	
Copper	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.0100	< 0.0100	
Iron	mg/L	6/19/2014	1230h	6/25/2014	1643h	E200.8	0.0300	< 0.0300	
Lead	mg/L	6/19/2014	1230h	6/20/2014	1825h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	6/19/2014	1230h	6/25/2014	1009h	E200.7	10.0	<b>29.0</b>	
Manganese	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	6/23/2014	1445h	6/24/2014	850h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	6/19/2014	1230h	6/25/2014	1134h	E200.7	1.00	<b>6.18</b>	
Selenium	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.00500	< 0.00500	
Silver	mg/L	6/19/2014	1230h	6/20/2014	1653h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	6/19/2014	1230h	6/25/2014	1009h	E200.7	10.0	<b>227</b>	
Thallium	mg/L	6/19/2014	1230h	6/20/2014	1825h	E200.8	0.000500	< 0.000500	
Tin	mg/L	6/19/2014	1230h	6/23/2014	1553h	E200.8	0.100	< 0.100	
Uranium	mg/L	6/19/2014	1230h	6/23/2014	1805h	E200.8	0.000300	<b>0.00962</b>	
Vanadium	mg/L	6/19/2014	1230h	6/25/2014	1134h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	6/19/2014	1230h	6/25/2014	1134h	E200.7	0.0100	< 0.0100	

463 West 3600 South  
Salt Lake City, UT 84115

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

web: www.awal-labs.com

Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer



## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2014  
**Lab Sample ID:** 1406403-003  
**Client Sample ID:** Cottonwood Spring  
**Collection Date:** 6/17/2014 1010h  
**Received Date:** 6/19/2014 900h

### Analytical Results

463 West 3600 South

Salt Lake City, UT 84115

Phone: (801) 263-8686

Toll Free: (888) 263-8686

Fax: (801) 263-8687

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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	6/25/2014	1130h	6/25/2014	2013h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L			6/20/2014	705h	SM2320B	1.00	<b>251</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L			6/20/2014	705h	SM2320B	1.00	< 1.00	
Chloride	mg/L			6/24/2014	1944h	E300.0	10.0	<b>128</b>	
Fluoride	mg/L			6/24/2014	1944h	E300.0	1.00	< 1.00	
Ion Balance	%			6/26/2014	1450h	Calc.	-100	<b>0.346</b>	
Nitrate/Nitrite (as N)	mg/L			6/19/2014	1552h	E353.2	0.100	< 0.100	
Sulfate	mg/L			6/24/2014	2000h	E300.0	100	<b>417</b>	
Total Anions, Measured	meq/L			6/26/2014	1450h	Calc.		<b>17.3</b>	
Total Cations, Measured	meq/L			6/26/2014	1450h	Calc.		<b>17.4</b>	
Total Dissolved Solids	mg/L			6/20/2014	1050h	SM2540C	20.0	<b>968</b>	
Total Dissolved Solids Ratio, Measured/Calculated				6/26/2014	1450h	Calc.		<b>0.916</b>	
Total Dissolved Solids, Calculated	mg/L			6/26/2014	1450h	Calc.		<b>1,060</b>	



## ORGANIC ANALYTICAL REPORT

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

**Contact:** Garrin Palmer

**Project:** Seeps and Springs 2014

**Lab Sample ID:** 1406403-003A

**Client Sample ID:** Cottonwood Spring

**Collection Date:** 6/17/2014 1010h

**Received Date:** 6/19/2014 900h

Test Code: 8260-W

### Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 6/19/2014 1314h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

463 West 3600 South  
Salt Lake City, UT 84115

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

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	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	56.3	50.00	113	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	49.7	50.00	99.4	80-128	
Surr: Dibromofluoromethane	1868-53-7	52.2	50.00	104	80-124	
Surr: Toluene-d8	2037-26-5	50.3	50.00	101	77-129	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 16, 2014

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

Client Sample ID: Cottonwood Spring  
Sample ID: 351092003  
Matrix: Ground Water  
Collect Date: 17-JUN-14 10:10  
Receive Date: 20-JUN-14  
Collector: Client

Project: DNMI00106  
Client ID: DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha	U	0.0848	+/-0.110	0.428	1.00	pCi/L		CXP3	07/12/14	1614	1399658	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	EPA 900.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			94.9	(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.





## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2014  
**Lab Sample ID:** 1406403-004  
**Client Sample ID:** Back Spring  
**Collection Date:** 6/17/2014 1010h  
**Received Date:** 6/19/2014 900h

**Contact:** Garrin Palmer

### Analytical Results

### DISSOLVED METALS

463 West 3600 South  
Salt Lake City, UT 84115

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

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	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	6/19/2014	1230h	6/20/2014	1830h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	6/19/2014	1230h	6/25/2014	1015h	E200.7	10.0	<b>91.4</b>	
Chromium	mg/L	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.0100	< 0.0100	
Copper	mg/L	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.0100	< 0.0100	
Iron	mg/L	6/19/2014	1230h	6/25/2014	1648h	E200.8	0.0300	< 0.0300	
Lead	mg/L	6/19/2014	1230h	6/20/2014	1830h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	6/19/2014	1230h	6/25/2014	1015h	E200.7	10.0	<b>27.1</b>	
Manganese	mg/L	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	6/23/2014	1445h	6/24/2014	855h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	6/19/2014	1230h	6/25/2014	1136h	E200.7	1.00	<b>6.04</b>	
Selenium	mg/L	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.00500	< 0.00500	
Silver	mg/L	6/19/2014	1230h	6/20/2014	1659h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	6/19/2014	1230h	6/25/2014	1015h	E200.7	10.0	<b>214</b>	
Thallium	mg/L	6/19/2014	1230h	6/20/2014	1830h	E200.8	0.000500	< 0.000500	
Tin	mg/L	6/19/2014	1230h	6/23/2014	1558h	E200.8	0.100	< 0.100	
Uranium	mg/L	6/19/2014	1230h	6/23/2014	1810h	E200.8	0.000300	<b>0.00924</b>	
Vanadium	mg/L	6/19/2014	1230h	6/25/2014	1136h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	6/19/2014	1230h	6/25/2014	1136h	E200.7	0.0100	< 0.0100	



## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2014  
**Lab Sample ID:** 1406403-004  
**Client Sample ID:** Back Spring  
**Collection Date:** 6/17/2014 1010h  
**Received Date:** 6/19/2014 900h

**Contact:** Garrin Palmer

### Analytical Results

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	6/25/2014	1130h	6/25/2014	2014h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L			6/20/2014	705h	SM2320B	1.00	<b>218</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L			6/20/2014	705h	SM2320B	1.00	< 1.00	
Chloride	mg/L			6/24/2014	2016h	E300.0	10.0	<b>127</b>	
Fluoride	mg/L			6/24/2014	2016h	E300.0	1.00	< 1.00	
Ion Balance	%			6/26/2014	1450h	Calc.	-100	<b>-1.22</b>	
Nitrate/Nitrite (as N)	mg/L			6/19/2014	1553h	E353.2	0.100	< 0.100	
Sulfate	mg/L			6/24/2014	2032h	E300.0	100	<b>418</b>	
Total Anions, Measured	meq/L			6/26/2014	1450h	Calc.		<b>16.7</b>	
Total Cations, Measured	meq/L			6/26/2014	1450h	Calc.		<b>16.3</b>	
Total Dissolved Solids	mg/L			6/20/2014	1050h	SM2540C	20.0	<b>1,000</b>	
Total Dissolved Solids Ratio, Measured/Calculated				6/26/2014	1450h	Calc.		<b>0.985</b>	
Total Dissolved Solids, Calculated	mg/L			6/26/2014	1450h	Calc.		<b>1,020</b>	

463 West 3600 South  
Salt Lake City, UT 84115

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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.

**Contact:** Garrin Palmer

**Project:** Seeps and Springs 2014

**Lab Sample ID:** 1406403-004A

**Client Sample ID:** Back Spring

**Collection Date:** 6/17/2014 1010h

**Received Date:** 6/19/2014 900h

Test Code: 8260-W

### Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 6/19/2014 1333h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

463 West 3600 South  
Salt Lake City, UT 84115

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

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	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	56.1	50.00	112	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	49.8	50.00	99.7	80-128	
Surr: Dibromofluoromethane	1868-53-7	52.4	50.00	105	80-124	
Surr: Toluene-d8	2037-26-5	50.4	50.00	101	77-129	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 16, 2014

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

Client Sample ID: Back Spring  
Sample ID: 351092004  
Matrix: Ground Water  
Collect Date: 17-JUN-14 10:10  
Receive Date: 20-JUN-14  
Collector: Client

Project: DNMI00106  
Client ID: DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time Batch	Method
Rad Gas Flow Proportional Counting											
GFPC, Total Alpha Radium, Liquid "As Received"											
Gross Radium Alpha	U	0.193	+/-0.122	0.400	1.00	pCi/L		CXP3	07/12/14	1614 1399658	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments									
	EPA 900.1 Modified										
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits						
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			98.5	(25%-125%)						

### Notes:

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

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





# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2014  
**Lab Sample ID:** 1406403-001  
**Client Sample ID:** Entrance Seep  
**Collection Date:** 6/17/2014 825h  
**Received Date:** 6/19/2014 900h

**Contact:** Garrin Palmer

## Analytical Results

## DISSOLVED METALS

463 West 3600 South  
Salt Lake City, UT 84115

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

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	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	6/19/2014	1230h	6/20/2014	1813h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	6/19/2014	1230h	6/25/2014	1000h	E200.7	10.0	<b>103</b>	2
Chromium	mg/L	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.0100	< 0.0100	
Copper	mg/L	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.0100	< 0.0100	
Iron	mg/L	6/19/2014	1230h	6/25/2014	1631h	E200.8	0.0300	<b>0.0372</b>	
Lead	mg/L	6/19/2014	1230h	6/20/2014	1813h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	6/19/2014	1230h	6/25/2014	1000h	E200.7	10.0	<b>34.9</b>	1
Manganese	mg/L	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.0100	<b>0.0161</b>	
Mercury	mg/L	6/23/2014	1445h	6/24/2014	842h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	6/19/2014	1230h	6/25/2014	1127h	E200.7	1.00	<b>1.56</b>	
Selenium	mg/L	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.00500	<b>0.0159</b>	
Silver	mg/L	6/19/2014	1230h	6/20/2014	1616h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	6/19/2014	1230h	6/25/2014	1000h	E200.7	10.0	<b>78.9</b>	2
Thallium	mg/L	6/19/2014	1230h	6/20/2014	1813h	E200.8	0.000500	< 0.000500	
Tin	mg/L	6/19/2014	1230h	6/23/2014	1529h	E200.8	0.100	< 0.100	
Uranium	mg/L	6/19/2014	1230h	6/23/2014	1753h	E200.8	0.000300	<b>0.0232</b>	
Vanadium	mg/L	6/19/2014	1230h	6/25/2014	1127h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	6/19/2014	1230h	6/25/2014	1127h	E200.7	0.0100	< 0.0100	

<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:** Seeps and Springs 2014  
**Lab Sample ID:** 1406403-001  
**Client Sample ID:** Entrance Seep  
**Collection Date:** 6/17/2014 825h  
**Received Date:** 6/19/2014 900h

**Contact:** Garrin Palmer

### Analytical Results

463 West 3600 South  
Salt Lake City, UT 84115

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

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	6/25/2014	1130h	6/25/2014	2008h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L			6/20/2014	705h	SM2320B	1.00	<b>247</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L			6/20/2014	705h	SM2320B	1.00	< 1.00	
Chloride	mg/L			6/24/2014	1841h	E300.0	10.0	<b>76.8</b>	
Fluoride	mg/L			6/24/2014	1841h	E300.0	1.00	< 1.00	
Ion Balance	%			6/26/2014	1450h	Calc.	-100	<b>-1.13</b>	
Nitrate/Nitrite (as N)	mg/L			6/19/2014	1549h	E353.2	0.500	<b>3.65</b>	
Sulfate	mg/L			6/24/2014	1857h	E300.0	100	<b>219</b>	
Total Anions, Measured	meq/L			6/26/2014	1450h	Calc.		<b>11.7</b>	
Total Cations, Measured	meq/L			6/26/2014	1450h	Calc.		<b>11.5</b>	
Total Dissolved Solids	mg/L			6/20/2014	1050h	SM2540C	20.0	<b>688</b>	@
Total Dissolved Solids Ratio, Measured/Calculated				6/26/2014	1450h	Calc.		<b>1.03</b>	
Total Dissolved Solids, Calculated	mg/L			6/26/2014	1450h	Calc.		<b>666</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.



## ORGANIC ANALYTICAL REPORT

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

**Contact:** Garrin Palmer

**Project:** Seeps and Springs 2014

**Lab Sample ID:** 1406403-001A

**Client Sample ID:** Entrance Seep

**Collection Date:** 6/17/2014 825h

**Received Date:** 6/19/2014 900h

Test Code: 8260-W

### Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 6/19/2014 1237h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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	1.32	
Xylenes, Total	1330-20-7	1.00	< 1.00	

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	54.4	50.00	109	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	50.8	50.00	102	80-128	
Surr: Dibromofluoromethane	1868-53-7	51.6	50.00	103	80-124	
Surr: Toluene-d8	2037-26-5	49.6	50.00	99.1	77-129	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 16, 2014

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

Client Sample ID: Enterance Seep  
Sample ID: 351092001  
Matrix: Ground Water  
Collect Date: 17-JUN-14 08:25  
Receive Date: 20-JUN-14  
Collector: Client

Project: DNMI00106  
Client ID: DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha	U	0.659	+/-0.184	0.438	1.00	pCi/L		CXP3	07/12/14	1613	1399658	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	EPA 900.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			93.4	(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.



## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2014  
**Lab Sample ID:** 1406403-002  
**Client Sample ID:** Ruin Spring  
**Collection Date:** 6/17/2014 925h  
**Received Date:** 6/19/2014 900h

**Contact:** Garrin Palmer

### Analytical Results

### DISSOLVED METALS

463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686  
 Toll Free: (888) 263-8686  
 Fax: (801) 263-8687  
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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	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	6/19/2014	1230h	6/20/2014	1819h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	6/19/2014	1230h	6/25/2014	1007h	E200.7	10.0	<b>150</b>	
Chromium	mg/L	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.0100	< 0.0100	
Copper	mg/L	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.0100	< 0.0100	
Iron	mg/L	6/19/2014	1230h	6/25/2014	1637h	E200.8	0.0300	< 0.0300	
Lead	mg/L	6/19/2014	1230h	6/20/2014	1819h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	6/19/2014	1230h	6/25/2014	1007h	E200.7	10.0	<b>35.4</b>	
Manganese	mg/L	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	6/23/2014	1445h	6/24/2014	848h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.0100	<b>0.0160</b>	
Nickel	mg/L	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	6/19/2014	1230h	6/25/2014	1132h	E200.7	1.00	<b>3.24</b>	
Selenium	mg/L	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.00500	<b>0.0120</b>	
Silver	mg/L	6/19/2014	1230h	6/20/2014	1647h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	6/19/2014	1230h	6/25/2014	1007h	E200.7	10.0	<b>119</b>	
Thallium	mg/L	6/19/2014	1230h	6/20/2014	1819h	E200.8	0.000500	< 0.000500	
Tin	mg/L	6/19/2014	1230h	6/23/2014	1547h	E200.8	0.100	< 0.100	
Uranium	mg/L	6/19/2014	1230h	6/23/2014	1759h	E200.8	0.000300	<b>0.00961</b>	
Vanadium	mg/L	6/19/2014	1230h	6/25/2014	1132h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	6/19/2014	1230h	6/25/2014	1132h	E200.7	0.0100	< 0.0100	



## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2014  
**Lab Sample ID:** 1406403-002  
**Client Sample ID:** Ruin Spring  
**Collection Date:** 6/17/2014 925h  
**Received Date:** 6/19/2014 900h

**Contact:** Garrin Palmer

### Analytical Results

463 West 3600 South  
Salt Lake City, UT 84115

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

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	6/25/2014	1130h	6/25/2014	2012h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L			6/20/2014	705h	SM2320B	1.00	<b>204</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L			6/20/2014	705h	SM2320B	1.00	< 1.00	
Chloride	mg/L			6/24/2014	1913h	E300.0	10.0	<b>27.1</b>	
Fluoride	mg/L			6/24/2014	1913h	E300.0	1.00	< 1.00	
Ion Balance	%			6/26/2014	1450h	Calc.	-100	<b>-2.15</b>	
Nitrate/Nitrite (as N)	mg/L			6/19/2014	1550h	E353.2	0.100	<b>1.54</b>	
Sulfate	mg/L			6/24/2014	1929h	E300.0	100	<b>553</b>	
Total Anions, Measured	meq/L			6/26/2014	1450h	Calc.		<b>16.4</b>	
Total Cations, Measured	meq/L			6/26/2014	1450h	Calc.		<b>15.7</b>	
Total Dissolved Solids	mg/L			6/20/2014	1050h	SM2540C	20.0	<b>984</b>	
Total Dissolved Solids Ratio, Measured/Calculated				6/26/2014	1450h	Calc.		<b>0.972</b>	
Total Dissolved Solids, Calculated	mg/L			6/26/2014	1450h	Calc.		<b>1,010</b>	





## ORGANIC ANALYTICAL REPORT

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

**Contact:** Garrin Palmer

**Project:** Seeps and Springs 2014

**Lab Sample ID:** 1406403-002A

**Client Sample ID:** Ruin Spring

**Collection Date:** 6/17/2014 925h

**Received Date:** 6/19/2014 900h

Test Code: 8260-W

### Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 6/19/2014 1255h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	55.9	50.00	112	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	51.3	50.00	103	80-128	
Surr: Dibromofluoromethane	1868-53-7	51.7	50.00	103	80-124	
Surr: Toluene-d8	2037-26-5	49.9	50.00	99.8	77-129	

463 West 3600 South  
Salt Lake City, UT 84115

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: July 16, 2014

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

Client Sample ID: Ruin Spring  
Sample ID: 351092002  
Matrix: Ground Water  
Collect Date: 17-JUN-14 09:25  
Receive Date: 20-JUN-14  
Collector: Client

Project: DNMI00106  
Client ID: DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha	U	0.251	+/-0.136	0.422	1.00	pCi/L		CXP3	07/12/14	1614	1399658	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	EPA 900.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			91.6	(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.



## ORGANIC ANALYTICAL REPORT

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

**Contact:** Garrin Palmer

**Project:** Seeps and Springs 2014

**Lab Sample ID:** 1406403-005A

**Client Sample ID:** Trip Bank

**Collection Date:** 6/17/2014

**Received Date:** 6/19/2014 900h

Test Code: 8260-W

### Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 6/19/2014 1351h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	56.0	50.00	112	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	51.6	50.00	103	80-128	
Surr: Dibromofluoromethane	1868-53-7	51.6	50.00	103	80-124	
Surr: Toluene-d8	2037-26-5	50.0	50.00	99.9	77-129	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer





Garrin Palmer  
Energy Fuels Resources, Inc.  
6425 S. Hwy 191  
Blanding, UT 84511  
TEL: (435) 678-2221

RE: Seeps and Springs 2014

Dear Garrin Palmer:

Lab Set ID: 1406403

463 West 3600 South  
Salt Lake City, UT 84115

American West Analytical Laboratories received 5 sample(s) on 6/19/2014 for the analyses presented in the following report.

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

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

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

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

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

Thank You,

Approved by:

Digitally signed by Jose G. Rocha  
DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou=Quality Assurance Officer, email=jose@awal-labs.com, c=US  
Date: 2014.06.30 12:46:03 -06'00'

**Jose G. Rocha**

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2014  
**Lab Set ID:** 1406403  
**Date Received:** 6/19/2014 900h

**Contact:** Garrin Palmer

463 West 3600 South  
 Salt Lake City, UT 84115

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web: www.awal-labs.com

Kyle F. Gross

Laboratory Director

Jose Rocha  
 QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1406403-001A	Entrance Seep	6/17/2014 825h	Aqueous	VOA by GC/MS Method 8260C/5030C
1406403-001B	Entrance Seep	6/17/2014 825h	Aqueous	Anions, E300.0
1406403-001B	Entrance Seep	6/17/2014 825h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, A2320B
1406403-001C	Entrance Seep	6/17/2014 825h	Aqueous	Total Dissolved Solids, A2540C
1406403-001D	Entrance Seep	6/17/2014 825h	Aqueous	Nitrite/Nitrate (as N), E353.2
1406403-001D	Entrance Seep	6/17/2014 825h	Aqueous	Ammonia, Aqueous
1406403-001E	Entrance Seep	6/17/2014 825h	Aqueous	Mercury, Drinking Water Dissolved
1406403-001E	Entrance Seep	6/17/2014 825h	Aqueous	Ion Balance
1406403-001E	Entrance Seep	6/17/2014 825h	Aqueous	ICP Metals, Dissolved
1406403-001E	Entrance Seep	6/17/2014 825h	Aqueous	ICPMS Metals, Dissolved
1406403-002A	Ruin Spring	6/17/2014 925h	Aqueous	VOA by GC/MS Method 8260C/5030C
1406403-002B	Ruin Spring	6/17/2014 925h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, A2320B
1406403-002B	Ruin Spring	6/17/2014 925h	Aqueous	Anions, E300.0
1406403-002C	Ruin Spring	6/17/2014 925h	Aqueous	Total Dissolved Solids, A2540C
1406403-002D	Ruin Spring	6/17/2014 925h	Aqueous	Nitrite/Nitrate (as N), E353.2
1406403-002D	Ruin Spring	6/17/2014 925h	Aqueous	Ammonia, Aqueous
1406403-002E	Ruin Spring	6/17/2014 925h	Aqueous	Mercury, Drinking Water Dissolved
1406403-002E	Ruin Spring	6/17/2014 925h	Aqueous	Ion Balance
1406403-002E	Ruin Spring	6/17/2014 925h	Aqueous	ICP Metals, Dissolved
1406403-002E	Ruin Spring	6/17/2014 925h	Aqueous	ICPMS Metals, Dissolved
1406403-003A	Cottonwood Spring	6/17/2014 1010h	Aqueous	VOA by GC/MS Method 8260C/5030C
1406403-003B	Cottonwood Spring	6/17/2014 1010h	Aqueous	Anions, E300.0
1406403-003B	Cottonwood Spring	6/17/2014 1010h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, A2320B
1406403-003C	Cottonwood Spring	6/17/2014 1010h	Aqueous	Total Dissolved Solids, A2540C
1406403-003D	Cottonwood Spring	6/17/2014 1010h	Aqueous	Nitrite/Nitrate (as N), E353.2
1406403-003D	Cottonwood Spring	6/17/2014 1010h	Aqueous	Ammonia, Aqueous
1406403-003E	Cottonwood Spring	6/17/2014 1010h	Aqueous	Mercury, Drinking Water Dissolved
1406403-003E	Cottonwood Spring	6/17/2014 1010h	Aqueous	Ion Balance
1406403-003E	Cottonwood Spring	6/17/2014 1010h	Aqueous	ICP Metals, Dissolved



**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2014  
**Lab Set ID:** 1406403  
**Date Received:** 6/19/2014 900h

**Contact:** Garrin Palmer

		Lab Sample ID	Client Sample ID	Date Collected		Matrix	Analysis
463 West 3600 South Salt Lake City, UT 84115  Phone: (801) 263-8686 Toll Free: (888) 263-8686 Fax: (801) 263-8687 e-mail: awal@awal-labs.com web: www.awal-labs.com		1406403-003E	Cottonwood Spring	6/17/2014	1010h	Aqueous	ICPMS Metals, Dissolved
		1406403-004A	Back Spring	6/17/2014	1010h	Aqueous	VOA by GC/MS Method 8260C/5030C
		1406403-004B	Back Spring	6/17/2014	1010h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, A2320B
		1406403-004B	Back Spring	6/17/2014	1010h	Aqueous	Anions, E300.0
		1406403-004C	Back Spring	6/17/2014	1010h	Aqueous	Total Dissolved Solids, A2540C
		1406403-004D	Back Spring	6/17/2014	1010h	Aqueous	Nitrite/Nitrate (as N), E353.2
		1406403-004D	Back Spring	6/17/2014	1010h	Aqueous	Ammonia, Aqueous
		1406403-004E	Back Spring	6/17/2014	1010h	Aqueous	Ion Balance
		1406403-004E	Back Spring	6/17/2014	1010h	Aqueous	ICP Metals, Dissolved
		1406403-004E	Back Spring	6/17/2014	1010h	Aqueous	ICPMS Metals, Dissolved
		1406403-004E	Back Spring	6/17/2014	1010h	Aqueous	Mercury, Drinking Water Dissolved
		1406403-005A	Trip Bank	6/17/2014		Aqueous	VOA by GC/MS Method 8260C/5030C

Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer





## Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2014  
**Lab Set ID:** 1406403

463 West 3600 South  
Salt Lake City, UT 84115

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

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### **Sample Receipt Information:**

**Date of Receipt:** 6/19/2014  
**Date(s) of Collection:** 6/17/2014  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

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

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

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

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

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

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

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

Sample ID	Analyte	QC	Explanation
1406403-001D	Ammonia (as N)	MS	Sample matrix interference
1406403-001E	Calcium	MSD	High analyte concentration
1406403-001E	Magnesium	MS/MSD	Sample matrix interference
1406403-001E	Sodium	MSD	High analyte concentration
1406404-001E	Arsenic	MSD	Sample matrix interference
1406404-001E	Beryllium	MSD/RPD	Sample non-homogeneity or matrix interference
1406404-001E	Cadmium	RPD	Sample non-homogeneity or matrix interference
1406404-001E	Calcium	MS/MSD	High analyte concentration
1406404-001E	Lead	RPD	Sample non-homogeneity or matrix interference



Sample ID	Analyte	QC	Explanation
1406404-001E	Molybdenum	MSD/RPD	Sample non-homogeneity or matrix interference
1406404-001E	Selenium	MSD	Sample matrix interference
1406404-001E	Silver	RPD	Sample non-homogeneity or matrix interference
1406404-001E	Sodium	MS/MSD	High analyte concentration
1406404-001E	Thallium	RPD	Sample non-homogeneity or matrix interference
1406404-001E	Uranium	MSD/RPD	Sample non-homogeneity or matrix interference

**Duplicate (DUP):** The parameters that required a duplicate analysis had RPDs within the control limits, with the following exception: On samples 1406403-001C and 1406404-001C, high RPDs were observed on Total Dissolved Solids due to suspected sample non-homogeneity of matrix interference.

**Corrective Action:** None required.

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## Volatile Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2014  
**Lab Set ID:** 1406403

---

### Sample Receipt Information:

**Date of Receipt:** 6/19/2014  
**Date(s) of Collection:** 6/17/2014  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8260C/5030C  
**Analysis:** Volatile Organic Compounds

**General Set Comments:** Toluene was observed above reporting limits on sample Entrance Seep (AWAL 1406403-001A).

**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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Salt Lake City, UT 84115

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web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer





463 West 3600 South  
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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1406403  
**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer  
**Dept:** ME  
**QC Type:** LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: LCS-33054</b>													
Test Code: 200.7-DIS		Date Analyzed: 06/25/2014 957h		Date Prepared: 06/19/2014 1230h									
Calcium	9.56	mg/L	E200.7	0.00892	1.00	10.00	0	95.6	85 - 115				
Magnesium	9.82	mg/L	E200.7	0.0389	1.00	10.00	0	98.2	85 - 115				
Potassium	9.77	mg/L	E200.7	0.0721	1.00	10.00	0	97.7	85 - 115				
Sodium	9.91	mg/L	E200.7	0.0269	1.00	10.00	0	99.1	85 - 115				
Vanadium	0.199	mg/L	E200.7	0.000596	0.00500	0.2000	0	99.4	85 - 115				
Zinc	1.01	mg/L	E200.7	0.00448	0.0100	1.000	0	101	85 - 115				
<b>Lab Sample ID: LCS-33055</b>													
Test Code: 200.8-DIS		Date Analyzed: 06/23/2014 1713h		Date Prepared: 06/19/2014 1230h									
Arsenic	0.200	mg/L	E200.8	0.000802	0.00200	0.2000	0	100	85 - 115				
Beryllium	0.206	mg/L	E200.8	0.0000950	0.00200	0.2000	0	103	85 - 115				
Cadmium	0.195	mg/L	E200.8	0.0000598	0.000500	0.2000	0	97.7	85 - 115				
Chromium	0.192	mg/L	E200.8	0.000608	0.00200	0.2000	0	95.8	85 - 115				
Cobalt	0.190	mg/L	E200.8	0.000124	0.00400	0.2000	0	95.0	85 - 115				
Copper	0.194	mg/L	E200.8	0.00149	0.00200	0.2000	0	97.0	85 - 115				
Iron	0.997	mg/L	E200.8	0.0304	0.100	1.000	0	99.7	85 - 115				
Lead	0.197	mg/L	E200.8	0.000726	0.00200	0.2000	0	98.5	85 - 115				
Manganese	0.188	mg/L	E200.8	0.00175	0.00200	0.2000	0	94.0	85 - 115				
Molybdenum	0.206	mg/L	E200.8	0.000806	0.00200	0.2000	0	103	85 - 115				
Nickel	0.190	mg/L	E200.8	0.00175	0.00200	0.2000	0	95.0	85 - 115				
Selenium	0.192	mg/L	E200.8	0.000644	0.00200	0.2000	0	96.2	85 - 115				
Silver	0.196	mg/L	E200.8	0.000504	0.00200	0.2000	0	97.9	85 - 115				
Thallium	0.190	mg/L	E200.8	0.0000788	0.00200	0.2000	0	95.2	85 - 115				
Uranium	0.198	mg/L	E200.8	0.0000336	0.00200	0.2000	0	99.2	85 - 115				
<b>Lab Sample ID: LCS-33055</b>													
Test Code: 200.8-DIS		Date Analyzed: 06/23/2014 1523h		Date Prepared: 06/19/2014 1230h									
Tin	0.985	mg/L	E200.8	0.000482	0.00200	1.000	0	98.5	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:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** ME

**QC Type:** LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID:</b> LCS-33115	Date Analyzed:	06/24/2014	838h										
<b>Test Code:</b> Hg-DW-DIS-245.1	Date Prepared:	06/23/2014	1445h										
Mercury	0.00337	mg/L	E245.1	0.00000675	0.000150	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:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** ME

**QC Type:** MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-33054		Date Analyzed: 06/25/2014 955h											
Test Code: 200.7-DIS		Date Prepared: 06/19/2014 1230h											
Calcium	< 1.00	mg/L	E200.7	0.00892	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.0389	1.00								
Potassium	< 1.00	mg/L	E200.7	0.0721	1.00								
Sodium	< 1.00	mg/L	E200.7	0.0269	1.00								
Vanadium	< 0.00500	mg/L	E200.7	0.000596	0.00500								
Zinc	< 0.0100	mg/L	E200.7	0.00448	0.0100								
Lab Sample ID: MB-33055		Date Analyzed: 06/20/2014 1605h											
Test Code: 200.8-DIS		Date Prepared: 06/19/2014 1230h											
Arsenic	< 0.00200	mg/L	E200.8	0.000802	0.00200								
Cadmium	< 0.000500	mg/L	E200.8	0.0000598	0.000500								
Chromium	< 0.00200	mg/L	E200.8	0.000608	0.00200								
Cobalt	< 0.00400	mg/L	E200.8	0.000124	0.00400								
Copper	< 0.00200	mg/L	E200.8	0.00149	0.00200								
Manganese	< 0.00200	mg/L	E200.8	0.00175	0.00200								
Molybdenum	< 0.00200	mg/L	E200.8	0.000806	0.00200								
Nickel	< 0.00200	mg/L	E200.8	0.00175	0.00200								
Selenium	< 0.00200	mg/L	E200.8	0.000644	0.00200								
Silver	< 0.00200	mg/L	E200.8	0.000504	0.00200								
Lab Sample ID: MB-33055		Date Analyzed: 06/20/2014 1807h											
Test Code: 200.8-DIS		Date Prepared: 06/19/2014 1230h											
Beryllium	< 0.000500	mg/L	E200.8	0.0000238	0.000500								
Lead	< 0.000500	mg/L	E200.8	0.000182	0.000500								
Thallium	< 0.000500	mg/L	E200.8	0.0000197	0.000500								
Lab Sample ID: MB-33055		Date Analyzed: 06/23/2014 1747h											
Test Code: 200.8-DIS		Date Prepared: 06/19/2014 1230h											
Uranium	< 0.000200	mg/L	E200.8	0.00000336	0.000200								





463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687  
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:** 1406403  
**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer  
**Dept:** ME  
**QC Type:** MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID:</b> MB-33055	Date Analyzed:	06/23/2014	1517h										
Test Code:	Date Prepared:	06/19/2014	1230h										
Tin	< 0.00200	mg/L	E200.8	0.000482	0.00200								
<b>Lab Sample ID:</b> MB-33055	Date Analyzed:	06/25/2014	1625h										
Test Code:	Date Prepared:	06/19/2014	1230h										
Iron	< 0.0250	mg/L	E200.8	0.00760	0.0250								
<b>Lab Sample ID:</b> MB-33115	Date Analyzed:	06/24/2014	837h										
Test Code:	Date Prepared:	06/23/2014	1445h										
Mercury	< 0.000150	mg/L	E245.1	0.00000675	0.000150								



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** ME

**QC Type:** MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1406403-001EMS</b> Date Analyzed: 06/25/2014 1129h													
Test Code: 200.7-DIS      Date Prepared: 06/19/2014 1230h													
Potassium	12.0	mg/L	E200.7	0.0721	1.00	10.00	1.56	104	70 - 130				
Vanadium	0.207	mg/L	E200.7	0.000596	0.00500	0.2000	0.00134	103	70 - 130				
Zinc	1.03	mg/L	E200.7	0.00448	0.0100	1.000	0.00524	103	70 - 130				
<b>Lab Sample ID: 1406404-001EMS</b> Date Analyzed: 06/25/2014 1140h													
Test Code: 200.7-DIS      Date Prepared: 06/19/2014 1230h													
Magnesium	26.8	mg/L	E200.7	0.0389	1.00	10.00	17.3	94.3	70 - 130				
Potassium	36.2	mg/L	E200.7	0.0721	1.00	10.00	26.8	94.1	70 - 130				
Vanadium	0.212	mg/L	E200.7	0.000596	0.00500	0.2000	0.0113	100	70 - 130				
Zinc	1.08	mg/L	E200.7	0.00448	0.0100	1.000	0.00693	107	70 - 130				
<b>Lab Sample ID: 1406403-001EMS</b> Date Analyzed: 06/25/2014 1004h													
Test Code: 200.7-DIS      Date Prepared: 06/19/2014 1230h													
Calcium	111	mg/L	E200.7	0.0892	10.0	10.00	103	78.8	70 - 130				
Magnesium	41.5	mg/L	E200.7	0.389	10.0	10.00	34.9	66.5	70 - 130				
Sodium	87.1	mg/L	E200.7	0.269	10.0	10.00	78.9	81.6	70 - 130				
<b>Lab Sample ID: 1406404-001EMS</b> Date Analyzed: 06/25/2014 1024h													
Test Code: 200.7-DIS      Date Prepared: 06/19/2014 1230h													
Calcium	340	mg/L	E200.7	0.446	50.0	10.00	337	28.0	70 - 130				2
Sodium	1,180	mg/L	E200.7	1.34	50.0	10.00	1190	-117	70 - 130				2
<b>Lab Sample ID: 1406404-001EMS</b> Date Analyzed: 06/20/2014 1738h													
Test Code: 200.8-DIS      Date Prepared: 06/19/2014 1230h													
Arsenic	0.229	mg/L	E200.8	0.000802	0.00200	0.2000	0.00366	113	75 - 125				
Beryllium	0.212	mg/L	E200.8	0.0000950	0.00200	0.2000	0	106	75 - 125				
Cadmium	0.198	mg/L	E200.8	0.0000598	0.000500	0.2000	0	98.9	75 - 125				
Chromium	0.209	mg/L	E200.8	0.000608	0.00200	0.2000	0.00665	101	75 - 125				
Cobalt	0.201	mg/L	E200.8	0.000124	0.00400	0.2000	0	100	75 - 125				
Copper	0.201	mg/L	E200.8	0.00149	0.00200	0.2000	0.00761	96.7	75 - 125				

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463 West 3600 South

Salt Lake City, UT 84115

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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
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## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** ME

**QC Type:** MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	1406404-001EMS	Date Analyzed:	06/20/2014 1738h										
Test Code:	200.8-DIS	Date Prepared:	06/19/2014 1230h										
Iron	1.05	mg/L	E200.8	0.0304	0.100	1.000	0	105	75 - 125				
Lead	0.193	mg/L	E200.8	0.000726	0.00200	0.2000	0	96.6	75 - 125				
Manganese	0.202	mg/L	E200.8	0.00175	0.00200	0.2000	0	101	75 - 125				
Molybdenum	0.237	mg/L	E200.8	0.000806	0.00200	0.2000	0.0235	107	75 - 125				
Nickel	0.203	mg/L	E200.8	0.00175	0.00200	0.2000	0	102	75 - 125				
Selenium	0.248	mg/L	E200.8	0.000644	0.00200	0.2000	0.00289	123	75 - 125				
Silver	0.187	mg/L	E200.8	0.000504	0.00200	0.2000	0	93.4	75 - 125				
Thallium	0.182	mg/L	E200.8	0.0000788	0.00200	0.2000	0	91.2	75 - 125				
Uranium	0.202	mg/L	E200.8	0.0000336	0.00200	0.2000	0.00193	100	75 - 125				
Lab Sample ID:	1406403-001EMS	Date Analyzed:	06/23/2014 1719h										
Test Code:	200.8-DIS	Date Prepared:	06/19/2014 1230h										
Arsenic	0.210	mg/L	E200.8	0.000802	0.00200	0.2000	0.000988	104	75 - 125				
Beryllium	0.210	mg/L	E200.8	0.0000950	0.00200	0.2000	0	105	75 - 125				
Cadmium	0.200	mg/L	E200.8	0.0000598	0.000500	0.2000	0	99.8	75 - 125				
Chromium	0.199	mg/L	E200.8	0.000608	0.00200	0.2000	0	99.3	75 - 125				
Cobalt	0.196	mg/L	E200.8	0.000124	0.00400	0.2000	0.000863	97.5	75 - 125				
Copper	0.202	mg/L	E200.8	0.00149	0.00200	0.2000	0	101	75 - 125				
Iron	1.06	mg/L	E200.8	0.0304	0.100	1.000	0.0372	102	75 - 125				
Lead	0.199	mg/L	E200.8	0.000726	0.00200	0.2000	0	99.6	75 - 125				
Manganese	0.211	mg/L	E200.8	0.00175	0.00200	0.2000	0.0161	97.3	75 - 125				
Molybdenum	0.219	mg/L	E200.8	0.000806	0.00200	0.2000	0.00423	107	75 - 125				
Nickel	0.194	mg/L	E200.8	0.00175	0.00200	0.2000	0	97.2	75 - 125				
Selenium	0.211	mg/L	E200.8	0.000644	0.00200	0.2000	0.0159	97.5	75 - 125				
Silver	0.199	mg/L	E200.8	0.000504	0.00200	0.2000	0	99.3	75 - 125				
Thallium	0.192	mg/L	E200.8	0.0000788	0.00200	0.2000	0	95.9	75 - 125				
Uranium	0.228	mg/L	E200.8	0.0000336	0.00200	0.2000	0.0232	102	75 - 125				





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Salt Lake City, UT 84115

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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1406403  
**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer  
**Dept:** ME  
**QC Type:** MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID:</b> 1406403-001EMS	Date Analyzed:	06/23/2014 1535h											
<b>Test Code:</b> 200.8-DIS	Date Prepared:	06/19/2014 1230h											
Tin	1.01	mg/L	E200.8	0.000482	0.00200	1.000	0.00107	101	75 - 125				
<b>Lab Sample ID:</b> 1406404-001EMS	Date Analyzed:	06/23/2014 1610h											
<b>Test Code:</b> 200.8-DIS	Date Prepared:	06/19/2014 1230h											
Tin	0.974	mg/L	E200.8	0.000482	0.00200	1.000	0	97.4	75 - 125				
<b>Lab Sample ID:</b> 1406403-001EMS	Date Analyzed:	06/24/2014 845h											
<b>Test Code:</b> Hg-DW-DIS-245.1	Date Prepared:	06/23/2014 1445h											
Mercury	0.00329	mg/L	E245.1	0.00000675	0.000150	0.003330	0	98.9	85 - 115				
<b>Lab Sample ID:</b> 1406404-001EMS	Date Analyzed:	06/24/2014 900h											
<b>Test Code:</b> Hg-DW-DIS-245.1	Date Prepared:	06/23/2014 1445h											
Mercury	0.00338	mg/L	E245.1	0.00000675	0.000150	0.003330	0	102	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:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** ME

**QC Type:** MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1406403-001EMSD</b>													
Test Code: 200.7-DIS		Date Analyzed: 06/25/2014 1131h		Date Prepared: 06/19/2014 1230h									
Potassium	11.7	mg/L	E200.7	0.0721	1.00	10.00	1.56	102	70 - 130	12	1.72	20	
Vanadium	0.203	mg/L	E200.7	0.000596	0.00500	0.2000	0.00134	101	70 - 130	0.207	1.77	20	
Zinc	1.02	mg/L	E200.7	0.00448	0.0100	1.000	0.00524	101	70 - 130	1.03	1.46	20	
<b>Lab Sample ID: 1406404-001EMSD</b>													
Test Code: 200.7-DIS		Date Analyzed: 06/25/2014 1141h		Date Prepared: 06/19/2014 1230h									
Magnesium	27.5	mg/L	E200.7	0.0389	1.00	10.00	17.3	101	70 - 130	26.8	2.61	20	
Potassium	37.6	mg/L	E200.7	0.0721	1.00	10.00	26.8	108	70 - 130	36.2	3.88	20	
Vanadium	0.218	mg/L	E200.7	0.000596	0.00500	0.2000	0.0113	103	70 - 130	0.212	2.54	20	
Zinc	1.11	mg/L	E200.7	0.00448	0.0100	1.000	0.00693	110	70 - 130	1.08	2.63	20	
<b>Lab Sample ID: 1406403-001EMSD</b>													
Test Code: 200.7-DIS		Date Analyzed: 06/25/2014 1006h		Date Prepared: 06/19/2014 1230h									
Calcium	104	mg/L	E200.7	0.0892	10.0	10.00	103	13.3	70 - 130	111	6.10	20	2
Magnesium	39.3	mg/L	E200.7	0.389	10.0	10.00	34.9	43.9	70 - 130	41.5	5.60	20	1
Sodium	82.4	mg/L	E200.7	0.269	10.0	10.00	78.9	34.1	70 - 130	87.1	5.60	20	2
<b>Lab Sample ID: 1406404-001EMSD</b>													
Test Code: 200.7-DIS		Date Analyzed: 06/25/2014 1026h		Date Prepared: 06/19/2014 1230h									
Calcium	355	mg/L	E200.7	0.446	50.0	10.00	337	179	70 - 130	340	4.35	20	2
Sodium	1,230	mg/L	E200.7	1.34	50.0	10.00	1190	376	70 - 130	1180	4.08	20	2
<b>Lab Sample ID: 1406404-001EMSD</b>													
Test Code: 200.8-DIS		Date Analyzed: 06/20/2014 1744h		Date Prepared: 06/19/2014 1230h									
Arsenic	0.273	mg/L	E200.8	0.000802	0.00200	0.2000	0.00366	135	75 - 125	0.229	17.6	20	1
Beryllium	0.268	mg/L	E200.8	0.0000950	0.00200	0.2000	0	134	75 - 125	0.212	23.3	20	1@
Cadmium	0.249	mg/L	E200.8	0.0000598	0.000500	0.2000	0	125	75 - 125	0.198	22.9	20	@
Chromium	0.250	mg/L	E200.8	0.000608	0.00200	0.2000	0.00665	121	75 - 125	0.209	17.5	20	
Cobalt	0.239	mg/L	E200.8	0.000124	0.00400	0.2000	0	119	75 - 125	0.201	17.5	20	
Copper	0.239	mg/L	E200.8	0.00149	0.00200	0.2000	0.00761	116	75 - 125	0.201	17.3	20	

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All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC, Confidential Business Information: This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687  
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## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** ME

**QC Type:** MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1406404-001EMSD</b>													
Test Code: 200.8-DIS		Date Analyzed: 06/20/2014 1744h		Date Prepared: 06/19/2014 1230h									
Iron	1.25	mg/L	E200.8	0.0304	0.100	1.000	0	125	75 - 125	1.05	17.2	20	
Lead	0.244	mg/L	E200.8	0.000726	0.00200	0.2000	0	122	75 - 125	0.193	23.2	20	@
Manganese	0.239	mg/L	E200.8	0.00175	0.00200	0.2000	0	120	75 - 125	0.202	16.7	20	
Molybdenum	0.302	mg/L	E200.8	0.000806	0.00200	0.2000	0.0235	140	75 - 125	0.237	24.5	20	'@
Nickel	0.240	mg/L	E200.8	0.00175	0.00200	0.2000	0	120	75 - 125	0.203	16.8	20	
Selenium	0.291	mg/L	E200.8	0.000644	0.00200	0.2000	0.00289	144	75 - 125	0.248	15.8	20	
Silver	0.234	mg/L	E200.8	0.000504	0.00200	0.2000	0	117	75 - 125	0.187	22.5	20	@
Thallium	0.227	mg/L	E200.8	0.0000788	0.00200	0.2000	0	113	75 - 125	0.182	21.7	20	@
Uranium	0.254	mg/L	E200.8	0.0000336	0.00200	0.2000	0.00193	126	75 - 125	0.202	22.6	20	'@
<b>Lab Sample ID: 1406403-001EMSD</b>													
Test Code: 200.8-DIS		Date Analyzed: 06/23/2014 1725h		Date Prepared: 06/19/2014 1230h									
Arsenic	0.205	mg/L	E200.8	0.000802	0.00200	0.2000	0.000988	102	75 - 125	0.21	2.32	20	
Beryllium	0.217	mg/L	E200.8	0.0000950	0.00200	0.2000	0	109	75 - 125	0.21	3.19	20	
Cadmium	0.205	mg/L	E200.8	0.0000598	0.000500	0.2000	0	103	75 - 125	0.2	2.83	20	
Chromium	0.194	mg/L	E200.8	0.000608	0.00200	0.2000	0	97.0	75 - 125	0.199	2.41	20	
Cobalt	0.192	mg/L	E200.8	0.000124	0.00400	0.2000	0.000863	95.5	75 - 125	0.196	2.04	20	
Copper	0.195	mg/L	E200.8	0.00149	0.00200	0.2000	0	97.4	75 - 125	0.202	3.41	20	
Iron	1.03	mg/L	E200.8	0.0304	0.100	1.000	0.0372	99.6	75 - 125	1.06	2.45	20	
Lead	0.205	mg/L	E200.8	0.000726	0.00200	0.2000	0	103	75 - 125	0.199	3.06	20	
Manganese	0.205	mg/L	E200.8	0.00175	0.00200	0.2000	0.0161	94.4	75 - 125	0.211	2.82	20	
Molybdenum	0.226	mg/L	E200.8	0.000806	0.00200	0.2000	0.00423	111	75 - 125	0.219	3.01	20	
Nickel	0.190	mg/L	E200.8	0.00175	0.00200	0.2000	0	95.1	75 - 125	0.194	2.18	20	
Selenium	0.210	mg/L	E200.8	0.000644	0.00200	0.2000	0.0159	97.3	75 - 125	0.211	0.200	20	
Silver	0.205	mg/L	E200.8	0.000504	0.00200	0.2000	0	103	75 - 125	0.199	3.29	20	
Thallium	0.197	mg/L	E200.8	0.0000788	0.00200	0.2000	0	98.6	75 - 125	0.192	2.73	20	
Uranium	0.232	mg/L	E200.8	0.0000336	0.00200	0.2000	0.0232	104	75 - 125	0.228	1.74	20	





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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1406403  
**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer  
**Dept:** ME  
**QC Type:** MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID:</b> 1406403-001EMSD <b>Test Code:</b> 200.8-DIS	Date Analyzed: 06/23/2014 1541h Date Prepared: 06/19/2014 1230h												
Tin	1.00	mg/L	E200.8	0.000482	0.00200	1.000	0.00107	100	75 - 125	1.01	1.26	20	
<b>Lab Sample ID:</b> 1406404-001EMSD <b>Test Code:</b> 200.8-DIS	Date Analyzed: 06/23/2014 1638h Date Prepared: 06/19/2014 1230h												
Tin	0.985	mg/L	E200.8	0.000482	0.00200	1.000	0	98.5	75 - 125	0.974	1.08	20	
<b>Lab Sample ID:</b> 1406403-001EMSD <b>Test Code:</b> Hg-DW-DIS-245.1	Date Analyzed: 06/24/2014 847h Date Prepared: 06/23/2014 1445h												
Mercury	0.00334	mg/L	E245.1	0.00000675	0.000150	0.003330	0	100	85 - 115	0.00329	1.48	20	
<b>Lab Sample ID:</b> 1406404-001EMSD <b>Test Code:</b> Hg-DW-DIS-245.1	Date Analyzed: 06/24/2014 900h Date Prepared: 06/23/2014 1445h												
Mercury	0.00340	mg/L	E245.1	0.00000675	0.000150	0.003330	0	102	85 - 115	0.00338	0.649	20	

@ - 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.

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



463 West 3600 South  
Salt Lake City, UT 84115

Phone: (801) 263-8686, Toll Free: (888) 263-8686, Fax: (801) 263-8687  
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:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** WC

**QC Type:** DUP

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1406403-001CDUP</b>		Date Analyzed: 06/20/2014 1050h											
Test Code: TDS-W-2540C													
Total Dissolved Solids	728	mg/L	SM2540C	4.34	20.0					688	5.65	5	@
<b>Lab Sample ID: 1406404-001CDUP</b>		Date Analyzed: 06/20/2014 1050h											
Test Code: TDS-W-2540C													
Total Dissolved Solids	4,610	mg/L	SM2540C	4.34	20.0					4980	7.59	5	@

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



463 West 3600 South

Salt Lake City, UT 84115

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Jose Rocha  
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## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** WC

**QC Type:** LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: LCS-R70795</b> Date Analyzed: 06/24/2014 1257h													
Test Code: 300.0-W													
Chloride	4.93	mg/L	E300.0	0.00623	0.100	5.000	0	98.6	90 - 110				
Fluoride	5.08	mg/L	E300.0	0.00510	0.100	5.000	0	102	90 - 110				
Sulfate	5.10	mg/L	E300.0	0.0331	0.750	5.000	0	102	90 - 110				
<b>Lab Sample ID: LCS-R70641</b> Date Analyzed: 06/20/2014 705h													
Test Code: ALK-W-2320B													
Alkalinity (as CaCO <sub>3</sub> )	51,000	mg/L	SM2320B	0.719	10.0	50,000	0	102	90 - 110				
<b>Lab Sample ID: LCS-33164</b> Date Analyzed: 06/25/2014 1951h													
Test Code: NH3-W-350.1      Date Prepared: 06/25/2014 1130h													
Ammonia (as N)	0.985	mg/L	E350.1	0.0214	0.0500	1.000	0	98.5	90 - 110				
<b>Lab Sample ID: LCS-R70616</b> Date Analyzed: 06/19/2014 1531h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.01	mg/L	E353.2	0.00368	0.100	1.000	0	101	90 - 110				
<b>Lab Sample ID: LCS-R70736</b> Date Analyzed: 06/20/2014 1050h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	210	mg/L	SM2540C	2.17	10.0	205.0	0	102	80 - 120				





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Laboratory Director

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QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** WC

**QC Type:** MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: MB-R70795</b> Date Analyzed: 06/24/2014 1241h													
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.00623	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.00510	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.0331	0.750								
<b>Lab Sample ID: MB-R70641</b> Date Analyzed: 06/20/2014 705h													
Test Code: ALK-W-2320B													
Bicarbonate (as CaCO <sub>3</sub> )	< 1.00	mg/L	SM2320B	0.719	1.00								
Carbonate (as CaCO <sub>3</sub> )	< 1.00	mg/L	SM2320B	0.719	1.00								
<b>Lab Sample ID: MB-33164</b> Date Analyzed: 06/25/2014 1949h													
Test Code: NH3-W-350.1      Date Prepared: 06/25/2014 1130h													
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0214	0.0500								
<b>Lab Sample ID: MB-R70616</b> Date Analyzed: 06/19/2014 1530h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.100	mg/L	E353.2	0.00368	0.100								
<b>Lab Sample ID: MB-R70736</b> Date Analyzed: 06/20/2014 1050h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	2.17	10.0								



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Salt Lake City, UT 84115

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## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** WC

**QC Type:** MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1406403-004BMS	Date Analyzed: 06/24/2014 2047h												
Test Code: 300.0-W													
Chloride	633	mg/L	E300.0	0.623	10.0	500.0	126	101	90 - 110				
Fluoride	518	mg/L	E300.0	0.510	10.0	500.0	0	104	90 - 110				
Sulfate	940	mg/L	E300.0	3.31	75.0	500.0	418	104	90 - 110				
Lab Sample ID: 1406403-001BMS	Date Analyzed: 06/20/2014 705h												
Test Code: ALK-W-2320B													
Alkalinity (as CaCO3)	296	mg/L	SM2320B	0.719	10.0	50.00	247	98.4	80 - 120				
Lab Sample ID: 1406404-003BMS	Date Analyzed: 06/20/2014 705h												
Test Code: ALK-W-2320B													
Alkalinity (as CaCO3)	289	mg/L	SM2320B	0.719	10.0	50.00	240	98.4	80 - 120				
Lab Sample ID: 1406403-001DMS	Date Analyzed: 06/25/2014 2009h												
Test Code: NH3-W-350.1	Date Prepared: 06/25/2014 1130h												
Ammonia (as N)	0.877	mg/L	E350.1	0.0214	0.0500	1.000	0	87.7	90 - 110				
Lab Sample ID: 1406404-001DMS	Date Analyzed: 06/25/2014 2017h												
Test Code: NH3-W-350.1	Date Prepared: 06/25/2014 1130h												
Ammonia (as N)	0.981	mg/L	E350.1	0.0214	0.0500	1.000	0	98.1	90 - 110				
Lab Sample ID: 1406403-003DMS	Date Analyzed: 06/19/2014 1557h												
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.10	mg/L	E353.2	0.00368	0.100	1.000	0.0384	106	90 - 110				
Lab Sample ID: 1406404-003DMS	Date Analyzed: 06/19/2014 1618h												
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.32	mg/L	E353.2	0.00368	0.100	1.000	0.258	106	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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Salt Lake City, UT 84115

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** WC

**QC Type:** MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1406403-004BMSD</b> Date Analyzed: 06/24/2014 2103h													
Test Code: 300.0-W													
Chloride	636	mg/L	E300.0	0.623	10.0	500.0	126	102	90 - 110	633	0.453	20	
Fluoride	520	mg/L	E300.0	0.510	10.0	500.0	0	104	90 - 110	518	0.343	20	
Sulfate	947	mg/L	E300.0	3.31	75.0	500.0	418	106	90 - 110	940	0.717	20	
<b>Lab Sample ID: 1406403-001BMSD</b> Date Analyzed: 06/20/2014 705h													
Test Code: ALK-W-2320B													
Alkalinity (as CaCO <sub>3</sub> )	296	mg/L	SM2320B	0.719	10.0	50.00	247	98.4	80 - 120	296	0	10	
<b>Lab Sample ID: 1406404-003BMSD</b> Date Analyzed: 06/20/2014 705h													
Test Code: ALK-W-2320B													
Alkalinity (as CaCO <sub>3</sub> )	289	mg/L	SM2320B	0.719	10.0	50.00	240	98.4	80 - 120	289	0	10	
<b>Lab Sample ID: 1406403-001DMSD</b> Date Analyzed: 06/25/2014 2011h													
Test Code: NH <sub>3</sub> -W-350.1      Date Prepared: 06/25/2014 1130h													
Ammonia (as N)	0.922	mg/L	E350.1	0.0214	0.0500	1.000	0	92.2	90 - 110	0.877	5.02	10	
<b>Lab Sample ID: 1406404-001DMSD</b> Date Analyzed: 06/25/2014 2022h													
Test Code: NH <sub>3</sub> -W-350.1      Date Prepared: 06/25/2014 1130h													
Ammonia (as N)	0.952	mg/L	E350.1	0.0214	0.0500	1.000	0	95.2	90 - 110	0.981	3.03	10	
<b>Lab Sample ID: 1406403-003DMSD</b> Date Analyzed: 06/19/2014 1559h													
Test Code: NO <sub>2</sub> /NO <sub>3</sub> -W-353.2													
Nitrate/Nitrite (as N)	1.11	mg/L	E353.2	0.00368	0.100	1.000	0.0384	107	90 - 110	1.1	0.780	10	
<b>Lab Sample ID: 1406404-003DMSD</b> Date Analyzed: 06/19/2014 1619h													
Test Code: NO <sub>2</sub> /NO <sub>3</sub> -W-353.2													
Nitrate/Nitrite (as N)	1.28	mg/L	E353.2	0.00368	0.100	1.000	0.258	103	90 - 110	1.32	2.64	10	





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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** MSVOA

**QC Type:** LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID:</b> LCS VOC-C 061914A		Date Analyzed: 06/19/2014 726h											
Test Code: 8260-W													
Benzene	17.9	µg/L	SW8260C	0.0859	2.00	20.00	0	89.6	62 - 127				
Chloroform	19.2	µg/L	SW8260C	0.626	2.00	20.00	0	96.2	67 - 132				
Methylene chloride	18.5	µg/L	SW8260C	0.321	2.00	20.00	0	92.4	32 - 185				
Naphthalene	16.8	µg/L	SW8260C	0.315	2.00	20.00	0	84.0	28 - 136				
Tetrahydrofuran	17.1	µg/L	SW8260C	0.214	2.00	20.00	0	85.4	43 - 146				
Toluene	18.0	µg/L	SW8260C	0.206	2.00	20.00	0	90.1	64 - 129				
Xylenes, Total	56.0	µg/L	SW8260C	0.333	2.00	60.00	0	93.3	52 - 134				
Surr: 1,2-Dichloroethane-d4	53.9	µg/L	SW8260C			50.00		108	76 - 138				
Surr: 4-Bromofluorobenzene	48.6	µg/L	SW8260C			50.00		97.2	77 - 121				
Surr: Dibromofluoromethane	51.4	µg/L	SW8260C			50.00		103	67 - 128				
Surr: Toluene-d8	48.7	µg/L	SW8260C			50.00		97.3	81 - 135				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** MSVOA

**QC Type:** MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: MB VOC-C 061914A</b>		Date Analyzed: 06/19/2014 803h											
Test Code: 8260-W													
2-Butanone	< 20.0	µg/L	SW8260C	1.01	20.0								
Acetone	< 20.0	µg/L	SW8260C	3.62	20.0								
Benzene	< 1.00	µg/L	SW8260C	0.0859	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260C	0.738	1.00								
Chloroform	< 1.00	µg/L	SW8260C	0.626	1.00								
Chloromethane	< 1.00	µg/L	SW8260C	0.214	1.00								
Methylene chloride	< 1.00	µg/L	SW8260C	0.321	1.00								
Naphthalene	< 1.00	µg/L	SW8260C	0.315	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260C	0.214	1.00								
Toluene	< 1.00	µg/L	SW8260C	0.206	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260C	0.333	1.00								
Surr: 1,2-Dichloroethane-d4	55.2	µg/L	SW8260C			50.00		110	76 - 138				
Surr: 4-Bromofluorobenzene	49.5	µg/L	SW8260C			50.00		99.0	77 - 121				
Surr: Dibromofluoromethane	51.4	µg/L	SW8260C			50.00		103	67 - 128				
Surr: Toluene-d8	50.1	µg/L	SW8260C			50.00		100	81 - 135				



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## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** MSVOA

**QC Type:** MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1406403-001AMS</b>		Date Analyzed: 06/19/2014 1410h											
Test Code: 8260-W													
Benzene	19.0	µg/L	SW8260C	0.0859	2.00	20.00	0	94.9	66 - 145				
Chloroform	20.3	µg/L	SW8260C	0.626	2.00	20.00	0	102	50 - 146				
Methylene chloride	19.8	µg/L	SW8260C	0.321	2.00	20.00	0	98.8	30 - 192				
Naphthalene	16.2	µg/L	SW8260C	0.315	2.00	20.00	0	81.0	41 - 131				
Tetrahydrofuran	20.6	µg/L	SW8260C	0.214	2.00	20.00	0	103	43 - 146				
Toluene	19.6	µg/L	SW8260C	0.206	2.00	20.00	1.32	91.4	18 - 192				
Xylenes, Total	57.7	µg/L	SW8260C	0.333	2.00	60.00	0	96.1	42 - 167				
Surr: 1,2-Dichloroethane-d4	56.5	µg/L	SW8260C			50.00		113	72 - 151				
Surr: 4-Bromofluorobenzene	47.8	µg/L	SW8260C			50.00		95.6	80 - 128				
Surr: Dibromofluoromethane	52.7	µg/L	SW8260C			50.00		105	80 - 124				
Surr: Toluene-d8	47.6	µg/L	SW8260C			50.00		95.1	77 - 129				





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## QC SUMMARY REPORT

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

**Lab Set ID:** 1406403

**Project:** Seeps and Springs 2014

**Contact:** Garrin Palmer

**Dept:** MSVOA

**QC Type:** MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
<b>Lab Sample ID: 1406403-001AMSD</b>													
Date Analyzed: 06/19/2014 1429h													
Test Code: 8260-W													
Benzene	19.0	µg/L	SW8260C	0.0859	2.00	20.00	0	95.1	66 - 145	19	0.211	25	
Chloroform	20.4	µg/L	SW8260C	0.626	2.00	20.00	0	102	50 - 146	20.3	0.295	25	
Methylene chloride	19.6	µg/L	SW8260C	0.321	2.00	20.00	0	97.9	30 - 192	19.8	0.864	25	
Naphthalene	16.4	µg/L	SW8260C	0.315	2.00	20.00	0	82.0	41 - 131	16.2	1.17	25	
Tetrahydrofuran	23.1	µg/L	SW8260C	0.214	2.00	20.00	0	116	43 - 146	20.6	11.4	25	
Toluene	19.5	µg/L	SW8260C	0.206	2.00	20.00	1.32	91.0	18 - 192	19.6	0.460	25	
Xylenes, Total	57.4	µg/L	SW8260C	0.333	2.00	60.00	0	95.6	42 - 167	57.7	0.574	25	
Surr: 1,2-Dichloroethane-d4	57.3	µg/L	SW8260C			50.00		115	72 - 151				
Surr: 4-Bromofluorobenzene	48.9	µg/L	SW8260C			50.00		97.7	80 - 128				
Surr: Dibromofluoromethane	53.4	µg/L	SW8260C			50.00		107	80 - 124				
Surr: Toluene-d8	48.6	µg/L	SW8260C			50.00		97.1	77 - 129				

# American West Analytical Laboratories

UL  
Denison

## WORK ORDER Summary

Work Order: **1406403**

Page 1 of 3

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

**Client ID:** DEN100

**Contact:** Garrin Palmer

Due Date: 6/30/2014

**Project:** Seeps and Springs 2014

**QC Level:** III

WO Type: Project

**Comments:** PA Rush. QC 3 (Summary/No chromatograms). Alkalinity must be run at full volume. Groundwater project specific DL's: Assumes dilution of 2 for U, 5 for Be, Fe, Pb, and Tl, and 20X for others for required 200.8 PQLs. Run 200.8 on the Agilent. EDD-Denison and EIM-Locus. Email Group.; Run Fe by 200.8 for necessary reporting limits. Metals samples have been field filtered.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1406403-001A	Entrance Seep	6/17/2014 0825h	6/19/2014 0900h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				Test Group: 8260-W-Custom; # of Analytes: 11 / # of Surr: 4				
1406403-001B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B		<input checked="" type="checkbox"/>	df - wc	
				2 SEL Analytes: ALKB ALKC				
1406403-001C				TDS-W-2540C		<input checked="" type="checkbox"/>	ww - tds	
				1 SEL Analytes: TDS				
1406403-001D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				1 SEL Analytes: NH3N				
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1406403-001E				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				
1406403-002A	Ruin Spring	6/17/2014 0925h	6/19/2014 0900h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				Test Group: 8260-W-Custom; # of Analytes: 11 / # of Surr: 4				
1406403-002B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B		<input checked="" type="checkbox"/>	df - wc	
				2 SEL Analytes: ALKB ALKC				

# WORK ORDER Summary

Work Order: **1406403** Page 2 of 3

Client: Energy Fuels Resources, Inc.

Due Date: 6/30/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1406403-002C	Ruin Spring	6/17/2014 0925h	6/19/2014 0900h	TDS-W-2540C	Aqueous	<input checked="" type="checkbox"/>	ww - tds	1
				1 SEL Analytes: TDS				
1406403-002D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				1 SEL Analytes: NH3N				
	1406403-002E			NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				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				
1406403-003A	Cottonwood Spring	6/17/2014 1010h	6/19/2014 0900h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				Test Group: 8260-W-Custom; # of Analytes: 11 / # of Surr: 4				
1406403-003B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B		<input checked="" type="checkbox"/>	df - wc	
				2 SEL Analytes: ALKB ALKC				
1406403-003C				TDS-W-2540C		<input checked="" type="checkbox"/>	ww - tds	
				1 SEL Analytes: TDS				
1406403-003D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				1 SEL Analytes: NH3N				
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1406403-003E				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				



# WORK ORDER Summary

Work Order: **1406403**

Page 3 of 3

Client: Energy Fuels Resources, Inc.

Due Date: 6/30/2014

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1406403-003E	Cottonwood Spring	6/17/2014 1010h	6/19/2014 0900h	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				
1406403-004A	Back Spring	6/17/2014 1010h	6/19/2014 0900h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				Test Group: 8260-W-Custom; # of Analytes: 11 / # of Surr: 4				
1406403-004B				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B		<input checked="" type="checkbox"/>	df - wc	
				2 SEL Analytes: ALKB ALKC				
1406403-004C				TDS-W-2540C		<input checked="" type="checkbox"/>	ww - tds	
				1 SEL Analytes: TDS				
1406403-004D				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				1 SEL Analytes: NH3N				
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1406403-004E				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				
1406403-005A	Trip Bank	6/17/2014	6/19/2014 0900h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				Test Group: 8260-W-Custom; # 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](mailto:awal@awal-labs.com)  
[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.

1406403

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 #: **gpalmer@energyfuels.com; KWeinel@energyfuels.com;**  
Email: **dturk@energyfuels.com**  
Project Name: **Seeps and Springs 2014**  
Project #:  
PO #:  
Sampler Name: **Garrin Palmer**

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.								
3		Standard		Due Date: <b>6/30/14</b>								
# of Containers	Sample Matrix	NO2/NO3 (353.2)	NH3 (4500G or 350.1)	FI, CI, SO4 (4500 or 300.0)	TDS (2540C)	Carb/Bicarb (2320B)	Dissolved Metals (200.7/200.8/245.1)	As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Mo, Ni, Se, Ag, Ti, Sn, U, V, Zn, Na, K, Mg, Ca	Ion Balance	VOCs (8260C)	<input checked="" type="checkbox"/> Include EDD: <b>LOCUS UPLOAD EXCEL</b> <input checked="" type="checkbox"/> Field Filtered For: <b>Dissolved Metals</b>	Laboratory Use Only  Samples Were: 1. Shipped or hand delivered 2. Ambient or Chilled 3. Temperature <b>2.0</b> 4. Received Broken/Leaking (Improperly Sealed) 5. Properly Preserved 6. Received Within Holding Times
											For Compliance With: <input type="checkbox"/> NELAP <input type="checkbox"/> RCRA <input type="checkbox"/> CWA <input type="checkbox"/> SDWA <input type="checkbox"/> ELAP / A2LA <input type="checkbox"/> NLLAP <input type="checkbox"/> Non-Compliance <input type="checkbox"/> Other:	
Known Hazards & Sample Comments											CDC Tube Was: 1. Present on Outer Package 2. Unbroken on Outer Package 3. Present on Sample 4. Unbroken on Sample Discrepancies Between Sample Labels and CDC Record?	
Sample ID:	Date Sampled	Time Sampled										
1 Entrance Seep * Entrance Seep	6/17/2014	825	7	W	X	X	X	X	X	X	X	
2 Ruin Spring	6/17/2014	925	7	W	X	X	X	X	X	X	X	
3 Cottonwood Spring	6/17/201	1010	7	W	X	X	X	X	X	X	X	
4 Back Spring	6/17/2014	1010	7	W	X	X	X	X	X	X	X	
5 Trip Blank	6/17/2014		3	W							X	
6 Temp Blank												
7												
8												
9												
10												
11												
12												

Relinquished by: Signature: <i>Garrin Palmer</i>	Date: <b>6/19/14</b>	Received by: Signature: <i>Elma Hays</i>	Date: <b>6/19/14</b>	Special Instructions:  Sample containers for metals were field filtered. See the Analytical Scope of Work for Reporting Limits and VOC analyte list.  <b>* Sample ID should be Entrance Seep per Kathy Weinel via email 6/23/14. MC</b>
Print Name: <b>Garrin Palmer</b>	Time: <b>0900</b>	Print Name: <b>Elma Hays</b>	Time: <b>0900</b>	
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: 1406403

### Preservation Check Sheet

### Sample Set Extension and pH

[illegible]

### 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





July 16, 2014

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

Re: GW Monitoring Project  
Work Order: 351092

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 20, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4505.

Sincerely,

Heather Shaffer  
Project Manager

Purchase Order: DW16138  
Enclosures



**Receipt Narrative  
for  
Energy Fuels Resources (USA), Inc.  
SDG: 351092**

**July 16, 2014**

**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 June 20, 2014 for analysis.

**Sample Identification:** The laboratory received the following samples:

<b><u>Laboratory ID</u></b>	<b><u>Client ID</u></b>
351092001	Entrance Seep
351092002	Ruin Spring
351092003	Cottonwood Spring
351092004	Back Spring

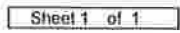
**Case Narrative:**

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.

*Heather Shaffer*

Heather Shaffer  
Project Manager



351092

## CHAIN OF CUSTODY

**Samples Shipped to:** Gel Laboratories **Contact:** Garrin Palmer  
2040 Savage Road Ph: 435 678 4115  
Charleston, SC 29407 gpalmer@energyfuels.com

## Chain of Custody/Sampling Analysis Request

[illegible]



**SAMPLE RECEIPT & REVIEW FORM**

Client: <u>DOMI</u>		SDG/AR/COC/Work Order: <u>351092 351093</u>	
Received By: <u>C. Zurcher</u>		Date Received: <u>062014</u>	
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels? <u>0cpm</u>
COC/Samples marked containing PCBs?		<input checked="" type="checkbox"/>	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		<input checked="" type="checkbox"/>	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		<input checked="" type="checkbox"/>	

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 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: <u>Ice bags</u> Blue ice Dry ice None Other (describe) 5 *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>130462966</u> Secondary Temperature Device Serial # (If Applicable):
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
7 Are Encore containers present?	<input checked="" type="checkbox"/>			(If yes, immediately deliver to Volatiles laboratory)
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"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
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"/>			
14 Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground UPS Field Services Courier Other  <u>8032 7121 5762</u>

Comments (Use Continuation Form if needed):

# GEL Laboratories LLC – Login Review Report

Report Date: 16-JUL-14

Work Order: 351092

Page 1 of 2

GEL Work Order/SDG: 351092 Seeps and Springs 2014

Client SDG: 351092

Project Manager: Heather Shaffer

Project Name: DNMI00106 GW Monitoring Project

Purchase Order: DW16138

Package Level: LEVEL3

EDD Format: EIM\_DNMI

Work Order Due Date: 18-JUL-14

Package Due Date: 15-JUL-14

EDD Due Date: 18-JUL-14

Due Date: 18-JUL-14

HXS1

Collector: C

Prelogin #: 20140618042

Project Workdef ID: 1329132

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
351092001	Entrance Seep		17-JUN-14 08:25	20-JUN-14 08:50	-2	1	GROUND WATER		20		1		
351092002	Ruin Spring		17-JUN-14 09:25	20-JUN-14 08:50	-2	1	GROUND WATER		20		1		
351092003	Cottonwood Spring		17-JUN-14 10:10	20-JUN-14 08:50	-2	1	GROUND WATER		20		1		
351092004	Back Spring		17-JUN-14 10:10	20-JUN-14 08:50	-2	1	GROUND WATER		20		1		

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data	Receive Codes
-001 Entrance Seep	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha			Temperature (C) 5	
-002 Ruin Spring	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha			Temperature (C) 5	
-003 Cottonwood Spring	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha			Temperature (C) 5	
-004 Back Spring	REVV	GFPC, Total Alpha Radium, Liquid	Gross Alpha			Temperature (C) 5	

Product: GFCTORAL Workdef ID: 1329138 In Product Group? No Group Name: Group Reference:

Method: EPA 900.1 Modified Path: Standard

Product Description: GFPC, Total Alpha Radium, Liquid Product Reference: Gross Alpha

Samples: 001, 002, 003, 004 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
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Contingent Tests

GEL Laboratories LLC – Login Review Report

Report Date: 16-JUL-14  
Work Order: 351092  
Page 2 of 2

Login Requirements:

Requirement	Include?	Comments
-------------	----------	----------

Peer Review by: \_\_\_\_\_ Work Order (SDG#), PO# Checked? \_\_\_\_\_ C of C signed in receiver location? \_\_\_\_\_



**Radiochemistry Case Narrative  
Energy Fuels Resources (DNMI)  
SDG 351092**

**Method/Analysis Information**

**Product:** GFPC, Total Alpha Radium, Liquid

Analytical Method: EPA 900.1 Modified

Analytical Batch Number: 1399658

<b>Sample ID</b>	<b>Client ID</b>
351092001	Entrance Seep
351092002	Ruin Spring
351092003	Cottonwood Spring
351092004	Back Spring
1203118534	Method Blank (MB)
1203118535	351092001(Entrance Seep) Sample Duplicate (DUP)
1203118536	351092001(Entrance Seep) Matrix Spike (MS)
1203118537	351092001(Entrance Seep) Matrix Spike Duplicate (MSD)
1203118538	Laboratory Control Sample (LCS)

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

**SOP Reference**

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-010 REV# 15.

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

**Sample Geometry**

All counting sources were prepared in the same geometry as the calibration standards.

**Quality Control (QC) Information:**

**Blank Information**

The blank volume is representative of the sample volume in this batch.

**Designated QC**

The following sample was used for QC: 351092001 (Entrance Seep).

**QC Information**

All of the QC samples met the required acceptance limits.

**Technical Information:****Holding Time**

All sample procedures for this sample set were performed within the required holding time.

**Sample Re-prep/Re-analysis**

None of the samples in this sample set required reprep or reanalysis.

**Chemical Recoveries**

All chemical recoveries meet the required acceptance limits for this sample set.

**Recounts**

None of the samples in this sample set were recounted.

**Miscellaneous Information:****Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

**Sample-Specific MDA/MDC**

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

**Additional Comments**

The matrix spike and matrix spike duplicate, 1203118536 (Entrance Seep) and 1203118537 (Entrance Seep), aliquots were reduced to conserve sample volume.

**Qualifier Information**

Manual qualifiers were not required.

**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: 351092 GEL Work Order: 351092

**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: 16 JUL 2014**

**Title: Analyst I**



# GEL LABORATORIES LLC

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

## QC Summary

Report Date: July 16, 2014

Page 1 of

Energy Fuels Resources (USA), Inc.

225 Union Boulevard

Suite 600

Lakewood, Colorado

Contact: Ms. Kathy Weinel

Workorder: 351092

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1399658										
QC1203118535	351092001	DUP									
Gross Radium Alpha		U	0.659	U	0.760	pCi/L	N/A		N/A	CXP3	07/13/14 17:0
		Uncertainty	+/-0.184		+/-0.175						
QC1203118538	LCS										
Gross Radium Alpha		555			548	pCi/L	98.6	(75%-125%)			07/13/14 17:0
		Uncertainty			+/-4.62						
QC1203118534	MB										
Gross Radium Alpha			U		0.158	pCi/L					07/13/14 17:0
		Uncertainty			+/-0.122						
QC1203118536	351092001	MS									
Gross Radium Alpha		2240	U		0.659	pCi/L	101	(75%-125%)			07/13/14 17:0
		Uncertainty	+/-0.184		+/-19.0						
QC1203118537	351092001	MSD									
Gross Radium Alpha		2240	U		0.659	pCi/L	4.79	96.6	(0%-20%)		07/13/14 17:0
		Uncertainty	+/-0.184		+/-18.1						

### 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
- 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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 351092

Page 2 of

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the CRDL.										
UI	Gamma Spectroscopy--Uncertain identification										
UJ	Gamma Spectroscopy--Uncertain identification										
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	QC Samples were not spiked with this compound										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Tab E

Quality Assurance and Data Validation Tables



**Table E-1 Holding Time Evaluation**

	Required Holding Time	Entrance Seep	Cottonwood Spring	Ruin Spring	Back Spring (duplicate of Cottonwood Spring)
<b>Major Ions</b>					
Carbonate	14 days	OK	OK	OK	OK
Bicarbonate	14 days	OK	OK	OK	OK
Calcium	6 months	OK	OK	OK	OK
Chloride	28 days	OK	OK	OK	OK
Fluoride	28 days	OK	OK	OK	OK
Magnesium	6 months	OK	OK	OK	OK
Nitrogen-Ammonia	28 days	OK	OK	OK	OK
Nitrogen-Nitrate	28 days	OK	OK	OK	OK
Potassium	6 months	OK	OK	OK	OK
Sodium	6 months	OK	OK	OK	OK
Sulfate	28 days	OK	OK	OK	OK
pH (s.u.)	N/A	OK	OK	OK	OK
TDS	7 days	OK	OK	OK	OK
Metals	6 months (except mercury which is 28 days)	OK	OK	OK	OK
Radiologics	6 months	OK	OK	OK	OK
VOCS (including THF)	14 days	OK	OK	OK	OK

\* - Corral Spring, Corral Canyon, and Westwater Seep were all dry during the quarter and no samples were collected.

**E-2 Laboratory Receipt Temperature Check**

Work Order Number/Lab Set ID	Receipt Temp
AWAL - 1406403	3.0°C
GEL - 351092	N/A

N/A = These shipments contained samples for the analysis of Gross Alpha only. Per Table 1 in the approved QAP, samples submitted for Gross Alpha analyses do not have a sample temperature requirement.

**E-3: Analytical Method Check - Routine Samples**

<b>Parameter</b>	<b>QAP/Permit Method</b>	<b>Method Used by Lab</b>
Ammonia (as N)	A4500-NH3 G or E350.1	E350.1
Nitrate + Nitrite (as N)	E 353.1 or E353.2	E353.2
Metals	E 200.7 or E200.8	E200.7, E200.8
Mercury	E200.7 or E200.8 or E245.1	E245.1
Gross Alpha	E900.0 or E900.1	E900.1
VOCs	SW8260B or SW8260C	SW8260C
Chloride	A4500-Cl B, 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	A2540C	A2540C
Carbonate as CO <sub>3</sub> , Bicarbonate as HCO <sub>3</sub>	A2320B	A2320B
Calcium, Magnesium, Potassium, Sodium	E200.7	E200.7



#### E-4 Reporting Limit Evaluation

Parameter	Permit-Specified RL
Ammonia (as N)	25 mg/L
Nitrate + Nitrite (as N)	10 mg/L
<b>Metals ug/L</b>	
Arsenic	50
Beryllium	4
Cadmium	5
Chromium	100
Cobalt	730
Copper	1300
Iron	11000
Lead	15
Manganese	800
Mercury	2
Molybdenum	40
Nickel	100
Selenium	50
Silver	100
Thallium	2
Tin	17000
Uranium	30
Vanadium	60
Zinc	5000
Gross Alpha	15
<b>VOCs ug/L</b>	
Acetone	700
Benzene	5
Carbon tetrachloride	5
Chloroform	70
Chloromethane	30
MEK	4000
Methylene Chloride	5
Naphthalene	100
Tetrahydrofuran	46
Toluene	1000
Xylenes	10000
<b>Major Ions mg/L</b>	
Chloride	1
Fluoride	4
Sulfate	1
TDS	10
Carbonate as CO <sub>3</sub> , Bicarbonate as HCO <sub>3</sub>	Not Specified
Calcium, Magnesium, Potassium, Sodium	Not Specified

All analyses were reported to the required  
RLs unless noted in the text.

#### E-5: Trip Blank Evaluation

The trip blank for the 2014 sampling program was nondetect.

Blank	Sample Date	Laboratory
1	6/17/2014	AWAL

E-6 Duplicate Sample Relative Percent Difference

Major Ions (mg/l)	Cottonwood Spring	Back Spring (Duplicate of Cottonwood Spring)	RPD %
Carbonate	<1	<1	N/C
Bicarbonate	251	218	14.1
Calcium	99.7	91.4	8.7
Chloride	128	127	0.8
Fluoride	<1	<1	N/C
Magnesium	29	27.1	6.8
Nitrogen-Ammonia	<0.05	<0.05	N/C
Nitrogen-Nitrate	<0.1	<0.1	N/C
Potassium	6.18	6.04	2.3
Sodium	227	214	5.9
Sulfate	417	418	0.2
TDS	968	1000	3.3
<b>Metals (ug/l)</b>			
Arsenic	<5	<5	N/C
Beryllium	<0.5	<0.5	N/C
Cadmium	<0.5	<0.5	N/C
Chromium	<25	<25	N/C
Cobalt	<10	<10	N/C
Copper	<10	<10	N/C
Iron	<30	<30	N/C
Lead	<1.0	<1.0	N/C
Manganese	<10	<10	N/C
Mercury	<0.5	<0.5	N/C
Molybdenum	<10	<10	N/C
Nickel	<20	<20	N/C
Selenium	<5	<5	N/C
Silver	<10	<10	N/C
Thallium	<0.5	<0.5	N/C
Tin	<100	<100	N/C
Uranium	9.62	9.24	4.0
Vanadium	<15	<15	N/C
Zinc	<10	<10	N/C
<b>Radiologics (pCi/l)</b>			
Gross Alpha	<1.0	<1.0	N/C
<b>VOCS (ug/L)</b>			
Acetone	ND	ND	N/C
Benzene	ND	ND	N/C
Carbon tetrachloride	ND	ND	N/C
Chloroform	ND	ND	N/C
Chloromethane	ND	ND	N/C



**E-6 Duplicate Sample Relative Percent Difference**

<b>Major Ions (mg/l)</b>	<b>Cottonwood Spring</b>	<b>Back Spring (Duplicate of Cottonwood Spring)</b>	<b>RPD %</b>
MEK	ND	ND	N/C
Methylene Chloride	ND	ND	N/C
Naphthalene	ND	ND	N/C
Tetrahydrofuran	ND	ND	N/C
Toluene	ND	ND	N/C
Xylenes	ND	ND	N/C

N/C = Not Calculated

### E-7 Radiologics Counting Error

Sample ID	Gross Alpha minus Rn & U	Gross Alpha minus Rn & U Precision ( $\pm$ )	Counting Error $\leq$ 20%	GWQS	Within GWQS
Entrance Seep	ND	N/A	N/A	15	N/A
Westwater Seep	NS	NS	N/A	15	N/A
Cottonwood Spring	ND	N/A	N/A	15	N/A
Ruin Spring	ND	N/A	N/A	15	N/A
Back Spring (duplicate of Cottonwood Spring)	ND	N/A	N/A	15	N/A

N/A - The sample results are all non-detect and the QAP required checks are not applicable.

NS - Westwater Seep was dry and not sampled in 2014

## E-8: Laboratory Matrix QC

### Matrix Spike % Recovery Comparison

Lab Report	Well	Analyte	MS %REC	MSD %REC	REC Range	RPD
1406403	Entrance Seep	Magnesium	66.5	43.9	70 - 130	5.60
1406403	Entrance Seep	Calcium*	NC	NC	70 - 130	NC
1406403	Entrance Seep	Sodium*	NC	NC	70 - 130	NC
1406403	N/A	Calcium*	NC	NC	70 - 130	NC
1406403	N/A	Sodium*	NC	NC	70 - 130	NC
1406403	N/A	Arsenic	113	135	75-125	17.6
1406403	N/A	Beryllium	106	134	75-125	23.3
1406403	N/A	Cadmium	98.9	125	75-125	22.9
1406403	N/A	Lead	96.6	122	75-125	23.2
1406403	N/A	Molybdenum	107	140	75-125	24.5
1406403	N/A	Selenium	123	144	75-125	15.8
1406403	N/A	Silver	93.4	117	75-125	22.5
1406403	N/A	Thallium	91.2	113	75-125	21.7
1406403	N/A	Uranium	100	126	75-125	22.6
1406403	Entrance Seep	Ammonia (as N)	87.7	92.2	90-110	5.02

\* Recovery was not calculated as the analyte level in the sample was greater than 4 times the spike amount

N/A - MS/MSD not an EFRI Sample

### Laboratory Duplicate % Recovery Comparison

Lab Report	Well	Analyte	Sample Result (mg/L)	Duplicate Result	RPD %	RPD Range %
1406403	Entrance Seep	Total Dissolved Solids	728	688	5.65	5
1406403	N/A	Total Dissolved Solids	4610	4980	7.59	5

N/A - MS/MSD not an EFRI Sample

### Surrogate % Recovery

All surrogate recoveries were within the laboratory established acceptance limits.

### Method/Laboratory Reagent Blank detections

No analytes were detected in the laboratory blanks.



Tab F

CSV Transmittal

## Kathy Weinel

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**From:** Kathy Weinel  
**Sent:** Tuesday, October 21, 2014 10:44 AM  
**To:** Rusty Lundberg  
**Cc:** 'Phillip Goble'; 'Dean Henderson'; Harold Roberts; David Frydenlund; David Turk; Dan Hillsten; Jaime Massey; Scott Bakken  
**Subject:** Transmittal of CSV Files White Mesa Mill 2014 Seeps and Springs Monitoring  
**Attachments:** 351092.csv; 1406403-EDD.csv

Mr. Lundberg,

Attached to this e-mail are electronic copies of laboratory results for annual seeps and springs monitoring conducted at the White Mesa Mill during 2014, 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