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October 31, 2016

Sent VIA OVERNIGHT DELIVERY

Mr. Scott Anderson
Director
Division of Waste Management and Radiation Control
Utah Department of Environmental Quality
195 North 1950 West
P.O. Box 144850
Salt Lake City, UT 84114-4820

Re: Transmittal of Annual Tailings System Wastewater Monitoring Report
Groundwater Quality Discharge Permit UGW370004 White Mesa Uranium Mill

Dear Mr. Anderson:

Enclosed are two copies of the White Mesa Uranium Mill Annual Tailings System Wastewater Monitoring Report for 2016 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,

Kathy Weinel

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

cc: Scott A. Bakken
Harold R. Roberts
David E. Turk
Kathy Weinel
Logan Shumway

White Mesa Uranium Mill

2016 Annual Tailings System Wastewater Sampling Report

State of Utah
Groundwater Discharge Permit No. UGW370004

Prepared by:

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

October 31, 2016

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2016 ANNUAL TAILINGS SYSTEM WASTEWATER SAMPLING REPORT

1.0 INTRODUCTION

This is the 2016 Annual Tailings System Wastewater Sampling Report for the Energy Fuels Resources (USA) Inc. ("EFRI") White Mesa Mill (the "Mill"), as required under Part I.F.9 of the Mill's State of Utah Groundwater Discharge Permit No. UGW370004 (the "Permit") and Section 6.0 of the *Mill's Sampling and Analysis Plan for The Tailings Management System, Leak Detection Systems and Slimes Drains,* Revision: 3.0, dated July 8, 2016 (the "Sampling Plan") and approved by the State of Utah Division of Waste Management and Radiation Control (the "DWMRC" on August 8, 2016.

Cell solution and slimes drain sampling is required under the Sampling Plan and Part I.E.10 of the Permit to be conducted on an annual basis in August of each year for the solutions in Cells 1, 3, 4A, and 4B, the solutions in the slimes drains in Cells 2, 3, 4A, and 4B (for Cells 3, 4A and 4B after the commencement of dewatering), the solutions in the leak detection system (the "LDS") in Cell 4A and 4B and any detected solutions in the LDS in Cells 1, 2, and 3 at the time of the August Sampling event. The results of the sampling event are required to be reported to the DWMRC with the Mill's Third Quarter Groundwater Monitoring Report due December 1, of each year.

2.0 SUMMARY OF MILL TAILINGS SYSTEM ACTIVITIES IN 2016

This section provides a brief description of the Mill's tailings management system, and any changes that were made as a result of Mill activities during the reporting year. A description of which systems were sampled is provided in Section 3.0.

The Mill is designed not to discharge to groundwater or surface waters. Instead, the Mill tailings system utilizes tailings and evaporation cells for disposal, evaporation, and management of Mill tailings, effluents, and other wastes as indicated below:

- Cell 1: dedicated to evaporation of Mill waste solutions;
- Cell 2: contains Mill tailings and has been closed to tailings disposal since 1995 and 11e.(2) byproduct materials since 2000. Cell 2 Phase 1 cover placement commenced in April 2016;
- Cell 3: contains Mill tailings and is in the final stages of filling. It also accepts other Mill wastes and 11e.(2) material from in-situ recovery ("ISR") operations;
- Cell 4A: receives Mill tailings and is used for evaporation of Mill solutions; and
- Cell 4B: is used for evaporation of Mill solutions.

2.1 Cell 1

Cell 1 is a 55-acre impoundment built in June of 1981. It operates as an evaporation pond which receives solutions only. Cell 1 is equipped with a LDS. In 2016, Cell 1 received fluid from the Mill process, storm water run-off, and Mill laboratory waste. The LDS in Cell 1 was dry in 2016.

2.2 Cell 2

Cell 2 is a 67-acre impoundment built in May of 1980. Cell 2 contains Mill tailings and has been closed to tailings disposal since 1995 and 11e.(2) byproduct materials since 2000. Cell 2 Phase 1 cover placement commenced in April 2016. Cell 2 is equipped with a LDS and a slimes drain. The LDS was dry in 2016. As part of closure activities, EFRI began monitoring the slimes drain system in 2008. The fluid from the slimes drain is pumped to Cell 4A. Cell 2 no longer receives any solutions or solids.

2.3 Cell 3

Cell 3 is a 71-acre impoundment built in September 1982. Cell 3 is nearly full of solids and is undergoing pre-closure steps. This cell is equipped with a LDS and a slimes drain. The LDS was dry in 2016 and the slimes drain system will be monitored once dewatering begins. In 2016, Cell 3 received solid Mill waste and solid 11e.2 byproduct material from in situ recovery ("ISR") facilities.

2.4 Cell 4A

Cell 4A is a 40-acre impoundment built in 2008. This cell is equipped with a LDS and a slimes drain. The slimes drain system will be monitored once dewatering begins. The LDS in Cell 4A was sampled in 2016, as described below. In 2016, Cell 4A received solutions from the Mill process, and solid tailings sands.

2.4 Cell 4B

Cell 4B is a 40-acre impoundment built in 2011. It operates as an evaporation pond which receives solutions only. Cell 4B is equipped with a LDS. In 2016, Cell 4B received fluid from the Mill process. The LDS in Cell 4B was sampled in 2016, as described below.

3.0 SAMPLING EVENTS AND SAMPLING METHODOLOGY

3.1 Sampling Events

Samples of solutions from Cells 1, 3, 4A, and 4B, the Cell 2 slimes drain and the Cell 4A and Cell 4B LDSs were collected on August 30, 2016. In accordance with the Permit, DWMRC was notified of the sampling event, and a DWMRC representative was present for a part of the sampling. The DWMRC representative collected a split sample aliquots.

Maps showing the locations of the solution and slimes drain and, when applicable, LDS sampling locations are attached under Tab B. Table 1, included in the Tables Tab, provides an overview of all solution monitoring samples collected during the current period and includes the sampling date, laboratory report date, and the work order/lab set ID associated with the analytical data.

The Permit requires that the samples be analyzed for the water quality parameters listed in Table 2 of the Permit and Semi-Volatile Organic Compounds ("SVOCs").

Additionally, in order to further characterize the radiological constituents and physical properties of the solution, EFRI conducted voluntary analyses on the August 30, 2016 samples for radium-226, thorium-228, thorium-230, thorium-232, uranium-233/234, uranium-235/236, uranium-238, and specific gravity. The additional data from the August 30, 2016 sampling event are included in a separate data table in Tab D. The gross alpha results have been evaluated and are included as required. These additional data are included in this report for informational purposes only. EFRI may or may not choose to continue these analyses in future sampling events.

3.2 Field Data

Attached under Tab A are copies of all of the field data sheets recorded in association with the annual tailings system monitoring program. Sampling dates are listed in Table 1.

3.3 Sampling Methodology, Equipment and Decontamination Procedures

As noted in the DWMRC-approved Sampling Plan, Revision 3.0, dated July 8, 2016, field filtering and preservation of metals and gross alpha sample aliquots was not completed due to safety concerns associated with the filtering apparatus and the backpressure created by the increased viscosity of these samples. The gross alpha and metals aliquots were filtered and preserved as necessary by the analytical laboratory. It is important to note that field preservation of the samples is to preclude biological growth and prevent the inorganic analytes from precipitating. Based on past field data, the cell solutions and LDS and slimes drain samples are at a pH of 3.0 or less at the time of collection without additional preservative. The addition of acidic preservatives in the field would add minimal if any protection from biological growth or precipitation. The VOC sample aliquots were preserved in the field.

3.3.1 Cells

Cell solution samples were collected at the cell sampling stations shown on the Figures in Tab B using a ladle as noted in the DWMRC-approved Sampling Plan, Section 3.1.2.

Disposable or dedicated sample ladles were used during this sampling event and, as such, rinsate samples were not required.

3.3.2 Cell 2 Slimes Drain

Once a tailings cell has started the dewatering procedures, a sample will be collected from the slimes drain system. At this time Cell 2 is the only slimes drain that requires sampling. The location of the slimes drain for Cell 2 is shown in Tab B. While Cells 3, 4A and 4B are equipped with slimes drain sample locations, Cells 3 and 4A are still active and Cell 4B is being used as an evaporation pond, and the slimes drains will not be pumped (and/or sampled) until dewatering operations have commenced.

The Cell 2 slimes drain, shown on the Figures in Tab B, was sampled using a disposable bailer as noted in the DWMRC-approved Sampling Plan, Section 3.1.3.

Due to the use of a disposable bailer, a rinsate sample was not required.

3.3.3 Cell 4A Leak Detection Systems

The Cell 4A LDS sample was collected from the sampling station shown on the Figures in Tab B using a dedicated stainless steel bucket and ladle as noted in the DWMRC-approved Sampling Plan, Section 3.2.2.

3.3.4 Cell 4B Leak Detection Systems

The Cell 4B LDS sample was collected from the sampling station shown on the Figures in Tab B using a dedicated stainless steel bucket and ladle as noted in the DWMRC-approved Sampling Plan, Section 3.2.2.

3.3.5 Cells 1, 2, 3,

The Cells 1, 2, 3 LDSs were not sampled during the 2016 sampling event because the systems were dry.

3.4 Field QC Samples

The field Quality Control ("QC") samples generated during this sampling event included one duplicate and one trip blank per shipment to each laboratory which received samples for VOCs. The duplicate sample (Cell 65) was submitted blind to the analytical laboratory. As previously stated, no rinsate blanks were collected during this sampling event as only dedicated or disposable equipment was used for sample collection.

3.5 Laboratory Results

All analytical results were provided by one of the Mill's two contract analytical laboratories, GEL Laboratories ("GEL") or American West Analytical Laboratories ("AWAL").

The laboratories utilized during this investigation were certified under the Environmental Lab Certification Program administered by the 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 C.

4.0 QUALITY ASSURANCE AND DATA EVALUATION

The Permit requires that the annual tailings system wastewater 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"), the approved Sampling Plan and the Permit itself. To meet these requirements, the data validation completed for the tailings system wastewater sampling program and discussed in this Section utilized the requirements outlined in the QAP, the Permit and the approved Sampling Plan as necessary. The Mill Quality Assurance Manager ("QAM") performed a QA/QC review to confirm compliance of the monitoring program with the requirements of the Permit, the QAP, and the Sampling Plan. As required, 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 that were collected and analyzed is provided in Section 3.4 and 4.3.1. Discussion of adherence to the Sampling Plan is provided in Section 4.1. Analytical completeness review results are provided in Section 4.2. The steps and tests applied to check laboratory data QA/QC are discussed in Section 4.3.

The analytical laboratories have provided summary reports of the analytical QA/QC measurements necessary to maintain conformance with National Environmental Laboratory Accreditation Conference ("NELAC") certification and reporting protocol. The analytical laboratory QA/QC Summary Reports, including copies of the Chain of Custody forms for each set of Analytical Results, follow the analytical results under Tab C. Results of review of the laboratory QA/QC information are provided under Tab E and discussed in Section 4.3, below.

4.1 Adherence to Sampling Plan and Permit Requirements

On a review of adherence by Mill personnel to the QA/QC requirements, the QAM observed that QA/QC requirements established in the Permit, the QAP, and the Sampling Plan were met, as discussed below.

4.2 Analyte Completeness Review

All analyses required by the Permit Table 2 were completed. In addition, all cell solution samples were analyzed for SVOCs as required by the Permit.

4.3 Data Validation

The QAP and the Permit identify the data validation steps and data quality control checks required for the tailings system wastewater monitoring program. Consistent with these requirements, the QAM 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.

4.3.1 Field Data QA/QC Evaluation

The QAM performs a review of all field recorded data to assess adherence with QAP, Permit, and Sampling Plan requirements. The assessment involved review of the Field Data sheets. Review of the Field Data Sheets noted that all requirements for field data collection were met.

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

4.3.3 Laboratory Receipt Temperature Check

Chain of Custody sheets were reviewed to confirm compliance with the Permit. Sample receipt temperature checks are provided under Tab E. All samples were received within the required temperature limit.

4.3.4 Analytical Method Check

All analytical methods reported by both laboratories were checked against the required methods specified in Table 1 of the QAP. It is important to note that neither the QAP nor the Permit specify a method for laboratory pH or conductivity. The QAM verified that the methods used by the laboratory were appropriate and provided accurate data. Analytical method check results are provided in Tab E.

4.3.5 Reporting Limit Evaluation

All analytical method reporting limits reported by both laboratories were checked against the reporting limits specified in the Permit. Section I.E.4 of the Permit requires the following Reporting Limits:

> "all water quality analyses reported shall have a minimum detection limit or reporting limit that is less than or equal to the respective:

i. Ground Water Quality Standards ("GWQS") concentrations defined in Table 2 of this Permit,

ii. For TDS, Sulfate, and Chloride, the Minimum Detection Limit for those constituents for Cell solution monitoring will be as follows: 1,000 mg/L, 1,000 mg/L, and 1 mg/L, respectively, and

iii. Lower limits of quantitation for groundwater for semi-volatile organic compounds listed in Table 2 of EPA Method 8270D, Revision 4, dated February, 2007."

Reporting limit evaluations are provided in Tab E. All analytes were measured and reported to the required reporting limits. Several sets of sample results had the reporting limit raised for at least one analyte due to sample dilution. In all cases the reported value for the analyte was higher than the increased detection limit.

4.3.6 Trip Blank Evaluation

All trip blank results were reviewed to identify any blank contamination. Trip blank evaluations are provided in Tab E. All trip blank results associated with the samples were less than the reporting limit for all VOCs.

4.3.7 QA/QC Evaluation for Sample Duplicates

Section 9.1.4 a) of the QAP states that the relative percent difference (the "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 are less than 5 times the required detection limit. This standard is based on the EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February 1994, 9240.1-05-01 as cited in the QAP. The RPDs are calculated for all duplicate pairs for all analytes regardless of whether or not the reported concentrations are greater than 5 times the required detection limits; however, data will be considered noncompliant only when the results are greater than 5 times the required detection limit and the RPD is greater than 20%. 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.

All duplicate results were within 20% RPD except for calcium, total dissolved solids ("TDS"), chromium, cobalt, lead, nickel, and gross alpha in the duplicate pair Cell 3/Cell 65. The gross alpha duplicate results are discussed in Section 4.3.8 below. The lead result RPD is greater than 20% (44.1%). Both of the lead sample results reported for Cell 3/Cell 65 were not five times greater than the reporting limit of 20.4 mg/L, and, as such, the deviation from the 20% RPD requirement is acceptable.

The calcium, TDS, chromium, cobalt, and nickel results for the duplicate sample Cell 3/Cell 65 did not meet the duplicate comparability check. Per the QAP, Revision 7.2, and in response to requests from DWMRC, a separate corrective action for duplicate RPDs outside of acceptance limits has been developed. The revised procedure for duplicate results outside of acceptance limits was implemented for the calcium, TDS, chromium, cobalt, and nickel results in duplicate pair Cell 3/Cell 65. The corrective actions that were taken in accordance with the revised procedure are as follows: the QAM contacted the Analytical Laboratory and requested a review of the raw data to assure that there were no transcription errors and the data were accurately reported. The laboratory noted that the data were accurate and reported correctly. Reanalysis was not completed as the RPDs above the limit are likely due to interferences caused by the matrix, as discussed below. There is no effect on the usability of the data due to the duplicate results exceeding the comparability criteria because the matrix of the sample solution caused the noncompliance.

Results of the RPD test are provided under Tab E. The radiologic duplicates are discussed in Section 4.3.8 below.

4.3.8 Radiologic 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 Limit (the "GWCL") (for the tailings system wastewater samples the 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.

Results of routine radiologic sample QC are provided under Tab E. All tailings system wastewater radiologic sample results met the counting error requirement.

Section 9.1.4 of the QAP also requires a comparability check between the sample and field duplicate sample results utilizing the formula provided below:

$$| A-B | /(s_a^2+s_b^2)^{1/2} \leq 2$$

The original and duplicate sample did not meet the duplicate comparability check specified in the QAP. Results of the RPD test are provided under Tab E. Per QAP, Revision 7.2, and in response to requests from DWMRC, a separate corrective action for duplicate RPDs outside of acceptance limits has been developed and is documented in the revised QAP. The revised procedure for duplicate results outside of acceptance limits was implemented for the gross alpha results in duplicate pair Cell 3/Cell 65. The corrective actions that were taken in accordance with the revised procedure are as follows: the QA Manager contacted the Analytical Laboratory and requested a review of the raw data to assure that there were no transcription errors and the data were accurately reported. The laboratory noted that the data were accurate and reported correctly. Reanalysis was not completed as the RPDs above the limit are likely due to interferences caused by the matrix as discussed below.

The lack of comparability of the gross alpha results is indicative of a matrix interference and does not affect the usability of the data. Matrix interference is most likely caused by high concentrations of TDS and other constituents in the sample.

4.3.9 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 QAM 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. All lab QA/QC results from both CTF and GEL met these requirements. There were QC results which did not meet laboratory established acceptance limits, as identified in Tab E and described below.

A significant number of the tailings system wastewater samples had the RL raised for multiple analytes due to matrix interference and/or sample dilution. RL evaluations are discussed in Section 4.3.5.

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.

All 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 QAM.

The QAP Section 8.1.2 requires that a MS/MSD pair be analyzed with each analytical batch, depending upon the analytical method requirements and/or method limitations. 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 the laboratory established acceptance limits. The QAP does not require this level of review, and the results of this review are provided for information only.

The information from the Laboratory QA/QC Summary Reports indicates that the MS/MSDs recoveries and the associated RPDs for all tailings system wastewater samples were within acceptable laboratory limits for all regulated compounds except as indicated in Tab E. The recoveries and RPDs which are outside of the laboratory established acceptance limits do not affect the quality or usability of the data because the recoveries and RPDs outside of the acceptance limits are indicative of matrix interference. The recoveries outside of acceptance limits reported in these analyses were due to a matrix interference caused by high levels of metals and other inorganic constituents. 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.

Sixteen metals MS/MSD recoveries and one gross alpha MS/MSD recovery were not calculated because the analyte level in the natural sample was 4 times greater than the spike level added by the laboratory. It is not possible to calculate the MS/MSD recovery when the sample results are significantly higher than the spike amount added. In effect, the sample results mask the spike results and the calculations are not possible. There is no effect on the quality or usability of the data.

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 all tailings system wastewater samples were within acceptable laboratory limits for all surrogate compounds except as indicated in Tab E.

There are twenty surrogate recoveries outside of acceptance limits for the SVOC analyses. In all instances the surrogate recoveries outside of acceptance limits were the result of a matrix interference. A matrix interference resulted in the surrogate compounds being outside of the acceptance limits noted in Tab E. There are other surrogate compounds used for SVOC analyses which were all within acceptance limits. As such there is no effect on the quality or usability of the data. Since surrogate compounds were added to all of the organic analyses as required by the QAP, the data are compliant with the QAP requirements.

The information from the Laboratory QA/QC Summary Reports indicates that the LCS recoveries for the samples were within acceptable laboratory limits for all LCS compounds as noted in Tab E.

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 blank) will be used to evaluate any analytical laboratory contamination of environmental samples. The QAP criteria for method blanks states that nonconformance will exist when blanks are within an order of

magnitude of the sample results. There were no detections reported in the method blanks. Method blank results are included in Tab C.

5.0 HISTORIC DATA

The historic analytical data for the tailings system wastewater sampling program are included in Tab D. In addition, the minimum and maximum concentrations compiled in the DWMRC GWDP, Statement of Basis for a Uranium Mining Facility at White Mesa, South of Blanding, Utah, dated December 1, 2004 are included in Tab D.

6.0 SUMMARY AND CONCLUSIONS

6.1 Cell 1

Cell 1 solutions were acidic in nature with a laboratory pH of <1.00. As expected, the solutions contained gross alpha, major ions, metals, and Volatile Organic Compounds ("VOCs"). SVOCs were not detected. Regarding major ions, chloride, fluoride, magnesium, ammonia, potassium, sodium and sulfate were one or more orders of magnitude greater in concentration than the other major ions. Metals exhibiting the greatest concentration by at least one order of magnitude higher than the other metals analyzed included arsenic, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, silver, uranium, vanadium and zinc. A decrease was noted in the gross alpha concentration in the August 2016 sample, but it is the same order of magnitude as the 2015 sample. The variable gross alpha results are being caused by matrix interference due to the nature of the tailings solution and are not representative of gross alpha from radium concentrations in the solution. This is evidenced by the results of the voluntary additional analyses. The results of the voluntary analyses are shown in Tab D.

The concentrations reported in the 2016 sample remained within historic ranges. It is important to note that not all constituents present in the tailings fluids will exhibit the same behavior as a result of concentration of the tailings fluids and any increases or decreases in constituent results will not be linear. The individual constituent results are greatly affected by the matrix of the tailings fluids and each constituent will behave differently based on the matrix interactions and the differing solubility properties of the constituent.

6.2 Cell 3

Cell 3 solutions were acidic in nature, with a laboratory pH of <1.00. As expected, the solutions contained gross alpha, major ions, metals, and VOCs. SVOCs were not detected. Regarding major ions, chloride, fluoride, magnesium, ammonia, potassium, sodium and sulfate were generally one to more orders of magnitude greater in concentration than the other major ions. Metals exhibiting the greatest concentration by at least one order of magnitude greater than the other metals analyzed included arsenic, beryllium, cadmium, chromium, cobalt, copper, iron, manganese, molybdenum, nickel, selenium, silver, uranium, vanadium and zinc. A decrease in the gross alpha concentration was noted in the August 2016 sample, but it is the same order of magnitude as the 2015 sample. The variable gross alpha results are being caused by matrix

interference due to the nature of the tailings solution and are not representative of gross alpha from radium concentrations in the solution. This is evidenced by the results of the voluntary additional analyses which are shown in Tab D.

The concentrations reported in the 2016 sample are within expected ranges given that the liquid pool is shrinking and concentrating. It is important to note that not all constituents present in the tailings fluids will exhibit the same behavior as a result of concentration of the tailings fluids and the increases in constituent results will not be linear. The individual constituent results are greatly affected by the matrix of the tailings fluids and each constituent will behave differently based on the matrix interactions and the differing solubility properties of the constituent.

6.3 Cell 4A

Cell 4A solutions were acidic in nature, with a laboratory pH of 1.59. As expected, the solutions contained gross alpha, major ions, metals, and VOCs. SVOCs were not detected. Cell 4A fluid exhibited the highest major ion concentrations for chloride, fluoride, magnesium, ammonia, potassium, sodium and sulfate. The metals arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, uranium, vanadium and zinc were one or more orders of magnitude greater than the other metals analyzed. A slight increase in the gross alpha concentration was noted in the 2016 sample. The variable and increased gross alpha results are being caused by matrix interference due to the nature of the tailings solution and are not representative of gross alpha from radium concentrations in the solution. This is evidenced by the results of the voluntary additional analyses which are shown in Tab D.

Overall, the concentrations reported in the 2016 sample remained approximately the same as the 2015 sample. Concentration changes noted are within the analytical accuracy of the methods used for analysis. It is important to note that not all constituents present in the tailings fluids will exhibit the same behavior as a result of concentration of the tailings fluids and the increases in constituent results will not be linear. The individual constituent results are greatly affected by the matrix of the tailings fluids and each constituent will behave differently based on the matrix interactions and the differing solubility properties of the constituent.

Comparison of Cell 4A fluids to those of Cells 1, and 4B reveals that Cell 4A is similar in composition and concentration ratios to the fluids in Cells 1, and 4B.

6.4 Cell 4B

Cell 4B solutions were acidic in nature, with a laboratory pH of 1.26. As expected, the solutions contained gross alpha, major ions, metals and VOCs. SVOCs were not detected. Cell 4B fluid exhibited the highest major ion concentrations for chloride, fluoride, magnesium, ammonia, potassium, sodium and sulfate. The metals arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, uranium, vanadium and zinc were one or more orders of magnitude greater than the other metals analyzed. A slight decrease in the gross alpha concentration was noted in the 2016 sample, but it is the same order of magnitude as the 2015 sample. The variable gross alpha results are being caused by matrix interference due to the nature

of the tailings solution and are not representative of gross alpha from radium concentrations in the solution. This is evidenced by the results of the voluntary additional analyses which are shown in Tab D.

Overall, the concentrations reported in the 2016 sample remained approximately the same as the 2015 sample. Concentration changes noted are within the analytical accuracy of the methods used for analysis. It is important to note that not all constituents present in the tailings fluids will exhibit the same behavior as a result of concentration of the tailings fluids and the increases in constituent results will not be linear. The individual constituent results are greatly affected by the matrix of the tailings fluids and each constituent will behave differently based on the matrix interactions and the differing solubility properties of the constituent.

Comparison of Cell 4B fluids to those of Cells 1, and 4A reveals that Cell 4B is similar in composition and concentration ratios to the fluids in Cells 1, and 4A.

6.5 Cell 2 Slimes Drain

Cell 2 Slimes drain fluid was acidic in nature, with a laboratory pH of 2.99. As expected, the solutions contained gross alpha, major ions, metals, VOCs and one SVOC. Major ions that were highest in concentration by one or more orders of magnitude included chloride, magnesium, ammonia, sodium and sulfate. For metals, arsenic, cadmium, chromium, cobalt, copper, iron, manganese, molybdenum, nickel, uranium, vanadium and zinc were at least one order of magnitude greater in concentration than other metals analyzed. A slight decrease in the gross alpha concentration was noted in the 2016 sample. The gross alpha result decreased but is the same order of magnitude of the historic data. Overall, the concentrations reported in the 2016 sample remained approximately the same as the 2015 sample. Concentration changes noted are within the analytical accuracy of the methods used for analysis.

6.6 Cells 3, 4A and 4B Slimes Drain

In accordance with the Permit, the slimes drains for Cell 3, 4A and 4B are not required to be sampled until dewatering operations have begun. Cell 1 was designed to be used solely as an evaporation pond and does not have a slimes drain.

6.7 Cell 2 Leak Detection System

Consistent with the Permit, the Cell 2 LDS was not sampled during the 2016 sampling event. The Cell 2 LDS is now dry and covered to prevent precipitation inflow.

6.8 Cells 1 and 3 Leak Detection System

Consistent with the Permit, the Cells 1 and 3 leak detection systems were not sampled during the 2015 sampling event because the systems were dry.

6.9 Cell 4A Leak Detection System

Cell 4A LDS solutions were acidic in nature, with a laboratory pH of 2.04. As expected, the solutions contained gross alpha, major ions, metals and VOCs. SVOCs were not detected. Cell 4A LDS fluid exhibited the highest major ion concentrations for chloride, fluoride, magnesium, ammonia, sodium, and sulfate. The metals arsenic, cadmium, chromium, cobalt, copper, iron, manganese, molybdenum, nickel, selenium, uranium, vanadium, and zinc were one or more orders of magnitude greater than the other metals analyzed. A slight increase in the gross alpha concentration was noted in the 2016 sample, but it is the same order of magnitude as the 2015 sample. The variable gross alpha results are being caused by matrix interference due to the nature of the tailings solution and are not representative of gross alpha from radium concentrations in the solution. This is evidenced by the results of the voluntary additional analyses which are shown in Tab D.

The concentrations reported in the Cell 4A LDS fluid are similar to the concentrations reported for the fluid in Cell 4A. Because the Cell 4A LDS fluids are from Cell 4A, the similarities in concentration are expected. The factors affecting the Cell 4A fluid concentrations will have the same impacts and overall effects on the LDS fluid concentrations. Overall, the concentrations reported in the 2016 Cell 4A LDS sample remained within historic ranges.

6.10 Cell 4B Leak Detection System

Cell 4B LDS solutions were acidic in nature, with a laboratory pH of 1.88. As expected, the solutions contained gross alpha, major ions, metals, VOCs and one SVOC. Cell 4B LDS fluid exhibited the highest major ion concentrations for chloride, fluoride, magnesium, ammonia, potassium, sodium, and sulfate. The metals arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, uranium, vanadium and zinc were one or more orders of magnitude greater than the other metals analyzed. A decrease in the gross alpha concentration was noted in the 2016 sample, but it is the same order of magnitude as the 2015 sample. The variable gross alpha results are being caused by matrix interference due to the nature of the tailings solution and are not representative of gross alpha from radium concentrations in the solution. This is evidenced by the results of the voluntary additional analyses which are shown in Tab D.

The concentrations reported in the Cell 4B LDS fluid are similar to the concentrations reported for the fluid in Cell 4B. Because the Cell 4B LDS fluids are from Cell 4B, the similarities in concentration are expected. The factors affecting the Cell 4B fluid concentrations will have the same impacts and overall effects on the LDS fluid concentrations. Overall, the concentrations reported in the 2016 Cell 4B LDS sample are within historic ranges.

6.11 Summary and Conclusions of Analytical Results

The metals arsenic, cadmium, chromium, cobalt, copper, iron, manganese, molybdenum, nickel, selenium, uranium, vanadium and zinc were generally present in greatest concentration for all samples. For major ions, chloride, fluoride, magnesium, ammonia, sodium, and sulfate were

predominant. Increases were noted for several metals and major anions as well as in some of the gross alpha concentrations. However, some gross alpha concentrations decreased. EFRI conducted additional voluntary analyses (not required by the GWDP) in order to further characterize the radiological and physical properties of the tailings solution, as discussed Section 3.1 above. The results of the additional voluntary analyses for radium-226, thorium-228, thorium-230, thorium-232, uranium-233/234, uranium-235/236, uranium-238, and specific gravity show that the variability in gross alpha results are being caused by matrix interference due to the nature of the tailings solution and are not representative of gross alpha from radium concentrations in the solution. EFRI may or may not choose to continue these additional analyses in the future. The changes in concentrations of metals and major ions are indicative of a "concentration effect" during the warm summer months and are off-set by the addition of fluids during periods of operation, which provide information relative to the system as a whole. The individual constituent results are greatly affected by the matrix of the tailings fluids and each constituent will behave differently based on the matrix interactions and the differing solubility properties of the constituent. Overall, the results of the 2016 tailings solutions are within historic, expected ranges.

7.0 CORRECTIVE ACTION REPORT

No corrective action reports are required for the 2016 annual sampling event.

7.1 Assessment of Corrective Actions from Previous Period

No corrective action reports were required for the 2015 annual sampling event and as such there is no assessment of previous actions necessary.

8.0 SIGNATURE AND CERTIFICATION

This document was prepared by Energy Fuels Resources (USA) Inc. on October 31, 2016.

ENERGY FUELS RESOURCES (USA) INC.

By:

Scott A. Bakken
Senior Director Regulatory Affairs

Certification:

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

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

TABLES

Table 1

Summary of 2016 Tailings System Wastewater Monitoring

Location	Sample Date	Date of Laboratory Report	Work Order Number/Lab Set ID
Cell 1 Solutions	8/30/2016*	GEL – 9/30/2016	GEL – 405194
		AWAL - 9/20/2016 (10/18/2016)	AWAL - 1609037
Cell 2 Slimes Drain	8/30/2016*	GEL – 9/30/2016	GEL – 405194
		AWAL - 9/20/2016 (10/18/2016)	AWAL - 1609037
Cell 3 Solutions	8/30/2016*	GEL – 9/30/2016	GEL – 405194
		AWAL - 9/20/2016 (10/18/2016)	AWAL - 1609037
Cell 4A Solutions	8/30/2016*	GEL – 9/30/2016	GEL – 405194
		AWAL - 9/20/2016 (10/18/2016)	AWAL - 1609037
Cell 4A LDS	8/30/2016*	GEL – 9/30/2016	GEL – 405194
		AWAL - 9/20/2016 (10/18/2016)	AWAL - 1609037
Cell 4B Solutions	8/30/2016*	GEL – 9/30/2016	GEL – 405194
		AWAL - 9/20/2016 (10/18/2016)	AWAL - 1609037
Cell 4B LDS	8/30/2016*	GEL – 9/30/2016	GEL – 405194
		AWAL - 9/20/2016 (10/18/2016)	AWAL - 1609037
Cell 65 - Duplicate of Cell 3	8/30/2016*	GEL – 9/30/2016	GEL – 405194
		AWAL - 9/20/2016 (10/18/2016)	AWAL - 1609037

Notes:

GEL = GEL Laboratories, LLC

AWAL = American West Analytical Laboratories

* - EFRI conducted the annual sampling event in August 2016. EFRI collected additional sample aliquots for specific gravity and additional radiological constituents.

Dates in parenthesis indicate the date the corrected data packages were received.

INDEX OF TABS

Tab A

Tailings System Monitoring Field Sheets

Field Data Record-Tailings Solutions, LDS and Slimes Drain Sampling

Location: Cell 1 **Sampling Personnel:** Garrin Palmer, Tanner Holliday, Dean Henderson

Is this a Slimes Drain? ☐ Yes ☒ No

If this is a Slimes Drain, measure depth to wastewater immediately before sampling.

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method: Lab

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Metals	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Nutrients	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Other Non Radiologics	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
Gross Alpha	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
SVOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Conductivity	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0825. Used Label sampling method. Samples were collected at 0830. Left site at 0841

8/30/16

Field Data Record-Tailings Solutions, LDS and Slimes Drain Sampling

Location: Slimes #2 **Sampling Personnel:** Garcia, Tanner, Dean

Is this a Slimes Drain? ☒ Yes ☐ No

If this is a Slimes Drain, measure depth to wastewater immediately before sampling.

DTW immediately before sampling (slimes only): 34.71

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method: Lab

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☒	☐	AWAL
Metals	☒ Yes	☐ No	☐ Yes	☒ No	☐	☒	☐	AWAL
Nutrients	☒ Yes	☐ No	☐ Yes	☒ No	☐	☒	☐	AWAL
Other Non Radiologics	☒ Yes	☐ No	☐ Yes	☒ No	☐	☒	☐	GEL
Gross Alpha	☒ Yes	☐ No	☐ Yes	☒ No	☐	☒	☐	GEL
SVOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☒	☐	AWAL
Conductivity	☒ Yes	☐ No	☐ Yes	☒ No	☐	☒	☐	AWAL

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0842. Collected samples at 0850. Left site at 0904.

08/30/16

Field Data Record-Tailings Solutions, LDS and Slimes Drain Sampling

Location: Cell 3 **Sampling Personnel:** Garrin, Tanner, Dean

Is this a Slimes Drain? ☐ Yes ☒ No

If this is a Slimes Drain, measure depth to wastewater immediately before sampling.

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method: Lab

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Metals	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Nutrients	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Other Non Radiologics	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
Gross Alpha	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
SVOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Conductivity	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL

QC Samples Associated with this Location:

☐ Rinsate Blank

☒ Duplicate

Duplicate Sample Name: Cell 65

Notes: Arrived on site at 0908. Used ladel to collect samples. Samples were collected at 0915. Left site at 0950.

8/30/16

Field Data Record-Tailings Solutions, LDS and Slimes Drain Sampling

Location: Cell 4A **Sampling Personnel:** Garcia, Tanner, Dean

Is this a Slimes Drain? ☐ Yes ☒ No

If this is a Slimes Drain, measure depth to wastewater immediately before sampling.

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method: Lab

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Metals	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Nutrients	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Other Non Radiologics	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
Gross Alpha	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
SVOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Conductivity	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0954 Samples were collected using ladel. Samples were collected at 1000. Left site at 1020. 8/30/16

Field Data Record-Tailings Solutions, LDS and Slimes Drain Sampling

Location: Cell 4A LDS **Sampling Personnel:** Garcia, Tasaez, Dean

Is this a Slimes Drain? ☐ Yes ☒ No

If this is a Slimes Drain, measure depth to wastewater immediately before sampling.

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method: Lab

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Metals	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Nutrients	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Other Non Radiologics	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
Gross Alpha	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
SVOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Conductivity	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 1021. Filled stainless steel bucket at discharge then used a ladel to fill sample bottles. Samples collected at 1025. Completed MS/MSD at location. Left site at 1043.

08/30/2016

Field Data Record-Tailings Solutions, LDS and Slimes Drain Sampling

Location: Cell 4B **Sampling Personnel:** Garcia, Tanner, Dean

Is this a Slimes Drain? ☐ Yes ☒ No

If this is a Slimes Drain, measure depth to wastewater immediately before sampling.

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method: Lab

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Metals	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Nutrients	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Other Non Radiologics	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
Gross Alpha	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
SVOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Conductivity	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 1044. Used Ladel to collect samples. Samples were collected at 1050. Left site at 1057.

8/30/16

Field Data Record-Tailings Solutions, LDS and Slimes Drain Sampling

Location: Cell 4B LDS **Sampling Personnel:** Garmin, Tanner, Dean

Is this a Slimes Drain? ☐ Yes ☒ No

If this is a Slimes Drain, measure depth to wastewater immediately before sampling.

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method: Lab

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Metals	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Nutrients	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Other Non Radiologics	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
Gross Alpha	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	GEL
SVOCs	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL
Conductivity	☒ Yes	☐ No	☐ Yes	☒ No	☐	☐	☒	AWAL

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

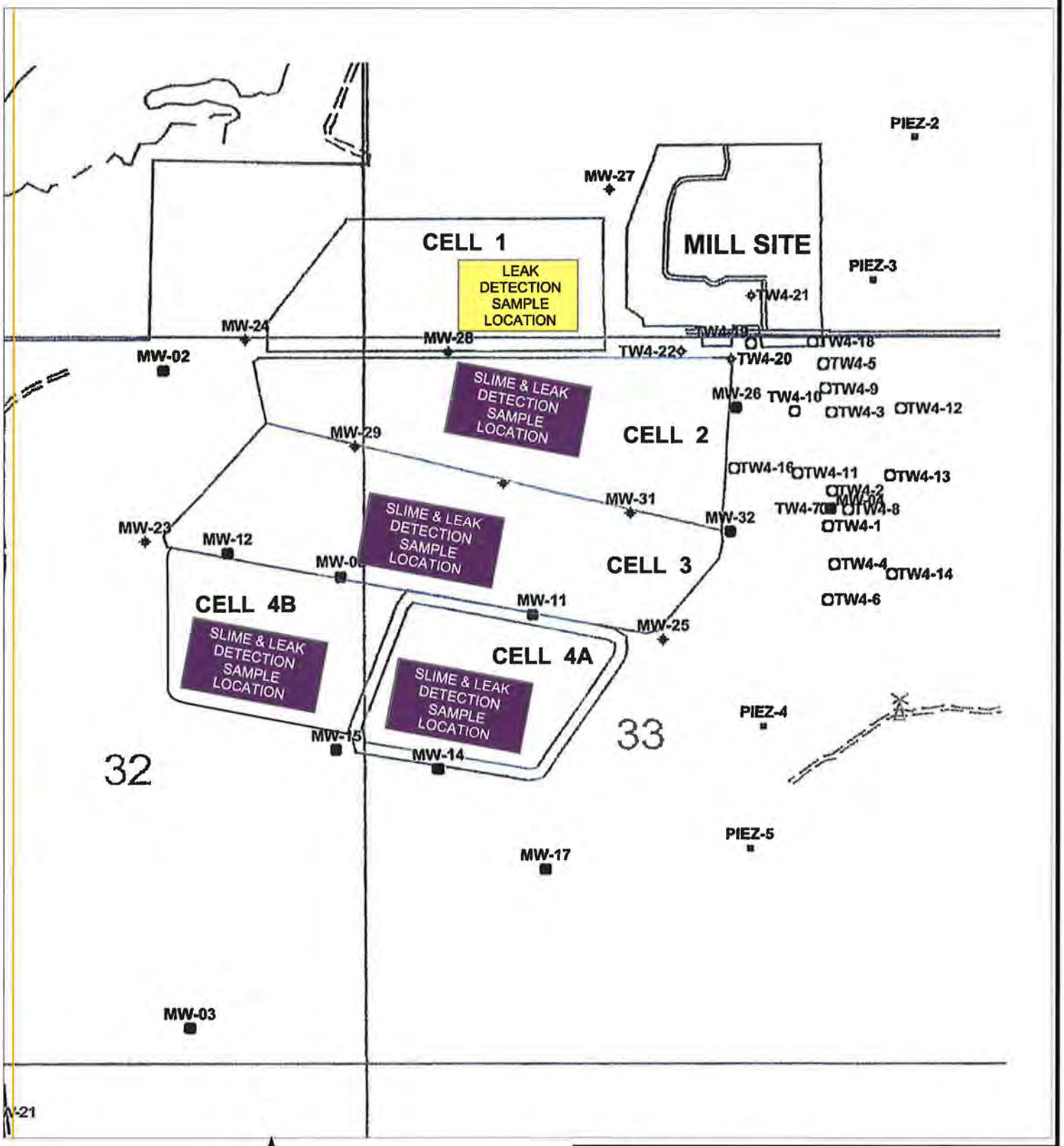
Duplicate Sample Name: _____

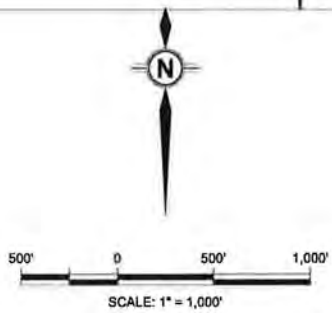
Notes: Arrived on site at 1058. Stainless steal bucket was filled with solution and a ladel was used to fill sample bottles. Samples were collected at 1110. Left site at 1111.

8/30/16

Tab B

Sample Location Figures





Energy Fuels Resources (USA) Inc.

REVISIONS	
Date	By
10/8/14	RE
11/24/15	RE

Project: White Mesa Mill
County: San Juan State: Utah
Location: T37S, R22E

Annual Tailings System
Slimes and Leak Detection
Sample Locations

Author: ____ Date: 11/24/15 Drafted By:

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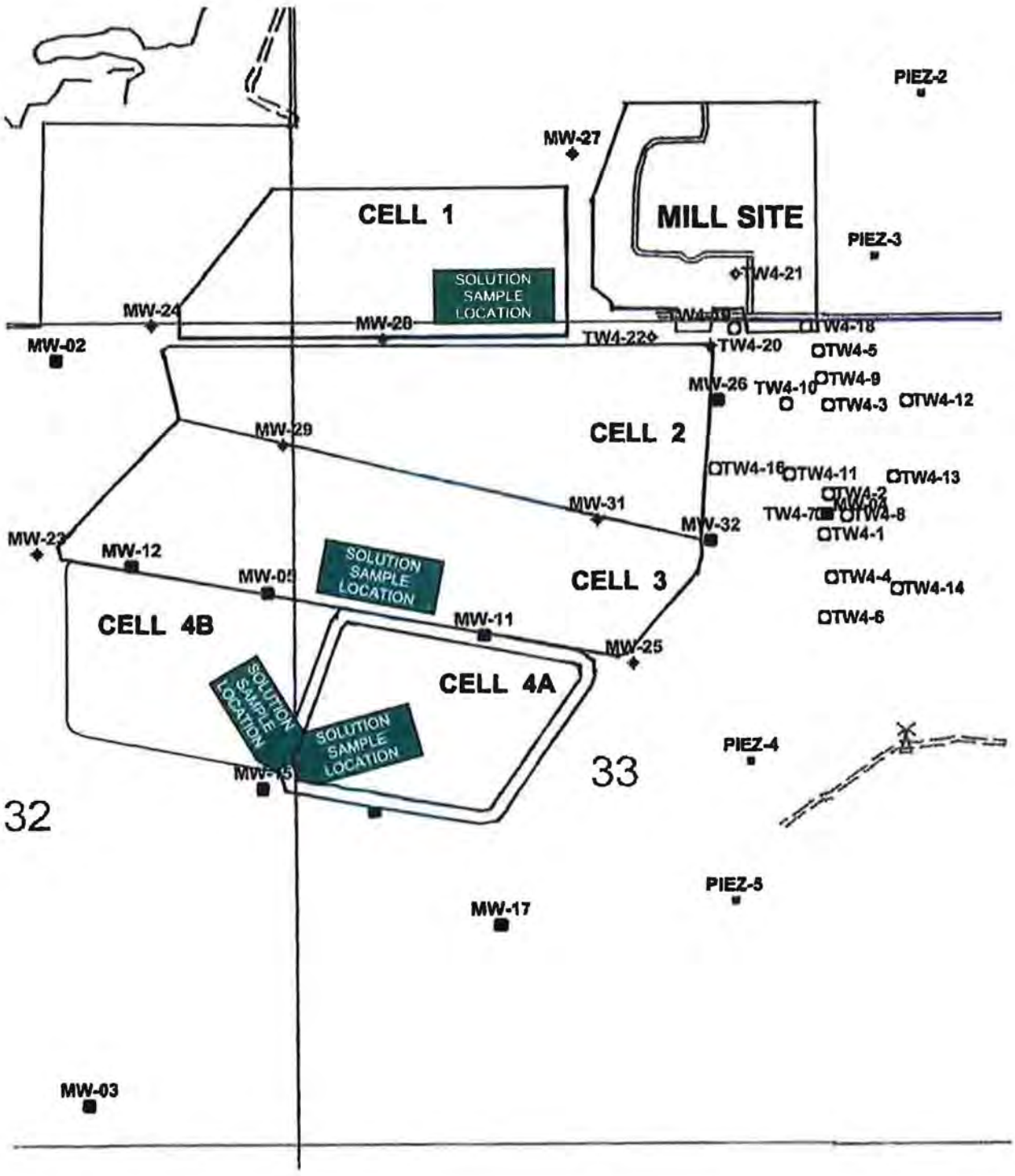

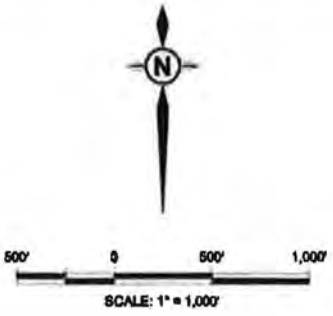

Energy Fuels Resources (USA) Inc.

REVISIONS	
Date	By
10/8/14	RE
11/24/15	RE

Project: White Mesa Mill
County: San Juan | State: Utah
Location: T37S, R22E

Annual Tailings System, Cell Solution Sample Locations

Author: ---- | Date: 11/24/15 | Drafted By:

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Tab C

Laboratory Analytical Reports

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-001
Client Sample ID: Cell 1
Collection Date: 8/30/2016 830h
Received Date: 9/2/2016 1005h

Analytical Results DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/6/2016 1051h	9/12/2016 1311h	E200.8	1.00	**407**	
Beryllium	mg/L	9/6/2016 1051h	9/12/2016 1311h	E200.8	1.00	**1.03**	
Cadmium	mg/L	9/6/2016 1051h	9/7/2016 1148h	E200.8	0.0250	**6.32**	
Calcium	mg/L	9/6/2016 1051h	9/12/2016 1600h	E200.7	50.0	**647**	
Chromium	mg/L	9/6/2016 1051h	9/12/2016 1311h	E200.8	1.00	**14.0**	
Cobalt	mg/L	9/6/2016 1051h	9/12/2016 1311h	E200.8	2.00	**77.2**	
Copper	mg/L	9/6/2016 1051h	9/12/2016 1320h	E200.8	10.0	**4,730**	
Iron	mg/L	9/6/2016 1051h	9/12/2016 1320h	E200.8	500	**5,650**	
Lead	mg/L	9/6/2016 1051h	9/7/2016 1148h	E200.8	0.100	**22.5**	
Magnesium	mg/L	9/6/2016 1051h	9/12/2016 1331h	E200.7	500	**9,210**	
Manganese	mg/L	9/6/2016 1051h	9/12/2016 1311h	E200.8	1.00	**713**	
Mercury	mg/L	9/12/2016 1500h	9/13/2016 1019h	E245.1	0.00200	**0.00859**	
Molybdenum	mg/L	9/6/2016 1051h	9/12/2016 1311h	E200.8	1.00	**97.1**	
Nickel	mg/L	9/6/2016 1051h	9/12/2016 1311h	E200.8	1.00	**170**	
Potassium	mg/L	9/6/2016 1051h	9/12/2016 1331h	E200.7	500	**1,970**	
Selenium	mg/L	9/6/2016 1051h	9/7/2016 1148h	E200.8	0.100	**3.95**	
Silver	mg/L	9/6/2016 1051h	9/7/2016 1148h	E200.8	0.100	**1.24**	
Sodium	mg/L	9/6/2016 1051h	9/12/2016 1522h	E200.7	2,000	**18,900**	
Thallium	mg/L	9/6/2016 1051h	9/7/2016 1148h	E200.8	0.100	**0.754**	
Tin	mg/L	9/6/2016 1051h	9/7/2016 1148h	E200.8	17.0	< 17.0	
Uranium	mg/L	9/6/2016 1051h	9/12/2016 1311h	E200.8	1.00	**131**	
Vanadium	mg/L	9/6/2016 1051h	9/12/2016 1331h	E200.7	2.50	**746**	
Zinc	mg/L	9/6/2016 1051h	9/12/2016 1311h	E200.8	5.00	**448**	

Analysis performed on a portion of the sample filtered at the laboratory upon receipt. The sample was received after the filtration holding time had expired for dissolved analysis.

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Kyle F. Gross
Laboratory Director
Jose Rocha
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ANALYTICAL LABORATORIES

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-001
Client Sample ID: Cell 1
Collection Date: 8/30/2016 830h
Received Date: 9/2/2016 1005h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	9/8/2016 1300h	9/8/2016 1838h	E350.1	25.0	**7,090**	
Bicarbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Chloride	mg/L		9/14/2016 1556h	E300.0	1,000	**19,200**	
Conductivity	µmhos/cm		9/2/2016 1149h	SM2510B	2.00	**123,000**	
Fluoride	mg/L		9/14/2016 1556h	E300.0	100	**2,980**	
Ion Balance	%		9/12/2016	Calc.	-100	**-43.1**	
Nitrate/Nitrite (as N)	mg/L		9/2/2016 1747h	E353.2	1.00	**124**	
pH @ 25° C	pH Units		9/2/2016 1534h	SW9040C	1.00	< 1.00	H
Sulfate	mg/L		9/14/2016 1449h	E300.0	100,000	**212,000**	
Total Anions, Measured	meq/L		9/12/2016	Calc.		**4,950**	
Total Cations, Measured	meq/L		9/12/2016	Calc.		**1,970**	
Total Dissolved Solids	mg/L		9/2/2016 1230h	SM2540C	500	**242,000**	
Total Dissolved Solids Ratio, Measured/Calculated			9/12/2016	Calc.		**0.905**	
Total Dissolved Solids, Calculated	mg/L		9/12/2016	Calc.		**267,000**	

H - Sample was received outside of the holding time.

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-001F
Client Sample ID: Cell 1
Collection Date: 8/30/2016 830h
Received Date: 9/2/2016 1005h

Test Code: 8270-W

Analytical Results SVOA by GC/MS Method 8270D/3510C

Analyzed: 9/7/2016 1544h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Nitrophenol	88-75-5	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-001F
Client Sample ID: Cell 1

Analyzed: 9/7/2016 1544h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-001F
Client Sample ID: Cell 1

Analyzed: 9/7/2016 1544h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	11.6	80.00	14.4	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	1.45	40.00	3.63	10-124	S
Surr: 2-Fluorophenol	367-12-4	2.06	80.00	2.58	10-106	S
Surr: Nitrobenzene-d5	4165-60-0	0.910	40.00	2.28	10-180	S
Surr: Phenol-d6	13127-88-3	3.26	80.00	4.08	10-122	S
Surr: Terphenyl-d14	1718-51-0	6.86	40.00	17.2	10-221	

S - Surrogate recoveries outside the control limits as expected due to sample matrix interference. Sample required 275mL of base and 75mL of acid during the extraction process compared to the usual 3mL normally required.
This sample was analyzed for the TIC compound 4-Chlorophenol and was not detected..

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-001A
Client Sample ID: Cell 1
Collection Date: 8/30/2016 830h
Received Date: 9/2/2016 1005h

Test Code: 8260-W-DEN100

Analytical Results VOAs by GC/MS Method 8260C/5030C

Analyzed: 9/2/2016 1849h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	**40.6**	
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	62.6	50.00	125	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	63.0	50.00	126	80-152	
Surr: Dibromofluoromethane	1868-53-7	51.4	50.00	103	80-124	
Surr: Toluene-d8	2037-26-5	53.0	50.00	106	77-129	

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QA Officer

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

Certificate of Analysis

Report Date: September 30, 2016

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: Tailings 2016 Characterization

Client Sample ID: Cell 1 Project: DNMI00107
Sample ID: 405194001 Client ID: DNMI001
Matrix: Water
Collect Date: 30-AUG-16 08:30
Receive Date: 02-SEP-16
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
High Rad Testing													
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	432	+/-195	447	1.00	pCi/L			JXC5	09/16/16	0935	1597083	1
Thorium-230		6.77E+05	+/-6520	575	1.00	pCi/L							
Thorium-232		4480	+/-534	311	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		4.20E+05	+/-3710	374	1.00	pCi/L			JXC5	09/19/16	1613	1597084	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		497	+/-29.1	23.6	1.00	pCi/L			LXP1	09/28/16	0945	1597086	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		45200	+/-1720	458	1.00	pCi/L			JXC5	09/16/16	0926	1597081	4
Uranium-235/236		2380	+/-451	447	1.00	pCi/L							
Uranium-238		45800	+/-1730	196	1.00	pCi/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 900.1 Modified	
3	EPA 903.1 Modified	
4	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"			92.1	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			96.3	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			90.4	(15%-125%)

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

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 1	Project:	DNMI00107
Sample ID:	405194001	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 08:30		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Hazardous Waste												
ASTM D 5057 Specific Gravity "As Received"												
Specific Gravity		1.15	0.010	0.100	none		1	SXW3	09/29/16	1335	1598090	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	ASTM D 5057	

Notes:

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

Column headers are defined as follows:

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

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-002
Client Sample ID: Cell 2 Slimes
Collection Date: 8/30/2016 850h
Received Date: 9/2/2016 1005h

Analytical Results DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.100	**16.9**	
Beryllium	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.100	**0.259**	
Cadmium	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.0250	**6.61**	
Calcium	mg/L	9/6/2016 1051h	9/12/2016 1602h	E200.7	50.0	**402**	
Chromium	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.100	**1.63**	
Cobalt	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.730	**46.1**	
Copper	mg/L	9/6/2016 1051h	9/12/2016 1314h	E200.8	1.30	**156**	
Iron	mg/L	9/6/2016 1051h	9/12/2016 1323h	E200.8	500	**3,410**	
Lead	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.100	**0.484**	
Magnesium	mg/L	9/6/2016 1051h	9/12/2016 1355h	E200.7	500	**3,570**	
Manganese	mg/L	9/6/2016 1051h	9/12/2016 1314h	E200.8	1.00	**149**	
Mercury	mg/L	9/12/2016 1500h	9/13/2016 1025h	E245.1	0.00200	< 0.00200	
Molybdenum	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.100	**3.36**	
Nickel	mg/L	9/6/2016 1051h	9/12/2016 1314h	E200.8	1.00	**134**	
Potassium	mg/L	9/6/2016 1051h	9/12/2016 1602h	E200.7	50.0	**512**	
Selenium	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.100	**0.615**	
Silver	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.100	< 0.100	*
Sodium	mg/L	9/6/2016 1051h	9/12/2016 1355h	E200.7	500	**4,690**	
Thallium	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.100	**0.212**	
Tin	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	17.0	< 17.0	*
Uranium	mg/L	9/6/2016 1051h	9/7/2016 1151h	E200.8	0.100	**27.3**	
Vanadium	mg/L	9/6/2016 1051h	9/12/2016 1602h	E200.7	0.250	**497**	
Zinc	mg/L	9/6/2016 1051h	9/12/2016 1314h	E200.8	5.00	**764**	

** - The reporting limits were raised due to sample matrix interferences.*

Analysis performed on a portion of the sample filtered at the laboratory upon receipt. The sample was received after the filtration holding time had expired for dissolved analysis.

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QA Officer

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-002
Client Sample ID: Cell 2 Slimes
Collection Date: 8/30/2016 850h
Received Date: 9/2/2016 1005h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	9/6/2016 1050h	9/6/2016 1915h	E350.1	25.0	**3,800**	
Bicarbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Chloride	mg/L		9/14/2016 1613h	E300.0	1,000	**4,040**	
Conductivity	µmhos/cm		9/2/2016 1149h	SM2510B	2.00	**44,500**	
Fluoride	mg/L		9/15/2016 727h	E300.0	2.00	**48.4**	
Ion Balance	%		9/12/2016	Calc.	-100	**-44.5**	
Nitrate/Nitrite (as N)	mg/L		9/2/2016 1806h	E353.2	0.100	**12.7**	
pH @ 25° C	pH Units		9/2/2016 1534h	SW9040C	1.00	**2.99**	H
Sulfate	mg/L		9/14/2016 1630h	E300.0	10,000	**83,900**	
Total Anions, Measured	meq/L		9/12/2016	Calc.		**1,860**	
Total Cations, Measured	meq/L		9/12/2016	Calc.		**715**	
Total Dissolved Solids	mg/L		9/2/2016 1230h	SM2540C	500	**93,100**	
Total Dissolved Solids Ratio, Measured/Calculated			9/12/2016	Calc.		**0.926**	
Total Dissolved Solids, Calculated	mg/L		9/12/2016	Calc.		**100,000**	

H - Sample was received outside of the holding time.

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ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-002F
Client Sample ID: Cell 2 Slimes
Collection Date: 8/30/2016 850h
Received Date: 9/2/2016 1005h

Test Code: 8270-W

Analytical Results SVOA by GC/MS Method 8270D/3510C

Analyzed: 9/7/2016 1610h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	**11.1**	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Nitrophenol	88-75-5	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-002F
Client Sample ID: Cell 2 Slimes

Analyzed: 9/7/2016 1610h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	

American West
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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-002F
Client Sample ID: Cell 2 Slimes

Analyzed: 9/7/2016 1610h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	58.7	80.00	73.4	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	19.3	40.00	48.2	10-124	
Surr: 2-Fluorophenol	367-12-4	41.7	80.00	52.1	10-106	
Surr: Nitrobenzene-d5	4165-60-0	0.190	40.00	0.475	10-180	S
Surr: Phenol-d6	13127-88-3	28.8	80.00	35.9	10-122	
Surr: Terphenyl-d14	1718-51-0	25.9	40.00	64.7	10-221	

S - Surrogate recoveries outside the control limits as expected due to sample matrix interference. Sample required 150mL of base and 60mL of acid during the extraction process compared to the usual 3mL normally required.
This sample was analyzed for the TIC compound 4-Chlorophenol and was not detected.

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-002A
Client Sample ID: Cell 2 Slimes
Collection Date: 8/30/2016 850h
Received Date: 9/2/2016 1005h

Test Code: 8260-W-DEN100

Analytical Results VOAs by GC/MS Method 8260C/5030C

Analyzed: 9/6/2016 1215h
Units: µg/L **Dilution Factor:** 10 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Acetone	67-64-1	200	**473**	~

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	561	500.0	112	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	532	500.0	106	80-152	
Surr: Dibromofluoromethane	1868-53-7	525	500.0	105	80-124	
Surr: Toluene-d8	2037-26-5	523	500.0	105	77-129	

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

Analyzed: 9/2/2016 1909h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	**80.3**	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	**15.0**	
Chloromethane	74-87-3	1.00	< 1.00	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	**11.9**	
Tetrahydrofuran	109-99-9	1.00	< 1.00	
Toluene	108-88-3	1.00	**2.94**	
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	53.1	50.00	106	80-152	
Surr: Dibromofluoromethane	1868-53-7	52.1	50.00	104	80-124	
Surr: Toluene-d8	2037-26-5	52.5	50.00	105	77-129	

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Jose Rocha
QA Officer

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

Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 2 Slimes	Project:	DNMI00107
Sample ID:	405194002	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 08:50		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
High Rad Testing													
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	-106	+/-76.0	488	1.00	pCi/L			JXC5	09/16/16	0935	1597083	1
Thorium-230		5050	+/-572	517	1.00	pCi/L							
Thorium-232	U	42.9	+/-89.8	308	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		5660	+/-378	302	1.00	pCi/L			JXC5	09/19/16	1613	1597084	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		52.4	+/-10.9	24.9	1.00	pCi/L			LXP1	09/28/16	1020	1597086	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		11700	+/-979	493	1.00	pCi/L			JXC5	09/16/16	0926	1597081	4
Uranium-235/236		599	+/-265	299	1.00	pCi/L							
Uranium-238		10700	+/-935	387	1.00	pCi/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 900.1 Modified	
3	EPA 903.1 Modified	
4	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"			84.7	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			98.5	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			70.3	(15%-125%)

Notes:

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

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

Column headers are defined as follows:

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

GEL LABORATORIES LLC
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Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 2 Slimes	Project:	DNMI00107
Sample ID:	405194002	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 08:50		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Hazardous Waste												
ASTM D 5057 Specific Gravity "As Received"												
Specific Gravity		1.03	0.010	0.100	none		1	SXW3	09/29/16	1343	1598090	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	ASTM D 5057	

Notes:

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

Column headers are defined as follows:

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

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-003
Client Sample ID: Cell 3
Collection Date: 8/30/2016 915h
Received Date: 9/2/2016 1005h

Analytical Results DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	1.00	**194**	
Beryllium	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	1.00	**12.5**	
Cadmium	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	0.250	**41.0**	
Calcium	mg/L	9/6/2016 1051h	9/12/2016 1637h	E200.7	100	**148**	
Chromium	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	1.00	**76.2**	
Cobalt	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	2.00	**74.2**	
Copper	mg/L	9/6/2016 1051h	9/13/2016 847h	E200.8	10.0	**3,000**	
Iron	mg/L	9/6/2016 1051h	9/13/2016 1050h	E200.8	5,000	**15,400**	
Lead	mg/L	9/6/2016 1051h	9/16/2016 1720h	E200.8	0.0204	**0.0403**	*
Magnesium	mg/L	9/6/2016 1051h	9/12/2016 1531h	E200.7	2,000	**31,000**	
Manganese	mg/L	9/6/2016 1051h	9/13/2016 847h	E200.8	10.0	**5,690**	
Mercury	mg/L	9/12/2016 1500h	9/13/2016 1032h	E245.1	0.250	**0.873**	
Molybdenum	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	1.00	**133**	
Nickel	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	1.00	**29.2**	
Potassium	mg/L	9/6/2016 1051h	9/12/2016 1357h	E200.7	500	**3,120**	
Selenium	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	1.00	**3.17**	
Silver	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	1.00	**6.78**	
Sodium	mg/L	9/6/2016 1051h	9/12/2016 1533h	E200.7	5,000	**59,800**	
Thallium	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	1.00	**2.16**	
Tin	mg/L	9/6/2016 1051h	9/12/2016 1342h	E200.8	17.0	< 17.0	
Uranium	mg/L	9/6/2016 1051h	9/13/2016 847h	E200.8	10.0	**5,360**	
Vanadium	mg/L	9/6/2016 1051h	9/12/2016 1531h	E200.7	10.0	**10,300**	
Zinc	mg/L	9/6/2016 1051h	9/13/2016 1050h	E200.8	250	**7,810**	

** - This analyte has been evaluated and reported down to the MDL. This is an estimated value between the MDL of 0.0204 mg/L and the reporting limit (PQL) of 0.05 mg/L.*

Analysis performed on a portion of the sample filtered at the laboratory upon receipt. The sample was received after the filtration holding time had expired for dissolved analysis.

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-003
Client Sample ID: Cell 3
Collection Date: 8/30/2016 915h
Received Date: 9/2/2016 1005h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	9/8/2016 1300h	9/8/2016 1845h	E350.1	25.0	**6,270**	
Bicarbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Chloride	mg/L		9/14/2016 1342h	E300.0	10,000	**115,000**	
Conductivity	µmhos/cm		9/2/2016 1149h	SM2510B	2.00	**13,600**	
Fluoride	mg/L		9/14/2016 1342h	E300.0	1,000	**46,500**	
Ion Balance	%		9/12/2016	Calc.	-100	**-54.5**	
Nitrate/Nitrite (as N)	mg/L		9/2/2016 1817h	E353.2	5.00	**582**	
pH @ 25° C	pH Units		9/2/2016 1534h	SW9040C	1.00	< 1.00	H
Sulfate	mg/L		9/14/2016 1432h	E300.0	100,000	**834,000**	
Total Anions, Measured	meq/L		9/12/2016	Calc.		**20,600**	
Total Cations, Measured	meq/L		9/12/2016	Calc.		**6,070**	
Total Dissolved Solids	mg/L		9/2/2016 1230h	SM2540C	500	**887,000**	
Total Dissolved Solids Ratio, Measured/Calculated			9/12/2016	Calc.		**0.837**	
Total Dissolved Solids, Calculated	mg/L		9/12/2016	Calc.		**1,060,000**	

H - Sample was received outside of the holding time.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-003F
Client Sample ID: Cell 3
Collection Date: 8/30/2016 915h
Received Date: 9/2/2016 1005h

Test Code: 8270-W

Analytical Results SVOA by GC/MS Method 8270D/3510C

Analyzed: 9/8/2016 2106h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 10 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Bis(2-ethylhexyl) phthalate	117-81-7	100	**392**	~

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

Analyzed: 9/7/2016 1636h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Nitrophenol	88-75-5	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-003F
Client Sample ID: Cell 3

Analyzed: 9/7/2016 1636h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Nitrophenol	100-02-7	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-003F
Client Sample ID: Cell 3

Analyzed: 9/7/2016 1636h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Phenol	108-95-2	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	2.71	80.00	3.39	14-159	S
Surr: 2-Fluorobiphenyl	321-60-8	0.0500	40.00	0.125	10-124	S
Surr: 2-Fluorophenol	367-12-4	0.0400	80.00	0.0500	10-106	S
Surr: Nitrobenzene-d5	4165-60-0	0.0100	40.00	0.0250	10-180	S
Surr: Phenol-d6	13127-88-3	0.300	80.00	0.375	10-122	S
Surr: Terphenyl-d14	1718-51-0	0.710	40.00	1.78	10-221	S

S - Surrogate recoveries outside the control limits as expected due to sample matrix interference. Sample required 435mL of base and 60mL of acid during the extraction process compared to the usual 3mL normally required.
This sample was analyzed for the TIC compound 4-Chlorophenol and was not detected.

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-003A
Client Sample ID: Cell 3
Collection Date: 8/30/2016 915h
Received Date: 9/2/2016 1005h

Test Code: 8260-W-DEN100

Analytical Results VOAs by GC/MS Method 8260C/5030C

Analyzed: 9/6/2016 1337h
Units: µg/L **Dilution Factor:** 10 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Acetone	67-64-1	200	< 200	~

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	586	500.0	117	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	592	500.0	118	80-152	
Surr: Dibromofluoromethane	1868-53-7	559	500.0	112	80-124	
Surr: Toluene-d8	2037-26-5	505	500.0	101	77-129	

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

Analyzed: 9/6/2016 1438h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	**13.2**	
Chloromethane	74-87-3	1.00	**19.8**	
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	67.4	50.00	135	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	57.5	50.00	115	80-152	
Surr: Dibromofluoromethane	1868-53-7	57.4	50.00	115	80-124	
Surr: Toluene-d8	2037-26-5	48.7	50.00	97.5	77-129	

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Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

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

Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 3	Project:	DNMI00107
Sample ID:	405194003	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 09:15		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
High Rad Testing													
Alphaspec Th, Liquid "As Received"													
Thorium-228		983	+/-262	405	1.00	pCi/L			JXC5	09/16/16	0935	1597083	1
Thorium-230		72500	+/-2100	488	1.00	pCi/L							
Thorium-232		1670	+/-325	300	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		86000	+/-1950	522	1.00	pCi/L			JXC5	09/19/16	1613	1597084	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		584	+/-30.3	14.9	1.00	pCi/L			LXP1	09/28/16	1020	1597086	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		1.96E+06	+/-23700	2130	1.00	pCi/L			JXC5	09/16/16	0926	1597081	4
Uranium-235/236		1.30E+05	+/-6820	2180	1.00	pCi/L							
Uranium-238		2.06E+06	+/-24400	1760	1.00	pCi/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 900.1 Modified	
3	EPA 903.1 Modified	
4	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"			96	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			82.7	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			18.9	(15%-125%)

Notes:

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

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 3	Project:	DNMI00107
Sample ID:	405194003	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 09:15		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Hazardous Waste												
ASTM D 5057 Specific Gravity "As Received"												
Specific Gravity		1.62	0.010	0.100	none		1	SXW3	09/29/16	1345	1598090	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	ASTM D 5057	

Notes:

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

Column headers are defined as follows:

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

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Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-004
Client Sample ID: Cell 4A
Collection Date: 8/30/2016 1000h
Received Date: 9/2/2016 1005h

Analytical Results DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/6/2016 1051h	9/12/2016 1345h	E200.8	0.100	**94.4**	
Beryllium	mg/L	9/6/2016 1051h	10/14/2016 1424h	E200.8	0.100	**0.320**	^
Cadmium	mg/L	9/6/2016 1051h	9/12/2016 1345h	E200.8	0.0250	**2.85**	
Calcium	mg/L	9/6/2016 1051h	9/12/2016 1607h	E200.7	50.0	**632**	
Chromium	mg/L	9/6/2016 1051h	9/13/2016 850h	E200.8	1.00	**7.92**	
Cobalt	mg/L	9/6/2016 1051h	9/13/2016 850h	E200.8	2.00	**32.8**	
Copper	mg/L	9/6/2016 1051h	9/13/2016 850h	E200.8	1.30	**566**	
Iron	mg/L	9/6/2016 1051h	9/13/2016 1053h	E200.8	500	**3,850**	
Lead	mg/L	9/6/2016 1051h	9/12/2016 1345h	E200.8	0.100	**14.0**	
Magnesium	mg/L	9/6/2016 1051h	9/12/2016 1359h	E200.7	500	**3,550**	
Manganese	mg/L	9/6/2016 1051h	9/13/2016 850h	E200.8	1.00	**225**	
Mercury	mg/L	9/12/2016 1500h	9/13/2016 1033h	E245.1	0.00200	< 0.00200	
Molybdenum	mg/L	9/6/2016 1051h	9/12/2016 1345h	E200.8	0.100	**43.9**	
Nickel	mg/L	9/6/2016 1051h	9/13/2016 850h	E200.8	1.00	**61.3**	
Potassium	mg/L	9/6/2016 1051h	9/12/2016 1359h	E200.7	500	**915**	
Selenium	mg/L	9/6/2016 1051h	9/12/2016 1345h	E200.8	0.100	**2.82**	
Silver	mg/L	9/6/2016 1051h	9/12/2016 1345h	E200.8	0.100	**0.305**	
Sodium	mg/L	9/6/2016 1051h	9/12/2016 1359h	E200.7	500	**9,580**	
Thallium	mg/L	9/6/2016 1051h	9/12/2016 1345h	E200.8	0.100	**0.568**	
Tin	mg/L	9/6/2016 1051h	9/12/2016 1345h	E200.8	17.0	< 17.0	
Uranium	mg/L	9/6/2016 1051h	9/13/2016 850h	E200.8	1.00	**214**	
Vanadium	mg/L	9/6/2016 1051h	9/12/2016 1607h	E200.7	0.250	**715**	
Zinc	mg/L	9/6/2016 1051h	9/13/2016 1053h	E200.8	25.0	**318**	

^ - Reissue of a previously generated report. Information has been added, updated, or revised. Information herein supersedes that of the previously issued reports.

Analysis performed on a portion of the sample filtered at the laboratory upon receipt. The sample was received after the filtration holding time had expired for dissolved analysis.

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-004
Client Sample ID: Cell 4A
Collection Date: 8/30/2016 1000h
Received Date: 9/2/2016 1005h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	9/6/2016 1050h	9/6/2016 1916h	E350.1	25.0	**4,770**	
Bicarbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Chloride	mg/L		9/14/2016 1647h	E300.0	1,000	**7,040**	
Conductivity	µmhos/cm		9/2/2016 1149h	SM2510B	2.00	**81,300**	
Fluoride	mg/L		9/14/2016 1647h	E300.0	100	**2,030**	
Ion Balance	%		9/12/2016	Calc.	-100	**-48.7**	
Nitrate/Nitrite (as N)	mg/L		9/2/2016 1751h	E353.2	1.00	**41.9**	
pH @ 25° C	pH Units		9/2/2016 1534h	SW9040C	1.00	**1.59**	H
Sulfate	mg/L		9/14/2016 1704h	E300.0	10,000	**126,000**	
Total Anions, Measured	meq/L		9/12/2016	Calc.		**2,820**	
Total Cations, Measured	meq/L		9/12/2016	Calc.		**972**	
Total Dissolved Solids	mg/L		9/2/2016 1230h	SM2540C	500	**124,000**	
Total Dissolved Solids Ratio, Measured/Calculated			9/12/2016	Calc.		**0.816**	
Total Dissolved Solids, Calculated	mg/L		9/12/2016	Calc.		**151,000**	

H - Sample was received outside of the holding time.

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Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-004F
Client Sample ID: Cell 4A
Collection Date: 8/30/2016 1000h
Received Date: 9/2/2016 1005h

Test Code: 8270-W

Analytical Results SVOA by GC/MS Method 8270D/3510C

Analyzed: 9/7/2016 1701h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Nitrophenol	88-75-5	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3´-Dichlorobenzidine	91-94-1	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-004F
Client Sample ID: Cell 4A

Analyzed: 9/7/2016 1701h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-004F
Client Sample ID: Cell 4A

Analyzed: 9/7/2016 1701h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	17.2	80.00	21.4	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	5.86	40.00	14.7	10-124	
Surr: 2-Fluorophenol	367-12-4	6.28	80.00	7.85	10-106	S
Surr: Nitrobenzene-d5	4165-60-0	1.21	40.00	3.02	10-180	S
Surr: Phenol-d6	13127-88-3	7.03	80.00	8.79	10-122	S
Surr: Terphenyl-d14	1718-51-0	16.0	40.00	40.0	10-221	

S - Surrogate recoveries outside the control limits as expected due to sample matrix interference. Sample required 165mL of base and 75mL of acid during the extraction process compared to the usual 3mL normally required.
This sample was analyzed for the TIC compound 4-Chlorophenol and was not detected.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-004A
Client Sample ID: Cell 4A
Collection Date: 8/30/2016 1000h
Received Date: 9/2/2016 1005h

Test Code: 8260-W-DEN100

Analytical Results VOAs by GC/MS Method 8260C/5030C

Analyzed: 9/2/2016 1930h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	**45.1**	
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	58.7	50.00	117	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	59.4	50.00	119	80-152	
Surr: Dibromofluoromethane	1868-53-7	50.6	50.00	101	80-124	
Surr: Toluene-d8	2037-26-5	50.4	50.00	101	77-129	

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Certificate of Analysis

Report Date: September 30, 2016

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: Tailings 2016 Characterization

Client Sample ID: Cell 4A
Sample ID: 405194004
Matrix: Water
Collect Date: 30-AUG-16 10:00
Receive Date: 02-SEP-16
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
High Rad Testing													
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	227	+/-206	673	1.00	pCi/L			JXC5	09/16/16	0935	1597083	1
Thorium-230		4.66E+05	+/-6070	573	1.00	pCi/L							
Thorium-232		2870	+/-487	445	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		2.92E+05	+/-3320	537	1.00	pCi/L			JXC5	09/19/16	1613	1597084	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		1050	+/-40.8	19.2	1.00	pCi/L			LXP1	09/28/16	1020	1597086	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		61100	+/-2430	586	1.00	pCi/L			JXC5	09/16/16	0926	1597081	4
Uranium-235/236		3320	+/-639	356	1.00	pCi/L							
Uranium-238		70900	+/-2610	632	1.00	pCi/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 900.1 Modified	
3	EPA 903.1 Modified	
4	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"			69.6	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			96.3	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			79.2	(15%-125%)

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

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 4A	Project:	DNMI00107
Sample ID:	405194004	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 10:00		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Hazardous Waste												
ASTM D 5057 Specific Gravity "As Received"												
Specific Gravity		1.10	0.010	0.100	none		1	SXW3	09/29/16	1348	1598090	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	ASTM D 5057	

Notes:

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

Column headers are defined as follows:

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

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-005
Client Sample ID: Cell 4A LDS
Collection Date: 8/30/2016 1025h
Received Date: 9/2/2016 1005h

Analytical Results DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.100	**43.5**	2
Beryllium	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.100	**0.289**	
Cadmium	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.0250	**4.50**	
Calcium	mg/L	9/6/2016 1051h	9/12/2016 1401h	E200.7	200	**446**	2
Chromium	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.100	**4.25**	
Cobalt	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.730	**32.1**	
Copper	mg/L	9/6/2016 1051h	9/13/2016 853h	E200.8	1.30	**331**	2
Iron	mg/L	9/6/2016 1051h	9/13/2016 1056h	E200.8	500	**2,330**	2
Lead	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.100	**0.797**	
Magnesium	mg/L	9/6/2016 1051h	9/12/2016 1535h	E200.7	500	**3,940**	2
Manganese	mg/L	9/6/2016 1051h	9/13/2016 853h	E200.8	1.00	**184**	2
Mercury	mg/L	9/12/2016 1500h	9/13/2016 1014h	E245.1	0.00200	< 0.00200	
Molybdenum	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.100	**10.7**	
Nickel	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.100	**72.7**	
Potassium	mg/L	9/6/2016 1051h	9/12/2016 1401h	E200.7	200	**675**	2
Selenium	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.100	**1.59**	
Silver	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.100	**0.144**	
Sodium	mg/L	9/6/2016 1051h	9/12/2016 1535h	E200.7	500	**8,050**	2
Thallium	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	0.100	**0.439**	
Tin	mg/L	9/6/2016 1051h	9/12/2016 1348h	E200.8	17.0	< 17.0	*
Uranium	mg/L	9/6/2016 1051h	9/13/2016 853h	E200.8	1.00	**116**	2
Vanadium	mg/L	9/6/2016 1051h	9/12/2016 1401h	E200.7	1.00	**449**	2
Zinc	mg/L	9/6/2016 1051h	9/13/2016 1056h	E200.8	25.0	**502**	2

** - The reporting limits were raised due to sample matrix interferences.*

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

Analysis performed on a portion of the sample filtered at the laboratory upon receipt. The sample was received after the filtration holding time had expired for dissolved analysis.

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Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-005
Client Sample ID: Cell 4A LDS
Collection Date: 8/30/2016 1025h
Received Date: 9/2/2016 1005h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	9/8/2016 1300h	9/8/2016 1845h	E350.1	25.0	**5,050**	2
Bicarbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Chloride	mg/L		9/14/2016 1721h	E300.0	1,000	**5,200**	
Conductivity	µmhos/cm		9/2/2016 1149h	SM2510B	2.00	**62,200**	
Fluoride	mg/L		9/14/2016 1721h	E300.0	100	**1,150**	
Ion Balance	%		9/12/2016	Calc.	-100	**-41.8**	
Nitrate/Nitrite (as N)	mg/L		9/2/2016 1752h	E353.2	1.00	**40.9**	3
pH @ 25° C	pH Units		9/2/2016 1534h	SW9040C	1.00	**2.04**	H
Sulfate	mg/L		9/14/2016 1251h	E300.0	10,000	**91,300**	
Total Anions, Measured	meq/L		9/12/2016	Calc.		**2,050**	
Total Cations, Measured	meq/L		9/12/2016	Calc.		**840**	
Total Dissolved Solids	mg/L		9/2/2016 1230h	SM2540C	500	**95,400**	
Total Dissolved Solids Ratio, Measured/Calculated			9/12/2016	Calc.		**0.852**	
Total Dissolved Solids, Calculated	mg/L		9/12/2016	Calc.		**112,000**	

[2] - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.
[3] - Matrix spike recoveries and/or high RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.
H - Sample was received outside of the holding time.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-005F
Client Sample ID: Cell 4A LDS
Collection Date: 8/30/2016 1025h
Received Date: 9/2/2016 1005h

Test Code: 8270-W

Analytical Results SVOA by GC/MS Method 8270D/3510C

Analyzed: 9/7/2016 1727h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Nitrophenol	88-75-5	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3´-Dichlorobenzidine	91-94-1	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-005F
Client Sample ID: Cell 4A LDS

Analyzed: 9/7/2016 1727h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-005F
Client Sample ID: Cell 4A LDS

Analyzed: 9/7/2016 1727h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	65.6	80.00	82.0	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	17.3	40.00	43.2	10-124	
Surr: 2-Fluorophenol	367-12-4	30.0	80.00	37.6	10-106	
Surr: Nitrobenzene-d5	4165-60-0	13.8	40.00	34.4	10-180	
Surr: Phenol-d6	13127-88-3	29.5	80.00	36.9	10-122	
Surr: Terphenyl-d14	1718-51-0	31.2	40.00	78.1	10-221	

This sample was analyzed for the TIC compound 4-Chlorophenol and was not detected.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-005A
Client Sample ID: Cell 4A LDS
Collection Date: 8/30/2016 1025h
Received Date: 9/2/2016 1005h

Test Code: 8260-W-DEN100

Analytical Results VOAs by GC/MS Method 8260C/5030C

Analyzed: 9/2/2016 1951h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	**61.5**	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	**84.5**	
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	**12.6**	
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	59.9	50.00	120	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	59.5	50.00	119	80-152	
Surr: Dibromofluoromethane	1868-53-7	51.6	50.00	103	80-124	
Surr: Toluene-d8	2037-26-5	50.6	50.00	101	77-129	

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Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 4A LDS	Project:	DNMI00107
Sample ID:	405194005	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 10:25		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
High Rad Testing													
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	142	+/-141	476	1.00	pCi/L			JXC5	09/16/16	0935	1597083	1
Thorium-230		1.34E+05	+/-2690	449	1.00	pCi/L							
Thorium-232		1130	+/-253	210	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		98700	+/-1780	402	1.00	pCi/L			JXC5	09/19/16	1613	1597084	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		51.1	+/-11.1	25.8	1.00	pCi/L			LXP1	09/28/16	1020	1597086	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		46200	+/-2100	818	1.00	pCi/L			JXC5	09/16/16	0926	1597081	4
Uranium-235/236		1900	+/-498	712	1.00	pCi/L							
Uranium-238		40400	+/-1960	576	1.00	pCi/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 900.1 Modified	
3	EPA 903.1 Modified	
4	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"			104	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			98.5	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			80.5	(15%-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 he greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 4A LDS	Project:	DNMI00107
Sample ID:	405194005	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 10:25		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Hazardous Waste												
ASTM D 5057 Specific Gravity "As Received"												
Specific Gravity		1.10	0.010	0.100	none		1	SXW3	09/29/16	1351	1598090	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	ASTM D 5057	

Notes:

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

Column headers are defined as follows:

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

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-006
Client Sample ID: Cell 4B
Collection Date: 8/30/2016 1050h
Received Date: 9/2/2016 1005h

Analytical Results DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/6/2016 1051h	9/13/2016 902h	E200.8	1.00	**139**	
Beryllium	mg/L	9/6/2016 1051h	9/14/2016 741h	E200.8	0.200	**0.557**	
Cadmium	mg/L	9/6/2016 1051h	9/13/2016 1131h	E200.8	0.0250	**4.26**	
Calcium	mg/L	9/6/2016 1051h	9/12/2016 1436h	E200.7	500	**523**	
Chromium	mg/L	9/6/2016 1051h	9/13/2016 902h	E200.8	1.00	**11.9**	
Cobalt	mg/L	9/6/2016 1051h	9/13/2016 902h	E200.8	2.00	**46.7**	
Copper	mg/L	9/6/2016 1051h	9/13/2016 902h	E200.8	1.30	**684**	
Iron	mg/L	9/6/2016 1051h	9/13/2016 1106h	E200.8	500	**6,340**	
Lead	mg/L	9/6/2016 1051h	9/13/2016 1131h	E200.8	0.100	**17.9**	
Magnesium	mg/L	9/6/2016 1051h	9/12/2016 1436h	E200.7	500	**5,780**	
Manganese	mg/L	9/6/2016 1051h	9/13/2016 902h	E200.8	1.00	**325**	
Mercury	mg/L	9/12/2016 1500h	9/13/2016 1035h	E245.1	0.00200	< 0.00200	
Molybdenum	mg/L	9/6/2016 1051h	9/13/2016 1131h	E200.8	0.100	**55.4**	
Nickel	mg/L	9/6/2016 1051h	9/13/2016 902h	E200.8	1.00	**79.6**	
Potassium	mg/L	9/6/2016 1051h	9/12/2016 1436h	E200.7	500	**1,710**	
Selenium	mg/L	9/6/2016 1051h	9/13/2016 1131h	E200.8	0.100	**7.30**	
Silver	mg/L	9/6/2016 1051h	9/13/2016 1131h	E200.8	0.100	**0.307**	
Sodium	mg/L	9/6/2016 1051h	9/12/2016 1544h	E200.7	1,000	**14,100**	
Thallium	mg/L	9/6/2016 1051h	9/13/2016 1131h	E200.8	0.100	**0.559**	
Tin	mg/L	9/6/2016 1051h	9/13/2016 1131h	E200.8	17.0	< 17.0	
Uranium	mg/L	9/6/2016 1051h	9/13/2016 902h	E200.8	1.00	**278**	
Vanadium	mg/L	9/6/2016 1051h	9/12/2016 1436h	E200.7	2.50	**868**	
Zinc	mg/L	9/6/2016 1051h	9/13/2016 1106h	E200.8	25.0	**476**	

Analysis performed on a portion of the sample filtered at the laboratory upon receipt. The sample was received after the filtration holding time had expired for dissolved analysis.

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Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-006
Client Sample ID: Cell 4B
Collection Date: 8/30/2016 1050h
Received Date: 9/2/2016 1005h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	9/6/2016 1050h	9/6/2016 1918h	E350.1	50.0	**8,690**	
Bicarbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Chloride	mg/L		9/14/2016 1828h	E300.0	1,000	**12,000**	
Conductivity	µmhos/cm		9/2/2016 1149h	SM2510B	2.00	**116,000**	
Fluoride	mg/L		9/14/2016 1828h	E300.0	100	**1,780**	
Ion Balance	%		9/12/2016	Calc.	-100	**-61.4**	
Nitrate/Nitrite (as N)	mg/L		9/2/2016 1756h	E353.2	1.00	**64.5**	
pH @ 25° C	pH Units		9/2/2016 1534h	SW9040C	1.00	**1.26**	H
Sulfate	mg/L		9/15/2016 745h	E300.0	100,000	**285,000**	
Total Anions, Measured	meq/L		9/12/2016	Calc.		**6,280**	
Total Cations, Measured	meq/L		9/12/2016	Calc.		**1,500**	
Total Dissolved Solids	mg/L		9/2/2016 1343h	SM2540C	500	**172,000**	
Total Dissolved Solids Ratio, Measured/Calculated			9/12/2016	Calc.		**0.526**	
Total Dissolved Solids, Calculated	mg/L		9/12/2016	Calc.		**326,000**	

H - Sample was received outside of the holding time.

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Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-006F
Client Sample ID: Cell 4B
Collection Date: 8/30/2016 1050h
Received Date: 9/2/2016 1005h

Test Code: 8270-W

Analytical Results SVOA by GC/MS Method 8270D/3510C

Analyzed: 9/7/2016 1845h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Nitrophenol	88-75-5	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-006F
Client Sample ID: Cell 4B

Analyzed: 9/7/2016 1845h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-006F
Client Sample ID: Cell 4B

Analyzed: 9/7/2016 1845h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	34.3	80.00	42.9	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	6.66	40.00	16.7	10-124	
Surr: 2-Fluorophenol	367-12-4	9.90	80.00	12.4	10-106	
Surr: Nitrobenzene-d5	4165-60-0	6.31	40.00	15.8	10-180	
Surr: Phenol-d6	13127-88-3	12.4	80.00	15.5	10-122	
Surr: Terphenyl-d14	1718-51-0	18.5	40.00	46.1	10-221	

This sample was analyzed for the TIC compound 4-Chlorophenol and was not detected.

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-006A
Client Sample ID: Cell 4B
Collection Date: 8/30/2016 1050h
Received Date: 9/2/2016 1005h

Test Code: 8260-W-DEN100

Analytical Results VOAs by GC/MS Method 8260C/5030C

Analyzed: 9/2/2016 2052h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Acetone	67-64-1	20.0	**86.4**	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	**3.07**	
Chloromethane	74-87-3	1.00	**6.01**	
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	62.5	50.00	125	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	64.6	50.00	129	80-152	
Surr: Dibromofluoromethane	1868-53-7	53.2	50.00	106	80-124	
Surr: Toluene-d8	2037-26-5	56.7	50.00	113	77-129	

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Jose Rocha
QA Officer

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

Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 4B	Project:	DNMI00107
Sample ID:	405194006	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 10:50		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
High Rad Testing													
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	399	+/-225	584	1.00	pCi/L			JXC5	09/16/16	0936	1597083	1
Thorium-230		5.95E+05	+/-6980	698	1.00	pCi/L							
Thorium-232		3510	+/-542	305	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		2.62E+05	+/-2670	323	1.00	pCi/L			JXC5	09/19/16	1613	1597084	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		715	+/-34.2	25.6	1.00	pCi/L			LXP1	09/28/16	1020	1597086	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		90200	+/-2700	531	1.00	pCi/L			JXC5	09/16/16	0926	1597081	4
Uranium-235/236		4090	+/-646	299	1.00	pCi/L							
Uranium-238		90100	+/-2700	531	1.00	pCi/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 900.1 Modified	
3	EPA 903.1 Modified	
4	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"			89.3	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			96	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			92.3	(15%-125%)

Notes:

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

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

Column headers are defined as follows:

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

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

Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 4B	Project:	DNMI00107
Sample ID:	405194006	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 10:50		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Hazardous Waste												
ASTM D 5057 Specific Gravity "As Received"												
Specific Gravity		1.13	0.010	0.100	none		1	SXW3	09/29/16	1353	1598090	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	ASTM D 5057	

Notes:

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

Column headers are defined as follows:

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

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-007
Client Sample ID: Cell 4 B LDS
Collection Date: 8/30/2016 1110h
Received Date: 9/2/2016 1005h

Analytical Results DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/6/2016 1051h	9/7/2016 1154h	E200.8	0.100	**98.8**	
Beryllium	mg/L	9/6/2016 1051h	9/14/2016 744h	E200.8	0.200	**0.430**	
Cadmium	mg/L	9/6/2016 1051h	9/7/2016 1154h	E200.8	0.0250	**3.25**	
Calcium	mg/L	9/6/2016 1051h	9/12/2016 1609h	E200.7	50.0	**547**	
Chromium	mg/L	9/6/2016 1051h	9/12/2016 1317h	E200.8	1.00	**9.47**	
Cobalt	mg/L	9/6/2016 1051h	9/12/2016 1317h	E200.8	2.00	**33.6**	
Copper	mg/L	9/6/2016 1051h	9/12/2016 1317h	E200.8	1.30	**475**	
Iron	mg/L	9/6/2016 1051h	9/12/2016 1326h	E200.8	500	**4,680**	
Lead	mg/L	9/6/2016 1051h	9/7/2016 1154h	E200.8	0.100	**5.86**	
Magnesium	mg/L	9/6/2016 1051h	9/12/2016 1438h	E200.7	500	**4,780**	
Manganese	mg/L	9/6/2016 1051h	9/12/2016 1317h	E200.8	1.00	**262**	
Mercury	mg/L	9/12/2016 1500h	9/13/2016 1037h	E245.1	0.00200	< 0.00200	
Molybdenum	mg/L	9/6/2016 1051h	9/7/2016 1154h	E200.8	0.100	**35.5**	
Nickel	mg/L	9/6/2016 1051h	9/12/2016 1317h	E200.8	1.00	**58.1**	
Potassium	mg/L	9/6/2016 1051h	9/12/2016 1438h	E200.7	500	**1,360**	
Selenium	mg/L	9/6/2016 1051h	9/7/2016 1154h	E200.8	0.100	**5.31**	
Silver	mg/L	9/6/2016 1051h	9/7/2016 1154h	E200.8	0.100	**0.224**	
Sodium	mg/L	9/6/2016 1051h	9/12/2016 1546h	E200.7	1,000	**10,800**	
Thallium	mg/L	9/6/2016 1051h	9/7/2016 1154h	E200.8	0.100	**0.414**	
Tin	mg/L	9/6/2016 1051h	9/7/2016 1154h	E200.8	17.0	< 17.0	
Uranium	mg/L	9/6/2016 1051h	9/12/2016 1317h	E200.8	1.00	**192**	
Vanadium	mg/L	9/6/2016 1051h	9/12/2016 1609h	E200.7	0.250	**847**	
Zinc	mg/L	9/6/2016 1051h	9/12/2016 1317h	E200.8	5.00	**315**	

Analysis performed on a portion of the sample filtered at the laboratory upon receipt. The sample was received after the filtration holding time had expired for dissolved analysis.

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-007
Client Sample ID: Cell 4 B LDS
Collection Date: 8/30/2016 1110h
Received Date: 9/2/2016 1005h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	9/6/2016 1050h	9/6/2016 1918h	E350.1	50.0	**7,540**	
Bicarbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Chloride	mg/L		9/14/2016 1845h	E300.0	1,000	**8,510**	
Conductivity	µmhos/cm		9/2/2016 1149h	SM2510B	2.00	**68,400**	
Fluoride	mg/L		9/14/2016 1845h	E300.0	100	**1,290**	
Ion Balance	%		9/12/2016	Calc.	-100	**-51.0**	
Nitrate/Nitrite (as N)	mg/L		9/2/2016 1757h	E353.2	1.00	**49.6**	
pH @ 25° C	pH Units		9/2/2016 1534h	SW9040C	1.00	**1.88**	H
Sulfate	mg/L		9/14/2016 1902h	E300.0	10,000	**163,000**	
Total Anions, Measured	meq/L		9/12/2016	Calc.		**3,630**	
Total Cations, Measured	meq/L		9/12/2016	Calc.		**1,180**	
Total Dissolved Solids	mg/L		9/2/2016 1343h	SM2540C	500	**133,000**	
Total Dissolved Solids Ratio, Measured/Calculated			9/12/2016	Calc.		**0.686**	
Total Dissolved Solids, Calculated	mg/L		9/12/2016	Calc.		**193,000**	

H - Sample was received outside of the holding time.

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-007F
Client Sample ID: Cell 4 B LDS
Collection Date: 8/30/2016 1110h
Received Date: 9/2/2016 1005h

Test Code: 8270-W

Analytical Results SVOA by GC/MS Method 8270D/3510C

Analyzed: 9/7/2016 1910h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Nitrophenol	88-75-5	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-007F
Client Sample ID: Cell 4 B LDS

Analyzed: 9/7/2016 1910h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	**132**	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-007F
Client Sample ID: Cell 4 B LDS

Analyzed: 9/7/2016 1910h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	50.1	80.00	62.6	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	12.2	40.00	30.4	10-124	
Surr: 2-Fluorophenol	367-12-4	37.4	80.00	46.8	10-106	
Surr: Nitrobenzene-d5	4165-60-0	11.6	40.00	29.0	10-180	
Surr: Phenol-d6	13127-88-3	37.8	80.00	47.2	10-122	
Surr: Terphenyl-d14	1718-51-0	26.9	40.00	67.3	10-221	

This sample was analyzed for the TIC compound 4-Chlorophenol and was not detected.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-007A
Client Sample ID: Cell 4 B LDS
Collection Date: 8/30/2016 1110h
Received Date: 9/2/2016 1005h

Test Code: 8260-W-DEN100

Analytical Results VOAs by GC/MS Method 8260C/5030C

Analyzed: 9/6/2016 1317h
Units: µg/L **Dilution Factor:** 10 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Acetone	67-64-1	200	**266**	~

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	562	500.0	112	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	606	500.0	121	80-152	
Surr: Dibromofluoromethane	1868-53-7	506	500.0	101	80-124	
Surr: Toluene-d8	2037-26-5	509	500.0	102	77-129	

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

Analyzed: 9/6/2016 1418h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	**53.6**	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	**9.97**	
Chloromethane	74-87-3	1.00	**10.8**	
Methylene chloride	75-09-2	1.00	< 1.00	
Naphthalene	91-20-3	1.00	< 1.00	
Tetrahydrofuran	109-99-9	1.00	**75.9**	
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	59.8	50.00	120	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	58.8	50.00	118	80-152	
Surr: Dibromofluoromethane	1868-53-7	52.1	50.00	104	80-124	
Surr: Toluene-d8	2037-26-5	51.1	50.00	102	77-129	

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Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 4B LDS	Project:	DNMI00107
Sample ID:	405194007	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 11:10		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
High Rad Testing													
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	21.8	+/-118	485	1.00	pCi/L			JXC5	09/16/16	0936	1597083	1
Thorium-230		3.68E+05	+/-5360	670	1.00	pCi/L							
Thorium-232		1010	+/-292	292	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		1.85E+05	+/-2080	232	1.00	pCi/L			JXC5	09/19/16	1613	1597084	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		104	+/-13.4	23.0	1.00	pCi/L			LXP1	09/28/16	1055	1597086	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		78600	+/-2760	780	1.00	pCi/L			JXC5	09/16/16	0926	1597081	4
Uranium-235/236		3820	+/-687	358	1.00	pCi/L							
Uranium-238		78900	+/-2760	535	1.00	pCi/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 900.1 Modified	
3	EPA 903.1 Modified	
4	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"			91.8	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			98.2	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			75.1	(15%-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 he greater of either the adjusted MDL or the CRDL.

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 4B LDS	Project:	DNMI00107
Sample ID:	405194007	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 11:10		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Hazardous Waste												
ASTM D 5057 Specific Gravity "As Received"												
Specific Gravity		1.11	0.010	0.100	none		1	SXW3	09/29/16	1356	1598090	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	ASTM D 5057	

Notes:

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 30, 2016

Company : Energy Fuels Resources (USA), Inc.
Address : 225 Union Boulevard
Suite 600
Lakewood, Colorado 80228
Contact: Ms. Kathy Weinel
Project: Tailings 2016 Characterization

Client Sample ID: Cell 65
Sample ID: 405194008
Matrix: Water
Collect Date: 30-AUG-16 09:15
Receive Date: 02-SEP-16
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
High Rad Testing													
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	521	+/-234	538	1.00	pCi/L			JXC5	09/16/16	0936	1597083	1
Thorium-230		67000	+/-2250	581	1.00	pCi/L							
Thorium-232		788	+/-263	425	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		57500	+/-1280	455	1.00	pCi/L			JXC5	09/19/16	1613	1597084	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		640	+/-29.7	16.7	1.00	pCi/L			LXP1	09/28/16	1055	1597086	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		2.52E+06	+/-34000	3700	1.00	pCi/L			JXC5	09/16/16	0926	1597081	4
Uranium-235/236		1.30E+05	+/-8620	2720	1.00	pCi/L							
Uranium-238		2.49E+06	+/-33800	3840	1.00	pCi/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 900.1 Modified	
3	EPA 903.1 Modified	
4	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"			97	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			93	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			15.9	(15%-125%)

Notes:

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

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 65	Project:	DNMI00107
Sample ID:	405194008	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 09:15		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Hazardous Waste												
ASTM D 5057 Specific Gravity "As Received"												
Specific Gravity		1.53	0.010	0.100	none		1	SXW3	09/29/16	1359	1598090	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	ASTM D 5057	

Notes:

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

Column headers are defined as follows:

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

INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-008
Client Sample ID: Cell 65
Collection Date: 8/30/2016 915h
Received Date: 9/2/2016 1005h

Analytical Results DISSOLVED METALS

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/6/2016 1051h	9/13/2016 1134h	E200.8	1.00	**199**	
Beryllium	mg/L	9/6/2016 1051h	9/13/2016 1134h	E200.8	1.00	**12.2**	
Cadmium	mg/L	9/6/2016 1051h	9/13/2016 1134h	E200.8	0.250	**39.4**	
Calcium	mg/L	9/6/2016 1051h	9/12/2016 1440h	E200.7	500	**3,290**	
Chromium	mg/L	9/6/2016 1051h	9/13/2016 905h	E200.8	10.0	**95.8**	
Cobalt	mg/L	9/6/2016 1051h	9/13/2016 905h	E200.8	20.0	**107**	
Copper	mg/L	9/6/2016 1051h	9/13/2016 905h	E200.8	10.0	**2,970**	
Iron	mg/L	9/6/2016 1051h	9/13/2016 1109h	E200.8	5,000	**16,400**	
Lead	mg/L	9/6/2016 1051h	9/16/2016 1737h	E200.8	0.0500	**0.0631**	
Magnesium	mg/L	9/6/2016 1051h	9/12/2016 1548h	E200.7	5,000	**31,200**	
Manganese	mg/L	9/6/2016 1051h	9/13/2016 905h	E200.8	10.0	**5,650**	
Mercury	mg/L	9/12/2016 1500h	9/13/2016 1044h	E245.1	0.125	**0.881**	
Molybdenum	mg/L	9/6/2016 1051h	9/13/2016 1134h	E200.8	1.00	**132**	
Nickel	mg/L	9/6/2016 1051h	9/13/2016 905h	E200.8	10.0	**52.0**	
Potassium	mg/L	9/6/2016 1051h	9/12/2016 1440h	E200.7	500	**3,150**	
Selenium	mg/L	9/6/2016 1051h	9/13/2016 1134h	E200.8	1.00	**3.19**	
Silver	mg/L	9/6/2016 1051h	9/13/2016 1134h	E200.8	1.00	**6.47**	
Sodium	mg/L	9/6/2016 1051h	9/12/2016 1548h	E200.7	5,000	**57,500**	
Thallium	mg/L	9/6/2016 1051h	9/13/2016 1134h	E200.8	1.00	**2.17**	
Tin	mg/L	9/6/2016 1051h	9/13/2016 1134h	E200.8	17.0	< 17.0	
Uranium	mg/L	9/6/2016 1051h	9/13/2016 905h	E200.8	10.0	**5,150**	
Vanadium	mg/L	9/6/2016 1051h	9/12/2016 1548h	E200.7	25.0	**9,870**	
Zinc	mg/L	9/6/2016 1051h	9/13/2016 1109h	E200.8	250	**7,940**	

Analysis performed on a portion of the sample filtered at the laboratory upon receipt. The sample was received after the filtration holding time had expired for dissolved analysis.

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INORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-008
Client Sample ID: Cell 65
Collection Date: 8/30/2016 915h
Received Date: 9/2/2016 1005h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Ammonia (as N)	mg/L	9/8/2016 1300h	9/8/2016 1848h	E350.1	25.0	**7,280**	
Bicarbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Carbonate (as CaCO3)	mg/L		9/6/2016 600h	SM2320B	1.00	< 1.00	
Chloride	mg/L		9/14/2016 1359h	E300.0	10,000	**115,000**	
Conductivity	µmhos/cm		9/2/2016 1149h	SM2510B	2.00	**15,600**	
Fluoride	mg/L		9/14/2016 1359h	E300.0	1,000	**49,300**	
Ion Balance	%		9/12/2016	Calc.	-100	**-53.4**	
Nitrate/Nitrite (as N)	mg/L		9/2/2016 1809h	E353.2	5.00	**669**	
pH @ 25° C	pH Units		9/2/2016 1534h	SW9040C	1.00	< 1.00	H
Sulfate	mg/L		9/14/2016 1415h	E300.0	100,000	**826,000**	
Total Anions, Measured	meq/L		9/12/2016	Calc.		**20,400**	
Total Cations, Measured	meq/L		9/12/2016	Calc.		**6,200**	
Total Dissolved Solids	mg/L		9/2/2016 1343h	SM2540C	500	**559,000**	
Total Dissolved Solids Ratio, Measured/Calculated			9/12/2016	Calc.		**0.531**	
Total Dissolved Solids, Calculated	mg/L		9/12/2016	Calc.		**1,050,000**	

H - Sample was received outside of the holding time.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-008F
Client Sample ID: Cell 65
Collection Date: 8/30/2016 915h
Received Date: 9/2/2016 1005h

Test Code: 8270-W

Analytical Results SVOA by GC/MS Method 8270D/3510C

Analyzed: 9/9/2016 832h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 10 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Bis(2-ethylhexyl) phthalate	117-81-7	100	**220**	~

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

Analyzed: 9/7/2016 1936h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Nitrophenol	88-75-5	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-008F
Client Sample ID: Cell 65

Analyzed: 9/7/2016 1936h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Nitrophenol	100-02-7	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1609037-008F
Client Sample ID: Cell 65

Analyzed: 9/7/2016 1936h **Extracted:** 9/2/2016 1059h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Phenol	108-95-2	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	2.59	80.00	3.24	14-159	S
Surr: 2-Fluorobiphenyl	321-60-8	0.0400	40.00	0.100	10-124	S
Surr: 2-Fluorophenol	367-12-4	0.0400	80.00	0.0500	10-106	S
Surr: Nitrobenzene-d5	4165-60-0	0.0200	40.00	0.0500	10-180	S
Surr: Phenol-d6	13127-88-3	0.260	80.00	0.325	10-122	S
Surr: Terphenyl-d14	1718-51-0	0.570	40.00	1.43	10-221	S

S - Surrogate recoveries outside the control limits as expected due to sample matrix interference. Sample required 500mL of base and 75mL of acid during the extraction process compared to the usual 3mL normally required.

This sample was analyzed for the TIC compound 4-Chlorophenol and was not detected.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-008A
Client Sample ID: Cell 65
Collection Date: 8/30/2016 915h
Received Date: 9/2/2016 1005h

Test Code: 8260-W-DEN100

Analytical Results VOAs by GC/MS Method 8260C/5030C

Analyzed: 9/6/2016 1357h
Units: µg/L **Dilution Factor:** 10 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Acetone	67-64-1	200	**297**	~

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	652	500.0	130	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	580	500.0	116	80-152	
Surr: Dibromofluoromethane	1868-53-7	576	500.0	115	80-124	
Surr: Toluene-d8	2037-26-5	505	500.0	101	77-129	

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

Analyzed: 9/6/2016 1459h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Butanone	78-93-3	20.0	< 20.0	
Benzene	71-43-2	1.00	< 1.00	
Carbon tetrachloride	56-23-5	1.00	< 1.00	
Chloroform	67-66-3	1.00	**14.7**	
Chloromethane	74-87-3	1.00	**18.3**	
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	69.3	50.00	139	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	54.9	50.00	110	80-152	
Surr: Dibromofluoromethane	1868-53-7	58.1	50.00	116	80-124	
Surr: Toluene-d8	2037-26-5	48.9	50.00	97.9	77-129	

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

Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 65	Project:	DNMI00107
Sample ID:	405194008	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 09:15		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
High Rad Testing													
Alphaspec Th, Liquid "As Received"													
Thorium-228	U	521	+/-234	538	1.00	pCi/L			JXC5	09/16/16	0936	1597083	1
Thorium-230		67000	+/-2250	581	1.00	pCi/L							
Thorium-232		788	+/-263	425	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		57500	+/-1280	455	1.00	pCi/L			JXC5	09/19/16	1613	1597084	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		640	+/-29.7	16.7	1.00	pCi/L			LXP1	09/28/16	1055	1597086	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		2.52E+06	+/-34000	3700	1.00	pCi/L			JXC5	09/16/16	0926	1597081	4
Uranium-235/236		1.30E+05	+/-8620	2720	1.00	pCi/L							
Uranium-238		2.49E+06	+/-33800	3840	1.00	pCi/L							

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 900.1 Modified	
3	EPA 903.1 Modified	
4	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Thorium-229 Tracer	Alphaspec Th, Liquid "As Received"			97	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			93	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			15.9	(15%-125%)

Notes:

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

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

Column headers are defined as follows:

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

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Certificate of Analysis

Report Date: September 30, 2016

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Tailings 2016 Characterization

Client Sample ID:	Cell 65	Project:	DNMI00107
Sample ID:	405194008	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	30-AUG-16 09:15		
Receive Date:	02-SEP-16		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Hazardous Waste												
ASTM D 5057 Specific Gravity "As Received"												
Specific Gravity		1.53	0.010	0.100	none		1	SXW3	09/29/16	1359	1598090	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
	ASTM D 5057	

Notes:

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

Column headers are defined as follows:

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

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Sample ID: 1609037-009A
Client Sample ID: Trip Blank
Collection Date: 8/30/2016
Received Date: 9/2/2016 1005h

Test Code: 8260-W-DEN100

Analytical Results VOAs by GC/MS Method 8260C/5030C

Analyzed: 9/2/2016 1537h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8260C

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

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	55.8	50.00	112	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	56.6	50.00	113	80-152	
Surr: Dibromofluoromethane	1868-53-7	50.0	50.00	100	80-124	
Surr: Toluene-d8	2037-26-5	49.5	50.00	99.1	77-129	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Garrin Palmer
Energy Fuels Resources, Inc.
6425 S. Hwy 191
Blanding, UT 84511

RE: Annual Tailings 2016

Dear Garrin Palmer: Lab Set ID: 1609037

American West Analytical Laboratories received sample(s) on 9/2/2016 for the analyses presented in the following report.

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

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

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

This is a revision to a report originally issued 9/20/2016. Pages 1 and 12 have been revised. The Beryllium result has been updated.

Thank You,

Approved by: Kyle F. Gross Digitally signed by Kyle F. Gross Date: 2016.10.18 11:17:17 -06'00'

Laboratory Director or designee

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

SAMPLE SUMMARY

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Set ID: 1609037
Date Received: 9/2/2016 1005h

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1609037-001A	Cell 1	8/30/2016 830h	Aqueous	VOA by GC/MS Method 8260C/5030C
1609037-001B	Cell 1	8/30/2016 830h	Aqueous	Anions, E300.0
1609037-001B	Cell 1	8/30/2016 830h	Aqueous	Conductivity (Specific Conductance)
1609037-001B	Cell 1	8/30/2016 830h	Aqueous	pH by 9040C
1609037-001B	Cell 1	8/30/2016 830h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1609037-001C	Cell 1	8/30/2016 830h	Aqueous	Total Dissolved Solids, A2540C
1609037-001D	Cell 1	8/30/2016 830h	Aqueous	Ammonia, Aqueous
1609037-001D	Cell 1	8/30/2016 830h	Aqueous	Nitrite/Nitrate (as N), E353.2
1609037-001E	Cell 1	8/30/2016 830h	Aqueous	ICP Metals, Dissolved
1609037-001E	Cell 1	8/30/2016 830h	Aqueous	ICPMS Metals, Dissolved
1609037-001E	Cell 1	8/30/2016 830h	Aqueous	Mercury, Drinking Water Dissolved
1609037-001E	Cell 1	8/30/2016 830h	Aqueous	Ion Balance
1609037-001F	Cell 1	8/30/2016 830h	Aqueous	SVOAs by GC/MS Method 8270D/3510C
1609037-002A	Cell 2 Slimes	8/30/2016 850h	Aqueous	VOA by GC/MS Method 8260C/5030C
1609037-002B	Cell 2 Slimes	8/30/2016 850h	Aqueous	Conductivity (Specific Conductance)
1609037-002B	Cell 2 Slimes	8/30/2016 850h	Aqueous	pH by 9040C
1609037-002B	Cell 2 Slimes	8/30/2016 850h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1609037-002B	Cell 2 Slimes	8/30/2016 850h	Aqueous	Anions, E300.0
1609037-002C	Cell 2 Slimes	8/30/2016 850h	Aqueous	Total Dissolved Solids, A2540C
1609037-002D	Cell 2 Slimes	8/30/2016 850h	Aqueous	Ammonia, Aqueous
1609037-002D	Cell 2 Slimes	8/30/2016 850h	Aqueous	Nitrite/Nitrate (as N), E353.2
1609037-002E	Cell 2 Slimes	8/30/2016 850h	Aqueous	ICP Metals, Dissolved
1609037-002E	Cell 2 Slimes	8/30/2016 850h	Aqueous	ICPMS Metals, Dissolved
1609037-002E	Cell 2 Slimes	8/30/2016 850h	Aqueous	Mercury, Drinking Water Dissolved
1609037-002E	Cell 2 Slimes	8/30/2016 850h	Aqueous	Ion Balance
1609037-002F	Cell 2 Slimes	8/30/2016 850h	Aqueous	SVOAs by GC/MS Method 8270D/3510C
1609037-003A	Cell 3	8/30/2016 915h	Aqueous	VOA by GC/MS Method 8260C/5030C
1609037-003B	Cell 3	8/30/2016 915h	Aqueous	Anions, E300.0

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Set ID: 1609037
Date Received: 9/2/2016 1005h

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1609037-003B	Cell 3	8/30/2016 915h	Aqueous	Conductivity (Specific Conductance)
1609037-003B	Cell 3	8/30/2016 915h	Aqueous	pH by 9040C
1609037-003B	Cell 3	8/30/2016 915h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1609037-003C	Cell 3	8/30/2016 915h	Aqueous	Total Dissolved Solids, A2540C
1609037-003D	Cell 3	8/30/2016 915h	Aqueous	Ammonia, Aqueous
1609037-003D	Cell 3	8/30/2016 915h	Aqueous	Nitrite/Nitrate (as N), E353.2
1609037-003E	Cell 3	8/30/2016 915h	Aqueous	ICP Metals, Dissolved
1609037-003E	Cell 3	8/30/2016 915h	Aqueous	ICPMS Metals, Dissolved
1609037-003E	Cell 3	8/30/2016 915h	Aqueous	Mercury, Drinking Water Dissolved
1609037-003E	Cell 3	8/30/2016 915h	Aqueous	Ion Balance
1609037-003F	Cell 3	8/30/2016 915h	Aqueous	SVOAs by GC/MS Method 8270D/3510C
1609037-004A	Cell 4A	8/30/2016 1000h	Aqueous	VOA by GC/MS Method 8260C/5030C
1609037-004B	Cell 4A	8/30/2016 1000h	Aqueous	Conductivity (Specific Conductance)
1609037-004B	Cell 4A	8/30/2016 1000h	Aqueous	pH by 9040C
1609037-004B	Cell 4A	8/30/2016 1000h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1609037-004B	Cell 4A	8/30/2016 1000h	Aqueous	Anions, E300.0
1609037-004C	Cell 4A	8/30/2016 1000h	Aqueous	Total Dissolved Solids, A2540C
1609037-004D	Cell 4A	8/30/2016 1000h	Aqueous	Ammonia, Aqueous
1609037-004D	Cell 4A	8/30/2016 1000h	Aqueous	Nitrite/Nitrate (as N), E353.2
1609037-004E	Cell 4A	8/30/2016 1000h	Aqueous	ICP Metals, Dissolved
1609037-004E	Cell 4A	8/30/2016 1000h	Aqueous	ICPMS Metals, Dissolved
1609037-004E	Cell 4A	8/30/2016 1000h	Aqueous	Mercury, Drinking Water Dissolved
1609037-004E	Cell 4A	8/30/2016 1000h	Aqueous	Ion Balance
1609037-004F	Cell 4A	8/30/2016 1000h	Aqueous	SVOAs by GC/MS Method 8270D/3510C
1609037-005A	Cell 4A LDS	8/30/2016 1025h	Aqueous	VOA by GC/MS Method 8260C/5030C
1609037-005B	Cell 4A LDS	8/30/2016 1025h	Aqueous	Anions, E300.0
1609037-005B	Cell 4A LDS	8/30/2016 1025h	Aqueous	Conductivity (Specific Conductance)
1609037-005B	Cell 4A LDS	8/30/2016 1025h	Aqueous	pH by 9040C
1609037-005B	Cell 4A LDS	8/30/2016 1025h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level

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Kyle F. Gross
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Jose Rocha
QA Officer

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Set ID: 1609037
Date Received: 9/2/2016 1005h

Lab Sample ID	Client Sample ID	Date Collected		Matrix	Analysis
1609037-005C	Cell 4A LDS	8/30/2016	1025h	Aqueous	Total Dissolved Solids, A2540C
1609037-005D	Cell 4A LDS	8/30/2016	1025h	Aqueous	Ammonia, Aqueous
1609037-005D	Cell 4A LDS	8/30/2016	1025h	Aqueous	Nitrite/Nitrate (as N), E353.2
1609037-005E	Cell 4A LDS	8/30/2016	1025h	Aqueous	ICP Metals, Dissolved
1609037-005E	Cell 4A LDS	8/30/2016	1025h	Aqueous	ICPMS Metals, Dissolved
1609037-005E	Cell 4A LDS	8/30/2016	1025h	Aqueous	Mercury, Drinking Water Dissolved
1609037-005E	Cell 4A LDS	8/30/2016	1025h	Aqueous	Ion Balance
1609037-005F	Cell 4A LDS	8/30/2016	1025h	Aqueous	SVOAs by GC/MS Method 8270D/3510C
1609037-006A	Cell 4B	8/30/2016	1050h	Aqueous	VOA by GC/MS Method 8260C/5030C
1609037-006B	Cell 4B	8/30/2016	1050h	Aqueous	Conductivity (Specific Conductance)
1609037-006B	Cell 4B	8/30/2016	1050h	Aqueous	pH by 9040C
1609037-006B	Cell 4B	8/30/2016	1050h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1609037-006B	Cell 4B	8/30/2016	1050h	Aqueous	Anions, E300.0
1609037-006C	Cell 4B	8/30/2016	1050h	Aqueous	Total Dissolved Solids, A2540C
1609037-006D	Cell 4B	8/30/2016	1050h	Aqueous	Ammonia, Aqueous
1609037-006D	Cell 4B	8/30/2016	1050h	Aqueous	Nitrite/Nitrate (as N), E353.2
1609037-006E	Cell 4B	8/30/2016	1050h	Aqueous	ICP Metals, Dissolved
1609037-006E	Cell 4B	8/30/2016	1050h	Aqueous	ICPMS Metals, Dissolved
1609037-006E	Cell 4B	8/30/2016	1050h	Aqueous	Mercury, Drinking Water Dissolved
1609037-006E	Cell 4B	8/30/2016	1050h	Aqueous	Ion Balance
1609037-006F	Cell 4B	8/30/2016	1050h	Aqueous	SVOAs by GC/MS Method 8270D/3510C
1609037-007A	Cell 4 B LDS	8/30/2016	1110h	Aqueous	VOA by GC/MS Method 8260C/5030C
1609037-007B	Cell 4 B LDS	8/30/2016	1110h	Aqueous	Anions, E300.0
1609037-007B	Cell 4 B LDS	8/30/2016	1110h	Aqueous	Conductivity (Specific Conductance)
1609037-007B	Cell 4 B LDS	8/30/2016	1110h	Aqueous	pH by 9040C
1609037-007B	Cell 4 B LDS	8/30/2016	1110h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1609037-007C	Cell 4 B LDS	8/30/2016	1110h	Aqueous	Total Dissolved Solids, A2540C
1609037-007D	Cell 4 B LDS	8/30/2016	1110h	Aqueous	Ammonia, Aqueous
1609037-007D	Cell 4 B LDS	8/30/2016	1110h	Aqueous	Nitrite/Nitrate (as N), E353.2
1609037-007E	Cell 4 B LDS	8/30/2016	1110h	Aqueous	ICP Metals, Dissolved

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Laboratory Director

Jose Rocha
QA Officer

Client: Energy Fuels Resources, Inc. **Contact:** Garrin Palmer
Project: Annual Tailings 2016
Lab Set ID: 1609037
Date Received: 9/2/2016 1005h

Lab Sample ID	Client Sample ID	Date Collected	Matrix	Analysis
1609037-007E	Cell 4 B LDS	8/30/2016 1110h	Aqueous	ICPMS Metals, Dissolved
1609037-007E	Cell 4 B LDS	8/30/2016 1110h	Aqueous	Mercury, Drinking Water Dissolved
1609037-007E	Cell 4 B LDS	8/30/2016 1110h	Aqueous	Ion Balance
1609037-007F	Cell 4 B LDS	8/30/2016 1110h	Aqueous	SVOAs by GC/MS Method 8270D/3510C
1609037-008A	Cell 65	8/30/2016 915h	Aqueous	VOA by GC/MS Method 8260C/5030C
1609037-008B	Cell 65	8/30/2016 915h	Aqueous	Conductivity (Specific Conductance)
1609037-008B	Cell 65	8/30/2016 915h	Aqueous	pH by 9040C
1609037-008B	Cell 65	8/30/2016 915h	Aqueous	Alkalinity/ Bicarbonate/ Carbonate, Low Level
1609037-008B	Cell 65	8/30/2016 915h	Aqueous	Anions, E300.0
1609037-008C	Cell 65	8/30/2016 915h	Aqueous	Total Dissolved Solids, A2540C
1609037-008D	Cell 65	8/30/2016 915h	Aqueous	Ammonia, Aqueous
1609037-008D	Cell 65	8/30/2016 915h	Aqueous	Nitrite/Nitrate (as N), E353.2
1609037-008E	Cell 65	8/30/2016 915h	Aqueous	ICP Metals, Dissolved
1609037-008E	Cell 65	8/30/2016 915h	Aqueous	ICPMS Metals, Dissolved
1609037-008E	Cell 65	8/30/2016 915h	Aqueous	Mercury, Drinking Water Dissolved
1609037-008E	Cell 65	8/30/2016 915h	Aqueous	Ion Balance
1609037-008F	Cell 65	8/30/2016 915h	Aqueous	SVOAs by GC/MS Method 8270D/3510C
1609037-009A	Trip Blank	8/30/2016	Aqueous	VOA by GC/MS Method 8260C/5030C

Inorganic Case Narrative

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Client: Energy Fuels Resources, Inc.
Contact: Garrin Palmer
Project: Annual Tailings 2016
Lab Set ID: 1609037

Sample Receipt Information:

Date of Receipt: 9/2/2016
Date of Collection: 8/30/2016
Sample Condition: Intact
C-O-C Discrepancies: See Chain of Custody

Holding Time and Preservation Requirements: The analysis and preparation for the samples were performed within the method holding times, with the following exceptions: all of the samples for pH analysis by method SW9040C and for filtration were received outside of the holding time. The samples were properly preserved.

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

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

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

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

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

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

Sample ID	Analyte	QC	Explanation
1609037-001B	Alkalinity	MS/MSD	Sample matrix interference
1609037-005D	Ammonia	MS/MSD	High analyte concentration
1609037-005D	Nitrate/Nitrite	MS/MSD	Suspected sample non-homogeneity
1609037-005E	As, Ca, Cr, Co, Cu, Fe, Mg, Mn, Mo, Ni, K, Na, U, V, Zn	MS/MSD	High analyte concentration
1609037-005E	Cd	MS	High analyte concentration

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

Corrective Action: None required.

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Jose Rocha
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Semivolatile Case Narrative

Client:	Energy Fuels Resources, Inc.
Contact:	Garrin Palmer
Project:	Annual Tailings 2016
Lab Set ID:	1609037

Sample Receipt Information:

Date of Receipt:	9/2/2016
Date of Collection:	8/30/2016
Sample Condition:	Intact
C-O-C Discrepancies:	See Chain of Custody
Method:	SW-846 8270D/3510C
Analysis:	Semivolatile Organics

General Set Comments: Multiple target analytes were observed above their reporting limits.

Holding Time Requirements: The preparations and analyses of the samples were performed within respective holding times.

Preparation Requirements: The samples were prepared and 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, and Surrogates:

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

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

Matrix Spike / Matrix Spike Duplicate (MS/MSD): All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, with the following exceptions: The MS percent recovery, MSD percent recovery, and/or RPD were outside of the control limits for multiple analytes on sample 1609037-005F due to sample matrix interference or sample non-homogeneity.

Surrogates: All surrogate recoveries were within established limits, with the following exceptions: one or more surrogate percent recoveries were outside of the control limits on samples 1609037-001F, -002F, -003F, -004F, and -008F to sample matrix interference. Phenol-d6 on MB-44821 was outside of the control limits. Method blanks are used to determine contamination in the samples. As none of the samples in the batch had analytical results above reporting limits for the compounds associated with this surrogate, the data were deemed acceptable.

Corrective Action: None required.

Volatile Case Narrative

Client:	Energy Fuels Resources, Inc.
Contact:	Garrin Palmer
Project:	Annual Tailings 2016
Lab Set ID:	1609037

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt:	9/2/2016
Date of Collection:	8/30/2016
Sample Condition:	Intact
C-O-C Discrepancies:	See Chain of Custody
Method:	SW-846 8260C/5030C
Analysis:	Volatile Organic Compounds

General Set Comments: Multiple target analytes were observed above reporting limits.

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

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

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

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

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

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

Surrogates: All surrogate recoveries were within established limits.

Corrective Action: None required.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: ME
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-44835	Date Analyzed:	09/12/2016 1520h											
Test Code: 200.7-DIS	Date Prepared:	09/06/2016 1051h											
Calcium	9.66	mg/L	E200.7	0.0579	1.00	10.00	0	96.6	85 - 115				
Magnesium	10.1	mg/L	E200.7	0.0495	1.00	10.00	0	101	85 - 115				
Potassium	9.86	mg/L	E200.7	0.121	1.00	10.00	0	98.6	85 - 115				
Sodium	10.4	mg/L	E200.7	0.0125	1.00	10.00	0	104	85 - 115				
Vanadium	0.185	mg/L	E200.7	0.000750	0.00500	0.2000	0	92.7	85 - 115				
Lab Sample ID: LCS-44836	Date Analyzed:	09/07/2016 1104h											
Test Code: 200.8-DIS	Date Prepared:	09/06/2016 1051h											
Arsenic	0.204	mg/L	E200.8	0.000540	0.00200	0.2000	0	102	85 - 115				
Beryllium	0.201	mg/L	E200.8	0.000177	0.00200	0.2000	0	100	85 - 115				
Cadmium	0.203	mg/L	E200.8	0.0000666	0.000500	0.2000	0	102	85 - 115				
Chromium	0.196	mg/L	E200.8	0.000998	0.00200	0.2000	0	98.2	85 - 115				
Cobalt	0.192	mg/L	E200.8	0.0000990	0.00400	0.2000	0	96.2	85 - 115				
Copper	0.194	mg/L	E200.8	0.000862	0.00200	0.2000	0	96.8	85 - 115				
Iron	0.984	mg/L	E200.8	0.0274	0.100	1.000	0	98.4	85 - 115				
Lead	0.197	mg/L	E200.8	0.000125	0.00200	0.2000	0	98.5	85 - 115				
Manganese	0.197	mg/L	E200.8	0.000560	0.00200	0.2000	0	98.4	85 - 115				
Molybdenum	0.208	mg/L	E200.8	0.000202	0.00200	0.2000	0	104	85 - 115				
Nickel	0.195	mg/L	E200.8	0.000522	0.00200	0.2000	0	97.7	85 - 115				
Selenium	0.202	mg/L	E200.8	0.000310	0.00200	0.2000	0	101	85 - 115				
Silver	0.204	mg/L	E200.8	0.000132	0.00200	0.2000	0	102	85 - 115				
Thallium	0.191	mg/L	E200.8	0.0000500	0.00200	0.2000	0	95.7	85 - 115				
Tin	0.997	mg/L	E200.8	0.000372	0.00200	1.000	0	99.7	85 - 115				
Uranium	0.201	mg/L	E200.8	0.0000710	0.00200	0.2000	0	100	85 - 115				
Zinc	0.999	mg/L	E200.8	0.00452	0.00500	1.000	0	99.9	85 - 115				

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: ME
QC Type: LCS

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	**LCS-44940**	Date Analyzed:	09/13/2016 1005h											
Test Code:	HG-DW-DIS-245.1	Date Prepared:	09/12/2016 1500h											
Mercury		0.00362	mg/L	E245.1	0.00000559	0.000150	0.003330	0	109	85 - 115				

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: ME
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-44835	Date Analyzed:	09/12/2016 1518h											
Test Code: 200.7-DIS	Date Prepared:	09/06/2016 1051h											
Calcium	< 1.00	mg/L	E200.7	0.0579	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.0495	1.00								
Potassium	< 1.00	mg/L	E200.7	0.121	1.00								
Sodium	< 1.00	mg/L	E200.7	0.0125	1.00								
Vanadium	< 0.00500	mg/L	E200.7	0.000750	0.00500								
Lab Sample ID: MB-FILTER-44822	Date Analyzed:	09/12/2016 1550h											
Test Code: 200.7-DIS	Date Prepared:	09/06/2016 1051h											
Calcium	< 1.00	mg/L	E200.7	0.0579	1.00								
Magnesium	< 1.00	mg/L	E200.7	0.0495	1.00								
Potassium	< 1.00	mg/L	E200.7	0.121	1.00								
Sodium	< 1.00	mg/L	E200.7	0.0125	1.00								
Vanadium	< 0.00500	mg/L	E200.7	0.000750	0.00500								
Lab Sample ID: MB-44836	Date Analyzed:	09/07/2016 1101h											
Test Code: 200.8-DIS	Date Prepared:	09/06/2016 1051h											
Arsenic	< 0.00200	mg/L	E200.8	0.000540	0.00200								
Beryllium	< 0.00200	mg/L	E200.8	0.000177	0.00200								
Cadmium	< 0.000500	mg/L	E200.8	0.0000666	0.000500								
Chromium	< 0.00200	mg/L	E200.8	0.000998	0.00200								
Cobalt	< 0.00400	mg/L	E200.8	0.0000990	0.00400								
Copper	< 0.00200	mg/L	E200.8	0.000862	0.00200								
Iron	< 0.100	mg/L	E200.8	0.0274	0.100								
Lead	< 0.00200	mg/L	E200.8	0.000125	0.00200								
Manganese	< 0.00200	mg/L	E200.8	0.000560	0.00200								
Molybdenum	< 0.00200	mg/L	E200.8	0.000202	0.00200								
Nickel	< 0.00200	mg/L	E200.8	0.000522	0.00200								
Selenium	< 0.00200	mg/L	E200.8	0.000310	0.00200								

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: ME
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-44836	Date Analyzed:	09/07/2016 1101h											
Test Code: 200.8-DIS	Date Prepared:	09/06/2016 1051h											
Silver	< 0.00200	mg/L	E200.8	0.000132	0.00200								
Thallium	< 0.00200	mg/L	E200.8	0.0000500	0.00200								
Tin	< 0.00200	mg/L	E200.8	0.000372	0.00200								
Zinc	< 0.00500	mg/L	E200.8	0.00452	0.00500								
Lab Sample ID: MB-FILTER-44808	Date Analyzed:	09/07/2016 1157h											
Test Code: 200.8-DIS	Date Prepared:	09/06/2016 1051h											
Arsenic	< 0.00200	mg/L	E200.8	0.000540	0.00200								
Beryllium	< 0.00200	mg/L	E200.8	0.000177	0.00200								
Cadmium	< 0.000500	mg/L	E200.8	0.0000666	0.000500								
Chromium	< 0.00200	mg/L	E200.8	0.000998	0.00200								
Cobalt	< 0.00400	mg/L	E200.8	0.0000990	0.00400								
Copper	< 0.00200	mg/L	E200.8	0.000862	0.00200								
Iron	< 0.100	mg/L	E200.8	0.0274	0.100								
Lead	< 0.00200	mg/L	E200.8	0.000125	0.00200								
Manganese	< 0.00200	mg/L	E200.8	0.000560	0.00200								
Molybdenum	< 0.00200	mg/L	E200.8	0.000202	0.00200								
Nickel	< 0.00200	mg/L	E200.8	0.000522	0.00200								
Selenium	< 0.00200	mg/L	E200.8	0.000310	0.00200								
Silver	< 0.00200	mg/L	E200.8	0.000132	0.00200								
Thallium	< 0.00200	mg/L	E200.8	0.0000500	0.00200								
Tin	< 0.00200	mg/L	E200.8	0.000372	0.00200								
Uranium	< 0.00200	mg/L	E200.8	0.0000710	0.00200								
Zinc	< 0.00500	mg/L	E200.8	0.00452	0.00500								
Lab Sample ID: MB-FILTER-44822	Date Analyzed:	09/07/2016 1200h											
Test Code: 200.8-DIS	Date Prepared:	09/06/2016 1051h											
Arsenic	< 0.00200	mg/L	E200.8	0.000540	0.00200								

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: ME
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-FILTER-44822	Date Analyzed:	09/07/2016 1200h											
Test Code: 200.8-DIS	Date Prepared:	09/06/2016 1051h											
Beryllium	< 0.00200	mg/L	E200.8	0.000177	0.00200								
Cadmium	< 0.000500	mg/L	E200.8	0.0000666	0.000500								
Chromium	< 0.00200	mg/L	E200.8	0.000998	0.00200								
Cobalt	< 0.00400	mg/L	E200.8	0.0000990	0.00400								
Copper	< 0.00200	mg/L	E200.8	0.000862	0.00200								
Iron	< 0.100	mg/L	E200.8	0.0274	0.100								
Lead	< 0.00200	mg/L	E200.8	0.000125	0.00200								
Manganese	< 0.00200	mg/L	E200.8	0.000560	0.00200								
Molybdenum	< 0.00200	mg/L	E200.8	0.000202	0.00200								
Nickel	< 0.00200	mg/L	E200.8	0.000522	0.00200								
Selenium	< 0.00200	mg/L	E200.8	0.000310	0.00200								
Silver	< 0.00200	mg/L	E200.8	0.000132	0.00200								
Thallium	< 0.00200	mg/L	E200.8	0.0000500	0.00200								
Tin	< 0.00200	mg/L	E200.8	0.000372	0.00200								
Uranium	< 0.00200	mg/L	E200.8	0.0000710	0.00200								
Zinc	< 0.00500	mg/L	E200.8	0.00452	0.00500								
Lab Sample ID: MB-44836	Date Analyzed:	09/07/2016 1216h											
Test Code: 200.8-DIS	Date Prepared:	09/06/2016 1051h											
Uranium	< 0.000200	mg/L	E200.8	0.00000710	0.000200								
Lab Sample ID: MB-44940	Date Analyzed:	09/13/2016 1003h											
Test Code: HG-DW-DIS-245.1	Date Prepared:	09/12/2016 1500h											
Mercury	< 0.000150	mg/L	E245.1	0.00000559	0.000150								

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: ME
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1609037-005EMS	Date Analyzed:	09/12/2016 1422h											
Test Code: 200.7-DIS	Date Prepared:	09/06/2016 1051h											
Calcium	410	mg/L	E200.7	11.6	200	10.00	446	-363	70 - 130				*
Potassium	613	mg/L	E200.7	24.2	200	10.00	675	-614	70 - 130				*
Vanadium	401	mg/L	E200.7	0.150	1.00	0.2000	449	-24,200	70 - 130				*
Lab Sample ID: 1609037-005EMS	Date Analyzed:	09/12/2016 1537h											
Test Code: 200.7-DIS	Date Prepared:	09/06/2016 1051h											
Magnesium	3,630	mg/L	E200.7	24.8	500	10.00	3940	-3,100	70 - 130				*
Sodium	7,430	mg/L	E200.7	6.25	500	10.00	8050	-6,250	70 - 130				*
Lab Sample ID: 1609036-001BMS	Date Analyzed:	09/07/2016 1139h											
Test Code: 200.8-DIS	Date Prepared:	09/06/2016 1051h											
Arsenic	0.223	mg/L	E200.8	0.000540	0.00200	0.2000	0.0111	106	75 - 125				
Beryllium	0.195	mg/L	E200.8	0.000177	0.00200	0.2000	0	97.4	75 - 125				
Cadmium	0.210	mg/L	E200.8	0.0000666	0.000500	0.2000	0.00503	103	75 - 125				
Chromium	0.197	mg/L	E200.8	0.000998	0.00200	0.2000	0	98.3	75 - 125				
Cobalt	0.223	mg/L	E200.8	0.0000990	0.00400	0.2000	0.0313	95.8	75 - 125				
Copper	0.194	mg/L	E200.8	0.000862	0.00200	0.2000	0.00352	95.4	75 - 125				
Iron	1.00	mg/L	E200.8	0.0274	0.100	1.000	0.0255	97.7	75 - 125				
Lead	0.193	mg/L	E200.8	0.000125	0.00200	0.2000	0.000934	96.1	75 - 125				
Manganese	1.76	mg/L	E200.8	0.000560	0.00200	0.2000	1.59	86.3	75 - 125				
Molybdenum	0.224	mg/L	E200.8	0.000202	0.00200	0.2000	0.00109	111	75 - 125				
Nickel	0.217	mg/L	E200.8	0.000522	0.00200	0.2000	0.0229	97.1	75 - 125				
Selenium	0.209	mg/L	E200.8	0.000310	0.00200	0.2000	0.00671	101	75 - 125				
Silver	0.203	mg/L	E200.8	0.000132	0.00200	0.2000	0.0000831	102	75 - 125				
Thallium	0.190	mg/L	E200.8	0.0000500	0.00200	0.2000	0	95.2	75 - 125				
Tin	1.06	mg/L	E200.8	0.000372	0.00200	1.000	0	106	75 - 125				
Uranium	0.205	mg/L	E200.8	0.0000710	0.00200	0.2000	0.00481	100	75 - 125				
Zinc	1.05	mg/L	E200.8	0.00452	0.00500	1.000	0.0535	100	75 - 125				

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: ME
QC Type: MS

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	**1609037-005EMS**	Date Analyzed:	09/13/2016 856h											
Test Code:	200.8-DIS	Date Prepared:	09/06/2016 1051h											
Copper		377	mg/L	E200.8	0.431	1.00	0.2000	331	22,600	75 - 125				2
Manganese		210	mg/L	E200.8	0.280	1.00	0.2000	184	12,600	75 - 125				2
Uranium		132	mg/L	E200.8	0.0355	1.00	0.2000	116	7,570	75 - 125				2
Lab Sample ID:	**1609037-005EMS**	Date Analyzed:	09/13/2016 1059h											
Test Code:	200.8-DIS	Date Prepared:	09/06/2016 1051h											
Iron		2,640	mg/L	E200.8	137	500	1.000	2330	30,200	75 - 125				2
Zinc		552	mg/L	E200.8	22.6	25.0	1.000	502	4,980	75 - 125				2
Lab Sample ID:	**1609037-005EMS**	Date Analyzed:	09/13/2016 1124h											
Test Code:	200.8-DIS	Date Prepared:	09/06/2016 1051h											
Arsenic		43.8	mg/L	E200.8	0.0270	0.100	0.2000	43.5	165	75 - 125				2
Beryllium		0.458	mg/L	E200.8	0.00886	0.100	0.2000	0.289	84.6	75 - 125				
Cadmium		4.61	mg/L	E200.8	0.00333	0.0250	0.2000	4.5	54.8	75 - 125				2
Chromium		4.37	mg/L	E200.8	0.0499	0.100	0.2000	4.25	62.7	75 - 125				2
Cobalt		31.9	mg/L	E200.8	0.00495	0.200	0.2000	32.1	-115	75 - 125				2
Lead		0.966	mg/L	E200.8	0.00623	0.100	0.2000	0.797	84.5	75 - 125				
Molybdenum		10.6	mg/L	E200.8	0.0101	0.100	0.2000	10.7	-67.1	75 - 125				2
Nickel		71.4	mg/L	E200.8	0.0261	0.100	0.2000	72.7	-643	75 - 125				2
Selenium		1.78	mg/L	E200.8	0.0155	0.100	0.2000	1.59	96.2	75 - 125				
Silver		0.344	mg/L	E200.8	0.00660	0.100	0.2000	0.144	100	75 - 125				
Thallium		0.619	mg/L	E200.8	0.00250	0.100	0.2000	0.439	89.8	75 - 125				
Tin		1.10	mg/L	E200.8	0.0186	0.100	1.000	0.0476	105	75 - 125				
Lab Sample ID:	**1609037-005EMS**	Date Analyzed:	09/13/2016 1016h											
Test Code:	HG-DW-DIS-245.1	Date Prepared:	09/12/2016 1500h											
Mercury		0.00327	mg/L	E245.1	0.00000559	0.000150	0.003330	0.00019	92.5	85 - 115				

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

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Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: ME
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1609037-005EMSD	Date Analyzed:	09/12/2016 1424h											
Test Code: 200.7-DIS	Date Prepared:	09/06/2016 1051h											
Calcium	426	mg/L	E200.7	11.6	200	10.00	446	-206	70 - 130	410	3.75	20	2
Potassium	639	mg/L	E200.7	24.2	200	10.00	675	-354	70 - 130	613	4.15	20	2
Vanadium	412	mg/L	E200.7	0.150	1.00	0.2000	449	-18,400	70 - 130	401	2.85	20	2
Lab Sample ID: 1609037-005EMSD	Date Analyzed:	09/12/2016 1539h											
Test Code: 200.7-DIS	Date Prepared:	09/06/2016 1051h											
Magnesium	3,510	mg/L	E200.7	24.8	500	10.00	3940	-4,300	70 - 130	3630	3.34	20	2
Sodium	6,950	mg/L	E200.7	6.25	500	10.00	8050	-11,000	70 - 130	7430	6.62	20	2
Lab Sample ID: 1609036-001BMSD	Date Analyzed:	09/07/2016 1142h											
Test Code: 200.8-DIS	Date Prepared:	09/06/2016 1051h											
Arsenic	0.224	mg/L	E200.8	0.000540	0.00200	0.2000	0.0111	106	75 - 125	0.223	0.452	20	
Beryllium	0.193	mg/L	E200.8	0.000177	0.00200	0.2000	0	96.5	75 - 125	0.195	0.995	20	
Cadmium	0.208	mg/L	E200.8	0.0000666	0.000500	0.2000	0.00503	102	75 - 125	0.21	0.915	20	
Chromium	0.199	mg/L	E200.8	0.000998	0.00200	0.2000	0	99.4	75 - 125	0.197	1.13	20	
Cobalt	0.224	mg/L	E200.8	0.0000990	0.00400	0.2000	0.0313	96.4	75 - 125	0.223	0.568	20	
Copper	0.194	mg/L	E200.8	0.000862	0.00200	0.2000	0.00352	95.2	75 - 125	0.194	0.200	20	
Iron	1.00	mg/L	E200.8	0.0274	0.100	1.000	0.0255	97.5	75 - 125	1	0.189	20	
Lead	0.190	mg/L	E200.8	0.000125	0.00200	0.2000	0.000934	94.7	75 - 125	0.193	1.49	20	
Manganese	1.77	mg/L	E200.8	0.000560	0.00200	0.2000	1.59	94.7	75 - 125	1.76	0.946	20	
Molybdenum	0.222	mg/L	E200.8	0.000202	0.00200	0.2000	0.00109	111	75 - 125	0.224	0.655	20	
Nickel	0.217	mg/L	E200.8	0.000522	0.00200	0.2000	0.0229	97.0	75 - 125	0.217	0.127	20	
Selenium	0.212	mg/L	E200.8	0.000310	0.00200	0.2000	0.00671	103	75 - 125	0.209	1.36	20	
Silver	0.201	mg/L	E200.8	0.000132	0.00200	0.2000	0.0000831	100	75 - 125	0.203	1.28	20	
Thallium	0.187	mg/L	E200.8	0.0000500	0.00200	0.2000	0	93.4	75 - 125	0.19	1.98	20	
Tin	1.05	mg/L	E200.8	0.000372	0.00200	1.000	0	105	75 - 125	1.06	0.617	20	
Uranium	0.204	mg/L	E200.8	0.0000710	0.00200	0.2000	0.00481	99.8	75 - 125	0.205	0.538	20	
Zinc	1.07	mg/L	E200.8	0.00452	0.00500	1.000	0.0535	102	75 - 125	1.05	1.54	20	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: ME
QC Type: MSD

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	**1609037-005EMSD**	Date Analyzed:	09/13/2016 859h											
Test Code:	200.8-DIS	Date Prepared:	09/06/2016 1051h											
Copper		344	mg/L	E200.8	0.431	1.00	0.2000	331	6,100	75 - 125	377	9.17	20	2
Manganese		190	mg/L	E200.8	0.280	1.00	0.2000	184	2,700	75 - 125	210	9.95	20	2
Uranium		119	mg/L	E200.8	0.0355	1.00	0.2000	116	1,040	75 - 125	132	10.4	20	2
Lab Sample ID:	**1609037-005EMSD**	Date Analyzed:	09/13/2016 1103h											
Test Code:	200.8-DIS	Date Prepared:	09/06/2016 1051h											
Iron		2,490	mg/L	E200.8	137	500	1.000	2330	15,200	75 - 125	2640	5.83	20	2
Zinc		527	mg/L	E200.8	22.6	25.0	1.000	502	2,470	75 - 125	552	4.65	20	2
Lab Sample ID:	**1609037-005EMSD**	Date Analyzed:	09/13/2016 1128h											
Test Code:	200.8-DIS	Date Prepared:	09/06/2016 1051h											
Arsenic		44.2	mg/L	E200.8	0.0270	0.100	0.2000	43.5	352	75 - 125	43.8	0.849	20	2
Beryllium		0.463	mg/L	E200.8	0.00886	0.100	0.2000	0.289	87.2	75 - 125	0.458	1.11	20	
Cadmium		4.67	mg/L	E200.8	0.00333	0.0250	0.2000	4.5	88.4	75 - 125	4.61	1.45	20	
Chromium		4.37	mg/L	E200.8	0.0499	0.100	0.2000	4.25	58.8	75 - 125	4.37	0.179	20	2
Cobalt		31.8	mg/L	E200.8	0.00495	0.200	0.2000	32.1	-136	75 - 125	31.9	0.131	20	2
Lead		0.984	mg/L	E200.8	0.00623	0.100	0.2000	0.797	93.7	75 - 125	0.966	1.89	20	
Molybdenum		10.7	mg/L	E200.8	0.0101	0.100	0.2000	10.7	3.23	75 - 125	10.6	1.32	20	2
Nickel		71.5	mg/L	E200.8	0.0261	0.100	0.2000	72.7	-576	75 - 125	71.4	0.188	20	2
Selenium		1.82	mg/L	E200.8	0.0155	0.100	0.2000	1.59	113	75 - 125	1.78	1.89	20	
Silver		0.355	mg/L	E200.8	0.00660	0.100	0.2000	0.144	106	75 - 125	0.344	3.17	20	
Thallium		0.627	mg/L	E200.8	0.00250	0.100	0.2000	0.439	94.0	75 - 125	0.619	1.33	20	
Tin		1.12	mg/L	E200.8	0.0186	0.100	1.000	0.0476	107	75 - 125	1.1	2.29	20	
Lab Sample ID:	**1609037-005EMSD**	Date Analyzed:	09/13/2016 1017h											
Test Code:	HG-DW-DIS-245.1	Date Prepared:	09/12/2016 1500h											
Mercury		0.00324	mg/L	E245.1	0.00000559	0.000150	0.003330	0.00019	91.4	85 - 115	0.00327	1.08	20	

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

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Kyle F. Gross
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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: WC
QC Type: DUP

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1609037-001BDUP Date Analyzed: 09/02/2016 1149h Test Code: COND-W-2510B													
Conductivity	124,000	µmhos/cm	SM2510B	0.542	2.00					123000	0.162	5	
Lab Sample ID: 1609037-001BDUP Date Analyzed: 09/02/2016 1534h Test Code: PH-9040C													
pH @ 25° C	< 1.00	pH Units	SW9040C	1.00	1.00					0	0	10	H
Lab Sample ID: 1609037-006CDUP Date Analyzed: 09/02/2016 1343h Test Code: TDS-W-2540C													
Total Dissolved Solids	170,000	mg/L	SM2540C	438	500					172000	0.878	5	
Lab Sample ID: 1609036-003BDUP Date Analyzed: 09/02/2016 1230h Test Code: TDS-W-2540C													
Total Dissolved Solids	4,390	mg/L	SM2540C	17.5	20.0					4410	0.455	5	
Lab Sample ID: 1609037-005CDUP Date Analyzed: 09/02/2016 1230h Test Code: TDS-W-2540C													
Total Dissolved Solids	93,100	mg/L	SM2540C	438	500					95400	2.44	5	

H - Sample was received outside of the holding time.

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: WC
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R93957 Date Analyzed: 09/14/2016 1234h													
Test Code: 300.0-W													
Chloride	5.27	mg/L	E300.0	0.00516	0.100	5.000	0	105	90 - 110				
Fluoride	5.28	mg/L	E300.0	0.0139	0.100	5.000	0	106	90 - 110				
Sulfate	5.38	mg/L	E300.0	0.0201	0.750	5.000	0	108	90 - 110				
Lab Sample ID: LCS-R93625 Date Analyzed: 09/06/2016 600h													
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	50,000	mg/L	SM2320B	0.504	1.00	50,000	0	100	90 - 110				
Lab Sample ID: LCS-R93596 Date Analyzed: 09/02/2016 1149h													
Test Code: COND-W-2510B													
Conductivity	1,000	µmhos/cm	SM2510B	0.542	2.00	1,000	0	100	98 - 102				
Lab Sample ID: LCS-44833 Date Analyzed: 09/06/2016 1835h													
Test Code: NH3-W-350.1 Date Prepared: 09/06/2016 1050h													
Ammonia (as N)	9.18	mg/L	E350.1	0.0185	0.0500	10.00	0	91.8	90 - 110				
Lab Sample ID: LCS-44882 Date Analyzed: 09/08/2016 1836h													
Test Code: NH3-W-350.1 Date Prepared: 09/08/2016 1300h													
Ammonia (as N)	10.6	mg/L	E350.1	0.0185	0.0500	10.00	0	106	90 - 110				
Lab Sample ID: LCS-R93618 Date Analyzed: 09/02/2016 1722h													
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	0.979	mg/L	E353.2	0.00833	0.0100	1.000	0	97.9	90 - 110				
Lab Sample ID: LCS-R93612 Date Analyzed: 09/02/2016 1534h													
Test Code: PH-9040C													
pH @ 25° C	8.96	pH Units	SW9040C	1.00	1.00	9.000	0	99.6	98 - 102				

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: WC
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-R93646 Date Analyzed: 09/02/2016 1343h Test Code: TDS-W-2540C													
Total Dissolved Solids	202	mg/L	SM2540C	8.77	10.0	205.0	0	98.5	80 - 120				
Lab Sample ID: LCS-R93649 Date Analyzed: 09/02/2016 1230h Test Code: TDS-W-2540C													
Total Dissolved Solids	220	mg/L	SM2540C	8.77	10.0	205.0	0	107	80 - 120				

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: WC
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R93957	Date Analyzed:	09/14/2016 1217h											
Test Code: 300.0-W													
Chloride	< 0.100	mg/L	E300.0	0.00516	0.100								
Fluoride	< 0.100	mg/L	E300.0	0.0139	0.100								
Sulfate	< 0.750	mg/L	E300.0	0.0201	0.750								
Lab Sample ID: MB-R93625	Date Analyzed:	09/06/2016 600h											
Test Code: ALK-W-2320B-LL													
Bicarbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.504	1.00								
Carbonate (as CaCO3)	< 1.00	mg/L	SM2320B	0.504	1.00								
Lab Sample ID: MB-R93596	Date Analyzed:	09/02/2016 1149h											
Test Code: COND-W-2510B													
Conductivity	< 2.00	µmhos/cm	SM2510B	0.542	2.00								
Lab Sample ID: MB-44833	Date Analyzed:	09/06/2016 1835h											
Test Code: NH3-W-350.1	Date Prepared:	09/06/2016 1050h											
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0185	0.0500								
Lab Sample ID: MB-44882	Date Analyzed:	09/08/2016 1835h											
Test Code: NH3-W-350.1	Date Prepared:	09/08/2016 1300h											
Ammonia (as N)	< 0.0500	mg/L	E350.1	0.0185	0.0500								
Lab Sample ID: MB-R93618	Date Analyzed:	09/02/2016 1720h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	< 0.0100	mg/L	E353.2	0.00833	0.0100								
Lab Sample ID: MB-R93646	Date Analyzed:	09/02/2016 1343h											
Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.77	10.0								

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: WC
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-R93649 Date Analyzed: 09/02/2016 1230h Test Code: TDS-W-2540C													
Total Dissolved Solids	< 10.0	mg/L	SM2540C	8.77	10.0								

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: WC
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1609037-005BMS	Date Analyzed:	09/14/2016 1308h											
Test Code: 300.0-W													
Chloride	269,000	mg/L	E300.0	258	5,000	250,000	5200	106	90 - 110				
Fluoride	271,000	mg/L	E300.0	695	5,000	250,000	1150	108	90 - 110				
Sulfate	331,000	mg/L	E300.0	1,000	37,500	250,000	91300	96.1	90 - 110				
Lab Sample ID: 1609037-001BMS	Date Analyzed:	09/06/2016 600h											
Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	< 1.00	mg/L	SM2320B	0.504	1.00	250.0	0	0	80 - 120				[1]
Lab Sample ID: 1608614-002EMS	Date Analyzed:	09/06/2016 1849h											
Test Code: NH3-W-350.1	Date Prepared:	09/06/2016 1050h											
Ammonia (as N)	14.4	mg/L	E350.1	0.0206	0.0556	11.11	0.169	128	90 - 110				[1]
Lab Sample ID: 1608594-005AMS	Date Analyzed:	09/06/2016 1837h											
Test Code: NH3-W-350.1	Date Prepared:	09/06/2016 1050h											
Ammonia (as N)	14.4	mg/L	E350.1	0.0206	0.0556	11.11	0.193	128	90 - 110				[1]
Lab Sample ID: 1609037-005DMS	Date Analyzed:	09/08/2016 1846h											
Test Code: NH3-W-350.1	Date Prepared:	09/08/2016 1300h											
Ammonia (as N)	6,520	mg/L	E350.1	10.3	27.8	1,000	5050	148	90 - 110				[2]
Lab Sample ID: 1609037-005DMS	Date Analyzed:	09/02/2016 1753h											
Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	117	mg/L	E353.2	0.833	1.00	100.0	40.9	76.1	90 - 110				[3]

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

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

[3] - Matrix spike recoveries and/or high RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.

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Jose Rocha
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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: WC
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1609037-005BMSD Date Analyzed: 09/14/2016 1325h Test Code: 300.0-W													
Chloride	273,000	mg/L	E300.0	258	5,000	250,000	5200	107	90 - 110	269000	1.25	20	
Fluoride	276,000	mg/L	E300.0	695	5,000	250,000	1150	110	90 - 110	271000	1.69	20	
Sulfate	332,000	mg/L	E300.0	1,000	37,500	250,000	91300	96.3	90 - 110	331000	0.171	20	
Lab Sample ID: 1609037-001BMSD Date Analyzed: 09/06/2016 600h Test Code: ALK-W-2320B-LL													
Alkalinity (as CaCO3)	< 1.00	mg/L	SM2320B	0.504	1.00	250.0	0	0	80 - 120	0	0	10	[1]
Lab Sample ID: 1608594-005AMSD Date Analyzed: 09/06/2016 1847h Test Code: NH3-W-350.1 Date Prepared: 09/06/2016 1050h													
Ammonia (as N)	14.4	mg/L	E350.1	0.0206	0.0556	11.11	0.193	128	90 - 110	14.4	0.154	10	[1]
Lab Sample ID: 1608614-002EMSD Date Analyzed: 09/06/2016 1849h Test Code: NH3-W-350.1 Date Prepared: 09/06/2016 1050h													
Ammonia (as N)	14.2	mg/L	E350.1	0.0206	0.0556	11.11	0.169	126	90 - 110	14.4	1.56	10	[1]
Lab Sample ID: 1609037-005DMSD Date Analyzed: 09/08/2016 1847h Test Code: NH3-W-350.1 Date Prepared: 09/08/2016 1300h													
Ammonia (as N)	6,530	mg/L	E350.1	10.3	27.8	1,000	5050	149	90 - 110	6520	0.153	10	[2]
Lab Sample ID: 1609037-005DMSD Date Analyzed: 09/02/2016 1754h Test Code: NO2/NO3-W-353.2													
Nitrate/Nitrite (as N)	117	mg/L	E353.2	0.833	1.00	100.0	40.9	76.5	90 - 110	117	0.341	10	[3]

[1] - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.
[2] - Analyte concentration is too high for accurate matrix spike recovery and/or RPD.
[3] - Matrix spike recoveries and/or high RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.

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Jose Rocha
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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSSV
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS-44821	Date Analyzed:	09/07/2016 1518h											
Test Code: 8270-W	Date Prepared:	09/02/2016 1059h											
1,2,4-Trichlorobenzene	27.7	µg/L	SW8270D	0.687	10.0	80.00	0	34.6	10 - 85				
1,4-Dichlorobenzene	22.3	µg/L	SW8270D	0.612	10.0	80.00	0	27.9	10 - 86				
2,4,6-Trichlorophenol	63.6	µg/L	SW8270D	1.06	10.0	80.00	0	79.5	46 - 109				
2,4-Dimethylphenol	58.3	µg/L	SW8270D	1.63	10.0	80.00	0	72.9	35 - 98				
2,4-Dinitrotoluene	72.0	µg/L	SW8270D	0.648	10.0	80.00	0	90.0	10 - 117				
2-Chloronaphthalene	40.5	µg/L	SW8270D	0.949	10.0	80.00	0	50.6	13 - 112				
2-Chlorophenol	42.0	µg/L	SW8270D	1.21	10.0	80.00	0	52.5	21 - 91				
4,6-Dinitro-2-methylphenol	70.4	µg/L	SW8270D	3.27	10.0	80.00	0	88.1	27 - 118				
4-Chloro-3-methylphenol	63.8	µg/L	SW8270D	1.55	10.0	80.00	0	79.8	48 - 108				
4-Nitrophenol	15.1	µg/L	SW8270D	0.105	10.0	80.00	0	18.8	10 - 87				
Acenaphthene	52.3	µg/L	SW8270D	1.02	10.0	80.00	0	65.4	28 - 115				
Benzo(a)pyrene	100	µg/L	SW8270D	1.28	10.0	80.00	0	125	35 - 155				
N-Nitrosodi-n-propylamine	55.0	µg/L	SW8270D	1.08	10.0	80.00	0	68.8	22 - 101				
Pentachlorophenol	57.2	µg/L	SW8270D	1.42	10.0	80.00	0	71.5	33 - 114				
Phenol	14.4	µg/L	SW8270D	3.74	10.0	80.00	0	18.0	10 - 61				
Pyrene	65.8	µg/L	SW8270D	1.19	10.0	80.00	0	82.3	44 - 128				
Surr: 2,4,6-Tribromophenol	68.0	µg/L	SW8270D			80.00		85.0	10 - 165				
Surr: 2-Fluorobiphenyl	26.0	µg/L	SW8270D			40.00		65.0	10 - 118				
Surr: 2-Fluorophenol	19.3	µg/L	SW8270D			80.00		24.1	10 - 121				
Surr: Nitrobenzene-d5	26.8	µg/L	SW8270D			40.00		67.1	10 - 127				
Surr: Phenol-d6	13.9	µg/L	SW8270D			80.00		17.4	10 - 124				
Surr: Terphenyl-d14	35.4	µg/L	SW8270D			40.00		88.6	30 - 147				

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSSV
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-44821	Date Analyzed:	09/07/2016 1452h											
Test Code: 8270-W	Date Prepared:	09/02/2016 1059h											
1,2,4-Trichlorobenzene	< 10.0	µg/L	SW8270D	0.687	10.0								
1,2-Dichlorobenzene	< 10.0	µg/L	SW8270D	0.667	10.0								
1,3-Dichlorobenzene	< 10.0	µg/L	SW8270D	1.05	10.0								
1,4-Dichlorobenzene	< 10.0	µg/L	SW8270D	0.612	10.0								
1-Methylnaphthalene	< 10.0	µg/L	SW8270D	8.60	10.0								
2,4,5-Trichlorophenol	< 10.0	µg/L	SW8270D	1.17	10.0								
2,4,6-Trichlorophenol	< 10.0	µg/L	SW8270D	1.06	10.0								
2,4-Dichlorophenol	< 10.0	µg/L	SW8270D	1.18	10.0								
2,4-Dimethylphenol	< 10.0	µg/L	SW8270D	1.63	10.0								
2,4-Dinitrophenol	< 10.0	µg/L	SW8270D	7.24	10.0								
2,4-Dinitrotoluene	< 10.0	µg/L	SW8270D	0.648	10.0								
2,6-Dinitrotoluene	< 10.0	µg/L	SW8270D	2.32	10.0								
2-Chloronaphthalene	< 10.0	µg/L	SW8270D	0.949	10.0								
2-Chlorophenol	< 10.0	µg/L	SW8270D	1.21	10.0								
2-Methylnaphthalene	< 10.0	µg/L	SW8270D	0.943	10.0								
2-Methylphenol	< 10.0	µg/L	SW8270D	2.91	10.0								
2-Nitrophenol	< 10.0	µg/L	SW8270D	2.56	10.0								
3&4-Methylphenol	< 10.0	µg/L	SW8270D	1.99	10.0								
3,3'-Dichlorobenzidine	< 10.0	µg/L	SW8270D	1.74	10.0								
4,6-Dinitro-2-methylphenol	< 10.0	µg/L	SW8270D	3.27	10.0								
4-Bromophenyl phenyl ether	< 10.0	µg/L	SW8270D	2.05	10.0								
4-Chloro-3-methylphenol	< 10.0	µg/L	SW8270D	1.55	10.0								
4-Chlorophenyl phenyl ether	< 10.0	µg/L	SW8270D	1.05	10.0								
4-Nitrophenol	< 10.0	µg/L	SW8270D	0.105	10.0								
Acenaphthene	< 10.0	µg/L	SW8270D	1.02	10.0								
Acenaphthylene	< 10.0	µg/L	SW8270D	0.924	10.0								
Anthracene	< 10.0	µg/L	SW8270D	0.925	10.0								

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSSV
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-44821	Date Analyzed:	09/07/2016 1452h											
Test Code: 8270-W	Date Prepared:	09/02/2016 1059h											
Azobenzene	< 10.0	µg/L	SW8270D	0.923	10.0								
Benz(a)anthracene	< 10.0	µg/L	SW8270D	1.46	10.0								
Benzidine	< 10.0	µg/L	SW8270D	5.45	10.0								
Benzo(a)pyrene	< 10.0	µg/L	SW8270D	1.28	10.0								
Benzo(b)fluoranthene	< 10.0	µg/L	SW8270D	1.89	10.0								
Benzo(g,h,i)perylene	< 10.0	µg/L	SW8270D	3.03	10.0								
Benzo(k)fluoranthene	< 10.0	µg/L	SW8270D	2.92	10.0								
Bis(2-chloroethoxy)methane	< 10.0	µg/L	SW8270D	0.982	10.0								
Bis(2-chloroethyl) ether	< 10.0	µg/L	SW8270D	1.22	10.0								
Bis(2-chloroisopropyl) ether	< 10.0	µg/L	SW8270D	0.886	10.0								
Bis(2-ethylhexyl) phthalate	< 10.0	µg/L	SW8270D	2.31	10.0								
Butyl benzyl phthalate	< 10.0	µg/L	SW8270D	1.16	10.0								
Chrysene	< 10.0	µg/L	SW8270D	1.76	10.0								
Dibenz(a,h)anthracene	< 10.0	µg/L	SW8270D	2.76	10.0								
Diethyl phthalate	< 10.0	µg/L	SW8270D	1.99	10.0								
Dimethyl phthalate	< 10.0	µg/L	SW8270D	2.74	10.0								
Di-n-butyl phthalate	< 10.0	µg/L	SW8270D	1.16	10.0								
Di-n-octyl phthalate	< 10.0	µg/L	SW8270D	0.933	10.0								
Fluoranthene	< 10.0	µg/L	SW8270D	1.09	10.0								
Fluorene	< 10.0	µg/L	SW8270D	0.914	10.0								
Hexachlorobenzene	< 10.0	µg/L	SW8270D	0.722	10.0								
Hexachlorobutadiene	< 10.0	µg/L	SW8270D	3.93	10.0								
Hexachlorocyclopentadiene	< 10.0	µg/L	SW8270D	6.51	10.0								
Hexachloroethane	< 10.0	µg/L	SW8270D	3.83	10.0								
Indeno(1,2,3-cd)pyrene	< 10.0	µg/L	SW8270D	1.77	10.0								
Isophorone	< 10.0	µg/L	SW8270D	1.05	10.0								
Naphthalene	< 10.0	µg/L	SW8270D	0.910	10.0								

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSSV
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-44821	Date Analyzed:	09/07/2016 1452h											
Test Code: 8270-W	Date Prepared:	09/02/2016 1059h											
Nitrobenzene	< 10.0	µg/L	SW8270D	2.58	10.0								
N-Nitrosodimethylamine	< 10.0	µg/L	SW8270D	3.49	10.0								
N-Nitrosodi-n-propylamine	< 10.0	µg/L	SW8270D	1.08	10.0								
N-Nitrosodiphenylamine	< 10.0	µg/L	SW8270D	1.02	10.0								
Pentachlorophenol	< 10.0	µg/L	SW8270D	1.42	10.0								
Phenanthrene	< 10.0	µg/L	SW8270D	0.995	10.0								
Phenol	< 10.0	µg/L	SW8270D	3.74	10.0								
Pyrene	< 10.0	µg/L	SW8270D	1.19	10.0								
Pyridine	< 10.0	µg/L	SW8270D	7.79	10.0								
Surr: 2,4,6-Tribromophenol	44.8	µg/L	SW8270D			80.00		56.0	10 - 165				
Surr: 2-Fluorobiphenyl	12.3	µg/L	SW8270D			40.00		30.8	10 - 118				
Surr: 2-Fluorophenol	10.6	µg/L	SW8270D			80.00		13.3	10 - 121				
Surr: Nitrobenzene-d5	11.4	µg/L	SW8270D			40.00		28.6	10 - 127				
Surr: Phenol-d6	6.97	µg/L	SW8270D			80.00		8.71	10 - 124				S
Surr: Terphenyl-d14	35.6	µg/L	SW8270D			40.00		89.0	30 - 147				

S - Surrogate recoveries are outside of the control limits in MB-44821. Method blanks are used to determine contamination in the samples. As none of the samples in the batch had analytical results above reporting limits for the compounds associated with this surrogate, the data were deemed acceptable.

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSSV
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1609037-005FMS	Date Analyzed:	09/07/2016 1753h											
Test Code: 8270-W	Date Prepared:	09/02/2016 1059h											
1,2,4-Trichlorobenzene	23.2	µg/L	SW8270D	0.687	10.0	80.00	0	29.0	20 - 107				
1,4-Dichlorobenzene	16.8	µg/L	SW8270D	0.612	10.0	80.00	0	21.1	11 - 90				
2,4,6-Trichlorophenol	68.9	µg/L	SW8270D	1.06	10.0	80.00	0	86.1	10 - 223				
2,4-Dimethylphenol	49.0	µg/L	SW8270D	1.63	10.0	80.00	0	61.2	10 - 176				
2,4-Dinitrotoluene	10.8	µg/L	SW8270D	0.648	10.0	80.00	0	13.6	21 - 191				1
2-Chloronaphthalene	39.5	µg/L	SW8270D	0.949	10.0	80.00	0	49.4	12 - 132				
2-Chlorophenol	51.5	µg/L	SW8270D	1.21	10.0	80.00	0	64.4	20 - 107				
4,6-Dinitro-2-methylphenol	5.48	µg/L	SW8270D	3.27	10.0	80.00	0	6.85	20 - 250				1
4-Chloro-3-methylphenol	67.9	µg/L	SW8270D	1.55	10.0	80.00	0	84.8	10 - 136				
4-Nitrophenol	< 10.0	µg/L	SW8270D	0.105	10.0	80.00	0	0	10 - 135				1
Acenaphthene	50.8	µg/L	SW8270D	1.02	10.0	80.00	0	63.5	21 - 113				
Benzo(a)pyrene	84.2	µg/L	SW8270D	1.28	10.0	80.00	0	105	15 - 169				
N-Nitrosodi-n-propylamine	55.3	µg/L	SW8270D	1.08	10.0	80.00	0	69.1	10 - 133				
Pentachlorophenol	66.1	µg/L	SW8270D	1.42	10.0	80.00	0	82.6	10 - 131				
Phenol	42.8	µg/L	SW8270D	3.74	10.0	80.00	0	53.6	10 - 71				
Pyrene	62.2	µg/L	SW8270D	1.19	10.0	80.00	0	77.7	23 - 150				
Surr: 2,4,6-Tribromophenol	67.4	µg/L	SW8270D			80.00		84.2	14 - 159				
Surr: 2-Fluorobiphenyl	23.1	µg/L	SW8270D			40.00		57.7	10 - 124				
Surr: 2-Fluorophenol	39.6	µg/L	SW8270D			80.00		49.4	10 - 106				
Surr: Nitrobenzene-d5	13.2	µg/L	SW8270D			40.00		33.0	10 - 180				
Surr: Phenol-d6	37.3	µg/L	SW8270D			80.00		46.7	10 - 122				
Surr: Terphenyl-d14	33.8	µg/L	SW8270D			40.00		84.6	10 - 221				

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

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSSV
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1609037-005FMSD	Date Analyzed:	09/07/2016 1819h											
Test Code: 8270-W	Date Prepared:	09/02/2016 1059h											
1,2,4-Trichlorobenzene	24.7	µg/L	SW8270D	0.687	10.0	80.00	0	30.8	20 - 107	23.2	5.97	25	
1,4-Dichlorobenzene	18.0	µg/L	SW8270D	0.612	10.0	80.00	0	22.4	11 - 90	16.9	6.38	25	
2,4,6-Trichlorophenol	62.3	µg/L	SW8270D	1.06	10.0	80.00	0	77.9	10 - 223	68.9	10.0	25	
2,4-Dimethylphenol	61.2	µg/L	SW8270D	1.63	10.0	80.00	0	76.5	10 - 176	49	22.2	25	
2,4-Dinitrotoluene	8.87	µg/L	SW8270D	0.648	10.0	80.00	0	11.1	21 - 191	10.8	20.0	25	'
2-Chloronaphthalene	37.5	µg/L	SW8270D	0.949	10.0	80.00	0	46.9	12 - 132	39.5	5.11	25	
2-Chlorophenol	50.0	µg/L	SW8270D	1.21	10.0	80.00	0	62.5	20 - 107	51.5	2.94	25	
4,6-Dinitro-2-methylphenol	4.62	µg/L	SW8270D	3.27	10.0	80.00	0	5.78	20 - 250	5.48	17.0	25	'
4-Chloro-3-methylphenol	66.9	µg/L	SW8270D	1.55	10.0	80.00	0	83.7	10 - 136	67.9	1.41	25	
4-Nitrophenol	2.52	µg/L	SW8270D	0.105	10.0	80.00	0	3.15	10 - 135	0	200	25	'@
Acenaphthene	47.1	µg/L	SW8270D	1.02	10.0	80.00	0	58.8	21 - 113	50.8	7.58	25	
Benzo(a)pyrene	87.7	µg/L	SW8270D	1.28	10.0	80.00	0	110	15 - 169	84.2	4.00	25	
N-Nitrosodi-n-propylamine	61.6	µg/L	SW8270D	1.08	10.0	80.00	0	77.1	10 - 133	55.3	10.9	25	
Pentachlorophenol	61.2	µg/L	SW8270D	1.42	10.0	80.00	0	76.5	10 - 131	66.1	7.73	25	
Phenol	32.0	µg/L	SW8270D	3.74	10.0	80.00	0	40.0	10 - 71	42.9	29.0	25	@
Pyrene	67.9	µg/L	SW8270D	1.19	10.0	80.00	0	84.9	23 - 150	62.2	8.84	25	
Surr: 2,4,6-Tribromophenol	64.3	µg/L	SW8270D			80.00		80.4	14 - 159				
Surr: 2-Fluorobiphenyl	22.9	µg/L	SW8270D			40.00		57.3	10 - 124				
Surr: 2-Fluorophenol	31.1	µg/L	SW8270D			80.00		38.9	10 - 106				
Surr: Nitrobenzene-d5	11.3	µg/L	SW8270D			40.00		28.2	10 - 180				
Surr: Phenol-d6	26.9	µg/L	SW8270D			80.00		33.6	10 - 122				
Surr: Terphenyl-d14	35.2	µg/L	SW8270D			40.00		88.0	10 - 221				

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

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

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSVOA
QC Type: LCS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: LCS VOC-3 090216A Date Analyzed: 09/02/2016 945h													
Test Code: 8260-W-DEN100													
Benzene	19.1	µg/L	SW8260C	0.270	1.00	20.00	0	95.4	82 - 132				
Chloroform	19.6	µg/L	SW8260C	0.153	1.00	20.00	0	97.8	85 - 124				
Methylene chloride	20.2	µg/L	SW8260C	0.172	1.00	20.00	0	101	71 - 135				
Naphthalene	13.0	µg/L	SW8260C	0.587	1.00	20.00	0	65.2	63 - 129				
Tetrahydrofuran	21.9	µg/L	SW8260C	0.516	1.00	20.00	0	110	59 - 120				
Toluene	18.0	µg/L	SW8260C	0.183	1.00	20.00	0	89.8	78 - 130				
Xylenes, Total	50.3	µg/L	SW8260C	0.857	1.00	60.00	0	83.8	70 - 138				
Surr: 1,2-Dichloroethane-d4	54.6	µg/L	SW8260C			50.00		109	80 - 122				
Surr: 4-Bromofluorobenzene	47.8	µg/L	SW8260C			50.00		95.7	85 - 121				
Surr: Dibromofluoromethane	52.2	µg/L	SW8260C			50.00		104	80 - 116				
Surr: Toluene-d8	48.8	µg/L	SW8260C			50.00		97.5	81 - 123				
Lab Sample ID: LCS VOC-3 090616A Date Analyzed: 09/06/2016 1038h													
Test Code: 8260-W-DEN100													
Benzene	22.5	µg/L	SW8260C	0.270	1.00	20.00	0	112	82 - 132				
Chloroform	23.2	µg/L	SW8260C	0.153	1.00	20.00	0	116	85 - 124				
Methylene chloride	22.8	µg/L	SW8260C	0.172	1.00	20.00	0	114	71 - 135				
Naphthalene	14.8	µg/L	SW8260C	0.587	1.00	20.00	0	74.2	63 - 129				
Tetrahydrofuran	19.3	µg/L	SW8260C	0.516	1.00	20.00	0	96.6	59 - 120				
Toluene	22.7	µg/L	SW8260C	0.183	1.00	20.00	0	114	78 - 130				
Xylenes, Total	67.6	µg/L	SW8260C	0.857	1.00	60.00	0	113	70 - 138				
Surr: 1,2-Dichloroethane-d4	55.9	µg/L	SW8260C			50.00		112	80 - 122				
Surr: 4-Bromofluorobenzene	47.2	µg/L	SW8260C			50.00		94.4	85 - 121				
Surr: Dibromofluoromethane	54.2	µg/L	SW8260C			50.00		108	80 - 116				
Surr: Toluene-d8	50.7	µg/L	SW8260C			50.00		101	81 - 123				

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Jose Rocha
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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSVOA
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB VOC-3 090216A Date Analyzed: 09/02/2016 1026h													
Test Code: 8260-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260C	4.11	20.0								
Acetone	< 20.0	µg/L	SW8260C	1.70	20.0								
Benzene	< 1.00	µg/L	SW8260C	0.270	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260C	0.504	1.00								
Chloroform	< 1.00	µg/L	SW8260C	0.153	1.00								
Chloromethane	< 1.00	µg/L	SW8260C	0.163	1.00								
Methylene chloride	< 1.00	µg/L	SW8260C	0.172	1.00								
Naphthalene	< 1.00	µg/L	SW8260C	0.587	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260C	0.516	1.00								
Toluene	< 1.00	µg/L	SW8260C	0.183	1.00								
Xylenes, Total	< 1.00	µg/L	SW8260C	0.857	1.00								
Surr: 1,2-Dichloroethane-d4	55.9	µg/L	SW8260C			50.00		112	80 - 122				
Surr: 4-Bromofluorobenzene	56.3	µg/L	SW8260C			50.00		113	85 - 121				
Surr: Dibromofluoromethane	53.2	µg/L	SW8260C			50.00		106	80 - 116				
Surr: Toluene-d8	50.7	µg/L	SW8260C			50.00		101	81 - 123				
Lab Sample ID: MB VOC-3 090616A Date Analyzed: 09/06/2016 1118h													
Test Code: 8260-W-DEN100													
2-Butanone	< 20.0	µg/L	SW8260C	4.11	20.0								
Acetone	< 20.0	µg/L	SW8260C	1.70	20.0								
Benzene	< 1.00	µg/L	SW8260C	0.270	1.00								
Carbon tetrachloride	< 1.00	µg/L	SW8260C	0.504	1.00								
Chloroform	< 1.00	µg/L	SW8260C	0.153	1.00								
Chloromethane	< 1.00	µg/L	SW8260C	0.163	1.00								
Methylene chloride	< 1.00	µg/L	SW8260C	0.172	1.00								
Naphthalene	< 1.00	µg/L	SW8260C	0.587	1.00								
Tetrahydrofuran	< 1.00	µg/L	SW8260C	0.516	1.00								
Toluene	< 1.00	µg/L	SW8260C	0.183	1.00								

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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSVOA
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB VOC-3 090616A	Date Analyzed:	09/06/2016 1118h											
Test Code: 8260-W-DEN100													
Xylenes, Total	< 1.00	µg/L	SW8260C	0.857	1.00								
Surr: 1,2-Dichloroethane-d4	55.8	µg/L	SW8260C			50.00		112	80 - 122				
Surr: 4-Bromofluorobenzene	48.7	µg/L	SW8260C			50.00		97.5	85 - 121				
Surr: Dibromofluoromethane	52.5	µg/L	SW8260C			50.00		105	80 - 116				
Surr: Toluene-d8	61.7	µg/L	SW8260C			50.00		123	81 - 123				

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSVOA
QC Type: MS

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1609037-005AMS Date Analyzed: 09/02/2016 2011h													
Test Code: 8260-W-DEN100													
Benzene	14.3	µg/L	SW8260C	0.270	1.00	20.00	0	71.4	66 - 145				
Chloroform	104	µg/L	SW8260C	0.153	1.00	20.00	84.5	95.8	50 - 146				
Methylene chloride	17.5	µg/L	SW8260C	0.172	1.00	20.00	0	87.5	30 - 192				
Naphthalene	20.4	µg/L	SW8260C	0.587	1.00	20.00	0	102	41 - 131				
Tetrahydrofuran	32.7	µg/L	SW8260C	0.516	1.00	20.00	12.6	100	43 - 146				
Toluene	14.9	µg/L	SW8260C	0.183	1.00	20.00	0	74.4	18 - 192				
Xylenes, Total	34.7	µg/L	SW8260C	0.857	1.00	60.00	0	57.8	42 - 167				
Surr: 1,2-Dichloroethane-d4	54.9	µg/L	SW8260C			50.00		110	72 - 151				
Surr: 4-Bromofluorobenzene	47.2	µg/L	SW8260C			50.00		94.4	80 - 152				
Surr: Dibromofluoromethane	52.2	µg/L	SW8260C			50.00		104	80 - 124				
Surr: Toluene-d8	55.2	µg/L	SW8260C			50.00		110	77 - 129				
Lab Sample ID: 1609037-002AMS Date Analyzed: 09/06/2016 1236h													
Test Code: 8260-W-DEN100													
Benzene	211	µg/L	SW8260C	2.70	10.0	200.0	0	106	66 - 145				
Chloroform	235	µg/L	SW8260C	1.53	10.0	200.0	15	110	50 - 146				
Methylene chloride	220	µg/L	SW8260C	1.72	10.0	200.0	0	110	30 - 192				
Naphthalene	177	µg/L	SW8260C	5.87	10.0	200.0	11.9	82.6	41 - 131				
Tetrahydrofuran	197	µg/L	SW8260C	5.16	10.0	200.0	0	98.6	43 - 146				
Toluene	207	µg/L	SW8260C	1.83	10.0	200.0	2.94	102	18 - 192				
Xylenes, Total	588	µg/L	SW8260C	8.57	10.0	600.0	0	98.0	42 - 167				
Surr: 1,2-Dichloroethane-d4	559	µg/L	SW8260C			500.0		112	72 - 151				
Surr: 4-Bromofluorobenzene	444	µg/L	SW8260C			500.0		88.8	80 - 152				
Surr: Dibromofluoromethane	535	µg/L	SW8260C			500.0		107	80 - 124				
Surr: Toluene-d8	494	µg/L	SW8260C			500.0		98.7	77 - 129				

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QC SUMMARY REPORT

Client: Energy Fuels Resources, Inc.
Lab Set ID: 1609037
Project: Annual Tailings 2016

Contact: Garrin Palmer
Dept: MSVOA
QC Type: MSD

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: 1609037-005AMSD Date Analyzed: 09/02/2016 2032h													
Test Code: 8260-W-DEN100													
Benzene	14.5	µg/L	SW8260C	0.270	1.00	20.00	0	72.4	66 - 145	14.3	1.39	25	
Chloroform	105	µg/L	SW8260C	0.153	1.00	20.00	84.5	103	50 - 146	104	1.41	25	
Methylene chloride	17.4	µg/L	SW8260C	0.172	1.00	20.00	0	87.1	30 - 192	17.5	0.401	25	
Naphthalene	22.6	µg/L	SW8260C	0.587	1.00	20.00	0	113	41 - 131	20.4	10.6	25	
Tetrahydrofuran	33.7	µg/L	SW8260C	0.516	1.00	20.00	12.6	105	43 - 146	32.7	2.92	25	
Toluene	13.6	µg/L	SW8260C	0.183	1.00	20.00	0	68.0	18 - 192	14.9	8.99	25	
Xylenes, Total	35.1	µg/L	SW8260C	0.857	1.00	60.00	0	58.4	42 - 167	34.7	1.15	25	
Surr: 1,2-Dichloroethane-d4	55.6	µg/L	SW8260C			50.00		111	72 - 151				
Surr: 4-Bromofluorobenzene	48.6	µg/L	SW8260C			50.00		97.2	80 - 152				
Surr: Dibromofluoromethane	51.7	µg/L	SW8260C			50.00		103	80 - 124				
Surr: Toluene-d8	51.0	µg/L	SW8260C			50.00		102	77 - 129				
Lab Sample ID: 1609037-002AMSD Date Analyzed: 09/06/2016 1256h													
Test Code: 8260-W-DEN100													
Benzene	207	µg/L	SW8260C	2.70	10.0	200.0	0	104	66 - 145	211	1.96	25	
Chloroform	229	µg/L	SW8260C	1.53	10.0	200.0	15	107	50 - 146	235	2.76	25	
Methylene chloride	218	µg/L	SW8260C	1.72	10.0	200.0	0	109	30 - 192	220	0.775	25	
Naphthalene	183	µg/L	SW8260C	5.87	10.0	200.0	11.9	85.4	41 - 131	177	3.06	25	
Tetrahydrofuran	216	µg/L	SW8260C	5.16	10.0	200.0	0	108	43 - 146	197	8.91	25	
Toluene	204	µg/L	SW8260C	1.83	10.0	200.0	2.94	101	18 - 192	207	1.36	25	
Xylenes, Total	566	µg/L	SW8260C	8.57	10.0	600.0	0	94.3	42 - 167	588	3.88	25	
Surr: 1,2-Dichloroethane-d4	578	µg/L	SW8260C			500.0		116	72 - 151				
Surr: 4-Bromofluorobenzene	436	µg/L	SW8260C			500.0		87.2	80 - 152				
Surr: Dibromofluoromethane	545	µg/L	SW8260C			500.0		109	80 - 124				
Surr: Toluene-d8	495	µg/L	SW8260C			500.0		99.1	77 - 129				

American West Analytical Laboratories

UL
Denison

WORK ORDER Summary

Work Order: **1609037**

Client: Energy Fuels Resources, Inc. Due Date: 9/19/2016

Client ID: DEN100 **Contact:** Garrin Palmer

Project: **Annual Tailings 2016** **QC Level:** III WO Type: Project

Comments: QC 3 (Summary/No chromatograms). Use CAUTION when handling these samples. Project specific DL's: see COC. Run 200.8 on the Agilent. 8270 LIBRARY SEARCH: 4-Chlorophenol. EDD-Denison. Footnote report, pH and filter prep received outside of hold. Use Sample #5 for the MS/MSD. Email Group.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1609037-001A	**Cell 1**	8/30/2016 0830h	9/2/2016 1005h	**8260-W-DEN100**	Aqueous		VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4				
1609037-001B				**300.0-W**			DF - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B-LL			DF - wc	
				2 SEL Analytes: ALKB ALKC				
				COND-W-2510B			DF - wc	
				PH-9040C			DF - wc	
1609037-001C				**TDS-W-2540C**			ww - tds	
				1 SEL Analytes: TDS				
1609037-001D				**NH3-W-350.1**			DF - no2/no3 & nh3	2
				1 SEL Analytes: NH3N				
				NH3-W-PR			DF - no2/no3 & nh3	
				NO2/NO3-W-353.2			DF - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1609037-001E				**200.7-DIS**			DIS MET/HG	
				5 SEL Analytes: CA MG K NA V				
				200.7-DIS-PR			DIS MET/HG	
				200.8-DIS			DIS MET/HG	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN				
				200.8-DIS-PR			DIS MET/HG	
				FILTER-PR			DIS MET/HG	
				HG-DW-DIS-245.1			DIS MET/HG	
				1 SEL Analytes: HG				
				HG-DW-DIS-PR			DIS MET/HG	
				IONBALANCE			DIS MET/HG	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1609037-001F				**3510-SVOA-PR**			Walkin-Semi	
				8270-W			Walkin-Semi	
				Test Group: 8270-W-Custom; # of Analytes: 63 / # of Surr: 6				

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WORK ORDER Summary

Work Order: **1609037**

Client: Energy Fuels Resources, Inc. Due Date: 9/19/2016

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1609037-002A	**Cell 2 Slimes**	8/30/2016 0850h	9/2/2016 1005h	**8260-W-DEN100**	Aqueous		VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4				
1609037-002B				**300.0-W**			DF - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B-LL			DF - wc	
				2 SEL Analytes: ALKB ALKC				
				COND-W-2510B			DF - wc	
				PH-9040C			DF - wc	
1609037-002C				**TDS-W-2540C**			ww - tds	
				1 SEL Analytes: TDS				
1609037-002D				**NH3-W-350.1**			DF - no2/no3 & nh3	2
				1 SEL Analytes: NH3N				
				NH3-W-PR			DF - no2/no3 & nh3	
				NO2/NO3-W-353.2			DF - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1609037-002E				**200.7-DIS**			DIS MET/HG	
				5 SEL Analytes: CA MG K NA V				
				200.7-DIS-PR			DIS MET/HG	
				200.8-DIS			DIS MET/HG	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN				
				200.8-DIS-PR			DIS MET/HG	
				FILTER-PR			DIS MET/HG	
				HG-DW-DIS-245.1			DIS MET/HG	
				1 SEL Analytes: HG				
				HG-DW-DIS-PR			DIS MET/HG	
				IONBALANCE			DIS MET/HG	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1609037-002F				**3510-SVOA-PR**			Walkin-Semi	
				8270-W			Walkin-Semi	
				Test Group: 8270-W-Custom; # of Analytes: 63 / # of Surr: 6				
1609037-003A	**Cell 3**	8/30/2016 0915h	9/2/2016 1005h	**8260-W-DEN100**	Aqueous		VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4				
1609037-003B				**300.0-W**			DF - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B-LL			DF - wc	
				2 SEL Analytes: ALKB ALKC				
				COND-W-2510B			DF - wc	
				PH-9040C			DF - wc	

WORK ORDER Summary

Work Order: **1609037**

Client: Energy Fuels Resources, Inc. Due Date: 9/19/2016

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1609037-003C	**Cell 3**	8/30/2016 0915h	9/2/2016 1005h	**TDS-W-2540C**	Aqueous		ww - tds	1
				1 SEL Analytes: TDS				
1609037-003D				**NH3-W-350.1**			DF - no2/no3 & nh3	2
				1 SEL Analytes: NH3N				
				NH3-W-PR			DF - no2/no3 & nh3	
				NO2/NO3-W-353.2			DF - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1609037-003E				**200.7-DIS**			DIS MET/HG	
				5 SEL Analytes: CA MG K NA V				
				200.7-DIS-PR			DIS MET/HG	
				200.8-DIS			DIS MET/HG	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN				
				200.8-DIS-PR			DIS MET/HG	
				FILTER-PR			DIS MET/HG	
				HG-DW-DIS-245.1			DIS MET/HG	
				1 SEL Analytes: HG				
				HG-DW-DIS-PR			DIS MET/HG	
				IONBALANCE			DIS MET/HG	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1609037-003F				**3510-SVOA-PR**			Walkin-Semi	
				8270-W			Walkin-Semi	
				Test Group: 8270-W-Custom; # of Analytes: 63 / # of Surr: 6				
1609037-004A	**Cell 4A**	8/30/2016 1000h	9/2/2016 1005h	**8260-W-DEN100**	Aqueous		VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4				
1609037-004B				**300.0-W**			DF - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B-LL			DF - wc	
				2 SEL Analytes: ALKB ALKC				
				COND-W-2510B			DF - wc	
				PH-9040C			DF - wc	
1609037-004C				**TDS-W-2540C**			ww - tds	
				1 SEL Analytes: TDS				
1609037-004D				**NH3-W-350.1**			DF - no2/no3 & nh3	2
				1 SEL Analytes: NH3N				
				NH3-W-PR			DF - no2/no3 & nh3	
				NO2/NO3-W-353.2			DF - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				

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WORK ORDER Summary

Work Order: **1609037**

Client: Energy Fuels Resources, Inc. Due Date: 9/19/2016

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1609037-004E	**Cell 4A**	8/30/2016 1000h	9/2/2016 1005h	**200.7-DIS**	Aqueous		DIS MET/HG	2
				5 SEL Analytes: CA MG K NA V				
				200.7-DIS-PR			DIS MET/HG	
				200.8-DIS			DIS MET/HG	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN				
				200.8-DIS-PR			DIS MET/HG	
				FILTER-PR			DIS MET/HG	
				HG-DW-DIS-245.1			DIS MET/HG	
				1 SEL Analytes: HG				
				HG-DW-DIS-PR			DIS MET/HG	
				IONBALANCE			DIS MET/HG	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1609037-004F				**3510-SVOA-PR**			Walkin-Semi	
				8270-W			Walkin-Semi	
				Test Group: 8270-W-Custom; # of Analytes: 63 / # of Surr: 6				
1609037-005A	**Cell 4A LDS**	8/30/2016 1025h	9/2/2016 1005h	**8260-W-DEN100**	Aqueous		VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4				
1609037-005B				**300.0-W**			DF - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B-LL			DF - wc	
				2 SEL Analytes: ALKB ALKC				
				COND-W-2510B			DF - wc	
				PH-9040C			DF - wc	
1609037-005C				**TDS-W-2540C**			ww - tds	
				1 SEL Analytes: TDS				
1609037-005D				**NH3-W-350.1**			DF - no2/no3 & nh3	2
				1 SEL Analytes: NH3N				
				NH3-W-PR			DF - no2/no3 & nh3	
				NO2/NO3-W-353.2			DF - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1609037-005E				**200.7-DIS**			DIS MET/HG	
				5 SEL Analytes: CA MG K NA V				
				200.7-DIS-PR			DIS MET/HG	
				200.8-DIS			DIS MET/HG	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN				
				200.8-DIS-PR			DIS MET/HG	
				FILTER-PR			DIS MET/HG	

WORK ORDER Summary

Work Order: **1609037**

Client: Energy Fuels Resources, Inc. Due Date: 9/19/2016

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1609037-005E	**Cell 4A LDS**	8/30/2016 1025h	9/2/2016 1005h	**HG-DW-DIS-245.1**	Aqueous		DIS MET/HG	2
				1 SEL Analytes: HG				
				HG-DW-DIS-PR			DIS MET/HG	
				IONBALANCE			DIS MET/HG	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1609037-005F				**3510-SVOA-PR**			Walkin-Semi	4
				8270-W			Walkin-Semi	
				Test Group: 8270-W-Custom; # of Analytes: 63 / # of Surr: 6				
1609037-006A	**Cell 4B**	8/30/2016 1050h	9/2/2016 1005h	**8260-W-DEN100**	Aqueous		VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4				
1609037-006B				**300.0-W**			DF - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B-LL			DF - wc	
				2 SEL Analytes: ALKB ALKC				
				COND-W-2510B			DF - wc	
				PH-9040C			DF - wc	
1609037-006C				**TDS-W-2540C**			ww - tds	
				1 SEL Analytes: TDS				
1609037-006D				**NH3-W-350.1**			DF - no2/no3 & nh3	2
				1 SEL Analytes: NH3N				
				NH3-W-PR			DF - no2/no3 & nh3	
				NO2/NO3-W-353.2			DF - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1609037-006E				**200.7-DIS**			DIS MET/HG	
				5 SEL Analytes: CA MG K NA V				
				200.7-DIS-PR			DIS MET/HG	
				200.8-DIS			DIS MET/HG	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN				
				200.8-DIS-PR			DIS MET/HG	
				FILTER-PR			DIS MET/HG	
				HG-DW-DIS-245.1			DIS MET/HG	
				1 SEL Analytes: HG				
				HG-DW-DIS-PR			DIS MET/HG	
				IONBALANCE			DIS MET/HG	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1609037-006F				**3510-SVOA-PR**			Walkin-Semi	
				8270-W			Walkin-Semi	
				Test Group: 8270-W-Custom; # of Analytes: 63 / # of Surr: 6				

WORK ORDER Summary

Work Order: **1609037**

Client: Energy Fuels Resources, Inc. Due Date: 9/19/2016

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1609037-007A	**Cell 4 B LDS**	8/30/2016 1110h	9/2/2016 1005h	**8260-W-DEN100**	Aqueous		VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4				
1609037-007B				**300.0-W**			DF - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B-LL			DF - wc	
				2 SEL Analytes: ALKB ALKC				
				COND-W-2510B			DF - wc	
				PH-9040C			DF - wc	
1609037-007C				**TDS-W-2540C**			ww - tds	
				1 SEL Analytes: TDS				
1609037-007D				**NH3-W-350.1**			DF - no2/no3 & nh3	2
				1 SEL Analytes: NH3N				
				NH3-W-PR			DF - no2/no3 & nh3	
				NO2/NO3-W-353.2			DF - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1609037-007E				**200.7-DIS**			DIS MET/HG	
				5 SEL Analytes: CA MG K NA V				
				200.7-DIS-PR			DIS MET/HG	
				200.8-DIS			DIS MET/HG	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN				
				200.8-DIS-PR			DIS MET/HG	
				FILTER-PR			DIS MET/HG	
				HG-DW-DIS-245.1			DIS MET/HG	
				1 SEL Analytes: HG				
				HG-DW-DIS-PR			DIS MET/HG	
				IONBALANCE			DIS MET/HG	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1609037-007F				**3510-SVOA-PR**			Walkin-Semi	
				8270-W			Walkin-Semi	
				Test Group: 8270-W-Custom; # of Analytes: 63 / # of Surr: 6				
1609037-008A	**Cell 65**	8/30/2016 0915h	9/2/2016 1005h	**8260-W-DEN100**	Aqueous		VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4				
1609037-008B				**300.0-W**			DF - wc	1
				3 SEL Analytes: CL F SO4				
				ALK-W-2320B-LL			DF - wc	
				2 SEL Analytes: ALKB ALKC				
				COND-W-2510B			DF - wc	
				PH-9040C			DF - wc	

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WORK ORDER Summary

Work Order: **1609037**

Client: Energy Fuels Resources, Inc. Due Date: 9/19/2016

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1609037-008C	**Cell 65**	8/30/2016 0915h	9/2/2016 1005h	**TDS-W-2540C**	Aqueous		ww - tds	1
				1 SEL Analytes: TDS				
1609037-008D				**NH3-W-350.1**			DF - no2/no3 & nh3	2
				1 SEL Analytes: NH3N				
				NH3-W-PR			DF - no2/no3 & nh3	
				NO2/NO3-W-353.2			DF - no2/no3 & nh3	
				1 SEL Analytes: NO3NO2N				
1609037-008E				**200.7-DIS**			DIS MET/HG	
				5 SEL Analytes: CA MG K NA V				
				200.7-DIS-PR			DIS MET/HG	
				200.8-DIS			DIS MET/HG	
				17 SEL Analytes: AS BE CD CR CO CU FE PB MN MO NI SE AG TL SN U ZN				
				200.8-DIS-PR			DIS MET/HG	
				FILTER-PR			DIS MET/HG	
				HG-DW-DIS-245.1			DIS MET/HG	
				1 SEL Analytes: HG				
				HG-DW-DIS-PR			DIS MET/HG	
				IONBALANCE			DIS MET/HG	
				5 SEL Analytes: BALANCE Anions Cations TDS-Balance TDS-Calc				
1609037-008F				**3510-SVOA-PR**			Walkin-Semi	
				8270-W			Walkin-Semi	
				Test Group: 8270-W-Custom; # of Analytes: 63 / # of Surr: 6				
1609037-009A	**Trip Blank**	8/30/2016	9/2/2016 1005h	**8260-W-DEN100**	Aqueous		VOCFridge	3
				Test Group: 8260-W-DEN100; # of Analytes: 11 / # of Surr: 4				

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

CHAIN OF CUSTODY

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

1669037
AWAL Lab Sample Set #
Page 1 of 1

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

Client: **Energy Fuels Resources, Inc.**
Address: **6425 S. Hwy. 191**
Blanding, UT 84511
Contact: **Garrin Palmer**
Phone #: **(435) 678-2221** Cell #: 435 459 9463
Email: **gpalmer@energyfuels.com; KWeinel@energyfuels.com; dturk@energyfuels.com**
Project Name: **Annual Tailings 2016**
Project #:
PO #:
Sampler Name: **Garrin Palmer**

X Include EDD:
NO LOCUS UPLOAD
EXCEL ONLY
Field Filtered For:
NOT FIELD FILTERED

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

Laboratory Use Only

Samples Were:
1 Shipped or hand delivered
2 Ambient or Chilled
3 Temperature 1.3 °C
4 Received Broken/Leaking (Improperly Sealed) Y (N)
5 Properly Preserved Y N
Checked at bench Y N
6 Received Within Holding Times Y (N)
pH ≥ 2 filter prep rec. outside of hold

COC Tape Was:
1 Present on Outer Package Y N (NA)
2 Unbroken on Outer Package Y N (NA)
3 Present on Sample Y N (NA)
4 Unbroken on Sample Y N (NA)

Discrepancies Between Sample Labels and COC Record? Y (N)

	Sample ID:	Date Sampled	Time Sampled	# of Containers	Sample Matrix	NO2/NO3 (353.2)	NH3 (4500G or 350.1)	Fl, Cl, SO4 (4500 or 300.0)	TDS (2540C)	Carb/Bicarb (2320B)	Dissolved Metals (200.7/200.8/245.1)	As, Be, Cd, Cr, Co, Cu, Fe, Pb, Mn, Hg, Mo,	Ni, Se, Ag, Tl, Sn, U, V, Zn, Na, K, Mg, Ca	Ion Balance	SVOCs (8270D)	pH	Conductivity	VOCs (8260C)	Known Hazards & Sample Comments
1	**Cell 1**	**8/30/2016**	**830**	10	WW	X	X	X	X	X	X	X	X	X	X	X	X	X	* Please use caution
2	**Cell 2 Slimes**	**8/30/2016**	**850**	10	WW	X	X	X	X	X	X	X	X	X	X	X	X	X	handling samples.
3	**Cell 3**	**8/30/2016**	**915**	10	WW	X	X	X	X	X	X	X	X	X	X	X	X	X	
4	**Cell 4A**	**8/30/2016**	**1000**	10	WW	X	X	X	X	X	X	X	X	X	X	X	X	X	
5	**Cell 4A LDS**	**8/30/2016**	**1025**	12	WW	X	X	X	X	X	X	X	X	X	X	X	X	X	
6	**Cell 4B**	**8/30/2016**	**1050**	10	WW	X	X	X	X	X	X	X	X	X	X	X	X	X	
7	**Cell 4 B LDS**	**8/30/2016**	**1110**	10	WW	X	X	X	X	X	X	X	X	X	X	X	X	X	
8	**Cell 65**	**8/30/2016**	**915**	10	WW	X	X	X	X	X	X	X	X	X	X	X	X	X	
9	**Trip Blank**	**8/30/2016**		3	W													X	
10																			
11																			
12																			

Relinquished by: Signature / Print Name	Date / Time	Received by: Signature / Print Name	Date / Time
Garrin Palmer	9/2/2016 1005	Elena Thyne	9/2/16 1005

Special Instructions:

Sample containers for metals were ***NOT*** field filtered. PLEASE FILTER UPON RECEIPT! See the Analytical Scope of Work for Reporting Limits and VOC analyte list. Reporting Limits are the UTAH GWQS - See Pat Noteboom for questions

Tailings Program					
Contaminant	Analytical Methods to be Used	Reporting Limit	Maximum Holding Times	Sample Preservation Requirements	Sample Temperature Requirements
SVOCs					
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
4-Bromophenylphenyl ether	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
4-Chloro-3-methylphenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
4-Chlorophenyl phenyl ether	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
4-Chlorophenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
4-Nitrophenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Acenaphthene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Acenaphthylene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Anthracene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Azobenzene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Benz(a)anthracene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Benzidine	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Benzo(a)pyrene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Benzo(b)fluoranthene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Benzo(g,h,i)perylene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Benzo(k)fluoranthene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Bis(2-hloroethoxy)methane	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Bis(2-chloroethyl) ether	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Bis(2-chloroisopropyl) ether	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Bis(2-ethylhexyl) phthalate	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Butyl benzyl phthalate	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Chrysene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Dibenz(a,h)anthracene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Diethyl phthalate	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Dimethyl phthalate	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Di-n-butyl phthalate	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Di-n-octyl phthalate	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Fluoranthene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Fluorene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Hexachlorobenzene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C

Tailings Program					
Contaminant	Analytical Methods to be Used	Reporting Limit	Maximum Holding Times	Sample Preservation Requirements	Sample Temperature Requirements
Hexachlorobutadiene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Hexachlorocyclopentadiene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Hexachloroethane	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Indeno(1,2,3-cd)pyrene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Isophorone	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Naphthalene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Nitrobenzene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
N-Nitrosodimethylamine	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
N-Nitrosodi-n-propylamine	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
N-Nitrosodiphenylamine	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Pentachlorophenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Phenanthrene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Phenol	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Pyrene	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Pyridine	SW8270D	<10 ug/L	7/40 days	None	≤ 6°C
Nutrients					
Ammonia (as N)	A4500-NH3 G or E350.1	25 mg/l	28 days	H_2SO_4 to pH<2	≤ 6°C
Nitrate & Nitrite (as N)	E353.1 or E353.2	10 mg/l	28 days	H_2SO_4 to pH<2	≤ 6°C
Volatile Organic Compounds					
Acetone	SW8260B or SW8260C	700 ug/l	14 days	HCl to pH<2	≤ 6°C
Benzene	SW8260B or SW8260C	5 ug/l	14 days	HCl to pH<2	≤ 6°C
2-Butanone (MEK)	SW8260B or SW8260C	4000 ug/l	14 days	HCl to pH<2	≤ 6°C
Carbon Tetrachloride	SW8260B or SW8260C	5 ug/l	14 days	HCl to pH<2	≤ 6°C
Chloroform	SW8260B or SW8260C	70 ug/l	14 days	HCl to pH<2	≤ 6°C
Chloromethane	SW8260B or SW8260C	30 ug/l	14 days	HCl to pH<2	≤ 6°C
Dichloromethane (Methylene Chloride)	SW8260B or SW8260C	5 ug/l	14 days	HCl to pH<2	≤ 6°C
Naphthalene	SW8260B or SW8260C	100 ug/l	14 days	HCl to pH<2	≤ 6°C
Tetrahydrofuran	SW8260B or SW8260C	46 ug/l	14 days	HCl to pH<2	≤ 6°C
Toluene	SW8260B	1000 ug/l	14 days	HCl to pH<2	≤ 6°C

Tailings Program					
Contaminant	Analytical Methods to be Used	Reporting Limit	Maximum Holding Times	Sample Preservation Requirements	Sample Temperature Requirements
	or SW8260C				
Xylenes (total)	SW8260B or SW8260C	10000 ug/l	14 days	HCl to pH<2	≤ 6°C
Others					
Fluoride	A4500-F C or E300.0	4 mg/l	28 days	None	≤ 6°C
TDS	A2540 C	1000 mg/l	7 days	None	≤ 6°C
General Inorganics					
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	1000 mg/l	28 days	None	≤ 6°C
Carbonate as CO3	A2320 B	1.0 mg/l	14 days	None	≤ 6°C
Bicarbonate as HCO3	A2320 B	1.0 mg/l	14 days	None	≤ 6°C
pH	Not specified	0.01	Analyze immediately	None	≤ 6°C
Conductivity	Not specified	1.0	Analyze immediately	None	≤ 6°C

Tailings Program					
Contaminant	Analytical Methods to be Used	Reporting Limit	Maximum Holding Times	Sample Preservation Requirements	Sample Temperature Requirements
Metals**					
Arsenic	E200.7 or E200.8	50 ug/l	6 months	HNO_3 to pH<2	None
Beryllium	E200.7 or E200.8	4 ug/l	6 months	HNO_3 to pH<2	None
Cadmium	E200.7 or E200.8	5 ug/l	6 months	HNO_3 to pH<2	None
Chromium	E200.7 or E200.8	100 ug/l	6 months	HNO_3 to pH<2	None
Cobalt	E200.7 or E200.8	730 ug/l	6 months	HNO_3 to pH<2	None
Copper	E200.7 or E200.8	1300 ug/l	6 months	HNO_3 to pH<2	None
Iron	E200.7 or E200.8	11000 ug/l	6 months	HNO_3 to pH<2	None
Lead	E200.7 or E200.8	15 ug/l	6 months	HNO_3 to pH<2	None
Manganese	E200.7 or E200.8	800 ug/l	6 months	HNO_3 to pH<2	None
Mercury	E 245.1 or E200.7 or E200.8	2 ug/l	28 days	HNO_3 to pH<2	None
Molybdenum	E200.7 or E200.8	40 ug/l	6 months	HNO_3 to pH<2	None
Nickel	E200.7 or E200.8	100 ug/l	6 months	HNO_3 to pH<2	None
Selenium	E200.7 or E200.8	50 ug/l	6 months	HNO_3 to pH<2	None
Silver	E200.7 or E200.8	100 ug/l	6 months	HNO_3 to pH<2	None
Thallium	E200.7 or E200.8	2 ug/l	6 months	HNO_3 to pH<2	None
Tin	E200.7 or E200.8	17000 ug/l	6 months	HNO_3 to pH<2	None
Uranium	E200.7 or E200.8	30 ug/l	6 months	HNO_3 to pH<2	None
Vanadium	E200.7 or E200.8	60 ug/l	6 months	HNO_3 to pH<2	None
Zinc	E200.7 or E200.8	5000 ug/l	6 months	HNO_3 to pH<2	None
Sodium	E200.7	None specified	6 months	HNO_3 to pH<2	None
Potassium	E200.7	None specified	6 months	HNO_3 to pH<2	None
Magnesium	E200.7	None specified	6 months	HNO_3 to pH<2	None
Calcium	E200.7	None specified	6 months	HNO_3 to pH<2	None
TDS Calculated	N/A	N/A	N/A	N/A	N/A
Total Anions	N/A	N/A	N/A	N/A	N/A
Total Cations	N/A	N/A	N/A	N/A	N/A
Cation/Anion ratio	N/A	N/A	N/A	N/A	N/A

Holding time for SVOCs is 7 days to extraction and 40 days for analysis of the extract.

**Tailings sample collected for metals analysis will NOT be field filtered.

Lab Set ID: 1609037
pH cat 5003

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	1	2	3	4	5	6	7	8										
Ammonia	pH <2 H_2SO_4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes										
COD	pH <2 H_2SO_4																		
Cyanide	pH >12 NaOH																		
Metals	pH <2 HNO_3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes										
NO_2 & NO_3	pH <2 H_2SO_4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes										
O & G	pH <2 HCL																		
Phenols	pH <2 H_2SO_4																		
Sulfide	pH > 9NaOH, Zn Acetate																		
TKN	pH <2 H_2SO_4																		
T PO_4	pH <2 H_2SO_4																		

Procedure:
1) Pour a small amount of sample in the sample lid
2) Pour sample from Lid gently over wide range pH paper
3) **Do Not** dip the pH paper in the sample bottle or lid
4) If sample is not preserved, properly list its extension and receiving pH in the appropriate column above
5) Flag COC, notify client if requested
6) Place client conversation on COC
7) Samples may be adjusted

Frequency: All samples requiring preservation

* The sample required additional preservative upon receipt.

\+ The sample was received unpreserved.

▲ The sample was received unpreserved and therefore preserved upon receipt.

\# The sample pH was unadjustable to a pH < 2 due to the sample matrix.

• The sample pH was unadjustable to a pH > ____ due to the sample matrix interference.

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

September 30, 2016

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

Re: Tailings 2016 Characterization
Work Order: 405194

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on September 02, 2016. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

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

Sincerely,

Linda Pullano for
Julie Robinson
Project Manager

Purchase Order: DW16138
Enclosures

Energy Fuels Resources (USA), Inc.
Tailings 2016 Characterization
SDG: 405194

Receipt Narrative
for
Energy Fuels Resources (USA), Inc.
SDG: 405194

September 30, 2016

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 September 02, 2016 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:

Laboratory ID	Client ID
405194001	Cell 1
405194002	Cell 2 Slimes
405194003	Cell 3
405194004	Cell 4A
405194005	Cell 4A LDS
405194006	Cell 4B
405194007	Cell 4B LDS
405194008	Cell 65

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: General Chemistry and Radiochemistry.

Linda Pullano for
Julie Robinson
Project Manager

40519.4

Sheet 1 of 1

CHAIN OF CUSTODY

Samples Shipped to: Gel Laboratories
2040 Savage Road
Charleston, SC 29407

Contact: Garrin Palmer
Ph: 435 678 4115
gpalmer@energyfuels.com

Project	Samplers Name	Samplers Signature
Annual Tailings 2016	Garrin Palmer	Garrin Palmer

Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
Cell 1	8/30/2016	830	Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity
Cell 2 Slimes	8/30/2016	850	Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity
Cell 3	8/30/2016	915	Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity
Cell 4A	8/30/2016	1000	Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity
Cell 4A LDS	8/30/2016	1025	Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity
Cell 4B	8/30/2016	1050	Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity
Cell 4B LDS	8/30/2016	1110	Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity
Cell 65	8/30/2016	915	Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity
Specific gravity is to be run on UNFILTERED sample aliquot			
			* Please use caution handling samples.

Comments: SAMPLES ARE NOT FIELD FILTERED - PLEASE FILTER UPON RECEIPT! SAMPLES ARE NOT PRESERVED - pH is as collected! See Julie Robinson for technical questions. No LOCUS UPLOAD. *Methods used = same as 378920*

Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
Garrin Palmer	9/1/16/1230		9.2.16 0930
Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time

GEL | Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DNMI			**SDG/AR/COC/Work Order:** 405194	
Received By: JKW			**Date Received:** 9/2/16	
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?	✓		Maximum Net Counts Observed* (Observed Counts - Area Background Counts):	400cpm
Classified Radioactive II or III by RSO?	✓		If yes, Were swipes taken of sample containers < action levels?	
COC/Samples marked containing PCBs?		✓		
Package, COC, and/or Samples marked as beryllium or asbestos containing?		✓	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.	
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped:	UN#:
Samples identified as Foreign Soil?		✓		

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		✓		Preservation Method: Ice bags Blue ice Dry ice (None) Other (describe) 21°C *all temperatures are recorded in Celsius
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): ES5320158 30
3	Chain of custody documents included with shipment?	✓			
4	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?		✓		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	Do Low Level Perchlorate samples have headspace as required?		✓		Sample ID's and containers affected:
7	VOA vials contain acid preservation?		✓		(If unknown, select No)
8	VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
9	Are Encore containers present?			✓	(If yes, immediately deliver to Volatiles laboratory)
10	Samples received within holding time?	✓			ID's and tests affected:
11	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
12	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
13	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
14	Are sample containers identifiable as GEL provided?	✓			
15	COC form is properly signed in relinquished/received sections?	✓			
16	Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground (UPS) Field Services Courier Other 1Z 187 Y4Y 01 9516 1549

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials JL Date 9/2/16 Page 1 of 1

GL-CHL-SR-001 Rev 3

GEL Laboratories LLC – Login Review Report

GEL Work Order/SDG: 405194 Annual Tailings 2016
Client SDG: 405194
Project Manager: Julie Robinson
Project Name: DNMI00107 Tailings 2016 Characterization
Purchase Order: DW16138
Package Level: LEVEL3
EDD Format: EIM_DNMI

Work Order Due Date: 03-OCT-16
Package Due Date: 01-OCT-16
EDD Due Date: 03-OCT-16
Due Date: 03-OCT-16
JAR1

Collector: C
Prelogin #: 20150833683
Project Workdef ID: 1330584
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
405194001	Cell 1		30-AUG-16 08:30	02-SEP-16 09:30	-2	2	WATER		20		1		
405194002	Cell 2 Slimes		30-AUG-16 08:50	02-SEP-16 09:30	-2	2	WATER		20		1		
405194003	Cell 3		30-AUG-16 09:15	02-SEP-16 09:30	-2	2	WATER		20		1		
405194004	Cell 4A		30-AUG-16 10:00	02-SEP-16 09:30	-2	2	WATER		20		1		
405194005	Cell 4A LDS		30-AUG-16 10:25	02-SEP-16 09:30	-2	2	WATER		20		1		
405194006	Cell 4B		30-AUG-16 10:50	02-SEP-16 09:30	-2	2	WATER		20		1		
405194007	Cell 4B LDS		30-AUG-16 11:10	02-SEP-16 09:30	-2	2	WATER		20		1		
405194008	Cell 65		30-AUG-16 09:15	02-SEP-16 09:30	-2	2	WATER		20		1		

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data	Receive Codes
-001 Cell 1	REVW	Alphaspec Th, Liquid			Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses		RAD2,HZ
	REVW	U- 233/234,U-235/236 and U-238	U-233/234,U-235/236				
	REVW	GFPC,Total Alpha Radium, Liquid	Gross Alpha				
	REVW	Laboratory Composite	RAD2				
	REVW	Lucas Cell, Ra226, liquid					
	REVW	ASTM D 5057 Specific Gravity					
	REVW	Rad 2 Aliquot for distribution throughout the lab					
-002 Cell 2 Slimes	REVW	Alphaspec Th, Liquid			Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses		RAD2,HZ
	REVW	U- 233/234,U-235/236 and U-238	U-233/234,U-235/236				
	REVW	GFPC,Total Alpha Radium, Liquid	Gross Alpha				
	REVW	Laboratory Composite	RAD2				
	REVW	Lucas Cell, Ra226, liquid					
	REVW	ASTM D 5057 Specific Gravity					
	REVW	Rad 2 Aliquot for distribution throughout the lab					
-003 Cell 3	REVW	Alphaspec Th, Liquid			Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses		RAD2,HZ
	REVW	U- 233/234,U-235/236 and U-238	U-233/234,U-235/236				
	REVW	GFPC,Total Alpha Radium,	Gross Alpha				

		Liquid			
	REVW	Laboratory Composite	RAD2		
	REVW	Lucas Cell, Ra226, liquid			
	REVW	ASTM D 5057 Specific Gravity			
	REVW	Rad 2 Aliquot for distribution throughout the lab			
-004 Cell 4A	REVW	Alphaspec Th, Liquid		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses	RAD2,HZ
	REVW	U- 233/234,U-235/236 and U-238	U-233/234,U-235/236		
	REVW	GFPC,Total Alpha Radium, Liquid	Gross Alpha		
	REVW	Laboratory Composite	RAD2		
	REVW	Lucas Cell, Ra226, liquid			
	REVW	ASTM D 5057 Specific Gravity			
	REVW	Rad 2 Aliquot for distribution throughout the lab			
-005 Cell 4A LDS	REVW	Alphaspec Th, Liquid		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses	RAD2,HZ
	REVW	U- 233/234,U-235/236 and U-238	U-233/234,U-235/236		
	REVW	GFPC,Total Alpha Radium, Liquid	Gross Alpha		
	REVW	Laboratory Composite	RAD2		
	REVW	Lucas Cell, Ra226, liquid			
	REVW	ASTM D 5057 Specific Gravity			
	REVW	Rad 2 Aliquot for distribution throughout the lab			
-006 Cell 4B	REVW	Alphaspec Th, Liquid		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses	RAD2,HZ
	REVW	U- 233/234,U-235/236 and U-238	U-233/234,U-235/236		
	REVW	GFPC,Total Alpha Radium, Liquid	Gross Alpha		
	REVW	Laboratory Composite	RAD2		
	REVW	Lucas Cell, Ra226, liquid			
	REVW	ASTM D 5057 Specific Gravity			
	REVW	Rad 2 Aliquot for distribution throughout the lab			
-007 Cell 4B LDS	REVW	Alphaspec Th, Liquid		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses	RAD2,HZ
	REVW	U- 233/234,U-235/236 and U-238	U-233/234,U-235/236		
	REVW	GFPC,Total Alpha Radium, Liquid	Gross Alpha		
	REVW	Laboratory Composite	RAD2		
	REVW	Lucas Cell, Ra226, liquid			
	REVW	ASTM D 5057 Specific Gravity			
	REVW	Rad 2 Aliquot for distribution throughout the lab			
-008 Cell 65	REVW	Alphaspec Th, Liquid		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses	RAD2,HZ
	REVW	U- 233/234,U-235/236 and U-238	U-233/234,U-235/236		

REVW	GFPC,Total Alpha Radium, Liquid	Gross Alpha
REVW	Laboratory Composite	RAD2
REVW	Lucas Cell, Ra226, liquid	
REVW	ASTM D 5057 Specific Gravity	
REVW	Rad 2 Aliquot for distribution throughout the lab	

Product: ASP__THL **Workdef ID:** 1371096 **In Product Group?** No **Group Name:** **Group Reference:**

Method: DOE EML HASL-300, Th-01-RC Modified
Product Description: Alphaspec Th, Liquid
Samples: 001, 002, 003, 004, 005, 006, 007, 008
Parmname Check: All parmnames scheduled properly

Path: High Rad
Product Reference:
Moisture Correction: "As Received"

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
14274-82-9	Thorium-228	1	pCi/L	REG	Y	Y	No
14269-63-7	Thorium-230	1	pCi/L	REG	Y	Y	
7440-29-1	Thorium-232	1	pCi/L	REG	Y	Y	

Product: ASP__UUL **Workdef ID:** 1371097 **In Product Group?** No **Group Name:** **Group Reference:**

Method: DOE EML HASL-300, U-02-RC Modified
Product Description: U- 233/234,U-235/236 and U-238
Samples: 001, 002, 003, 004, 005, 006, 007, 008
Parmname Check: All parmnames scheduled properly

Path: High Rad
Product Reference: U-233/234,U-235/236
Moisture Correction: "As Received"

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
13968-55-3/13966-	Uranium-233/234	1	pCi/L	REG	Y	Y	No
15117-96-1/13982-	Uranium-235/236	1	pCi/L	REG	Y	Y	
7440-61-1	Uranium-238	1	pCi/L	REG	Y	Y	

Product: GFCTORAL **Workdef ID:** 1371098 **In Product Group?** No **Group Name:** **Group Reference:**

Method: EPA 900.1 Modified
Product Description: GFPC,Total Alpha Radium, Liquid
Samples: 001, 002, 003, 004, 005, 006, 007, 008
Parmname Check: All parmnames scheduled properly

Path: High Rad
Product Reference: Gross Alpha
Moisture Correction: "As Received"

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
	Gross Radium Alpha	1	pCi/L	REG	Y	Y	No

GEL Laboratories LLC – Login Review Report

Product: LUC26RAL **Workdef ID:** 1371099 **In Product Group?** No **Group Name:** **Group Reference:**
Method: EPA 903.1 Modified **Path:** High Rad
Product Description: Lucas Cell, Ra226, liquid **Product Reference:**
Samples: 001, 002, 003, 004, 005, 006, 007, 008 **Moisture Correction:** "As Received"
Parmname Check: All parmnames scheduled properly

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
13982-63-3	Radium-226	1	pCi/L	REG	Y	Y	No

Product: LABCOMP_L **Workdef ID:** 1371213 **In Product Group?** No **Group Name:** **Group Reference:**
Method: **Path:** High Rad
Product Description: Laboratory Composite **Product Reference:** RAD2
Samples: 001, 002, 003, 004, 005, 006, 007, 008 **Moisture Correction:** "As Received"
Parmname Check: All parmnames scheduled properly

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?

No

Product: MISSGAS_L **Workdef ID:** 1370067 **In Product Group?** No **Group Name:** **Group Reference:**
Method: ASTM D 5057 **Path:** Standard
Product Description: ASTM D 5057 Specific Gravity **Product Reference:**
Samples: 001, 002, 003, 004, 005, 006, 007, 008 **Moisture Correction:** "As Received"
Parmname Check: All parmnames scheduled properly

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
	Specific Gravity	.1 none	none	REG	Y	Y	No

Product: RADALQT_L **Workdef ID:** 1371095 **In Product Group?** No **Group Name:** **Group Reference:**
Method: **Path:** Standard
Product Description: Rad 2 Aliquot for distribution throughout the lab **Product Reference:**
Samples: 001, 002, 003, 004, 005, 006, 007, 008 **Moisture Correction:** "As Received"
Parmname Check: All parmnames scheduled properly

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?

No

GEL Laboratories LLC – Login Review Report

Action	Product Name	Description	Samples
Contingent Tests			

Login Requirements:

Requirement	Include?	Comments

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

List of current GEL Certifications as of 29 September 2016

State	Certification
Alaska	UST-0110
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA160006
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122016-1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania NELAP	68-00485
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-16-11
Utah NELAP	SC000122016-20
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

General Chemistry
Technical Case Narrative
Energy Fuels Resources (DNMI)
SDG #: 405194

Method/Analysis Information

Product:	**Specific Gravity**		
Analytical Batch:	1598090	**Method:**	ASTM D 5057 Specific Gravity

Sample Analysis

The following samples were analyzed using the analytical protocol as established in ASTM D 5057:

Sample ID	Client ID
405194001	Cell 1
405194002	Cell 2 Slimes
405194003	Cell 3
405194004	Cell 4A
405194005	Cell 4A LDS
405194006	Cell 4B
405194007	Cell 4B LDS
405194008	Cell 65
1203626140	405194001(Cell 1) Sample Duplicate (DUP)

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-GC-E-065 REV# 7.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Hazardous Waste analysis was performed on a Sartorius Balance BAL216. Solids lab

Initial Calibration
All initial calibration requirements have been met for this SDG.

Quality Control (QC) Information

Quality Control (QC) Designation

Sample 405194001 (Cell 1) was selected for QC analysis.

Duplicate Relative Percent Difference (RPD) Statement
The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

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

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

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

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Qualifier Definition Report
for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 405194 GEL Work Order: 405194

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

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: Aubrey Kingsbury**

Date: 30 SEP 2016 **Title: Analyst I**

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

QC Summary

Report Date: September 30, 2016

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

Contact: **Ms. Kathy Weinel**

Workorder: **405194**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Hazardous Waste											
Batch 1598090											
QC1203626140 405194001 DUP											
Specific Gravity		1.15		1.25	none	8.36		(0%-10%)	SXW3	09/29/16	13:4

Notes:

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.
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the CRDL.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

GEL LABORATORIES LLC
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QC Summary

Workorder: 405194

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

Radiochemistry
Technical Case Narrative
Energy Fuels Resources (DNMI)
SDG #: 405194

Method/Analysis Information

Product:	**U- 233/234,U-235/236 and U-238**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Analytical Batch Number:	1597081

Sample ID	Client ID
405194001	Cell 1
405194002	Cell 2 Slimes
405194003	Cell 3
405194004	Cell 4A
405194005	Cell 4A LDS
405194006	Cell 4B
405194007	Cell 4B LDS
405194008	Cell 65
1203623415	Method Blank (MB)
1203623417	Laboratory Control Sample (LCS)
1203623416	405194001(Cell 1) Sample Duplicate (DUP)

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-011 REV# 26.

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 volumes in this batch.

QC Information
All of the QC samples meet the required acceptance limits with the following exceptions: The blank did not meet the U-233/234, U-235/236, and U-238 detection limits due to keeping the blank volume consistent with the other sample aliquots. All other samples met the detection limits.

Designated QC
The following sample was used for QC: 405194001 (Cell 1).

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.

Recounts
Sample 1203623417 (LCS) was recounted due to a peak shift. The recount is reported. Sample 1203623415 (MB) was recounted due to a suspected false positive. The recount is reported.

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.

Manual Integration
Manual integrations of alpha spectroscopy spectra 405194003 (Cell 3) and 405194008 (Cell 65) were performed to fully separate counts in Regions of Interest which would have been biased.

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

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Th, Liquid**
Analytical Method:	DOE EML HASL-300, Th-01-RC Modified
Analytical Batch Number:	1597083

Sample ID	Client ID

405194001	Cell 1
405194002	Cell 2 Slimes
405194003	Cell 3
405194004	Cell 4A
405194005	Cell 4A LDS
405194006	Cell 4B
405194007	Cell 4B LDS
405194008	Cell 65
1203623421	Method Blank (MB)
1203623423	Laboratory Control Sample (LCS)
1203623422	405194001(Cell 1) Sample Duplicate (DUP)

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-038 REV# 17.

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.

QC Information
All of the QC samples meet the required acceptance limits with the following exceptions: Refer to Miscellaneous Information section. The sample and the duplicate, 1203623422 (Cell 1DUP) and 405194001 (Cell 1), did not meet the Th-232 relative percent difference requirement; however, they do meet the relative error ratio requirement with a value of 1.84.

Designated QC
The following sample was used for QC: 405194001 (Cell 1).

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.

Recounts
Sample 1203623422 (Cell 1DUP) was recounted due to a peak shift and then again due to a high tracer yield.

The third count is reported.

Miscellaneous Information:

Data Exception (DER) Documentation
A data exception report (DER) 1559484 was generated for samples 1203623421 (MB), 1203623422 (Cell 1DUP), 405194001 (Cell 1), 405194002 (Cell 2 Slimes), 405194004 (Cell 4A), 405194005 (Cell 4A LDS), 405194006 (Cell 4B), 405194007 (Cell 4B LDS) and 405194008 (Cell 65) in this SDG/batch. DER 1559484 was generated due to RDL less than MDA. 1. Sample 405194002 does not meet the Th-228 and Th-232 detection limits and samples 405194001, 405194004, 405194005, 405194006, 405194007, 405194008, and 1203623422 do not meet the Th-228 detection limits due to the small sample aliquots. The blank, 1203623421, did not meet the Th-228, Th-230, and Th-232 detection limits due to keeping the volume consistent with the other sample aliquots. 1. The sample aliquots were reduced due to the high activity of other isotopes and in attempt to minimize interferences. Reporting results.

Manual Integration
Manual integrations of alpha spectroscopy spectra 1203623422 (Cell 1DUP) and 405194006 (Cell 4B) were performed to fully separate counts in Regions of Interest which would have been biased.

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

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GFPC,Total Alpha Radium, Liquid**
Analytical Method:	EPA 900.1 Modified
Analytical Batch Number:	1597084

Sample ID	Client ID
405194001	Cell 1
405194002	Cell 2 Slimes
405194003	Cell 3
405194004	Cell 4A
405194005	Cell 4A LDS
405194006	Cell 4B
405194007	Cell 4B LDS
405194008	Cell 65
1203623428	Method Blank (MB)
1203623432	Laboratory Control Sample (LCS)
1203623429	405194001(Cell 1) Sample Duplicate (DUP)
1203623430	405194001(Cell 1) Matrix Spike (MS)

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.

QC Information
All of the QC samples meet the required acceptance limits with the following exceptions: The blank, 1203623428 (MB), did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots. All other samples met the detection limits. The blank, 1203623428 (MB), result is greater than the required detection limit but less than the MDC. The sample and the duplicate, 1203623429 (Cell 1DUP) and 405194001 (Cell 1), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with a value of 2.2903. The matrix spike and matrix spike duplicate, 1203623430 (Cell 1MS) and 1203623431 (Cell 1MSD), did not meet recovery requirements due to the sample activity being greater than five times the spiked nominal concentration. The matrix spike and matrix spike duplicate, 1203623430 (Cell 1MS) and 1203623431 (Cell 1MSD), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with a value of 2.1076.

Designated QC
The following sample was used for QC: 405194001 (Cell 1).

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.

Recounts
None of the samples in this sample set were recounted.

Miscellaneous Information:

Data Exception (DER) Documentation

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

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

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Lucas Cell, Ra226, liquid**
Analytical Method:	EPA 903.1 Modified
Analytical Batch Number:	1597086

Sample ID	Client ID
405194001	Cell 1
405194002	Cell 2 Slimes
405194003	Cell 3
405194004	Cell 4A
405194005	Cell 4A LDS
405194006	Cell 4B
405194007	Cell 4B LDS
405194008	Cell 65
1203623433	Method Blank (MB)
1203623436	Laboratory Control Sample (LCS)
1203623434	405194002(Cell 2 Slimes) Sample Duplicate (DUP)
1203623435	405194002(Cell 2 Slimes) Matrix Spike (MS)

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-008 REV# 14.

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.

QC Information
All of the QC samples meet the required acceptance limits with the following exceptions: The blank, 1203623433 (MB), did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots. All other samples met the detection limits.

Designated QC
The following sample was used for QC: 405194002 (Cell 2 Slimes).

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.

Recounts
None of the samples in this sample set were recounted.

Miscellaneous Information:

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

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

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Laboratory Composite**
Analytical Method:	GL-RAD-A-026

Analytical Batch Number: 1595752

Sample ID	Client ID
405194001	Cell 1
405194002	Cell 2 Slimes
405194003	Cell 3
405194004	Cell 4A
405194005	Cell 4A LDS
405194006	Cell 4B
405194007	Cell 4B LDS
405194008	Cell 65

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-026 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(s) in this batch.

QC Information
All of the QC samples met the required acceptance limits.

Designated QC
None of the samples were designated for QC analysis.

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.

Recounts
None of the samples in this sample set were recounted.

Miscellaneous Information:

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

Manual Integration
No manual integrations were performed on data in this batch.

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

Additional Comments
Samples 405194001-2, and 004-7 were filtered through a 0.45micron filter. Samples 003 and 008 were too viscous to pass through a 0.7micron filter. For samples 003 and 008, a portion of each sample was split into several centrifuge tubes and centrifuged to to sediment any solids in the sample. The samples were then decanted, the solids disposed of, and the liquid portion was passed through an empty column frit to remove any remaining solids. 405194003 (Cell 3), 405194008 (Cell 65) and All.

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

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Qualifier Definition Report
for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 405194 GEL Work Order: 405194

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: Heather McCarty **Name: Heather McCarty**

Date: 30 SEP 2016 **Title: Analyst II**

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
20-SEP-16	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ALPHA SPECTROMETER	DOE EML HASL-300, Th-01-RC Modified	Liquid	DNMI
Batch ID:	**Sample Numbers:**		
1597083	See Below		

Potentially affected work order(s)(SDG): 405194

Application Issues:

RDL less than MDA

Specification and Requirements Exception Description:	DER Disposition:
1. Sample 405194002 does not meet the Th-228 and Th-232 detection limits and samples 405194001, 405194004, 405194005, 405194006, 405194007, 405194008, and 1203623422 do not meet the Th-228 detection limits due to the small sample aliquots. The blank, 1203623421, did not meet the Th-228, Th-230, and Th-232 detection limits due to keeping the volume consistent with the other sample aliquots.	1. The sample aliquots were reduced due to the high activity of other isotopes and in attempt to minimize interferences. Reporting results.

Originator's Name:

Melanie Aycock 20-SEP-16

Data Validator/Group Leader:

Scott Moreland 29-SEP-16

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

QC Summary

Report Date: September 30, 2016

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

Contact: **Ms. Kathy Weinel**

Workorder: **405194**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
High Rad Testing										
Batch 1597081										
QC1203623416 405194001 DUP										
Uranium-233/234		45200		38500	pCi/L	15.9		(0%-20%)	JXC5	09/16/16 09:2
	Uncertainty	+/-1720		+/-1790						
Uranium-235/236		2380		2360	pCi/L	0.937		(0%-20%)		
	Uncertainty	+/-451		+/-503						
Uranium-238		45800		38800	pCi/L	16.4		(0%-20%)		
	Uncertainty	+/-1730		+/-1800						
QC1203623417 LCS										
Uranium-233/234				22400	pCi/L					09/19/16 12:5
	Uncertainty			+/-1310						
Uranium-235/236				1290	pCi/L					
	Uncertainty			+/-363						
Uranium-238	26900			26000	pCi/L		96.5	(75%-125%)		
	Uncertainty			+/-1410						
QC1203623415 MB										
Uranium-233/234			U	46.1	pCi/L					09/19/16 12:5
	Uncertainty			+/-152						
Uranium-235/236			U	77.4	pCi/L					
	Uncertainty			+/-148						
Uranium-238			U	125	pCi/L					
	Uncertainty			+/-147						
Batch 1597083										
QC1203623422 405194001 DUP										
Thorium-228	U	432	U	889	pCi/L	N/A		N/A	JXC5	09/20/16 09:2
	Uncertainty	+/-195		+/-384						
Thorium-230		6.77E+05		5.72E+05	pCi/L	16.8		(0%-20%)		
	Uncertainty	+/-6520		+/-8210						
Thorium-232		4480		3520	pCi/L	24.1*		(0%-20%)		
	Uncertainty	+/-534		+/-654						
QC1203623423 LCS										
Thorium-228				19900	pCi/L					09/16/16 09:3
	Uncertainty			+/-1230						
Thorium-230				2540	pCi/L			(75%-125%)		
	Uncertainty			+/-454						
Thorium-232	19900			22600	pCi/L		114	(75%-125%)		
	Uncertainty			+/-1310						
QC1203623421 MB										
Thorium-228			U	-18	pCi/L					09/16/16 09:3
	Uncertainty			+/-77.8						
Thorium-230			U	95.3	pCi/L					
	Uncertainty			+/-150						

QC Summary

Workorder: 405194

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
High Rad Testing										
Batch 1597083										
Thorium-232			U	51.9	pCi/L					
	Uncertainty			+/-107						
Batch 1597084										
QC1203623429 405194001 DUP										
Gross Radium Alpha		4.20E+05		3.12E+05	pCi/L	29.7*		(0%-20%)	JXC5	09/19/16 16:1
	Uncertainty	+/-3710		+/-2610						
QC1203623432 LCS										
Gross Radium Alpha	82500			79000	pCi/L		95.8	(75%-125%)		09/19/16 16:1
	Uncertainty			+/-1290						
QC1203623428 MB										
Gross Radium Alpha			U	125	pCi/L					09/19/16 16:1
	Uncertainty			+/-76.1						
QC1203623430 405194001 MS										
Gross Radium Alpha	83300	4.20E+05		4.00E+05	pCi/L		N/A	(75%-125%)		09/19/16 16:1
	Uncertainty	+/-3710		+/-2960						
QC1203623431 405194001 MSD										
Gross Radium Alpha	83300	4.20E+05		3.07E+05	pCi/L	26.2*	N/A	(0%-20%)		09/19/16 16:1
	Uncertainty	+/-3710		+/-2590						
Batch 1597086										
QC1203623434 405194002 DUP										
Radium-226		52.4		57.6	pCi/L	9.43		(0% - 100%)	LXP1	09/28/16 10:5
	Uncertainty	+/-10.9		+/-11.1						
QC1203623436 LCS										
Radium-226	1220			1180	pCi/L		97	(75%-125%)		09/28/16 11:2
	Uncertainty			+/-39.7						
QC1203623433 MB										
Radium-226			U	12.4	pCi/L					09/28/16 10:5
	Uncertainty			+/-5.38						
QC1203623435 405194002 MS										
Radium-226	1220	52.4		1420	pCi/L		112	(75%-125%)		09/28/16 10:5
	Uncertainty	+/-10.9		+/-50.3						

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

QC Summary

Workorder: 405194

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

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

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

Tailings Program					
Contaminant	Analytical Methods to be Used	Reporting Limit	Maximum Holding Times	Sample Preservation Requirements	Sample Temperature Requirements
Metals**					
Arsenic	E200.7 or E200.8	50 ug/l	6 months	HNO_3 to pH<2	None
Beryllium	E200.7 or E200.8	4 ug/l	6 months	HNO_3 to pH<2	None
Cadmium	E200.7 or E200.8	5 ug/l	6 months	HNO_3 to pH<2	None
Chromium	E200.7 or E200.8	100 ug/l	6 months	HNO_3 to pH<2	None
Cobalt	E200.7 or E200.8	730 ug/l	6 months	HNO_3 to pH<2	None
Copper	E200.7 or E200.8	1300 ug/l	6 months	HNO_3 to pH<2	None
Iron	E200.7 or E200.8	11000 ug/l	6 months	HNO_3 to pH<2	None
Lead	E200.7 or E200.8	15 ug/l	6 months	HNO_3 to pH<2	None
Manganese	E200.7 or E200.8	800 ug/l	6 months	HNO_3 to pH<2	None
Mercury	E 245.1 or E200.7 or E200.8	2 ug/l	28 days	HNO_3 to pH<2	None
Molybdenum	E200.7 or E200.8	40 ug/l	6 months	HNO_3 to pH<2	None
Nickel	E200.7 or E200.8	100 ug/l	6 months	HNO_3 to pH<2	None
Selenium	E200.7 or E200.8	50 ug/l	6 months	HNO_3 to pH<2	None
Silver	E200.7 or E200.8	100 ug/l	6 months	HNO_3 to pH<2	None
Thallium	E200.7 or E200.8	2 ug/l	6 months	HNO_3 to pH<2	None
Tin	E200.7 or E200.8	17000 ug/l	6 months	HNO_3 to pH<2	None
Uranium	E200.7 or E200.8	30 ug/l	6 months	HNO_3 to pH<2	None
Vanadium	E200.7 or E200.8	60 ug/l	6 months	HNO_3 to pH<2	None
Zinc	E200.7 or E200.8	5000 ug/l	6 months	HNO_3 to pH<2	None
Sodium	E200.7	None specified	6 months	HNO_3 to pH<2	None
Potassium	E200.7	None specified	6 months	HNO_3 to pH<2	None
Magnesium	E200.7	None specified	6 months	HNO_3 to pH<2	None
Calcium	E200.7	None specified	6 months	HNO_3 to pH<2	None
TDS Calculated	N/A	N/A	N/A	N/A	N/A
Total Anions	N/A	N/A	N/A	N/A	N/A
Total Cations	N/A	N/A	N/A	N/A	N/A
Cation/Anion ratio	N/A	N/A	N/A	N/A	N/A

Holding time for SVOCs is 7 days to extraction and 40 days for analysis of the extract.

**Tailings sample collected for metals analysis will NOT be field filtered.

Lab Set ID: 1609037
pH cat 5003

Preservation Check Sheet

Sample Set Extension and pH

Analysis	Preservative	1	2	3	4	5	6	7	8										
Ammonia	pH <2 H_2SO_4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes										
COD	pH <2 H_2SO_4																		
Cyanide	pH >12 NaOH																		
Metals	pH <2 HNO_3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes										
NO_2 & NO_3	pH <2 H_2SO_4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes										
O & G	pH <2 HCL																		
Phenols	pH <2 H_2SO_4																		
Sulfide	pH > 9NaOH, Zn Acetate																		
TKN	pH <2 H_2SO_4																		
T PO_4	pH <2 H_2SO_4																		

Procedure:
1) Pour a small amount of sample in the sample lid
2) Pour sample from Lid gently over wide range pH paper
3) **Do Not** dip the pH paper in the sample bottle or lid
4) If sample is not preserved, properly list its extension and receiving pH in the appropriate column above
5) Flag COC, notify client if requested
6) Place client conversation on COC
7) Samples may be adjusted

Frequency: All samples requiring preservation

* The sample required additional preservative upon receipt.

\+ The sample was received unpreserved.

▲ The sample was received unpreserved and therefore preserved upon receipt.

\# The sample pH was unadjustable to a pH < 2 due to the sample matrix.

• The sample pH was unadjustable to a pH > ____ due to the sample matrix interference.

Tab D

Chemical and Radiological Summary Tables

2016 Additional Analyses
Cell Radiological Characteristics

Location	Cell 1 8/4/2015	Cell 1 5/28/15	Cell 1 8/30/16	Cell 2 8/4/2015	Cell 2 8/30/16	Cell 3 8/4/2015	Cell 3 5/28/2015	Cell 3 8/30/16	Cell 4A 8/4/2015	Cell 4A 5/28/2015	Cell 4A 8/30/16	Cell 4A LDS 8/4/2015	Cell 4A LDS 5/28/2015	Cell 4A LDS 8/30/16	Cell 4B 8/4/2015	Cell 4B 5/28/2015	Cell 4B 8/30/16	Cell 4B LDS 8/4/2015	Cell 4B LDS 5/28/2015	Cell 4B LDS 8/30/16	Cell 65 (Duplicate of 4B LDS 8/4/2015)	Cell 65 (Duplicate of 4A 5/28/2015)	Cell 65 (Duplicate of Cell 3 8/30/16)
Radiologics (pCi/L)																							
Thorium-228	1310	204	ND	ND	ND	ND	798	983	ND	327	ND	ND	ND	ND	ND	122	ND	ND	334	ND	ND	265	ND
Thorium-230	991000	782000	677000	6680	5050	123000	131000	72500	374000	405000	466000	25300	25300	134000	410000	346000	595000	452000	487000	368000	436000	315000	67000
Thorium-232	6150	6730	4480	ND	ND	1640	1290	1670	3490	3440	2870	ND	ND	1130	2210	3790	3510	3660	5430	1010	4000	3790	788
Radium-226	1110	829	497	36.6	52.4	448	202	584	663	ND	1050	19.3	19.3	51.1	611	544	715	161	55.2	104	125	772	640
Uranium-233/234	141000	96700	45200	11300	11700	184000	557000	1960000	57500	61200	61100	9380	9380	46200	63500	65000	90200	62600	63500	78600	62600	58600	2520000
Uranium-235/236	8920	5980	2380	858	599	10300	37900	130000	3720	4030	3320	504	504	1900	3710	3870	4090	3890	3900	3820	2680	3020	130000
Uranium-238	140000	100000	45800	10500	10700	191000	591000	2060000	64400	62700	70900	10800	10800	40400	67000	66100	90100	60900	65500	78900	61300	58300	2490000
Physical Properties																							
Kinematic Viscosity (cst)	<10	<10	NS	<10	NS	<10	<10	NS	<10	<10	NS	<10	NS	NS	<10	<10	NS	<10	NS	NS	<10	NS	NS
Specific Gravity	1.21	1.13	1.15	1.09	1.03	1.21	1.29	1.62	1.11	1.07	1.10	1.07	NS	1.10	1.12	1.08	1.13	1.12	NS	1.11	1.12	NS	1.53

Cell 1

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
Major Ions (mg/l)													
Carbonate	<5	<1	ND	ND	<1	<1	<1	<1	<1	NS	<1	<1	<1
Bicarbonate	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<1	<1	<1
Calcium	630	307	483.8	604	635	711	577	426	768	NS	404	573	647
Chloride	8000	6728	37340	9830	20700	7440	33800	78000	9900	NS	11600	25500	19200
Fluoride	<100	3005	31.72	0.3	0.4	28.4	69.2	62.9	4130	NS	2380	5880	2980
Magnesium	7900	5988	21220	6550	16200	5410	14300	16000	4470	NS	5530	12400	9210
Nitrogen-Ammonia	7800	3353	10628	5250	15200	8120	12900	9750	3900	NS	5700	5.4	7090
Nitrogen-Nitrate	<100	41.8	269.4	64.9	142	58	212	556	128	NS	53	192	124
Potassium	NA	647	5698	1880	4140	1840	4510	9750	6580	NS	3010	7330	1970
Sodium	10000	8638	62600	13200	39000	16700	29500	41700	15900	NS	12200	32100	18900
Sulfate	190000	63667	287600	118000	232000	107000	182000	158000	100000	NS	124000	204000	212000
pH (s.u.)	0.7	1.88	0.8	1.53	1.15	2.73	2.23	1.9	2.74	NS	1.3	1.01	<1.00
TDS	120000	94700	357400	131000	140000	130000	216000	342000	149000	NS	159000	334000	242000
Conductivity (umhos/cm)	NA	NA	NA	NA	365000	110000	112000	136000	94200	NS	113000	131000	123000
Metals (ug/l)													
Arsenic	440000	121267	849000	271000	436000	74400	299000	25500	9800	NS	249000	377000	407000
Beryllium	780	475	2262	500	410	338	1270	3180	415	NS	448	1290	1030
Cadmium	6600	3990	29320	8790	9120	2940	13700	30700	2380	NS	3060	7710	6320
Chromium	13000	6365	29940	6760	18700	5620	22700	12100	8350	NS	13200	19600	14000
Cobalt	120000	NA	88240	23500	97500	16200	56000	53100	25500	NS	56500	82000	77200
Copper	740000	196667	881000	360000	168000	125000	483000	885000	544000	NS	3420000	3560000	4730000
Iron	3400000	2820000	13480000	3280000	2390000	3400000	8940000	840000	1420000	NS	2520000	6680000	5650000
Lead	<20000	3393	27420	11200	10600	9240	23600	17000	2810	NS	13500	16800	22500
Manganese	140000	162500	990200	206000	723000	173000	735000	1560000	188000	NS	162000	515000	713000
Mercury	NA	NA	ND	ND	7.61	7.2	61.4	117	6.16	NS	12.5	24.6	8.59
Molybdenum	240000	50550	415600	106000	142000	35300	235000	434000	16800	NS	68800	127000	97100

Cell 1

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
Nickel	370000	36950	40860	32000	156000	27500	43700	15000	39100	NS	129000	130000	170000
Selenium	<20000	1862	15420	13000	14800	5220	11600	8090	2690	NS	3970	7070	3950
Silver	<5000	NA	1559.2	449	558	155	1110	4310	329	NS	336	1390	1240
Thallium	45000	NA	407.8	165	387	193	560	13	63.3	NS	876	1130	754
Tin	<5000	NA	6512	1240	2290	263	1500	<100	<100	NS	<17000	<100	<17000
Uranium	105000	134517	788600	416000	578000	159000	838000	1450000	140000	NS	137000	363000	131000
Vanadium	280000	348000	2208200	1200000	773000	752000	2500000	1940000	98200	NS	485000	1130000	746000
Zinc	1300000	NA	642940	476000	229000	171000	398000	811000	228000	NS	229000	638000	448000
Radiologics (pCi/l)													
Gross Alpha	NA	1693331	29380	21900	16500	11300	3610	12600	32700	NS	331000	735000 (8/4/2015) 73800 (5/28/2015	420000
VOCS (ug/L)													
Acetone	35	NA	66.5	110	710	260	80	310	41.1	NS	<700	56	40.6
Benzene	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<5.0	<1	<1
Carbon tetrachloride	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<5.0	<1	<1
Chloroform	8	NA	6.7	6.6	16	4.9	13	19	7.62	NS	<70.0	5.54	<1
Chloromethane	NA	NA	ND	9.4	11	4.4	3.6	4	5	NS	<30.0	1.93	<1
MEK	NA	NA	ND	ND	120	65	<1	200	<20	NS	<4000	<20	<20
Methylene Chloride	11	NA	ND	ND	2	<1	<1	2	<1	NS	<5.0	1.83	<1
Naphthalene	<10000	NA	<10	ND	1.1	5.4	2	3	<1	NS	<100	<1	<1
Tetrahydrofuran	NA	NA	150	<20	<100	<10	<500	2.9	<1	NS	<46.0	<1	<1
Toluene	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<1000	<1	<1
Xylenes	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<10000	<1	<1
SVOCS (ug/L)													
1,2,4-Trichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
1,2-Dichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
1,3-Dichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10

Cell 1

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
1,4-Dichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
1-Methylnaphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2,4,5-Trichlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2,4,6-Trichlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2,4-Dichlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2,4-Dimethylphenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2,4-Dinitrophenol	NA	NA	NA	NA	<250	<20	<20	<20	<21.6	<20	<20	<20	<10
2,4-Dinitrotoluene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2,6-Dinitrotoluene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2-Chloronaphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2-Chlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2-Methylnaphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2-Methylphenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
2-Nitrophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
3&4-Methylphenol	NA	NA	NA	NA	<22	<10	<10	<10	<10.8	<10	<10	<10	<10
3,3´-Dichlorobenzidine	NA	NA	NA	NA	<100	<10	<10	<10	<10.8	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	<250	<10	<10	<10	<10.8	<10	<10	<10	<10
4-Bromophenyl phenyl ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
4-Chloro-3-methylphenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
4-Nitrophenol	NA	NA	NA	NA	<250	<10	<10	<10	<10.8	<10	<10	<10	<10
Acenaphthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Acenaphthylene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Anthracene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Azobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Benz(a)anthracene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Benzidine	NA	NA	NA	NA	<100	<10	<10	<10	<10.8	<10	41	<10	<10
Benzo(a)pyrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10

Cell 1

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
Benzo(b)fluoranthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Benzo(g,h,i)perylene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Benzo(k)fluoranthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Bis(2-chloroethyl) ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Bis(2-chloroisopropyl) ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	NA	NA	NA	NA	<50	27	<10	<10	<10.8	<10	<10	<10	<10
Butyl benzyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Chrysene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Dibenz(a,h)anthracene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Diethyl phthalate	NA	NA	NA	NA	170	<10	<10	<10	<10.8	<10	<10	<10	<10
Dimethyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Di-n-butyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Di-n-octyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Fluoranthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Fluorene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Hexachlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Hexachlorobutadiene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Hexachlorocyclopentadiene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Hexachloroethane	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Isophorone	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Naphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Nitrobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
N-Nitrosodimethylamine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10

Cell 1

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
N-Nitrosodi-n-propylamine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
N-Nitrosodiphenylamine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Pentachlorophenol	NA	NA	NA	NA	<250	<10	<10	<10	<10.8	<10	<10	<10	<10
Phenanthrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Phenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Pyrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10
Pyridine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10

[1] Historic values reported for Gross Alpha from 1987 and 2003 are total gross alpha reported in pCi/L. All other gross alpha data are reported as Gross Alpha minus Rn & U.

Cell 2 Slimes Drain
Chemical and Radiological Characteristics

Constituents	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Major Ions (mg/l)										
Carbonate	ND	ND	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate	ND	ND	<1	<1	<1	<1	<1	<1	<1	<1
Calcium	572	528	508	496	474	462	465	322	524	402
Chloride	3700	3860	2750	3510	3110	3730	3270	3720	3850	4040
Fluoride	3.3	ND	<0.1	2.4	2.1	1.32	161	130	204	48.4
Magnesium	4100	4030	3750	3790	3640	3760	3320	2780	3810	3570
Nitrogen-Ammonia	4020	3620	3240	3820	2940	3540	1880	3500	367	3800
Nitrogen-Nitrate	30.9	20.3	38	126	38	27	47.2	35	1.06	12.7
Potassium	636	560	689	620	636	611	622	489	659	512
Sodium	4050	4600	4410	4770	4590	4380	3980	3130	4800	4690
Sulfate	60600	74000	72200	63700	64200	58300	83700	62200	57800	83900
pH (s.u.)	3.18	3.24	3.11	3.39	3.18	3	3.02	3.1	3.1	2.99
TDS	84300	74600	84100	79900	80200	83800	92200	87000	88200	93100
Conductivity (umhos/cm)	NA	NA	88700	60200	51400	52900	51100	54100	58800	44500
Metals (ug/l)										
Arsenic	26900	19300	14200	23500	17800	19400	21000	19800	13300	16900
Beryllium	298	245	271	267	231	251	262	197	275	259
Cadmium	5500	5840	5510	6370	5580	5290	5780	6480	6260	6610
Chromium	2750	2450	2230	2510	2380	2350	2290	1630	1840	1630
Cobalt	46500	43800	38700	48200	42500	48700	44900	46700	46000	46100
Copper	106000	154000	170000	148000	132000	138000	137000	126000	143000	156000
Iron	2770000	3310000	3230000	2720000	2960000	2850000	2810000	2180000	3000000	3410000
Lead	566	528	403	586	501	619	515	638	268	484
Manganese	117000	130000	160000	144000	123000	141000	122000	98000	136000	149000
Mercury	ND	ND	<0.5	<4	11.1	1.9	<0.5	<0.0020	<0.5	<2.00
Molybdenum	4080	3190	2240	4630	3510	3610	3650	4250	2010	3360
Nickel	123000	122000	108000	126000	111000	125000	108000	127000	120000	134000
Selenium	422	647	726	844	714	711	678	1020	631	615

Cell 2 Slimes Drain

Chemical and Radiological Characteristics

Constituents	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Silver	ND	ND	<10	<10	<10	<10	<10	<100	<20	<100
Thallium	361	703	368	470	371	338	278	402	233	212
Tin	ND	ND	<100	<100	<100	<100	<100	<17000	<100	<17000
Uranium	23000	29200	29900	30600	27100	33400	22800	26400	27200	27300
Vanadium	409000	463000	536000	469000	454000	475000	452000	497000	513000	497000
Zinc	767000	750000	582000	652000	574000	639000	631000	405000	702000	764000
Gross Alpha	1290	1570	1580	1000	1230	1370 (2400)*	2270	6890	7210	5660
VOCS (ug/L)										
Acetone	550	410	570	460	690	600	384	<700	599	473
Benzene	ND	ND	<1	<1	<1	<1	<1	<5.0	<1	<1
Carbon tetrachloride	ND	ND	<1	<1	<1	<1	<1	<5.0	<1	<1
Chloroform	20	17	16	15	20	16	21.4	<70.0	18.6	15
Chloromethane	1.8	ND	2.2	2.3	2	3	2.04	<30.0	<1	<1
MEK	65	ND	100	83	130	100	95.5	<4000	102	80.3
Methylene Chloride	ND	ND	<1	<1	<1	<1	<1	<5.0	<1	<1
Naphthalene	14	7.5	16	17	13	12	16.8	<100	16.2	11.9
Tetrahydrofuran	15	NA	<100	<10	<10	3.2	3.98	<46.0	2.16	<1
Toluene	1.7	ND	2.6	2.6	3	2	3.23	<1000	3.74	2.94
Xylenes	1.5	ND	<1	2.2	<1	2	5.97	<10000	<1	<1
SVOCS (ug/L)										
1,2,4-Trichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
1-Methylnaphthalene	NA	NA	<11	<10	<10	<10	<10	11	<10	<10
2,4,5-Trichlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10

Cell 2 Slimes Drain

Chemical and Radiological Characteristics

Constituents	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2,4-Dichlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
2,4-Dimethylphenol	NA	NA	<51	<20	<20	<10	<10	<10	<10	<10
2,4-Dinitrophenol	NA	NA	<11	<10	<10	<20	<20	<20	<20	<10
2,4-Dinitrotoluene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
2-Chloronaphthalene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
2-Chlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
2-Methylnaphthalene	NA	NA	<11	<10	<10	<10	<10	11	<10	11.1
2-Methylphenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
2-Nitrophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
3&4-Methylphenol	NA	NA	<21	<10	<10	<10	<10	<10	<10	<10
3,3´-Dichlorobenzidine	NA	NA	<51	<10	<10	<10	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
4-Bromophenyl phenyl ether	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	NA	NA	<51	<10	<10	<10	<10	<10	<10	<10
4-Nitrophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Acenaphthene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Acenaphthylene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Anthracene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Azobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Benz(a)anthracene	NA	NA	<21	<10	<10	<10	<10	<10	<10	<10
Benzidine	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(a)pyrene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(b)fluoranthene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(g,h,i)perylene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(k)fluoranthene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10

Cell 2 Slimes Drain
Chemical and Radiological Characteristics

Constituents	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bis(2-chloroethyl) ether	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroisopropyl) ether	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Butyl benzyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Chrysene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Dibenz(a,h)anthracene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Diethyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Dimethyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Di-n-butyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Di-n-octyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Fluoranthene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Fluorene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Hexachlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Hexachlorobutadiene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Hexachloroethane	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Isophorone	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Naphthalene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Nitrobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
N-Nitrosodimethylamine	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
N-Nitrosodi-n-propylamine	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
N-Nitrosodiphenylamine	NA	NA	<51	<10	<10	<10	<10	<10	<10	<10
Pentachlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Phenanthrene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Phenol	NA	NA	<11	10.7	<10	<10	<10	<10	<10	<10
Pyrene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10
Pyridine	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10

* Sample was reanalyzed due to comparability with the duplicate sample. The reanalysis data are in (parenthesis).

Cell 2 LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016
Major Ions (mg/l)								
Carbonate	<1	<1	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Bicarbonate	168	324						
Calcium	711	615						
Chloride	1750	1360						
Fluoride	0.4	0.4						
Magnesium	596	454						
Nitrogen-Ammonia	32.6	0.7						
Nitrogen-Nitrate	2.8	2.2						
Potassium	22	13						
Sodium	412	318						
Sulfate	2700	1780						
pH (s.u.)	6.6	7.36						
TDS	6750	5310						
Conductivity (umhos/cm)	11000	6500						
Metals (ug/l)								
Arsenic	<5	<5	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Beryllium	<0.50	<0.50						
Cadmium	33.4	1.1						
Chromium	<25	<25						
Cobalt	314	<10						
Copper	59	12						
Iron	208	37						
Lead	<1.0	<1.0						
Manganese	1810	395						
Mercury	<0.50	0.52						
Molybdenum	21	13						
Nickel	948	<20						
Selenium	7.9	9.4						
Silver	<10	<10						
Thallium	0.92	<0.50						
Tin	<100	<100						
Uranium	83.8	79.6						
Vanadium	22	<15						
Zinc	4220	78						
Radiologics (pCi/l)								
Gross Alpha	13.5	7.3	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled

Cell 2 LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016
VOCS (ug/L)								
Acetone	<20	<20	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Benzene	<1	<1						
Carbon tetrachloride	<1	<1						
Chloroform	<1	<1						
Chloromethane	<1	<1						
MEK	<20	<20						
Methylene Chloride	<1	<1						
Naphthalene	<1	<1						
Tetrahydrofuran	<100	6.13						
Toluene	<1	<1						
Xylenes	<1	<1						
SVOCS (ug/L)								
1,2,4-Trichlorobenzene	NA	<10	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
1,2-Dichlorobenzene	NA	<10						
1,3-Dichlorobenzene	NA	<10						
1,4-Dichlorobenzene	NA	<10						
1-Methylnaphthalene	NA	<10						
2,4,5-Trichlorophenol	NA	<10						
2,4,6-Trichlorophenol	NA	<10						
2,4-Dichlorophenol	NA	<10						
2,4-Dimethylphenol	NA	<10						
2,4-Dinitrophenol	NA	<20						
2,4-Dinitrotoluene	NA	<10						
2,6-Dinitrotoluene	NA	<10						
2-Chloronaphthalene	NA	<10						
2-Chlorophenol	NA	<10						
2-Methylnaphthalene	NA	<10						
2-Methylphenol	NA	<10						
2-Nitrophenol	NA	<10						
3&4-Methylphenol	NA	<10						
3,3´-Dichlorobenzidine	NA	<10						
4,6-Dinitro-2-methylphenol	NA	<10						
4-Bromophenyl phenyl ether	NA	<10						
4-Chloro-3-methylphenol	NA	<10						
4-Chlorophenyl phenyl ether	NA	<10						
4-Nitrophenol	NA	<10						
Acenaphthene	NA	<10						
Acenaphthylene	NA	<10						
Anthracene	NA	<10						
Azobenzene	NA	<10						

Cell 2 LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016
Benz(a)anthracene	NA	<10	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Benzidine	NA	<10						
Benzo(a)pyrene	NA	<10						
Benzo(b)fluoranthene	NA	<10						
Benzo(g,h,i)perylene	NA	<10						
Benzo(k)fluoranthene	NA	<10						
Bis(2-chloroethoxy)methane	NA	<10						
Bis(2-chloroethyl) ether	NA	<10						
Bis(2-chloroisopropyl) ether	NA	<10						
Bis(2-ethylhexyl) phthalate	NA	<10						
Butyl benzyl phthalate	NA	<10						
Chrysene	NA	<10						
Dibenz(a,h)anthracene	NA	<10						
Diethyl phthalate	NA	<10						
Dimethyl phthalate	NA	<10						
Di-n-butyl phthalate	NA	<10						
Di-n-octyl phthalate	NA	<10						
Fluoranthene	NA	<10						
Fluorene	NA	<10						
Hexachlorobenzene	NA	<10						
Hexachlorobutadiene	NA	<10						
Hexachlorocyclopentadiene	NA	<10						
Hexachloroethane	NA	<10						
Indeno(1,2,3-cd)pyrene	NA	<10						
Isophorone	NA	<10						
Naphthalene	NA	<10						
Nitrobenzene	NA	<10						
N-Nitrosodimethylamine	NA	<10						
N-Nitrosodi-n-propylamine	NA	<10						
N-Nitrosodiphenylamine	NA	<10						
Pentachlorophenol	NA	<10						
Phenanthrene	NA	<10						
Phenol	NA	<10						
Pyrene	NA	<10						
Pyridine	NA	<10						

Cell 3

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
Major Ions (mg/l)													
Carbonate	NA	<1	ND	ND	<1	<1	<1	<1	<1	NS	<1	<1	<1.00
Bicarbonate	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<1	<1	<1.00
Calcium	300	418	887	478	628	560	200	591	586	NS	294	713	148
Chloride	NA	2460	15965	15400	17200	3470	40400	8880	38400	NS	7200	22800	115000
Fluoride	<100	667	42.8	1.4	0.6	54.8	64.1	2300	12400	NS	1330	5410	46500
Magnesium	5400	3386	15767	13100	17100	2500	22100	5680	15400	NS	1910	12700	31000
Nitrogen-Ammonia	13900	1302	13867	9010	21600	2650	6470	6840	100	NS	3030	8.91	6270
Nitrogen-Nitrate	<100	20	102	44	142	26	261	64	277	NS	59.5	26.6	582
Potassium	NA	254	6657	4760	3820	782	2590	1190	2110	NS	386	1620	3120
Sodium	5900	3198	25583	22900	28600	5620	47900	6660	34400	NS	3630	23800	59800
Sulfate	180000	33400	173667	167000	214000	40400	197000	80000	440000	NS	37000	158000	834000
pH (s.u.)	0.82	2.28	1.6	1.79	1.4	2.18	1.27	2.4	1.05	NS	2.2	1.72	<1.00
TDS	189000	51633	228500	193000	243000	56200	296000	120000	410000	NS	70100	238000	887000
Conductivity (umhos/cm)	NA	NA	NA	NA	304000	59800	86400	80300	84300	NS	56200	121000	13600
Metals (ug/l)													
Arsenic	163000	32867	256500	489000	ND	52900	263000	4340	66000	NS	2920	21500	194000
Beryllium	540	430	913	840	905	206	1570	678	2570	NS	222	1520	12500
Cadmium	2600	1958	9260	15400	ND	1960	12200	3460	24000	NS	2550	14800	41000
Chromium	12000	3742	14883	12800	ND	3360	22800	10900	30600	NS	2380	15300	76200
Cobalt	48000	NA	82783	57000	ND	13000	76000	76100	99700	NS	20800	72500	74200
Copper	360000	87333	505000	345000	ND	89000	768000	379000	954000	NS	139000	511000	3000000
Iron	2100000	1278333	4874500	4400000	5970000	1460000	1.02E+07	3400000	9700000	NS	688000	4570000	15400000
Lead	<20000	2507	9647	16900	ND	17200	16700	1860	14400	NS	1900	9090	40.3
Manganese	82000	144000	496833	313000	ND	101000	587000	3110000	2470000	NS	214000	1270000	5690000
Mercury	ND	NA	ND	16	ND	<4	30.9	9.6	21.6	NS	2.4	7.01	873
Molybdenum	52000	12250	122167	209000	14	21300	96200	790	56100	NS	2930	12500	133000

Cell 3

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
Nickel	170000	20917	131833	241000	ND	23800	75800	150000	122000	NS	44900	121000	29200
Selenium	<2000	910	5856	10200	ND	3080	6900	2460	7060	NS	1370	4330	3170
Silver	<2500	NA	305	1010	ND	101	792	1850	3380	NS	329	1790	6780
Thallium	4700	NA	446	1200	ND	190	518	1080	694	NS	290	602	2160
Tin	NA	NA	1090	1070	ND	155	325	<100	<100	NS	<17000	<100	<17000
Uranium	118000	67833	332333	636000	3690	180000	458000	835000	1200000	NS	134000	530000	5360000
Vanadium	210000	158333	935000	1130000	ND	692000	2370000	836000	3220000	NS	454000	1720000	10300000
Zinc	590000	NA	748833	515000	ND	134000	726000	652000	1430000	NS	155000	899000	7810000
Radiologics (pCi/l)													
Gross Alpha	NA	1015831	16533	21700	17000	4030	11100	1530	81900	NS	19700	94900 (8/4/2015) 8780 (5/28/2015)	86000
VOCS (ug/L)													
Acetone	28	NA	80	100	67	37	330	64	302	159	<700	82.8	<200
Benzene	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<5.0	<1	<1
Carbon tetrachloride	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<5.0	<1	<1
Chloroform	6	NA	ND	11	4.2	2.6	31	2	56.3	21	<70.0	1.75	13.2
Chloromethane	NA	NA	ND	ND	1.4	1.8	3.5	1	<5	2.58	<30.0	1.03	19.8
MEK	NA	NA	ND	ND	<1	<1	67	<20	<100	24.5	<4000	<20	<20
Methylene Chloride	10	NA	ND	ND	<1	<1	7.4	<1	6.95	<1	<5.0	<1	<1
Naphthalene	<10000	NA	ND	<10	<1	2.1	1.2	<1	<5	<1	<100	<1	<1
Tetrahydrofuran	NA	NA	150	<20	<100	<10	<10	<1	<5	<1	<46.0	<1	<1
Toluene	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<1000	<1	<1
Xylenes	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<10000	<1	<1
SVOCS (ug/L)													
1,2,4-Trichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
1,2-Dichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10

Cell 3

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
1,3-Dichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
1,4-Dichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
1-Methylnaphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2,4,5-Trichlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2,4,6-Trichlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2,4-Dichlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2,4-Dimethylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2,4-Dinitrophenol	NA	NA	NA	NA	<53	<20	<20	<20	<21.1	<20	<20	<20	<10
2,4-Dinitrotoluene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2,6-Dinitrotoluene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2-Chloronaphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2-Chlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2-Methylnaphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2-Methylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
2-Nitrophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
3&4-Methylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
3,3´-Dichlorobenzidine	NA	NA	NA	NA	<21	<10	<10	<10	<10.5	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	<53	<10	<10	<10	<10.5	<10	<10	<10	<10
4-Bromophenyl phenyl ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
4-Chloro-3-methylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
4-Nitrophenol	NA	NA	NA	NA	<53	<10	<10	<10	<10.5	<10	<10	<10	<10
Acenaphthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Acenaphthylene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Anthracene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Azobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Benz(a)anthracene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Benzidine	NA	NA	NA	NA	<21	<10	<10	<10	<10.5	<10	<10	<10	<10
Benzo(a)pyrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10

Cell 3

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
Benzo(b)fluoranthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Benzo(g,h,i)perylene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Benzo(k)fluoranthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Bis(2-chloroethyl) ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Bis(2-chloroisopropyl) ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	NA	NA	NA	NA	<11	10.6	<10	<10	<10.5	<10	<10	<10	<10
Butyl benzyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Chrysene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Dibenz(a,h)anthracene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Diethyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Dimethyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Di-n-butyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Di-n-octyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Fluoranthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Fluorene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Hexachlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Hexachlorobutadiene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Hexachlorocyclopentadiene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Hexachloroethane	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Isophorone	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Naphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Nitrobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
N-Nitrosodimethylamine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
N-Nitrosodi-n-propylamine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
N-Nitrosodiphenylamine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Pentachlorophenol	NA	NA	NA	NA	<53	<10	<10	<10	<10.5	<10	<10	<10	<10
Phenanthrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10

Cell 3

Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014	2015	2016
Phenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Pyrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10
Pyridine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10

[1] Historic values reported for Gross Alpha from 1987 and 2003 are total gross alpha reported in pCi/L. All other gross alpha data are reported as Gross Alpha minus Rn & U.

Cell 4A
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016
Major Ions (mg/l)								
Carbonate	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate	<1	<1	<1	<1	<1	<1	<1	<1
Calcium	627	598	558	591	668	445	604	632
Chloride	4650	7350	5870	4980	4530	5900	6410	7040
Fluoride	0.3	21.6	30.6	43	1130	1290	1660	2030
Magnesium	3250	4940	4720	2230	3660	2990	3910	3550
Nitrogen-Ammonia	3140	5230	4930	1540	1340	2730	11	4770
Nitrogen-Nitrate	28	52	44	27	38.2	39.5	19.9	41.9
Potassium	980	1440	1450	558	773	724	1020	915
Sodium	5980	11300	11400	7130	6860	7190	9760	9580
Sulfate	67600	87100	267000	64900	83300	64900	77200	126000
pH (s.u.)	1.4	1.99	1.73	1.2	1.47	1.7	1.51	1.59
TDS	81400	107000	108000	76000	90000	97000	104000	124000
Conductivity (umhos/cm)	131000	101000	82100	78100	66300	73000	89600	81300
Metals (ug/l)								
Arsenic	626000	109000	86600	60500	73700	70000	82600	94400
Beryllium	296	215	323	167	247	190	281	320
Cadmium	1920	3670	2190	844	1450	1780	2090	2850
Chromium	3220	7500	5900	5990	5220	4620	5460	7920
Cobalt	9440	26500	22500	22900	22900	27500	26100	32800
Copper	99200	168000	181000	433000	540000	556000	477000	566000
Iron	2360000	2920000	3390000	3190000	2620000	2280000	3090000	3850000
Lead	5360	11800	11000	5270	11500	14800	11700	14000
Manganese	178000	209000	131000	112000	143000	120000	181000	225000
Mercury	1.19	<4	15.2	2.4	0.786	2.5	0.99	<2
Molybdenum	24300	43800	24200	58200	25500	40600	35400	43900
Nickel	17100	40900	43500	41300	43300	54100	48700	61300
Selenium	4620	5810	4460	1310	2080	2000	2400	2820
Silver	78	193	216	127	144	197	186	305
Thallium	162	350	410	250	256	376	436	568
Tin	257	378	319	169	118	<17000	142	<17000
Uranium	118000	217000	153000	91000	112000	159000	171000	214000
Vanadium	918000	1090000	730000	237000	461000	535000	577000	715000
Zinc	142000	224000	286000	200000	183000	169000	237000	318000
Radiologics (pCi/l)								
Gross Alpha	8910	3400	8290	16300	15800	240000	176000 (8/4/2015) 37800 (5/28/2015)	292000

Cell 4A

Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016
VOCS (ug/L)								
Acetone	60	55	100	25	28.4	<700	42.5	45.1
Benzene	<1	<1	<1	<1	<1	<5.0	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<5.0	<1	<1
Chloroform	4	8.5	10	<1	<1	<70.0	<1	<1
Chloromethane	3.4	5.5	7.9	<1	<1	<30.0	<1	<1
MEK	<1	<1	<1	<1	<20	<4000	<20	<20
Methylene Chloride	<1	<1	<1	<20	<1	<5.0	<1	<1
Naphthalene	1.8	<1	<1	<1	<1	<100	<1	<1
Tetrahydrofuran	<100	<10	<10	1.36	<1	<46.0	<1	12.6
Toluene	<1	<1	<1	<1	<1	<1000	<1	<1
Xylenes	<1	<1	<1	<1	<1	<10000	<1	<1
SVOCS (ug/L)								
1,2,4-Trichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
1-Methylnaphthalene	<11	<10	<10	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10
2,4-Dichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10
2,4-Dimethylphenol	<11	<10	<10	<10	<10	<10	<10	<10
2,4-Dinitrophenol	<53	<20	<20	<20	<20	<20	<20	<10
2,4-Dinitrotoluene	<11	<10	<10	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	<11	<10	<10	<10	<10	<10	<10	<10
2-Chloronaphthalene	<11	<10	<10	<10	<10	<10	<10	<10
2-Chlorophenol	<11	<10	<10	<10	<10	<10	<10	<10
2-Methylnaphthalene	<11	<10	<10	<10	<10	<10	<10	<10
2-Methylphenol	<11	<10	<10	<10	<10	<10	<10	<10
2-Nitrophenol	<11	<10	<10	<10	<10	<10	<10	<10
3&4-Methylphenol	<11	<10	<10	<10	<10	<10	<10	<10
3,3´-Dichlorobenzidine	<21	<10	<10	<10	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	<53	<10	<10	<10	<10	<10	<10	<10
4-Bromophenyl phenyl ether	<11	<10	<10	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	<11	<10	<10	<10	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	<11	<10	<10	<10	<10	<10	<10	<10
4-Nitrophenol	<53	<10	<10	<10	<10	<10	<10	<10
Acenaphthene	<11	<10	<10	<10	<10	<10	<10	<10
Acenaphthylene	<11	<10	<10	<10	<10	<10	<10	<10
Anthracene	<11	<10	<10	<10	<10	<10	<10	<10

Cell 4A

Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016
Azobenzene	<11	<10	<10	<10	<10	<10	<10	<10
Benz(a)anthracene	<11	<10	<10	<10	<10	<10	<10	<10
Benzidine	<21	<10	<10	<10	<10	<10	<10	<10
Benzo(a)pyrene	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(b)fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(g,h,i)perylene	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(k)fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroethyl) ether	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroisopropyl) ether	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	<11	19.6	<10	<10	<10	<10	<10	<10
Butyl benzyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Chrysene	<11	<10	<10	<10	<10	<10	<10	<10
Dibenz(a,h)anthracene	<11	<10	<10	<10	<10	<10	<10	<10
Diethyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Dimethyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Di-n-butyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Di-n-octyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10
Fluorene	<11	<10	<10	<10	<10	<10	<10	<10
Hexachlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
Hexachlorobutadiene	<11	<10	<10	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	<11	<10	<10	<10	<10	<10	<10	<10
Hexachloroethane	<11	<10	<10	<10	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	<11	<10	<10	<10	<10	<10	<10	<10
Isophorone	<11	<10	<10	<10	<10	<10	<10	<10
Naphthalene	<11	<10	<10	<10	<10	<10	<10	<10
Nitrobenzene	<11	<10	<10	<10	<10	<10	<10	<10
N-Nitrosodimethylamine	<11	<10	<10	<10	<10	<10	<10	<10
N-Nitrosodi-n-propylamine	<11	<10	<10	<10	<10	<10	<10	<10
N-Nitrosodiphenylamine	<11	<10	<10	<10	<10	<10	<10	<10
Pentachlorophenol	<53	<10	<10	<10	<10	<10	<10	<10
Phenanthrene	<11	<10	<10	<10	<10	<10	<10	<10
Phenol	<11	<10	<10	<10	<10	<10	<10	<10
Pyrene	<11	<10	<10	<10	<10	<10	<10	<10
Pyridine	<11	<10	<10	<10	<10	<10	<10	<10

Cell 4A LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016
Major Ions (mg/l)								
Carbonate	<1	<1	<1	<1	<1	<1	<1	<1
Bicarbonate	<1	<1	<1	<1	<1	<1	<1	<1
Calcium	558	474	470	453	429	336	510	446
Chloride	7570	4670	6040	2710	1910	4200	2860	5200
Fluoride	0.7	39.4	46	27	1970	1320	282	1150
Magnesium	6390	3240	5100	2070	1710	2690	2730	3940
Nitrogen-Ammonia	4480	2290	3480	1320	1010	2920	13.4	5050
Nitrogen-Nitrate	69	183	94	15	28.9	39	27.4	40.9
Potassium	1960	934	1500	503	305	415	245	675
Sodium	12600	6700	11000	3500	2930	4190	3490	8050
Sulfate	92400	41700	77400	39600	31400	56000	50500	91300
pH (s.u.)	1.98	2.53	2.32	2.1	2.32	2.4	2.29	2.04
TDS	117000	56900	93800	55400	49700	81900	65200	95400
Conductivity (umhos/cm)	150000	49000	66600	39600	31300	53600	50200	62200
Metals (ug/l)								
Arsenic	133000	54000	74700	44100	35700	51200	10400	43500
Beryllium	536	295	367	180	188	185	199	289
Cadmium	4010	2650	3160	921	1170	4720	4270	4500
Chromium	9140	3890	5940	3930	2630	2780	1760	4250
Cobalt	37300	15200	21700	22300	44300	41200	33700	32100
Copper	222000	116000	150000	481000	754000	439000	160000	331000
Iron	3940000	1420000	2530000	2460000	1370000	1850000	1320000	2330000
Lead	5270	3400	4520	2300	165	991	46.8	797
Manganese	389000	157000	207000	95200	86300	98600	96700	184000
Mercury	2.66	6.2	14.7	0.7	<0.5	<0.0020	<0.5	<2.00
Molybdenum	49200	23900	29300	10200	1200	3970	278	10700
Nickel	43900	23900	29600	35000	54600	99300	86300	72700
Selenium	5250	2820	3780	1260	1020	2170	649	1590
Silver	204	62	127	44	24.8	<100	25.6	144
Thallium	252	194	290	332	171	522	218	439
Tin	504	180	119	<100	<100	<17000	<100	<17000
Uranium	284000	145000	168000	90200	75000	82200	25000	116000
Vanadium	1150000	518000	770000	240000	157000	510000	253000	449000
Zinc	298000	152000	204000	181000	163000	306000	510000	502000
Radiologics (pCi/l)								
Gross Alpha	7020	3230	7440	4730	6930	61800	17200 (8/4/2015) 1670 (5/28/2015)	98700

Cell 4A LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016
VOCS (ug/L)								
Acetone	240	130	120	55	57	<700	84.7	61.5
Benzene	<1	<1	<1	<1	<1	<5.0	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<5.0	<1	<1
Chloroform	23	52	26	42	110	95	129	84.5
Chloromethane	7.9	13	3.8	6	9.93	<30.0	5.35	<1.00
MEK	78	50	82	36	<20	<4000	<20	<20
Methylene Chloride	<1	<1	<1	<1	<1	<5.0	<1	<1
Naphthalene	<1	1.5	<1	1	2.35	<100	<1	<1
Tetrahydrofuran	140	158	102	117	39.1	<46.0	18.5	<1
Toluene	<1	<1	<1	<1	<1	<1000	<1	<1
Xylenes	<1	<1	<1	<1	<1	<10000	<1	<1
SVOCS (ug/L)								
1,2,4-Trichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
1-Methylnaphthalene	<11	<10	<10	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10
2,4-Dichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10
2,4-Dimethylphenol	<11	<10	<10	<10	<10	<10	<10	<10
2,4-Dinitrophenol	<54	<20	<20	<20	<20	<20	<20	<10
2,4-Dinitrotoluene	<11	<10	<10	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	<11	<10	<10	<10	<10	<10	<10	<10
2-Chloronaphthalene	<11	<10	<10	<10	<10	<10	<10	<10
2-Chlorophenol	<11	<10	<10	<10	<10	<10	<10	<10
2-Methylnaphthalene	<11	<10	<10	<10	<10	<10	<10	<10
2-Methylphenol	<11	<10	<10	<10	<10	<10	<10	<10
2-Nitrophenol	<11	<10	<10	<10	<10	<10	<10	<10
3&4-Methylphenol	<11	<10	<10	<10	<10	<10	<10	<10
3,3´-Dichlorobenzidine	<22	<10	<10	<10	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	<54	<10	<10	<10	<10	<10	<10	<10
4-Bromophenyl phenyl ether	<11	<10	<10	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	<11	<10	<10	<10	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	<11	<10	<10	<10	<10	<10	<10	<10
4-Nitrophenol	<54	<10	<10	<10	<10	<10	<10	<10
Acenaphthene	<11	<10	<10	<10	<10	<10	<10	<10
Acenaphthylene	<11	<10	<10	<10	<10	<10	<10	<10
Anthracene	<11	<10	<10	<10	<10	<10	<10	<10

Cell 4A LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016
Azobenzene	<11	<10	<10	<10	<10	<10	<10	<10
Benz(a)anthracene	<11	<10	<10	<10	<10	<10	<10	<10
Benzidine	<22	<10	<10	<10	<10	<10	<10	<10
Benzo(a)pyrene	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(b)fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(g,h,i)perylene	<11	<10	<10	<10	<10	<10	<10	<10
Benzo(k)fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroethyl) ether	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroisopropyl) ether	<11	<10	<10	<10	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	<11	54.9	54.9	16.6	<10	<10	<10	<10
Butyl benzyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Chrysene	<11	<10	<10	<10	<10	<10	<10	<10
Dibenz(a,h)anthracene	<11	<10	<10	<10	<10	<10	<10	<10
Diethyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Dimethyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Di-n-butyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Di-n-octyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10
Fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10
Fluorene	<11	<10	<10	<10	<10	<10	<10	<10
Hexachlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10
Hexachlorobutadiene	<11	<10	<10	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	<11	<10	<10	<10	<10	<10	<10	<10
Hexachloroethane	<11	<10	<10	<10	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	<11	<10	<10	<10	<10	<10	<10	<10
Isophorone	<11	<10	<10	<10	<10	<10	<10	<10
Naphthalene	<11	<10	<10	<10	<10	<10	<10	<10
Nitrobenzene	<11	<10	<10	<10	<10	<10	<10	<10
N-Nitrosodimethylamine	<11	<10	<10	<10	<10	<10	<10	<10
N-Nitrosodi-n-propylamine	<11	<10	<10	<10	<10	<10	<10	<10
N-Nitrosodiphenylamine	<11	<10	<10	<10	<10	<10	<10	<10
Pentachlorophenol	<54	<10	<10	<10	<10	<10	<10	<10
Phenanthrene	<11	<10	<10	<10	<10	<10	<10	<10
Phenol	33	23.5	<10	<10	<10	<10	<10	<10
Pyrene	<11	<10	<10	<10	<10	<10	<10	<10
Pyridine	<11	<10	<10	<10	<10	<10	<10	<10

Cell 4B
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016
Major Ions (mg/l)						
Carbonate	<1	<1	<1	<1	<1	<1
Bicarbonate	<1	<1	<1	<1	<1	<1
Calcium	570	580	662	366	655	523
Chloride	8290	8170	4570	7300	8500	12000
Fluoride	26.7	23.3	1050	1150	1210	1780
Magnesium	3910	4500	3560	3310	5530	5780
Nitrogen-Ammonia	5220	5580	2060	5380	1.09	8690
Nitrogen-Nitrate	39	42	51.4	47	15.2	64.5
Potassium	1370	1650	1110	989	1700	1710
Sodium	9050	11700	3150	7100	12800	14100
Sulfate	134000	119000	98100	91500	108000	285000
pH (s.u.)	1.87	1.5	1.65	1.6	1.35	1.26
TDS	98000	128000	108000	131000	149000	172000
Conductivity (umhos/cm)	76900	86900	72800	90100	115000	116000
Metals (ug/l)						
Arsenic	67400	80000	65400	70400	106000	139000
Beryllium	311	356	334	275	430	557
Cadmium	1990	2540	1990	2290	2980	4260
Chromium	6860	8280	6390	6940	7450	11900
Cobalt	17800	29300	21300	24600	33700	46700
Copper	193000	340000	340000	368000	499000	684000
Iron	2960000	3580000	2830000	2480000	4340000	6340000
Lead	9960	11600	9820	10900	13400	17900
Manganese	128000	148000	154000	129000	231000	325000
Mercury	13.7	2.6	1.49	<0.0020	1.72	<2.00
Molybdenum	21400	27600	26100	29000	39800	55400
Nickel	33900	50500	35100	42000	56400	79600
Selenium	4670	4470	3900	5010	5600	7300
Silver	137	169	137	142	195	307
Thallium	237	368	243	258	408	559
Tin	196	215	163	<17000	211	<17000
Uranium	133000	171000	110000	133000	200000	278000
Vanadium	660000	783000	163000	666000	881000	868000
Zinc	191000	270000	184000	144000	313000	476000
Radiologics (pCi/l)						
Gross Alpha	8590	13600	14600	148000	267000 (8/4/2015) 42500 (5/28/2015)	262000

Cell 4B
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016
VOCS (ug/L)						
Acetone	130	94	43.5	<700	56.2	86.4
Benzene	<1	<1	<1	<5.0	<1	<1
Carbon tetrachloride	<1	<1	<1	<5.0	<1	<1
Chloroform	9.4	4	8.06	<70.0	2.34	3.07
Chloromethane	8.5	8	7.12	<30.0	3.62	6.01
MEK	<1	<1	<20	<4000	<20	<20
Methylene Chloride	<1	<1	<1	<5.0	<1	<1
Naphthalene	<1	<1	<1	<100	<1	<1
Tetrahydrofuran	<10	11.1	<1	<46.0	<1	<1
Toluene	<1	<1	<1	<1000	<1	<1
Xylenes	<1	<1	<1	<10000	<1	<1
SVOCS (ug/L)						
1,2,4-Trichlorobenzene	<10	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10
1-Methylnaphthalene	<10	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10
2,4-Dichlorophenol	<10	<10	<10	<10	<10	<10
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10
2,4-Dinitrophenol	<20	<20	<20	<20	<20	<10
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10
2-Chloronaphthalene	<10	<10	<10	<10	<10	<10
2-Chlorophenol	<10	<10	<10	<10	<10	<10
2-Methylnaphthalene	<10	<10	<10	<10	<10	<10
2-Methylphenol	<10	<10	<10	<10	<10	<10
2-Nitrophenol	<10	<10	<10	<10	<10	<10
3&4-Methylphenol	<10	<10	<10	<10	<10	<10
3,3´-Dichlorobenzidine	<10	<10	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	<10	<10	<10	<10	<10	<10
4-Bromophenyl phenyl ether	<10	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	<10	<10	<10	<10	<10	<10
4-Nitrophenol	<10	<10	<10	<10	<10	<10
Acenaphthene	<10	<10	<10	<10	<10	<10
Acenaphthylene	<10	<10	<10	<10	<10	<10
Anthracene	<10	<10	<10	<10	<10	<10

Cell 4B
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016
Azobenzene	<10	<10	<10	<10	<10	<10
Benz(a)anthracene	<10	<10	<10	<10	<10	<10
Benzidine	<10	<10	<10	26	<10	<10
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10
Benzo(g,h,i)perylene	<10	<10	<10	<10	<10	<10
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10
Bis(2-chloroethyl) ether	<10	<10	<10	<10	<10	<10
Bis(2-chloroisopropyl) ether	<10	<10	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	410	19	<10	<10	<10	<10
Butyl benzyl phthalate	<10	<10	<10	<10	<10	<10
Chrysene	<10	<10	<10	<10	<10	<10
Dibenz(a,h)anthracene	<10	<10	<10	<10	<10	<10
Diethyl phthalate	<10	<10	<10	<10	<10	<10
Dimethyl phthalate	<10	<10	<10	<10	<10	<10
Di-n-butyl phthalate	<10	<10	<10	<10	<10	<10
Di-n-octyl phthalate	<10	<10	<10	<10	<10	<10
Fluoranthene	<10	<10	<10	<10	<10	<10
Fluorene	<10	<10	<10	<10	<10	<10
Hexachlorobenzene	<10	<10	<10	<10	<10	<10
Hexachlorobutadiene	<10	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10
Hexachloroethane	<10	<10	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	<10	<10	<10	<10	<10	<10
Isophorone	<10	<10	<10	<10	<10	<10
Naphthalene	<10	<10	<10	<10	<10	<10
Nitrobenzene	<10	<10	<10	<10	<10	<10
N-Nitrosodimethylamine	<10	<10	<10	<10	<10	<10
N-Nitrosodi-n-propylamine	<10	<10	<10	<10	<10	<10
N-Nitrosodiphenylamine	<10	<10	<10	<10	<10	<10
Pentachlorophenol	<10	<10	<10	<10	<10	<10
Phenanthrene	<10	<10	<10	<10	<10	<10
Phenol	<10	<10	<10	<10	<10	<10
Pyrene	<10	<10	<10	<10	<10	<10
Pyridine	<10	<10	<10	15	<10	<10

Cell 4B LDS
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016
Major Ions (mg/l)						
Carbonate	<1	<1	Not Sampled - dry	<1	<1	<1
Bicarbonate	<1	<1		<1	<1	<1
Calcium	486	456		308	538	547
Chloride	3630	6850		6900	7960	8510
Fluoride	28.4	22		970	1150	1290
Magnesium	3230	3360		3400	5190	4780
Nitrogen-Ammonia	4260	4090		5240	2.43	7540
Nitrogen-Nitrate	30	31		43	16.6	49.6
Potassium	1130	1060		952	1560	1360
Sodium	8240	8080		6920	11900	10800
Sulfate	59900	99100		82300	104000	163000
pH (s.u.)	2.23	2.4		2.2	1.51	1.88
TDS	85800	90200		129000	131000	133000
Conductivity (umhos/cm)	63000	62400		76300	106000	68400
Metals (ug/l)						
Arsenic	54200	41200	Not Sampled - dry	67800	98400	98800
Beryllium	274	271		282	411	430
Cadmium	1670	1740		2290	2790	3250
Chromium	6250	5930		6160	7320	9470
Cobalt	15600	19000		23300	31100	33600
Copper	176000	181000		308000	458000	475000
Iron	2450000	2120000		2590000	4180000	4680000
Lead	6060	4420		4120	10100	5860
Manganese	118000	162000		144000	222000	262000
Mercury	12.3	3		0.002	1.47	<2.00
Molybdenum	16700	15000		24300	36300	35500
Nickel	30700	33700		40100	52600	58100
Selenium	3710	2880		4080	5080	5310
Silver	111	117		119	179	224
Thallium	179	175		336	354	414
Tin	332	<100		<17000	198	<17000
Uranium	111000	132000		143000	185000	192000
Vanadium	518000	428000		671000	817000	847000
Zinc	172000	182000		144000	296000	315000
Radiologics (pCi/l)						
Gross Alpha	6000	7500	Not Sampled - dry	181000	375000 (8/4/2015) 52500 (5/28/2015)	185000

Cell 4B LDS
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016
VOCS (ug/L)						
Acetone	390	370	Not Sampled - dry	<700	218	266
Benzene	<1	<1		<5.0	<1	<1
Carbon tetrachloride	<1	<1		<5.0	<1	<1
Chloroform	20	19		<70.0	5.03	9.97
Chloromethane	11	11		<30.0	9.72	10.8
MEK	240	180		<4000	71.8	53.6
Methylene Chloride	<1	<1		<5.0	<1	<1
Naphthalene	<1	<1		<100	<1	<1
Tetrahydrofuran	198	322		75.6	36.6	75.9
Toluene	<1	<1		<1000	<1	<1
Xylenes	<1	<1		<10000	<1	<1
SVOCS (ug/L)						
1,2,4-Trichlorobenzene	<10	<10	Not Sampled - dry	<10	<10	<10
1,2-Dichlorobenzene	<10	<10		<10	<10	<10
1,3-Dichlorobenzene	<10	<10		<10	<10	<10
1,4-Dichlorobenzene	<10	<10		<10	<10	<10
1-Methylnaphthalene	<10	<10		<10	<10	<10
2,4,5-Trichlorophenol	<10	<10		<10	<10	<10
2,4,6-Trichlorophenol	<10	<10		<10	<10	<10
2,4-Dichlorophenol	<10	<10		<10	<10	<10
2,4-Dimethylphenol	<10	<10		<10	<10	<10
2,4-Dinitrophenol	<20	<20		<20	<20	<20
2,4-Dinitrotoluene	<10	<10		<10	<10	<10
2,6-Dinitrotoluene	<10	<10		<10	<10	<10
2-Chloronaphthalene	<10	<10		<10	<10	<10
2-Chlorophenol	<10	<10		<10	<10	<10
2-Methylnaphthalene	<10	<10		<10	<10	<10
2-Methylphenol	<10	<10		<10	<10	<10
2-Nitrophenol	<10	<10		<10	<10	<10
3&4-Methylphenol	<10	<10		<10	<10	<10
3,3´-Dichlorobenzidine	<10	<10		<10	<10	<10
4,6-Dinitro-2-methylphenol	<10	<10		<10	<10	<10
4-Bromophenyl phenyl ether	<10	<10		<10	<10	<10
4-Chloro-3-methylphenol	<10	<10		<10	<10	<10
4-Chlorophenyl phenyl ether	<10	<10		<10	<10	<10
4-Nitrophenol	<10	<10		<10	<10	<10
Acenaphthene	<10	<10		<10	<10	<10
Acenaphthylene	<10	<10		<10	<10	<10
Anthracene	<10	<10		<10	<10	<10
Azobenzene	<10	<10		<10	<10	<10

Cell 4B LDS

Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016
Benz(a)anthracene	<10	<10	Not Sampled - dry	<10	<10	<10
Benzidine	<10	<10		<10	<10	<10
Benzo(a)pyrene	<10	<10		<10	<10	<10
Benzo(b)fluoranthene	<10	<10		<10	<10	<10
Benzo(g,h,i)perylene	<10	<10		<10	<10	<10
Benzo(k)fluoranthene	<10	<10		<10	<10	<10
Bis(2-chloroethoxy)methane	<10	<10		<10	<10	<10
Bis(2-chloroethyl) ether	<10	<10		<10	<10	<10
Bis(2-chloroisopropyl) ether	<10	<10		<10	<10	<10
Bis(2-ethylhexyl) phthalate	191	191		27	<10	132
Butyl benzyl phthalate	<10	<10		<10	<10	<10
Chrysene	<10	<10		<10	<10	<10
Dibenz(a,h)anthracene	<10	<10		<10	<10	<10
Diethyl phthalate	<10	<10		<10	<10	<10
Dimethyl phthalate	<10	<10		<10	<10	<10
Di-n-butyl phthalate	<10	<10		<10	<10	<10
Di-n-octyl phthalate	<10	<10		<10	<10	<10
Fluoranthene	<10	<10		<10	<10	<10
Fluorene	<10	<10		<10	<10	<10
Hexachlorobenzene	<10	<10		<10	<10	<10
Hexachlorobutadiene	<10	<10		<10	<10	<10
Hexachlorocyclopentadiene	<10	<10		<10	<10	<10
Hexachloroethane	<10	<10		<10	<10	<10
Indeno(1,2,3-cd)pyrene	<10	<10		<10	<10	<10
Isophorone	<10	<10		<10	<10	<10
Naphthalene	<10	<10		<10	<10	<10
Nitrobenzene	<10	<10		<10	<10	<10
N-Nitrosodimethylamine	<10	<10		<10	<10	<10
N-Nitrosodi-n-propylamine	<10	<10		<10	<10	<10
N-Nitrosodiphenylamine	<10	<10		<10	<10	<10
Pentachlorophenol	<10	<10		<10	<10	<10
Phenanthrene	<10	<10		<10	<10	<10
Phenol	<10	<10		<10	<10	<10
Pyrene	<10	<10		<10	<10	<10
Pyridine	<10	<10		<10	<10	<10

1980 – 2003 IUC/NRC Tailings System Wastewater Samples*[1]

Constituent	Minimum	Maximum
pH (Std units)	0.7	2.33
Nutrients (mg/L)		
Ammonia (N)	3.0	13900
Nitrite (N)	<100	<100
Nitrate (N)	24	24
Nitrate+Nitrite (N)	17.0	49.2
Phosphorus – total	88.1	620
TKN (N)	4900	5300
Inorganics (mg/L)		
Bicarbonate (HCO3)	<5	<5
Bromide	<500	<500
Carbonate (CO3)	<1	<5
Chloride	2110	8000
Cyanide – total	0.022	0.022
Fluoride	0.02	4400
Phosphate	<500	<500
Silica	110	400
Sulfate	29800	190000
Sulfide	<5	<5
TDS	43100	189000
TOC	76.0	81
TSS	31.0	115
Metals (mg/l)		
Aluminum	330	2530
Antimony	<20	<20
Arsenic	0.3	440
Barium	1.021	0.1
Beryllium	0.347	0.78
Boron	3.5	11.3
Cadmium	1.64	6.6
Calcium	90.0	630
Chromium	1.0	13
Cobalt	14.0	120
Copper	72.2	740
Iron	1080	3400
Gallium	<30	<30
Lead	0.21	6.0
Lithium	<10	<20
Magnesium	1800	7900
Manganese	74.0	222
Mercury	0.0008	17.6
Molybdenum	0.44	240
Nickel	7.2	370
Potassium	219.0	828
Selenium	0.18	2.4
Silver	0.005	0.14
Sodium	1400	10000

1980 – 2003 IUC/NRC Tailings System Wastewater Samples*[1]

Constituent	Minimum	Maximum
Strontium	3.6	14
Thallium	0.7	45
Tin	<5	<5
Titanium	6.5	33.3
Uranium	5.0	154
Vanadium	136	510
Zinc	50	1300
Zirconium	2.3	38.5
Radiologics (pCi/L)		
Gross Alpha	14000	189000
Gross Beta	74	116000
Lead-210	680	20700
Thorium-230	3650	76640
Thorium-232	49	121
Polonium-210	1410	1410
Radium-226	40	1690
Radium-228	1.9	1.9
Total Radium	42	1700
Selected VOCs (ug/L)		
Acetone	28	514
Benzene	<5	<5
2-butanone (MEK)	11	15.13
Carbon Disulfide	16	16
Carbon Tetrachloride	<5	<5
Chloroform	6	16.84
1,1-Dichloroethane	<5	<5
1,2-Dichloroethane	<5	<5
Dichloromethane	10	11
Tetrahydofuran	N/A	N/A
Toluene	<5	6.25
Vinyl Chloride	<10	<10
Xylene (total)	<5	<5
Selected Semivolatiles (ug/L)		
Benzo(a)pyrene	<10	<10
Bis(2-ethylhexyl)phthalate	1	1
Chrysene	<10	<10
Diethyl phthalate	<10	18.1
Dimethylphthalate	2.7	2.7
Di-n-butylphthalate	1.08	1.08
Fluoranthene	<10	<10
2-Methylnaphthalene	<10	<10
Naphthalene	2.44	2.44
Phenol	<10	38.4

*Reproduced from the Utah Division of Radiation Control Groundwater Quality Discharge Permit, Statement of Basis for a Uranium Mining Facility at White Mesa, South of Blanding, Utah, dated December 1, 2004.

[1]The data in the Utah Division of Radiation Control Groundwater Quality Discharge Permit, Statement of Basis are based on historical data collected from Cell 1, Cell 2, and Cell 3. The date of collection reflects which cells were operational at the time of sampling. The location of the samples and date of collection is referenced in the Statement of Basis.

Tab E

Quality Assurance and Data Validation Tables

Table E-1 Holding Time Evaluation**

	Required Holding Time	Cell 1 Solutions	Cell 2 Slimes Drain	Cell 3 Solutions	Cell 4A Solutions	Cell 4A LDS	Cell 4B Solutions	Cell 4B LDS	Cell 65 (Duplicate of Cell 3)
Carbonate	14 days	OK	OK	OK	OK	OK	OK	OK	OK
Bicarbonate	14 days	OK	OK	OK	OK	OK	OK	OK	OK
Calcium	6 months	OK	OK	OK	OK	OK	OK	OK	OK
Chloride	28 days	OK	OK	OK	OK	OK	OK	OK	OK
Fluoride	28 days	OK	OK	OK	OK	OK	OK	OK	OK
Magnesium	6 months	OK	OK	OK	OK	OK	OK	OK	OK
Nitrogen-Ammonia	28 days	OK	OK	OK	OK	OK	OK	OK	OK
Nitrogen-Nitrate	28 days	OK	OK	OK	OK	OK	OK	OK	OK
Potassium	6 months	OK	OK	OK	OK	OK	OK	OK	OK
Sodium	6 months	OK	OK	OK	OK	OK	OK	OK	OK
Sulfate	28 days	OK	OK	OK	OK	OK	OK	OK	OK
pH (pH units)	Immediately	OK*	OK*	OK*	OK*	OK*	OK*	OK*	OK*
TDS	7 days	OK	OK	OK	OK	OK	OK	OK	OK
Conductivity (umhos/cm)	N/A	OK	OK	OK	OK	OK	OK	OK	OK
Metals	6 months (except mercury which is 28 days)	OK	OK	OK	OK	OK	OK	OK	OK
Radiologics	6 months	OK	OK	OK	OK	OK	OK	OK	OK
VOCS (including THF)	14 days	OK	OK	OK	OK	OK	OK	OK	OK
SVOCS	7 days to extraction/40 days for analysis	OK	OK	OK	OK	OK	OK	OK	OK

* Per the method, pH should be analyzed within 15 minutes of sample collection. Due to the nature of the solution matrix, sample handling in the field is minimized and pH is measured by the laboratory upon receipt. This procedure change was requested by and approved by DWMRC.

** - The voluntary analyses conducted for specific gravity, thorium isotopes, uranium isotopes, and radium-226 are for informational purposes only. These analyses do not have QAP required holding times, and therefore, are not included in the holding time evaluation.

E-2 Laboratory Receipt Temperature Check

Work Order Number/Lab Set ID	Receipt Temp
GEL - 405194	N/A
AWAL - 1609037	1.3°C

N/A = These shipments contained samples for the analysis of radionuclides only. Samples submitted for radionuclide analyses do not have a sample temperature requirement.

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

Parameter	QAP/Permit Method	Method Used by Lab
Ammonia (as N)	A4500-NH3 G or E350.1	E350.1
Nitrate + Nitrite (as N)	E353.1 or E353.2	E353.2
Metals	E200.7 or E200.8	E200.7 and E200.8
Gross Alpha	E900.0 or E900.1	E900.1
VOCs	SW8260B or SW8260C	SW8260C
Chloride	A4500-Cl B or E300.0	E300.0
Fluoride	A4500-F C or E300.0	E300.0
Sulfate	A4500-SO4 E or E300.0	E300.0
TDS	A2540 C	A2540 C
Carbonate as CO3, Bicarbonate as HCO3	A2320 B	A2320 B
pH	Not Specified	SW9040B
Conductivity	Not Specified	A2510B
SVOCs	SW8270D	SW8270D

** - The voluntary analyses conducted for specific gravity, thorium isotopes, uranium isotopes, and radium-226 are for informational purposes only. These analyses do not have QAP required methods, and therefore, are not included in the analytical method evaluation.

E-4 Reporting Limit Evaluation**

Parameter	Permit-Specified RL
Ammonia (as N)	25 mg/L
Nitrate + Nitrite (as N)	10 mg/L
Metals ug/L	
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
VOCs ug/L	
Acetone	700
Benzene	5
Carbon tetrachloride	5
Chloroform	70
Chloromethane	30
MEK	4000
Methylene Chloride	5
Naphthalene	100
Tetrahydrofuran	46
Toluene	1000
Xylenes	10000
Major Ions	
Chloride	1.0 mg/L
Fluoride	4 mg/L
Sulfate	1000 mg/L
TDS	1000 mg/L
Carbonate as CO3, Bicarbonate as HCO3	1*
Calcium, Magnesium, Potassium, Sodium	1*
SVOCs (from the 8270D LLD) ug/L	
1,2,4-Trichlorobenzene	10
1,2-Dichlorobenzene	10

E-4 Reporting Limit Evaluation**

Parameter	Permit-Specified RL
1,3-Dichlorobenzene	10
1,4-Dichlorobenzene	10
1-Methylnaphthalene	10
2,4,5-Trichlorophenol	10
2,4,6-Trichlorophenol	10
2,4-Dichlorophenol	10
2,4-Dimethylphenol	10
2,4-Dinitrophenol	50
2,4-Dinitrotoluene	10
2,6-Dinitrotoluene	10
2-Chloronaphthalene	10
2-Chlorophenol	10
2-Methylnaphthalene	10
2-Methylphenol	10
2-Nitrophenol	10
3&4-Methylphenol	10
3,3´-Dichlorobenzidine	20
4,6-Dinitro-2-methylphenol	50
4-Bromophenyl phenyl ether	10
4-Chloro-3-methylphenol	20
4-Chlorophenyl phenyl ether	10
4-Nitrophenol	50
Acenaphthene	10
Acenaphthylene	10
Anthracene	10
Azobenzene	10*
Benz(a)anthracene	10
Benzidine	10*
Benzo(a)pyrene	10
Benzo(b)fluoranthene	10
Benzo(g,h,i)perylene	10
Benzo(k)fluoranthene	10
Bis(2-chloroethoxy)methane	10
Bis(2-chloroethyl) ether	10
Bis(2-chloroisopropyl) ether	10
Bis(2-ethylhexyl) phthalate	10*
Butyl benzyl phthalate	10
Chrysene	10
Dibenz(a,h)anthracene	10
Diethyl phthalate	10
Dimethyl phthalate	10
Di-n-butyl phthalate	10
Di-n-octyl phthalate	10
Fluoranthene	10
Fluorene	10

E-4 Reporting Limit Evaluation**

Parameter	Permit-Specified RL
Hexachlorobenzene	10
Hexachlorobutadiene	10
Hexachlorocyclopentadiene	10
Hexachloroethane	10
Indeno(1,2,3-cd)pyrene	10
Isophorone	10
Naphthalene	10
Nitrobenzene	10
N-Nitrosodimethylamine	10*
N-Nitrosodi-n-propylamine	10
N-Nitrosodiphenylamine	10
Pentachlorophenol	50
Phenanthrene	10
Phenol	10
Pyrene	10
Pyridine	10*

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

* Reporting limits for these analytes are not specified in either the Permit or EPA Method 8270D. The reporting limits established by the laboratory are reported here. The reporting limits are comparable to other analytes in the same method.

** - The voluntary analyses conducted for specific gravity, thorium isotopes, uranium isotopes, and radium-226 are for informational purposes only. These analyses do not have QAP required reporting limits, and therefore, are not included in the reporting limit evaluation.

E-5: Trip Blank Evaluation

All trip blanks for the 2016 sampling program were nondetect.

Blank	Sample Date	Laboratory
1	8/30/2016	AWAL

E-6 Duplicate Sample Relative Percent Difference**

Major Ions (mg/l)	Cell 3	Cell 65	RPD %
Carbonate	<1.00	<1.00	NA
Bicarbonate	<1.00	<1.00	NA
Calcium	148	3290	182.8
Chloride	115000	115000	0.0
Fluoride	46500	49300	5.8
Magnesium	31000	31200	0.6
Nitrogen-Ammonia	6270	7280	14.9
Nitrogen-Nitrate	582	669	13.9
Potassium	3120	3150	1.0
Sodium	59800	57500	3.9
Sulfate	834000	826000	1.0
pH (s.u.)	<1.00	<1.00	NA
TDS	887000	559000	45.4
Conductivity (umhos/cm)	13600	15600	13.7
Metals (mg/l)			
Arsenic	194	199	2.5
Beryllium	12.5	12.2	2.4
Cadmium	41	39.4	4.0
Chromium	76.2	95.8	22.8
Cobalt	74.2	107	36.2
Copper	3000	2970	1.0
Iron	15400	16400	6.3
Lead	0.0403	0.0631	44.1
Manganese	5690	5650	0.7
Mercury	0.873	0.881	0.9
Molybdenum	133	132	0.8
Nickel	29.2	52.0	56.2
Selenium	3.17	3.19	0.6
Silver	6.78	6.47	4.7
Thallium	2.16	2.17	0.5
Tin	<17.0	<17.0	NA
Uranium	5360	5150	4.0
Vanadium	10300	9870	4.3
Zinc	7810	7940	1.7
Radiologics (pCi/l)			
Gross Alpha*	86000	57500	12.22
VOCS (ug/L)			
Acetone	<200	297	NA
Benzene	<1.00	<1.00	NA
Carbon tetrachloride	<1.00	<1.00	NA
Chloroform	13.2	14.7	10.8

E-6 Duplicate Sample Relative Percent Difference**

Major Ions (mg/l)	Cell 3	Cell 65	RPD %
Chloromethane	19.8	18.3	7.9
MEK	<20.0	<20.0	NA
Methylene Chloride	<1.0	<1.00	NA
Naphthalene	<1.0	<1.00	NA
Tetrahydrofuran	<1.0	<1.00	NA
Toluene	<1.0	<1.00	NA
Xylenes	<1.0	<1.00	NA
SVOCS (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NA
1,2-Dichlorobenzene	<10	<10	NA
1,3-Dichlorobenzene	<10	<10	NA
1,4-Dichlorobenzene	<10	<10	NA
1-Methylnaphthalene	<10	<10	NA
2,4,5-Trichlorophenol	<10	<10	NA
2,4,6-Trichlorophenol	<10	<10	NA
2,4-Dichlorophenol	<10	<10	NA
2,4-Dimethylphenol	<10	<10	NA
2,4-Dinitrophenol	<10	<10	NA
2,4-Dinitrotoluene	<10	<10	NA
2,6-Dinitrotoluene	<10	<10	NA
2-Chloronaphthalene	<10	<10	NA
2-Chlorophenol	<10	<10	NA
2-Methylnaphthalene	<10	<10	NA
2-Methylphenol	<10	<10	NA
2-Nitrophenol	<10	<10	NA
3&4-Methylphenol	<10	<10	NA
3,3´-Dichlorobenzidine	<10	<10	NA
4,6-Dinitro-2-methylphenol	<10	<10	NA
4-Bromophenyl phenyl ether	<10	<10	NA
4-Chloro-3-methylphenol	<10	<10	NA
4-Chlorophenyl phenyl ether	<10	<10	NA
4-Nitrophenol	<10	<10	NA
Acenaphthene	<10	<10	NA
Acenaphthylene	<10	<10	NA
Anthracene	<10	<10	NA
Azobenzene	<10	<10	NA
Benz(a)anthracene	<10	<10	NA
Benzidine	<10	<10	NA
Benzo(a)pyrene	<10	<10	NA
Benzo(b)fluoranthene	<10	<10	NA
Benzo(g,h,i)perylene	<10	<10	NA
Benzo(k)fluoranthene	<10	<10	NA
Bis(2-chloroethoxy)methane	<10	<10	NA

E-6 Duplicate Sample Relative Percent Difference**

Major Ions (mg/l)	Cell 3	Cell 65	RPD %
Bis(2-chloroethyl) ether	<10	<10	NA
Bis(2-chloroisopropyl) ether	<10	<10	NA
Bis(2-ethylhexyl) phthalate	<10	<10	NA
Butyl benzyl phthalate	<10	<10	NA
Chrysene	<10	<10	NA
Dibenz(a,h)anthracene	<10	<10	NA
Diethyl phthalate	<10	<10	NA
Dimethyl phthalate	<10	<10	NA
Di-n-butyl phthalate	<10	<10	NA
Di-n-octyl phthalate	<10	<10	NA
Fluoranthene	<10	<10	NA
Fluorene	<10	<10	NA
Hexachlorobenzene	<10	<10	NA
Hexachlorobutadiene	<10	<10	NA
Hexachlorocyclopentadiene	<10	<10	NA
Hexachloroethane	<10	<10	NA
Indeno(1,2,3-cd)pyrene	<10	<10	NA
Isophorone	<10	<10	NA
Naphthalene	<10	<10	NA
Nitrobenzene	<10	<10	NA
N-Nitrosodimethylamine	<10	<10	NA
N-Nitrosodi-n-propylamine	<10	<10	NA
N-Nitrosodiphenylamine	<10	<10	NA
Pentachlorophenol	<10	<10	NA
Phenanthrene	<10	<10	NA
Phenol	<10	<10	NA
Pyrene	<10	<10	NA
Pyridine	<10	<10	NA

Highlighted cells indicate an RPD that exceeded the 20% RPD criteria

Per the approved QAP, an RPD greater than 20% is acceptable if the reported results are less than 5 times the RL. These results are provided for information only.

* Duplicate checks reported for gross alpha minus RN and U are not %RPD. Calculated values are based on the formula in the approved QAP.

** - The voluntary analyses conducted for specific gravity, thorium isotopes, uranium isotopes, and radium-226 are for informational purposes only. These analyses do not have QAP required duplicate requirements, and therefore, are not included in the duplicate evaluation.

E-7 Radiologics Counting Error

Sample ID	Gross Alpha minus Rn & U	Gross Alpha minus Rn & U Precision (±)	Counting Error ≤ 20%	GWQS	Within GWQS
Cell 1	420000	3710	Y	15	NA
Cell 2 Slimes	5660	378	Y	15	NA
Cell 3	86000	1950	Y	15	NA
Cell 4A	292000	3320	Y	15	NA
Cell 4A LDS	98700	1780	Y	15	NA
Cell 4B	262000	2670	Y	15	NA
Cell 4B LDS	185000	2080	Y	15	NA
Cell 65 (Duplicate of Cell 3)	57500	1280	Y	15	NA

GWQS = Groundwater Quality Standard

E-8: Laboratory Matrix QC

Matrix Spike % Recovery Comparison

Lab Report	Sample ID	Analyte	MS %REC	MSD %REC	REC Range	RPD
1609037	Cell 4A LDS	Calcium*	NC	NC	70-130	NC
1609037	Cell 4A LDS	Potassium*	NC	NC	70-130	NC
1609037	Cell 4A LDS	Vanadium*	NC	NC	70-130	NC
1609037	Cell 4A LDS	Magnesium*	NC	NC	70-130	NC
1609037	Cell 4A LDS	Sodium*	NC	NC	70-130	NC
1609037	Cell 4A LDS	Copper*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Manganese*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Uranium*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Iron*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Zinc*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Arsenic*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Cadmium*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Chromium*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Cobalt*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Molybdenum*	NC	NC	75-125	NC
1609037	Cell 4A LDS	Nickel*	NC	NC	75-125	NC
1609037	Cell 1	Alkalinity	0	0	80-120	0
1608614	N/A	Ammonia (as N)	128	126	90-110	1.56
1608594	N/A	Ammonia (as N)	128	128	90-110	0.154
1609037	Cell 4A LDS	Ammonia (as N)	148	149	90-110	0.153
1609037	Cell 4A LDS	Nitrate/Nitrate (as N)	76.1	76.5	90-110	0.341
1609037	Cell 4A LDS	2,4-Dinitrotoluene	13.6	11.1	21-191	20.0
1609037	Cell 4A LDS	4,6-Dinitro-2-methylphenol	6.85	5.78	20-250	17.0
1609037	Cell 4A LDS	4-Nitrophenol	0	0	10-135	200
1609037	Cell 4A LDS	Phenol	53.6	40.0	10-71	29.0
405194	Cell 1	Gross Alpha*	NC	NC	75 - 125	NC

NC = Not Calculated

*= Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

N/A = QC was not performed on an EFRI sample.

LCS % Recovery

All LCS recoveries were within acceptable ranges.

E-8: Laboratory Matrix QC

Surrogate % Recovery

Lab Report	Well/Sample	Analyte	Surrogate %REC	Lab Specified REC Range	QAP Required Range
1609037	Cell 1	2-Fluorobiphenyl	3.63	10-124	None
1609037	Cell 1	2-Fluorophenol	2.58	10-106	None
1609037	Cell 1	Nitrobenzene-d5	2.28	10-180	None
1609037	Cell 1	Phenol-d6	4.08	10-122	None
1609037	Cell 2 Slimes	Nitrobenzene-d5	0.475	10-180	None
1609037	Cell 3	2,4,6-Tribromophenol	3.39	14-159	None
1609037	Cell 3	2-Fluorobiphenyl	0.125	10-124	None
1609037	Cell 3	2-Fluorophenol	0.0500	10-106	None
1609037	Cell 3	Nitrobenzene-d5	0.0250	10-180	None
1609037	Cell 3	Phenol-d6	0.375	10-122	None
1609037	Cell 3	Terphenyl-d14	1.78	10-221	None
1609037	Cell 4A	2-Fluorophenol	7.85	10-106	None
1609037	Cell 4A	Nitrobenzene-d5	3.02	10-180	None
1609037	Cell 4A	Phenol-d6	8.79	10-122	None
1609037	Cell 65	2,4,6-Tribromophenol	3.24	14-159	None
1609037	Cell 65	2-Fluorobiphenyl	0.100	10-124	None
1609037	Cell 65	2-Fluorophenol	0.0500	10-106	None
1609037	Cell 65	Nitrobenzene-d5	0.0500	10-180	None
1609037	Cell 65	Phenol-d6	0.325	10-122	None
1609037	Cell 65	Terphenyl-d14	1.43	10-221	None
1609037	Method Blank	Phenol-d6	8.71	10-122	None

Laboratory Duplicate % Recovery Comparison

Lab Report	Well	Analyte	Sample Result (pCi/L)	Lab Duplicate Result (pCi/L)	RPD %	RPD Range %
405194	Cell 1	Gross Alpha	420000	312000	29.7	20