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**Sent VIA Federal Express**

November 19, 2013

Mr. Rusty Lundberg  
Director  
Utah Water Quality Board  
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 2013 as required by the Groundwater Quality Discharge Permit UGW370004, as well as two CDs each containing a word searchable electronic copy of the report.

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

Yours very truly,

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

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

CC: David C. Frydenlund  
Jo Ann Tischler  
Harold R. Roberts  
David E. Turk  
Kathy Weinel

**White Mesa Uranium Mill**  
**2013 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

**November 19, 2013**

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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

## 2013 ANNUAL SEEPS AND SPRINGS SAMPLING REPORT

### 1.0 INTRODUCTION

This is the 2013 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, and July 2013 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.

#### 2.1 July 2013 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 July 16, 2013, EFRI collected seeps and springs samples from Cottonwood Seep, Ruin Spring, Back Spring (duplicate sample of Ruin Spring), and Entrance Spring. The DRC representative collected a “split” sample on July 16, 2013 at Ruin Spring from the EFRI sampling equipment, using sample containers he provided. Corral Canyon Seep, Westwater Seep, and Corral Springs were dry in 2013. The data from the July sampling event are included as Attachment D in this report.

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

During the July 16, 2013 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 August 9, 2013 and August 20, 2013 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 and 2012. 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 2013, because the 2010, 2011 and 2012 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 and 2013 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, and 2013, 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 July 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” the day before 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 July 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 July 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, and 2013 sampling events. DRC has not provided comments on the Sampling Plan to date; however, the DRC representative was present for the 2010, 2011, 2012, and 2013 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.

Results of routine radiologic sample QC are provided under Tab E. The seeps and springs radiologic sample results that had positive detections met the QAP specified criteria for radiological counting error. However, the only positive detection was still below the GWQS. The duplicate samples were nondetect, and as such the duplicate comparability check specified in the QAP does not apply.

#### **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. One MS/MSD recovery was outside the laboratory established acceptance limits. This result does not affect the quality or usability of the data because the recoveries were above the acceptance limits which is indicative of matrix interference. The MS/MSD recoveries above the laboratory established acceptance limits, indicate a high bias to the individual sample results. A high bias means that reported results may

be higher than the actual results. The QAP requirement 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 July 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, and 2012 data to the 2013 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, sodium, sulfate, molybdenum, and uranium increased from the 2012 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 Seep**

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, and 2012 data to the 2013 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, uranium, and sulfate increased from the 2012 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.

### **5.1.3 Entrance Spring**

No VOCs were detected. Gross alpha, 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 concentrations of iron, manganese and uranium increasing compared to the 2012 sample results. The reported values for calcium, chloride, fluoride, magnesium, potassium, sodium, sulfate, and TDS increased from the 2012 sample results. Gross alpha was detected at a higher activity level than 2012, but still below the GWQS of 15 pCi/L. The detected concentrations are significantly 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. The variations are likely caused by the drought conditions which were present at the time of the July sampling event. 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 2013 annual sampling event.

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

No corrective action reports were required for the 2012 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 November 19, 2013.

Energy Fuels Resources (USA) Inc.

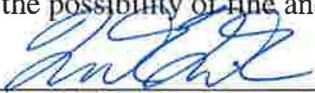
By:

A handwritten signature in blue ink, appearing to read "Frank Filas", is written over a light blue rectangular background.

Frank Filas, P.E  
Vice President, Permitting and 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.



---

Frank Filas, P.E  
Vice President, Permitting and Environmental Affairs  
Energy Fuels Resources (USA) Inc.

## Tables

**Table 1: Summary of Seeps and Springs Sampling for 2013**

<b>Location</b>	<b>Sample Date</b>	<b>Work Order No./Lab Set ID</b>	<b>Date of Lab Report</b>
Entrance Seep	7/16/2013	AWAL = 1307412 GEL = 329986	AWAL = 7/31/13 GEL = 8/2/13
Cottonwood Seep	7/16/2013	AWAL = 1307412 GEL = 329986	AWAL = 7/31/13 GEL = 8/2/13
Back Spring (Duplicate of Ruin Spring)	7/16/2013	AWAL = 1307412 GEL = 329986	AWAL = 7/31/13 GEL = 8/2/13
Ruin Spring	7/16/2013	AWAL = 1307412 GEL = 329986	AWAL = 7/31/13 GEL = 8/2/13
Westwater Seep	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry
Corral Spring	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry
Corral Canyon Spring	Not Sampled - Dry	Not Sampled - Dry	Not Sampled - Dry



Ruin Spring								
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	Range of Average Historic Values for Monitoring Wells <sup>1*</sup>	Ave 2003-2004 <sup>2</sup>
Benzene	<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	--	--
Chloroform	<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	--	--
MEK	<20	<20	<20	<20	<20	<20	--	--
Methylene Chloride	<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	--	--
Tetrahydrofuran	<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	--	--
Xylenes	<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 Seep								
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	Range of Average Historic Values for Monitoring Wells <sup>1*</sup>	Ave 1977 - 1982 <sup>1</sup>
Benzene	<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	--	--
Chloroform	<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	--	--
MEK	<20	<20	<20	<20	<20	<20	--	--
Methylene Chloride	<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	--	--
Tetrahydrofuran	<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	--	--
Xylenes	<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	Historic Values for Monitoring Wells <sup>1</sup> *
<b>Major Ions (mg/l)</b>							
Carbonate	<1	<1	<1	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
<b>Metals (ug/l)</b>							
Arsenic	<5	<5	12.3	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				--
<b>Radiologics (pCi/l)</b>							
Gross Alpha	< -0.1	<0.3	0.5	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	Historic Values for Monitoring Wells <sup>1</sup> *
VOCS (ug/L)							
Acetone	<20	<20	ND	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

Entrance Spring							
Constituent	2009	2010	2011 - May	2011 - July	2012	2013	Range of Average Historic Values for Monitoring Wells <sup>1*</sup>
Chloromethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--
MEK	<20	<20	<20	<20	<20	<20	--
Methylene Chloride	<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	--
Tetrahydrofuran	<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	--
Xylenes	<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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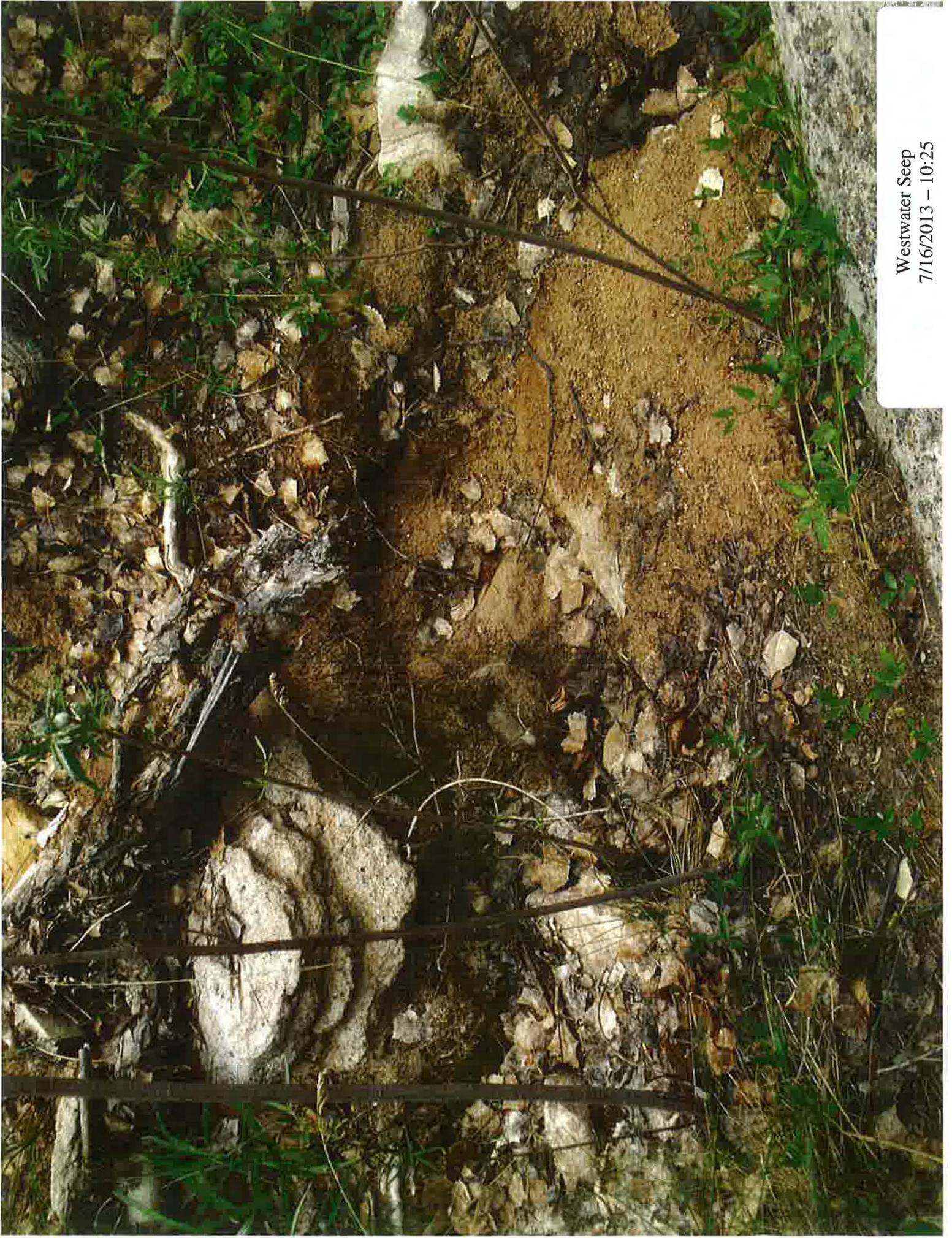
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Tab A

Seeps and Springs Field Data Sheets and Photographic Documentation





Westwater Seep  
7/16/2013 - 10:25

Westwater Seep  
8/9/2013 - 8:30



Westwater Seep  
8/20/2013 - 8:30



**Field Data Record-Seeps and Springs Sampling**

Seep or Spring Location: Back Spring

Date For Initial Sampling Visit: 7/16/13 Time: 0930

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: Garcia, Tanner, Dean

Weather Conditions at Time of Sampling: Cloudy and Cool

Estimated Seep or Spring Flow Rate: 1.0 - 1.5 GPM

**Field Parameter Measurements:**

-pH 7.36

-Temperature (°C) 16.28

-Conductivity μMHOC/cm 1402

-Turbidity (NTU) (if measured) 1.0

-Redox Potential Eh (mV) (if measured) 288

**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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>	<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: Back Spring

Notes: Same as Ruin Spring. Sample is a duplicate of Ruin Spring.





Coral Canyon Seep  
7/16/2013 - 12:20



Coral Canyon Seep  
8/9/2013 - 7:30



Coral Canyon Seep  
8/20/2013 - 9:00

### Field Data Record-Seeps and Springs Sampling

Seep or Spring Location: Ruin Spring

Date For Initial Sampling Visit: 7/16/13 Time: 0930

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: Garrin Palmer, Tanner Holliday, Dean Henderson

Weather Conditions at Time of Sampling: Cloudy and Cool

Estimated Seep or Spring Flow Rate: 1.0-1.5 GPM

**Field Parameter Measurements:**

- pH 7.36
- Temperature (°C) 16.28
- Conductivity  $\mu$ MHOC/cm 1402
- Turbidity (NTU) (if measured) 1.0
- Redox Potential Eh (mV) (if measured) 288

**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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>	<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: Back Spring

Notes: Arrived on site at 0915. Heavy rain has been recorded in the area during the last 24 hours. Parameters were collected and samples were taken at 0930. Picture was taken of spring sampling point. Left site at 1010.



Ruin Spring  
7/16/2013 - 9:15



Ruin Spring  
7/16/2013 - 9:15

**Field Data Record-Seeps and Springs Sampling**

Seep or Spring Location: Corral Spring

Date For Initial Sampling Visit: 7/16/13 Time: 1155

Sample Collected:  Yes  No

Date For Second Sampling Visit: 8/9/13 Time: 0800

Sample Collected:  Yes  No

Date For Third Sampling Visit: 08/20/13 Time: 0845

Sample Collected:  Yes  No

Sampling Personnel: Gerrin Palmer, Tanner Holliday, David Turk

Weather Conditions at Time of Sampling: cloudy

Estimated Seep or Spring Flow Rate: 0

**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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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

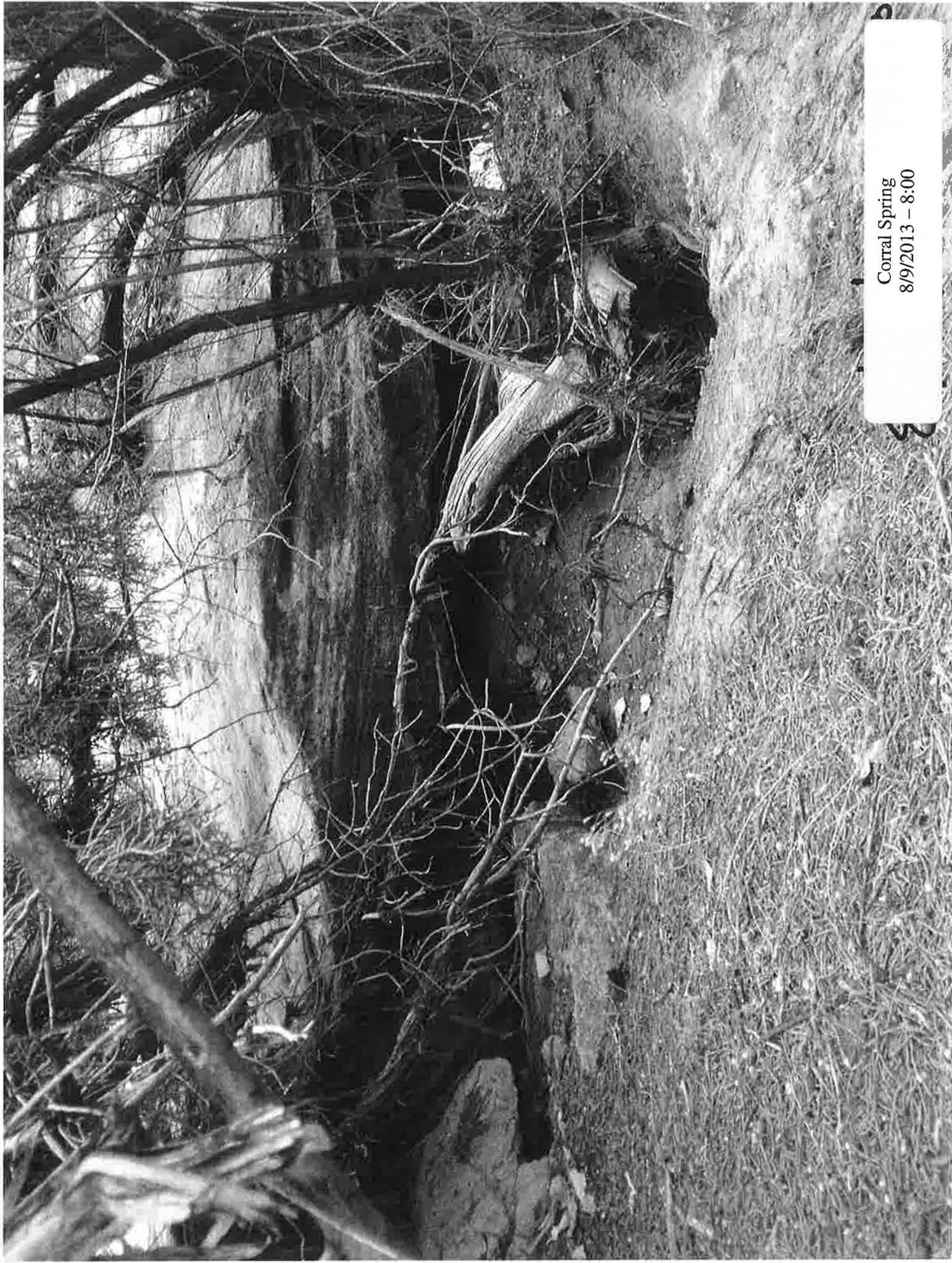
Duplicate Sample Name: \_\_\_\_\_

Notes: Arrived on site at 1150. Heavy rain in the area over the last 24 hours caused the area to be damp. No water was present to sample, see photo. Picture was taken at 1155. Left site at 1200. 8/9/13-Arrived on site at 0800, Spring was found dry. 8/20/13-Arrived on site at 0845. Spring was dry.

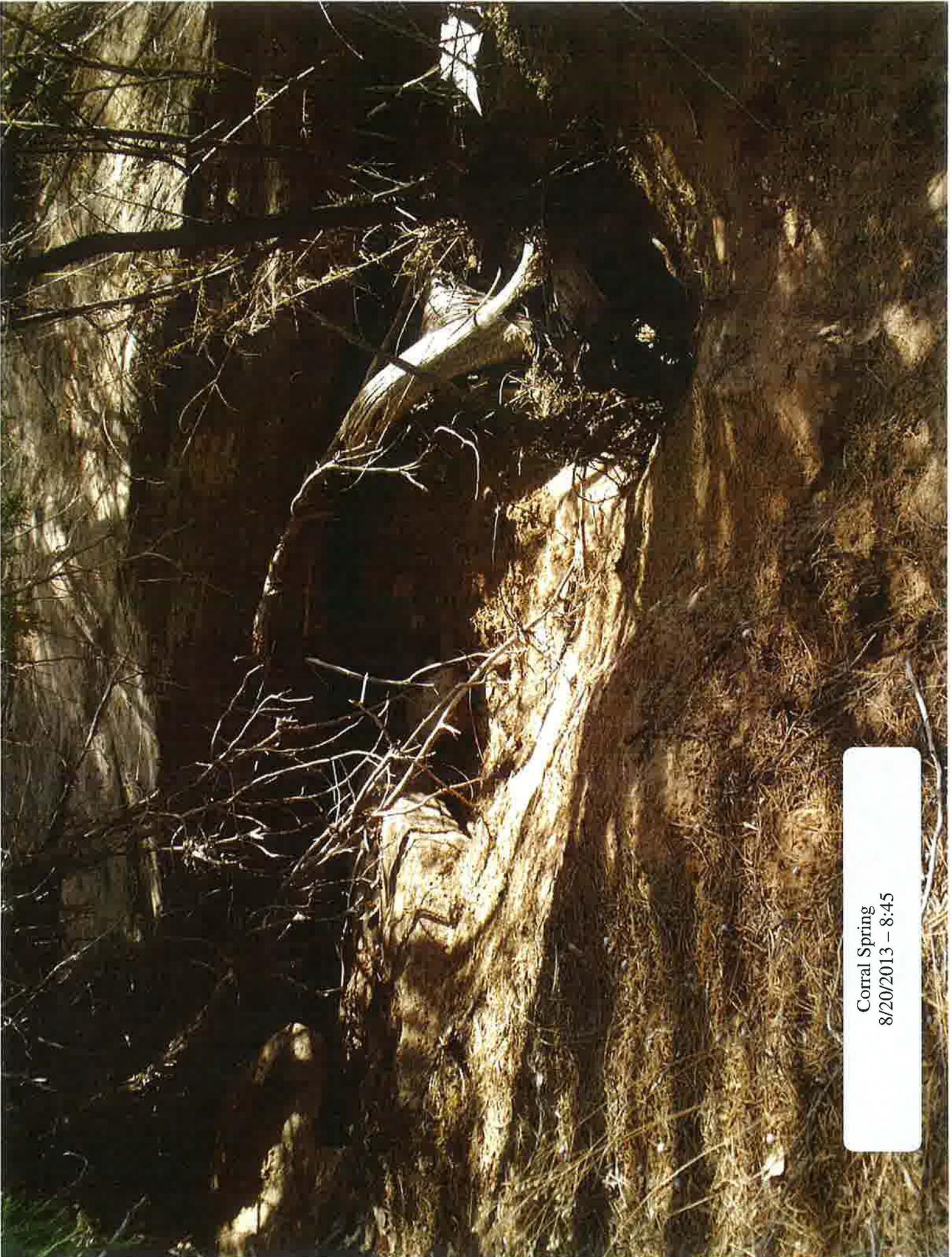
Not able to sample spring - see photos



Corral Spring  
7/16/2013 - 11:55



Corral Spring  
8/9/2013 - 8:00



Corral Spring  
8/20/2013 - 8:45

**Field Data Record-Seeps and Springs Sampling**

Seep or Spring Location: Entrance Seep

Date For Initial Sampling Visit: 7/16/13 Time: 0750

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: Carrin Palmer, Tanner Holliday, Dean Henderson

Weather Conditions at Time of Sampling: Cloudy and Cool

Estimated Seep or Spring Flow Rate: 25-50 GPM

**Field Parameter Measurements:**

- pH 6.41
- Temperature (°C) 19.51
- Conductivity μMHOC/cm 1152
- Turbidity (NTU) (if measured) 1.5
- Redox Potential Eh (mV) (if measured) 316

**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 checked="" 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"/>	<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: Developed spring on 7/15 for event. Heavy rains recorded in area during the last 24 hours. Arrived on site at 0740. Parameters were taken and samples were collected at 0750. water became murky during event. Left site at 0810. Picture was taken of seep before sampling.



Entrance Seep  
7/16/2013 - 7:40

### Field Data Record-Seeps and Springs Sampling

Seep or Spring Location: Cottonwood Spring

Date For Initial Sampling Visit: 7/16/13 Time: 0840

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: Garrin Palmer, Tanner Holliday, Dean Henderson

Weather Conditions at Time of Sampling: Cloudy and Cool

Estimated Seep or Spring Flow Rate: .5-1.0 GPM

**Field Parameter Measurements:**

-pH 7.25

-Temperature (°C) 16.28

-Conductivity  $\mu$ MHOC/cm 1634

-Turbidity (NTU) (if measured) 2.0

-Redox Potential Eh (mV) (if measured) 259

**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 checked="" 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"/>	<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: Developed <sup>Spring</sup> well on 7/15 for event. Heavy rains were recorded in the area during the last 24 hours. Arrived on site at 0830. Parameters were taken and samples were collected at 0840. Left site at 0900. Picture was taken of sampling area before samples were collected.



Cottonwood Spring  
7/16/2013 - 8:30

**Tab B**

**Field Parameter Measurement Data**

**Field parameters**

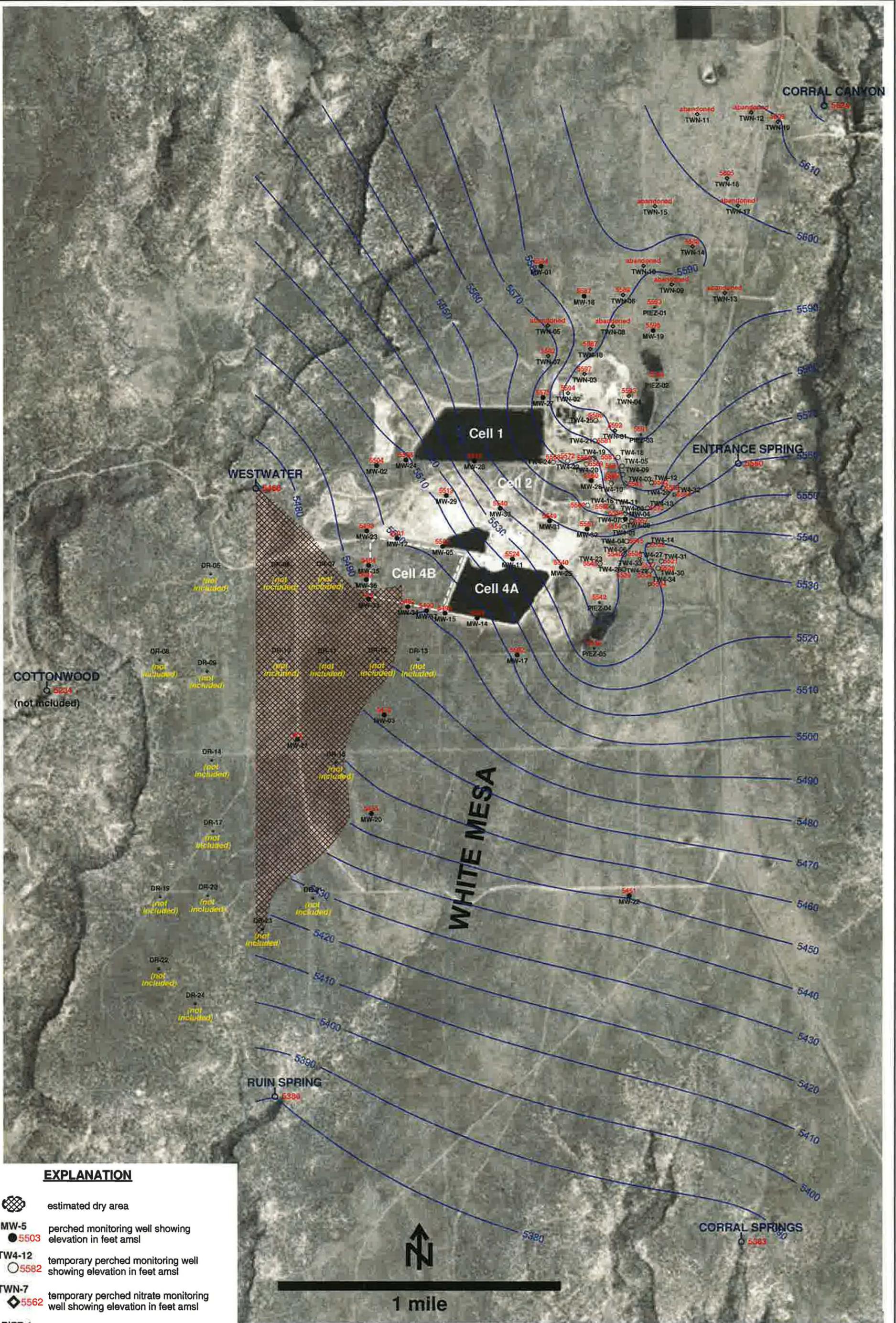
<b>Location</b>	<b>pH</b>	<b>Conductivity</b>	<b>Turbidity</b>	<b>Redox</b>	<b>Temperature</b>
<b>Date</b>	7/16/2013	7/16/2013	7/16/2013	7/16/2013	7/16/2013
Entrance Seep	6.41	1152	1.5	316	19.51
Cottonwood Seep	7.25	1634	2	259	16.28
Back Spring (Duplicate of Ruin Spring)	7.36	1402	1.0	288	16.28
Ruin Spring	7.36	1402	1.0	288	16.28

Tab C

Survey Data and Contour Map

### 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  5582 temporary perched monitoring well showing elevation in feet amsl
- TWN-7  5562 temporary perched nitrate monitoring well showing elevation in feet amsl
- PIEZ-1  5593 perched piezometer showing elevation in feet amsl
- TW4-32  5564 temporary perched monitoring well installed September, 2013 showing approximate elevation in feet amsl
- RUIN SPRING  5380 seep or spring showing elevation in feet amsl

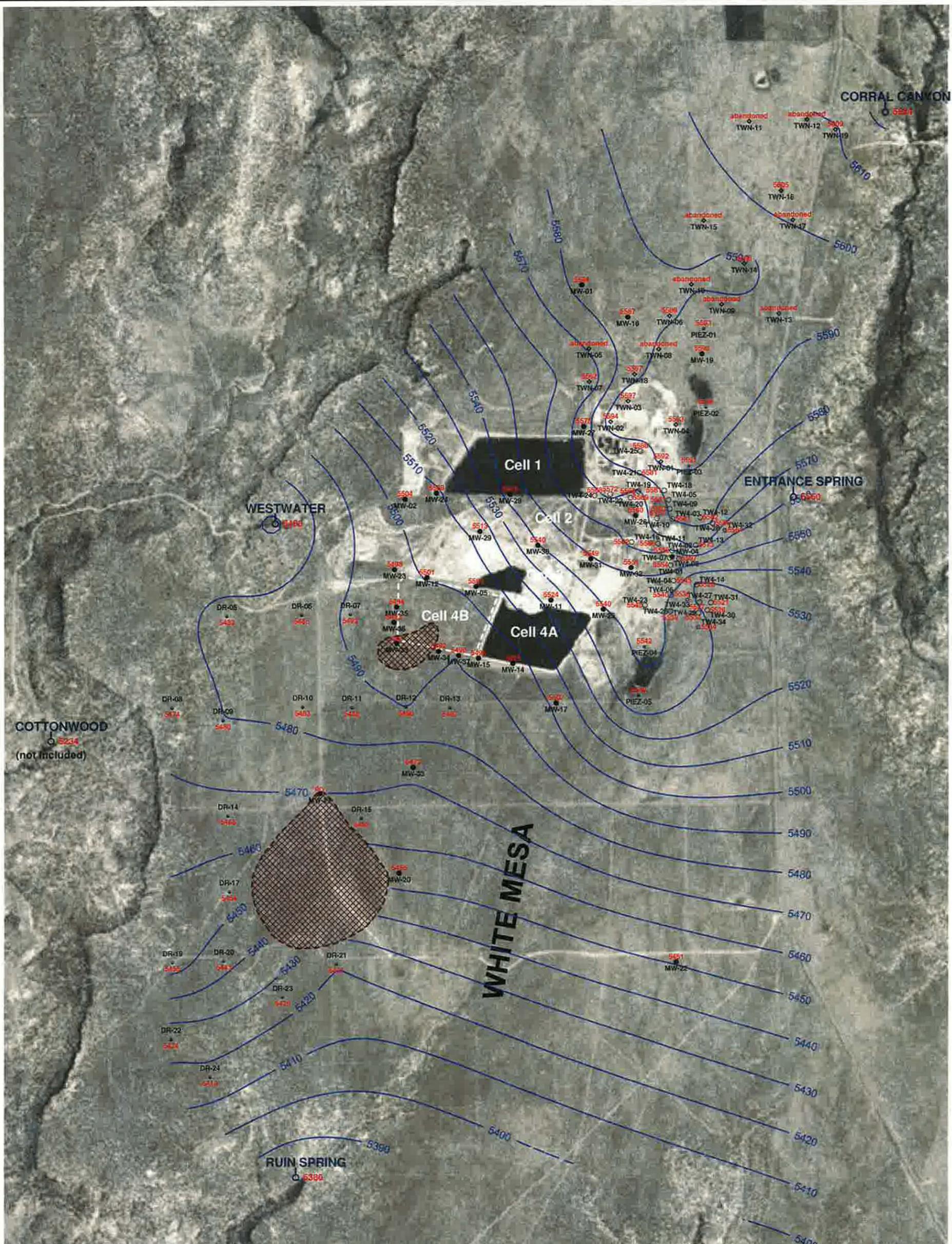
NOTE: MW-4, MW-26, TW4-4, TW4-19, and TW4-20 are chloroform pumping wells; TW4-22, TW4-24, TW4-25, and TWN-2 are nitrate pumping wells



**HYDRO  
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CHEM, INC.**

**KRIGED 3rd QUARTER, 2013 WATER LEVELS  
(DR-SERIES PIEZOMETERS NOT INCLUDED)  
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
		H:718000/nov13/ springs_report/Uwl0913sp_nodr.srf	C-1



**EXPLANATION**

-  estimated dry area
- MW-5**  
 5503 perched monitoring well showing elevation in feet amsl
- TW4-12**  
 5582 temporary perched monitoring well showing elevation in feet amsl
- TWN-7**  
 5562 temporary perched nitrate monitoring well showing elevation in feet amsl
- PIEZ-1**  
 5593 perched piezometer showing elevation in feet amsl
- TW4-32**  
 5564 temporary perched monitoring well installed September, 2013 showing approximate 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



**HYDRO  
GEO  
CHEM, INC.**

**KRIGED 3rd QUARTER, 2013 WATER LEVELS  
WHITE MESA SITE**

APPROVED	DATE	REFERENCE	FIGURE
		H:/718000/nov13/springs_report/UwI0913sp.srf	<b>C-2</b>

Tab D

Analytical Laboratory Data



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-001  
**Client Sample ID:** Entrance Seep  
**Collection Date:** 7/16/2013 750h  
**Received Date:** 7/19/2013 1010h

**Contact:** Garrin Palmer

## Analytical Results

## DISSOLVED METALS

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	7/19/2013	1145h	7/26/2013	1809h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	7/19/2013	1145h	7/23/2013	1350h	E200.7	10.0	<b>121</b>	2
Chromium	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.0100	< 0.0100	
Copper	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.0100	< 0.0100	
Iron	mg/L	7/19/2013	1145h	7/26/2013	1809h	E200.8	0.0300	<b>0.162</b>	
Lead	mg/L	7/19/2013	1145h	7/26/2013	1809h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	7/19/2013	1145h	7/23/2013	1350h	E200.7	10.0	<b>43.0</b>	
Manganese	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.0100	<b>0.259</b>	
Mercury	mg/L	7/22/2013	1200h	7/23/2013	820h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	7/19/2013	1145h	7/23/2013	1319h	E200.7	1.00	<b>3.83</b>	
Selenium	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.00500	<b>0.0112</b>	
Silver	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	7/19/2013	1145h	7/25/2013	958h	E200.7	10.0	<b>127</b>	2
Thallium	mg/L	7/19/2013	1145h	7/29/2013	1158h	E200.8	0.000500	< 0.000500	
Tin	mg/L	7/19/2013	1145h	7/28/2013	2004h	E200.8	0.100	< 0.100	
Uranium	mg/L	7/19/2013	1145h	7/26/2013	1705h	E200.8	0.000300	<b>0.0388</b>	
Vanadium	mg/L	7/19/2013	1145h	7/23/2013	1319h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	7/19/2013	1145h	7/22/2013	1908h	E200.8	0.0100	< 0.0100	

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



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-001  
**Client Sample ID:** Entrance Seep  
**Collection Date:** 7/16/2013 750h  
**Received Date:** 7/19/2013 1010h

## Analytical Results

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Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	7/29/2013 1130h	7/29/2013 2113h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		7/19/2013 1139h	SM2320B	1.00	<b>292</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		7/19/2013 1139h	SM2320B	1.00	< 1.00	
Chloride	mg/L		7/22/2013 1844h	E300.0	100	<b>139</b>	
Fluoride	mg/L		7/24/2013 223h	E300.0	0.100	<b>0.710</b>	
Ion Balance	%		7/26/2013 856h	Calc.	-15.0	<b>-8.34</b>	
Nitrate/Nitrite (as N)	mg/L		7/23/2013 1755h	E353.2	1.00	<b>2.06</b>	
Sulfate	mg/L		7/22/2013 1844h	E300.0	100	<b>394</b>	
Total Anions, Measured	meq/L		7/26/2013 856h	Calc.		<b>18.0</b>	
Total Cations, Measured	meq/L		7/26/2013 856h	Calc.		<b>15.2</b>	
Total Dissolved Solids	mg/L		7/19/2013 1210h	SM2540C	20.0	<b>828</b>	
Total Dissolved Solids Ratio, Measured/Calculated			7/26/2013 856h	Calc.		<b>0.823</b>	
Total Dissolved Solids, Calculated	mg/L		7/26/2013 856h	Calc.		<b>1,010</b>	

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



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-001A  
**Client Sample ID:** Enterance Seep  
**Collection Date:** 7/16/2013 750h  
**Received Date:** 7/19/2013 1010h

**Contact:** Garrin Palmer

## Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 7/22/2013 950h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

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

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	59.5	50.00	119	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	50.7	50.00	101	80-128	
Surr: Dibromofluoromethane	1868-53-7	54.5	50.00	109	80-124	
Surr: Toluene-d8	2037-26-5	50.0	50.00	100	77-129	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 14, 2013

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

Client Sample ID: Enterance Seep Project: DNMI00100  
Sample ID: 329986001 Client ID: DNMI001  
Matrix: Ground Water  
Collect Date: 16-JUL-13 07:50  
Receive Date: 22-JUL-13  
Collector: Client

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		2.30	+/-0.299	0.365	1.00	pCi/L		KDF1	08/10/13	1859	1318324	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"			97.4	(25%-125%)

### Notes:

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

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



## INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-002  
**Client Sample ID:** Cottonwood Spring  
**Collection Date:** 7/16/2013 840h  
**Received Date:** 7/19/2013 1010h

**Contact:** Garrin Palmer

### Analytical Results

### DISSOLVED METALS

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	7/19/2013	1145h	7/26/2013	1814h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	7/19/2013	1145h	7/23/2013	1402h	E200.7	10.0	<b>87.9</b>	
Chromium	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.0100	< 0.0100	
Copper	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.0100	< 0.0100	
Iron	mg/L	7/19/2013	1145h	7/26/2013	1814h	E200.8	0.0300	< 0.0300	
Lead	mg/L	7/19/2013	1145h	7/26/2013	1814h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	7/19/2013	1145h	7/23/2013	1402h	E200.7	10.0	<b>23.6</b>	
Manganese	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	7/22/2013	1200h	7/23/2013	827h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.0100	< 0.0100	
Nickel	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	7/19/2013	1145h	7/23/2013	1302h	E200.7	1.00	<b>5.53</b>	
Selenium	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.00500	< 0.00500	
Silver	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	7/19/2013	1145h	7/25/2013	1009h	E200.7	10.0	<b>217</b>	
Thallium	mg/L	7/19/2013	1145h	7/29/2013	1219h	E200.8	0.000500	< 0.000500	
Tin	mg/L	7/19/2013	1145h	7/28/2013	2018h	E200.8	0.100	< 0.100	
Uranium	mg/L	7/19/2013	1145h	7/26/2013	1710h	E200.8	0.000300	<b>0.00895</b>	
Vanadium	mg/L	7/19/2013	1145h	7/23/2013	1302h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	7/19/2013	1145h	7/22/2013	1924h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-002  
**Client Sample ID:** Cottonwood Spring  
**Collection Date:** 7/16/2013 840h  
**Received Date:** 7/19/2013 1010h

**Contact:** Garrin Palmer

## Analytical Results

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Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	7/29/2013 1130h	7/29/2013 2115h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO <sub>3</sub> )	mg/L		7/19/2013 1139h	SM2320B	1.00	<b>280</b>	
Carbonate (as CaCO <sub>3</sub> )	mg/L		7/19/2013 1139h	SM2320B	1.00	< 1.00	
Chloride	mg/L		7/22/2013 2000h	E300.0	100	<b>118</b>	
Fluoride	mg/L		7/24/2013 250h	E300.0	0.100	<b>0.417</b>	
Ion Balance	%		7/26/2013 856h	Calc.	-15.0	<b>-4.25</b>	
Nitrate/Nitrite (as N)	mg/L		7/23/2013 1808h	E353.2	0.100	< 0.100	
Sulfate	mg/L		7/22/2013 2000h	E300.0	100	<b>403</b>	
Total Anions, Measured	meq/L		7/26/2013 856h	Calc.		<b>17.3</b>	
Total Cations, Measured	meq/L		7/26/2013 856h	Calc.		<b>15.9</b>	
Total Dissolved Solids	mg/L		7/19/2013 1210h	SM2540C	20.0	<b>996</b>	
Total Dissolved Solids Ratio, Measured/Calculated			7/26/2013 856h	Calc.		<b>0.975</b>	
Total Dissolved Solids, Calculated	mg/L		7/26/2013 856h	Calc.		<b>1,020</b>	



## ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-002A  
**Client Sample ID:** Cottonwood Spring  
**Collection Date:** 7/16/2013 840h  
**Received Date:** 7/19/2013 1010h

**Contact:** Garrin Palmer

### Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 7/19/2013 2127h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

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

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	58.8	50.00	118	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	51.1	50.00	102	80-128	
Surr: Dibromofluoromethane	1868-53-7	54.5	50.00	109	80-124	
Surr: Toluene-d8	2037-26-5	50.0	50.00	100	77-129	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 14, 2013

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

Client Sample ID: Cottonwood Spring Project: DNMI00100  
Sample ID: 329986002 Client ID: DNMI001  
Matrix: Ground Water  
Collect Date: 16-JUL-13 08:40  
Receive Date: 22-JUL-13  
Collector: Client

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	1.00	+/-0.132	0.310	1.00	pCi/L		KDF1	08/11/13	1029	1318324	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"			97.0	(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 2013  
**Lab Sample ID:** 1307412-003  
**Client Sample ID:** Ruin Spring  
**Collection Date:** 7/16/2013 930h  
**Received Date:** 7/19/2013 1010h

**Contact:** Garrin Palmer

## Analytical Results

## DISSOLVED METALS

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	Units	Date		Method	Reporting	Analytical	Qual
		Prepared	Analyzed	Used	Limit	Result	
Arsenic	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	7/19/2013 1145h	7/26/2013 1819h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	7/19/2013 1145h	7/23/2013 1406h	E200.7	10.0	<b>149</b>	
Chromium	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.0100	< 0.0100	
Copper	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.0100	< 0.0100	
Iron	mg/L	7/19/2013 1145h	7/26/2013 1819h	E200.8	0.0300	< 0.0300	
Lead	mg/L	7/19/2013 1145h	7/26/2013 1819h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	7/19/2013 1145h	7/23/2013 1406h	E200.7	10.0	<b>32.1</b>	
Manganese	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	7/22/2013 1200h	7/23/2013 828h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.0100	<b>0.0161</b>	
Nickel	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	7/19/2013 1145h	7/23/2013 1306h	E200.7	1.00	<b>3.46</b>	
Selenium	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.00500	<b>0.0102</b>	
Silver	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	7/19/2013 1145h	7/25/2013 1013h	E200.7	10.0	<b>118</b>	
Thallium	mg/L	7/19/2013 1145h	7/29/2013 1247h	E200.8	0.000500	< 0.000500	
Tin	mg/L	7/19/2013 1145h	7/28/2013 2021h	E200.8	0.100	< 0.100	
Uranium	mg/L	7/19/2013 1145h	7/26/2013 1716h	E200.8	0.000300	<b>0.00912</b>	
Vanadium	mg/L	7/19/2013 1145h	7/23/2013 1306h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	7/19/2013 1145h	7/22/2013 1929h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-003  
**Client Sample ID:** Ruin Spring  
**Collection Date:** 7/16/2013 930h  
**Received Date:** 7/19/2013 1010h

## Analytical Results

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web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	7/29/2013 1130h	7/29/2013 2110h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		7/19/2013 1139h	SM2320B	1.00	<b>208</b>	
Carbonate (as CaCO3)	mg/L		7/19/2013 1139h	SM2320B	1.00	< 1.00	
Chloride	mg/L		7/23/2013 1718h	E300.0	5.00	<b>26.3</b>	
Fluoride	mg/L		7/24/2013 317h	E300.0	0.100	<b>0.538</b>	
Ion Balance	%		7/26/2013 856h	Calc.	-15.0	<b>-3.60</b>	
Nitrate/Nitrite (as N)	mg/L		7/23/2013 1809h	E353.2	0.100	<b>1.56</b>	
Sulfate	mg/L		7/22/2013 2025h	E300.0	100	<b>553</b>	
Total Anions, Measured	meq/L		7/26/2013 856h	Calc.		<b>16.4</b>	
Total Cations, Measured	meq/L		7/26/2013 856h	Calc.		<b>15.3</b>	
Total Dissolved Solids	mg/L		7/19/2013 1210h	SM2540C	20.0	<b>952</b>	
Total Dissolved Solids Ratio, Measured/Calculated			7/26/2013 856h	Calc.		<b>0.944</b>	
Total Dissolved Solids, Calculated	mg/L		7/26/2013 856h	Calc.		<b>1,010</b>	



## ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-003A  
**Client Sample ID:** Ruin Spring  
**Collection Date:** 7/16/2013 930h  
**Received Date:** 7/19/2013 1010h

### Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 7/19/2013 2146h

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

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

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

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	57.7	50.00	115	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	50.9	50.00	102	80-128	
Surr: Dibromofluoromethane	1868-53-7	53.0	50.00	106	80-124	
Surr: Toluene-d8	2037-26-5	48.4	50.00	96.7	77-129	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 14, 2013

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

Client Sample ID: Ruin Spring Project: DNMI00100  
Sample ID: 329986003 Client ID: DNMI001  
Matrix: Ground Water  
Collect Date: 16-JUL-13 09:30  
Receive Date: 22-JUL-13  
Collector: Client

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	1.00	+/-0.125	0.325	1.00	pCi/L		KDF1	08/11/13	1029 1318324	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"			98.9	(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. **Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-004  
**Client Sample ID:** Back Spring  
**Collection Date:** 7/16/2013 930h  
**Received Date:** 7/19/2013 1010h

## Analytical Results

## DISSOLVED METALS

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	Units	Date Prepared		Date Analyzed		Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.00500	< 0.00500	
Beryllium	mg/L	7/19/2013	1145h	7/26/2013	1825h	E200.8	0.000500	< 0.000500	
Cadmium	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.000500	< 0.000500	
Calcium	mg/L	7/19/2013	1145h	7/23/2013	1412h	E200.7	10.0	<b>152</b>	
Chromium	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.0250	< 0.0250	
Cobalt	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.0100	< 0.0100	
Copper	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.0100	< 0.0100	
Iron	mg/L	7/19/2013	1145h	7/26/2013	1825h	E200.8	0.0300	< 0.0300	
Lead	mg/L	7/19/2013	1145h	7/26/2013	1825h	E200.8	0.00100	< 0.00100	
Magnesium	mg/L	7/19/2013	1145h	7/23/2013	1412h	E200.7	10.0	<b>32.6</b>	
Manganese	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.0100	< 0.0100	
Mercury	mg/L	7/22/2013	1200h	7/23/2013	830h	E245.1	0.000500	< 0.000500	
Molybdenum	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.0100	<b>0.0160</b>	
Nickel	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.0200	< 0.0200	
Potassium	mg/L	7/19/2013	1145h	7/23/2013	1310h	E200.7	1.00	<b>3.17</b>	
Selenium	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.00500	<b>0.0108</b>	
Silver	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.0100	< 0.0100	
Sodium	mg/L	7/19/2013	1145h	7/25/2013	1017h	E200.7	10.0	<b>118</b>	
Thallium	mg/L	7/19/2013	1145h	7/29/2013	1254h	E200.8	0.000500	< 0.000500	
Tin	mg/L	7/19/2013	1145h	7/28/2013	2023h	E200.8	0.100	< 0.100	
Uranium	mg/L	7/19/2013	1145h	7/26/2013	1721h	E200.8	0.000300	<b>0.00916</b>	
Vanadium	mg/L	7/19/2013	1145h	7/23/2013	1310h	E200.7	0.0150	< 0.0150	
Zinc	mg/L	7/19/2013	1145h	7/22/2013	1934h	E200.8	0.0100	< 0.0100	



# INORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc. **Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-004  
**Client Sample ID:** Back Spring  
**Collection Date:** 7/16/2013 930h  
**Received Date:** 7/19/2013 1010h

## **Analytical Results**

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	7/29/2013 1130h	7/29/2013 2116h	E350.1	0.0500	< 0.0500	
Bicarbonate (as CaCO3)	mg/L		7/19/2013 1139h	SM2320B	1.00	<b>202</b>	
Carbonate (as CaCO3)	mg/L		7/19/2013 1139h	SM2320B	1.00	< 1.00	
Chloride	mg/L		7/23/2013 1840h	E300.0	5.00	<b>26.0</b>	
Fluoride	mg/L		7/24/2013 344h	E300.0	0.100	<b>0.540</b>	
Ion Balance	%		7/26/2013 856h	Calc.	-15.0	<b>-2.72</b>	
Nitrate/Nitrite (as N)	mg/L		7/23/2013 1810h	E353.2	0.100	<b>1.54</b>	
Sulfate	mg/L		7/22/2013 2050h	E300.0	100	<b>555</b>	
Total Anions, Measured	meq/L		7/26/2013 856h	Calc.		<b>16.4</b>	
Total Cations, Measured	meq/L		7/26/2013 856h	Calc.		<b>15.5</b>	
Total Dissolved Solids	mg/L		7/19/2013 1210h	SM2540C	20.0	<b>984</b>	
Total Dissolved Solids Ratio, Measured/Calculated			7/26/2013 856h	Calc.		<b>0.974</b>	
Total Dissolved Solids, Calculated	mg/L		7/26/2013 856h	Calc.		<b>1,010</b>	



## ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-004A  
**Client Sample ID:** Back Spring  
**Collection Date:** 7/16/2013 930h  
**Received Date:** 7/19/2013 1010h

**Contact:** Garrin Palmer

### Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 7/19/2013 2205h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

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

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	57.6	50.00	115	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	51.6	50.00	103	80-128	
Surr: Dibromofluoromethane	1868-53-7	53.0	50.00	106	80-124	
Surr: Toluene-d8	2037-26-5	49.1	50.00	98.3	77-129	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: August 14, 2013

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

Client Sample ID: Back Spring Project: DNMI00100  
Sample ID: 329986004 Client ID: DNMI001  
Matrix: Ground Water  
Collect Date: 16-JUL-13 09:30  
Receive Date: 22-JUL-13  
Collector: Client

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	1.00	+/-0.159	0.290	1.00	pCi/L		KDF1	08/11/13	1029	1318324	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"			96.3	(25%-125%)

### Notes:

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

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



# ORGANIC ANALYTICAL REPORT

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2013  
**Lab Sample ID:** 1307412-005A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 7/16/2013  
**Received Date:** 7/19/2013 1010h

**Contact:** Garrin Palmer

## Analytical Results

VOAs by GC/MS Method 8260C/5030C

**Analyzed:** 7/22/2013 931h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

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

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	58.5	50.00	117	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	52.0	50.00	104	80-128	
Surr: Dibromofluoromethane	1868-53-7	53.6	50.00	107	80-124	
Surr: Toluene-d8	2037-26-5	49.3	50.00	98.5	77-129	



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

RE: Seeps and Springs 2013

Dear Garrin Palmer:

Lab Set ID: 1307412

463 West 3600 South  
Salt Lake City, UT 84115

American West Analytical Laboratories received 5 sample(s) on 7/19/2013 for the analyses presented in the following report.

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web: www.awal-labs.com

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

<b>Jose G. Rocha</b>	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: 2013.07.31 16:30:25 -06'00'

Laboratory Director or designee



## SAMPLE SUMMARY

**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2013  
**Lab Set ID:** 1307412  
**Date Received:** 7/19/2013 1010h

**Contact:** Garrin Palmer

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Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1307412-001A	Entrance Seep	7/16/2013 750h	Aqueous	VOA by GC/MS Method 8260C/5030C
1307412-001B	Entrance Seep	7/16/2013 750h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, A2320B
1307412-001B	Entrance Seep	7/16/2013 750h	Aqueous	Anions, E300.0
1307412-001C	Entrance Seep	7/16/2013 750h	Aqueous	Total Dissolved Solids, A2540C
1307412-001D	Entrance Seep	7/16/2013 750h	Aqueous	Ammonia, Aqueous
1307412-001D	Entrance Seep	7/16/2013 750h	Aqueous	Nitrite/Nitrate (as N), E353.2
1307412-001E	Entrance Seep	7/16/2013 750h	Aqueous	ICPMS Metals, Dissolved
1307412-001E	Entrance Seep	7/16/2013 750h	Aqueous	Mercury, Drinking Water Dissolved
1307412-001E	Entrance Seep	7/16/2013 750h	Aqueous	Ion Balance
1307412-001E	Entrance Seep	7/16/2013 750h	Aqueous	ICP Metals, Dissolved
1307412-002A	Cottonwood Spring	7/16/2013 840h	Aqueous	VOA by GC/MS Method 8260C/5030C
1307412-002B	Cottonwood Spring	7/16/2013 840h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, A2320B
1307412-002B	Cottonwood Spring	7/16/2013 840h	Aqueous	Anions, E300.0
1307412-002C	Cottonwood Spring	7/16/2013 840h	Aqueous	Total Dissolved Solids, A2540C
1307412-002D	Cottonwood Spring	7/16/2013 840h	Aqueous	Ammonia, Aqueous
1307412-002D	Cottonwood Spring	7/16/2013 840h	Aqueous	Nitrite/Nitrate (as N), E353.2
1307412-002E	Cottonwood Spring	7/16/2013 840h	Aqueous	Ion Balance
1307412-002E	Cottonwood Spring	7/16/2013 840h	Aqueous	Mercury, Drinking Water Dissolved
1307412-002E	Cottonwood Spring	7/16/2013 840h	Aqueous	ICPMS Metals, Dissolved
1307412-002E	Cottonwood Spring	7/16/2013 840h	Aqueous	ICP Metals, Dissolved
1307412-003A	Ruin Spring	7/16/2013 930h	Aqueous	VOA by GC/MS Method 8260C/5030C
1307412-003B	Ruin Spring	7/16/2013 930h	Aqueous	Anions, E300.0
1307412-003B	Ruin Spring	7/16/2013 930h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, A2320B
1307412-003C	Ruin Spring	7/16/2013 930h	Aqueous	Total Dissolved Solids, A2540C
1307412-003D	Ruin Spring	7/16/2013 930h	Aqueous	Ammonia, Aqueous
1307412-003D	Ruin Spring	7/16/2013 930h	Aqueous	Nitrite/Nitrate (as N), E353.2
1307412-003E	Ruin Spring	7/16/2013 930h	Aqueous	Mercury, Drinking Water Dissolved
1307412-003E	Ruin Spring	7/16/2013 930h	Aqueous	ICP Metals, Dissolved
1307412-003E	Ruin Spring	7/16/2013 930h	Aqueous	Ion Balance



**Client:** Energy Fuels Resources, Inc.  
**Project:** Seeps and Springs 2013  
**Lab Set ID:** 1307412  
**Date Received:** 7/19/2013 1010h

**Contact:** Garrin Palmer

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 Laboratory Director

Jose Rocha  
 QA Officer

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1307412-003E	Ruin Spring	7/16/2013 930h	Aqueous	ICPMS Metals, Dissolved
1307412-004A	Back Spring	7/16/2013 930h	Aqueous	VOA by GC/MS Method 8260C/5030C
1307412-004B	Back Spring	7/16/2013 930h	Aqueous	Anions, E300.0
1307412-004B	Back Spring	7/16/2013 930h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, A2320B
1307412-004C	Back Spring	7/16/2013 930h	Aqueous	Total Dissolved Solids, A2540C
1307412-004D	Back Spring	7/16/2013 930h	Aqueous	Nitrite/Nitrate (as N), E353.2
1307412-004D	Back Spring	7/16/2013 930h	Aqueous	Ammonia, Aqueous
1307412-004E	Back Spring	7/16/2013 930h	Aqueous	ICPMS Metals, Dissolved
1307412-004E	Back Spring	7/16/2013 930h	Aqueous	ICP Metals, Dissolved
1307412-004E	Back Spring	7/16/2013 930h	Aqueous	Mercury, Drinking Water Dissolved
1307412-004E	Back Spring	7/16/2013 930h	Aqueous	Ion Balance
1307412-005A	Trip Blank	7/16/2013	Aqueous	VOA by GC/MS Method 8260C/5030C



## Inorganic Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2013  
**Lab Set ID:** 1307412

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Jose Rocha  
QA Officer

### Sample Receipt Information:

**Date of Receipt:** 7/19/2013  
**Date(s) of Collection:** 7/16/2013  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

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

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

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

**Batch QC Requirements:** MB, LCS, MS, MSD, RPD, 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
1307412-001E	Calcium	MS	High analyte concentration
1307412-001E	Sodium	MS	High analyte concentration
1307411-003A	Nitrite/Nitrate (as N)	MS/MSD	Sample matrix interference
1307412-001A	Nitrite/Nitrate (as N)	MS/MSD	Sample matrix interference

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

**Corrective Action:** None required.



## Volatile Case Narrative

**Client:** Energy Fuels Resources, Inc.  
**Contact:** Garrin Palmer  
**Project:** Seeps and Springs 2013  
**Lab Set ID:** 1307412

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### **Sample Receipt Information:**

<b>Date of Receipt:</b>	7/19/2013
<b>Date(s) of Collection:</b>	7/16/2013
<b>Sample Condition:</b>	Intact
<b>C-O-C Discrepancies:</b>	None
<b>Method:</b>	SW-846 8260C/5030C
<b>Analysis:</b>	Volatile Organic Compounds

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

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

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

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

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

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

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

**Surrogates:** All surrogate recoveries were within established limits.

**Corrective Action:** None required.



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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-26726</b>													
Date Analyzed:		07/23/2013 1254h											
Test Code:		200.7-DIS											
Date Prepared:		07/19/2013 1145h											
Calcium	9.80	mg/L	E200.7	0.0227	1.00	10.00	0	98.0	85 - 115				
Magnesium	9.66	mg/L	E200.7	0.102	1.00	10.00	0	96.6	85 - 115				
Potassium	9.73	mg/L	E200.7	0.203	1.00	10.00	0	97.3	85 - 115				
Vanadium	0.194	mg/L	E200.7	0.00150	0.00500	0.2000	0	97.2	85 - 115				
<b>Lab Sample ID: LCS-26726</b>													
Date Analyzed:		07/25/2013 954h											
Test Code:		200.7-DIS											
Date Prepared:		07/19/2013 1145h											
Sodium	9.72	mg/L	E200.7	0.0514	1.00	10.00	0	97.2	85 - 115				
<b>Lab Sample ID: LCS-26727</b>													
Date Analyzed:		07/22/2013 1903h											
Test Code:		200.8-DIS											
Date Prepared:		07/19/2013 1145h											
Arsenic	0.201	mg/L	E200.8	0.00118	0.00200	0.2000	0	101	85 - 115				
Beryllium	0.190	mg/L	E200.8	0.0000698	0.00200	0.2000	0	95.2	85 - 115				
Cadmium	0.201	mg/L	E200.8	0.0000726	0.000500	0.2000	0	100	85 - 115				
Chromium	0.198	mg/L	E200.8	0.000938	0.00200	0.2000	0	99.2	85 - 115				
Cobalt	0.197	mg/L	E200.8	0.00364	0.00400	0.2000	0	98.4	85 - 115				
Copper	0.199	mg/L	E200.8	0.00152	0.00200	0.2000	0	99.4	85 - 115				
Iron	0.995	mg/L	E200.8	0.0472	0.100	1.000	0	99.5	85 - 115				
Lead	0.198	mg/L	E200.8	0.00126	0.00200	0.2000	0	99.1	85 - 115				
Manganese	0.199	mg/L	E200.8	0.00166	0.00200	0.2000	0	99.4	85 - 115				
Molybdenum	0.200	mg/L	E200.8	0.000496	0.00200	0.2000	0	100	85 - 115				
Nickel	0.195	mg/L	E200.8	0.000898	0.00200	0.2000	0	97.4	85 - 115				
Selenium	0.197	mg/L	E200.8	0.000686	0.00200	0.2000	0	98.3	85 - 115				
Silver	0.202	mg/L	E200.8	0.000101	0.00200	0.2000	0	101	85 - 115				
Uranium	0.194	mg/L	E200.8	0.0000598	0.00200	0.2000	0	96.8	85 - 115				
Zinc	0.981	mg/L	E200.8	0.00368	0.00500	1.000	0	98.1	85 - 115				
<b>Lab Sample ID: LCS-26727</b>													
Date Analyzed:		07/28/2013 2001h											
Test Code:		200.8-DIS											
Date Prepared:		07/19/2013 1145h											
Tin	0.977	mg/L	E200.8	0.000620	0.00200	1.000	0	97.7	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:** 1307412

**Project:** Seeps and Springs 2013

**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-26727	Date Analyzed:	07/29/2013	1124h										
<b>Test Code:</b> 200.8-DIS	Date Prepared:	07/19/2013	1145h										
Thallium	0.179	mg/L	E200.8	0.000222	0.00200	0.2000	0	89.3	85 - 115				
<b>Lab Sample ID:</b> LCS-26771	Date Analyzed:	07/23/2013	817h										
<b>Test Code:</b> Hg-DW-DIS-245.1	Date Prepared:	07/22/2013	1200h										
Mercury	0.00354	mg/L	E245.1	0.0000175	0.000150	0.003330	0	106	85 - 115				



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1307412

**Project:** Seeps and Springs 2013

**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: MB-26726</b>													
Date Analyzed: 07/23/2013 1250h													
Test Code: 200.7-DIS													
Date Prepared: 07/19/2013 1145h													
Calcium	< 1.00	mg/L	E200.7	0.0227	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.102	1.00								
Potassium	< 1.00	mg/L	E200.7	0.203	1.00								
Vanadium	< 0.00500	mg/L	E200.7	0.00150	0.00500								
<b>Lab Sample ID: MB-26726</b>													
Date Analyzed: 07/25/2013 949h													
Test Code: 200.7-DIS													
Date Prepared: 07/19/2013 1145h													
Sodium	< 1.00	mg/L	E200.7	0.0514	1.00								
<b>Lab Sample ID: MB-26727</b>													
Date Analyzed: 07/22/2013 1857h													
Test Code: 200.8-DIS													
Date Prepared: 07/19/2013 1145h													
Arsenic	< 0.00500	mg/L	E200.8	0.00118	0.00500								
Cadmium	< 0.000500	mg/L	E200.8	0.0000726	0.000500								
Chromium	< 0.0250	mg/L	E200.8	0.000938	0.0250								
Cobalt	< 0.0100	mg/L	E200.8	0.00364	0.0100								
Copper	< 0.0100	mg/L	E200.8	0.00152	0.0100								
Manganese	< 0.0100	mg/L	E200.8	0.00166	0.0100								
Molybdenum	< 0.0100	mg/L	E200.8	0.000496	0.0100								
Nickel	< 0.0200	mg/L	E200.8	0.000898	0.0200								
Selenium	< 0.00500	mg/L	E200.8	0.000686	0.00500								
Silver	< 0.0100	mg/L	E200.8	0.000101	0.0100								
Zinc	< 0.0100	mg/L	E200.8	0.00368	0.0100								
<b>Lab Sample ID: MB-26727</b>													
Date Analyzed: 07/26/2013 1633h													
Test Code: 200.8-DIS													
Date Prepared: 07/19/2013 1145h													
Uranium	< 0.000300	mg/L	E200.8	0.00000598	0.000300								
<b>Lab Sample ID: MB-26727</b>													
Date Analyzed: 07/26/2013 1742h													
Test Code: 200.8-DIS													
Date Prepared: 07/19/2013 1145h													
Beryllium	< 0.000500	mg/L	E200.8	0.0000174	0.000500								



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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-26727	Date Analyzed:	07/26/2013 1742h											
Test Code:	200.8-DIS	Date Prepared:	07/19/2013 1145h										
Iron	< 0.0300	mg/L	E200.8	0.0118	0.0300								
Lead	< 0.00100	mg/L	E200.8	0.000316	0.00100								
<b>Lab Sample ID:</b> MB-26727	Date Analyzed:	07/28/2013 1958h											
Test Code:	200.8-DIS	Date Prepared:	07/19/2013 1145h										
Tin	< 0.100	mg/L	E200.8	0.000620	0.100								
<b>Lab Sample ID:</b> MB-26727	Date Analyzed:	07/29/2013 1117h											
Test Code:	200.8-DIS	Date Prepared:	07/19/2013 1145h										
Thallium	< 0.000500	mg/L	E200.8	0.0000555	0.000500								
<b>Lab Sample ID:</b> MB-26771	Date Analyzed:	07/23/2013 815h											
Test Code:	Hg-DW-DIS-245.1	Date Prepared:	07/22/2013 1200h										
Mercury	< 0.000150	mg/L	E245.1	0.0000175	0.000150								



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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: 1307412-001EMS</b>													
Date Analyzed:		07/23/2013 1258h											
Test Code:		200.7-DIS											
Date Prepared:		07/19/2013 1145h											
Potassium	13.6	mg/L	E200.7	0.203	1.00	10.00	3.83	97.9	70 - 130				
Vanadium	0.202	mg/L	E200.7	0.00150	0.00500	0.2000	0.00466	98.7	70 - 130				
<b>Lab Sample ID: 1307412-001EMS</b>													
Date Analyzed:		07/23/2013 1354h											
Test Code:		200.7-DIS											
Date Prepared:		07/19/2013 1145h											
Calcium	128	mg/L	E200.7	0.227	10.0	10.00	121	69.5	70 - 130				
Magnesium	51.6	mg/L	E200.7	1.02	10.0	10.00	43	85.9	70 - 130				
<b>Lab Sample ID: 1307412-001EMS</b>													
Date Analyzed:		07/25/2013 1001h											
Test Code:		200.7-DIS											
Date Prepared:		07/19/2013 1145h											
Sodium	143	mg/L	E200.7	0.514	10.0	10.00	127	153	70 - 130				
<b>Lab Sample ID: 1307412-001EMS</b>													
Date Analyzed:		07/22/2013 1913h											
Test Code:		200.8-DIS											
Date Prepared:		07/19/2013 1145h											
Arsenic	0.208	mg/L	E200.8	0.00118	0.00200	0.2000	0.00251	103	75 - 125				
Beryllium	0.191	mg/L	E200.8	0.0000698	0.00200	0.2000	0	95.7	75 - 125				
Cadmium	0.196	mg/L	E200.8	0.0000726	0.000500	0.2000	0	98.2	75 - 125				
Chromium	0.197	mg/L	E200.8	0.000938	0.00200	0.2000	0	98.7	75 - 125				
Cobalt	0.197	mg/L	E200.8	0.00364	0.00400	0.2000	0	98.4	75 - 125				
Copper	0.200	mg/L	E200.8	0.00152	0.00200	0.2000	0	99.8	75 - 125				
Iron	1.16	mg/L	E200.8	0.0472	0.100	1.000	0.172	99.2	75 - 125				
Lead	0.191	mg/L	E200.8	0.00126	0.00200	0.2000	0	95.7	75 - 125				
Manganese	0.454	mg/L	E200.8	0.00166	0.00200	0.2000	0.259	97.4	75 - 125				
Molybdenum	0.201	mg/L	E200.8	0.000496	0.00200	0.2000	0.00645	97.4	75 - 125				
Nickel	0.195	mg/L	E200.8	0.000898	0.00200	0.2000	0.00114	97.1	75 - 125				
Selenium	0.208	mg/L	E200.8	0.000686	0.00200	0.2000	0.0112	98.6	75 - 125				
Silver	0.197	mg/L	E200.8	0.000101	0.00200	0.2000	0	98.3	75 - 125				
Uranium	0.220	mg/L	E200.8	0.0000598	0.00200	0.2000	0.0356	92.4	75 - 125				
Zinc	0.984	mg/L	E200.8	0.00368	0.00500	1.000	0	98.4	75 - 125				



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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: 1307411-001AMS</b> Date Analyzed: 07/26/2013 1644h													
Test Code: 200.8-DIS      Date Prepared: 07/19/2013 1145h													
Beryllium	0.198	mg/L	E200.8	0.0000698	0.00200	0.2000	0	99.0	75 - 125				
Iron	0.998	mg/L	E200.8	0.0472	0.100	1.000	0	99.8	75 - 125				
Lead	0.188	mg/L	E200.8	0.00126	0.00200	0.2000	0	94.2	75 - 125				
Manganese	0.224	mg/L	E200.8	0.00166	0.00200	0.2000	0.0336	95.4	75 - 125				
Selenium	0.227	mg/L	E200.8	0.000686	0.00200	0.2000	0.0205	103	75 - 125				
Uranium	0.211	mg/L	E200.8	0.0000598	0.00200	0.2000	0.0196	95.9	75 - 125				
<b>Lab Sample ID: 1307412-001EMS</b> Date Analyzed: 07/28/2013 2012h													
Test Code: 200.8-DIS      Date Prepared: 07/19/2013 1145h													
Tin	0.967	mg/L	E200.8	0.000620	0.00200	1.000	0	96.7	75 - 125				
<b>Lab Sample ID: 1307411-001AMS</b> Date Analyzed: 07/29/2013 1138h													
Test Code: 200.8-DIS      Date Prepared: 07/19/2013 1145h													
Thallium	0.185	mg/L	E200.8	0.000222	0.00200	0.2000	0.000398	92.5	75 - 125				
<b>Lab Sample ID: 1307412-001EMS</b> Date Analyzed: 07/29/2013 1205h													
Test Code: 200.8-DIS      Date Prepared: 07/19/2013 1145h													
Thallium	0.191	mg/L	E200.8	0.000222	0.00200	0.2000	0.000061	95.4	75 - 125				
<b>Lab Sample ID: 1307412-001EMS</b> Date Analyzed: 07/23/2013 823h													
Test Code: Hg-DW-DIS-245.1      Date Prepared: 07/22/2013 1200h													
Mercury	0.00349	mg/L	E245.1	0.0000175	0.000150	0.003330	0	105	85 - 115				

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



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Laboratory Director

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QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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: 1307412-001EMSD</b>		Date Analyzed: 07/23/2013 1323h											
Test Code: 200.7-DIS		Date Prepared: 07/19/2013 1145h											
Potassium	13.0	mg/L	E200.7	0.203	1.00	10.00	3.83	92.0	70 - 130	13.6	4.44	20	
Vanadium	0.198	mg/L	E200.7	0.00150	0.00500	0.2000	0.00466	96.8	70 - 130	0.202	1.93	20	
<b>Lab Sample ID: 1307412-001EMSD</b>		Date Analyzed: 07/23/2013 1358h											
Test Code: 200.7-DIS		Date Prepared: 07/19/2013 1145h											
Calcium	131	mg/L	E200.7	0.227	10.0	10.00	121	97.8	70 - 130	128	2.18	20	
Magnesium	52.5	mg/L	E200.7	1.02	10.0	10.00	43	94.8	70 - 130	51.6	1.71	20	
<b>Lab Sample ID: 1307412-001EMSD</b>		Date Analyzed: 07/25/2013 1005h											
Test Code: 200.7-DIS		Date Prepared: 07/19/2013 1145h											
Sodium	139	mg/L	E200.7	0.514	10.0	10.00	127	116	70 - 130	143	2.66	20	
<b>Lab Sample ID: 1307412-001EMSD</b>		Date Analyzed: 07/22/2013 1918h											
Test Code: 200.8-DIS		Date Prepared: 07/19/2013 1145h											
Arsenic	0.205	mg/L	E200.8	0.00118	0.00200	0.2000	0.00251	101	75 - 125	0.208	1.38	20	
Beryllium	0.192	mg/L	E200.8	0.0000698	0.00200	0.2000	0	95.9	75 - 125	0.191	0.247	20	
Cadmium	0.198	mg/L	E200.8	0.0000726	0.000500	0.2000	0	99.1	75 - 125	0.196	0.918	20	
Chromium	0.195	mg/L	E200.8	0.000938	0.00200	0.2000	0	97.7	75 - 125	0.197	0.974	20	
Cobalt	0.193	mg/L	E200.8	0.00364	0.00400	0.2000	0	96.4	75 - 125	0.197	2.04	20	
Copper	0.204	mg/L	E200.8	0.00152	0.00200	0.2000	0	102	75 - 125	0.2	2.06	20	
Iron	1.15	mg/L	E200.8	0.0472	0.100	1.000	0.172	98.2	75 - 125	1.16	0.842	20	
Lead	0.190	mg/L	E200.8	0.00126	0.00200	0.2000	0	95.1	75 - 125	0.191	0.592	20	
Manganese	0.449	mg/L	E200.8	0.00166	0.00200	0.2000	0.259	95.3	75 - 125	0.454	0.918	20	
Molybdenum	0.205	mg/L	E200.8	0.000496	0.00200	0.2000	0.00645	99.5	75 - 125	0.201	2.09	20	
Nickel	0.191	mg/L	E200.8	0.000898	0.00200	0.2000	0.00114	95.1	75 - 125	0.195	2.11	20	
Selenium	0.207	mg/L	E200.8	0.000686	0.00200	0.2000	0.0112	97.7	75 - 125	0.208	0.852	20	
Silver	0.197	mg/L	E200.8	0.000101	0.00200	0.2000	0	98.4	75 - 125	0.197	0.155	20	
Uranium	0.220	mg/L	E200.8	0.0000598	0.00200	0.2000	0.0356	92.0	75 - 125	0.22	0.422	20	
Zinc	0.963	mg/L	E200.8	0.00368	0.00500	1.000	0	96.3	75 - 125	0.984	2.19	20	



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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: 1307411-001AMSD</b>													
Date Analyzed:		07/26/2013 1649h											
Test Code:		200.8-DIS											
Date Prepared:		07/19/2013 1145h											
Beryllium	0.197	mg/L	E200.8	0.0000698	0.00200	0.2000	0	98.6	75 - 125	0.198	0.365	20	
Iron	1.01	mg/L	E200.8	0.0472	0.100	1.000	0	101	75 - 125	0.998	1.61	20	
Lead	0.190	mg/L	E200.8	0.00126	0.00200	0.2000	0	94.8	75 - 125	0.188	0.618	20	
Manganese	0.235	mg/L	E200.8	0.00166	0.00200	0.2000	0.0336	101	75 - 125	0.224	4.47	20	
Selenium	0.232	mg/L	E200.8	0.000686	0.00200	0.2000	0.0205	106	75 - 125	0.227	1.85	20	
Uranium	0.213	mg/L	E200.8	0.0000598	0.00200	0.2000	0.0196	96.8	75 - 125	0.211	0.920	20	
<b>Lab Sample ID: 1307412-001EMSD</b>													
Date Analyzed:		07/28/2013 2015h											
Test Code:		200.8-DIS											
Date Prepared:		07/19/2013 1145h											
Tin	0.963	mg/L	E200.8	0.000620	0.00200	1.000	0	96.3	75 - 125	0.967	0.365	20	
<b>Lab Sample ID: 1307411-001AMSD</b>													
Date Analyzed:		07/29/2013 1144h											
Test Code:		200.8-DIS											
Date Prepared:		07/19/2013 1145h											
Thallium	0.186	mg/L	E200.8	0.000222	0.00200	0.2000	0.000398	93.0	75 - 125	0.185	0.531	20	
<b>Lab Sample ID: 1307412-001EMSD</b>													
Date Analyzed:		07/29/2013 1212h											
Test Code:		200.8-DIS											
Date Prepared:		07/19/2013 1145h											
Thallium	0.186	mg/L	E200.8	0.000222	0.00200	0.2000	0.000061	92.8	75 - 125	0.191	2.81	20	
<b>Lab Sample ID: 1307412-001EMSD</b>													
Date Analyzed:		07/23/2013 825h											
Test Code:		Hg-DW-DIS-245.1											
Date Prepared:		07/22/2013 1200h											
Mercury	0.00357	mg/L	E245.1	0.0000175	0.000150	0.003330	0	107	85 - 115	0.00349	2.21	20	



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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: 1307411-002CDUP</b> Date Analyzed: 07/19/2013 1210h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	3,170	mg/L	SM2540C	8.00	20.0					3170	0	5	
<b>Lab Sample ID: 1307412-001CDUP</b> Date Analyzed: 07/19/2013 1210h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	860	mg/L	SM2540C	8.00	20.0					828	3.79	5	



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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-R57106</b> Date Analyzed: 07/22/2013 1250h													
Test Code: 300.0-W													
Chloride	4.76	mg/L	E300.0	0.0114	1.00	5.000	0	95.2	90 - 110				
Sulfate	5.02	mg/L	E300.0	0.177	1.00	5.000	0	100	90 - 110				
<b>Lab Sample ID: LCS-R57161</b> Date Analyzed: 07/23/2013 1651h													
Test Code: 300.0-W													
Chloride	4.59	mg/L	E300.0	0.0114	1.00	5.000	0	91.7	90 - 110				
Fluoride	4.70	mg/L	E300.0	0.0126	0.100	5.000	0	94.1	90 - 110				
<b>Lab Sample ID: LCS-R57008</b> Date Analyzed: 07/19/2013 1139h													
Test Code: ALK-W-2320B													
Alkalinity (as CaCO3)	52,000	mg/L	SM2320B	4.53	10.0	50,000	0	104	90 - 110				
<b>Lab Sample ID: LCS-26899</b> Date Analyzed: 07/29/2013 2054h													
Test Code: NH3-W-350.1      Date Prepared: 07/29/2013 1130h													
Ammonia (as N)	0.999	mg/L	E350.1	0.0277	0.0500	1.000	0	99.9	90 - 110				
<b>Lab Sample ID: LCS-R57135</b> Date Analyzed: 07/23/2013 1751h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	1.05	mg/L	E353.2	0.00252	0.100	1.000	0	105	90 - 110				
<b>Lab Sample ID: LCS-R57066</b> Date Analyzed: 07/19/2013 1210h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	204	mg/L	SM2540C	4.00	10.0	205.0	0	99.5	80 - 120				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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-R57106</b> Date Analyzed: 07/22/2013 1225h													
Test Code: 300.0-W													
Chloride	< 1.00	mg/L	E300.0	0.0114	1.00								
Sulfate	< 1.00	mg/L	E300.0	0.177	1.00								
<b>Lab Sample ID: MB-R57161</b> Date Analyzed: 07/23/2013 1623h													
Test Code: 300.0-W													
Chloride	< 1.00	mg/L	E300.0	0.0114	1.00								
Fluoride	< 0.100	mg/L	E300.0	0.0126	0.100								
<b>Lab Sample ID: MB-R57008</b> Date Analyzed: 07/19/2013 1139h													
Test Code: ALK-W-2320B													
Bicarbonate (as CaCO3)	< 10.0	mg/L	SM2320B	4.53	10.0								
Carbonate (as CaCO3)	< 10.0	mg/L	SM2320B	4.53	10.0								
<b>Lab Sample ID: MB-26899</b> Date Analyzed: 07/29/2013 2053h													
Test Code: NH3-W-350.1 Date Prepared: 07/29/2013 1130h													
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0277	0.0500								
<b>Lab Sample ID: MB-R57135</b> Date Analyzed: 07/23/2013 1750h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.100	mg/L	E353.2	0.00252	0.100								
<b>Lab Sample ID: MB-R57066</b> Date Analyzed: 07/19/2013 1210h													
Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	4.00	10.0								



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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
<b>Lab Sample ID: 1307411-002BMS</b> Date Analyzed: 07/22/2013 1612h													
Test Code: 300.0-W													
Chloride	24,000	mg/L	E300.0	57.0	5,000	25,000	61.9	95.9	90 - 110				
Sulfate	27,400	mg/L	E300.0	885	5,000	25,000	1860	102	90 - 110				
<b>Lab Sample ID: 1307412-001BMS</b> Date Analyzed: 07/22/2013 1909h													
Test Code: 300.0-W													
Chloride	5,070	mg/L	E300.0	11.4	1,000	5,000	139	98.6	90 - 110				
Sulfate	5,720	mg/L	E300.0	177	1,000	5,000	394	107	90 - 110				
<b>Lab Sample ID: 1307412-003BMS</b> Date Analyzed: 07/23/2013 1745h													
Test Code: 300.0-W													
Chloride	498	mg/L	E300.0	1.14	100	500.0	26.3	94.3	90 - 110				
Fluoride	485	mg/L	E300.0	1.26	100	500.0	0.592	96.8	90 - 110				
<b>Lab Sample ID: 1307412-001BMS</b> Date Analyzed: 07/19/2013 1139h													
Test Code: ALK-W-2320B													
Alkalinity (as CaCO3)	343	mg/L	SM2320B	4.53	10.0	50.00	292	102	80 - 120				
<b>Lab Sample ID: 1307412-003DMS</b> Date Analyzed: 07/29/2013 2111h													
Test Code: NH3-W-350.1      Date Prepared: 07/29/2013 1130h													
Ammonia (as N)	0.938	mg/L	E350.1	0.0277	0.0500	1.000	0	93.8	90 - 110				
<b>Lab Sample ID: 1307411-003AMS</b> Date Analyzed: 07/23/2013 1800h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	15.6	mg/L	E353.2	0.0252	1.00	10.00	3.66	119	90 - 110				
<b>Lab Sample ID: 1307412-001DMS</b> Date Analyzed: 07/23/2013 1812h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	14.0	mg/L	E353.2	0.0252	1.00	10.00	2.06	119	90 - 110				

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



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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: 1307411-002BMSD</b> Date Analyzed: 07/22/2013 1728h													
Test Code: 300.0-W													
Chloride	23,900	mg/L	E300.0	57.0	5,000	25,000	61.9	95.2	90 - 110	24000	0.741	20	
Sulfate	27,300	mg/L	E300.0	885	5,000	25,000	1860	102	90 - 110	27400	0.514	20	
<b>Lab Sample ID: 1307412-001BMSD</b> Date Analyzed: 07/22/2013 1934h													
Test Code: 300.0-W													
Chloride	5,140	mg/L	E300.0	11.4	1,000	5,000	139	99.9	90 - 110	5070	1.26	20	
Sulfate	5,740	mg/L	E300.0	177	1,000	5,000	394	107	90 - 110	5720	0.299	20	
<b>Lab Sample ID: 1307412-003BMSD</b> Date Analyzed: 07/23/2013 1812h													
Test Code: 300.0-W													
Chloride	513	mg/L	E300.0	1.14	100	500.0	26.3	97.4	90 - 110	498	3.11	20	
Fluoride	502	mg/L	E300.0	1.26	100	500.0	0.592	100	90 - 110	485	3.55	20	
<b>Lab Sample ID: 1307412-001BMSD</b> Date Analyzed: 07/19/2013 1139h													
Test Code: ALK-W-2320B													
Alkalinity (as CaCO <sub>3</sub> )	344	mg/L	SM2320B	4.53	10.0	50.00	292	104	80 - 120	343	0.291	10	
<b>Lab Sample ID: 1307412-003DMSD</b> Date Analyzed: 07/29/2013 2112h													
Test Code: NH3-W-350.1 Date Prepared: 07/29/2013 1130h													
Ammonia (as N)	0.910	mg/L	E350.1	0.0277	0.0500	1.000	0	91.0	90 - 110	0.938	3.05	10	
<b>Lab Sample ID: 1307411-003AMSD</b> Date Analyzed: 07/23/2013 1802h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	15.6	mg/L	E353.2	0.0252	1.00	10.00	3.66	119	90 - 110	15.6	0.214	10	1
<b>Lab Sample ID: 1307412-001DMSD</b> Date Analyzed: 07/23/2013 1813h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	13.8	mg/L	E353.2	0.0252	1.00	10.00	2.06	117	90 - 110	14	1.13	10	1

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



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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: LCS VOC 072213A</b>		Date Analyzed: 07/22/2013 717h											
Test Code: 8260-W													
Benzene	19.2	µg/L	SW8260C	0.149	2.00	20.00	0	96.2	62 - 127				
Chloroform	20.8	µg/L	SW8260C	0.277	2.00	20.00	0	104	67 - 132				
Methylene chloride	22.7	µg/L	SW8260C	0.155	2.00	20.00	0	113	32 - 185				
Naphthalene	17.0	µg/L	SW8260C	0.547	2.00	20.00	0	85.0	28 - 136				
Tetrahydrofuran	17.4	µg/L	SW8260C	0.874	2.00	20.00	0	87.2	43 - 146				
Toluene	18.9	µg/L	SW8260C	0.429	2.00	20.00	0	94.4	64 - 129				
Xylenes, Total	59.2	µg/L	SW8260C	0.870	2.00	60.00	0	98.7	52 - 134				
Surr: 1,2-Dichloroethane-d4	56.2	µg/L	SW8260C			50.00		112	76 - 138				
Surr: 4-Bromofluorobenzene	52.7	µg/L	SW8260C			50.00		105	77 - 121				
Surr: Dibromofluoromethane	53.4	µg/L	SW8260C			50.00		107	67 - 128				
Surr: Toluene-d8	50.6	µg/L	SW8260C			50.00		101	81 - 135				
<b>Lab Sample ID: LCS VOC 071913B</b>		Date Analyzed: 07/19/2013 1348h											
Test Code: 8260-W													
Benzene	20.2	µg/L	SW8260C	0.149	2.00	20.00	0	101	62 - 127				
Chloroform	20.4	µg/L	SW8260C	0.277	2.00	20.00	0	102	67 - 132				
Methylene chloride	21.3	µg/L	SW8260C	0.155	2.00	20.00	0	107	32 - 185				
Naphthalene	18.2	µg/L	SW8260C	0.547	2.00	20.00	0	90.8	28 - 136				
Tetrahydrofuran	20.1	µg/L	SW8260C	0.874	2.00	20.00	0	100	43 - 146				
Toluene	19.9	µg/L	SW8260C	0.429	2.00	20.00	0	99.4	64 - 129				
Xylenes, Total	62.8	µg/L	SW8260C	0.870	2.00	60.00	0	105	52 - 134				
Surr: 1,2-Dichloroethane-d4	53.0	µg/L	SW8260C			50.00		106	76 - 138				
Surr: 4-Bromofluorobenzene	49.4	µg/L	SW8260C			50.00		98.9	77 - 121				
Surr: Dibromofluoromethane	51.3	µg/L	SW8260C			50.00		103	67 - 128				
Surr: Toluene-d8	49.2	µg/L	SW8260C			50.00		98.3	81 - 135				



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## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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 072213A</b>		<b>Date Analyzed: 07/22/2013 755h</b>											
Test Code: 8260-W													
2-Butanone	< 20.0	µg/L	SW8260C	1.45	20.0								
Acetone	< 20.0	µg/L	SW8260C	3.35	20.0								
Benzene	< 1.00	µg/L	SW8260C	0.149	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260C	0.137	1.00								
Chloroform	< 1.00	µg/L	SW8260C	0.277	1.00								
Chloromethane	< 1.00	µg/L	SW8260C	0.127	1.00								
Methylene chloride	< 1.00	µg/L	SW8260C	0.155	1.00								
Naphthalene	< 1.00	µg/L	SW8260C	0.547	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260C	0.874	1.00								
Toluene	< 1.00	µg/L	SW8260C	0.429	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260C	0.870	1.00								
Surr: 1,2-Dichloroethane-d4	58.0	µg/L	SW8260C			50.00		116	76 - 138				
Surr: 4-Bromofluorobenzene	54.1	µg/L	SW8260C			50.00		108	77 - 121				
Surr: Dibromofluoromethane	54.0	µg/L	SW8260C			50.00		108	67 - 128				
Surr: Toluene-d8	51.3	µg/L	SW8260C			50.00		103	81 - 135				

<b>Lab Sample ID: MB VOC 071913B</b>		<b>Date Analyzed: 07/19/2013 1426h</b>											
Test Code: 8260-W													
2-Butanone	< 20.0	µg/L	SW8260C	1.45	20.0								
Acetone	< 20.0	µg/L	SW8260C	3.35	20.0								
Benzene	< 1.00	µg/L	SW8260C	0.149	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260C	0.137	1.00								
Chloroform	< 1.00	µg/L	SW8260C	0.277	1.00								
Chloromethane	< 1.00	µg/L	SW8260C	0.127	1.00								
Methylene chloride	< 1.00	µg/L	SW8260C	0.155	1.00								
Naphthalene	< 1.00	µg/L	SW8260C	0.547	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260C	0.874	1.00								
Toluene	< 1.00	µg/L	SW8260C	0.429	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260C	0.870	1.00								



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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 071913B</b>		Date Analyzed: 07/19/2013 1426h											
Test Code: 8260-W													
Surr: 1,2-Dichloroethane-d4	55.8	µg/L	SW8260C			50.00		112	76 - 138				
Surr: 4-Bromofluorobenzene	51.7	µg/L	SW8260C			50.00		103	77 - 121				
Surr: Dibromofluoromethane	52.7	µg/L	SW8260C			50.00		105	67 - 128				
Surr: Toluene-d8	50.0	µg/L	SW8260C			50.00		99.9	81 - 135				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

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

**Lab Set ID:** 1307412

**Project:** Seeps and Springs 2013

**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: 1307412-001AMS</b>		Date Analyzed: 07/22/2013 1358h											
Test Code: 8260-W													
Benzene	18.5	µg/L	SW8260C	0.149	2.00	20.00	0	92.5	66 - 145				
Chloroform	19.7	µg/L	SW8260C	0.277	2.00	20.00	0	98.3	50 - 146				
Methylene chloride	20.6	µg/L	SW8260C	0.155	2.00	20.00	0	103	30 - 192				
Naphthalene	16.0	µg/L	SW8260C	0.547	2.00	20.00	0	79.8	41 - 131				
Tetrahydrofuran	14.4	µg/L	SW8260C	0.874	2.00	20.00	0	72.2	43 - 146				
Toluene	18.4	µg/L	SW8260C	0.429	2.00	20.00	0	92.1	18 - 192				
Xylenes, Total	56.0	µg/L	SW8260C	0.870	2.00	60.00	0	93.4	42 - 167				
Surr: 1,2-Dichloroethane-d4	58.0	µg/L	SW8260C			50.00		116	72 - 151				
Surr: 4-Bromofluorobenzene	49.1	µg/L	SW8260C			50.00		98.2	80 - 128				
Surr: Dibromofluoromethane	54.0	µg/L	SW8260C			50.00		108	80 - 124				
Surr: Toluene-d8	47.8	µg/L	SW8260C			50.00		95.6	77 - 129				



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Energy Fuels Resources, Inc.  
**Lab Set ID:** 1307412  
**Project:** Seeps and Springs 2013

**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: 1307412-001AMSD</b>		<b>Date Analyzed: 07/22/2013 1417h</b>											
<b>Test Code: 8260-W</b>													
Benzene	21.4	µg/L	SW8260C	0.149	2.00	20.00	0	107	66 - 145	18.5	14.6	25	
Chloroform	22.5	µg/L	SW8260C	0.277	2.00	20.00	0	112	50 - 146	19.7	13.4	25	
Methylene chloride	23.6	µg/L	SW8260C	0.155	2.00	20.00	0	118	30 - 192	20.6	13.8	25	
Naphthalene	18.3	µg/L	SW8260C	0.547	2.00	20.00	0	91.7	41 - 131	16	13.8	25	
Tetrahydrofuran	17.2	µg/L	SW8260C	0.874	2.00	20.00	0	86.2	43 - 146	14.4	17.6	25	
Toluene	21.0	µg/L	SW8260C	0.429	2.00	20.00	0	105	18 - 192	18.4	12.9	25	
Xylenes, Total	64.8	µg/L	SW8260C	0.870	2.00	60.00	0	108	42 - 167	56	14.5	25	
Surr: 1,2-Dichloroethane-d4	58.1	µg/L	SW8260C			50.00		116	72 - 151				
Surr: 4-Bromofluorobenzene	48.9	µg/L	SW8260C			50.00		97.9	80 - 128				
Surr: Dibromofluoromethane	54.2	µg/L	SW8260C			50.00		108	80 - 124				
Surr: Toluene-d8	47.4	µg/L	SW8260C			50.00		94.9	77 - 129				

## WORK ORDER Summary

Work Order: **1307412** Page 1 of 3

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

Due Date: 7/31/2013

**Client ID:** DEN100

**Contact:** Garrin Palmer

**Project:** Seeps and Springs 2013

**QC Level:** III

**WO Type:** Project

**Comments:** PA Rush. QC 3 (Summary/No chromatograms). Project specific DL's: see COC. Run 200.8 on the Agilent. EDD-Denison and EIM-Locus. Email Group. Metals were field filtered.;

DB

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1307412-001A	Enterance Seep	7/16/2013 0750h	7/19/2013 1010h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1307412-001B				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				
1307412-001C				TDS-W-2540C		<input checked="" type="checkbox"/>	ww - tds	
				1 SEL Analytes: TDS				
1307412-001D				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				
1307412-001E				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				
1307412-002A	Cottonwood Spring	7/16/2013 0840h	7/19/2013 1010h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
1307412-002B				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				
1307412-002C				TDS-W-2540C		<input checked="" type="checkbox"/>	ww - tds	
				1 SEL Analytes: TDS				

# WORK ORDER Summary

Work Order: **1307412** Page 2 of 3

Client: Energy Fuels Resources, Inc.

Due Date: 7/31/2013

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1307412-002D	Cottonwood Spring	7/16/2013 0840h	7/19/2013 1010h	NH3-W-350.1	Aqueous	<input checked="" type="checkbox"/>	df - no2/no3 & nh3	1
				<i>1 SEL Analytes: NH3N</i>				
				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
1307412-002E				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<i>1 SEL Analytes: NO3NO2N</i>				
				200.7-DIS		<input checked="" type="checkbox"/>	df-met	
				<i>5 SEL Analytes: CA MG K NA V</i>				
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS		<input checked="" type="checkbox"/>	df-met	
				<i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>				
				200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				HG-DW-DIS-245.1		<input checked="" type="checkbox"/>	df-met	
				<i>1 SEL Analytes: HG</i>				
1307412-003A	Ruin Spring	7/16/2013 0930h	7/19/2013 1010h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Custom; # of Analytes: 11 / # of Surr: 4</i>				
				300.0-W		<input checked="" type="checkbox"/>	df - wc	1
1307412-003B				3 SEL Analytes: CL F SO4		<input checked="" type="checkbox"/>	df - wc	
				ALK-W-2320B		<input checked="" type="checkbox"/>	df - wc	
1307412-003C				2 SEL Analytes: ALKB ALKC		<input checked="" type="checkbox"/>	df - wc	
				TDS-W-2540C		<input checked="" type="checkbox"/>	ww - tds	
1307412-003D				1 SEL Analytes: TDS		<input checked="" type="checkbox"/>	ww - tds	
				NH3-W-350.1		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<i>1 SEL Analytes: NH3N</i>				
1307412-003E				NH3-W-PR		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				NO2/NO3-W-353.2		<input checked="" type="checkbox"/>	df - no2/no3 & nh3	
				<i>1 SEL Analytes: NO3NO2N</i>				
				200.7-DIS		<input checked="" type="checkbox"/>	df-met	
				<i>5 SEL Analytes: CA MG K NA V</i>				
				200.7-DIS-PR		<input checked="" type="checkbox"/>	df-met	
				200.8-DIS		<input checked="" type="checkbox"/>	df-met	
				<i>17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN</i>				
200.8-DIS-PR		<input checked="" type="checkbox"/>	df-met					
				HG-DW-DIS-245.1		<input checked="" type="checkbox"/>	df-met	
				<i>1 SEL Analytes: HG</i>				
				HG-DW-DIS-PR		<input checked="" type="checkbox"/>	df-met	

# WORK ORDER Summary

Work Order: **1307412** Page 3 of 3

Client: Energy Fuels Resources, Inc.

Due Date: 7/31/2013

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1307412-003E	Ruin Spring	7/16/2013 0930h	7/19/2013 1010h	IONBALANCE	Aqueous	<input checked="" type="checkbox"/>	df-met	1
5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc								
1307412-004A	Back Spring	7/16/2013 0930h	7/19/2013 1010h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
Test Group: 8260-W-Custom; # of Analytes: 11 / # of Surr: 4								
1307412-004B				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								
1307412-004C				TDS-W-2540C		<input checked="" type="checkbox"/>	ww - tds	
1 SEL Analytes: TDS								
1307412-004D				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								
1307412-004E				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								
1307412-005A	Trip Blank	7/16/2013	7/19/2013 1010h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
Test Group: 8260-W-Custom; # of Analytes: 11 / # of Surr: 4								

# American West Analytical Laboratories

Chain of Custody

Lab Sample Set #

1307412  
 1307411 DB  
 7/19/13  
 Page 1 of 1

Client: **Energy Fuels Resources, Inc.**  
 Address: **6425 S. Hwy. 191**  
**Blanding, UT 84511**

Contact: **Garrin Palmer**  
 Phone: **(435) 678-2221**  
 Email: **gpalmer@energyfuels.com**

QC Level: **3**

Project Name: **Seeps and Springs 2013**

PO#:

Sampler Name: **Garrin Palmer**

Turn Around Time

**Standard**

Sample ID:	Date Sampled	Time	# of Containers	Sample Matrix	NO2/NO3 (353.2)	NH3 (4500G or 350.1)	VOCs (8260C)	FI, Cl, SO4 (4500E or 300)	TDS (2540C)	Carb/Bicarb (2320B)	Metals	Comments
1 <b>Entrance Seep</b>	7/16/2013	7/16/2013 7:50	7	W	x	x	x	x	x	x	x	Metals were
2 <b>Cottonwood Spring</b>	7/16/2013	7/16/2013 8:40	7	W	x	x	x	x	x	x	x	field filtered.
3 <b>Ruin Spring</b>	7/16/2013	7/16/2013 9:30	7	W	x	x	x	x	x	x	x	
4 <b>Back Spring</b>	7/16/2013	7/16/2013 9:30	7	W	x	x	x	x	x	x	x	
5 <b>Trip Blank</b>	7/16/2013			W			x					
6 <b>Temp Blank</b>												
7												
8												
9												
10												
11												
12												
13												
14												
15												

**USE ONLY**

Sample Vials:

1. Shipped in cool delivered

2. Arrived in chilled

3. Temperature **32°C**

4. Received Broken/Leaking

5. Improperly Sealed

6. Not Properly Preserved

7. Received Within Holding Times  Y  N

8. Contraps Was:

9. No Contact on Outer Package  Y  N  NA

10. Damaged on Outer Package  Y  N  NA

11. Contact on Sample  Y  N  NA

12. Damaged on Sample  Y  N  NA

13. Discrepancies Between Sample Labels and TOC Report  Y  N  NA

Special Instructions: **Email results to Garrin Palmer, Kethy Weinel, and David Turk**

Relinquished by: Signature <i>Garrin Palmer</i>	Date: <b>7/18/13</b>	Received by: Signature <i>[Signature]</i>	Date:
Print Name <b>Garrin Palmer</b>	Time: <b>1200</b>	Print Name	Time:
Relinquished by: Signature	Date:	Received by: Signature	Date:
Print Name	Time:	Print Name	Time:
Relinquished by: Signature	Date:	Received by: Signature <i>Denise Braun</i>	Date: <b>7/19/13</b>
Print Name	Time:	Print Name <b>Denise Braun</b>	Time: <b>10:10</b>

Table 3 – AWAL Analyte List, Reporting Limits and Analytical Method Requirements

Ammonia (as N)	A4500-NH <sub>3</sub> G or E350.1	0.05 mg/L	28 days	H <sub>2</sub> SO <sub>4</sub> to pH<2	≤ 6°C
Nitrate & Nitrite (as N)	E353.1 or E353.2	0.1 mg/L	28 days	H <sub>2</sub> SO <sub>4</sub> to pH<2	≤ 6°C
Acetone	SW8260B or SW8260C	20 µg/L	14 days	HCl to pH<2	≤ 6°C
Benzene	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
2-Butanone (MEK)	SW8260B or SW8260C	20 µg/L	14 days	HCl to pH<2	≤ 6°C
Carbon Tetrachloride	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Chloroform	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Chloromethane	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Dichloromethane (Methylene Chloride)	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Naphthalene	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Tetrahydrofuran	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Toluene	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Xylenes (total)	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Fluoride	A4500-F C or E300.0	0.1 mg/L	28 days	None	≤ 6°C
TDS	A2540 C	10 mg/L	7 days	None	≤ 6°C

Chloride	A4500-Cl B or A4500-Cl E or E300.0	1 mg/L	28 days	None	≤ 6°C
Sulfate	A4500-SO4 E or E300.0	1 mg/L	28 days	None	≤ 6°C
Carbonate as CO3	A2320 B	1 mg/L	14 days	None	≤ 6°C
Bicarbonate as HCO3	A2320 B	1 mg/L	14 days	None	
Carbon Tetrachloride	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Chloroform	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Dichloromethane (Methylene Chloride)	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
Chloromethane	SW8260B or SW8260C	1.0 µg/L	14 days	HCl to pH<2	≤ 6°C
1,2,4-Trichlorobenzene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
1,2-Dichlorobenzene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
1,3-Dichlorobenzene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
1,4-Dichlorobenzene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
1-Methylnaphthalene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2,4,5-Trichlorophenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2,4,6-Trichlorophenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2,4-Dichlorophenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2,4-Dimethylphenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2,4-Dinitrophenol	SW8270D	<20 ug/L	7/40 days	None	≤ 6°C
2,4-Dinitrotoluene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2,6-Dinitrotoluene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2-Chloronaphthalene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2-Chlorophenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2-Methylnaphthalene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2-Methylphenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
2-Nitrophenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
3&4-Methylphenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
3,3'-Dichlorobenzidine	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
4,6-Dinitro-2-methylphenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C

Table 3 – GEL Groundwater, Tailings Impoundment, and Seeps and Springs Sampling

Contaminant	Sampling Point	Reporting Limit	Frequency	Sample Preparation	Reporting Unit
Arsenic	E200.7 or E200.8	5 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Beryllium	E200.7 or E200.8	0.50 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Cadmium	E200.7 or E200.8	0.50 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Chromium	E200.7 or E200.8	25 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Cobalt	E200.7 or E200.8	10 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Copper	E200.7 or E200.8	10 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Iron	E200.7 or E200.8	30 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Lead	E200.7 or E200.8	1.0 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Manganese	E200.7 or E200.8	10 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Mercury	E 245.1 or E200.7 or E200.8	0.50 µg/L	28 days	HNO <sub>3</sub> to pH<2	None
Molybdenum	E200.7 or E200.8	10 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Nickel	E200.7 or E200.8	20 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Selenium	E200.7 or E200.8	5 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Silver	E200.7 or E200.8	10 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Thallium	E200.7 or E200.8	0.50 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Tin	E200.7 or E200.8	100 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Uranium	E200.7 or E200.8	0.30 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Vanadium	E200.7 or E200.8	15 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Zinc	E200.7 or E200.8	10 µg/L	6 months	HNO <sub>3</sub> to pH<2	None
Sodium	E200.7	0.5 mg/L	6 months	HNO <sub>3</sub> to pH<2	None
Potassium	E200.7	0.5 mg/L	6 months	HNO <sub>3</sub> to pH<2	None
Magnesium	E200.7	0.5 mg/L	6 months	HNO <sub>3</sub> to pH<2	None
Calcium	E200.7	0.5 mg/L	6 months	HNO <sub>3</sub> to pH<2	None
Gross Alpha	E 988.9 or E988.1	1.0 pCi/L	6 months	HNO <sub>3</sub> to pH<2	None

-RW 2/27/2013

Table 4 Fee Schedule

Item	Fee
Full Suite Metals	
Partial Suite Metals (cost per individual metal)	
Gross alpha	

\*\* - per email from Kathy Weinel 3/27/13 -RW

Run ION BALANCE when the full metals suite has been requested, per email from Kathy Weinel 3/27/13

**Ion Balance to include:**

- Total Anions, Measured
- Total Cations, Measured
- TDS Ratio, Measured/Calculated
- TDS, Calculated

-RW 3/27/13





August 02, 2013

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

Re: White Mesa Mill GW  
Work Order: 329986

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on July 22, 2013. 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



**Energy Fuels Resources (USA), Inc.**  
**White Mesa Mill GW**  
**SDG: 329986**

**Receipt Narrative  
for  
Energy Fuels Resources (USA), Inc.  
SDG: 329986**

**August 12, 2013**

**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 July 22, 2013 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

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

<b><u>Laboratory ID</u></b>	<b><u>Client ID</u></b>
329986001	Enterance Seep
329986002	Cottonwood Spring
329986003	Ruin Spring
329986004	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



**SAMPLE RECEIPT & REVIEW FORM**

Client: <u>DAMI</u>		SDG/AR/COC/Work Order: <u>329986   329987</u>	
Received By: <u>P. D. Smith</u>		Date Received: <u>7-22-13</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): <u>0CPM</u>
Classified Radioactive II or III by RSO?		<input checked="" type="checkbox"/>	If yes, Were swipes taken of sample containers < action levels?
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	No	2	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 ≤ deg. C)?*		<input checked="" type="checkbox"/>	<u>21</u>	Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) *all temperatures are recorded in Celsius
2a	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <u>601524649</u>
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"/>	Lab Rec'd 1 container each
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: <u>FedEx Air</u> FedEx Ground UPS Field Services Courier Other  <u>8015 5302 2044-</u>

Comments (Use Continuation Form if needed):

# GEL Laboratories LLC – Login Review Report

Report Date: 12-AUG-13  
 Work Order: 329986  
 Page 1 of 2

GEL Work Order/SDG: 329986      Seeps and Springs 2013  
 Client SDG: 329986  
 Project Manager: Heather Shaffer  
 Project Name: DNMI00100 White Mesa Mill GW  
 Purchase Order: DW16138  
 Package Level: LEVEL3  
 EDD Format: EIM\_DNMI

Work Order Due Date: 19-AUG-13  
 Package Due Date: 16-AUG-13  
 EDD Due Date: 19-AUG-13  
 Due Date: 19-AUG-13  
 HXS1

Collector: C  
 Prelogin #: 20130705879  
 Project Workdef ID: 1294356  
 SDG Status: Closed  
 Logged by:

GEL ID	Client Sample ID	Client Sample Desc.	Collect Date & Time	Receive Date & Time	Time Zone	# of Cont.	Lab Matrix	Fax Due Date	Days to Process	CofC #	Prelog Group	Lab QC	Field QC
329986001	Entrance Seep		16-JUL-13 07:50	22-JUL-13 09:35	-2	1	GROUND WATER		20		1		
329986002	Cottonwood Spring		16-JUL-13 08:40	22-JUL-13 09:35	-2	1	GROUND WATER		20		1		
329986003	Ruin Spring		16-JUL-13 09:30	22-JUL-13 09:35	-2	1	GROUND WATER		20		1		
329986004	Back Spring		16-JUL-13 09:30	22-JUL-13 09:35	-2	1	GROUND WATER		20		1		

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

<b>Product:</b> GFCTORAL	<b>Workdef ID:</b> 1297250	<b>In Product Group?</b> No	<b>Group Name:</b>	<b>Group Reference:</b>			
<b>Method:</b> EPA 900.1 Modified				<b>Path:</b> Standard			
<b>Product Description:</b> GFPC, Total Alpha Radium, Liquid				<b>Product Reference:</b> Gross Alpha			
<b>Samples:</b> 001, 002, 003, 004				<b>Moisture Correction:</b> "As Received"			
<b>Parmname Check:</b> All parmnames scheduled properly							
<b>CAS #</b>	<b>Parmname</b>	<b>Client RDL or PQL &amp; Unit</b>	<b>Reporting Units</b>	<b>Parm Function</b>	<b>Included in Sample?</b>	<b>Included in QC?</b>	<b>Custom List?</b>
	Gross Radium Alpha	1	pCi/L	REG	Y	Y	Yes

Action	Product Name	Description	Samples
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Contingent Tests

# GEL Laboratories LLC – Login Review Report

Report Date: 12-AUG-13

Work Order: 329986

Page 2 of 2

## Login Requirements:

**Requirement**

**Include? Comments**

---

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

**List of current GEL Certifications as of 12 August 2013**

<b>State</b>	<b>Certification</b>
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California NELAP	01151CA
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP A2LA ISO 17025	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA130005
Maryland	270
Massachusetts	M-SC012
Nevada	SC000122011-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
South Carolina Chemistry	10120001
South Carolina Radiochemi	10120002
Tennessee	TN 02934
Texas NELAP	T104704235-13-8
Utah NELAP	SC000122013-8
Vermont	VT87156
Virginia NELAP	460202
Washington	C780-12
Wisconsin	999887790

**Radiochemistry Case Narrative  
Energy Fuels Resources (DNMI)  
SDG 329986**

**Method/Analysis Information**

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

Analytical Method: EPA 900.1 Modified

Analytical Batch Number: 1318324

<b>Sample ID</b>	<b>Client ID</b>
329986001	Entrance Seep
329986002	Cottonwood Spring
329986003	Ruin Spring
329986004	Back Spring
1202917400	Method Blank (MB)
1202917401	329986001(Entrance Seep) Sample Duplicate (DUP)
1202917402	329986001(Entrance Seep) Matrix Spike (MS)
1202917403	329986001(Entrance Seep) Matrix Spike Duplicate (MSD)
1202917404	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: 329986001 (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.

**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.

**Additional Comments**

The matrix spike and matrix spike duplicate, 1202917402 (Entrance Seep) and 1202917403 (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: 329986 GEL Work Order: 329986

**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:** 14 AUG 2013

**Title:** Analyst I

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: August 14, 2013

Page 1 of

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

**Contact: Ms. Kathy Weinel**

**Workorder: 329986**

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gas Flow</b>											
Batch	1318324										
QC1202917401	329986001	DUP									
Gross Radium Alpha		2.30		2.51	pCi/L	8.78		(0%-20%)	KDF1	08/11/13	10:2
	Uncertainty	+/-0.299		+/-0.327							
QC1202917404	LCS										
Gross Radium Alpha	555			571	pCi/L		103	(75%-125%)		08/11/13	10:2
	Uncertainty	+/-4.51									
QC1202917400	MB										
Gross Radium Alpha			U	0.344	pCi/L					08/11/13	10:2
	Uncertainty	+/-0.148									
QC1202917402	329986001	MS									
Gross Radium Alpha	1120	2.30		1070	pCi/L		95.3	(75%-125%)		08/11/13	10:2
	Uncertainty	+/-0.299		+/-8.62							
QC1202917403	329986001	MSD									
Gross Radium Alpha	1120	2.30		1200	pCi/L	11.8	107	(0%-20%)		08/11/13	10:2
	Uncertainty	+/-0.299		+/-9.68							

**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: 329986

Page 2 of

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
NJ											
Q											
R											
U											
UI											
UJ											
UL											
X											
Y											
^											
h											

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

^ 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	Westwater Seep	Cottonwood Seep	Ruin Spring	Back Spring (duplicate of Ruin Spring)
<b>Major Ions</b>						
Carbonate	14 days	OK	Not Sampled - Dry	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

**E-2 Laboratory Receipt Temperature Check**

Work Order Number/Lab Set ID	Receipt Temp
AWAL - 1307412	3.2°C
GEL - 329986	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	A4500-NH3 G
Nitrate + Nitrite (as N)	E353.1 or E353.2	E353.2
Metals except Iron	E 200.7 or E200.8	E200.8
Iron	E 200.7 or E200.8	E200.7
Gross Alpha	E900.0 or E900.1	E900.1
VOCs except Tetrahydrofuran	SW8260B or SW8260C	SW8260B
Tetrahydrofuran	SW8260B or SW8260C	SW8260C
Chloride	A4500-Cl B, A4500-Cl E, or E300.0	A4500-Cl B
Fluoride	A4500-F C or E300.0	A4500-F C
Sulfate	A4500-SO4 E or E300.0	A4500-SO4 E
TDS	A2540 C	A2540 C
Carbonate as CO <sub>3</sub> , Bicarbonate as HCO <sub>3</sub>	A2320 B	A2320 B
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 2013 sampling program was nondetect.

<b>Blank</b>	<b>Sample Date</b>	<b>Laboratory</b>
1	7/16/2013	AWAL

E-6 Duplicate Sample Relative Percent Difference

Major Ions (mg/l)	Ruin Spring	Back Spring (Duplicate of Ruin Spring)	RPD %
Carbonate	<1	<1	N/C
Bicarbonate	208	202	2.9
Calcium	149	152	2.0
Chloride	26.3	26	1.1
Fluoride	0.538	0.54	0.4
Magnesium	32.1	32.6	1.5
Nitrogen-Ammonia	<0.05	<0.05	N/C
Nitrogen-Nitrate	1.56	1.54	N/C
Potassium	3.46	3.17	8.7
Sodium	118	118	0.0
Sulfate	553	555	0.4
TDS	952	984	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	16.1	16	0.44
Nickel	<20	<20	N/C
Selenium	10.2	10.8	0.44
Silver	<10	<10	N/C
Thallium	<0.5	<0.5	N/C
Tin	<100	<100	N/C
Uranium	9.12	9.16	0.4
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>Ruin Spring</b>	<b>Back Spring (Duplicate of Ruin 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	2.3	0.299	Y	15	NA
Westwater Seep	NS	NS	NA	15	NA
Cottonwood Seep	<1.0	0.132	NA	15	NA
Ruin Spring	<1.0	0.125	NA	15	NA
Back Spring (duplicate of Ruin Spring)	<1.0	0.159	NA	15	NA

NS - Westwater Seep was dry and not sampled 2013

E-8: Laboratory Matrix QC

**Matrix Spike % Recovery Comparison**

<b>Lab Report</b>	<b>Well</b>	<b>Analyte</b>	<b>MS %REC</b>	<b>MSD %REC</b>	<b>REC Range</b>	<b>RPD</b>
1307412	Entrance Seep	Calcium*	NC	NC	70 - 130	NC
1307412	Entrance Seep	Sodium*	NC	NC	70 - 130	NC
1307412	Ruin Spring	Nitrate+Nitrite as N	119	117	90 - 110	1.13

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

**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, November 19, 2013 1:54 PM  
**To:** Rusty Lundberg  
**Cc:** 'Phillip Goble'; 'Dean Henderson'; Harold Roberts; David Frydenlund; Jo Ann Tischler; David Turk; Dan Hillsten; Frank Filas, P.E; Jaime Massey  
**Subject:** Transmittal of CSV Files White Mesa Mill 2013 Seeps and Springs Monitoring  
**Attachments:** 1307412-EDD.csv; 329986.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 2013, 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