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October 17, 2022

Sent VIA OVERNIGHT DELIVERY

Mr. Doug Hansen
Director
Division of Waste Management and Radiation Control
Utah Department of Environmental Quality
195 North 1950 West
Salt Lake City, UT 84116

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

Dear Mr. Howard:

Enclosed are two copies of the White Mesa Uranium Mill Annual Tailings System Wastewater Monitoring Report for 2022 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
Garrin Palmer
Dave Frydenlund
Logan Shumway

White Mesa Uranium Mill

2022 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 17, 2022

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2022 ANNUAL TAILINGS SYSTEM WASTEWATER SAMPLING REPORT

1.0 INTRODUCTION

This is the 2022 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 ("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 ("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.

The 2022 sampling event was conducted August 24, 2022.

2.0 SUMMARY OF MILL TAILINGS SYSTEM ACTIVITIES IN 2022

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 2022, Cell 1 received fluid from the Mill process, storm water run-off, and Mill laboratory waste. The LDS in Cell 1 was dry in 2022.

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 2022. 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. This cell is equipped with a LDS and a slimes drain. The LDS was dry in 2022 and the slimes drain system will be monitored once dewatering begins. In 2022, Cell 3 received solid Mill waste, some process solutions, and solid 11e.2 byproduct material from in situ recovery ("ISR") facilities. There was no liquid pool during the 2022 sampling event due to evaporation caused by extreme local drought conditions and high temperatures. Cell 3 liquids were not sampled in 2022.

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 2022, as described below. In 2022, Cell 4A received solutions from the Mill process, and some solid tailings sands.

2.5 Cell 4B

Cell 4B is a 40-acre impoundment built in 2011. It operates as an evaporation pond which receives solutions only. Process fluids were sent to Cell 4B from the Mill in 2022.The LDS in Cell 4B was sampled in 2022, 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 24, 2022.

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 split

sample aliquots at Cell 1.

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 SVOCs.

Additionally, in order to further characterize the radiological constituents and physical properties of the solution, EFRI conducted voluntary analyses on the August 24, 2022 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 24, 2022 sampling event are included in separate data tables 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 low pH 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.

3.3.1 Cells

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

Disposable or dedicated sampling equipment was 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, and 3 LDSs were not sampled during the 2022 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 Volatile Organic Compounds ("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 Energy Laboratories ("EL").

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 Director, Regulatory Compliance 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 Director, Regulatory Compliance 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.

It is important to note that the SVOC analyses include Tentatively Identified Compounds ("TICs"). The SVOC compound 4-chlorophenol would be reported in the TIC data list if detected. 4-chlorophenol was not detected.

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 Director, Regulatory Compliance 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 Director, Regulatory Compliance 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 analyzed within the required holding time.

It is important to note that pH is analyzed by the laboratory and is not measured in the field because the acidic nature of the samples requires a more robust meter than what is available for field use. In most circumstances pH is measured at the time of sample collection and a holding time is not assessed. If pH is not measured at the time of collection, a 15-minute time limit is set. EL flagged the pH results with an "H" flag because the pH was measured beyond the 15-minute limit. This does not affect the usability of the data, as the sample matrices are stable and pH is collected for informational purposes only and there are no compliance criteria for pH measurements.

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 Director, Regulatory Compliance verified that the laboratory pH and conductivity methods used by the laboratory were appropriate and provided accurate data.

GEL used EPA Method 8270E for the analysis of SVOCs during the 2022 sampling event. Table 1 of the QAP does not specify a method for SVOCs because SVOCs are not routinely collected in the Mill groundwater samples. The GWDP requires that tailings and slimes drain samples shall include the SVOCs identified in EPA Method 8270D. The GWDP does not specify that EPA Method 8270D be used for analysis, only that the compounds specified in that method be included

in the analytical list. All of the SVOCs in the GWDP-specified list were included in the analytical data The analytical data are included in Tab C.

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 limits are provided in Tab E. There are several constituents that do not have specified reporting limits in either the Permit or EPA Method 8270D. The reporting limits established by the laboratory are reported in the data packages. The reporting limits are comparable to other analytes in the same method based on the same matrix. The reporting limits used by the laboratory are considered acceptable based on the matrix and known difficulties caused by the sample matrix.

The VOCs and all of the SVOCs had reporting limits that exceeded the reporting limits listed in the permit or the method respectively.

The VOCs that had reporting limits that exceeded the reporting limits are:

- Methylene chloride in Cell 1, Cell 2 Slimes, Cell 4A, Cell 4A LDS, Cell 4B, Cell 4B LDS – 2022 reporting limit = 25 ug/L

All samples had methylene chloride RLs above the permit required RL of 5 ug/L. These exceedances were likely the result of dilutions necessary to address the matrix interferences inherent in these samples. The exceedances do not affect the quality or usability of the data because the results of this sampling provide an "inventory" of cell composition and are not used for comparison to regulatory limits.

The reporting limits for the SVOCs exceeded the recommended RLs in Method 8270D. GEL provided both a method detection limit ("DL") and RL. The DL is based on the sample

composition and other sample-specific variables such as TDS and pH. EPA Method 8270D provides "recommended" quantitation limits for water samples. The tailings solution matrix is not comparable to routine groundwater samples and require dilutions to address these matrix interferences. The laboratory will report detections to the DL and therefore that is the lowest limit for reporting (i.e. the RL). These RL exceedances were likely the result of dilutions necessary to address the matrix interferences inherent in these samples. The exceedances do not affect the quality or usability of the data because the results of this sampling provide an "inventory" of cell composition and are not used for comparison to regulatory limits.

In addition, 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 the 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 acetone and methyl ethyl ketone ("MEK or 2-butanone) in the duplicate pair Cell 4A LDS/Cell 65. The MEK results were greater than 20% RPD, however, the sample and duplicate results were not greater than 5 times the RL and as such are acceptable. Per the approved QAP, 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. The corrective actions that were taken in accordance with the revised procedure are as follows: the Director, Regulatory Compliance 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 for gross alpha. Results of the RPD test are provided under Tab E. Per the approved QAP, 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 4A LDS/Cell 65. The corrective actions that were taken in accordance with the revised procedure are as follows: the Director, Regulatory Compliance 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 Director, Regulatory Compliance 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 EL 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.

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 Director, Regulatory Compliance.

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 the samples were within acceptable laboratory limits except as indicated in Tab E. The data recoveries and RPDs which are outside the laboratory established acceptance limits do not affect the quality or usability of the data because the recoveries and RPDs above or below the acceptance limits are indicative of matrix interference most likely caused by other constituents in the samples. Matrix interferences are applicable to the individual sample results only. The requirement in the QAP to analyze a MS/MSD pair with each analytical batch was met and as such the data are compliant with the QAP. The SVOC MSD results for 40 of the 42 analytes showed no recoveries. GEL noted that this was likely due to a bad extraction and that there was insufficient sample volume remaining for re-extraction. The method and analytical batch are considered acceptable because the MS and LCS data were within limits. It is also important to note that the MS/MSD sample pair were not analyzed on EFRI samples.

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 samples met the requirement specified in the QAP. The information from the Laboratory QA/QC Summary Reports indicates that the surrogate recoveries for the samples were within acceptable laboratory limits for the surrogate compounds except as noted in Tab E. Two surrogate recoveries for an MSD sample were noted as being outside of acceptance limits. The surrogate recoveries as well as the MSD spiking analytes were not recovered due to a bad extraction and as noted above there was insufficient sample volume remaining for re-extraction. The method and analytical batch are considered acceptable because the MS and LCS data were within limits. The requirement in the QAP to analyze surrogate compounds was met and the data are compliant with the QAP. Furthermore, there are no QAP requirements for surrogate recoveries.

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

The QAP, Section 8.1.2 requires that each analytical batch shall be accompanied by a method blank. The analytical batches routinely contain a blank, which is a blank sample made and carried through all analytical steps. For the Mill samples, a method blank was prepared for the analytical methods. Per the approved QAP, contamination detected in analysis of method blanks will be used to evaluate any analytical laboratory contamination of environmental samples. The QAP states that non-conformance conditions will exist when contaminant levels in the samples(s) are not an order of magnitude greater than the blank result. Total Acidity as $CaCO_3$, conductivity, chloride, sulfate uranium, thallium, and silver were reported the method blanks from EL. The QAP criteria were not met for silver in the Cell 2 slimes sample because the method blank detections were not less than an order of magnitude of the sample results. The method blank detection indicates false positive results or high biased for tin in the samples, however, since the Cell 2 slimes result was nondetect there is no effect on the sample results. No specific corrective actions are specified in the QAP. The QAP requirement to analyze a method blank with each batch and evaluate the results has been completed as required. Method blank results are included in Tab E.

5.0 HISTORIC DATA

The historic analytical data for the tailings system wastewater sampling program are included in Tab D. In addition, the average concentrations for Cell 3, 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 1.2. As expected, the solutions contained gross alpha, major ions, metals and one VOC (chloroform). 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, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, uranium, vanadium and zinc. An increase was noted in the gross

alpha concentration in the August 2022 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 majority of the concentrations reported in the 2022 sample remained within historic ranges. Nitrate had a reported concentration outside (below) the historic ranges. The concentration which fell outside of the historic ranges are due to effects from the severe local drought, routine sampling and analytical error, and matrix interferences during the analyses caused by the inherent composition of the fluids. 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 was dry in 2022 and was therefore not sampled.

6.3 Cell 4A

Cell 4A solutions were acidic in nature, with a laboratory pH of 2.2. As expected, the solutions contained gross alpha, major ions, metals. VOCs and 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. An increase in the gross alpha concentration of the 2022 sample was noted. 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 2022 sample remained approximately the same as the 2021 sample. Calcium, chloride, potassium, sodium, TDS, cadmium, chromium, copper, nickel, and silver reported concentration slightly above the historic ranges. 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.

6.4 Cell 4B

Cell 4B solutions were acidic in nature, with a laboratory pH of 2.6. As expected, the solutions contained gross alpha, major ions, metals, and one VOC (acetone). SVOCs were not detected.

Cell 4B fluid exhibited the highest major ion concentrations for chloride, ammonia, sodium and sulfate. The metals arsenic, chromium, cobalt, copper, iron, manganese, molybdenum, nickel, uranium, vanadium and zinc were one or more orders of magnitude greater than the other metals analyzed. A decrease in the gross alpha concentration of the 2022 sample was noted. 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 2022 pH result was above historic averages. The concentrations of calcium, chloride, magnesium, nitrate, potassium, sodium, sulfate, TDS, arsenic, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, silver, uranium, vanadium, and zinc reported in the 2022 sample are below previous results due to the addition of fresh water in an effort to cover the crystals on the bottom of the cell. It is important to note that not all constituents present in the tailings fluids will exhibit the same behavior and any decreases or 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.

6.5 Cell 2 Slimes Drain

Cell 2 Slimes drain fluid was acidic in nature, with a laboratory pH of 3.0. As expected, the solutions contained gross alpha, major ions, metals, and VOCs. Two SVOCs were detected. 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. The 2022 gross alpha concentration remained similar to the 2021 sample result. The gross alpha result remains in the same order of magnitude of the historic data. It is important to note that gross alpha results affected 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 2022 sample remained approximately the same as the 2021 sample with only nickel slightly above the historic ranges. Concentration changes noted are within the analytical accuracy of the methods used for analysis. It is important to note that not all constituents will behave in a linear manner. The individual constituent results are greatly affected by the matrix of the tailings management system and each constituent will behave differently based on the matrix interactions and the differing solubility properties of the constituent.

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 Cells 1, 2, and 3 Leak Detection Systems

Consistent with the Permit, the Cells 1, 2, and 3 LDSs were not sampled during the 2022 sampling event. The Cells 1, 2, and 3 LDSs were dry.

6.8 Cell 4A Leak Detection System

Cell 4A LDS solutions were acidic in nature, with a laboratory pH of 2.5. As expected, the solutions contained gross alpha, major ions, metals and VOCs. No SVOCs were 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, 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, compared to the 2021 sample was noted. 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 2022 sample remained within historic ranges. Iron reported concentrations were below the historic ranges. The concentrations which fall outside of the historic ranges are due to analytical error, and matrix interferences during the analyses caused by the inherent composition of the fluids.

6.9 Cell 4B Leak Detection System

Cell 4B LDS solutions were acidic in nature, with a laboratory pH of 2.2. As expected, the solutions contained gross alpha, major ions, and metals. Four VOCs were detected. One SVOC was detected. Cell 4B LDS fluid exhibited the highest major ion concentrations for chloride, fluoride, magnesium, ammonia, 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 2022 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 majority of the concentrations reported in the 2022 sample were below historic ranges. Magnesium, potassium, sulfate, TDS, arsenic, beryllium, cadmium, chromium, copper, iron lead, molybdenum, selenium, silver, thallium, and uranium had reported concentration below the historic ranges. The concentrations which fall outside of the historic ranges are due to changes in the Cell 4B solutions caused by effects from the severe local drought, routine sampling and analytical error, and matrix interferences during the analyses caused by the inherent composition of the fluids.

6.10 Summary and Conclusions of Analytical Results

The metals arsenic, cadmium, chromium, cobalt, copper, iron, manganese, molybdenum, nickel, uranium, vanadium and zinc were generally present in greatest concentration for all samples. For major ions, chloride, ammonia, sodium, and sulfate were predominant. Both increases and decreases were noted for several metals and major anions. Concentrations are variable and are driven by Mill operations. 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 reflective of Mill operations and are driven by the addition/movement of fluids during periods of operation. 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 2022 tailings solutions are within historic, expected ranges except as noted above.

7.0 CORRECTIVE ACTION REPORT

No corrective action reports are required for the 2022 annual sampling event.

7.1 Assessment of Corrective Actions from Previous Period

No corrective action reports were required for the 2021 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.

Energy Fuels Resources (USA) Inc.

By:

Scott A. Bakken
Vice President, Regulatory Affairs

10/17/22
Date

Certification:

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

Scott A. Bakken
Vice President, Regulatory Affairs
Energy Fuels Resources (USA) Inc.

TABLES

Table 1
Summary of Tailings System Wastewater Monitoring

Location	Sample Date*	Date of Laboratory Report	Work Order Number/Lab Set ID
Cell 1 Solutions	8/24/2022	GEL- 9/27/2022	GEL - 591138
		EL - 9/19/2022	EL - C22081104
Cell 2 Slimes Drain	8/24/2022	GEL- 9/27/2022	GEL - 591138
		EL - 9/19/2022	EL - C22081104
Cell 3 Solutions	Not Sampled - DRY	NA	NA
		NA	NA
Cell 4A Solutions	8/24/2022	GEL- 9/27/2022	GEL - 591138
		EL - 9/19/2022	EL - C22081104
Cell 4A LDS	8/24/2022	GEL- 9/27/2022	GEL - 591138
		EL - 9/19/2022	EL - C22081104
Cell 4B Solutions	8/24/2022	GEL- 9/27/2022	GEL - 591138
		EL - 9/19/2022	EL - C22081104
Cell 4B LDS	8/24/2022	GEL- 9/27/2022	GEL - 591138
		EL - 9/19/2022	EL - C22081104
Cell 65 - Duplicate of Cell 4A LDS	8/24/2022	GEL- 9/27/2022	GEL - 591138
		EL - 9/19/2022	EL - C22081104

Notes:
NA = Not sampled or analyzed. There was no liquid present at the time of the sampling event.
GEL = GEL Laboratories, LLC
EL = Energy Labs

***EFRI conducted the annual sampling event in August 2022. EFRI collected additional samples aliquots for specific gravity and additional radiological constituents.**

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:** Tanner Holliday, Deen Lyman 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): N/A

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method:

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

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0803 Samples collected at 0810
Left site at 0835

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

Location: Slimes # 2 **Sampling Personnel:** Tanner Holliday, Deen Lyman 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): 34.71

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method:

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

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name:_____

Notes: Arrived on site at 0836 Samples collected at 0845
Left site at 0850

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

Location: Cell 4A **Sampling Personnel:** Tanner Holliday, Dean Lyman, 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): N/A

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method:

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

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0857 Samples collected at 0905
Left site at 0911

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

Location: Cell 4A LDS **Sampling Personnel:** Tanner Holliday, Deen Lyman 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): N/A

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method:

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

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name:

Notes: Arrived on site at 0912 Samples collected at 0920
Left site at 0936

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

Location: Cell 4B **Sampling Personnel:** Tanner Holliday, Deen Lyman 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): N/A

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method:

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

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0937. Samples collected at 0945
Left site at 0949

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

Location: Cell 4B LDS **Sampling Personnel:** Tanner Holliday, Deen Lyman, 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): N/A

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method:

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

QC Samples Associated with this Location:

☐ Rinsate Blank

☐ Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0950 Samples collected at 0955
Left site at 1003

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

Location: Cell 65 **Sampling Personnel:** Tanner Holliday, Deen Lyman 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): N/A

Weather Conditions at Time of Sampling: Sunny

Analytical Parameters/Sample Collection Method:

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

QC Samples Associated with this Location:

☐ Rinsate Blank

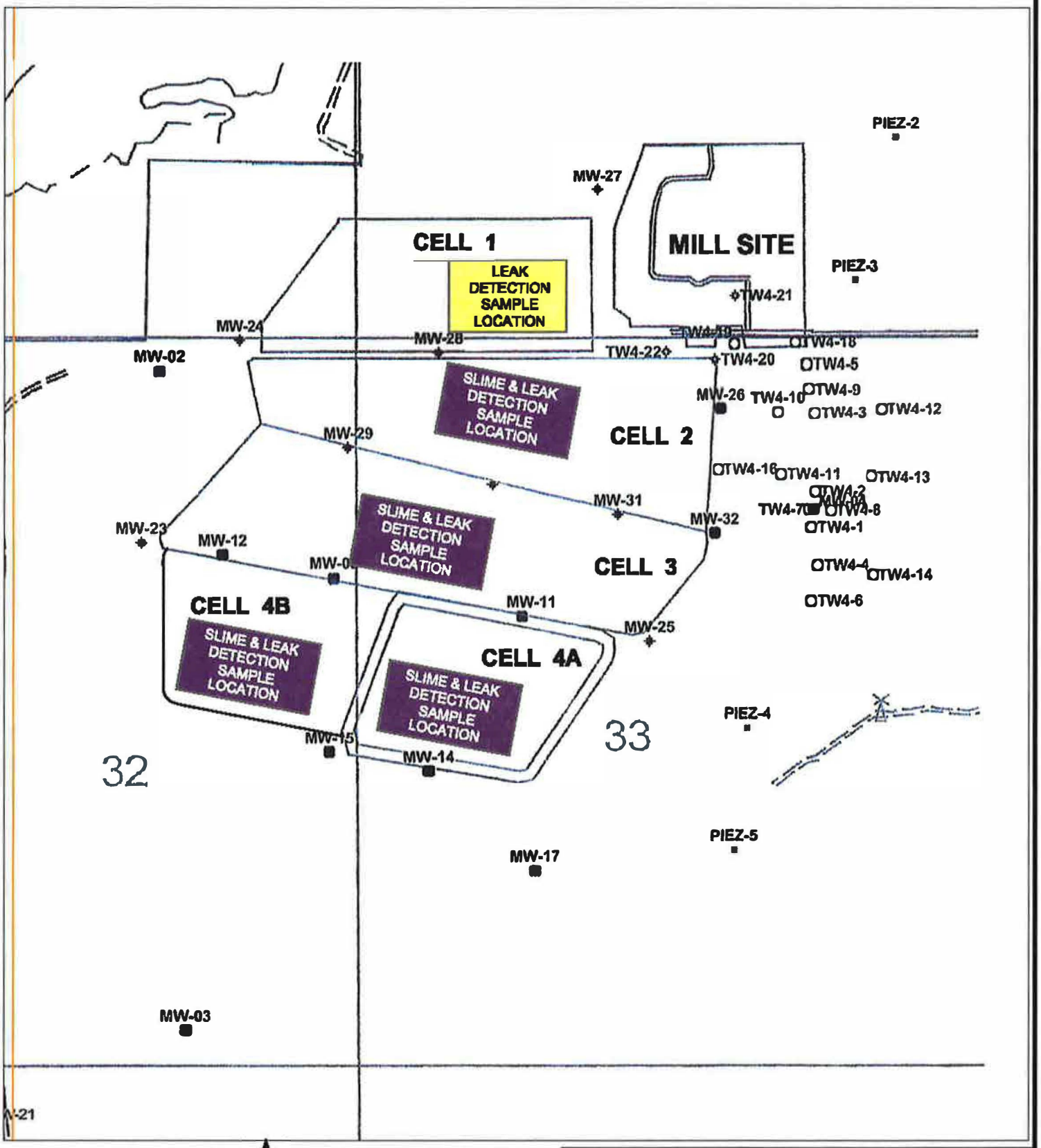
☒ Duplicate

Duplicate Sample Name: Cell 65

Notes: Arrived on site at 0912 Samples collected at 0920
Left site at 0936

Tab B

Sample Location Figures



Energy Fuels Resources (USA) Inc.

REVISIONS	
Date	By
10/6/14	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

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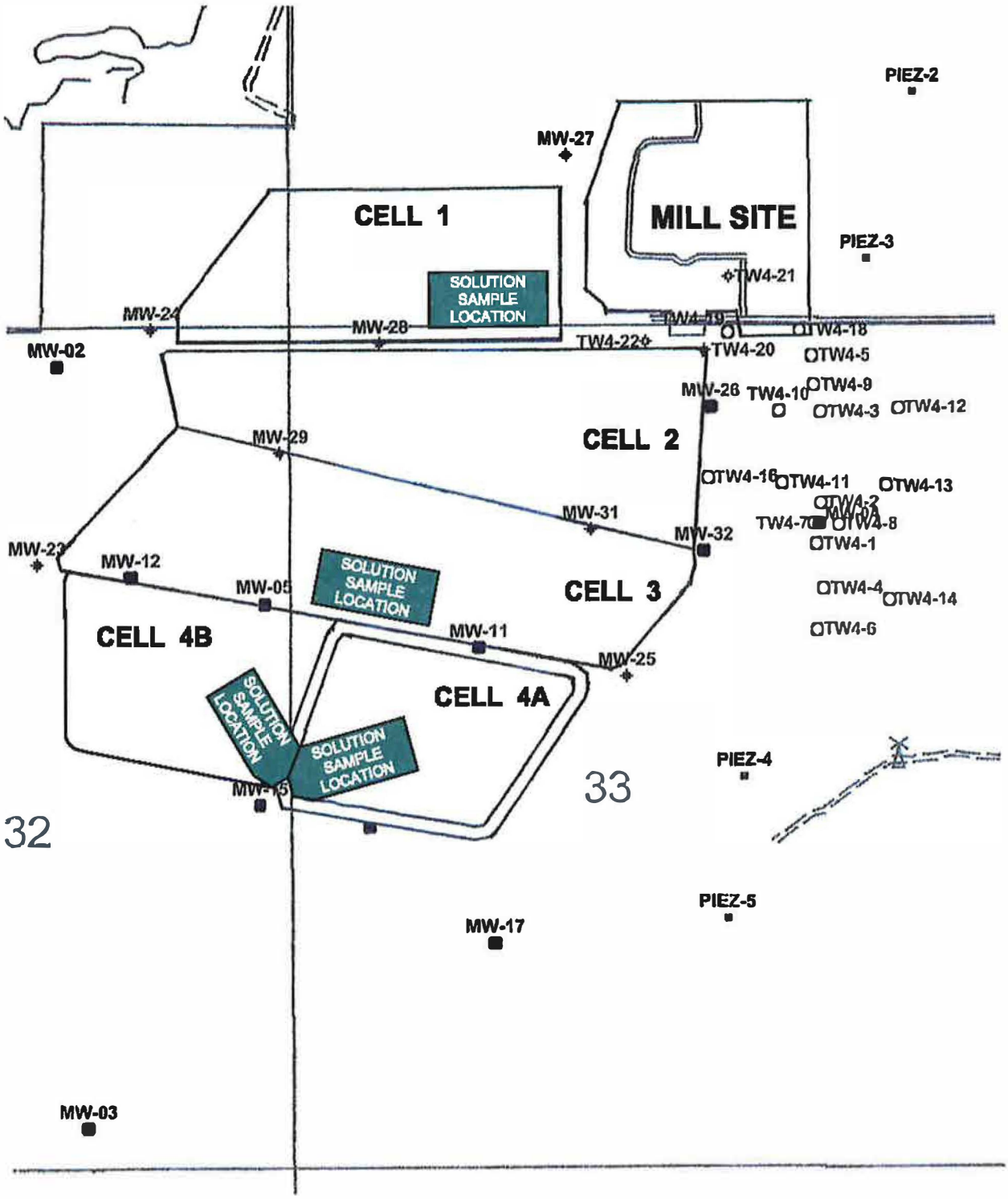

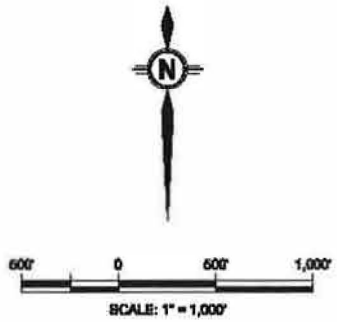

Energy Fuels Resources (USA) Inc.

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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LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-001
Client Sample ID: Cell 1

Report Date: 09/19/22
Collection Date: 08/24/22 08:10
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO3	47800	mg/L				A2310 B	08/30/22 11:36 / dmb
Carbonate as CO3	ND	mg/L		3		A2320 B	08/28/22 09:26 / dmb
Bicarbonate as HCO3	ND	mg/L		6		A2320 B	08/28/22 09:26 / dmb
Chloride	24100	mg/L	D	50		E300.0	08/30/22 05:31 / dmb
Fluoride	4400	mg/L	D	500		A4500-F C	09/01/22 11:27 / slf
Sulfate	103000	mg/L	D	200		E300.0	08/30/22 05:31 / dmb
Calcium	290	mg/L	D	60		E200.7	09/01/22 20:44 / eli-b
Magnesium	6930	mg/L	D	100		E200.7	09/01/22 20:44 / eli-b
Potassium	1470	mg/L	D	100		E200.7	09/01/22 20:44 / eli-b
Sodium	28000	mg/L	D	100		E200.7	09/01/22 20:44 / eli-b
PHYSICAL PROPERTIES							
Conductivity @ 25 C	98800	umhos/cm	E	5		A2510 B	08/29/22 13:31 / slf
pH	1.2	s.u.	H	0.1		A4500-H B	08/29/22 13:31 / slf
pH Measurement Temp	13.0	°C				A4500-H B	08/29/22 13:31 / slf
Solids, Total Dissolved TDS @ 180 C	193000	mg/L	D	2000		A2540 C	08/30/22 09:01 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	9	mg/L	D	2		E353.2	08/30/22 15:36 / dmb
Nitrogen, Ammonia as N	3580	mg/L	D	200		E350.1	08/29/22 14:12 / dmb
METALS, DISSOLVED							
Arsenic	296000	ug/L	D	40000		E200.7	09/01/22 20:44 / eli-b
Beryllium	845	ug/L	D	400		E200.7	09/01/22 20:44 / eli-b
Cadmium	7470	ug/L	D	1000		E200.7	09/01/22 20:44 / eli-b
Chromium	11000	ug/L	D	8000		E200.7	09/01/22 20:44 / eli-b
Cobalt	26800	ug/L	D	6000		E200.7	09/01/22 20:44 / eli-b
Copper	1110000	ug/L	D	10000		E200.7	09/01/22 20:44 / eli-b
Iron	2130000	ug/L	D	8000		E200.7	09/01/22 20:44 / eli-b
Lead	26600	ug/L	D	10		E200.8	09/10/22 06:59 / eli-b
Manganese	454000	ug/L	D	1000		E200.7	09/01/22 20:44 / eli-b
Mercury	0.0138	mg/L	D	0.0003		E245.1	09/01/22 12:21 / eli-b
Molybdenum	104000	ug/L	D	8000		E200.7	09/01/22 20:44 / eli-b
Nickel	19800	ug/L	D	6000		E200.7	09/01/22 20:44 / eli-b
Selenium	6190	ug/L	D	200		E200.8	09/13/22 11:23 / eli-b
Silver	885	ug/L	D	20		E200.8	09/13/22 11:23 / eli-b
Thallium	618	ug/L	D	50		E200.8	09/10/22 06:59 / eli-b
Tin	ND	ug/L	D	1000		E200.8	09/10/22 06:59 / eli-b
Uranium	182000	ug/L	D	50		E200.8	09/13/22 11:23 / eli-b
Vanadium	1310000	ug/L	D	10000		E200.7	09/01/22 20:44 / eli-b
Zinc	353000	ug/L	D	4000		E200.7	09/01/22 20:44 / eli-b
DATA QUALITY							
Solids, Total Dissolved - Calculated	168000	mg/L		1.00		A1030 E	09/16/22 10:46 / tlf

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
H - Analysis performed past the method holding time
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
E - Estimated value - result exceeds the instrument upper quantitation limit

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-001
Client Sample ID: Cell 1

Report Date: 09/19/22
Collection Date: 08/24/22 08:10
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance	-0.10	%				A1030 E	09/16/22 10:46 / tlf
Anions	3060	meq/L				A1030 E	09/16/22 10:46 / tlf
Cations	3050	meq/L				A1030 E	09/16/22 10:46 / tlf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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

Certificate of Analysis

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

Report Date: September 15, 2022

Client Sample ID: Cell 1
Sample ID: 591138001
Matrix: Water
Collect Date: 24-AUG-22 08:10
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260 Volatiles "As Received"												
2-Butanone	U	ND	8.34	25.0	ug/L		5	JM6	08/30/22	1641	2310475	1
Acetone	U	ND	8.72	25.0	ug/L		5					
Benzene	U	ND	1.67	5.00	ug/L		5					
Carbon tetrachloride	U	ND	1.67	5.00	ug/L		5					
Chloroform		11.4	1.67	5.00	ug/L		5					
Chloromethane	U	ND	1.67	5.00	ug/L		5					
Methylene chloride	U	ND	2.50	25.0	ug/L		5					
Naphthalene	U	ND	1.67	5.00	ug/L		5					
Tetrahydrofuran	U	ND	8.34	25.0	ug/L		5					
Toluene	U	ND	1.67	5.00	ug/L		5					
Xylenes (total)	U	ND	5.00	15.0	ug/L		5					

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*08/30/22 16 41*
Bromofluorobenzene	258 ug/L	50.0	103	(72%-125%)		
Toluene-d8	266 ug/L	50.0	106	(75%-123%)		
1,2-Dichloroethane-d4	273 ug/L	50.0	109	(73%-129%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*08/30/22 16 41*
unknown		3.913	35.9 ug/L	0	J		

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260D	

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.

Notes:

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

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

Report Date: September 22, 2022

Client Sample ID: Cell 1
Sample ID: 591138001
Matrix: Water
Collect Date: 24-AUG-22 08:10
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
1,2,4-Trichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1	NM1	09/01/22	2108	2310491	1
1,2-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,2-Diphenylhydrazine	U	ND	30.0	100	ug/L	0.0100	1					
1,3-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,4-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2,4,5-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4,6-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dimethylphenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dinitrophenol	U	ND	50.0	200	ug/L	0.0100	1					
2,4-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2,6-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2-Chloronaphthalene	U	ND	4.10	10.0	ug/L	0.0100	1					
2-Chlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methyl-4,6-dinitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
3,3'-Dimethylbenzidine	U	ND	33.0	100	ug/L	0.0100	1					
4-Bromophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Chloro-3-methylphenol	U	ND	30.0	100	ug/L	0.0100	1					
4-Chlorophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
Acenaphthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Acenaphthylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzidine	U	ND	39.0	100	ug/L	0.0100	1					
Benzo(a)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(a)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(b)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 1
Sample ID: 591138001

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
Benzo(ghi)perylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(k)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Butylbenzylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Chrysene	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-butylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-octylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dibenzo(a,h)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Diethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dimethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Diphenylamine	U	ND	30.0	100	ug/L	0.0100	1					
Fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Fluorene	U	ND	3.00	10.0	ug/L	0.0100	1					
Hexachlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorobutadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorocyclopentadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachloroethane	U	ND	30.0	100	ug/L	0.0100	1					
Indeno(1,2,3-cd)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Isophorone	U	ND	35.0	100	ug/L	0.0100	1					
N-Methyl-N-nitrosomethylamine	U	ND	30.0	100	ug/L	0.0100	1					
N-Nitrosodipropylamine	U	ND	30.0	100	ug/L	0.0100	1					
Naphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
Nitrobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Pentachlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
Phenanthrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Phenol	U	ND	30.0	100	ug/L	0.0100	1					
Pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Pyridine	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethoxy)methane	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethyl) ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Ethylhexyl)phthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
m,p-Cresols	U	ND	37.0	100	ug/L	0.0100	1					
o-Cresol	U	ND	30.0	100	ug/L	0.0100	1					

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Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 1
Sample ID: 591138001

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Semi-Volatile-GC/MS

SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*09/01/22 21 08*
p-Terphenyl-d14	281 ug/L	500	56	(24%-129%)		
Nitrobenzene-d5	330 ug/L	500	66	(39%-112%)		
2-Fluorobiphenyl	343 ug/L	500	69	(39%-112%)		
2-Fluorophenol	426 ug/L	1000	43	(11%-79%)		
Phenol-d5	488 ug/L	1000	49	(15%-85%)		
2,4,6-Tribromophenol	967 ug/L	1000	97	(37%-132%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*09/01/22 21 08*
Methylene chloride	000075-09-2	1.901	255 ug/L	95	NJ		
unknown		5.377	42.9 ug/L	47	J		
unknown		5.473	49.8 ug/L	37	J		
unknown		9.458	54.6 ug/L	50	J		
1,4-Benzenediamine, N,N-diethyl-	000093-05-0	9.704	98.5 ug/L	98	NJ		
unknown		10.303	42 ug/L	38	J		

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	SW846 3510C Prep Semivolatiles 8270	DG3	08/31/22	1113	2310481

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3510C/8270E	

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.

Notes:

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 27, 2022

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

Client Sample ID:	Cell 1	Project:	DNMI00107
Sample ID:	591138001	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	24-AUG-22 08:10		
Receive Date:	26-AUG-22		
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	137	+/-57.3	146	1.00	pCi/L			TC1	09/26/22	0903	2309861	1
Thorium-230		58700	+/-937	141	1.00	pCi/L							
Thorium-232		416	+/-80.4	61.6	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		33500	+/-203	11.8	1.00	pCi/L			TC1	09/19/22	1458	2309863	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		37.6	+/-2.75	1.53	1.00	pCi/L			TC1	09/23/22	0756	2309865	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		71200	+/-2540	652	1.00	pCi/L			TC1	09/23/22	0653	2319659	4
Uranium-235/236		4460	+/-715	335	1.00	pCi/L							
Uranium-238		77100	+/-2640	551	1.00	pCi/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GL-RAD-A-026	Laboratory Composite				2309728

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 903.0	
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"			93	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			89.3	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			80.8	(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.

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Certificate of Analysis

Report Date: September 27, 2022

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

Client Sample ID:	Cell 1	Project:	DNMI00107
Sample ID:	591138001	Client ID:	DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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 23, 2022

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

Client Sample ID:	Cell 1	Project:	DNMI00107
Sample ID:	591138001	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	24-AUG-22 08:10		
Receive Date:	26-AUG-22		
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		1.41	0.0100	0.100	none		1	VH1	08/29/22	1534	2310125	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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-002
Client Sample ID: Slimes #2

Report Date: 09/19/22
Collection Date: 08/24/22 08:45
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO3	29500	mg/L				A2310 B	08/30/22 11:45 / dmb
Carbonate as CO3	ND	mg/L		3		A2320 B	08/28/22 09:29 / dmb
Bicarbonate as HCO3	ND	mg/L		6		A2320 B	08/28/22 09:29 / dmb
Chloride	4060	mg/L	D	20		E300.0	08/30/22 05:51 / dmb
Fluoride	160	mg/L	D	50		A4500-F C	08/30/22 16:30 / slf
Sulfate	59900	mg/L	D	80		E300.0	08/30/22 05:51 / dmb
Calcium	496	mg/L	D	30		E200.7	09/01/22 20:49 / eli-b
Magnesium	3880	mg/L	D	50		E200.7	09/01/22 20:49 / eli-b
Potassium	623	mg/L	D	50		E200.7	09/01/22 20:49 / eli-b
Sodium	4480	mg/L	D	50		E200.7	09/01/22 20:49 / eli-b
PHYSICAL PROPERTIES							
Conductivity @ 25 C	46300	umhos/cm		5		A2510 B	08/29/22 13:36 / slf
pH	3.0	s.u.	H	0.1		A4500-H B	08/29/22 13:36 / slf
pH Measurement Temp	12.9	°C				A4500-H B	08/29/22 13:36 / slf
Solids, Total Dissolved TDS @ 180 C	85400	mg/L	D	2000		A2540 C	08/30/22 09:01 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	38	mg/L	D	1		E353.2	08/30/22 15:49 / dmb
Nitrogen, Ammonia as N	3310	mg/L	D	200		E350.1	08/29/22 14:13 / dmb
METALS, DISSOLVED							
Arsenic	23800	ug/L	D	20		E200.8	09/10/22 07:05 / eli-b
Beryllium	262	ug/L	D	10		E200.8	09/13/22 11:28 / eli-b
Cadmium	6410	ug/L	D	500		E200.7	09/01/22 20:49 / eli-b
Chromium	2120	ug/L	D	100		E200.8	09/13/22 11:28 / eli-b
Cobalt	50000	ug/L	D	3000		E200.7	09/01/22 20:49 / eli-b
Copper	104000	ug/L	D	5000		E200.7	09/01/22 20:49 / eli-b
Iron	2830000	ug/L	D	4000		E200.7	09/01/22 20:49 / eli-b
Lead	528	ug/L	D	5		E200.8	09/10/22 07:05 / eli-b
Manganese	130000	ug/L	D	500		E200.7	09/01/22 20:49 / eli-b
Mercury	ND	mg/L		0.0001		E245.1	09/01/22 12:03 / eli-b
Molybdenum	2920	ug/L	D	10		E200.8	09/13/22 11:28 / eli-b
Nickel	142000	ug/L	D	3000		E200.7	09/01/22 20:49 / eli-b
Selenium	645	ug/L	D	50		E200.8	09/13/22 11:28 / eli-b
Silver	ND	ug/L	D	4		E200.8	09/13/22 11:28 / eli-b
Thallium	320	ug/L	D	20		E200.8	09/10/22 07:05 / eli-b
Tin	ND	ug/L	D	500		E200.8	09/10/22 07:05 / eli-b
Uranium	24100	ug/L	D	5		E200.8	09/10/22 07:05 / eli-b
Vanadium	438000	ug/L	D	5000		E200.7	09/01/22 20:49 / eli-b
Zinc	751000	ug/L	D	2000		E200.7	09/01/22 20:49 / eli-b
DATA QUALITY							
Solids, Total Dissolved - Calculated	73800	mg/L		1.00		A1030 E	09/16/22 10:47 / tlf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-002
Client Sample ID: Slimes #2

Report Date: 09/19/22
Collection Date: 08/24/22 08:45
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance	0.28	%				A1030 E	09/16/22 10:47 / tlf
Anions	1370	meq/L				A1030 E	09/16/22 10:47 / tlf
Cations	1380	meq/L				A1030 E	09/16/22 10:47 / tlf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

GEL LABORATORIES LLC
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Certificate of Analysis

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

Report Date: September 15, 2022

Client Sample ID: Slimes #2
Sample ID: 591138002
Matrix: Water
Collect Date: 24-AUG-22 08:45
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260 Volatiles "As Received"												
2-Butanone		74.3	8.34	25.0	ug/L		5	JM6	08/30/22	1614	2310475	1
Acetone		409	8.72	25.0	ug/L		5					
Benzene	U	ND	1.67	5.00	ug/L		5					
Carbon tetrachloride	U	ND	1.67	5.00	ug/L		5					
Chloroform		14.0	1.67	5.00	ug/L		5					
Chloromethane	U	ND	1.67	5.00	ug/L		5					
Methylene chloride	U	ND	2.50	25.0	ug/L		5					
Naphthalene		6.05	1.67	5.00	ug/L		5					
Tetrahydrofuran	U	ND	8.34	25.0	ug/L		5					
Toluene	U	ND	1.67	5.00	ug/L		5					
Xylenes (total)	U	ND	5.00	15.0	ug/L		5					

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*08/30/22 16 14*
Bromofluorobenzene	261 ug/L	50.0	105	(72%-125%)		
Toluene-d8	263 ug/L	50.0	105	(75%-123%)		
1,2-Dichloroethane-d4	267 ug/L	50.0	107	(73%-129%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*08/30/22 16 14*
unknown		3.913	116 ug/L	0	J		
Hexanal, 2-ethyl-	000123-05-7	14.566	36.2 ug/L	91	NJ		

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260D	

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.

Notes:

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

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Slimes #2
Sample ID: 591138002
Matrix: Water
Collect Date: 24-AUG-22 08:45
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
1,2,4-Trichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1	NM1	09/01/22	2136	2310491	1
1,2-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,2-Diphenylhydrazine	U	ND	30.0	100	ug/L	0.0100	1					
1,3-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,4-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1-Methylnaphthalene		12.4	3.00	10.0	ug/L	0.0100	1					
2,4,5-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4,6-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dimethylphenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dinitrophenol	U	ND	50.0	200	ug/L	0.0100	1					
2,4-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2,6-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2-Chloronaphthalene	U	ND	4.10	10.0	ug/L	0.0100	1					
2-Chlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methyl-4,6-dinitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methylnaphthalene		12.1	3.00	10.0	ug/L	0.0100	1					
2-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
3,3'-Dimethylbenzidine	U	ND	33.0	100	ug/L	0.0100	1					
4-Bromophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Chloro-3-methylphenol	U	ND	30.0	100	ug/L	0.0100	1					
4-Chlorophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
Acenaphthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Acenaphthylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzidine	U	ND	39.0	100	ug/L	0.0100	1					
Benzo(a)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(a)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(b)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					

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Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Slimes #2
Sample ID: 591138002

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
Benzo(ghi)perylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(k)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Butylbenzylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Chrysene	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-butylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-octylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dibenzo(a,h)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Diethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dimethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Diphenylamine	U	ND	30.0	100	ug/L	0.0100	1					
Fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Fluorene	U	ND	3.00	10.0	ug/L	0.0100	1					
Hexachlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorobutadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorocyclopentadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachloroethane	U	ND	30.0	100	ug/L	0.0100	1					
Indeno(1,2,3-cd)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Isophorone	U	ND	35.0	100	ug/L	0.0100	1					
N-Methyl-N-nitrosomethylamine	U	ND	30.0	100	ug/L	0.0100	1					
N-Nitrosodipropylamine	U	ND	30.0	100	ug/L	0.0100	1					
Naphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
Nitrobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Pentachlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
Phenanthrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Phenol	U	ND	30.0	100	ug/L	0.0100	1					
Pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Pyridine	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethoxy)methane	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethyl) ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Ethylhexyl)phthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
m,p-Cresols	U	ND	37.0	100	ug/L	0.0100	1					
o-Cresol	U	ND	30.0	100	ug/L	0.0100	1					

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Slimes #2
Sample ID: 591138002

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Semi-Volatile-GC/MS

SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*09/01/22 21 36*
2,4,6-Tribromophenol	1150 ug/L	1000	115	(37%-132%)		
2-Fluorobiphenyl	400 ug/L	500	80	(39%-112%)		
Nitrobenzene-d5	401 ug/L	500	80	(39%-112%)		
p-Terphenyl-d14	446 ug/L	500	89	(24%-129%)		
Phenol-d5	453 ug/L	1000	45	(15%-85%)		
2-Fluorophenol	528 ug/L	1000	53	(11%-79%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*09/01/22 21 36*
2(3H)-Furanone, dihydro-5-methyl-	000108-29-2	4.479	65.6 ug/L	87	NJ		
Hexanoic acid	000142-62-1	4.746	71.5 ug/L	90	NJ		
unknown		5.313	1580 ug/L	78	J		
unknown		5.42	221 ug/L	17	J		
2(3H)-Furanone, 5-ethyldihydro-	000695-06-7	5.618	48.3 ug/L	86	NJ		
unknown		5.816	261 ug/L	72	J		
Hexanoic acid, 2-ethyl-	000149-57-5	6.276	131 ug/L	90	NJ		
unknown		6.688	56.7 ug/L	72	J		
Octanoic acid	000124-07-2	6.837	131 ug/L	91	NJ		
unknown		6.885	45.4 ug/L	50	J		
unknown		6.96	111 ug/L	35	J		
unknown		7.003	57.9 ug/L	47	J		
unknown		7.383	55.3 ug/L	35	J		
unknown		7.415	49.3 ug/L	9	J		
unknown		7.554	63.7 ug/L	43	J		
unknown		7.747	40.8 ug/L	74	J		
unknown		7.784	44.6 ug/L	40	J		
unknown		7.939	54.1 ug/L	14	J		
1,4-Benzenediamine, N,N-diethyl-	000093-05-0	9.677	713 ug/L	98	NJ		
unknown		10.309	72.8 ug/L	43	J		
unknown		10.827	42.3 ug/L	53	J		

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	SW846 3510C Prep Semivolatiles 8270	DG3	08/31/22	1113	2310481

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Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Slimes #2
Sample ID: 591138002

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3510C/8270E	

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.

Notes:

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 27, 2022

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

Client Sample ID: Slimes #2
Sample ID: 591138002
Matrix: Water
Collect Date: 24-AUG-22 08:45
Receive Date: 26-AUG-22
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	-45.5	+/-26.3	176	1.00	pCi/L			TC1	09/24/22	1012	2309861	1
Thorium-230		1050	+/-163	287	1.00	pCi/L							
Thorium-232	U	-11.5	+/-22.0	116	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		1970	+/-54.2	19.6	1.00	pCi/L			TC1	09/19/22	1458	2309863	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		28.5	+/-2.64	1.83	1.00	pCi/L			TC1	09/23/22	0828	2309865	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		9210	+/-1430	1980	1.00	pCi/L			TC1	09/27/22	0813	2321062	4
Uranium-235/236	U	-236	+/-279	1620	1.00	pCi/L							
Uranium-238		4590	+/-1000	1310	1.00	pCi/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GL-RAD-A-026	Laboratory Composite				2309728

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 903.0	
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"			72.2	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			75	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			91.6	(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.

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Certificate of Analysis

Report Date: September 27, 2022

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

Client Sample ID:	Slimes #2	Project:	DNMI00107
Sample ID:	591138002	Client ID:	DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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
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Certificate of Analysis

Report Date: September 23, 2022

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

Client Sample ID:	Slimes #2	Project:	DNMI00107
Sample ID:	591138002	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	24-AUG-22 08:45		
Receive Date:	26-AUG-22		
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		1.05	0.0100	0.100	none		1	VH1	08/29/22	1534	2310125	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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-003
Client Sample ID: Cell 4A

Report Date: 09/19/22
Collection Date: 08/24/22 09:05
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO3	37300	mg/L				A2310 B	08/30/22 11:48 / dmb
Carbonate as CO3	ND	mg/L		3		A2320 B	08/28/22 09:31 / dmb
Bicarbonate as HCO3	ND	mg/L		6		A2320 B	08/28/22 09:31 / dmb
Chloride	13500	mg/L	D	50		E300.0	08/30/22 06:10 / dmb
Fluoride	2800	mg/L	D	50		A4500-F C	08/30/22 16:36 / slf
Sulfate	115000	mg/L	D	200		E300.0	08/30/22 06:10 / dmb
Calcium	723	mg/L	D	60		E200.7	09/01/22 20:53 / eli-b
Magnesium	5930	mg/L	D	100		E200.7	09/01/22 20:53 / eli-b
Potassium	2910	mg/L	D	100		E200.7	09/01/22 20:53 / eli-b
Sodium	21900	mg/L	D	100		E200.7	09/01/22 20:53 / eli-b
PHYSICAL PROPERTIES							
Conductivity @ 25 C	86600	umhos/cm	E	5		A2510 B	08/29/22 13:40 / slf
pH	2.2	s.u.	H	0.1		A4500-H B	08/29/22 13:40 / slf
pH Measurement Temp	13.2	°C				A4500-H B	08/29/22 13:40 / slf
Solids, Total Dissolved TDS @ 180 C	174000	mg/L	D	2000		A2540 C	08/30/22 09:02 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	108	mg/L	D	1		E353.2	08/30/22 15:43 / dmb
Nitrogen, Ammonia as N	7600	mg/L	D	200		E350.1	08/29/22 14:14 / dmb
METALS, DISSOLVED							
Arsenic	79700	ug/L	D	50		E200.8	09/13/22 11:34 / eli-b
Beryllium	504	ug/L	D	400		E200.7	09/01/22 20:53 / eli-b
Cadmium	4370	ug/L	D	1000		E200.7	09/01/22 20:53 / eli-b
Chromium	11600	ug/L	D	8000		E200.7	09/01/22 20:53 / eli-b
Cobalt	39500	ug/L	D	6000		E200.7	09/01/22 20:53 / eli-b
Copper	735000	ug/L	D	10000		E200.7	09/01/22 20:53 / eli-b
Iron	4270000	ug/L	D	8000		E200.7	09/01/22 20:53 / eli-b
Lead	9760	ug/L	D	5		E200.8	09/10/22 07:10 / eli-b
Manganese	266000	ug/L	D	1000		E200.7	09/01/22 20:53 / eli-b
Mercury	0.0034	mg/L		0.0001		E245.1	09/01/22 12:07 / eli-b
Molybdenum	43600	ug/L	D	8000		E200.7	09/01/22 20:53 / eli-b
Nickel	78600	ug/L	D	6000		E200.7	09/01/22 20:53 / eli-b
Selenium	4320	ug/L	D	50		E200.8	09/13/22 11:34 / eli-b
Silver	565	ug/L	D	8		E200.8	09/15/22 00:11 / eli-b
Thallium	216	ug/L	D	20		E200.8	09/10/22 07:10 / eli-b
Tin	ND	ug/L	D	500		E200.8	09/10/22 07:10 / eli-b
Uranium	53400	ug/L	D	10		E200.8	09/13/22 11:34 / eli-b
Vanadium	323000	ug/L	D	10000		E200.7	09/01/22 20:53 / eli-b
Zinc	400000	ug/L	D	4000		E200.7	09/01/22 20:53 / eli-b
DATA QUALITY							
Solids, Total Dissolved - Calculated	163000	mg/L		1.00		A1030 E	09/16/22 10:47 / tlf

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
H - Analysis performed past the method holding time
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
E - Estimated value - result exceeds the instrument upper quantitation limit

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-003
Client Sample ID: Cell 4A

Report Date: 09/19/22
Collection Date: 08/24/22 09:05
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance	-1.60	%				A1030 E	09/16/22 10:47 / tlf
Anions	2930	meq/L				A1030 E	09/16/22 10:47 / tlf
Cations	2840	meq/L				A1030 E	09/16/22 10:47 / tlf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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Certificate of Analysis

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

Report Date: September 15, 2022

Client Sample ID: Cell 4A
Sample ID: 591138003
Matrix: Water
Collect Date: 24-AUG-22 09:05
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260 Volatiles "As Received"												
2-Butanone	U	ND	8.34	25.0	ug/L		5	JM6	08/30/22	1546	2310475	1
Acetone	U	ND	8.72	25.0	ug/L		5					
Benzene	U	ND	1.67	5.00	ug/L		5					
Carbon tetrachloride	U	ND	1.67	5.00	ug/L		5					
Chloroform	U	ND	1.67	5.00	ug/L		5					
Chloromethane	U	ND	1.67	5.00	ug/L		5					
Methylene chloride	U	ND	2.50	25.0	ug/L		5					
Naphthalene	U	ND	1.67	5.00	ug/L		5					
Tetrahydrofuran	U	ND	8.34	25.0	ug/L		5					
Toluene	U	ND	1.67	5.00	ug/L		5					
Xylenes (total)	U	ND	5.00	15.0	ug/L		5					

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*08/30/22 15 46*
Bromofluorobenzene	254 ug/L	50.0	102	(72%-125%)		
Toluene-d8	255 ug/L	50.0	102	(75%-123%)		
1,2-Dichloroethane-d4	279 ug/L	50.0	111	(73%-129%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*08/30/22 15 46*
unknown		3.895	31.9 ug/L	0	J		

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260D	

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.

Notes:

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

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

Report Date: September 22, 2022

Client Sample ID: Cell 4A
Sample ID: 591138003
Matrix: Water
Collect Date: 24-AUG-22 09:05
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
1,2,4-Trichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1	NM1	09/01/22	2203	2310491	1
1,2-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,2-Diphenylhydrazine	U	ND	30.0	100	ug/L	0.0100	1					
1,3-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,4-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2,4,5-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4,6-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dimethylphenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dinitrophenol	U	ND	50.0	200	ug/L	0.0100	1					
2,4-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2,6-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2-Chloronaphthalene	U	ND	4.10	10.0	ug/L	0.0100	1					
2-Chlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methyl-4,6-dinitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
3,3'-Dimethylbenzidine	U	ND	33.0	100	ug/L	0.0100	1					
4-Bromophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Chloro-3-methylphenol	U	ND	30.0	100	ug/L	0.0100	1					
4-Chlorophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
Acenaphthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Acenaphthylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzidine	U	ND	39.0	100	ug/L	0.0100	1					
Benzo(a)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(a)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(b)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					

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Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4A
Sample ID: 591138003

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
Benzo(ghi)perylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(k)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Butylbenzylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Chrysene	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-butylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-octylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dibenzo(a,h)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Diethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dimethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Diphenylamine	U	ND	30.0	100	ug/L	0.0100	1					
Fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Fluorene	U	ND	3.00	10.0	ug/L	0.0100	1					
Hexachlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorobutadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorocyclopentadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachloroethane	U	ND	30.0	100	ug/L	0.0100	1					
Indeno(1,2,3-cd)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Isophorone	U	ND	35.0	100	ug/L	0.0100	1					
N-Methyl-N-nitrosomethylamine	U	ND	30.0	100	ug/L	0.0100	1					
N-Nitrosodipropylamine	U	ND	30.0	100	ug/L	0.0100	1					
Naphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
Nitrobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Pentachlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
Phenanthrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Phenol	U	ND	30.0	100	ug/L	0.0100	1					
Pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Pyridine	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethoxy)methane	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethyl) ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Ethylhexyl)phthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
m,p-Cresols	U	ND	37.0	100	ug/L	0.0100	1					
o-Cresol	U	ND	30.0	100	ug/L	0.0100	1					

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4A
Sample ID: 591138003

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*09/01/22 22 03*
p-Terphenyl-d14	319 ug/L	500	64	(24%-129%)		
Nitrobenzene-d5	326 ug/L	500	65	(39%-112%)		
2-Fluorobiphenyl	329 ug/L	500	66	(39%-112%)		
2-Fluorophenol	482 ug/L	1000	48	(11%-79%)		
Phenol-d5	489 ug/L	1000	49	(15%-85%)		
2,4,6-Tribromophenol	654 ug/L	1000	65	(37%-132%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*09/01/22 22 03*
Butyrolactone	000096-48-0	4.013	63.3 ug/L	91	NJ		
2(3H)-Furanone, dihydro-5-methyl-	000108-29-2	4.479	53.6 ug/L	87	NJ		
unknown		4.516	41.7 ug/L	25	J		
unknown		5.377	49.7 ug/L	47	J		
unknown		5.447	129 ug/L	72	J		
unknown		5.5	1210 ug/L	59	J		
unknown		5.623	65.9 ug/L	64	J		
unknown		5.821	53.3 ug/L	43	J		
unknown		6.837	48.6 ug/L	25	J		
unknown		7.057	44.4 ug/L	43	J		
unknown		8.442	47 ug/L	52	J		
unknown		8.479	59.6 ug/L	53	J		
Formamide, N-octyl-	006282-06-0	9.421	41.6 ug/L	87	NJ		
unknown		9.458	85.9 ug/L	53	J		
unknown		9.758	42.4 ug/L	83	J		
unknown		10.309	54.2 ug/L	47	J		
unknown		13.448	40.5 ug/L	45	J		
unknown		14.759	93.6 ug/L	53	J		
unknown		14.871	113 ug/L	38	J		
4-tert-Butyl-N-(1H-[1,2,4]triazol-3-yl)-benzam	1000275-72-6	15.342	63.7 ug/L	91	NJ		
unknown		15.55	86.5 ug/L	58	J		
unknown		15.583	46.1 ug/L	50	J		
unknown		17.936	87.4 ug/L	58	J		
unknown		18.182	52.3 ug/L	59	J		

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Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4A
Sample ID: 591138003

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	SW846 3510C Prep Semivolatiles 8270	DG3	08/31/22	1113	2310481

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3510C/8270E	

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.

Notes:

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 27, 2022

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

Client Sample ID: Cell 4A
Sample ID: 591138003
Matrix: Water
Collect Date: 24-AUG-22 09:05
Receive Date: 26-AUG-22
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		1370	+/-393	816	1.00	pCi/L			TC1	09/24/22	1012	2309861	1
Thorium-230		7.07E+05	+/-7690	777	1.00	pCi/L							
Thorium-232		4740	+/-635	339	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		1.97E+05	+/-454	12.2	1.00	pCi/L			TC1	09/19/22	1458	2309863	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		578	+/-11.0	2.98	1.00	pCi/L			TC1	09/23/22	0828	2309865	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		26300	+/-2360	2220	1.00	pCi/L			TC1	09/27/22	0851	2321062	4
Uranium-235/236	U	1190	+/-617	1200	1.00	pCi/L							
Uranium-238		21800	+/-2120	1330	1.00	pCi/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GL-RAD-A-026	Laboratory Composite				2309728

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 903.0	
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"			83.2	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			106	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			87.1	(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 the greater of either the adjusted MDL or the CRDL.

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Certificate of Analysis

Report Date: September 27, 2022

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

Client Sample ID:	Cell 4A	Project:	DNMI00107
Sample ID:	591138003	Client ID:	DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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 23, 2022

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

Client Sample ID:	Cell 4A	Project:	DNMI00107
Sample ID:	591138003	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	24-AUG-22 09:05		
Receive Date:	26-AUG-22		
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		1.16	0.0100	0.100	none		1	VH1	08/29/22	1534	2310125	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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-004
Client Sample ID: Cell 4A LDS

Report Date: 09/19/22
Collection Date: 08/24/22 09:20
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO3	27200	mg/L				A2310 B	08/30/22 11:51 / dmb
Carbonate as CO3	ND	mg/L		3		A2320 B	08/28/22 09:34 / dmb
Bicarbonate as HCO3	ND	mg/L		6		A2320 B	08/28/22 09:34 / dmb
Chloride	6270	mg/L	D	50		E300.0	08/30/22 06:29 / dmb
Fluoride	1990	mg/L	D	100		A4500-F C	09/02/22 15:31 / slf
Sulfate	66300	mg/L	D	200		E300.0	08/30/22 06:29 / dmb
Calcium	468	mg/L	D	30		E200.7	09/01/22 20:57 / eli-b
Magnesium	4310	mg/L	D	50		E200.7	09/01/22 20:57 / eli-b
Potassium	678	mg/L	D	50		E200.7	09/01/22 20:57 / eli-b
Sodium	8630	mg/L	D	50		E200.7	09/01/22 20:57 / eli-b
PHYSICAL PROPERTIES							
Conductivity @ 25 C	55400	umhos/cm	E	5		A2510 B	08/29/22 13:43 / slf
pH	2.5	s.u.	H	0.1		A4500-H B	08/29/22 13:43 / slf
pH Measurement Temp	13.4	°C				A4500-H B	08/29/22 13:43 / slf
Solids, Total Dissolved TDS @ 180 C	91400	mg/L	D	2000		A2540 C	08/30/22 09:02 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	96	mg/L	D	1		E353.2	08/30/22 15:44 / dmb
Nitrogen, Ammonia as N	3500	mg/L	D	200		E350.1	08/29/22 14:18 / dmb
METALS, DISSOLVED							
Arsenic	24500	ug/L	D	20		E200.8	09/10/22 07:27 / eli-b
Beryllium	252	ug/L	D	200		E200.7	09/01/22 20:57 / eli-b
Cadmium	3150	ug/L	D	500		E200.7	09/01/22 20:57 / eli-b
Chromium	5720	ug/L	D	4000		E200.7	09/01/22 20:57 / eli-b
Cobalt	26900	ug/L	D	3000		E200.7	09/01/22 20:57 / eli-b
Copper	289000	ug/L	D	5000		E200.7	09/01/22 20:57 / eli-b
Iron	1100000	ug/L	D	4000		E200.7	09/01/22 20:57 / eli-b
Lead	1390	ug/L	D	5		E200.8	09/10/22 07:27 / eli-b
Manganese	191000	ug/L	D	500		E200.7	09/01/22 20:57 / eli-b
Mercury	ND	mg/L		0.0001		E245.1	09/01/22 12:09 / eli-b
Molybdenum	2940	ug/L	D	20		E200.8	09/13/22 11:45 / eli-b
Nickel	51200	ug/L	D	3000		E200.7	09/01/22 20:57 / eli-b
Selenium	2000	ug/L	D	100		E200.8	09/13/22 11:45 / eli-b
Silver	192	ug/L	D	8		E200.8	09/13/22 11:45 / eli-b
Thallium	325	ug/L	D	20		E200.8	09/10/22 07:27 / eli-b
Tin	ND	ug/L	D	500		E200.8	09/10/22 07:27 / eli-b
Uranium	116000	ug/L	D	100000		E200.7	09/01/22 20:57 / eli-b
Vanadium	472000	ug/L	D	5000		E200.7	09/01/22 20:57 / eli-b
Zinc	256000	ug/L	D	2000		E200.7	09/01/22 20:57 / eli-b
DATA QUALITY							
Solids, Total Dissolved - Calculated	89100	mg/L		1.00		A1030 E	09/16/22 10:48 / tlf

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
H - Analysis performed past the method holding time
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
E - Estimated value - result exceeds the instrument upper quantitation limit

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-004
Client Sample ID: Cell 4A LDS

Report Date: 09/19/22
Collection Date: 08/24/22 09:20
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance	-3.22	%				A1030 E	09/16/22 10:48 / tlf
Anions	1670	meq/L				A1030 E	09/16/22 10:48 / tlf
Cations	1560	meq/L				A1030 E	09/16/22 10:48 / tlf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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Certificate of Analysis

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

Report Date: September 15, 2022

Client Sample ID: Cell 4A LDS
Sample ID: 591138004
Matrix: Water
Collect Date: 24-AUG-22 09:20
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260 Volatiles "As Received"												
2-Butanone		50.0	8.34	25.0	ug/L		5	JM6	08/30/22	1519	2310475	1
Acetone		161	8.72	25.0	ug/L		5					
Benzene	U	ND	1.67	5.00	ug/L		5					
Carbon tetrachloride	U	ND	1.67	5.00	ug/L		5					
Chloroform		70.5	1.67	5.00	ug/L		5					
Chloromethane		5.15	1.67	5.00	ug/L		5					
Methylene chloride	U	ND	2.50	25.0	ug/L		5					
Naphthalene	U	ND	1.67	5.00	ug/L		5					
Tetrahydrofuran		61.6	8.34	25.0	ug/L		5					
Toluene	U	ND	1.67	5.00	ug/L		5					
Xylenes (total)	U	ND	5.00	15.0	ug/L		5					

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*08/30/22 15 19*
Bromofluorobenzene	253 ug/L	50.0	101	(72%-125%)		
Toluene-d8	253 ug/L	50.0	101	(75%-123%)		
1,2-Dichloroethane-d4	269 ug/L	50.0	108	(73%-129%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*08/30/22 15 19*
unknown		3.913	49.2 ug/L	0	J		

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260D	

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.

Notes:

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

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4A LDS
Sample ID: 591138004
Matrix: Water
Collect Date: 24-AUG-22 09:20
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
1,2,4-Trichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1	NM1	09/01/22	2231	2310491	1
1,2-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,2-Diphenylhydrazine	U	ND	30.0	100	ug/L	0.0100	1					
1,3-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,4-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2,4,5-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4,6-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dimethylphenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dinitrophenol	U	ND	50.0	200	ug/L	0.0100	1					
2,4-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2,6-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2-Chloronaphthalene	U	ND	4.10	10.0	ug/L	0.0100	1					
2-Chlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methyl-4,6-dinitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
3,3'-Dimethylbenzidine	U	ND	33.0	100	ug/L	0.0100	1					
4-Bromophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Chloro-3-methylphenol	U	ND	30.0	100	ug/L	0.0100	1					
4-Chlorophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
Acenaphthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Acenaphthylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzidine	U	ND	39.0	100	ug/L	0.0100	1					
Benzo(a)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(a)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(b)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4A LDS
Sample ID: 591138004

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
Benzo(ghi)perylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(k)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Butylbenzylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Chrysene	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-butylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-octylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dibenzo(a,h)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Diethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dimethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Diphenylamine	U	ND	30.0	100	ug/L	0.0100	1					
Fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Fluorene	U	ND	3.00	10.0	ug/L	0.0100	1					
Hexachlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorobutadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorocyclopentadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachloroethane	U	ND	30.0	100	ug/L	0.0100	1					
Indeno(1,2,3-cd)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Isophorone	U	ND	35.0	100	ug/L	0.0100	1					
N-Methyl-N-nitrosomethylamine	U	ND	30.0	100	ug/L	0.0100	1					
N-Nitrosodipropylamine	U	ND	30.0	100	ug/L	0.0100	1					
Naphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
Nitrobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Pentachlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
Phenanthrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Phenol	U	ND	30.0	100	ug/L	0.0100	1					
Pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Pyridine	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethoxy)methane	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethyl) ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Ethylhexyl)phthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
m,p-Cresols	U	ND	37.0	100	ug/L	0.0100	1					
o-Cresol	U	ND	30.0	100	ug/L	0.0100	1					

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4A LDS
Sample ID: 591138004

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Semi-Volatile-GC/MS

SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*09/01/22 22 31*
2,4,6-Tribromophenol	1060 ug/L	1000	106	(37%-132%)		
Nitrobenzene-d5	348 ug/L	500	70	(39%-112%)		
Phenol-d5	364 ug/L	1000	36	(15%-85%)		
2-Fluorobiphenyl	364 ug/L	500	73	(39%-112%)		
p-Terphenyl-d14	418 ug/L	500	84	(24%-129%)		
2-Fluorophenol	437 ug/L	1000	44	(11%-79%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*09/01/22 22 31*
Methylene chloride	000075-09-2	1.884	58.6 ug/L	90	NJ		
2H-Pyran-2-one, tetrahydro-4-methyl-	001121-84-2	6.185	47.4 ug/L	91	NJ		
unknown		6.334	66.2 ug/L	25	J		
unknown		6.5	89.2 ug/L	70	J		
unknown		6.853	43.2 ug/L	72	J		
unknown		9.458	52.8 ug/L	64	J		
1,4-Benzenediamine, N,N-diethyl-	000093-05-0	9.715	56.4 ug/L	98	NJ		
Tributyl phosphate	000126-73-8	11.068	45.2 ug/L	91	NJ		
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-	082304-66-3	13.063	42.5 ug/L	94	NJ		

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	SW846 3510C Prep Semivolatiles 8270	DG3	08/31/22	1113	2310481

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3510C/8270E	

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.

Notes:

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Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4A LDS
Sample ID: 591138004

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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 27, 2022

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

Client Sample ID: Cell 4A LDS
Sample ID: 591138004
Matrix: Water
Collect Date: 24-AUG-22 09:20
Receive Date: 26-AUG-22
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		272	+/-68.1	100	1.00	pCi/L			TC1	09/24/22	1012	2309861	1
Thorium-230		63600	+/-967	139	1.00	pCi/L							
Thorium-232		405	+/-79.0	75.0	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		34200	+/-198	11.2	1.00	pCi/L			TC1	09/19/22	1458	2309863	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		6.44	+/-1.29	1.83	1.00	pCi/L			TC1	09/23/22	0828	2309865	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		42600	+/-3990	3100	1.00	pCi/L			TC1	09/23/22	0653	2319659	4
Uranium-235/236		2580	+/-1190	2140	1.00	pCi/L							
Uranium-238		40800	+/-3910	3030	1.00	pCi/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GL-RAD-A-026	Laboratory Composite				2309728

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 903.0	
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"			95.6	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			96.5	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			21.2	(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.

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Certificate of Analysis

Report Date: September 27, 2022

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

Client Sample ID:	Cell 4A LDS	Project:	DNMI00107
Sample ID:	591138004	Client ID:	DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst Date	Time	Batch	Method

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 23, 2022

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

Client Sample ID:	Cell 4A LDS	Project:	DNMI00107
Sample ID:	591138004	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	24-AUG-22 09:20		
Receive Date:	26-AUG-22		
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		1.07	0.0100	0.100	none		1	VH1	08/29/22	1534	2310125	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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-005
Client Sample ID: Cell 4B

Report Date: 09/19/22
Collection Date: 08/24/22 09:45
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO3	9200	mg/L				A2310 B	08/30/22 11:54 / dmb
Carbonate as CO3	ND	mg/L		3		A2320 B	08/28/22 09:38 / dmb
Bicarbonate as HCO3	ND	mg/L		6		A2320 B	08/28/22 09:38 / dmb
Chloride	1110	mg/L	D	10		E300.0	08/30/22 06:48 / dmb
Fluoride	230	mg/L	D	100		A4500-F C	09/02/22 15:36 / slf
Sulfate	16700	mg/L	D	40		E300.0	08/30/22 06:48 / dmb
Calcium	328	mg/L	D	8		E200.7	09/01/22 21:02 / eli-b
Magnesium	267	mg/L	D	10		E200.7	09/01/22 21:02 / eli-b
Potassium	196	mg/L	D	10		E200.7	09/01/22 21:02 / eli-b
Sodium	1520	mg/L	D	10		E200.7	09/01/22 21:02 / eli-b
PHYSICAL PROPERTIES							
Conductivity @ 25 C	18100	umhos/cm		5		A2510 B	08/29/22 13:47 / slf
pH	2.6	s.u.	H	0.1		A4500-H B	08/29/22 13:47 / slf
pH Measurement Temp	13.4	°C				A4500-H B	08/29/22 13:47 / slf
Solids, Total Dissolved TDS @ 180 C	21500	mg/L	D	500		A2540 C	08/30/22 09:03 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	2	mg/L	D	1		E353.2	08/30/22 15:45 / dmb
Nitrogen, Ammonia as N	4350	mg/L	D	500		E350.1	08/29/22 14:19 / dmb
METALS, DISSOLVED							
Arsenic	3500	ug/L	D	10		E200.8	09/10/22 07:33 / eli-b
Beryllium	46	ug/L	D	5		E200.8	09/13/22 11:50 / eli-b
Cadmium	165	ug/L	D	2		E200.8	09/10/22 07:33 / eli-b
Chromium	2320	ug/L	D	1000		E200.7	09/01/22 21:02 / eli-b
Cobalt	1180	ug/L	D	800		E200.7	09/01/22 21:02 / eli-b
Copper	40600	ug/L	D	1000		E200.7	09/01/22 21:02 / eli-b
Iron	263000	ug/L	D	1000		E200.7	09/01/22 21:02 / eli-b
Lead	383	ug/L	D	2		E200.8	09/10/22 07:33 / eli-b
Manganese	18500	ug/L	D	100		E200.7	09/01/22 21:02 / eli-b
Mercury	ND	mg/L		0.0001		E245.1	09/01/22 12:12 / eli-b
Molybdenum	1600	ug/L	D	5		E200.8	09/13/22 11:50 / eli-b
Nickel	1520	ug/L	D	800		E200.7	09/01/22 21:02 / eli-b
Selenium	272	ug/L	D	20		E200.8	09/13/22 11:50 / eli-b
Silver	17	ug/L	D	2		E200.8	09/13/22 11:50 / eli-b
Thallium	150	ug/L	D	10		E200.8	09/10/22 07:33 / eli-b
Tin	ND	ug/L	D	200		E200.8	09/10/22 07:33 / eli-b
Uranium	4270	ug/L	D	2		E200.8	09/10/22 07:33 / eli-b
Vanadium	28300	ug/L	D	1000		E200.7	09/01/22 21:02 / eli-b
Zinc	12800	ug/L	D	500		E200.7	09/01/22 21:02 / eli-b
DATA QUALITY							
Solids, Total Dissolved - Calculated	20300	mg/L		1.00		A1030 E	09/17/22 09:22 / tlf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-005
Client Sample ID: Cell 4B

Report Date: 09/19/22
Collection Date: 08/24/22 09:45
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance	3.65	%				A1030 E	09/17/22 09:22 / tlf
Anions	390	meq/L				A1030 E	09/17/22 09:22 / tlf
Cations	420	meq/L				A1030 E	09/17/22 09:22 / tlf
Balance does not include Acidity							

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

GEL LABORATORIES LLC
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Certificate of Analysis

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

Report Date: September 15, 2022

Client Sample ID: Cell 4B
Sample ID: 591138005
Matrix: Water
Collect Date: 24-AUG-22 09:45
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260 Volatiles "As Received"												
2-Butanone	U	ND	8.34	25.0	ug/L		5	JM6	08/30/22	1451	2310475	1
Acetone		39.0	8.72	25.0	ug/L		5					
Benzene	U	ND	1.67	5.00	ug/L		5					
Carbon tetrachloride	U	ND	1.67	5.00	ug/L		5					
Chloroform	U	ND	1.67	5.00	ug/L		5					
Chloromethane	U	ND	1.67	5.00	ug/L		5					
Methylene chloride	U	ND	2.50	25.0	ug/L		5					
Naphthalene	U	ND	1.67	5.00	ug/L		5					
Tetrahydrofuran	U	ND	8.34	25.0	ug/L		5					
Toluene	U	ND	1.67	5.00	ug/L		5					
Xylenes (total)	U	ND	5.00	15.0	ug/L		5					

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*08/30/22 14 51*
Bromofluorobenzene	254 ug/L	50.0	102	(72%-125%)		
Toluene-d8	254 ug/L	50.0	101	(75%-123%)		
1,2-Dichloroethane-d4	262 ug/L	50.0	105	(73%-129%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*08/30/22 14 51*
unknown		3.913	40.1 ug/L	0	J		

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260D	

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.

Notes:

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

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

Report Date: September 22, 2022

Client Sample ID: Cell 4B
Sample ID: 591138005
Matrix: Water
Collect Date: 24-AUG-22 09:45
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
1,2,4-Trichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1	NM1	09/01/22	2259	2310491	1
1,2-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,2-Diphenylhydrazine	U	ND	30.0	100	ug/L	0.0100	1					
1,3-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,4-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2,4,5-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4,6-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dimethylphenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dinitrophenol	U	ND	50.0	200	ug/L	0.0100	1					
2,4-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2,6-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2-Chloronaphthalene	U	ND	4.10	10.0	ug/L	0.0100	1					
2-Chlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methyl-4,6-dinitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
3,3'-Dimethylbenzidine	U	ND	33.0	100	ug/L	0.0100	1					
4-Bromophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Chloro-3-methylphenol	U	ND	30.0	100	ug/L	0.0100	1					
4-Chlorophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
Acenaphthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Acenaphthylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzidine	U	ND	39.0	100	ug/L	0.0100	1					
Benzo(a)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(a)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(b)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4B
Sample ID: 591138005

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
Benzo(ghi)perylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(k)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Butylbenzylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Chrysene	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-butylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-octylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dibenzo(a,h)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Diethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dimethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Diphenylamine	U	ND	30.0	100	ug/L	0.0100	1					
Fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Fluorene	U	ND	3.00	10.0	ug/L	0.0100	1					
Hexachlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorobutadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorocyclopentadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachloroethane	U	ND	30.0	100	ug/L	0.0100	1					
Indeno(1,2,3-cd)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Isophorone	U	ND	35.0	100	ug/L	0.0100	1					
N-Methyl-N-nitrosomethylamine	U	ND	30.0	100	ug/L	0.0100	1					
N-Nitrosodipropylamine	U	ND	30.0	100	ug/L	0.0100	1					
Naphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
Nitrobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Pentachlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
Phenanthrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Phenol	U	ND	30.0	100	ug/L	0.0100	1					
Pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Pyridine	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethoxy)methane	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethyl) ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Ethylhexyl)phthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
m,p-Cresols	U	ND	37.0	100	ug/L	0.0100	1					
o-Cresol	U	ND	30.0	100	ug/L	0.0100	1					

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Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4B
Sample ID: 591138005

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Semi-Volatile-GC/MS

SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*09/01/22 22 59*
Phenol-d5	311 ug/L	1000	31	(15%-85%)		
Nitrobenzene-d5	313 ug/L	500	63	(39%-112%)		
p-Terphenyl-d14	318 ug/L	500	64	(24%-129%)		
2-Fluorobiphenyl	332 ug/L	500	66	(39%-112%)		
2-Fluorophenol	369 ug/L	1000	37	(11%-79%)		
2,4,6-Tribromophenol	910 ug/L	1000	91	(37%-132%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*09/01/22 22 59*
No Tentatively Identified Compounds Found							

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	SW846 3510C Prep Semivolatiles 8270	DG3	08/31/22	1113	2310481

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3510C/8270E	

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.

Notes:

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 27, 2022

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

Client Sample ID: Cell 4B
Sample ID: 591138005
Matrix: Water
Collect Date: 24-AUG-22 09:45
Receive Date: 26-AUG-22
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	-8.85	+/-44.9	192	1.00	pCi/L			TC1	09/24/22	1012	2309861	1
Thorium-230		11200	+/-426	175	1.00	pCi/L							
Thorium-232	U	18.7	+/-28.7	101	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		6210	+/-86.3	11.2	1.00	pCi/L			TC1	09/19/22	1458	2309863	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		23.6	+/-2.27	2.02	1.00	pCi/L			TC1	09/23/22	0828	2309865	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234	U	147	+/-557	2240	1.00	pCi/L			TC1	09/27/22	0813	2321062	4
Uranium-235/236	U	219	+/-419	1380	1.00	pCi/L							
Uranium-238	U	1240	+/-679	1810	1.00	pCi/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GL-RAD-A-026	Laboratory Composite				2309728

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 903.0	
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"			91.6	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			78.6	(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.

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Certificate of Analysis

Report Date: September 27, 2022

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

Client Sample ID:	Cell 4B	Project:	DNMI00107
Sample ID:	591138005	Client ID:	DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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 23, 2022

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

Client Sample ID:	Cell 4B	Project:	DNMI00107
Sample ID:	591138005	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	24-AUG-22 09:45		
Receive Date:	26-AUG-22		
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		1.07	0.0100	0.100	none		1	VH1	08/29/22	1534	2310125	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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-006
Client Sample ID: Cell 4B LDS

Report Date: 09/19/22
Collection Date: 08/24/22 09:55
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO3	24400	mg/L				A2310 B	08/30/22 11:56 / dmb
Carbonate as CO3	ND	mg/L		3		A2320 B	08/28/22 09:40 / dmb
Bicarbonate as HCO3	ND	mg/L		6		A2320 B	08/28/22 09:40 / dmb
Chloride	4740	mg/L	D	50		E300.0	08/31/22 13:16 / dmb
Fluoride	1270	mg/L	D	100		A4500-F C	09/02/22 15:40 / slf
Sulfate	54900	mg/L	D	200		E300.0	08/31/22 13:16 / dmb
Calcium	388	mg/L	D	30		E200.7	09/01/22 21:06 / eli-b
Magnesium	3090	mg/L	D	50		E200.7	09/01/22 21:06 / eli-b
Potassium	623	mg/L	D	50		E200.7	09/01/22 21:06 / eli-b
Sodium	7660	mg/L	D	50		E200.7	09/01/22 21:06 / eli-b
PHYSICAL PROPERTIES							
Conductivity @ 25 C	52100	umhos/cm	E	5		A2510 B	08/29/22 13:54 / slf
pH	2.2	s.u.	H	0.1		A4500-H B	08/29/22 13:54 / slf
pH Measurement Temp	13.8	°C				A4500-H B	08/29/22 13:54 / slf
Solids, Total Dissolved TDS @ 180 C	82000	mg/L	D	2000		A2540 C	08/30/22 09:03 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	28	mg/L	D	1		E353.2	08/30/22 15:46 / dmb
Nitrogen, Ammonia as N	3300	mg/L	D	200		E350.1	09/07/22 13:56 / erc
METALS, DISSOLVED							
Arsenic	37600	ug/L	D	20		E200.8	09/10/22 07:38 / eli-b
Beryllium	242	ug/L	D	5		E200.8	09/13/22 12:02 / eli-b
Cadmium	1320	ug/L	D	500		E200.7	09/01/22 21:06 / eli-b
Chromium	5560	ug/L	D	4000		E200.7	09/01/22 21:06 / eli-b
Cobalt	19000	ug/L	D	3000		E200.7	09/01/22 21:06 / eli-b
Copper	305000	ug/L	D	5000		E200.7	09/01/22 21:06 / eli-b
Iron	1720000	ug/L	D	4000		E200.7	09/01/22 21:06 / eli-b
Lead	1160	ug/L	D	5		E200.8	09/10/22 07:38 / eli-b
Manganese	148000	ug/L	D	500		E200.7	09/01/22 21:06 / eli-b
Mercury	ND	mg/L		0.0001		E245.1	09/01/22 12:15 / eli-b
Molybdenum	6360	ug/L	D	20		E200.8	09/15/22 00:22 / eli-b
Nickel	37600	ug/L	D	3000		E200.7	09/01/22 21:06 / eli-b
Selenium	2010	ug/L	D	20		E200.8	09/13/22 12:02 / eli-b
Silver	59	ug/L	D	2		E200.8	09/13/22 12:02 / eli-b
Thallium	66	ug/L	D	20		E200.8	09/10/22 07:38 / eli-b
Tin	ND	ug/L	D	500		E200.8	09/10/22 07:38 / eli-b
Uranium	21200	ug/L	D	5		E200.8	09/10/22 07:38 / eli-b
Vanadium	452000	ug/L	D	5000		E200.7	09/01/22 21:06 / eli-b
Zinc	164000	ug/L	D	2000		E200.7	09/01/22 21:06 / eli-b
DATA QUALITY							
Solids, Total Dissolved - Calculated	72800	mg/L		1.00		A1030 E	09/16/22 12:13 / tlf

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
H - Analysis performed past the method holding time
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
E - Estimated value - result exceeds the instrument upper quantitation limit

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-006
Client Sample ID: Cell 4B LDS

Report Date: 09/19/22
Collection Date: 08/24/22 09:55
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance	0.03	%				A1030 E	09/16/22 12:13 / tlf
Anions	1350	meq/L				A1030 E	09/16/22 12:13 / tlf
Cations	1350	meq/L				A1030 E	09/16/22 12:13 / tlf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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

Certificate of Analysis

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

Report Date: September 15, 2022

Client Sample ID: Cell 4B LDS
Sample ID: 591138006
Matrix: Water
Collect Date: 24-AUG-22 09:55
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260 Volatiles "As Received"												
2-Butanone		68.5	8.34	25.0	ug/L		5	JM6	08/30/22	1423	2310475	1
Acetone		192	8.72	25.0	ug/L		5					
Benzene	U	ND	1.67	5.00	ug/L		5					
Carbon tetrachloride	U	ND	1.67	5.00	ug/L		5					
Chloroform		7.10	1.67	5.00	ug/L		5					
Chloromethane	U	ND	1.67	5.00	ug/L		5					
Methylene chloride	U	ND	2.50	25.0	ug/L		5					
Naphthalene	U	ND	1.67	5.00	ug/L		5					
Tetrahydrofuran		227	8.34	25.0	ug/L		5					
Toluene	U	ND	1.67	5.00	ug/L		5					
Xylenes (total)	U	ND	5.00	15.0	ug/L		5					

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*08/30/22 14 23*
Toluene-d8	251 ug/L	50.0	101	(75%-123%)		
Bromofluorobenzene	254 ug/L	50.0	101	(72%-125%)		
1,2-Dichloroethane-d4	274 ug/L	50.0	109	(73%-129%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*08/30/22 14 23*
unknown		3.895	55.2 ug/L	0	J		

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260D	

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.

Notes:

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

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4B LDS
Sample ID: 591138006
Matrix: Water
Collect Date: 24-AUG-22 09:55
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
1,2,4-Trichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1	NM1	09/01/22	2326	2310491	1
1,2-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,2-Diphenylhydrazine	U	ND	30.0	100	ug/L	0.0100	1					
1,3-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,4-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2,4,5-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4,6-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dimethylphenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dinitrophenol	U	ND	50.0	200	ug/L	0.0100	1					
2,4-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2,6-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2-Chloronaphthalene	U	ND	4.10	10.0	ug/L	0.0100	1					
2-Chlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methyl-4,6-dinitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
3,3'-Dimethylbenzidine	U	ND	33.0	100	ug/L	0.0100	1					
4-Bromophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Chloro-3-methylphenol	U	ND	30.0	100	ug/L	0.0100	1					
4-Chlorophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
Acenaphthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Acenaphthylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzidine	U	ND	39.0	100	ug/L	0.0100	1					
Benzo(a)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(a)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(b)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4B LDS
Sample ID: 591138006

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
Benzo(ghi)perylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(k)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Butylbenzylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Chrysene	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-butylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-octylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dibenzo(a,h)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Diethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dimethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Diphenylamine	U	ND	30.0	100	ug/L	0.0100	1					
Fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Fluorene	U	ND	3.00	10.0	ug/L	0.0100	1					
Hexachlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorobutadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorocyclopentadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachloroethane	U	ND	30.0	100	ug/L	0.0100	1					
Indeno(1,2,3-cd)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Isophorone	U	ND	35.0	100	ug/L	0.0100	1					
N-Methyl-N-nitrosomethylamine	U	ND	30.0	100	ug/L	0.0100	1					
N-Nitrosodipropylamine	U	ND	30.0	100	ug/L	0.0100	1					
Naphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
Nitrobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Pentachlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
Phenanthrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Phenol	U	ND	30.0	100	ug/L	0.0100	1					
Pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Pyridine	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethoxy)methane	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethyl) ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Ethylhexyl)phthalate		13.9	3.00	10.0	ug/L	0.0100	1					
m,p-Cresols	U	ND	37.0	100	ug/L	0.0100	1					
o-Cresol	U	ND	30.0	100	ug/L	0.0100	1					

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Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 4B LDS
Sample ID: 591138006

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Semi-Volatile-GC/MS

SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*09/01/22 23 26*
2,4,6-Tribromophenol	1010 ug/L	1000	101	(37%-132%)		
Nitrobenzene-d5	344 ug/L	500	69	(39%-112%)		
Phenol-d5	354 ug/L	1000	35	(15%-85%)		
2-Fluorobiphenyl	358 ug/L	500	72	(39%-112%)		
p-Terphenyl-d14	386 ug/L	500	77	(24%-129%)		
2-Fluorophenol	433 ug/L	1000	43	(11%-79%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*09/01/22 23 26*
unknown		3.222	50.1 ug/L	50	J		
unknown		5.527	284 ug/L	72	J		
Ethanol, 2-(2-butoxyethoxy)-	000112-34-5	7.014	57.5 ug/L	90	NJ		
unknown		9.458	56.9 ug/L	50	J		
1,4-Benzenediamine, N,N-diethyl-	000093-05-0	9.678	106 ug/L	98	NJ		
unknown		13.106	42.3 ug/L	50	J		
unknown		14.566	550 ug/L	38	J		

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	SW846 3510C Prep Semivolatiles 8270	DG3	08/31/22	1113	2310481

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3510C/8270E	

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.

Notes:

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 27, 2022

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

Client Sample ID: Cell 4B LDS
Sample ID: 591138006
Matrix: Water
Collect Date: 24-AUG-22 09:55
Receive Date: 26-AUG-22
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	642	+/-289	736	1.00	pCi/L			TC1	09/24/22	1012	2309861	1
Thorium-230		2.32E+05	+/-4370	913	1.00	pCi/L							
Thorium-232		1470	+/-358	334	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		97600	+/-331	8.80	1.00	pCi/L			TC1	09/19/22	1457	2309863	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		56.5	+/-3.45	2.73	1.00	pCi/L			TC1	09/23/22	0828	2309865	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		8580	+/-379	138	1.00	pCi/L			TC1	09/23/22	0653	2319659	4
Uranium-235/236		365	+/-89.9	98.6	1.00	pCi/L							
Uranium-238		7950	+/-364	117	1.00	pCi/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GL-RAD-A-026	Laboratory Composite				2309728

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 903.0	
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"			85.8	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			102	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			85.2	(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.

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Certificate of Analysis

Report Date: September 27, 2022

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

Client Sample ID:	Cell 4B LDS	Project:	DNMI00107
Sample ID:	591138006	Client ID:	DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst Date	Time Batch	Method

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 23, 2022

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

Client Sample ID:	Cell 4B LDS	Project:	DNMI00107
Sample ID:	591138006	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	24-AUG-22 09:55		
Receive Date:	26-AUG-22		
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		1.07	0.0100	0.100	none		1	VH1	08/29/22	1535	2310125	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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-007
Client Sample ID: Cell 65

Report Date: 09/19/22
Collection Date: 08/24/22 09:20
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Acidity, Total as CaCO3	26200	mg/L				A2310 B	08/30/22 11:58 / dmb
Carbonate as CO3	ND	mg/L		3		A2320 B	08/28/22 09:43 / dmb
Bicarbonate as HCO3	ND	mg/L		6		A2320 B	08/28/22 09:43 / dmb
Chloride	5970	mg/L	D	50		E300.0	08/30/22 09:02 / dmb
Fluoride	2080	mg/L	D	200		A4500-F C	09/02/22 15:47 / slf
Sulfate	59900	mg/L	D	200		E300.0	08/30/22 09:02 / dmb
Calcium	471	mg/L	D	30		E200.7	09/01/22 21:10 / eli-b
Magnesium	4360	mg/L	D	50		E200.7	09/01/22 21:10 / eli-b
Potassium	679	mg/L	D	50		E200.7	09/01/22 21:10 / eli-b
Sodium	8710	mg/L	D	50		E200.7	09/01/22 21:10 / eli-b
PHYSICAL PROPERTIES							
Conductivity @ 25 C	55400	umhos/cm	E	5		A2510 B	08/29/22 13:58 / slf
pH	2.5	s.u.	H	0.1		A4500-H B	08/29/22 13:58 / slf
pH Measurement Temp	14.0	°C				A4500-H B	08/29/22 13:58 / slf
Solids, Total Dissolved TDS @ 180 C	93200	mg/L	D	2000		A2540 C	08/30/22 09:03 / mnm
NUTRIENTS							
Nitrogen, Nitrate+Nitrite as N	96	mg/L	D	1		E353.2	08/30/22 15:48 / dmb
Nitrogen, Ammonia as N	3500	mg/L	D	200		E350.1	08/29/22 14:21 / dmb
METALS, DISSOLVED							
Arsenic	21700	ug/L	D	20		E200.8	09/10/22 07:44 / eli-b
Beryllium	261	ug/L	D	200		E200.7	09/01/22 21:10 / eli-b
Cadmium	3220	ug/L	D	500		E200.7	09/01/22 21:10 / eli-b
Chromium	5820	ug/L	D	4000		E200.7	09/01/22 21:10 / eli-b
Cobalt	27100	ug/L	D	3000		E200.7	09/01/22 21:10 / eli-b
Copper	292000	ug/L	D	5000		E200.7	09/01/22 21:10 / eli-b
Iron	1110000	ug/L	D	4000		E200.7	09/01/22 21:10 / eli-b
Lead	1390	ug/L	D	5		E200.8	09/10/22 07:44 / eli-b
Manganese	192000	ug/L	D	500		E200.7	09/01/22 21:10 / eli-b
Mercury	ND	mg/L		0.0001		E245.1	09/01/22 12:17 / eli-b
Molybdenum	2990	ug/L	D	20		E200.8	09/13/22 12:07 / eli-b
Nickel	52000	ug/L	D	3000		E200.7	09/01/22 21:10 / eli-b
Selenium	1980	ug/L	D	100		E200.8	09/13/22 12:07 / eli-b
Silver	199	ug/L	D	8		E200.8	09/13/22 12:07 / eli-b
Thallium	309	ug/L	D	20		E200.8	09/10/22 07:44 / eli-b
Tin	ND	ug/L	D	500		E200.8	09/10/22 07:44 / eli-b
Uranium	109000	ug/L	D	100000		E200.7	09/01/22 21:10 / eli-b
Vanadium	477000	ug/L	D	5000		E200.7	09/01/22 21:10 / eli-b
Zinc	258000	ug/L	D	2000		E200.7	09/01/22 21:10 / eli-b
DATA QUALITY							
Solids, Total Dissolved - Calculated	82600	mg/L		1.00		A1030 E	09/16/22 10:48 / tlf

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
H - Analysis performed past the method holding time
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
E - Estimated value - result exceeds the instrument upper quantitation limit

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Lab ID: C22081104-007
Client Sample ID: Cell 65

Report Date: 09/19/22
Collection Date: 08/24/22 09:20
DateReceived: 08/26/22
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
DATA QUALITY							
A/C Balance	0.65	%				A1030 E	09/16/22 10:48 / tlf
Anions	1530	meq/L				A1030 E	09/16/22 10:48 / tlf
Cations	1550	meq/L				A1030 E	09/16/22 10:48 / tlf

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

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Certificate of Analysis

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

Report Date: September 15, 2022

Client Sample ID: Cell 65
Sample ID: 591138007
Matrix: Water
Collect Date: 24-AUG-22 09:20
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260 Volatiles "As Received"												
2-Butanone		40.7	8.34	25.0	ug/L		5	JM6	08/30/22	1356	2310475	1
Acetone		121	8.72	25.0	ug/L		5					
Benzene	U	ND	1.67	5.00	ug/L		5					
Carbon tetrachloride	U	ND	1.67	5.00	ug/L		5					
Chloroform		65.2	1.67	5.00	ug/L		5					
Chloromethane	U	ND	1.67	5.00	ug/L		5					
Methylene chloride	U	ND	2.50	25.0	ug/L		5					
Naphthalene	U	ND	1.67	5.00	ug/L		5					
Tetrahydrofuran		56.4	8.34	25.0	ug/L		5					
Toluene	U	ND	1.67	5.00	ug/L		5					
Xylenes (total)	U	ND	5.00	15.0	ug/L		5					

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*08/30/22 13 56*
Toluene-d8	256 ug/L	50.0	103	(75%-123%)		
Bromofluorobenzene	257 ug/L	50.0	103	(72%-125%)		
1,2-Dichloroethane-d4	277 ug/L	50.0	111	(73%-129%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*08/30/22 13 56*
unknown		3.913	56.8 ug/L	0	J		

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260D	

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.

Notes:

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

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

Report Date: September 22, 2022

Client Sample ID: Cell 65
Sample ID: 591138007
Matrix: Water
Collect Date: 24-AUG-22 09:20
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI●●1

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
1,2,4-Trichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1	NM1	09/01/22	2354	2310491	1
1,2-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,2-Diphenylhydrazine	U	ND	30.0	100	ug/L	0.0100	1					
1,3-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1,4-Dichlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
1-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2,4,5-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4,6-Trichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dichlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dimethylphenol	U	ND	30.0	100	ug/L	0.0100	1					
2,4-Dinitrophenol	U	ND	50.0	200	ug/L	0.0100	1					
2,4-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2,6-Dinitrotoluene	U	ND	30.0	100	ug/L	0.0100	1					
2-Chloronaphthalene	U	ND	4.10	10.0	ug/L	0.0100	1					
2-Chlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methyl-4,6-dinitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
2-Methylnaphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
2-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
3,3'-Dimethylbenzidine	U	ND	33.0	100	ug/L	0.0100	1					
4-Bromophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Chloro-3-methylphenol	U	ND	30.0	100	ug/L	0.0100	1					
4-Chlorophenylphenylether	U	ND	30.0	100	ug/L	0.0100	1					
4-Nitrophenol	U	ND	30.0	100	ug/L	0.0100	1					
Acenaphthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Acenaphthylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzidine	U	ND	39.0	100	ug/L	0.0100	1					
Benzo(a)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(a)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(b)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 65
Sample ID: 591138007

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Semi-Volatile-GC/MS												
SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"												
Benzo(ghi)perylene	U	ND	3.00	10.0	ug/L	0.0100	1					
Benzo(k)fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Butylbenzylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Chrysene	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-butylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Di-n-octylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dibenzo(a,h)anthracene	U	ND	3.00	10.0	ug/L	0.0100	1					
Diethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Dimethylphthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
Diphenylamine	U	ND	30.0	100	ug/L	0.0100	1					
Fluoranthene	U	ND	3.00	10.0	ug/L	0.0100	1					
Fluorene	U	ND	3.00	10.0	ug/L	0.0100	1					
Hexachlorobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorobutadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachlorocyclopentadiene	U	ND	30.0	100	ug/L	0.0100	1					
Hexachloroethane	U	ND	30.0	100	ug/L	0.0100	1					
Indeno(1,2,3-cd)pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Isophorone	U	ND	35.0	100	ug/L	0.0100	1					
N-Methyl-N-nitrosomethylamine	U	ND	30.0	100	ug/L	0.0100	1					
N-Nitrosodipropylamine	U	ND	30.0	100	ug/L	0.0100	1					
Naphthalene	U	ND	3.00	10.0	ug/L	0.0100	1					
Nitrobenzene	U	ND	30.0	100	ug/L	0.0100	1					
Pentachlorophenol	U	ND	30.0	100	ug/L	0.0100	1					
Phenanthrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Phenol	U	ND	30.0	100	ug/L	0.0100	1					
Pyrene	U	ND	3.00	10.0	ug/L	0.0100	1					
Pyridine	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloro-1-methylethyl)ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethoxy)methane	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Chloroethyl) ether	U	ND	30.0	100	ug/L	0.0100	1					
bis(2-Ethylhexyl)phthalate	U	ND	3.00	10.0	ug/L	0.0100	1					
m,p-Cresols	U	ND	37.0	100	ug/L	0.0100	1					
o-Cresol	U	ND	30.0	100	ug/L	0.0100	1					

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

Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 65
Sample ID: 591138007

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

Semi-Volatile-GC/MS

SW846 3510C/8270E SVOA (Separatory Funnel) "As Received"

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*09/01/22 23 54*
2,4,6-Tribromophenol	1110 ug/L	1000	111	(37%-132%)		
Nitrobenzene-d5	350 ug/L	500	70	(39%-112%)		
2-Fluorobiphenyl	371 ug/L	500	74	(39%-112%)		
p-Terphenyl-d14	388 ug/L	500	78	(24%-129%)		
Phenol-d5	391 ug/L	1000	39	(15%-85%)		
2-Fluorophenol	451 ug/L	1000	45	(11%-79%)		

Tentatively Identified Compound (TIC)	*CAS No.*	*RT*	*Est. Concentration*	*Fit*	*Qual*	*Date Time:*	*09/01/22 23 54*
2H-Pyran-2-one, tetrahydro-4-methyl-	001121-84-2	6.185	51.7 ug/L	90	NJ		
unknown		6.335	74.5 ug/L	30	J		
unknown		6.5	91.3 ug/L	49	J		
unknown		6.859	44.4 ug/L	59	J		
unknown		7.185	40.8 ug/L	53	J		
unknown		9.421	44.8 ug/L	46	J		
unknown		9.464	50 ug/L	50	J		
1,4-Benzenediamine, N,N-diethyl-	000093-05-0	9.715	42.2 ug/L	98	NJ		
Tributyl phosphate	000126-73-8	11.073	40.9 ug/L	91	NJ		
unknown		11.769	46.4 ug/L	38	J		
unknown		11.812	47.6 ug/L	10	J		
1-Octanamine, n-octyl-	001120-48-5	11.972	70.5 ug/L	93	NJ		
7,9-Di-tert-butyl-1-oxaspiro(4,5)deca-6,9-diene-2,8-	082304-66-3	13.063	47.3 ug/L	99	NJ		
unknown		18.187	264 ug/L	53	J		

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3510C	SW846 3510C Prep Semivolatiles 8270	DG3	08/31/22	1113	2310481

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 3510C/8270E	

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.

Notes:

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Certificate of Analysis

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

Report Date: September 22, 2022

Client Sample ID: Cell 65
Sample ID: 591138007

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method

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
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Certificate of Analysis

Report Date: September 27, 2022

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

Client Sample ID:	Cell 65	Project:	DNMI00107
Sample ID:	591138007	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	24-AUG-22 09:20		
Receive Date:	26-AUG-22		
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	26.1	+/-283	1130	1.00	pCi/L			TC1	09/24/22	1012	2309861	1
Thorium-230		69400	+/-2420	1040	1.00	pCi/L							
Thorium-232		801	+/-276	422	1.00	pCi/L							
GFPC,Total Alpha Radium, Liquid "As Received"													
Gross Radium Alpha		32100	+/-203	13.0	1.00	pCi/L			TC1	09/19/22	1457	2309863	2
Lucas Cell, Ra226, liquid "As Received"													
Radium-226		6.43	+/-1.27	2.12	1.00	pCi/L			TC1	09/23/22	0828	2309865	3
U- 233/234,U-235/236 and U-238 "As Received"													
Uranium-233/234		43900	+/-3770	2860	1.00	pCi/L			TC1	09/23/22	0653	2319659	4
Uranium-235/236		1940	+/-953	1160	1.00	pCi/L							
Uranium-238		38800	+/-3520	2060	1.00	pCi/L							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GL-RAD-A-026	Laboratory Composite				2309728

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, Th-01-RC Modified	
2	EPA 903.0	
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"			85.2	(15%-125%)
Barium Carrier	GFPC,Total Alpha Radium, Liquid "As Received"			87.4	(25%-125%)
Uranium-232 Tracer	U- 233/234,U-235/236 and U-238 "As Received"			22.8	(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.

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Certificate of Analysis

Report Date: September 27, 2022

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

Client Sample ID:	Cell 65	Project:	DNMI00107
Sample ID:	591138007	Client ID:	DNMI001

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst Date	Time	Batch	Method

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
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Certificate of Analysis

Report Date: September 23, 2022

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

Client Sample ID:	Cell 65	Project:	DNMI00107
Sample ID:	591138007	Client ID:	DNMI001
Matrix:	Water		
Collect Date:	24-AUG-22 09:20		
Receive Date:	26-AUG-22		
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	0.0100	0.100	none		1	VH1	08/29/22	1535	2310125	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

GEL LABORATORIES LLC
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Certificate of Analysis

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

Report Date: September 15, 2022

Client Sample ID: Trip Blank
Sample ID: 591138008
Matrix: Water
Collect Date: 24-AUG-22 08:10
Receive Date: 26-AUG-22
Collector: Client

Project: DNMI00107
Client ID: DNMI001

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Volatile Organics												
SW846 8260 Volatiles "As Received"												
2-Butanone	U	ND	1.67	5.00	ug/L		1	JM6	08/30/22	1329	2310475	1
Acetone	U	ND	1.74	5.00	ug/L		1					
Benzene	U	ND	0.333	1.00	ug/L		1					
Carbon tetrachloride	U	ND	0.333	1.00	ug/L		1					
Chloroform	U	ND	0.333	1.00	ug/L		1					
Chloromethane	U	ND	0.333	1.00	ug/L		1					
Methylene chloride	U	ND	0.500	5.00	ug/L		1					
Naphthalene	U	ND	0.333	1.00	ug/L		1					
Tetrahydrofuran	U	ND	1.67	5.00	ug/L		1					
Toluene	U	ND	0.333	1.00	ug/L		1					
Xylenes (total)	U	ND	1.00	3.00	ug/L		1					

Surrogate/Tracer recovery	*Result*	*Nominal*	*Recovery%*	*Acceptable Limits*	*Date Time:*	*08/30/22 13 29*
Toluene-d8	49.6 ug/L	50.0	99	(75%-123%)		
Bromofluorobenzene	50.3 ug/L	50.0	101	(72%-125%)		
1,2-Dichloroethane-d4	52.0 ug/L	50.0	104	(73%-129%)		

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8260D	

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.

Notes:

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

ANALYTICAL SUMMARY REPORT

September 19, 2022

Energy Fuels Resources (USA) Inc
44 Union Blvd Ste 600
Lakewood, CO 80228-1826

Work Order: C22081104 Quote ID: C5645

Project Name: Not Indicated

Energy Laboratories, Inc. Casper WY received the following 7 samples for Energy Fuels Resources (USA) Inc on 8/26/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C22081104-001	Cell 1	08/24/22 8:10	08/26/22	Aqueous	Metals by ICP/ICPMS, Dissolved Acidity to pH 8.3 Alkalinity to pH 4.5 Anion - Cation Balance Conductivity Mercury, Dissolved Fluoride Anions by Ion Chromatography Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Sample Filtering, Metals Digestion, Mercury by CVAA Solids, Total Dissolved Solids, Total Dissolved - Calculated
C22081104-002	Slimes #2	08/24/22 8:45	08/26/22	Aqueous	Same As Above
C22081104-003	Cell 4A	08/24/22 9:05	08/26/22	Aqueous	Same As Above
C22081104-004	Cell 4A LDS	08/24/22 9:20	08/26/22	Aqueous	Same As Above
C22081104-005	Cell 4B	08/24/22 9:45	08/26/22	Aqueous	Same As Above
C22081104-006	Cell 4B LDS	08/24/22 9:55	08/26/22	Aqueous	Same As Above
C22081104-007	Cell 65	08/24/22 9:20	08/26/22	Aqueous	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager .

Report Approved By:

Ashley Wilson
Project Manager

Digitally signed by
Ashley L. Wilson
Date: 2022.09.19 14:11:17 -06:00

CLIENT: Energy Fuels Resources (USA) Inc
Project: Not Indicated
Work Order: C22081104

Report Date: 09/19/22

CASE NARRATIVE

ORIGINAL SAMPLE SUBMITTAL(S)
All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)
Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS
Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS
The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES
All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS
Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS
Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS
eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT

ISO 17025 DISCLAIMER:
The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER,WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/08/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A2310 B**									Analytical Run: ACIDITY_220830A	
Lab ID: **ICV**	Initial Calibration Verification Standard								08/30/22 11:18	
pH		7.98	s.u.	0.010	100	98	102			
Method: **A2310 B**									Batch: ACID220830_A	
Lab ID: **MBLK**	Method Blank					Run: ACIDITY_220830A			08/30/22 11:19	
Acidity, Total as CaCO3		2	mg/L							
Lab ID: **LCS**	Laboratory Control Sample					Run: ACIDITY_220830A			08/30/22 11:25	
Acidity, Total as CaCO3		1650	mg/L		101	90	110			
Lab ID: **C22080783-004A DUP**	Sample Duplicate					Run: ACIDITY_220830A			08/30/22 11:35	
Acidity, Total as CaCO3		750	mg/L					1.3	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/08/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B									Analytical Run: MANTECH_220828A	
Lab ID: ICV		Initial Calibration Verification Standard							08/28/22 08:49	
pH		7.95	s.u.	0.010	99	98	102			
Method: A2320 B									Batch: R286384	
Lab ID: MBLK		Method Blank				Run: MANTECH_220828A			08/28/22 08:59	
Alkalinity, Total as CaCO3		ND	mg/L	2						
Lab ID: LCS		Laboratory Control Sample				Run: MANTECH_220828A			08/28/22 09:08	
Alkalinity, Total as CaCO3		251	mg/L	5.0	100	90	110			
Lab ID: C22081095-001ADUP		Sample Duplicate				Run: MANTECH_220828A			08/28/22 09:23	
Alkalinity, Total as CaCO3		223	mg/L	5.0				0.2	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/08/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B									Analytical Run: PHSC_101-C_220829A	
Lab ID: SC 100		Initial Calibration Verification Standard							08/29/22 10:36	
Conductivity @ 25 C		104	umhos/cm	5.0	103	90	110			
Lab ID: SC 5000		Initial Calibration Verification Standard							08/29/22 10:40	
Conductivity @ 25 C		5060	umhos/cm	5.0	101	90	110			
Lab ID: SC 20000		Initial Calibration Verification Standard							08/29/22 10:43	
Conductivity @ 25 C		18400	umhos/cm	5.0	92	90	110			
Method: A2510 B									Batch: R286371	
Lab ID: SC 50000		Initial Calibration Verification Standard				Run: PHSC_101-C_220829A			08/29/22 10:47	
Conductivity @ 25 C		45400	umhos/cm	5.0	91	90	110			
Lab ID: MBLK		Method Blank				Run: PHSC_101-C_220829A			08/29/22 13:02	
Conductivity @ 25 C		3	umhos/cm	1						
Lab ID: C22081104-005ADUP		Sample Duplicate				Run: PHSC_101-C_220829A			08/29/22 13:51	
Conductivity @ 25 C		18000	umhos/cm	5.0				0.3	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/08/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS220829A
Lab ID: MB-1_220829A		Method Blank				Run: BAL-111_220830A				08/30/22 08:59
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	10						
Lab ID: LCS-2_220829A		Laboratory Control Sample				Run: BAL-111_220830A				08/30/22 09:00
Solids, Total Dissolved TDS @ 180 C		1030	mg/L	20	103	90	110			
Lab ID: C22081106-001A DUP		Sample Duplicate				Run: BAL-111_220830A				08/30/22 09:04
Solids, Total Dissolved TDS @ 180 C		6330	mg/L	20				0	5	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/08/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-F C										Batch: R286468
Lab ID: MBLK	Method Blank					Run: MANTECH_220830A				08/30/22 11:50
Fluoride		ND	mg/L	0.04						
Lab ID: LCS	Laboratory Control Sample					Run: MANTECH_220830A				08/30/22 15:57
Fluoride		2.04	mg/L	0.10	102	90	110			
Lab ID: C22081055-002AMS	Sample Matrix Spike					Run: MANTECH_220830A				08/30/22 16:13
Fluoride		2.16	mg/L	0.10	108	90	110			
Lab ID: C22081143-002AMS	Sample Matrix Spike					Run: MANTECH_220830A				08/30/22 17:19
Fluoride		2.11	mg/L	0.10	98	90	110			
Method: A4500-F C										Batch: R286580
Lab ID: LCS	Laboratory Control Sample					Run: MANTECH_220901A				09/01/22 10:46
Fluoride		2.07	mg/L	0.10	103	90	110			
Lab ID: MBLK	Method Blank					Run: MANTECH_220901A				09/01/22 10:59
Fluoride		ND	mg/L	0.04						
Lab ID: C22081104-001ADUP	Sample Duplicate					Run: MANTECH_220901A				09/01/22 11:33
Fluoride		4500	mg/L	500				2.2	10	
Lab ID: C22081143-014AMS	Sample Matrix Spike					Run: MANTECH_220901A				09/01/22 11:38
Fluoride		2.46	mg/L	0.10	98	90	110			
Method: A4500-F C										Batch: R286620
Lab ID: MBLK	Method Blank					Run: MANTECH_220902A				09/02/22 10:23
Fluoride		ND	mg/L	0.04						
Lab ID: LCS	Laboratory Control Sample					Run: MANTECH_220902A				09/02/22 13:50
Fluoride		2.10	mg/L	0.10	105	90	110			
Lab ID: C22090021-016AMS	Sample Matrix Spike					Run: MANTECH_220902A				09/02/22 15:12
Fluoride		2.34	mg/L	0.10	109	90	110			
Lab ID: C22081146-009AMS	Sample Matrix Spike					Run: MANTECH_220902A				09/02/22 16:23
Fluoride		100	mg/L	5.0	94	90	110			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/08/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**										Batch: R286371
Lab ID: **C22081104-005ADUP**	2	Sample Duplicate				Run: PHSC_101-C_220829A				08/29/22 13:51
pH		2.6	s.u.	0.1				0.0	1.5	
pH Measurement Temp		13.5	°C							

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/08/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0									Analytical Run: IC3-C_220829A	
Lab ID: ICV	2	Initial Calibration Verification Standard							08/29/22 17:42	
Chloride		10.7	mg/L	1.0	107	90	110			
Sulfate		43.0	mg/L	1.0	107	90	110			
Method: E300.0									Batch: R286485	
Lab ID: LFB	2	Laboratory Fortified Blank				Run: IC3-C_220829A			08/29/22 18:01	
Chloride		9.76	mg/L	1.0	101	90	110			
Sulfate		39.9	mg/L	1.0	104	90	110			
Lab ID: C22081083-001BMS	2	Sample Matrix Spike				Run: IC3-C_220829A			08/30/22 03:55	
Chloride		712	mg/L	2.1	73	80	120			S
Sulfate		2330	mg/L	8.3	90	80	120			
Lab ID: C22081083-001BMSD	2	Sample Matrix Spike Duplicate				Run: IC3-C_220829A			08/30/22 04:15	
Chloride		715	mg/L	2.1	75	80	120	0.5	20	S
Sulfate		2340	mg/L	8.3	91	80	120	0.5	20	
Lab ID: C22081142-001AMS	2	Sample Matrix Spike				Run: IC3-C_220829A			08/30/22 08:24	
Chloride		31.2	mg/L	1.0	89	80	120			
Sulfate		100	mg/L	1.0	99	80	120			
Lab ID: C22081142-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC3-C_220829A			08/30/22 08:43	
Chloride		31.2	mg/L	1.0	89	80	120	0	20	
Sulfate		101	mg/L	1.0	100	80	120	0.5	20	
Lab ID: ICB	2	Method Blank				Run: IC3-C_220829A			08/29/22 17:23	
Chloride		0.02	mg/L	0.01						
Sulfate		0.3	mg/L	0.2						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/08/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E350.1									Analytical Run: FIA201-C_220829B	
Lab ID: ICV	Initial Calibration Verification Standard								08/29/22 13:56	
Nitrogen, Ammonia as N		1.10	mg/L	0.050	110	90	110			
Method: E350.1									Batch: R286402	
Lab ID: MBLK	Method Blank					Run: FIA201-C_220829B			08/29/22 13:55	
Nitrogen, Ammonia as N		ND	mg/L	0.03						
Lab ID: LFB	Laboratory Fortified Blank					Run: FIA201-C_220829B			08/29/22 13:57	
Nitrogen, Ammonia as N		1.03	mg/L	0.050	104	90	110			
Lab ID: C22080990-003CMS	Sample Matrix Spike					Run: FIA201-C_220829B			08/29/22 14:02	
Nitrogen, Ammonia as N		1.05	mg/L	0.050	93	90	110			
Lab ID: C22080990-003CMSD	Sample Matrix Spike Duplicate					Run: FIA201-C_220829B			08/29/22 14:03	
Nitrogen, Ammonia as N		1.07	mg/L	0.050	95	90	110	1.9	10	
Lab ID: C22081127-002DMS	Sample Matrix Spike					Run: FIA201-C_220829B			08/29/22 14:24	
Nitrogen, Ammonia as N		10.3	mg/L	0.50	100	90	110			
Lab ID: C22081127-002DMSD	Sample Matrix Spike Duplicate					Run: FIA201-C_220829B			08/29/22 14:25	
Nitrogen, Ammonia as N		10.3	mg/L	0.50	100	90	110	0.0	10	
Method: E350.1									Analytical Run: FIA201-C_220907B	
Lab ID: ICV	Initial Calibration Verification Standard								09/07/22 13:54	
Nitrogen, Ammonia as N		1.05	mg/L	0.050	105	90	110			
Method: E350.1									Batch: R286714	
Lab ID: MBLK	Method Blank					Run: FIA201-C_220907B			09/07/22 13:53	
Nitrogen, Ammonia as N		ND	mg/L	0.03						
Lab ID: LFB	Laboratory Fortified Blank					Run: FIA201-C_220907B			09/07/22 13:55	
Nitrogen, Ammonia as N		0.953	mg/L	0.050	96	90	110			
Lab ID: C22081127-002DMS	Sample Matrix Spike					Run: FIA201-C_220907B			09/07/22 13:59	
Nitrogen, Ammonia as N		1.12	mg/L	0.050	91	90	110			
Lab ID: C22081127-002DMSD	Sample Matrix Spike Duplicate					Run: FIA201-C_220907B			09/07/22 14:00	
Nitrogen, Ammonia as N		1.22	mg/L	0.050	101	90	110	8.6	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/08/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E353.2**									Analytical Run: FIA201-C_220830B	
Lab ID: **ICV**	Initial Calibration Verification Standard								08/30/22 14:28	
Nitrogen, Nitrate+Nitrite as N		1.06	mg/L	0.050	106	90	110			
Method: **E353.2**									Batch: R286456	
Lab ID: **MBLK**	Method Blank					Run: FIA201-C_220830B			08/30/22 14:29	
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.01						
Lab ID: **LFB**	Laboratory Fortified Blank					Run: FIA201-C_220830B			08/30/22 14:30	
Nitrogen, Nitrate+Nitrite as N		1.08	mg/L	0.050	109	90	110			
Lab ID: **C22081105-001AMS**	Sample Matrix Spike					Run: FIA201-C_220830B			08/30/22 15:41	
Nitrogen, Nitrate+Nitrite as N		11.5	mg/L	0.10	104	90	110			
Lab ID: **C22081105-001AMSD**	Sample Matrix Spike Duplicate					Run: FIA201-C_220830B			08/30/22 15:42	
Nitrogen, Nitrate+Nitrite as N		11.4	mg/L	0.10	102	90	110	0.9	10	
Lab ID: **C22081106-005DMS**	Sample Matrix Spike					Run: FIA201-C_220830B			08/30/22 15:57	
Nitrogen, Nitrate+Nitrite as N		1.02	mg/L	0.050	102	90	110			
Lab ID: **C22081106-005DMSD**	Sample Matrix Spike Duplicate					Run: FIA201-C_220830B			08/30/22 15:58	
Nitrogen, Nitrate+Nitrite as N		1.03	mg/L	0.050	103	90	110	1.0	10	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/15/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP203-B_220901A	
Lab ID: ICV	17	Continuing Calibration Verification Standard							09/01/22 11:52	
Arsenic		2.41	mg/L	0.20	96	95	105			
Beryllium		1.21	mg/L	0.010	97	95	105			
Cadmium		2.36	mg/L	0.010	95	95	105			
Calcium		25.3	mg/L	1.0	101	95	105			
Chromium		2.41	mg/L	0.050	96	95	105			
Cobalt		2.37	mg/L	0.030	95	95	105			
Copper		2.41	mg/L	0.050	97	95	105			
Iron		2.53	mg/L	0.040	101	95	105			
Magnesium		25.3	mg/L	1.0	101	95	105			
Manganese		2.36	mg/L	0.010	95	95	105			
Molybdenum		2.45	mg/L	0.10	98	95	105			
Nickel		2.37	mg/L	0.050	95	95	105			
Potassium		25.1	mg/L	1.0	101	95	105			
Sodium		25.1	mg/L	1.0	100	95	105			
Uranium		2.59	mg/L	1.0	104	95	105			
Vanadium		2.40	mg/L	0.10	96	95	105			
Zinc		2.38	mg/L	0.020	95	95	105			
Lab ID: CCV	17	Continuing Calibration Verification Standard							09/01/22 20:31	
Arsenic		2.50	mg/L	0.20	100	90	110			
Beryllium		1.21	mg/L	0.010	97	90	110			
Cadmium		2.37	mg/L	0.010	95	90	110			
Calcium		23.8	mg/L	1.0	95	90	110			
Chromium		2.45	mg/L	0.050	98	90	110			
Cobalt		2.37	mg/L	0.030	95	90	110			
Copper		2.38	mg/L	0.050	95	90	110			
Iron		2.31	mg/L	0.040	92	90	110			
Magnesium		24.6	mg/L	1.0	98	90	110			
Manganese		2.26	mg/L	0.010	90	90	110			
Molybdenum		2.50	mg/L	0.10	100	90	110			
Nickel		2.34	mg/L	0.050	94	90	110			
Potassium		22.6	mg/L	1.0	91	90	110			
Sodium		22.6	mg/L	1.0	90	90	110			
Uranium		2.29	mg/L	1.0	91	90	110			
Vanadium		2.36	mg/L	0.10	94	90	110			
Zinc		2.26	mg/L	0.020	91	90	110			
Method: E200.7									Batch: R387283	
Lab ID: MB-7500DIS220901A	17	Method Blank				Run: ICP203-B_220901A			09/01/22 12:16	
Arsenic		ND	mg/L	0.02						
Beryllium		ND	mg/L	0.0002						
Cadmium		ND	mg/L	0.0009						
Calcium		ND	mg/L	0.1						
Chromium		ND	mg/L	0.002						
Cobalt		ND	mg/L	0.006						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/15/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R387283
Lab ID: MB-7500DIS220901A	17	Method Blank				Run: ICP203-B_220901A				09/01/22 12:16
Copper		ND	mg/L	0.005						
Iron		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.02						
Manganese		ND	mg/L	0.001						
Molybdenum		ND	mg/L	0.02						
Nickel		ND	mg/L	0.004						
Potassium		ND	mg/L	0.1						
Sodium		ND	mg/L	0.2						
Uranium		ND	mg/L	0.09						
Vanadium		ND	mg/L	0.004						
Zinc		ND	mg/L	0.003						
Lab ID: LFB-7500DIS220901A	17	Laboratory Fortified Blank				Run: ICP203-B_220901A				09/01/22 12:20
Arsenic		1.02	mg/L	0.21	102	85	115			
Beryllium		0.494	mg/L	0.010	99	85	115			
Cadmium		0.479	mg/L	0.010	96	85	115			
Calcium		50.2	mg/L	1.0	100	85	115			
Chromium		0.954	mg/L	0.050	95	85	115			
Cobalt		0.931	mg/L	0.031	93	85	115			
Copper		0.958	mg/L	0.052	96	85	115			
Iron		5.00	mg/L	0.041	100	85	115			
Magnesium		50.2	mg/L	1.0	100	85	115			
Manganese		4.81	mg/L	0.010	96	85	115			
Molybdenum		0.975	mg/L	0.10	97	85	115			
Nickel		0.935	mg/L	0.050	94	85	115			
Potassium		50.2	mg/L	1.0	100	85	115			
Sodium		50.2	mg/L	1.0	100	85	115			
Uranium		1.06	mg/L	1.0	106	85	115			
Vanadium		0.973	mg/L	0.10	97	85	115			
Zinc		0.975	mg/L	0.021	98	85	115			
Lab ID: B22082728-001BMS2	17	Sample Matrix Spike				Run: ICP203-B_220901A				09/01/22 20:14
Arsenic		2.16	mg/L	0.41	108	70	130			
Beryllium		0.996	mg/L	0.0041	100	70	130			
Cadmium		0.961	mg/L	0.010	96	70	130			
Calcium		182	mg/L	1.0	95	70	130			
Chromium		1.97	mg/L	0.082	98	70	130			
Cobalt		1.74	mg/L	0.062	87	70	130			
Copper		1.76	mg/L	0.10	88	70	130			
Iron		9.35	mg/L	0.082	93	70	130			
Magnesium		108	mg/L	1.0	98	70	130			
Manganese		9.39	mg/L	0.010	94	70	130			
Molybdenum		2.00	mg/L	0.082	100	70	130			
Nickel		1.85	mg/L	0.062	93	70	130			
Potassium		112	mg/L	1.0	94	70	130			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/15/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: R387283
Lab ID: B22082728-001BMS2	17	Sample Matrix Spike				Run: ICP203-B_220901A				09/01/22 20:14
Sodium		238	mg/L	1.0	97	70	130			
Uranium		1.91	mg/L	2.1	96	70	130			
Vanadium		1.96	mg/L	0.10	98	70	130			
Zinc		1.88	mg/L	0.041	94	70	130			
Lab ID: B22082728-001BMSD	17	Sample Matrix Spike Duplicate				Run: ICP203-B_220901A				09/01/22 20:18
Arsenic		2.14	mg/L	0.41	107	70	130	1.0	20	
Beryllium		0.991	mg/L	0.0041	99	70	130	0.5	20	
Cadmium		0.955	mg/L	0.010	95	70	130	0.6	20	
Calcium		181	mg/L	1.0	94	70	130	0.6	20	
Chromium		1.95	mg/L	0.082	97	70	130	0.8	20	
Cobalt		1.73	mg/L	0.062	86	70	130	0.9	20	
Copper		1.74	mg/L	0.10	87	70	130	1.4	20	
Iron		9.28	mg/L	0.082	93	70	130	0.7	20	
Magnesium		108	mg/L	1.0	98	70	130	0.6	20	
Manganese		9.29	mg/L	0.010	93	70	130	1.1	20	
Molybdenum		2.00	mg/L	0.082	100	70	130	0.2	20	
Nickel		1.84	mg/L	0.062	92	70	130	0.7	20	
Potassium		111	mg/L	1.0	93	70	130	0.8	20	
Sodium		237	mg/L	1.0	95	70	130	0.8	20	
Uranium		1.90	mg/L	2.1	95	70	130		20	
Vanadium		1.96	mg/L	0.10	98	70	130	0.3	20	
Zinc		1.88	mg/L	0.041	93	70	130	0.3	20	
Lab ID: MB-170022	17	Method Blank				Run: ICP203-B_220901A				09/01/22 20:40
Arsenic		ND	mg/L	0.02						
Beryllium		ND	mg/L	0.0002						
Cadmium		ND	mg/L	0.0009						
Calcium		ND	mg/L	0.1						
Chromium		ND	mg/L	0.002						
Cobalt		ND	mg/L	0.006						
Copper		ND	mg/L	0.005						
Iron		ND	mg/L	0.01						
Magnesium		ND	mg/L	0.02						
Manganese		ND	mg/L	0.001						
Molybdenum		ND	mg/L	0.02						
Nickel		ND	mg/L	0.004						
Potassium		ND	mg/L	0.1						
Sodium		ND	mg/L	0.2						
Uranium		0.1	mg/L	0.09						
Vanadium		ND	mg/L	0.004						
Zinc		ND	mg/L	0.003						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/15/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS206-B_220909A	
Lab ID: QCS	6	Initial Calibration Verification Standard								09/09/22 22:51
Arsenic		0.0534	mg/L	0.0050	107	90	110			
Cadmium		0.0267	mg/L	0.0010	107	90	110			
Lead		0.0523	mg/L	0.010	105	90	110			
Thallium		0.0530	mg/L	0.10	106	90	110			
Tin		0.0522	mg/L	0.10	104	90	110			
Uranium		0.0515	mg/L	0.00030	103	90	110			
Lab ID: CCV	6	Continuing Calibration Verification Standard								09/10/22 05:57
Arsenic		0.0523	mg/L	0.0050	105	90	110			
Cadmium		0.0483	mg/L	0.0010	97	90	110			
Lead		0.0514	mg/L	0.010	103	90	110			
Thallium		0.0499	mg/L	0.10	100	90	110			
Tin		0.0484	mg/L	0.10	97	90	110			
Uranium		0.0504	mg/L	0.00030	101	90	110			
Lab ID: CCV	6	Continuing Calibration Verification Standard								09/10/22 07:16
Arsenic		0.0504	mg/L	0.0050	101	90	110			
Cadmium		0.0482	mg/L	0.0010	96	90	110			
Lead		0.0525	mg/L	0.010	105	90	110			
Thallium		0.0487	mg/L	0.10	97	90	110			
Tin		0.0494	mg/L	0.10	99	90	110			
Uranium		0.0522	mg/L	0.00030	104	90	110			
Method: E200.8										Batch: R387686
Lab ID: LRB	6	Method Blank				Run: ICPMS206-B_220909A				09/09/22 13:38
Arsenic		ND	mg/L	0.0002						
Cadmium		ND	mg/L	0.00008						
Lead		ND	mg/L	0.00006						
Thallium		0.0004	mg/L	0.0003						
Tin		ND	mg/L	0.002						
Uranium		0.00004	mg/L	0.00003						
Lab ID: LFB	6	Laboratory Fortified Blank				Run: ICPMS206-B_220909A				09/09/22 13:44
Arsenic		0.0552	mg/L	0.0050	110	85	115			
Cadmium		0.0513	mg/L	0.0010	103	85	115			
Lead		0.0495	mg/L	0.010	99	85	115			
Thallium		0.0504	mg/L	0.10	101	85	115			
Tin		0.0506	mg/L	0.10	101	85	115			
Uranium		0.0498	mg/L	0.00030	100	85	115			
Lab ID: MB-170022	6	Method Blank				Run: ICPMS206-B_220909A				09/10/22 06:53
Arsenic		ND	mg/L	0.0002						
Cadmium		ND	mg/L	0.00004						
Lead		ND	mg/L	0.00006						
Thallium		ND	mg/L	0.0003						
Tin		ND	mg/L	0.004						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/15/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: R387686
Lab ID: MB-170022	6	Method Blank				Run: ICPMS206-B_220909A				09/10/22 06:53
Uranium		ND	mg/L	0.00003						
Lab ID: B22082950-001BMS	6	Sample Matrix Spike				Run: ICPMS206-B_220909A				09/10/22 10:49
Arsenic		0.0497	mg/L	0.0010	99	70	130			
Cadmium		0.0435	mg/L	0.0010	87	70	130			
Lead		0.0511	mg/L	0.0010	102	70	130			
Thallium		0.0489	mg/L	0.00052	98	70	130			
Tin		0.0459	mg/L	0.010	92	70	130			
Uranium		0.0516	mg/L	0.00030	103	70	130			
Lab ID: B22082950-001BMSD	6	Sample Matrix Spike Duplicate				Run: ICPMS206-B_220909A				09/10/22 10:55
Arsenic		0.0490	mg/L	0.0010	98	70	130	1.5	20	
Cadmium		0.0458	mg/L	0.0010	92	70	130	5.2	20	
Lead		0.0501	mg/L	0.0010	100	70	130	2.0	20	
Thallium		0.0498	mg/L	0.00052	100	70	130	1.7	20	
Tin		0.0459	mg/L	0.010	92	70	130	0.1	20	
Uranium		0.0527	mg/L	0.00030	105	70	130	2.2	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/15/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS206-B_220912A	
Lab ID: QCS	7	Initial Calibration Verification Standard								09/13/22 05:21
Arsenic		0.0514	mg/L	0.0050	103	90	110			
Beryllium		0.0243	mg/L	0.0010	97	90	110			
Chromium		0.0500	mg/L	0.010	100	90	110			
Molybdenum		0.0478	mg/L	0.0050	95	90	110			
Selenium		0.0499	mg/L	0.0050	100	90	110			
Silver		0.0250	mg/L	0.0050	100	90	110			
Uranium		0.0480	mg/L	0.00030	96	90	110			
Lab ID: CCV	7	Continuing Calibration Verification Standard								09/13/22 11:05
Arsenic		0.0508	mg/L	0.0050	102	90	110			
Beryllium		0.0503	mg/L	0.0010	101	90	110			
Chromium		0.0502	mg/L	0.010	100	90	110			
Molybdenum		0.0480	mg/L	0.0050	96	90	110			
Selenium		0.0510	mg/L	0.0050	102	90	110			
Silver		0.0194	mg/L	0.0050	97	90	110			
Uranium		0.0455	mg/L	0.00030	91	90	110			
Method: E200.8										Batch: R387750
Lab ID: LRB	7	Method Blank				Run: ICPMS206-B_220912A				09/12/22 15:15
Arsenic		ND	mg/L	0.0002						
Beryllium		ND	mg/L	0.00007						
Chromium		ND	mg/L	0.0005						
Molybdenum		ND	mg/L	0.00008						
Selenium		ND	mg/L	0.0001						
Silver		0.00002	mg/L	0.00001						
Uranium		0.00006	mg/L	0.00003						
Lab ID: LFB	7	Laboratory Fortified Blank				Run: ICPMS206-B_220912A				09/12/22 15:20
Arsenic		0.0527	mg/L	0.0050	105	85	115			
Beryllium		0.0479	mg/L	0.0010	96	85	115			
Chromium		0.0514	mg/L	0.010	103	85	115			
Molybdenum		0.0520	mg/L	0.0050	104	85	115			
Selenium		0.0523	mg/L	0.0050	105	85	115			
Silver		0.0203	mg/L	0.0050	101	85	115			
Uranium		0.0497	mg/L	0.00030	99	85	115			
Lab ID: MB-170022	7	Method Blank				Run: ICPMS206-B_220912A				09/13/22 11:17
Arsenic		ND	mg/L	0.0002						
Beryllium		ND	mg/L	0.00007						
Chromium		ND	mg/L	0.0005						
Molybdenum		ND	mg/L	0.00008						
Selenium		ND	mg/L	0.0001						
Silver		ND	mg/L	0.00001						
Uranium		ND	mg/L	0.00003						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/15/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: R387750
Lab ID: B22090100-003BMS	7	Sample Matrix Spike				Run: ICPMS206-B_220912A				09/13/22 17:58
Arsenic		0.107	mg/L	0.0010	102	70	130			
Beryllium		0.107	mg/L	0.0010	107	70	130			
Chromium		0.102	mg/L	0.0050	102	70	130			
Molybdenum		0.363	mg/L	0.0010	78	70	130			E
Selenium		0.104	mg/L	0.0010	103	70	130			
Silver		0.0369	mg/L	0.0010	92	70	130			E
Uranium		4.36	mg/L	0.00030		70	130			AE
Lab ID: B22090100-003BMSD	7	Sample Matrix Spike Duplicate				Run: ICPMS206-B_220912A				09/13/22 18:03
Arsenic		0.111	mg/L	0.0010	105	70	130	3.2	20	
Beryllium		0.105	mg/L	0.0010	105	70	130	1.9	20	
Chromium		0.104	mg/L	0.0050	104	70	130	2.1	20	
Molybdenum		0.372	mg/L	0.0010	87	70	130	2.5	20	E
Selenium		0.106	mg/L	0.0010	104	70	130	1.5	20	
Silver		0.0377	mg/L	0.0010	94	70	130	2.0	20	E
Uranium		4.26	mg/L	0.00030		70	130	2.5	20	AE
Method: E200.8										Analytical Run: ICPMS206-B_220914B
Lab ID: QCS	2	Initial Calibration Verification Standard								09/14/22 16:25
Molybdenum		0.0500	mg/L	0.0050	100	90	110			
Silver		0.0257	mg/L	0.0050	103	90	110			
Lab ID: CCV	2	Continuing Calibration Verification Standard								09/14/22 23:37
Molybdenum		0.0470	mg/L	0.0050	94	90	110			
Silver		0.0179	mg/L	0.0050	90	90	110			
Method: E200.8										Batch: R387896
Lab ID: LRB	2	Method Blank				Run: ICPMS206-B_220914B				09/14/22 16:47
Molybdenum		ND	mg/L	0.00008						
Silver		ND	mg/L	0.00001						
Lab ID: LFB	2	Laboratory Fortified Blank				Run: ICPMS206-B_220914B				09/14/22 16:53
Molybdenum		0.0502	mg/L	0.0050	100	85	115			
Silver		0.0198	mg/L	0.0050	99	85	115			
Lab ID: B22090182-045BMS	2	Sample Matrix Spike				Run: ICPMS206-B_220914B				09/14/22 23:09
Molybdenum		0.245	mg/L	0.0010	97	70	130			
Silver		0.0912	mg/L	0.0010	91	70	130			E
Lab ID: B22090182-045BMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS206-B_220914B				09/14/22 23:15
Molybdenum		0.243	mg/L	0.0010	97	70	130	0.9	20	
Silver		0.0898	mg/L	0.0010	90	70	130	1.5	20	E
Lab ID: MB-170022	2	Method Blank				Run: ICPMS206-B_220914B				09/15/22 00:00
Molybdenum		ND	mg/L	0.00008						
Silver		ND	mg/L	0.00001						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

A - Analyte level was greater than four times the spike level - in accordance with the method, percent recovery is not calculated

E - Estimated value - result exceeds the instrument upper quantitation limit

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Energy Fuels Resources (USA) Inc **Work Order:** C22081104 **Report Date:** 09/15/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E245.1**									Analytical Run: HGCV203-B_220901A	
Lab ID: **ICV**	Initial Calibration Verification Standard								09/01/22 09:13	
Mercury		0.00194	mg/L	0.00010	97	90	110			
Method: **E245.1**									Batch: 169981	
Lab ID: **MB-169981**	Method Blank					Run: HGCV203-B_220901A			09/01/22 11:24	
Mercury		ND	mg/L	0.00003						
Lab ID: **LCS-169981**	Laboratory Control Sample					Run: HGCV203-B_220901A			09/01/22 11:25	
Mercury		0.00183	mg/L	0.00010	92	85	115			
Lab ID: **B22082897-009BMS**	Sample Matrix Spike					Run: HGCV203-B_220901A			09/01/22 11:43	
Mercury		0.00190	mg/L	0.00010	95	70	130			
Lab ID: **B22082897-009BMSD**	Sample Matrix Spike Duplicate					Run: HGCV203-B_220901A			09/01/22 11:44	
Mercury		0.00183	mg/L	0.00010	92	70	130	3.5	30	
Method: **E245.1**									Batch: 169982	
Lab ID: **MB-170022**	Method Blank					Run: HGCV203-B_220901A			09/01/22 12:00	
Mercury		ND	mg/L	0.00003						
Lab ID: **LCS-169982**	Laboratory Control Sample					Run: HGCV203-B_220901A			09/01/22 12:02	
Mercury		0.00184	mg/L	0.00010	92	85	115			
Lab ID: **C22081104-002BMS**	Sample Matrix Spike					Run: HGCV203-B_220901A			09/01/22 12:04	
Mercury		0.00164	mg/L	0.00010	82	70	130			
Lab ID: **C22081104-002BMSD**	Sample Matrix Spike Duplicate					Run: HGCV203-B_220901A			09/01/22 12:05	
Mercury		0.00161	mg/L	0.00010	81	70	130	2.2	30	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Energy Fuels Resources (USA) Inc

C22081104

Login completed by: Ciara M. Leis
Date Received: 8/26/2022
Reviewed by: cjohnson
Received by: mvj1
Reviewed Date: 8/29/2022
Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	3.6°C On Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

Dissolved Metals/Hardness were filtered and preserved to pH <2 with 2 mL of nitric acid per 250 mL in the laboratory. According to 40CFR136, samples for Dissolved Metals should be filtered and preserved within 15 minutes of collection.

C22081104

ENERGY LABORATORIES
Trust our People. Trust our Data.

Chain of Custody & Analytical Request Record

www.energylab.com

Page 1 of 1

Account Information (Billing Information)

Company/Name	Energy FUels
Contact	Kathy Weinel
Phone	(303) 389-4134
Mailing Address	225 Union Blvd, Suite 600
City, State, Zip	Lakewood, CO 80228
Email	kweinel@energyfuels.com
Receive Invoice	☐ Hard Copy ■ Email
Receive Report	☐ Hard Copy ■ Email
Purchase Order	
Quote	CS645
Bottle Order	

Report Information (if different than Account Information)

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	☐ Hard Copy ☐ Email
Special Report/Formats:	☐ LEVEL IV ☐ NELAC ☐ EDD/EDT (contact laboratory) ☐ Other STD EFRI

Comments

Samples HAVE NOT BEEN FILTERED

Project Information

Project Name, PWSID, Permit, etc.	
Sampler Name: Tanner Holliday	Sampler Phone: (435) 678-4115
Sample Origin State: Utah	EPA/State Compliance: ■ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type.
☐ NOT Source or Byproduct Material
☐ Source/Processed Ore (Ground or Refined) **CALL BEFORE SENDING
■ 11e.(2) Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Solid/Solids
V - Vegetation
B - Biosolids
O - Other
DW - Drinking Water

Analysis Requested

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	Quote CS645 (NO VOCs OR SVOCs)	See Attached	RUSH TAT	ELI LAB (Laboratory Use Only)
1	Cell 1	8/24/22	0810	3	O	X			
2	Slimes # 2	8/24/22	0845	3	O	X			
3	Cell 4A	8/24/22	0905	3	O	X			
4	Cell 4A LDS	8/24/22	0920	3	O	X			
5	Cell 4B	8/24/22	0945	3	O	X			
6	Cell 4B LDS	8/24/22	0955	3	O	X			
7	Cell 65	8/24/22	0920	3	O	X			
8									
9									
10									

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Tanner Holliday	8/25/2022 1100	Tanner Holliday			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Magdalena Bach	8/26/22	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check	Amount $	Receipt Number (cash/check only)

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

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 27, 2022

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

Re: Tailings Characterization
Work Order: 591138

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 26, 2022. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

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

Sincerely,

Julie Robinson

Julie Robinson
Project Manager

Purchase Order: DW16138
Enclosures

Receipt Narrative
for
Energy Fuels Resources (USA), Inc.
SDG: 591138

September 27, 2022

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 August 26, 2022 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
591138001	Cell 1
591138002	Slimes #2
591138003	Cell 4A
591138004	Cell 4A LDS
591138005	Cell 4B
591138006	Cell 4B LDS
591138007	Cell 65
591138008	Trip Blank

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: GC/MS Semivolatile, GC/MS Volatile, General Chemistry and Radiochemistry.

Julie Robinson

Julie Robinson
Project Manager

591138

Sheet 1 of 1

CHAIN OF CUSTODY

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

Contact: Tanner Holliday
Ph: 435 678 4115
tholliday@energyfuels.com

Project	Samplers Name	Samplers Signature
Annual Tailings 2022	Tanner Holliday	Tanner Holliday

Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
Cell 1	8/24/2022	810	Dissolved Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity, VOCs, SVOCs
Slimes # 2	8/24/2022	845	Dissolved Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity, VOCs, SVOCs
Cell 4A	8/24/2022	905	Dissolved Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity, VOCs, SVOCs
Cell 4A LDS	8/24/2022	920	Dissolved Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity, VOCs, SVOCs
Cell 4B	8/24/2022	945	Dissolved Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity, VOCs, SVOCs
Cell 4B LDS	8/24/2022	955	Dissolved Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity, VOCs, SVOCs
Cell 65	8/24/2022	920	Dissolved Gross Alpha, Thorium (228, 230, 232) Uranium (233/234, 235/236, 238), Ra-226, specific gravity, VOCs, SVOCs
Trip Blank	8/24/2022	810	VOCs
Specific gravity is to be run on UNFILTERED sample aliquot			

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 488668*

Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
Tanner Holliday	8/25/2022		8/26/22 10:10
Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DNMI	SDG/AR/COC/Work Order: 591138
Received By: Greg Austin	Date Received: 8/26/22
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground (UPS) Field Services Courier Other 1Z 187 Y4Y 01 9283 8558 1Z 187 Y4Y 01 7063 0523 1Z 187 Y4Y 01 9754 2946

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?	✓		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 (CPM) / mR/Hr Classified as: Rad 1 (Rad 2) Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	✓			Preservation Method: (Wet Ice) Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: 3°C
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR3-22 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?		✓		Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	✓			If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA✓ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No✓ NA___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes✓ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?			✓	Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	✓			
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials [signature] Date 8/29/22 Page 1 of 1

GL-CHL-SR-001 Rev 7

GEL Laboratories LLC – Login Review Report

GEL Work Order/SDG: 591138 Annual Tailings 2022
Client SDG: 591138
Project Manager: Julie Robinson
Project Name: DNMI00107 Tailings Characterization
Purchase Order: DW16138
Package Level: LEVEL3
EDD Format: EIM_DNMI

Work Order Due Date: 26-SEP-22
Package Due Date: 26-SEP-22
EDD Due Date: 26-SEP-22
Due Date: 26-SEP-22
JAR1

Collector: C
Prelogin #: 202008114643
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
591138001	Cell 1		24-AUG-22 08:10	26-AUG-22 10:10	-2	6	WATER		20		1		
591138002	Slimes #2		24-AUG-22 08:45	26-AUG-22 10:10	-2	6	WATER		20		1		
591138003	Cell 4A		24-AUG-22 09:05	26-AUG-22 10:10	-2	6	WATER		20		1		
591138004	Cell 4A LDS		24-AUG-22 09:20	26-AUG-22 10:10	-2	6	WATER		20		1		
591138005	Cell 4B		24-AUG-22 09:45	26-AUG-22 10:10	-2	6	WATER		20		1		
591138006	Cell 4B LDS		24-AUG-22 09:55	26-AUG-22 10:10	-2	6	WATER		20		1		
591138007	Cell 65		24-AUG-22 09:20	26-AUG-22 10:10	-2	6	WATER		20		1		
591138008	Trip Blank		24-AUG-22 08:10	26-AUG-22 10:10	-2	3	WATER		20		2		Y

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data	Receive Codes
-001 Cell 1	REVW	ASTM D 5057 Specific Gravity			Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses.		RAD2
	REVW	Rad 2 Aliquot for distribution throughout the lab					
	REVW	Alphaspec Th, Liquid					
	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	Lucas Cell, Ra226, liquid					
	REVW	Laboratory Composite	RAD2				
	REVW	VOA Library Search Liquid					
	REVW	SW846 8260 Volatiles					
	REVW	BNA Tentatively Identified Compound (TIC) Search					
	REVW	SW846 3510C/8270E SVOA (Separatory Funnel)					
-002 Slimes #2	REVW	ASTM D 5057 Specific Gravity			Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses.		RAD2
	REVW	Rad 2 Aliquot for distribution throughout the lab					
	REVW	Alphaspec Th, Liquid					
	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	Lucas Cell, Ra226, liquid			
	REVW	Laboratory Composite	RAD2		
	REVW	VOA Library Search Liquid			
	REVW	SW846 8260 Volatiles			
	REVW	BNA Tentatively Identified Compound (TIC) Search			
	REVW	SW846 3510C/8270E SVOA (Separatory Funnel)			
−003 Cell 4A	REVW	ASTM D 5057 Specific Gravity		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses.	RAD2
	REVW	Rad 2 Aliquot for distribution throughout the lab			
	REVW	Alphaspec Th, Liquid			
	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	Lucas Cell, Ra226, liquid			
	REVW	Laboratory Composite	RAD2		
	REVW	VOA Library Search Liquid			
	REVW	SW846 8260 Volatiles			
	REVW	BNA Tentatively Identified Compound (TIC) Search			
	REVW	SW846 3510C/8270E SVOA (Separatory Funnel)			
−004 Cell 4A LDS	REVW	ASTM D 5057 Specific Gravity		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses.	RAD2
	REVW	Rad 2 Aliquot for distribution throughout the lab			
	REVW	Alphaspec Th, Liquid			
	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	Lucas Cell, Ra226, liquid			
	REVW	Laboratory Composite	RAD2		
	REVW	VOA Library Search Liquid			
	REVW	SW846 8260 Volatiles			
	REVW	BNA Tentatively Identified Compound (TIC) Search			
	REVW	SW846 3510C/8270E SVOA (Separatory Funnel)			
−005 Cell 4B	REVW	ASTM D 5057 Specific Gravity		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses.	RAD2
	REVW	Rad 2 Aliquot for distribution throughout the lab			
	REVW	Alphaspec Th, Liquid			
	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	Lucas Cell, Ra226, liquid			
	REVW	Laboratory Composite	RAD2		

	REVW	VOA Library Search Liquid			
	REVW	SW846 8260 Volatiles			
	REVW	BNA Tentatively Identified Compound (TIC) Search			
	REVW	SW846 3510C/8270E SVOA (Separatory Funnel)			
-006 Cell 4B LDS	REVW	ASTM D 5057 Specific Gravity		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses.	RAD2
	REVW	Rad 2 Aliquot for distribution throughout the lab			
	REVW	Alphaspec Th, Liquid			
	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	Lucas Cell, Ra226, liquid			
	REVW	Laboratory Composite	RAD2		
	REVW	VOA Library Search Liquid			
	REVW	SW846 8260 Volatiles			
	REVW	BNA Tentatively Identified Compound (TIC) Search			
	REVW	SW846 3510C/8270E SVOA (Separatory Funnel)			
-007 Cell 65	REVW	ASTM D 5057 Specific Gravity		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses.	RAD2
	REVW	Rad 2 Aliquot for distribution throughout the lab			
	REVW	Alphaspec Th, Liquid			
	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	Lucas Cell, Ra226, liquid			
	REVW	Laboratory Composite	RAD2		
	REVW	VOA Library Search Liquid			
	REVW	SW846 8260 Volatiles			
	REVW	BNA Tentatively Identified Compound (TIC) Search			
	REVW	SW846 3510C/8270E SVOA (Separatory Funnel)			
-008 Trip Blank	REVW	SW846 8260 Volatiles		Handle these samples carefully, they are low pH with high metals. Use container .02 for all analyses.	

Product: VOA8260_L **Workdef ID:** 1542350 **In Product Group?** No **Group Name:** **Group Reference:**

Method: SW846 8260D
Path: 8260D Unpreserved (7d HT)
Product Description: SW846 8260 Volatiles
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?
17060-07-0	1,2-Dichloroethane-d4	50 ug/L	ug/L	SURR	Y	Y	No
3855-82-1	1,4-Dichlorobenzene-d4		ug/L	IS	Y	Y	
78-93-3	2-Butanone	4000	ug/L	REG	Y	Y	
67-64-1	Acetone	700	ug/L	REG	Y	Y	
71-43-2	Benzene	5	ug/L	REG	Y	Y	
460-00-4	Bromofluorobenzene	50 ug/L	ug/L	SURR	Y	Y	
56-23-5	Carbon tetrachloride	5	ug/L	REG	Y	Y	
3114-55-4	Chlorobenzene-d5		ug/L	IS	Y	Y	
67-66-3	Chloroform	70	ug/L	REG	Y	Y	
74-87-3	Chloromethane	30	ug/L	REG	Y	Y	
462-06-6	Fluorobenzene		ug/L	IS	Y	Y	
75-09-2	Methylene chloride	5	ug/L	REG	Y	Y	
91-20-3	Naphthalene	100	ug/L	REG	Y	Y	
109-99-9	Tetrahydrofuran	46	ug/L	REG	Y	Y	
108-88-3	Toluene	1000	ug/L	REG	Y	Y	
2037-26-5	Toluene-d8	50 ug/L	ug/L	SURR	Y	Y	
1330-20-7	Xylenes (total)	10000	ug/L	REG	Y	Y	

Product: MSDTIC_L **Workdef ID:** 1551147 **In Product Group?** No **Group Name:** **Group Reference:**

Method:
Path: 8270E
Product Description: BNA Tentatively Identified Compound (TIC) Search
Product Reference:
Samples: 001, 002, 003, 004, 005, 006, 007
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?
	TIC		ug/L	IS	Y	Y	No

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
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
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 903.0
Product Description: GFPC,Total Alpha Radium, Liquid
Samples: 001, 002, 003, 004, 005, 006, 007
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

Product: LUC26RAL **Workdef ID:** 1371099 **In Product Group?** No **Group Name:** **Group Reference:**

Method: EPA 903.1 Modified
Product Description: Lucas Cell, Ra226, liquid
Samples: 001, 002, 003, 004, 005, 006, 007
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?
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 **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 **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 **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: MSD8270_L **Workdef ID:** 1562759 **In Product Group?** No **Group Name:** **Group Reference:**
Method: SW846 3510C/8270E **Path:** Standard
Product Description: SW846 3510C/8270E SVOA (Separatory Funnel) **Product Reference:**
Samples: 001, 002, 003, 004, 005, 006, 007 **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?
120-82-1	1,2,4-Trichlorobenzene	10 ug/L	ug/L	REG	Y	Y	No
95-50-1	1,2-Dichlorobenzene	10 ug/L	ug/L	REG	Y	Y	
122-66-7	1,2-Diphenylhydrazine	10 ug/L	ug/L	REG	Y	Y	
541-73-1	1,3-Dichlorobenzene	10 ug/L	ug/L	REG	Y	Y	
106-46-7	1,4-Dichlorobenzene	10 ug/L	ug/L	REG	Y	Y	

3855−82−1	1,4−Dichlorobenzene−d4		ug/L	IS	Y	Y
90−12−0	1−Methylnaphthalene	1 ug/L	ug/L	REG	Y	Y
95−95−4	2,4,5−Trichlorophenol	10 ug/L	ug/L	REG	Y	Y
118−79−6	2,4,6−Tribromophenol	10 ug/L	ug/L	SURR	Y	Y
88−06−2	2,4,6−Trichlorophenol	10 ug/L	ug/L	REG	Y	Y
120−83−2	2,4−Dichlorophenol	10 ug/L	ug/L	REG	Y	Y
105−67−9	2,4−Dimethylphenol	10 ug/L	ug/L	REG	Y	Y
51−28−5	2,4−Dinitrophenol	20 ug/L	ug/L	REG	Y	Y
121−14−2	2,4−Dinitrotoluene	10 ug/L	ug/L	REG	Y	Y
606−20−2	2,6−Dinitrotoluene	10 ug/L	ug/L	REG	Y	Y
91−58−7	2−Chloronaphthalene	1 ug/L	ug/L	REG	Y	Y
95−57−8	2−Chlorophenol	10 ug/L	ug/L	REG	Y	Y
321−60−8	2−Fluorobiphenyl	10 ug/L	ug/L	SURR	Y	Y
367−12−4	2−Fluorophenol	10 ug/L	ug/L	SURR	Y	Y
534−52−1	2−Methyl−4,6−dinitrophenol	10 ug/L	ug/L	REG	Y	Y
91−57−6	2−Methylnaphthalene	1 ug/L	ug/L	REG	Y	Y
88−75−5	2−Nitrophenol	10 ug/L	ug/L	REG	Y	Y
119−93−7	3,3'−Dimethylbenzidine	10 ug/L	ug/L	REG	Y	Y
101−55−3	4−Bromophenylphenylether	10 ug/L	ug/L	REG	Y	Y
59−50−7	4−Chloro−3−methylphenol	10 ug/L	ug/L	REG	Y	Y
7005−72−3	4−Chlorophenylphenylether	10 ug/L	ug/L	REG	Y	Y
100−02−7	4−Nitrophenol	10 ug/L	ug/L	REG	Y	Y
83−32−9	Acenaphthene	1 ug/L	ug/L	REG	Y	Y
15067−26−2	Acenaphthene−d10		ug/L	IS	Y	Y
208−96−8	Acenaphthylene	1 ug/L	ug/L	REG	Y	Y
120−12−7	Anthracene	1 ug/L	ug/L	REG	Y	Y
92−87−5	Benzidine	10 ug/L	ug/L	REG	Y	Y
56−55−3	Benzo(a)anthracene	1 ug/L	ug/L	REG	Y	Y
50−32−8	Benzo(a)pyrene	1 ug/L	ug/L	REG	Y	Y
205−99−2	Benzo(b)fluoranthene	1 ug/L	ug/L	REG	Y	Y
191−24−2	Benzo(ghi)perylene	1 ug/L	ug/L	REG	Y	Y
207−08−9	Benzo(k)fluoranthene	1 ug/L	ug/L	REG	Y	Y
85−68−7	Butylbenzylphthalate	1 ug/L	ug/L	REG	Y	Y
218−01−9	Chrysene	1 ug/L	ug/L	REG	Y	Y
1719−03−5	Chrysene−d12		ug/L	IS	Y	Y
84−74−2	Di−n−butylphthalate	1 ug/L	ug/L	REG	Y	Y

117-84-0	Di-n-octylphthalate	1 ug/L	ug/L	REG	Y	Y
53-70-3	Dibenzo(a,h)anthracene	1 ug/L	ug/L	REG	Y	Y
84-66-2	Diethylphthalate	1 ug/L	ug/L	REG	Y	Y
131-11-3	Dimethylphthalate	1 ug/L	ug/L	REG	Y	Y
122-39-4	Diphenylamine	10 ug/L	ug/L	REG	Y	Y
206-44-0	Fluoranthene	1 ug/L	ug/L	REG	Y	Y
86-73-7	Fluorene	1 ug/L	ug/L	REG	Y	Y
118-74-1	Hexachlorobenzene	10 ug/L	ug/L	REG	Y	Y
87-68-3	Hexachlorobutadiene	10 ug/L	ug/L	REG	Y	Y
77-47-4	Hexachlorocyclopentadiene	10 ug/L	ug/L	REG	Y	Y
67-72-1	Hexachloroethane	10 ug/L	ug/L	REG	Y	Y
193-39-5	Indeno(1,2,3-cd)pyrene	1 ug/L	ug/L	REG	Y	Y
78-59-1	Isophorone	10 ug/L	ug/L	REG	Y	Y
62-75-9	N-Methyl-N-nitrosomethylamine	10 ug/L	ug/L	REG	Y	Y
621-64-7	N-Nitrosodipropylamine	10 ug/L	ug/L	REG	Y	Y
91-20-3	Naphthalene	1 ug/L	ug/L	REG	Y	Y
1146-65-2	Naphthalene-d8		ug/L	IS	Y	Y
98-95-3	Nitrobenzene	10 ug/L	ug/L	REG	Y	Y
4165-60-0	Nitrobenzene-d5	10 ug/L	ug/L	SURR	Y	Y
87-86-5	Pentachlorophenol	10 ug/L	ug/L	REG	Y	Y
1520-96-3	Perylene-d12		ug/L	IS	Y	Y
85-01-8	Phenanthrene	1 ug/L	ug/L	REG	Y	Y
1517-22-2	Phenanthrene-d10		ug/L	IS	Y	Y
108-95-2	Phenol	10 ug/L	ug/L	REG	Y	Y
4165-62-2	Phenol-d5	10 ug/L	ug/L	SURR	Y	Y
129-00-0	Pyrene	1 ug/L	ug/L	REG	Y	Y
110-86-1	Pyridine	10 ug/L	ug/L	REG	Y	Y
108-60-1	bis(2-Chloro-1-methylethyl)ether	10 ug/L	ug/L	REG	Y	Y
111-91-1	bis(2-Chloroethoxy)methane	10 ug/L	ug/L	REG	Y	Y
111-44-4	bis(2-Chloroethyl) ether	10 ug/L	ug/L	REG	Y	Y
117-81-7	bis(2-Ethylhexyl)phthalate	1 ug/L	ug/L	REG	Y	Y
65794-96-9	m,p-Cresols	10 ug/L	ug/L	REG	Y	Y
95-48-7	o-Cresol	10 ug/L	ug/L	REG	Y	Y
1718-51-0	p-Terphenyl-d14	10 ug/L	ug/L	SURR	Y	Y

GEL Laboratories LLC – Login Review Report

Product: VOATIC_L **Workdef ID:** 1542348 **In Product Group?** No **Group Name:** **Group Reference:**

Method: **Path:** TIC 8260D Standard

Product Description: VOA Library Search Liquid **Product Reference:**

Samples: 001, 002, 003, 004, 005, 006, 007 **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

	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? _____

GC/MS Volatile
Technical Case Narrative
Energy Fuels Resources
SDG #: 591138

Product: Volatile Organic Compounds (VOC) by Gas Chromatograph/Mass Spectrometer
Analytical Method: SW846 8260D
Analytical Procedure: GL-OA-E-038 REV# 28
Analytical Batch: 2310475

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

GEL Sample ID#	Client Sample Identification
591138001	Cell 1
591138002	Slimes #2
591138003	Cell 4A
591138004	Cell 4A LDS
591138005	Cell 4B
591138006	Cell 4B LDS
591138007	Cell 65
591138008	Trip Blank
1205179168	Laboratory Control Sample (LCS)
1205179169	Method Blank (MB)
1205179170	591138001(Cell 1) Post Spike (PS)
1205179171	591138001(Cell 1) Post Spike Duplicate (PSD)

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

Data Summary:

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

Calibration Information

Continuing Calibration Verification Requirements
All Calibration Verification Standards (CCV) did not meet the acceptance criteria as outlined in Method 8260D for samples and the associated QC. However, the method allows for a designated number of outliers dependent on the requested analyte list. This SDG satisfied the 8260D outlier acceptance criteria. The results are reported.

Quality Control (QC) Information

Matrix Spike/Matrix Spike Duplicate Recovery Statement
The spike and/or spike duplicate (See Below) recoveries were not all within the acceptance limits. The recoveries were similar. It is believed possible matrix interference has been demonstrated.

Sample	Analyte	Value
1205179170 (Cell 1PS)	Chloroform	65* (69%-133%)
1205179171 (Cell 1PSD)	Chloroform	66* (69%-133%)

The spike and/or spike duplicate (See Below) recoveries were not all within the acceptance limits. The associated spike and/or spike duplicate passed recoveries near the lower/upper end of the limits.

Sample	Analyte	Value
1205179170 (Cell 1PS)	Methylene chloride	60* (62%-125%)
	Naphthalene	56* (61%-134%)

Technical Information

Sample Preservation and Integrity

Excessive chlorine was measured in 591138001 (Cell 1), 591138003 (Cell 4A) and 591138004 (Cell 4A LDS). -001 & -003 >5ppm. -004 approx 3ppm.

Sample Dilutions/Methanol Dilutions

Samples in this SDG were analyzed at a dilution. The samples were not analyzed at a lower dilution. There were positive results for target analytes within the middle to upper range of the calibration curve.

Analyte	591138						
	001	002	003	004	005	006	007
1,4-Dichlorobenzene-d4	5X	5X	5X	5X	5X	5X	5X
2-Butanone	5X	5X	5X	5X	5X	5X	5X
Acetone	5X	5X	5X	5X	5X	5X	5X
Benzene	5X	5X	5X	5X	5X	5X	5X
Carbon tetrachloride	5X	5X	5X	5X	5X	5X	5X
Chlorobenzene-d5	5X	5X	5X	5X	5X	5X	5X
Chloroform	5X	5X	5X	5X	5X	5X	5X
Chloromethane	5X	5X	5X	5X	5X	5X	5X
Fluorobenzene	5X	5X	5X	5X	5X	5X	5X
Methylene chloride	5X	5X	5X	5X	5X	5X	5X
Naphthalene	5X	5X	5X	5X	5X	5X	5X
Tetrahydrofuran	5X	5X	5X	5X	5X	5X	5X
Toluene	5X	5X	5X	5X	5X	5X	5X
Xylenes (total)	5X	5X	5X	5X	5X	5X	5X

Miscellaneous Information

TIC Comment

Tentatively identified compounds (TIC) were requested for samples 591138001 (Cell 1), 591138002 (Slimes #2), 591138003 (Cell 4A), 591138004 (Cell 4A LDS), 591138005 (Cell 4B), 591138006 (Cell 4B LDS) and 591138007 (Cell 65) in this delivery group/work order. Please note that non-requested calibrated analytes detected in a client sample may be reported on the Form 1/Certificate of Analysis as TICs. TIC data, if requested, were included on the Sample Data Summary (Form 1) and included with the sample raw data.

Certification Statement

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

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 591138 GEL Work Order: 591138

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.

DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

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: Michael A. Penny Jr. **Name: Michael Penny**

Date: 15 SEP 2022 **Title: Analyst III**
Group Leader

QC Summary

Report Date: September 15, 2022

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

Contact: **Ms. Kathy Weinel**

Workorder: **591138**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 2310475										
QC1205179168 LCS										
2-Butanone	250			197	ug/L		79	(58%-138%)	JM6	08/30/22 07:0
Acetone	250			198	ug/L		79	(53%-151%)		
Benzene	50.0			44.2	ug/L		88	(74%-118%)		
Carbon tetrachloride	50.0			48.1	ug/L		96	(73%-140%)		
Chloroform	50.0			44.3	ug/L		89	(77%-126%)		
Chloromethane	50.0			63.2	ug/L		126	(60%-139%)		
Methylene chloride	50.0			41.1	ug/L		82	(69%-120%)		
Naphthalene	50.0			43.2	ug/L		86	(70%-128%)		
Toluene	50.0			42.6	ug/L		85	(74%-118%)		
Xylenes (total)	150			132	ug/L		88	(72%-126%)		
1,2-Dichloroethane-d4	50.0			50.4	ug/L		101	(73%-129%)		
Bromofluorobenzene	50.0			48.9	ug/L		98	(72%-125%)		
Toluene-d8	50.0			49.6	ug/L		99	(75%-123%)		

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS										
Batch 2310475										
QC1205179169 MB										
2-Butanone			U	ND	ug/L				JM6	08/30/22 08:5
Acetone			U	ND	ug/L					
Benzene			U	ND	ug/L					
Carbon tetrachloride			U	ND	ug/L					
Chloroform			U	ND	ug/L					
Chloromethane			U	ND	ug/L					
Methylene chloride			U	ND	ug/L					
Naphthalene			U	ND	ug/L					
Tetrahydrofuran			U	ND	ug/L					
Toluene			U	ND	ug/L					
Xylenes (total)			U	ND	ug/L					
1,2-Dichloroethane-d4	50.0			51.9	ug/L		104	(73%-129%)		
Bromofluorobenzene	50.0			51.3	ug/L		103	(72%-125%)		
Toluene-d8	50.0			52.9	ug/L		106	(75%-123%)		
QC1205179170 591138001 PS										
2-Butanone	250	U	4000	147	ug/L		59	(38%-137%)		08/30/22 17:0

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS											
Batch 2310475											
Acetone	250	U	700		141	ug/L		55	(47%-140%)	JM6	08/30/22 17:0
Benzene	50.0	U	5.00		32.4	ug/L		65	(65%-122%)		
Carbon tetrachloride	50.0	U	5.00		33.3	ug/L		67	(63%-144%)		
Chloroform	50.0		2.27		34.6	ug/L		65*	(69%-133%)		
Chloromethane	50.0	U	30.0		42.0	ug/L		83	(45%-142%)		
Methylene chloride	50.0	U	5.00		29.8	ug/L		60*	(62%-125%)		
Naphthalene	50.0	U	100		28.0	ug/L		56*	(61%-134%)		
Toluene	50.0	U	1000		31.6	ug/L		63	(63%-121%)		
Xylenes (total)	150	U	10000		90.2	ug/L		60	(52%-132%)		
1,2-Dichloroethane-d4	50.0		54.6		55.5	ug/L		111	(73%-129%)		
Bromofluorobenzene	50.0		51.5		50.1	ug/L		100	(72%-125%)		
Toluene-d8	50.0		53.2		50.0	ug/L		100	(75%-123%)		
QC1205179171 591138001 PSD											
2-Butanone	250	U	4000		169	ug/L	14	68	(0%-20%)		08/30/22 17:3
Acetone	250	U	700		165	ug/L	16	65	(0%-20%)		
Benzene	50.0	U	5.00		34.1	ug/L	5	68	(0%-20%)		

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Volatile-GC/MS											
Batch 2310475											
Carbon tetrachloride	50.0	U	5.00		36.1	ug/L	8	72	(0%-20%)	JM6	08/30/22 17:3
Chloroform	50.0		2.27		35.3	ug/L	2	66*	(0%-20%)		
Chloromethane	50.0	U	30.0		45.0	ug/L	7	89	(0%-20%)		
Methylene chloride	50.0	U	5.00		31.3	ug/L	5	63	(0%-20%)		
Naphthalene	50.0	U	100		30.8	ug/L	9	62	(0%-20%)		
Toluene	50.0	U	1000		33.6	ug/L	6	67	(0%-20%)		
Xylenes (total)	150	U	10000		97.2	ug/L	7	65	(0%-20%)		
1,2-Dichloroethane-d4	50.0		54.6		54.9	ug/L		110	(73%-129%)		
Bromofluorobenzene	50.0		51.5		50.6	ug/L		101	(72%-125%)		
Toluene-d8	50.0		53.2		49.9	ug/L		100	(75%-123%)		

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 Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded

QC Summary

Workorder: 591138

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

JNX Non Calibrated Compound

M Matrix Related Failure

N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor

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

P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%

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.

UJ Compound cannot be extracted

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 the 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.

GC/MS Semivolatile
Technical Case Narrative
Energy Fuels Resources
SDG #: 591138

Product: **Analysis of Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry**
Analytical Method: SW846 3510C/8270E
Analytical Procedure: GL-OA-E-009 REV# 46
Analytical Batch: 2310491

Preparation Method: SW846 3510C
Preparation Procedure: GL-OA-E-013 REV# 35
Preparation Batch: 2310481

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

GEL Sample ID#	Client Sample Identification
591138001	Cell 1
591138002	Slimes #2
591138003	Cell 4A
591138004	Cell 4A LDS
591138005	Cell 4B
591138006	Cell 4B LDS
591138007	Cell 65
1205179193	Method Blank (MB)
1205179194	Laboratory Control Sample (LCS)
1205179195	591143008(NonSDG) Matrix Spike (MS)
1205179196	591143008(NonSDG) Matrix Spike Duplicate (MSD)

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

Data Summary:

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

Calibration Information

CCV Requirements
All Calibration Verification Standards (CCV) did not meet the acceptance criteria as outlined in Method 8270D/E for samples and the associated QC. However, the method allows for a designated number of outliers dependent on the requested analyte list. This SDG satisfied the 8270D/E outlier acceptance criteria. If required, a CRDL was analyzed after the CCVs to demonstrate that there is adequate sensitivity to detect the failed compounds at the applicable lower quantitation limit.

Quality Control (QC) Information

Surrogate Recoveries
Sample (See Below) did not meet surrogate recovery acceptance criteria. The associated MS met surrogate recovery acceptance criteria. It appears that the low recoveries were isolated to the MSD only and may have been the result of a poor extraction. There is insufficient sample remaining to perform a re-extraction. The data

results were reported.

Sample	Analyte	Value
1205179196 (Non SDG 591143008MSD)	2-Fluorobiphenyl	36* (39%-112%)
	Nitrobenzene-d5	33* (39%-112%)

Spike Recovery Statement
The MSD (See Below) did not meet spike recovery acceptance criteria. The associated MS and LCS met spike recovery acceptance criteria. It appears that the low recoveries were isolated to the MSD only and may have been the result of a poor extraction. There is insufficient sample remaining to perform a re-extraction. The data results were reported.

Sample	Analyte
1205179196 (Non SDG 591143008MSD)	Several

MS/MSD Relative Percent Difference (RPD) Statement
The RPD values between the MS and MSD, (See Below), were not within the acceptance limits due to the large difference between the individual recoveries in each MS and MSD analyte pair. There is insufficient sample remaining to perform a re-extraction. The data results were reported.

Sample	Analyte
1205179195MS and 1205179196MSD (Non SDG 591143008)	Several

Miscellaneous Information

Manual Integrations
Sample (See Below) required manual integration in order to properly identify one or more peaks and/or to correctly position the baseline as set in the calibration standard injections.

Sample	Analyte	Value
1205179196 (Non SDG 591143008MSD)	2-Fluorobiphenyl	Result 40.6ug/L

TIC Comment
Tentatively identified compounds (TIC) were requested for samples 591138001 (Cell 1), 591138002 (Slimes #2), 591138003 (Cell 4A), 591138004 (Cell 4A LDS), 591138005 (Cell 4B), 591138006 (Cell 4B LDS) and 591138007 (Cell 65) in this SDG in this batch.

Additional Comments
Diphenylamine Statement
Diphenylamine has now superseded N-Nitroso-diphenylamine as a CCC in EPA Method 8270C. Previous versions of EPA Method 8270 (prior to 8270C) listed N-Nitroso-diphenylamine as a CCC. However, as stated in EPA Method 8270C, Revision 3, December, 1996, Section 1.4.5, "N-Nitroso-diphenylamine decomposes in the gas chromatographic inlet and cannot be separated from Diphenylamine." Studies of these two compounds at GEL, both independent of each other and together, show that they not only coelute, but also have similar mass spectra. The GEL Mobile Lab will report N-Nitroso-diphenylamine and Diphenylamine as N-Nitroso-diphenylamine on all reports and forms.

Certification Statement

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

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 591138 GEL Work Order: 591138

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.
DL Indicates that sample is diluted.
RA Indicates that sample is re-analyzed without re-extraction.
RE Indicates that sample is re-extracted.

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: Barbara Bailey **Name: Barbara Bailey**

Date: 23 SEP 2022 **Title: Data Validator**

QC Summary

Report Date: September 22, 2022

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

Contact: Ms. Kathy Weinel

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS										
Batch 2310491										
QC1205179194 LCS										
1,2,4-Trichlorobenzene	50.0			37.1	ug/L		74	(43%-105%)	NM1	09/01/22 18:5
1,2-Dichlorobenzene	50.0			34.5	ug/L		69	(40%-92%)		
1,2-Diphenylhydrazine	50.0			43.3	ug/L		87	(50%-111%)		
1,3-Dichlorobenzene	50.0			32.0	ug/L		64	(40%-89%)		
1,4-Dichlorobenzene	50.0			33.4	ug/L		67	(42%-92%)		
1-Methylnaphthalene	50.0			47.0	ug/L		94	(50%-111%)		
2,4,5-Trichlorophenol	50.0			44.7	ug/L		89	(50%-137%)		
2,4,6-Trichlorophenol	50.0			44.1	ug/L		88	(50%-127%)		
2,4-Dichlorophenol	50.0			43.5	ug/L		87	(50%-119%)		
2,4-Dimethylphenol	50.0			33.4	ug/L		67	(46%-99%)		
2,4-Dinitrophenol	50.0			47.9	ug/L		96	(28%-151%)		
2,4-Dinitrotoluene	50.0			54.0	ug/L		108	(50%-134%)		
2,6-Dinitrotoluene	50.0			49.7	ug/L		99	(59%-126%)		

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS										
Batch 2310491										
2-Chloronaphthalene	50.0			42.2	ug/L		84	(47%-108%)	NM1	09/01/22 18:5
2-Chlorophenol	50.0			35.1	ug/L		70	(46%-107%)		
2-Methyl-4,6-dinitrophenol	50.0			55.6	ug/L		111	(42%-149%)		
2-Methylnaphthalene	50.0			45.0	ug/L		90	(48%-104%)		
2-Nitrophenol	50.0			42.2	ug/L		84	(50%-115%)		
4-Bromophenylphenylether	50.0			49.4	ug/L		99	(49%-114%)		
4-Chloro-3-methylphenol	50.0			46.2	ug/L		92	(50%-118%)		
4-Chlorophenylphenylether	50.0			49.7	ug/L		99	(56%-120%)		
4-Nitrophenol	50.0			13.4	ug/L		27	(21%-110%)		
Acenaphthene	50.0			44.5	ug/L		89	(51%-109%)		
Acenaphthylene	50.0			44.1	ug/L		88	(51%-108%)		
Anthracene	50.0			47.8	ug/L		96	(56%-110%)		
Benzidine	100			48.5	ug/L		49	(13%-141%)		
Benzo(a)anthracene	50.0			45.8	ug/L		92	(50%-112%)		
Benzo(a)pyrene	50.0			48.1	ug/L		96	(55%-110%)		

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS										
Batch 2310491										
Benzo(b)fluoranthene	50.0			44.4	ug/L		89	(54%-111%)	NM1	09/01/22 18:5
Benzo(ghi)perylene	50.0			48.7	ug/L		97	(44%-133%)		
Benzo(k)fluoranthene	50.0			45.4	ug/L		91	(54%-117%)		
Butylbenzylphthalate	50.0			53.5	ug/L		107	(54%-118%)		
Chrysene	50.0			47.2	ug/L		94	(59%-116%)		
Di-n-butylphthalate	50.0			54.2	ug/L		108	(55%-122%)		
Di-n-octylphthalate	50.0			52.3	ug/L		105	(50%-125%)		
Dibenzo(a,h)anthracene	50.0			48.3	ug/L		97	(42%-130%)		
Diethylphthalate	50.0			54.1	ug/L		108	(60%-121%)		
Dimethylphthalate	50.0			51.0	ug/L		102	(62%-123%)		
Diphenylamine	50.0			47.9	ug/L		96	(48%-117%)		
Fluoranthene	50.0			54.4	ug/L		109	(54%-121%)		
Fluorene	50.0			48.1	ug/L		96	(56%-111%)		
Hexachlorobenzene	50.0			50.2	ug/L		100	(51%-118%)		
Hexachlorobutadiene	50.0			35.6	ug/L		71	(39%-103%)		

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS										
Batch 2310491										
Hexachlorocyclopentadiene	50.0			23.8	ug/L		48	(30%-95%)	NM1	09/01/22 18:5
Hexachloroethane	50.0			30.8	ug/L		62	(36%-90%)		
Indeno(1,2,3-cd)pyrene	50.0			48.7	ug/L		97	(48%-128%)		
Isophorone	50.0			45.5	ug/L		91	(58%-113%)		
N-Methyl-N-nitrosomethylamine	50.0			23.8	ug/L		48	(32%-84%)		
N-Nitrosodipropylamine	50.0			50.0	ug/L		100	(49%-118%)		
Naphthalene	50.0			39.3	ug/L		79	(49%-103%)		
Nitrobenzene	50.0			39.0	ug/L		78	(55%-110%)		
Pentachlorophenol	50.0			35.2	ug/L		70	(42%-132%)		
Phenanthrene	50.0			47.0	ug/L		94	(56%-110%)		
Phenol	50.0			17.2	ug/L		34	(12%-90%)		
Pyrene	50.0			52.0	ug/L		104	(43%-122%)		
Pyridine	50.0			15.7	ug/L		31	(25%-90%)		
bis(2-Chloro-1-methylethyl)ether	50.0			36.7	ug/L		73	(42%-115%)		
bis(2-Chloroethoxy)methane	50.0			44.0	ug/L		88	(56%-108%)		

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS										
Batch 2310491										
bis(2-Chloroethyl) ether	50.0			40.5	ug/L		81	(47%-108%)	NM1	09/01/22 18:5
bis(2-Ethylhexyl)phthalate	50.0			51.0	ug/L		102	(47%-118%)		
m,p-Cresols	50.0			34.4	ug/L		69	(39%-95%)		
o-Cresol	50.0			34.8	ug/L		70	(39%-102%)		
2,4,6-Tribromophenol	100			102	ug/L		102	(37%-132%)		
2-Fluorobiphenyl	50.0			38.9	ug/L		78	(39%-112%)		
2-Fluorophenol	100			37.0	ug/L		37	(11%-79%)		
Nitrobenzene-d5	50.0			35.3	ug/L		71	(39%-112%)		
Phenol-d5	100			32.8	ug/L		33	(15%-85%)		
p-Terphenyl-d14	50.0			47.2	ug/L		94	(24%-129%)		
QC1205179193 MB										
1,2,4-Trichlorobenzene			U	ND	ug/L					09/01/22 18:2
1,2-Dichlorobenzene			U	ND	ug/L					
1,2-Diphenylhydrazine			U	ND	ug/L					
1,3-Dichlorobenzene			U	ND	ug/L					
1,4-Dichlorobenzene			U	ND	ug/L					

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch 2310491											
1-Methylnaphthalene			U	ND	ug/L				NM1	09/01/22	18:2
2,4,5-Trichlorophenol			U	ND	ug/L						
2,4,6-Trichlorophenol			U	ND	ug/L						
2,4-Dichlorophenol			U	ND	ug/L						
2,4-Dimethylphenol			U	ND	ug/L						
2,4-Dinitrophenol			U	ND	ug/L						
2,4-Dinitrotoluene			U	ND	ug/L						
2,6-Dinitrotoluene			U	ND	ug/L						
2-Chloronaphthalene			U	ND	ug/L						
2-Chlorophenol			U	ND	ug/L						
2-Methyl-4,6-dinitrophenol			U	ND	ug/L						
2-Methylnaphthalene			U	ND	ug/L						
2-Nitrophenol			U	ND	ug/L						
3,3'-Dimethylbenzidine			U	ND	ug/L						
4-Bromophenylphenylether			U	ND	ug/L						

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch 2310491											
4-Chloro-3-methylphenol			U	ND	ug/L				NM1	09/01/22	18:2
4-Chlorophenylphenylether			U	ND	ug/L						
4-Nitrophenol			U	ND	ug/L						
Acenaphthene			U	ND	ug/L						
Acenaphthylene			U	ND	ug/L						
Anthracene			U	ND	ug/L						
Benzidine			U	ND	ug/L						
Benzo(a)anthracene			U	ND	ug/L						
Benzo(a)pyrene			U	ND	ug/L						
Benzo(b)fluoranthene			U	ND	ug/L						
Benzo(ghi)perylene			U	ND	ug/L						
Benzo(k)fluoranthene			U	ND	ug/L						
Butylbenzylphthalate			U	ND	ug/L						
Chrysene			U	ND	ug/L						
Di-n-butylphthalate			U	ND	ug/L						

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS										
Batch 2310491										
Di-n-octylphthalate			U	ND	ug/L				NM1	09/01/22 18:2
Dibenzo(a,h)anthracene			U	ND	ug/L					
Diethylphthalate			U	ND	ug/L					
Dimethylphthalate			U	ND	ug/L					
Diphenylamine			U	ND	ug/L					
Fluoranthene			U	ND	ug/L					
Fluorene			U	ND	ug/L					
Hexachlorobenzene			U	ND	ug/L					
Hexachlorobutadiene			U	ND	ug/L					
Hexachlorocyclopentadiene			U	ND	ug/L					
Hexachloroethane			U	ND	ug/L					
Indeno(1,2,3-cd)pyrene			U	ND	ug/L					
Isophorone			U	ND	ug/L					
N-Methyl-N-nitrosomethylamine			U	ND	ug/L					
N-Nitrosodipropylamine			U	ND	ug/L					

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS										
Batch 2310491										
Naphthalene			U	ND	ug/L				NM1	09/01/22 18:2
Nitrobenzene			U	ND	ug/L					
Pentachlorophenol			U	ND	ug/L					
Phenanthrene			U	ND	ug/L					
Phenol			U	ND	ug/L					
Pyrene			U	ND	ug/L					
Pyridine			U	ND	ug/L					
bis(2-Chloro-1-methylethyl)ether			U	ND	ug/L					
bis(2-Chloroethoxy)methane			U	ND	ug/L					
bis(2-Chloroethyl) ether			U	ND	ug/L					
bis(2-Ethylhexyl)phthalate			U	ND	ug/L					
m,p-Cresols			U	ND	ug/L					
o-Cresol			U	ND	ug/L					
2,4,6-Tribromophenol	100			90.5	ug/L		90	(37%-132%)		
2-Fluorobiphenyl	50.0			33.9	ug/L		68	(39%-112%)		

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS											
Batch 2310491											
2-Fluorophenol	100				36.2	ug/L		36	(11%-79%)	NM1	09/01/22 18:2
Nitrobenzene-d5	50.0				30.5	ug/L		61	(39%-112%)		
Phenol-d5	100				28.2	ug/L		28	(15%-85%)		
p-Terphenyl-d14	50.0				47.9	ug/L		96	(24%-129%)		
QC1205179195 591143008 MS											
1,2,4-Trichlorobenzene	112	U	22.5		76.4	ug/L		68	(29%-111%)		09/01/22 19:4
1,2-Dichlorobenzene	112	U	22.5		74.7	ug/L		66	(33%-101%)		
1,2-Diphenylhydrazine	112	U	22.5		91.4	ug/L		81	(40%-124%)		
1,3-Dichlorobenzene	112	U	22.5		68.2	ug/L		61	(31%-97%)		
1,4-Dichlorobenzene	112	U	22.5		70.0	ug/L		62	(37%-90%)		
1-Methylnaphthalene	112	U	2.25		96.7	ug/L		86	(38%-108%)		
2,4,5-Trichlorophenol	112	U	22.5		97.4	ug/L		87	(49%-125%)		
2,4,6-Trichlorophenol	112	U	22.5		96.0	ug/L		85	(47%-130%)		
2,4-Dichlorophenol	112	U	22.5		95.3	ug/L		85	(49%-119%)		
2,4-Dimethylphenol	112	U	22.5		72.2	ug/L		64	(40%-111%)		
2,4-Dinitrophenol	112	U	44.9		98.2	ug/L		87	(25%-154%)		

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS											
Batch 2310491											
2,4-Dinitrotoluene	112	U	22.5		113	ug/L		101	(49%-136%)	NM1	09/01/22 19:4
2,6-Dinitrotoluene	112	U	22.5		103	ug/L		92	(49%-126%)		
2-Chloronaphthalene	112	U	2.25		88.4	ug/L		79	(36%-120%)		
2-Chlorophenol	112	U	22.5		82.2	ug/L		73	(42%-113%)		
2-Methyl-4,6-dinitrophenol	112	U	22.5		114	ug/L		101	(30%-145%)		
2-Methylnaphthalene	112	U	2.25		93.6	ug/L		83	(37%-109%)		
2-Nitrophenol	112	U	22.5		92.5	ug/L		82	(42%-120%)		
4-Bromophenylphenylether	112	U	22.5		105	ug/L		93	(43%-121%)		
4-Chloro-3-methylphenol	112	U	22.5		99.6	ug/L		89	(42%-123%)		
4-Chlorophenylphenylether	112	U	22.5		105	ug/L		93	(47%-122%)		
4-Nitrophenol	112	U	22.5		30.6	ug/L		27	(20%-98%)		
Acenaphthene	112	U	2.25		92.6	ug/L		82	(43%-118%)		
Acenaphthylene	112	U	2.25		92.4	ug/L		82	(39%-120%)		
Anthracene	112	U	2.25		100	ug/L		89	(46%-117%)		
Benzidine	225	U	22.5		126	ug/L		56	(8%-128%)		

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS											
Batch 2310491											
Benzo(a)anthracene	112	U	2.25		93.4	ug/L		83	(48%-118%)	NM1	09/01/22 19:4
Benzo(a)pyrene	112	U	2.25		99.1	ug/L		88	(42%-112%)		
Benzo(b)fluoranthene	112	U	2.25		92.4	ug/L		82	(43%-118%)		
Benzo(ghi)perylene	112	U	2.25		101	ug/L		90	(32%-121%)		
Benzo(k)fluoranthene	112	U	2.25		94.0	ug/L		84	(46%-118%)		
Butylbenzylphthalate	112	U	2.25		108	ug/L		96	(43%-124%)		
Chrysene	112	U	2.25		97.8	ug/L		87	(47%-121%)		
Di-n-butylphthalate	112	U	2.25		113	ug/L		100	(45%-124%)		
Di-n-octylphthalate	112	U	2.25		111	ug/L		99	(38%-128%)		
Dibenzo(a,h)anthracene	112	U	2.25		101	ug/L		90	(33%-131%)		
Diethylphthalate	112	U	2.25		115	ug/L		103	(49%-128%)		
Dimethylphthalate	112	U	2.25		109	ug/L		97	(50%-130%)		
Diphenylamine	112	U	22.5		103	ug/L		91	(41%-118%)		
Fluoranthene	112	U	2.25		114	ug/L		102	(44%-121%)		
Fluorene	112	U	2.25		101	ug/L		90	(44%-119%)		

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS											
Batch 2310491											
Hexachlorobenzene	112	U	22.5		105	ug/L		94	(46%-116%)	NM1	09/01/22 19:4
Hexachlorobutadiene	112	U	22.5		70.3	ug/L		63	(24%-102%)		
Hexachlorocyclopentadiene	112	U	22.5		45.3	ug/L		40	(18%-89%)		
Hexachloroethane	112	U	22.5		63.0	ug/L		56	(27%-95%)		
Indeno(1,2,3-cd)pyrene	112	U	2.25		103	ug/L		92	(35%-130%)		
Isophorone	112	U	22.5		98.3	ug/L		87	(42%-116%)		
N-Methyl-N-nitrosomethylamine	112	U	22.5		58.6	ug/L		52	(27%-101%)		
N-Nitrosodipropylamine	112	U	22.5		109	ug/L		97	(36%-121%)		
Naphthalene	112	U	2.25		83.6	ug/L		74	(34%-104%)		
Nitrobenzene	112	U	22.5		87.9	ug/L		78	(44%-119%)		
Pentachlorophenol	112	U	22.5		76.7	ug/L		68	(36%-139%)		
Phenanthrene	112	U	2.25		98.8	ug/L		88	(48%-112%)		
Phenol	112	U	22.5		41.2	ug/L		37	(23%-71%)		
Pyrene	112	U	2.25		109	ug/L		97	(39%-120%)		
Pyridine	112	U	22.5		49.6	ug/L		44	(22%-103%)		

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS											
Batch 2310491											
bis(2-Chloro-1-methylethyl)ether	112	U	22.5		83.2	ug/L		74	(32%-122%)	NM1	09/01/22 19:4
bis(2-Chloroethoxy)methane	112	U	22.5		95.0	ug/L		85	(41%-118%)		
bis(2-Chloroethyl) ether	112	U	22.5		94.3	ug/L		84	(39%-112%)		
bis(2-Ethylhexyl)phthalate	112	U	2.25		105	ug/L		93	(37%-120%)		
m,p-Cresols	112	U	22.5		78.0	ug/L		69	(35%-112%)		
o-Cresol	112	U	22.5		76.2	ug/L		68	(37%-107%)		
2,4,6-Tribromophenol	225		25.8		221	ug/L		98	(37%-132%)		
2-Fluorobiphenyl	112		11.3		80.6	ug/L		72	(39%-112%)		
2-Fluorophenol	225		10.7		91.1	ug/L		41	(11%-79%)		
Nitrobenzene-d5	112		10.7		76.9	ug/L		68	(39%-112%)		
Phenol-d5	225		9.25		79.3	ug/L		35	(15%-85%)		
p-Terphenyl-d14	112		12.5		89.6	ug/L		80	(24%-129%)		
QC1205179196 591143008 MSD											
1,2,4-Trichlorobenzene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-48%)		09/01/22 20:1
1,2-Dichlorobenzene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-51%)		
1,2-Diphenylhydrazine	112	U	22.5	U	ND	ug/L	200*	0*	(0%-43%)		

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS											
Batch 2310491											
1,3-Dichlorobenzene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-52%)	NM1	09/01/22 20:1
1,4-Dichlorobenzene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-51%)		
1-Methylnaphthalene	112	U	2.25		2.47	ug/L	190*	2*	(0%-50%)		
2,4,5-Trichlorophenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-78%)		
2,4,6-Trichlorophenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-79%)		
2,4-Dichlorophenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-42%)		
2,4-Dimethylphenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-42%)		
2,4-Dinitrophenol	112	U	44.9	U	ND	ug/L	200*	0*	(0%-106%)		
2,4-Dinitrotoluene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-42%)		
2,6-Dinitrotoluene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-78%)		
2-Chloronaphthalene	112	U	2.25		2.29	ug/L	190*	2*	(0%-50%)		
2-Chlorophenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-78%)		
2-Methyl-4,6-dinitrophenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-86%)		
2-Methylnaphthalene	112	U	2.25		2.43	ug/L	190*	2*	(0%-53%)		
2-Nitrophenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-69%)		

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch 2310491												
4-Bromophenylphenylether	112	U	22.5	U	ND	ug/L	200*	0*	(0%-78%)	NM1	09/01/22	20:1
4-Chloro-3-methylphenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-41%)			
4-Chlorophenylphenylether	112	U	22.5	U	ND	ug/L	200*	0*	(0%-77%)			
4-Nitrophenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-110%)			
Acenaphthene	112	U	2.25		2.65	ug/L	189*	2*	(0%-47%)			
Acenaphthylene	112	U	2.25	U	ND	ug/L	200*	0*	(0%-49%)			
Anthracene	112	U	2.25		3.44	ug/L	187*	3*	(0%-49%)			
Benzidine	225	U	22.5		151	ug/L	18	67	(0%-174%)			
Benzo(a)anthracene	112	U	2.25		7.35	ug/L	171*	7*	(0%-46%)			
Benzo(a)pyrene	112	U	2.25		7.53	ug/L	172*	7*	(0%-78%)			
Benzo(b)fluoranthene	112	U	2.25		7.30	ug/L	171*	6*	(0%-45%)			
Benzo(ghi)perylene	112	U	2.25		8.11	ug/L	170*	7*	(0%-58%)			
Benzo(k)fluoranthene	112	U	2.25		7.73	ug/L	170*	7*	(0%-54%)			
Butylbenzylphthalate	112	U	2.25		5.44	ug/L	181*	5*	(0%-48%)			
Chrysene	112	U	2.25		8.81	ug/L	167*	8*	(0%-47%)			

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS												
Batch 2310491												
Di-n-butylphthalate	112	U	2.25		6.27	ug/L	179*	6*	(0%-47%)	NM1	09/01/22	20:1
Di-n-octylphthalate	112	U	2.25		5.89	ug/L	180*	5*	(0%-80%)			
Dibenzo(a,h)anthracene	112	U	2.25		7.80	ug/L	171*	7*	(0%-60%)			
Diethylphthalate	112	U	2.25		3.33	ug/L	189*	3*	(0%-50%)			
Dimethylphthalate	112	U	2.25		3.12	ug/L	189*	3*	(0%-50%)			
Diphenylamine	112	U	22.5	U	ND	ug/L	200*	0*	(0%-79%)			
Fluoranthene	112	U	2.25		5.55	ug/L	181*	5*	(0%-49%)			
Fluorene	112	U	2.25		2.97	ug/L	189*	3*	(0%-47%)			
Hexachlorobenzene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-75%)			
Hexachlorobutadiene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-47%)			
Hexachlorocyclopentadiene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-92%)			
Hexachloroethane	112	U	22.5	U	ND	ug/L	200*	0*	(0%-104%)			
Indeno(1,2,3-cd)pyrene	112	U	2.25		7.87	ug/L	172*	7*	(0%-57%)			
Isophorone	112	U	22.5	U	ND	ug/L	200*	0*	(0%-43%)			
N-Methyl-N-nitrosomethylamine	112	U	22.5		33.0	ug/L	56*	29	(0%-34%)			

QC Summary

Workorder: 591138

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Semi-Volatile-GC/MS											
Batch 2310491											
N-Nitrosodipropylamine	112	U	22.5	U	ND	ug/L	200*	0*	(0%-102%)	NM1	09/01/22 20:1
Naphthalene	112	U	2.25	U	ND	ug/L	200*	0*	(0%-54%)		
Nitrobenzene	112	U	22.5	U	ND	ug/L	200*	0*	(0%-79%)		
Pentachlorophenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-82%)		
Phenanthrene	112	U	2.25		3.73	ug/L	185*	3*	(0%-47%)		
Phenol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-42%)		
Pyrene	112	U	2.25		5.64	ug/L	180*	5*	(0%-53%)		
Pyridine	112	U	22.5		41.8	ug/L	17	37	(0%-70%)		
bis(2-Chloro-1-methylethyl)ether	112	U	22.5	U	ND	ug/L	200*	0*	(0%-81%)		
bis(2-Chloroethoxy)methane	112	U	22.5	U	ND	ug/L	200*	0*	(0%-44%)		
bis(2-Chloroethyl) ether	112	U	22.5	U	ND	ug/L	200*	0*	(0%-45%)		
bis(2-Ethylhexyl)phthalate	112	U	2.25		6.85	ug/L	176*	6*	(0%-49%)		
m,p-Cresols	112	U	22.5	U	ND	ug/L	200*	0*	(0%-38%)		
o-Cresol	112	U	22.5	U	ND	ug/L	200*	0*	(0%-42%)		
2,4,6-Tribromophenol	225		25.8		99.3	ug/L		44	(37%-132%)		

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Semi-Volatile-GC/MS											
Batch 2310491											
2-Fluorobiphenyl	112	11.3		40.6	ug/L		36*	(39%-112%)	NM1	09/01/22	20:1
2-Fluorophenol	225	10.7		61.8	ug/L		28	(11%-79%)			
Nitrobenzene-d5	112	10.7		37.3	ug/L		33*	(39%-112%)			
Phenol-d5	225	9.25		61.7	ug/L		27	(15%-85%)			
p-Terphenyl-d14	112	12.5		56.3	ug/L		50	(24%-129%)			

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 Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- JNX Non Calibrated Compound
- M Matrix Related Failure
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
- 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
- P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected

QC Summary

Workorder: 591138

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

U Analyte was analyzed for, but not detected above the CRDL.

UJ Compound cannot be extracted

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 the 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.

General Chemistry
Technical Case Narrative
Energy Fuels Resources
SDG #: 591138

Product: **Specific Gravity**
Analytical Method: ASTM D 5057
Analytical Procedure: GL-GC-E-065 REV# 7
Analytical Batch: 2310125

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

GEL Sample ID#	Client Sample Identification
591138001	Cell 1
591138002	Slimes #2
591138003	Cell 4A
591138004	Cell 4A LDS
591138005	Cell 4B
591138006	Cell 4B LDS
591138007	Cell 65

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

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Certification Statement

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

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 591138 GEL Work Order: 591138

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: 23 SEP 2022

Title: Team Leader

QC Summary

Report Date: September 27, 2022

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

Contact: **Ms. Kathy Weinel**

Workorder: **591138**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
High Rad Testing										
Batch 2309861										
QC1205177980 591138001 DUP										
Thorium-228	U	137	U	46.6	pCi/L	N/A		N/A	TC1	09/24/22 10:1
	Uncertainty	+/-57.3		+/-38.8						
Thorium-230		58700		58100	pCi/L	1.02		(0%-20%)		
	Uncertainty	+/-937		+/-927						
Thorium-232		416		327	pCi/L	24*		(0%-20%)		
	Uncertainty	+/-80.4		+/-72.5						
QC1205177981 LCS										
Thorium-228				3820	pCi/L					09/24/22 10:1
	Uncertainty			+/-246						
Thorium-230				543	pCi/L			(75%-125%)		
	Uncertainty			+/-102						
Thorium-232	3970			4000	pCi/L		101	(75%-125%)		
	Uncertainty			+/-249						
QC1205177979 MB										
Thorium-228			U	-19.6	pCi/L					09/24/22 10:1
	Uncertainty			+/-26.7						
Thorium-230			U	176	pCi/L					
	Uncertainty			+/-70.5						
Thorium-232			U	-1.09	pCi/L					
	Uncertainty			+/-25.1						
Batch 2309863										
QC1205177986 591138001 DUP										
Gross Radium Alpha		33500		28200	pCi/L	17.2		(0%-20%)	TC1	09/19/22 14:5
	Uncertainty	+/-203		+/-189						
QC1205177989 LCS										
Gross Radium Alpha	5410			4280	pCi/L		79.1	(75%-125%)		09/19/22 14:5
	Uncertainty			+/-75.9						

QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
High Rad Testing										
Batch 2309863										
QC1205177985 MB										
Gross Radium Alpha			U	0.487	pCi/L				TC1	09/19/22 14:5
	Uncertainty			+/-2.59						
QC1205177987 591138001 MS										
Gross Radium Alpha	5480	33500		32000	pCi/L		N/A	(75%-125%)		09/19/22 14:5
	Uncertainty	+/-203		+/-210						
QC1205177988 591138001 MSD										
Gross Radium Alpha	5480	33500		28900	pCi/L	10.1	N/A	(0%-20%)		09/19/22 14:5
	Uncertainty	+/-203		+/-203						
Batch 2309865										
QC1205177991 591138001 DUP										
Radium-226		37.6		44.5	pCi/L	16.9		(0%-20%)	TC1	09/23/22 09:0
	Uncertainty	+/-2.75		+/-3.19						
QC1205177993 LCS										
Radium-226	134			130	pCi/L		97.1	(75%-125%)		09/23/22 09:0
	Uncertainty			+/-5.55						
QC1205177990 MB										
Radium-226			U	0.780	pCi/L					09/23/22 08:2
	Uncertainty			+/-0.478						
QC1205177992 591138001 MS										
Radium-226	134	37.6		138	pCi/L		75.2	(75%-125%)		09/23/22 09:0
	Uncertainty	+/-2.75		+/-5.35						
Batch 2319659										
QC1205197630 591138001 DUP										
Uranium-233/234		71200		86700	pCi/L	19.7		(0%-20%)	TC1	09/23/22 06:5
	Uncertainty	+/-2540		+/-7270						
Uranium-235/236		4460		5680	pCi/L	24*		(0%-20%)		
	Uncertainty	+/-715		+/-2210						
Uranium-238		77100		1.03E+05	pCi/L	28.3*		(0%-20%)		
	Uncertainty	+/-2640		+/-7840						
QC1205197631 LCS										
Uranium-233/234				5320	pCi/L					09/23/22 07:0
	Uncertainty			+/-451						
Uranium-235/236				636	pCi/L					
	Uncertainty			+/-176						

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QC Summary

Workorder: 591138

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
High Rad Testing										
Batch 2319659										
Uranium-238	5550			5730	pCi/L		103	(75%-125%)	TC1	09/23/22 07:0
	Uncertainty			+/-457						
QC1205197629 MB										
Uranium-233/234			U	-39.7	pCi/L					09/23/22 06:5
	Uncertainty			+/-37.7						
Uranium-235/236			U	41.8	pCi/L					
	Uncertainty			+/-41.9						
Uranium-238			U	-3.07	pCi/L					
	Uncertainty			+/-36.3						
Batch 2321062										
QC1205200235 591138002 DUP										
Uranium-233/234		9210		10000	pCi/L	8.6		(0% - 100%)	TC1	09/27/22 08:1
	Uncertainty	+/-1430		+/-1590						
Uranium-235/236	U	-236	U	-66.8	pCi/L	N/A		N/A		
	Uncertainty	+/-279		+/-294						
Uranium-238		4590		10400	pCi/L	77.3*		(0%-20%)		
	Uncertainty	+/-1000		+/-1560						
QC1205200236 LCS										
Uranium-233/234				59100	pCi/L					09/27/22 08:1
	Uncertainty			+/-3730						
Uranium-235/236				4970	pCi/L					
	Uncertainty			+/-1240						
Uranium-238	69300			65300	pCi/L		94.2	(75%-125%)		
	Uncertainty			+/-3890						
QC1205200234 MB										
Uranium-233/234			U	-1540	pCi/L					09/27/22 08:1
	Uncertainty			+/-440						
Uranium-235/236			U	-267	pCi/L					
	Uncertainty			+/-412						
Uranium-238			U	84.1	pCi/L					
	Uncertainty			+/-448						

Notes:

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

QC Summary

Workorder: 591138

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

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- 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 the 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.

QC Summary

Report Date: September 23, 2022

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

Contact: Ms. Kathy Weinel

Workorder: 591138

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

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

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 the 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
SDG #: 591138

Product: **Alphaspec Th, Liquid**
Analytical Method: DOE EML HASL-300, Th-01-RC Modified
Analytical Procedure: GL-RAD-A-038 REV# 18
Analytical Batch: 2309861

Composite Preparation Method: GL-RAD-A-026
Composite Preparation Procedure: GL-RAD-A-026 REV# 18
Composite Preparation Batch: 2309728

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

GEL Sample ID#	Client Sample Identification
591138001	Cell 1
591138002	Slimes #2
591138003	Cell 4A
591138004	Cell 4A LDS
591138005	Cell 4B
591138006	Cell 4B LDS
591138007	Cell 65
1205177979	Method Blank (MB)
1205177980	591138001(Cell 1) Sample Duplicate (DUP)
1205177981	Laboratory Control Sample (LCS)

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

Data Summary:

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

Quality Control (QC) Information

Duplication Criteria between QC Sample and Duplicate Sample
The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value
1205177980 (Cell 1DUP)	Thorium-232	RPD 24* (0.00%-20.00%) RER 0.782 (0-3)

RDL Met
The blank (See Below) did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots.

Sample	Analyte	Value

1205177979 (MB)	Thorium-228	Result -19.6 < MDA 140 > RDL 1 pCi/L
	Thorium-230	Result 176 < MDA 188 > RDL 1 pCi/L
	Thorium-232	Result -1.09 < MDA 112 > RDL 1 pCi/L

Samples (See Below) did not meet the detection limits due to the small sample aliquots used. The aliquots were reduced due to the high activity of other isotopes and in attempt to minimize interference.

Sample	Analyte	Value
1205177980 (Cell 1DUP)	Thorium-228	Result 46.6 < MDA 123 > RDL 1 pCi/L
591138001 (Cell 1)	Thorium-228	Result 137 < MDA 146 > RDL 1 pCi/L
591138002 (Slimes #2)	Thorium-228	Result -45.5 < MDA 176 > RDL 1 pCi/L
	Thorium-232	Result -11.5 < MDA 116 > RDL 1 pCi/L
591138005 (Cell 4B)	Thorium-228	Result -8.85 < MDA 192 > RDL 1 pCi/L
	Thorium-232	Result 18.7 < MDA 101 > RDL 1 pCi/L
591138006 (Cell 4B LDS)	Thorium-228	Result 642 < MDA 736 > RDL 1 pCi/L
591138007 (Cell 65)	Thorium-228	Result 26.1 < MDA 1130 > RDL 1 pCi/L

Technical Information

Recounts
Sample 591138001 (Cell 1) was recounted due to a peak shift. The recount is reported.

Product: **U- 233/234,U-235/236 and U-238**
Analytical Method: DOE EML HASL-300, U-02-RC Modified
Analytical Procedure: GL-RAD-A-011 REV# 28
Analytical Batch: 2319659

Composite Preparation Method: GL-RAD-A-026
Composite Preparation Procedure: GL-RAD-A-026 REV# 18
Composite Preparation Batch: 2309728

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

GEL Sample ID#	Client Sample Identification
591138001	Cell 1
591138004	Cell 4A LDS
591138006	Cell 4B LDS
591138007	Cell 65
1205197629	Method Blank (MB)
1205197630	591138001(Cell 1) Sample Duplicate (DUP)
1205197631	Laboratory Control Sample (LCS)

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

Data Summary:

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

Quality Control (QC) Information

Tracer/Carrier Yield
Sample did not meet the client's yield requirement due to the matrix of the sample. The sample does meet the requested detection limits.

Sample	Analyte	Value
1205197630 (Cell 1DUP)	Uranium-232 Tracer	12* (15%-125%)

Duplication Criteria between QC Sample and Duplicate Sample
The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value
1205197630 (Cell 1DUP)	Uranium-235/236	RPD 24* (0.00%-20.00%) RER 0.474 (0-3)
	Uranium-238	RPD 28.3* (0.00%-20.00%) RER 1.2 (0-3)

RDL Met
The blank (See Below) did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots.

Sample	Analyte	Value
1205197629 (MB)	Uranium-233/234	Result -39.7 < MDA 197 > RDL 1 pCi/L
	Uranium-235/236	Result 41.8 < MDA 114 > RDL 1 pCi/L
	Uranium-238	Result -3.07 < MDA 161 > RDL 1 pCi/L

Product: **U- 233/234,U-235/236 and U-238**
Analytical Method: DOE EML HASL-300, U-02-RC Modified
Analytical Procedure: GL-RAD-A-011 REV# 28
Analytical Batch: 2321062

Composite Preparation Method: GL-RAD-A-026
Composite Preparation Procedure: GL-RAD-A-026 REV# 18
Composite Preparation Batch: 2309728

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

GEL Sample ID#	Client Sample Identification
591138002	Slimes #2
591138003	Cell 4A
591138005	Cell 4B
1205200234	Method Blank (MB)
1205200235	591138002(Slimes #2) Sample Duplicate (DUP)
1205200236	Laboratory Control Sample (LCS)

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

Data Summary:

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

Quality Control (QC) Information

Duplication Criteria between QC Sample and Duplicate Sample
The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value
1205200235 (Slimes #2DUP)	Uranium-238	RPD 77.3* (0.00%-20.00%) RER 2.79 (0-3)

RDL Met
The blank (See Below) did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots.

Sample	Analyte	Value
1205200234 (MB)	Uranium-233/234	Result -1540 < MDA 3360 > RDL 1 pCi/L
	Uranium-235/236	Result -267 < MDA 2270 > RDL 1 pCi/L
	Uranium-238	Result 84.1 < MDA 1830 > RDL 1 pCi/L

Samples (See Below) did not meet the detection limits due to the small sample aliquots used. The aliquots were reduced due to the high activity of other isotopes and in attempt to minimize interference.

Sample	Analyte	Value
1205200235 (Slimes #2DUP)	Uranium-235/236	Result -66.8 < MDA 1330 > RDL 1 pCi/L
591138002 (Slimes #2)	Uranium-235/236	Result -236 < MDA 1620 > RDL 1 pCi/L
591138003 (Cell 4A)	Uranium-235/236	Result 1190 < MDA 1200 > RDL 1 pCi/L
591138005 (Cell 4B)	Uranium-233/234	Result 147 < MDA 2240 > RDL 1 pCi/L
	Uranium-235/236	Result 219 < MDA 1380 > RDL 1 pCi/L
	Uranium-238	Result 1240 < MDA 1810 > RDL 1 pCi/L

Technical Information

Negative > 3 sigma TPU
Sample result was more negative than the three sigma TPU. The background control chart was examined and the detector was determined to be fully functional.

Sample	Analyte	Value
1205200234 (MB)	Uranium-233/234	Negative Result > 3 sigma value

Sample Re-prep/Re-analysis
Samples were reprepped twice due to low tracer yields. The third analysis is being reported.

Product: **GFPC,Total Alpha Radium, Liquid**
Analytical Method: EPA 903.0
Analytical Procedure: GL-RAD-A-010 REV# 21
Analytical Batch: 2309863

Composite Preparation Method: GL-RAD-A-026
Composite Preparation Procedure: GL-RAD-A-026 REV# 18
Composite Preparation Batch: 2309728

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

GEL Sample ID#	Client Sample Identification
591138001	Cell 1
591138002	Slimes #2
591138003	Cell 4A
591138004	Cell 4A LDS
591138005	Cell 4B
591138006	Cell 4B LDS
591138007	Cell 65
1205177985	Method Blank (MB)
1205177986	591138001(Cell 1) Sample Duplicate (DUP)
1205177987	591138001(Cell 1) Matrix Spike (MS)
1205177988	591138001(Cell 1) Matrix Spike Duplicate (MSD)
1205177989	Laboratory Control Sample (LCS)

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

Data Summary:

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

Preparation Information

Aliquot Reduced

aliquot volumes were reduced due to the sample matrix.

Quality Control (QC) Information

Matrix Spike (MS) Recovery
The Matrix Spike (See Below) did not meet recovery requirements due to the sample activity being greater than five times the spiked nominal concentration.

Sample	Analyte	Value
1205177987 (Cell 1MS)	Gross Radium Alpha	-27.3* (75%-125%), but result > 5x nominal
1205177988 (Cell 1MSD)	Gross Radium Alpha	-83.6* (75%-125%), but result > 5x nominal

RDL Met
The blank (See Below) did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots.

Sample	Analyte	Value
1205177985 (MB)	Gross Radium Alpha	Result 0.487 < MDA 11.8 > RDL 1 pCi/L

Miscellaneous Information

Additional Comments
Samples were filtered as per lab comp.

Product: **Lucas Cell, Ra226, liquid**
Analytical Method: EPA 903.1 Modified
Analytical Procedure: GL-RAD-A-008 REV# 15
Analytical Batch: 2309865

Composite Preparation Method: GL-RAD-A-026
Composite Preparation Procedure: GL-RAD-A-026 REV# 18
Composite Preparation Batch: 2309728

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

GEL Sample ID#	Client Sample Identification
591138001	Cell 1
591138002	Slimes #2
591138003	Cell 4A
591138004	Cell 4A LDS
591138005	Cell 4B
591138006	Cell 4B LDS
591138007	Cell 65
1205177990	Method Blank (MB)
1205177991	591138001(Cell 1) Sample Duplicate (DUP)
1205177992	591138001(Cell 1) Matrix Spike (MS)
1205177993	Laboratory Control Sample (LCS)

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

Data Summary:

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

Quality Control (QC) Information

RDL Met
The blank (See Below) did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots.

Sample	Analyte	Value
1205177990 (MB)	Radium-226	Result 0.78 < MDA 1.49 > RDL 1 pCi/L

Certification Statement

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

GEL LABORATORIES LLC

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

Qualifier Definition Report
for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 591138 GEL Work Order: 591138

The Qualifiers in this report are defined as follows:

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

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature:  **Name: Theresa Austin**

Date: 27 SEP 2022 **Title: Group Leader**

Tab C

Laboratory Analytical Reports

Tab D

Chemical and Radiological Summary Tables

Cell 1
Chemical and Radiological Characteristics

Constituent	1987	2003	2007	2008	2009	2010	2011	2012	2013	2013 Resample	2014	2015	2016	2017	2018	2018 Resample	2019	2020	2021	2022
Major Ions (mg/L)																				
Carbonate	<5	<1	ND	ND	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	NS	<5	<5	<5	<3
Bicarbonate	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<1	<1	<1	<1	<1	NS	<5	<5	<5	<6
Calcium	630	307	483.8	604	635	711	577	426	768	NS	404	573	647	581	518	NS	720	618	234	290
Chloride	8000	6728	37340	9830	20700	7440	33800	78000	9900	NS	11600	25500	19200	19900	39300	NS	19800	40000	74700	24100
Fluoride	<100	3005	31.72	0.3	0.4	28.4	69.2	62.9	4130	NS	2380	5880	2980	4290	5020	NS	3480	7460	14900	4400
Magnesium	7900	5988	21220	6550	16200	5410	14300	16000	4470	NS	5530	12400	9210	9380	20800	NS	9200	12300	19800	6930
Nitrogen-Ammonia	7800	3353	10628	5250	15200	8120	12900	9750	3900	NS	5700	5.4	7090	1040	9810	NS	10400	10600	5850	3580
Nitrogen-Nitrate	<100	41.8	269.4	64.9	142	58	212	556	128	NS	53	192	124	152	328	NS	118	191	27	9
Potassium	NA	647	5698	1880	4140	1840	4510	9750	6580	NS	3010	7330	1970	2700	4790	NS	2600	4580	4030	1470
Sodium	10000	8638	62600	13200	39000	16700	29500	41700	15900	NS	12200	32100	18900	23900	53500	NS	28000	62900	91900	28000
Sulfate	190000	63667	287600	118000	232000	107000	182000	158000	100000	NS	124000	204000	212000	165000	253000	NS	169000	222000	351000	103000
pH (s.u.)	0.70	1.88	0.80	1.53	1.15	2.73	2.23	1.90	2.74	NS	1.30	1.01	<1.00	<1.00	<1.00	NS	1.14	0.92	0.4	1.2
TDS	120000	94700	357400	131000	140000	130000	216000	342000	149000	NS	159000	334000	242000	231000	361000	NS	257000	422000	584000	193000
Conductivity (umhos/cm)	NA	NA	NA	NA	365000	110000	112000	136000	94200	NS	113000	131000	123000	57600	110000	NS	119000	81500	76000	98800
Metals (ug/L)																				
Arsenic	440000	121267	849000	271000	436000	74400	299000	25500	9800	NS	249000	377000	407000	391000	641000	NS	270000	599000	1040000	296000
Beryllium	780	475	2262	500	410	338	1270	3180	415	NS	448	1290	1030	749	1510	NS	930	1330	3660	845
Cadmium	6600	3990	29320	8790	9120	2940	13700	30700	2380	NS	3060	7710	6320	6730	14000	NS	5400	9070	21300	7470
Chromium	13000	6365	29940	6760	18700	5620	22700	12100	8350	NS	13200	19600	14000	15900	21100	NS	15000	25700	29600	11000
Cobalt	120000	NA	88240	23500	97500	16200	56000	53100	25500	NS	56500	82000	77200	91400	113000	NS	66000	51400	59500	26800
Copper	740000	196667	881000	360000	168000	125000	483000	885000	544000	NS	3420000	3560000	4730000	3440000	4550000	NS	1700000	2110000	3760000	1110000
Iron	3400000	2820000	13480000	3280000	2390000	3400000	8940000	840000	1420000	NS	2520000	6680000	5650000	2300000	12200000	NS	9100000	15400000	6680000	2130000
Lead	<20000	3393	27420	11200	10600	9240	23600	17000	2810	NS	13500	16800	22500	23000	41000	NS	22000	42400	91200	26600
Manganese	140000	162500	990200	206000	723000	173000	735000	1560000	188000	NS	162000	515000	713000	510000	936000	NS	540000	833000	1630000	454000
Mercury	NA	NA	ND	ND	7.61	7.2	61.4	117	6.16	NS	12.5	24.6	8.59	7.86	16.8	NS	3.7	14	35	13.8
Molybdenum	240000	50550	415600	106000	142000	35300	235000	434000	16800	NS	68800	127000	97100	128000	239000	NS	120000	247000	418000	104000
Nickel	370000	36950	40860	32000	156000	27500	43700	15000	39100	NS	129000	130000	170000	183000	167000	NS	110000	27100	18400	19800
Selenium	<20000	1862	15420	13000	14800	5220	11600	8090	2690	NS	3970	7070	3950	5070	10700	NS	10000	16600	21800	6190
Silver	<5000	NA	1559.2	449	558	155	1110	4310	329	NS	336	1390	1240	1240	2320	NS	790	1290	2640	885
Thallium	45000	NA	407.8	165	387	193	560	13	63.3	NS	876	1130	754	155	442	NS	<700	<50	1680	618
Tin	<5000	NA	6512	1240	2290	263	1500	<100	<100	NS	<17000	<100	<17000	<17000	<17000	NS	540	1220	1820	<1000
Uranium	105000	134517	788600	416000	578000	159000	838000	1450000	140000	NS	137000	363000	131000	102000	248000	NS	81000	200000	655000	182000
Vanadium	280000	348000	2208200	1200000	773000	752000	2500000	1940000	98200	NS	485000	1130000	746000	1520000	2440000	NS	1400000	2090000	4410000	1310000
Zinc	1300000	NA	642940	476000	229000	171000	398000	811000	228000	NS	229000	638000	448000	515000	948000	NS	550000	396000	905000	353000
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	191000	550000	NS	326000	83800	24600	33500

Cell 1
Chemical and Radiological Characteristics

Constituent	1987	2003	2007	2008	2009	2010	2011	2012	2013	2013 Resample	2014	2015	2016	2017	2018	2018 Resample	2019	2020	2021	2022
VOCS (ug/L)																				
Acetone	35	NA	66.5	110	710	260	80	310	41.1	NS	<700	56	40.6	28	50.4	NS	28	32.6	152	<25
Benzene	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<5.0	<1	<1	<1	<1	NS	<1	<1	<5	<5
Carbon tetrachloride	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<5.0	<1	<1	<1	<1	NS	<1	<1	<5	<5
Chloroform	8	NA	6.7	6.6	16	4.9	13	19	7.62	NS	<70.0	5.54	<1	3.42	114	NS	7.5	2.84	46.2	11.4
Chloromethane	NA	NA	ND	9.4	11	4.4	3.6	4	5	NS	<30.0	1.93	<1	1.13	1.16	NS	2.3	1.49	<5	<5
MEK	NA	NA	ND	ND	120	65	<1	200	<20	NS	<4000	<20	<20	<20	<20	NS	11 J	6.41	<25	<25
Methylene Chloride	11	NA	ND	ND	2	<1	<1	2	<1	NS	<5.0	1.83	<1	1.09	2.41	NS	<1	<5	<25	<25
Naphthalene	<10000	NA	<10	ND	1.1	5.4	2	3	<1	NS	<100	<1	<1	<1	<1	NS	<1	<1	<5	<5
Tetrahydrofuran	NA	NA	150	<20	<100	<10	<500	2.9	<1	NS	<46.0	<1	<1	<1	4.93	NS	<35	<5	<25	<25
Toluene	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<1000	<1	<1	<1	<1	NS	<1	<1	<5	<5
Xylenes	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<10000	<1	<1	<1	<1	NS	<1	<3	<15	<15
SVOCS (ug/L)																				
1,2,4-Trichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
1,2-Dichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
1,3-Dichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
1,4-Dichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
1-Methylnaphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3.0	<3.75	<3
2,4,5-Trichlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
2,4,6-Trichlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
2,4-Dichlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
2,4-Dimethylphenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
2,4-Dinitrophenol	NA	NA	NA	NA	<250	<20	<20	<20	<21.6	<20	<20	<20	<10	<10	<148	<8.04	<50	<50	<62.5	<50
2,4-Dinitrotoluene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
2,6-Dinitrotoluene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
2-Chloronaphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<4.1	<5.13	<4.1
2-Chlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
2-Methylnaphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
2-Methylphenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
2-Nitrophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
3&4-Methylphenol	NA	NA	NA	NA	<22	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<37	<46.3	<37
3,3-Dichlorobenzidine	NA	NA	NA	NA	<100	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<50	<33	<41.3	<33
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	<250	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<50	<30	<37.5	<30
4-Bromophenyl phenyl ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
4-Chloro-3-methylphenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
4-Nitrophenol	NA	NA	NA	NA	<250	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<50	<30	<37.5	<30
Acenaphthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Acenaphthylene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Anthracene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Azobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
Benz(a)anthracene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3

Cell 1
Chemical and Radiological Characteristics

Constituent	1987	2003	2007	2008	2009	2010	2011	2012	2013	2013 Resample	2014	2015	2016	2017	2018	2018 Resample	2019	2020	2021	2022
Benzidine	NA	NA	NA	NA	<100	<10	<10	<10	<10.8	<10	41	<10	<10	<10	<148	<8.04	<100	<39	<48.8	<39
Benzo(a)pyrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Benzo(b)fluoranthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Benzo(g,h,i)perylene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Benzo(k)fluoranthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Bis(2-chloroethoxy) methane	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<37.5	<30
Bis(2-chloroethyl) ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
Bis(2-chloroisopropyl) ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
Bis(2-ethylhexyl) phthalate	NA	NA	NA	NA	<50	27	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Butyl benzyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Chrysene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Dibenz(a,h)anthracene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Diethyl phthalate	NA	NA	NA	NA	170	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Dimethyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Di-n-butyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Di-n-octyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Fluoranthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Fluorene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Hexachlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
Hexachlorobutadiene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<30	<30	<37.5	<30
Hexachloro - cyclopentadiene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
Hexachloroethane	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<30	<30	<37.5	<30
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Isophorone	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<35	<43.8	<35
Naphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Nitrobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
N-Nitrosodimethylamine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
N-Nitrosodi-n-propylamine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
N-Nitrosodiphenylamine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
Pentachlorophenol	NA	NA	NA	NA	<250	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<50	<30	<37.5	<30
Phenanthrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Phenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<30	<37.5	<30
Pyrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<10	<3	<3.75	<3
Pyridine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10	<10	<10	<10	<148	<8.04	<20	<30	146	<30

[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	2017	2018	2019	2020	2021	2022
Major Ions (mg/L)																
Carbonate	ND	ND	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<3
Bicarbonate	ND	ND	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<6
Calcium	572	528	508	496	474	462	465	322	524	402	477	538	480	513	463	496
Chloride	3700	3860	2750	3510	3110	3730	3270	3720	3850	4040	3820	4310	3870	4080	4200	4060
Fluoride	3.3	ND	<0.1	2.4	2.1	1.32	161	130	204	48.4	110	116	105	130	130	160
Magnesium	4100	4030	3750	3790	3640	3760	3320	2780	3810	3570	3630	4470	3700	3800	3950	3880
Nitrogen-Ammonia	4020	3620	3240	3820	2940	3540	1880	3500	367	3800	500	5620	4420	7150	2950	3310
Nitrogen-Nitrate	30.9	20.3	38	126	38	27	47.2	35	1.06	12.7	13.7	12.1	33.0	21.6	48	38
Potassium	636	560	689	620	636	611	622	489	659	512	668	774	710	735	661	623
Sodium	4050	4600	4410	4770	4590	4380	3980	3130	4800	4690	4810	5290	4600	4620	4520	4480
Sulfate	60600	74000	72200	63700	64200	58300	83700	62200	57800	83900	58300	63300	67000	67000	68500	59900
pH (s.u.)	3.18	3.24	3.11	3.39	3.18	3	3.02	3.1	3.1	2.99	3.08	2.89	3.07	3.06	3.0	3.0
TDS	84300	74600	84100	79900	80200	83800	92200	87000	88200	93100	85900	99900	94300	89500	95700	85400
Conductivity (umhos/cm)	NA	NA	88700	60200	51400	52900	51100	54100	58800	44500	52600	58200	55700	53900	53200	46300
Metals (ug/L)																
Arsenic	26900	19300	14200	23500	17800	19400	21000	19800	13300	16900	21100	19600	23000	18000	19300	23800
Beryllium	298	245	271	267	231	251	262	197	275	259	261	241	280	284	217	262
Cadmium	5500	5840	5510	6370	5580	5290	5780	6480	6260	6610	6790	6380	6500	5220	5890	6410
Chromium	2750	2450	2230	2510	2380	2350	2290	1630	1840	1630	2290	2100	2100	1860	1810	2120
Cobalt	46500	43800	38700	48200	42500	48700	44900	46700	46000	46100	50600	46900	54000	40800	42700	50000
Copper	106000	154000	170000	148000	132000	138000	137000	126000	143000	156000	148000	136000	160000	93900	139000	104000
Iron	2770000	3310000	3230000	2720000	2960000	2850000	2810000	2180000	3000000	3410000	3430000	3030000	3600000	2420000	2840000	2830000
Lead	566	528	403	586	501	619	515	638	268	484	593	589	590	400	562	528
Manganese	117000	130000	160000	144000	123000	141000	122000	98000	136000	149000	151000	137000	170000	133000	138000	130000
Mercury	ND	ND	<0.5	<4	11.1	1.9	<0.5	<0.0020	<0.5	<2.00	<2.00	<2.00	<0.2	0.058	<0.2	<0.1
Molybdenum	4080	3190	2240	4630	3510	3610	3650	4250	2010	3360	4060	3340	3200	2170	3090	2920
Nickel	123000	122000	108000	126000	111000	125000	108000	127000	120000	134000	133000	121000	140000	104000	119000	142000
Selenium	422	647	726	844	714	711	678	1020	631	615	683	635	1300	585	657	645
Silver	ND	ND	<10	<10	<10	<10	<10	<100	<20	<100	<100	<100	<50	6	5	<4
Thallium	361	703	368	470	371	338	278	402	233	212	373	374	390	2190	1580	320
Tin	ND	ND	<100	<100	<100	<100	<100	<17000	<100	<17000	<17000	<17000	<50	<50	<50	<500
Uranium	23000	29200	29900	30600	27100	33400	22800	26400	27200	27300	28600	25200	29000	18600	24300	24100
Vanadium	409000	463000	536000	469000	454000	475000	452000	497000	513000	497000	534000	516000	500000	345000	450000	438000
Zinc	767000	750000	582000	652000	574000	639000	631000	405000	702000	764000	760000	728000	850000	816000	674000	751000
Radiologics (pCi/L)																
Gross Alpha	1290	1570	1580	1000	1230	1370 (2400)*	2270	6890	7210	5660	4570	7520	3790	1630	1920	1970
VOCS (ug/L)																
Acetone	550	410	570	460	690	600	384	<700	599	473	551	551	449	501	522	409
Benzene	ND	ND	<1	<1	<1	<1	<1	<5.0	<1	<1	<1	<1	<1	<5	<5	<5
Carbon tetrachloride	ND	ND	<1	<1	<1	<1	<1	<5.0	<1	<1	<1	<1	<1	<5	<5	<5
Chloroform	20	17	16	15	20	16	21.4	<70.0	18.6	15	17.1	17.1	16	13.7	15.9	14.0
Chloromethane	1.8	ND	2.2	2.3	2	3	2.04	<30.0	<1	<1	1.46	1.46	2.2	<5	<5	<5

Cell 2 Slimes Drain

Chemical and Radiological Characteristics

Constituents	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
MEK	65	ND	100	83	130	100	95.5	<4000	102	80.3	58.4	58.4	135	74.0	89.9	74.3
Methylene Chloride	ND	ND	<1	<1	<1	<1	<1	<5.0	<1	<1	1.02	1.02	0.49 J	<25	<25	<25
Naphthalene	14	7.5	16	17	13	12	16.8	<100	16.2	11.9	10.1	10.1	13	7.65	7.15	6.05
Tetrahydrofuran	15	NA	<100	<10	<10	3.2	3.98	<46.0	2.16	<1	2.88	2.88	<10	<25	<25	<25
Toluene	1.7	ND	2.6	2.6	3	2	3.23	<1000	3.74	2.94	3.20	3.20	2.4	<5	<5	<5
Xylenes	1.5	ND	<1	2.2	<1	2	5.97	<10000	<1	<1	<1	<1	0.51 J	<15	<15	<5
SVOCS (ug/L)																
1,2,4-Trichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
1,2-Dichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
1,3-Dichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
1,4-Dichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
1-Methylnaphthalene	NA	NA	<11	<10	<10	<10	<10	11	<10	<10	<10	<9.03	12	<3.0	11.6	12.4
2,4,5-Trichlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
2,4,6-Trichlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
2,4-Dichlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
2,4-Dimethylphenol	NA	NA	<51	<20	<20	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
2,4-Dinitrophenol	NA	NA	<11	<10	<10	<20	<20	<20	<20	<10	<10	<9.03	<50	<50	<50	<50
2,4-Dinitrotoluene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
2,6-Dinitrotoluene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
2-Chloronaphthalene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<4.1	<4.10	<4.1
2-Chlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
2-Methylnaphthalene	NA	NA	<11	<10	<10	<10	<10	11	<10	11.1	<10	<9.03	11	<3	10.4	12.1
2-Methylphenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
2-Nitrophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
3&4-Methylphenol	NA	NA	<21	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<37	<37	<37
3,3´-Dichlorobenzidine	NA	NA	<51	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<46	<33	<33	<33
4,6-Dinitro-2-methylphenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<50	<30	<30	<30
4-Bromophenyl phenyl ether	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
4-Chloro-3-methylphenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
4-Chlorophenyl phenyl ether	NA	NA	<51	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
4-Nitrophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<50	<30	<30	<30
Acenaphthene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Acenaphthylene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Anthracene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Azobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
Benz(a)anthracene	NA	NA	<21	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Benzidine	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<92	<39	<39	<39
Benzo(a)pyrene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Benzo(b)fluoranthene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Benzo(g,h,i)perylene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Benzo(k)fluoranthene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Bis(2-chloroethoxy)methane	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<30	<30
Bis(2-chloroethyl) ether	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
Bis(2-chloroisopropyl) ether	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30

Cell 2 Slimes Drain

Chemical and Radiological Characteristics

Constituents	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Bis(2-ethylhexyl) phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	1.1	<3	<3	<3
Butyl benzyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Chrysene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Dibenz(a,h)anthracene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Diethyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Dimethyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	1.5	<3	<3	<3
Di-n-butyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Di-n-octyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Fluoranthene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Fluorene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Hexachlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
Hexachlorobutadiene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<28	<30	<30	<30
Hexachlorocyclopentadiene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
Hexachloroethane	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<28	<30	<30	<30
Indeno(1,2,3-cd)pyrene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Isophorone	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<35	<35	<35
Naphthalene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	5.3	<3	<3	<3
Nitrobenzene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
N-Nitrosodimethylamine	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
N-Nitrosodi-n-propylamine	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
N-Nitrosodiphenylamine	NA	NA	<51	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
Pentachlorophenol	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<50	<30	<30	<30
Phenanthrene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Phenol	NA	NA	<11	10.7	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<30	<30	<30
Pyrene	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<10	<3	<3	<3
Pyridine	NA	NA	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.03	<18	<30	<30	<30

* 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	2017	2018	2019	2020	2021	2022
Major Ions (mg/L)														
Carbonate	<1	<1	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	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	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												

Cell 2 LDS

Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Radiologics (pCi/L)														
Gross Alpha	13.5	7.3	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
VOCS (ug/L)														
Acetone	<20	<20	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	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	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												

Cell 2 LDS

Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
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												
Benz(a)anthracene	NA	<10												
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	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled	Not Sampled
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	2017	2018	2018 ReSample	2019	2020	2021	2022
Major Ions (mg/L)																				
Carbonate	NA	<1	ND	ND	<1	<1	<1	<1	<1	NS	<1	<1	<1.00	<1.00	<1.00	NS	<5	Not Sampled - Dry	236	Not Sampled - Dry
Bicarbonate	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<1	<1	<1.00	<1.00	<1.00	NS	<5		175	
Calcium	300	418	887	478	628	560	200	591	586	NS	294	713	148	526	498	NS	510		3	
Chloride	NA	2460	15965	15400	17200	3470	40400	8880	38400	NS	7200	22800	115000	2720	55200	NS	15000		500	
Fluoride	<100	667	42.8	1.4	0.6	54.8	64.1	2300	12400	NS	1330	5410	46500	189	7400	NS	1340		2.2	
Magnesium	5400	3386	15767	13100	17100	2500	22100	5680	15400	NS	1910	12700	31000	84400	22000	NS	10000		11	
Nitrogen-Ammonia	13900	1302	13867	9010	21600	2650	6470	6840	100	NS	3030	8.91	6270	88.5	9490	NS	9000		278	
Nitrogen-Nitrate	<100	20	102	44	142	26	261	64	277	NS	59.5	26.6	582	107	710	NS	925		12.2	
Potassium	NA	254	6657	4760	3820	782	2590	1190	2110	NS	386	1620	3120	133	1480	NS	630		20	
Sodium	5900	3198	25583	22900	28600	5620	47900	6660	34400	NS	3630	23800	59800	2120	46900	NS	14000		1210	
Sulfate	180000	33400	173667	167000	214000	40400	197000	80000	440000	NS	37000	158000	834000	9970	208000	NS	96000		1630	
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	3.63	1.32	NS	3.88		10	
TDS	189000	51633	228500	193000	243000	56200	296000	120000	410000	NS	70100	238000	887000	17300	327000	NS	143000		3930	
Conductivity (umhos/cm)	NA	NA	NA	NA	304000	59800	86400	80300	84300	NS	56200	121000	13600	20300	104000	NS	95500		5870	
Metals (ug/L)																				
Arsenic	163000	32867	256500	489000	ND	52900	263000	4340	66000	NS	2920	21500	194000	870	20900	NS	380	Not Sampled - Dry	170	Not Sampled - Dry
Beryllium	540	430	913	840	905	206	1570	678	2570	NS	222	1520	12500	590	2950	NS	350		<1	
Cadmium	2600	1958	9260	15400	ND	1960	12200	3460	24000	NS	2550	14800	41000	1190	52100	NS	7400		2	
Chromium	12000	3742	14883	12800	ND	3360	22800	10900	30600	NS	2380	15300	76200	<100	25100	NS	230J		<5	
Cobalt	48000	NA	82783	57000	ND	13000	76000	76100	99700	NS	20800	72500	74200	4440	120000	NS	64000		<100	
Copper	360000	87333	505000	345000	ND	89000	768000	379000	954000	NS	139000	511000	3000000	9720	515000	NS	35000		454	
Iron	2100000	1278333	4874500	4400000	5970000	1460000	10200000	3400000	9700000	NS	688000	4570000	15400000	262000	13300000	NS	2500000		519	
Lead	<20000	2507	9647	16900	ND	17200	16700	1860	14400	NS	1900	9090	4030	15.8	20500	NS	<75		2	
Manganese	82000	144000	496833	313000	ND	101000	587000	3110000	2470000	NS	214000	1270000	5690000	102000	4070000	NS	1000000		47	
Mercury	ND	NA	ND	16	ND	<4	30.9	9.6	21.6	NS	2.4	7.01	873	<2.00	430	NS	0.20		<1	
Molybdenum	52000	12250	122167	209000	14	21300	96200	790	56100	NS	2930	12500	133000	70.1	3740	NS	550		759	
Nickel	170000	20917	131833	241000	ND	23800	75800	150000	122000	NS	44900	121000	29200	7220	113000	NS	150000		33	
Selenium	<2000	910	5856	10200	ND	3080	6900	2460	7060	NS	1370	4330	3170	306	3680	NS	2900		135	
Silver	<2500	NA	305	1010	ND	101	792	1850	3380	NS	329	1790	6780	<100	3770	NS	110		<1	
Thallium	4700	NA	446	1200	ND	190	518	1080	694	NS	290	602	2160	21.3	3760	NS	170		1.6	
Tin	NA	NA	1090	1070	ND	155	325	<100	<100	NS	<17000	<100	<17000	<17000	<17000	NS	<50		<50	
Uranium	118000	67833	332333	636000	3690	180000	458000	835000	1200000	NS	134000	530000	5360000	9630	1110000	NS	19000		533	
Vanadium	210000	158333	935000	1130000	ND	692000	2370000	836000	3220000	NS	454000	1720000	10300000	5600	2420000	NS	54000		6740	
Zinc	590000	NA	748833	515000	ND	134000	726000	652000	1430000	NS	155000	899000	7810000	68100	2100000	NS	950000		114	
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	292	19700	NS	3890	Not Sampled - Dry	<18.5	Not Sampled - Dry

Cell 3
Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 ReSample	2014	2015	2016	2017	2018	2018 ReSample	2019	2020	2021	2022
VOCS (ug/L)																				
Acetone	28	NA	80	100	67	37	330	64	302	159	<700	82.8	<200	48.4	135	NS	135	Not Sampled - Dry	46.6	Not Sampled - Dry
Benzene	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<5.0	<1	<1	<1	<1	NS	<1		<5	
Carbon tetrachloride	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<5.0	<1	<1	<1	<1	NS	<1		<5	
Chloroform	6	NA	ND	11	4.2	2.6	31	2	56.3	21	<70.0	1.75	13.2	<1	5.02	NS	18		<5	
Chloromethane	NA	NA	ND	ND	1.4	1.8	3.5	1	<5	2.58	<30.0	1.03	19.8	<1	5.36	NS	2.8		<5	
MEK	NA	NA	ND	ND	<1	<1	67	<20	<100	24.5	<4000	<20	<20	<20	<20	NS	34		<25	
Methylene Chloride	10	NA	ND	ND	<1	<1	7.4	<1	6.95	<1	<5.0	<1	<1	<1	10.4	NS	0.67 J		<25	
Naphthalene	<10000	NA	ND	<10	<1	2.1	1.2	<1	<5	<1	<100	<1	<1	<1	<1	NS	0.57 J		<5	
Tetrahydrofuran	NA	NA	150	<20	<100	<10	<10	<1	<5	<1	<46.0	<1	<1	<1	3.01	NS	<35.0		<25	
Toluene	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<1000	<1	<1	<1	<1	NS	<1		<5	
Xylenes	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<10000	<1	<1	<1	<1	NS	<1		<15	
SVOCS (ug/L)																				
1,2,4-Trichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10	Not Sampled - Dry	<30	Not Sampled - Dry
1,2-Dichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
1,3-Dichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
1,4-Dichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
1-Methylnaphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
2,4,5-Trichlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
2,4,6-Trichlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
2,4-Dichlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
2,4-Dimethylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
2,4-Dinitrophenol	NA	NA	NA	NA	<53	<20	<20	<20	<21.1	<20	<20	<20	<10	<10	<1,490	<7.78	<50		<50	
2,4-Dinitrotoluene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
2,6-Dinitrotoluene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
2-Chloronaphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<4.10	
2-Chlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
2-Methylnaphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
2-Methylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
2-Nitrophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
3&4-Methylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<37	
3,3´-Dichlorobenzidine	NA	NA	NA	NA	<21	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<45		<33	
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	<53	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<50		<30	
4-Bromophenyl phenyl ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
4-Chloro-3-methylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
4-Nitrophenol	NA	NA	NA	NA	<53	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<50		<30	
Acenaphthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	

Cell 3
Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 ReSample	2014	2015	2016	2017	2018	2018 ReSample	2019	2020	2021	2022
Acenaphthylene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10	Not Sampled - Dry	<3	Not Sampled - Dry
Anthracene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Azobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
Benz(a)anthracene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Benzidine	NA	NA	NA	NA	<21	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<39	
Benzo(a)pyrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Benzo(b)fluoranthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Benzo(g,h,i)perylene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Benzo(k)fluoranthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Bis(2-chloroethoxy)methane	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
Bis(2-chloroethyl) ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
Bis(2-chloroisopropyl) ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
Bis(2-ethylhexyl) phthalate	NA	NA	NA	NA	<11	10.6	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Butyl benzyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Chrysene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Dibenz(a,h)anthracene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Diethyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Dimethyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Di-n-butyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Di-n-octyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Fluoranthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Fluorene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Hexachlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
Hexachlorobutadiene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<27		<30	
Hexachlorocyclopentadiene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
Hexachloroethane	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<27		<30	
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Isophorone	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<35	
Naphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Nitrobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
N-Nitrosodimethylamine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
N-Nitrosodi-n-propylamine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
N-Nitrosodiphenylamine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
Pentachlorophenol	NA	NA	NA	NA	<53	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<50		<30	
Phenanthrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Phenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<30	
Pyrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<10		<3	
Pyridine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10	<10	<10	<10	<1,490	<7.78	<18		<30	

[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	2017	2018	2019	2020	2021	2022
Major Ions (mg/L)														
Carbonate	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<3
Bicarbonate	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<6
Calcium	627	598	558	591	668	445	604	632	607	707	510	641	637	723
Chloride	4650	7350	5870	4980	4530	5900	6410	7040	8060	10100	8670	9120	12700	13500
Fluoride	0.3	21.6	30.6	43	1130	1290	1660	2030	1420	2000	1650	1700	3190	2800
Magnesium	3250	4940	4720	2230	3660	2990	3910	3550	4360	7030	4100	4700	5020	5930
Nitrogen-Ammonia	3140	5230	4930	1540	1340	2730	11	4770	924	9060	6700	10000	7250	7600
Nitrogen-Nitrate	28	52	44	27	38.2	39.5	19.9	41.9	53.4	73.4	70.4	84.8	112	108
Potassium	980	1440	1450	558	773	724	1020	915	1500	2020	1200	1660	1730	2910
Sodium	5980	11300	11400	7130	6860	7190	9760	9580	12000	17600	15000	17700	18800	21900
Sulfate	67600	87100	267000	64900	83300	64900	77200	126000	77800	116000	81300	85700	110000	115000
pH (s.u.)	1.4	1.99	1.73	1.2	1.47	1.7	1.51	1.59	1.53	1.25	2.40	2.36	2.2	2.2
TDS	81400	107000	108000	76000	90000	97000	104000	124000	120000	147000	122000	139000	162000	174000
Conductivity (umhos/cm)	131000	101000	82100	78100	66300	73000	89600	81300	89800	115000	81400	84000	91300	86600
Metals (ug/L)														
Arsenic	626000	109000	86600	60500	73700	70000	82600	94400	104000	125000	63000	71300	68600	79700
Beryllium	296	215	323	167	247	190	281	320	440	538	420	485	448	504
Cadmium	1920	3670	2190	844	1450	1780	2090	2850	3360	3850	2500	3490	3540	4370
Chromium	3220	7500	5900	5990	5220	4620	5460	7920	8520	9350	7200	9050	8820	11600
Cobalt	9440	26500	22500	22900	22900	27500	26100	32800	37900	41000	28000	32800	30600	39500
Copper	99200	168000	181000	433000	540000	556000	477000	566000	578000	683000	580000	617000	557000	735000
Iron	2360000	2920000	3390000	3190000	2620000	2280000	3090000	3850000	4480000	5320000	3200000	3690000	3810000	4270000
Lead	5360	11800	11000	5270	11500	14800	11700	14000	15100	16400	9000	8680	8380	9760
Manganese	178000	209000	131000	112000	143000	120000	181000	225000	261000	307000	210000	211 000	214000	266000
Mercury	1.19	<4	15.2	2.4	0.786	2.5	0.99	<2	2.30	2.52	2.1	3.4	3.7	3.4
Molybdenum	24300	43800	24200	58200	25500	40600	35400	43900	40800	59100	19000	25700	32600	43600
Nickel	17100	40900	43500	41300	43300	54100	48700	61300	66800	71900	50000	58800	57100	78600
Selenium	4620	5810	4460	1310	2080	2000	2400	2820	4450	5870	3700	3660	3740	4320
Silver	78	193	216	127	144	197	186	305	379	521	310	487	466	565
Thallium	162	350	410	250	256	376	436	568	169	727	90	524	185	216
Tin	257	378	319	169	118	<17000	142	<17000	<17000	<17000	77	181	105	<500
Uranium	118000	217000	153000	91000	112000	159000	171000	214000	193000	244000	35000	42600	43300	53400
Vanadium	918000	1090000	730000	237000	461000	535000	577000	715000	972000	1080000	150000	205000	237000	323000
Zinc	142000	224000	286000	200000	183000	169000	237000	318000	344000	406000	280000	350000	307000	400000
Radiologics (pCi/L)														
Gross Alpha	8910	3400	8290	16300	15800	240000	176000 (8/4/2015) 37800 (5/28/2015)	292000	133000	516000	261000	52400	122000	197000

Cell 4A

Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
VOCS (ug/L)														
Acetone	60	55	100	25	28.4	<700	42.5	45.1	21.4	42.7	39 J	16.2	<25	<25
Benzene	<1	<1	<1	<1	<1	<5.0	<1	<1	<1	<1	<2.5	<1	<5	<5
Carbon tetrachloride	<1	<1	<1	<1	<1	<5.0	<1	<1	<1	<1	<2.5	<1	<5	<5
Chloroform	4	8.5	10	<1	<1	<70.0	<1	<1	<1	1.91	1.9 J	1.50	<5	<5
Chloromethane	3.4	5.5	7.9	<1	<1	<30.0	<1	<1	1.35	1.76	1.7 J	1.90	<5	<5
MEK	<1	<1	<1	<1	<20	<4000	<20	<20	<20	<20	13 J	<5	<25	<25
Methylene Chloride	<1	<1	<1	<20	<1	<5.0	<1	<1	<1	<1	<2.5	<5	<25	<25
Naphthalene	1.8	<1	<1	<1	<1	<100	<1	<1	<1	<1	<2.5	<1	<5	<5
Tetrahydrofuran	<100	<10	<10	1.36	<1	<46.0	<1	12.6	<1	<1	<35.0	<5	<25	<25
Toluene	<1	<1	<1	<1	<1	<1000	<1	<1	<1	<1	<2.5	<1	<5	<5
Xylenes	<1	<1	<1	<1	<1	<10000	<1	<1	<1	<1	<2.5	<3	<5	<15
SVOCS (ug/L)														
1,2,4-Trichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
1,2-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
1,3-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
1,4-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
1-Methylnaphthalene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3.0	<3	<3
2,4,5-Trichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
2,4,6-Trichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
2,4-Dichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
2,4-Dimethylphenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
2,4-Dinitrophenol	<53	<20	<20	<20	<20	<20	<20	<10	<10	<8.57	<50	<50	<50	<50
2,4-Dinitrotoluene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
2,6-Dinitrotoluene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
2-Chloronaphthalene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<4.1	<4.10	<4.1
2-Chlorophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
2-Methylnaphthalene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
2-Methylphenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
2-Nitrophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
3&4-Methylphenol	<ll	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<37	<37	<37
3,3´-Dichlorobenzidine	<21	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<46	<33	<33	<33
4,6-Dinitro-2-methylphenol	<53	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<50	<30	<30	<30
4-Bromophenyl phenyl ether	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
4-Chloro-3-methylphenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
4-Chlorophenyl phenyl ether	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
4-Nitrophenol	<53	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<50	<30	<30	<30
Acenaphthene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Acenaphthylene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Anthracene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	1.2	<3	<3	<3
Azobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30

Cell 4A

Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Benz(a)anthracene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Benzidine	<21	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<39	<39	<39
Benzo(a)pyrene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Benzo(b)fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Benzo(g,h,i)perylene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Benzo(k)fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Bis(2-chloroethoxy)methane	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<30	<30
Bis(2-chloroethyl) ether	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
Bis(2-chloroisopropyl) ether	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
Bis(2-ethylhexyl) phthalate	<11	19.6	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Butyl benzyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Chrysene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Dibenz(a,h)anthracene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Diethyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Dimethyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Di-n-butyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Di-n-octyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Fluorene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Hexachlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
Hexachlorobutadiene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<28	<30	<30	<30
Hexachlorocyclopentadiene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
Hexachloroethane	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<28	<30	<30	<30
Indeno(1,2,3-cd)pyrene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Isophorone	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<35	<35	<35
Naphthalene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Nitrobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
N-Nitrosodimethylamine	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
N-Nitrosodi-n-propylamine	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
N-Nitrosodiphenylamine	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
Pentachlorophenol	<53	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<50	<30	<30	<30
Phenanthrene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Phenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<30	<30	<30
Pyrene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<8.57	<10	<3	<3	<3
Pyridine	<11	<10	<10	<10	<10	<10	<10	<10	<10	34.0	<19	<30	<30	<30

Cell 4A LDS

Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Major Ions (mg/L)														
Carbonate	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<3
Bicarbonate	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<6
Calcium	558	474	470	453	429	336	510	446	542	516	520	496	500	468
Chloride	7570	4670	6040	2710	1910	4200	2860	5200	8610	4360	7360	3860	6510	6270
Fluoride	0.7	39.4	46	27	1970	1320	282	1150	1370	716	1530	500	2240	1990
Magnesium	6390	3240	5100	2070	1710	2690	2730	3940	4630	3820	3800	3690	3780	4310
Nitrogen-Ammonia	4480	2290	3480	1320	1010	2920	13.4	5050	846	4580	6080	3050	3680	3500
Nitrogen-Nitrate	69	183	94	15	28.9	39	27.4	40.9	63.1	44.0	58.2	60.2	161	96
Potassium	1960	934	1500	503	305	415	245	675	1710	539	1000	334	635	678
Sodium	12600	6700	11000	3500	2930	4190	3490	8050	11500	6780	13000	5260	9550	8630
Sulfate	92400	41700	77400	39600	31400	56000	50500	91300	89100	68600	72600	59900	72900	66300
pH (s.u.)	1.98	2.53	2.32	2.1	2.32	2.4	2.29	2.04	1.50	1.88	2.39	2.25	2.4	2.5
TDS	117000	56900	93800	55400	49700	81900	65200	95400	142000	75300	112000	83800	105000	91400
Conductivity (umhos/cm)	150000	49000	66600	39600	31300	53600	50200	62200	97900	63400	75600	53200	65900	55400
Metals (ug/L)														
Arsenic	133000	54000	74700	44100	35700	51200	10400	43500	117000	42400	52000	16600	32300	24500
Beryllium	536	295	367	180	188	185	199	289	479	298	370	317	323	252
Cadmium	4010	2650	3160	921	1170	4720	4270	4500	4080	3740	1900	4410	4220	3150
Chromium	9140	3890	5940	3930	2630	2780	1760	4250	9410	3930	6500	2820	5200	5720
Cobalt	37300	15200	21700	22300	44300	41200	33700	32100	42700	30600	25000	45800	73400	26900
Copper	222000	116000	150000	481000	754000	439000	160000	331000	650000	376000	500000	273000	322000	289000
Iron	3940000	1420000	2530000	2460000	1370000	1850000	1320000	2330000	5140000	2090000	2500000	1440000	1370000	1100000
Lead	5270	3400	4520	2300	165	991	46.8	797	15500	118	4200	254	1120	1390
Manganese	389000	157000	207000	95200	86300	98600	96700	184000	296000	136000	190000	137000	195000	191000
Mercury	2.66	6.2	14.7	0.7	<0.5	<0.0020	<0.5	<2.00	<2.00	<2.00	1.4	0.20	0.30	<0.1
Molybdenum	49200	23900	29300	10200	1200	3970	278	10700	49900	2350	8400	2190	4090	2940
Nickel	43900	23900	29600	35000	54600	99300	86300	72700	74700	70900	46000	110000	67700	51200
Selenium	5250	2820	3780	1260	1020	2170	649	1590	4940	1550	3100	1230	1960	2000
Silver	204	62	127	44	24.8	<100	25.6	144	312	<100	230	150	212	192
Thallium	252	194	290	332	171	522	218	439	550	281	55	425	245	325
Tin	504	180	119	<100	<100	<17000	<100	<17000	<17000	<17000	<70	<500	<50	<500
Uranium	284000	145000	168000	90200	75000	82200	25000	116000	247000	78600	38000	48000	76000	116000
Vanadium	1150000	518000	770000	240000	157000	510000	253000	449000	1090000	475000	130000	374000	458000	472000
Zinc	298000	152000	204000	181000	163000	306000	510000	502000	385000	446000	210000	541000	380000	256000
Radiologics (pCi/L)														
Gross Alpha	7020	3230	7440	4730	6930	61800	17200 (8/4/2015) 1670 (5/28/2015)	98700	176000	51000	163000	5450	23700	34200

Cell 4A LDS

Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
VOCS (ug/L)														
Acetone	240	130	120	55	57	<700	84.7	61.5	79.8	108	84	90.3	262	161
Benzene	<1	<1	<1	<1	<1	<5.0	<1	<1	<1	<1	<1	<5	<5	<5
Carbon tetrachloride	<1	<1	<1	<1	<1	<5.0	<1	<1	<1	<1	<1	<5	<5	<5
Chloroform	23	52	26	42	110	95	129	84.5	21.6	33.8	31	120	47.2	70.5
Chloromethane	7.9	13	3.8	6	9.93	<30.0	5.35	<1.00	3.00	2.41	3.6	6.90	<5	5.15
MEK	78	50	82	36	<20	<4000	<20	<20	<20	<20	43	29.5	92.2	50
Methylene Chloride	<1	<1	<1	<1	<1	<5.0	<1	<1	<1	1.05	0.47 J	<25	<25	<25
Naphthalene	<1	1.5	<1	1	2.35	<100	<1	<1	<1	<1	<1	<5	<5	<5
Tetrahydrofuran	140	158	102	117	39.1	<46.0	18.5	<1	15.7	19.7	16	<25	<25	61.6
Toluene	<1	<1	<1	<1	<1	<1000	<1	<1	<1	<1	<1	<5	<5	<5
Xylenes	<1	<1	<1	<1	<1	<10000	<1	<1	<1	<1	<1	<15	<15	<15
SVOCS (ug/L)														
1,2,4-Trichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
1,2-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
1,3-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
1,4-Dichlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
1-Methylnaphthalene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3.0	<3	<3
2,4,5-Trichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
2,4,6-Trichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
2,4-Dichlorophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
2,4-Dimethylphenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	11.1	<10	<30	<30	<30
2,4-Dinitrophenol	<54	<20	<20	<20	<20	<20	<20	<10	<10	<9.08	<50	<50	<50	<50
2,4-Dinitrotoluene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
2,6-Dinitrotoluene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
2-Chloronaphthalene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<4.1	<4.10	<4.1
2-Chlorophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
2-Methylnaphthalene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
2-Methylphenol	<ll	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
2-Nitrophenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
3&4-Methylphenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<37	<37	<37
3,3´-Dichlorobenzidine	<22	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<46	<33	<33	<33
4,6-Dinitro-2-methylphenol	<54	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<50	<30	<30	<30
4-Bromophenyl phenyl ether	<ll	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
4-Chloro-3-methylphenol	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
4-Chlorophenyl phenyl ether	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
4-Nitrophenol	<54	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<50	<30	<30	<30
Acenaphthene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Acenaphthylene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Anthracene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Azobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30

Cell 4A LDS

Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Benz(a)anthracene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Benzidine	<22	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<39	<39	<39
Benzo(a)pyrene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Benzo(b)fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Benzo(g,h,i)perylene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Benzo(k)fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Bis(2-chloroethoxy)methane	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<30	<30
Bis(2-chloroethyl) ether	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
Bis(2-chloroisopropyl) ether	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
Bis(2-ethylhexyl) phthalate	<11	54.9	54.9	16.6	<10	<10	<10	<10	<10	<9.08	1.1	<3	<3	<3
Butyl benzyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Chrysene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Dibenz(a,h)anthracene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Diethyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Dimethyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Di-n-butyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Di-n-octyl phthalate	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Fluoranthene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Fluorene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Hexachlorobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
Hexachlorobutadiene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<28	<30	<30	<30
Hexachlorocyclopentadiene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
Hexachloroethane	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<28	<30	<30	<30
Indeno(1,2,3-cd)pyrene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Isophorone	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<35	<35	<35
Naphthalene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Nitrobenzene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
N-Nitrosodimethylamine	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
N-Nitrosodi-n-propylamine	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
N-Nitrosodiphenylamine	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
Pentachlorophenol	<54	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<50	<30	<30	<30
Phenanthrene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Phenol	33	23.5	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<30	<30	<30
Pyrene	<11	<10	<10	<10	<10	<10	<10	<10	<10	<9.08	<10	<3	<3	<3
Pyridine	<11	<10	<10	<10	<10	<10	<10	<10	<10	12.9	<19	<30	<30	<30

Cell 4B

Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Major Ions (mg/L)												
Carbonate	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<3
Bicarbonate	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<6
Calcium	570	580	662	366	655	523	473	664	670	628	534	328
Chloride	8290	8170	4570	7300	8500	12000	6930	7860	10500	10200	44800	1110
Fluoride	26.7	23.3	1050	1150	1210	1780	1170	1410	2300	1730	7000	230
Magnesium	3910	4500	3560	3310	5530	5780	3550	5790	6500	4520	8200	267
Nitrogen-Ammonia	5220	5580	2060	5380	1.09	8690	724	7590	8150	6580	9100	4350
Nitrogen-Nitrate	39	42	51.4	47	15.2	64.5	31.3	42.2	38.6	70.0	286	2
Potassium	1370	1650	1110	989	1700	1710	1230	1660	1900	1680	3540	196
Sodium	9050	11700	3150	7100	12800	14100	10600	15700	18000	17100	54000	1520
Sulfate	134000	119000	98100	91500	108000	285000	708000	98400	124000	97200	259000	16700
pH (s.u.)	1.87	1.5	1.65	1.6	1.35	1.26	1.41	1.24	1.53	2.24	1.2	2.6
TDS	98000	128000	108000	131000	149000	172000	103000	117000	180000	150000	423000	21500
Conductivity (umhos/cm)	76900	86900	72800	90100	115000	116000	93800	107000	99600	87300	109000	18100
Metals (ug/L)												
Arsenic	67400	80000	65400	70400	106000	139000	82700	97800	140000	67900	307000	3500
Beryllium	311	356	334	275	430	557	347	407	640	455	1280	46
Cadmium	1990	2540	1990	2290	2980	4260	2340	2520	2000	1800	6760	165
Chromium	6860	8280	6390	6940	7450	11900	7800	8630	12000	9350	16600	2320
Cobalt	17800	29300	21300	24600	33700	46700	30300	32900	44000	30900	39700	1180
Copper	193000	340000	340000	368000	499000	684000	457000	539000	830000	602000	1170000	40600
Iron	2960000	3580000	2830000	2480000	4340000	6340000	3690000	4400000	5800000	3690000	7610000	263000
Lead	9960	11600	9820	10900	13400	17900	12200	12500	16000	8150	26000	383
Manganese	128000	148000	154000	129000	231000	325000	207000	242000	320000	201000	602000	18500
Mercury	13.7	2.6	1.49	<0.0020	1.72	<2.00	<2.00	<2.00	0.46	0.40	8.6	<0.1
Molybdenum	21400	27600	26100	29000	39800	55400	22600	27400	29000	8110	95600	1600
Nickel	33900	50500	35100	42000	56400	79600	53000	57800	78000	56400	48900	1520
Selenium	4670	4470	3900	5010	5600	7300	3740	4510	6600	3540	9080	272
Silver	137	169	137	142	195	307	<100	160	170	76	741	17
Thallium	237	368	243	258	408	559	17.5	33.7	<100	165	2160	150
Tin	196	215	163	<17000	211	<17000	<17000	<17000	340	138	879	<200
Uranium	133000	171000	110000	133000	200000	278000	23100	28100	36000	47400	279000	4270
Vanadium	660000	783000	163000	666000	881000	868000	746000	828000	710000	113000	1060000	28300
Zinc	191000	270000	184000	144000	313000	476000	267000	323000	280000	334000	475000	12800
Radiologics (pCi/L)												
Gross Alpha	8590	13600	14600	148000	267000 (8/4/2015) 42500 (5/28/2015)	262000	132000	320000	310000	54500	87400	6210
VOCS (ug/L)												
Acetone	130	94	43.5	<700	56.2	86.4	38.6	56.8	39	12.7	97.6	39
Benzene	<1	<1	<1	<5.0	<1	<1	<1	<1	<1	<1	<5	<5
Carbon tetrachloride	<1	<1	<1	<5.0	<1	<1	<1	<1	<1	<1	<5	<5
Chloroform	9.4	4	8.06	<70.0	2.34	3.07	2.39	2.17	3.4	<1	<5	<5
Chloromethane	8.5	8	7.12	<30.0	3.62	6.01	1.26	1.72	2.1	1.28	<5	<5
MEK	<1	<1	<20	<4000	<20	<20	<20	27.4	15 J	<5	57	<25

Cell 4B

Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Methylene Chloride	<1	<1	<1	<5.0	<1	<1	<1	<1	<1	<5	<25	<25
Naphthalene	<1	<1	<1	<100	<1	<1	<1	<1	<1	<1	<5	<5
Tetrahydrofuran	<10	11.1	<1	<46.0	<1	<1	<1	1.87	<35.0	<5	164	<25
Toluene	<1	<1	<1	<1000	<1	<1	<1	<1	<1	<1	<5	<5
Xylenes	<1	<1	<1	<10000	<1	<1	<1	<1	<1	<3	<15	<15
SVOCS (ug/L)												
1,2,4-Trichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
1-Methylnaphthalene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3.0	<3	<3
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
2,4-Dichlorophenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<50	<30	<30	<30
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
2,4-Dinitrophenol	<20	<20	<20	<20	<20	<10	<10	<8.72	<10	<50	<50	<50
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
2-Chloronaphthalene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<4.1	<4.10	<4.1
2-Chlorophenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
2-Methylnaphthalene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
3&4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<37	<37	<37
3,3´-Dichlorobenzidine	<10	<10	<10	<10	<10	<10	<10	<8.72	<44	<33	<33	<33
4,6-Dinitro-2-methylphenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<50	<30	<30	<30
4-Bromophenyl phenyl ether	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
4-Chlorophenyl phenyl ether	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<50	<30	<30	<30
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Anthracene	<10	<10	<10	<10	<10	<10	<10	<8.72	1.7	<3	<3	<3
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
Benz(a)anthracene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<30	<3
Benzidine	<10	<10	<10	26	<10	<10	<10	<8.72	<10	<39	<39	<39
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<30	<3
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<30	<3
Benzo(g,h,i)perylene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<30	<3
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<30	<3
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<30	<30
Bis(2-chloroethyl) ether	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30

Cell 4B

Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Bis(2-chloroisopropyl) ether	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
Bis(2-ethylhexyl) phthalate	410	19	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Butyl benzyl phthalate	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Chrysene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Dibenz(a,h)anthracene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Diethyl phthalate	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Dimethyl phthalate	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Di-n-butyl phthalate	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Di-n-octyl phthalate	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Fluoranthene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Fluorene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
Hexachlorobutadiene	<10	<10	<10	<10	<10	<10	<10	<8.72	<26	<30	<30	<30
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<8.72	<26	<30	<30	<30
Indeno(1,2,3-cd)pyrene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Isophorone	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<35	<35	<35
Naphthalene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Nitrobenzene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
N-Nitrosodimethylamine	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
N-Nitrosodi-n-propylamine	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
N-Nitrosodiphenylamine	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<50	<30	<30	<30
Phenanthrene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Phenol	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<30	<30	<30
Pyrene	<10	<10	<10	<10	<10	<10	<10	<8.72	<10	<3	<3	<3
Pyridine	<10	<10	<10	15	<10	<10	<10	31.7	<18	<30	118	<30

Cell 4B LDS

Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Major Ions (mg/L)												
Carbonate	<1	<1	dry	<1	<1	<1	<1	<1	<5	<5	<5	<3
Bicarbonate	<1	<1	dry	<1	<1	<1	<1	<1	<5	<5	<5	<6
Calcium	486	456	dry	308	538	547	516	592	550	555	526	388
Chloride	3630	6850	dry	6900	7960	8510	10400	8060	8050	7630	9180	4740
Fluoride	28.4	22	dry	970	1150	1290	1050	1480	1680	1550	1870	1270
Magnesium	3230	3360	dry	3400	5190	4780	5370	5580	4800	4830	4850	3090
Nitrogen-Ammonia	4260	4090	dry	5240	2.43	7540	739	7510	7080	5080	4280	3300
Nitrogen-Nitrate	30	31	dry	43	16.6	49.6	63.9	47.4	41.2	39.5	67.5	28
Potassium	1130	1060	dry	952	1560	1360	2130	1620	1400	1350	1240	623
Sodium	8240	8080	dry	6920	11900	10800	13200	14500	13000	12600	12200	7660
Sulfate	59900	99100	dry	82300	104000	163000	117000	100000	89500	88700	99000	54900
pH (s.u.)	2.23	2.4	dry	2.2	1.51	1.88	1.44	1.35	1.73	1.89	2.0	2.2
TDS	85800	90200	dry	129000	131000	133000	168000	132000	131000	134000	132000	82000
Conductivity (umhos/cm)	63000	62400	dry	76300	106000	68400	105000	104000	80800	77600	78000	52100
Metals (ug/L)												
Arsenic	54200	41200	dry	67800	98400	98800	135000	94100	89000	84900	74800	37600
Beryllium	274	271	dry	282	411	430	559	416	470	483	318	242
Cadmium	1670	1740	dry	2290	2790	3250	4500	2610	2000	2060	2140	1320
Chromium	6250	5930	dry	6160	7320	9470	13700	8980	9100	9620	8980	5560
Cobalt	15600	19000	dry	23300	31100	33600	48900	31700	31000	32200	60300	19000
Copper	176000	181000	dry	308000	458000	475000	681000	497000	550000	500000	423000	305000
Iron	2450000	2120000	dry	2590000	4180000	4680000	5910000	4190000	4400000	4180000	3660000	1720000
Lead	6060	4420	dry	4120	10100	5860	14000	8770	7800	5110	1860	1160
Manganese	118000	162000	dry	144000	222000	262000	346000	239000	240000	221000	213000	148000
Mercury	12.3	3	dry	0.002	1.47	<2.00	<2.00	<2.00	0.11J	0.10	<0.2	<0.1
Molybdenum	16700	15000	dry	24300	36300	35500	52900	25900	27000	19800	14300	6360
Nickel	30700	33700	dry	40100	52600	58100	84400	56100	59000	57900	52000	37600
Selenium	3710	2880	dry	4080	5080	5310	6860	4500	4700	3950	3870	2010
Silver	111	117	dry	119	179	224	266	156	170	173	142	59
Thallium	179	175	dry	336	354	414	427	245	87	98	123	66
Tin	332	<100	dry	<17000	198	<17000	<17000	<17000	200	258	141	<500
Uranium	111000	132000	dry	143000	185000	192000	269000	54200	31000	34600	29400	21200
Vanadium	518000	428000	dry	671000	817000	847000	1260000	811000	760000	743000	683000	452000
Zinc	172000	182000	dry	144000	296000	315000	443000	303000	280000	286000	244000	164000
Radiologics (pCi/L)												
Gross Alpha	6000	7500	dry	181000	375000 (8/4/2015) 52500 (5/28/2015)	185000	165000	305000	226000	54100	105000	97600

Cell 4B LDS

Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
VOCS (ug/L)												
Acetone	390	370	dry	<700	218	266	479	147	102	68.5	<25	192
Benzene	<1	<1	dry	<5.0	<1	<1	<1	<1	<1	<1	<5	<5
Carbon tetrachloride	<1	<1	dry	<5.0	<1	<1	<1	<1	<1	<1	<5	<5
Chloroform	20	19	dry	<70.0	5.03	9.97	9.13	4.74	3.9	1.22	<5	7.10
Chloromethane	11	11	dry	<30.0	9.72	10.8	7.16	2.4	2.3	<1	<5	<5
MEK	240	180	dry	<4000	71.8	53.6	89.4	34.6	71	42.8	<25	68.5
Methylene Chloride	<1	<1	dry	<5.0	<1	<1	1.01	<1	<1	<5	<25	<25
Naphthalene	<1	<1	dry	<100	<1	<1	<1	<1	<1	<1	<5	<5
Tetrahydrofuran	198	322	dry	75.6	36.6	75.9	51.2	17.3	53	96.5	<25	227
Toluene	<1	<1	dry	<1000	<1	<1	<1	<1	<1	<1	<5	<5
Xylenes	<1	<1	dry	<10000	<1	<1	<1	<1	<1	<3	<15	<15
SVOCS (ug/L)												
1,2,4-Trichlorobenzene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
1,2-Dichlorobenzene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
1,3-Dichlorobenzene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
1,4-Dichlorobenzene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
1-Methylnaphthalene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3.0	<3	<3
2,4,5-Trichlorophenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
2,4,6-Trichlorophenol	<10	<10	dry	<10	<10	<10	<10	<8.79	< 10	<30	<30	<30
2,4-Dichlorophenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
2,4-Dimethylphenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
2,4-Dinitrophenol	<20	<20	dry	<20	<20	<20	<10	<8.79	<50	<50	<50	<50
2,4-Dinitrotoluene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
2,6-Dinitrotoluene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
2-Chloronaphthalene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<4.1	<4.10	<4.1
2-Chlorophenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
2-Methylnaphthalene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
2-Methylphenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
2-Nitrophenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
3&4-Methylphenol	<10	<10	dry	<10	<10	<10	<10	<8.79	0.42	<37	<37	<37
3,3´-Dichlorobenzidine	<10	<10	dry	<10	<10	<10	<10	<8.79	<45	<33	<33	<33
4,6-Dinitro-2-methylphenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<50	<30	<30	<30
4-Bromophenyl phenyl ether	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
4-Chloro-3-methylphenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
4-Chlorophenyl phenyl ether	<10	<10	dry	<10	<10	<10	<10	<8.79	< 10	<30	<30	<30
4-Nitrophenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<50	<30	<30	<30
Acenaphthene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Acenaphthylene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Anthracene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Azobenzene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30

Cell 4B LDS
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Benz(a)anthracene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Benzidine	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<39	<39	<39
Benzo(a)pyrene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Benzo(b)fluoranthene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Benzo(g,h,i)perylene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Benzo(k)fluoranthene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Bis(2-chloroethoxy)methane	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<30	<30
Bis(2-chloroethyl) ether	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
Bis(2-chloroisopropyl) ether	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
Bis(2-ethylhexyl) phthalate	191	191	dry	27	<10	132	145	65.9	16	<3	43.1	13.9
Butyl benzyl phthalate	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Chrysene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Dibenz(a,h)anthracene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Diethyl phthalate	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Dimethyl phthalate	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Di-n-butyl phthalate	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Di-n-octyl phthalate	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Fluoranthene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Fluorene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Hexachlorobenzene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
Hexachlorobutadiene	<10	<10	dry	<10	<10	<10	<10	<8.79	<27	<30	<30	<30
Hexachlorocyclopentadiene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
Hexachloroethane	<10	<10	dry	<10	<10	<10	<10	<8.79	<27	<30	<30	<30
Indeno(1,2,3-cd)pyrene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Isophorone	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<35	<35	<35
Naphthalene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Nitrobenzene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
N-Nitrosodimethylamine	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
N-Nitrosodi-n-propylamine	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
N-Nitrosodiphenylamine	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
Pentachlorophenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<50	<30	<30	<30
Phenanthrene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Phenol	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<30	<30	<30
Pyrene	<10	<10	dry	<10	<10	<10	<10	<8.79	<10	<3	<3	<3
Pyridine	<10	<10	dry	<10	<10	<10	<10	29.1	<18	<30	146	<30

Cell 1

Additional Radiological Analyses

Date	Thorium-228 (pCi/L)	Thorium-230 (pCi/L)	Thorium-232 (pCi/L)	Radium-226 (pCi/L)	Uranium-233/234 (pCi/L)	Uranium-235/236 (pCi/L)	Uranium-238 (pCi/L)	Specific Gravity
8/4/15	1310	991000	6150	1110	141000	8920	140000	1.21
5/28/15	204	782000	6730	829	96700	5980	100000	1.13
8/30/16	ND	677000	4480	497		2380	45800	1.15
8/29/17	2890	8100000	76000	391	353000	20400	344000	1.17
8/1/18	ND	856000	8410	443	97300	6970	97200	1.16
8/21/19	1380	747000	4780	348	28400	1650	28700	1.15
8/21/2019 (Cell 65 - Duplicate of Cell 1)	1500	663000	5720	434	25500	1960	27700	1.15
8/19/20	1090	1030000	6670	801	68300	4020	64600	1.33
9/1/21	469	174000	1060	424	218000	11800	221000	1.38
9/1/2021 (Cell 65 - Duplicate of Cell 1)	500	178000	946	281	212000	10300	223000	1.33
8/24/22	ND	58700	416	37.6	71200	4460	77100	1.41

Cell 2 Slimes Drain
Additional Radiological Analyses

Date	Thorium-228 (pCi/L)	Thorium-230 (pCi/L)	Thorium-232 (pCi/L)	Radium-226 (pCi/L)	Uranium-233/234 (pCi/L)	Uranium-235/236 (pCi/L)	Uranium-238 (pCi/L)	Specific Gravity
8/4/15	ND	6680	ND	36.6	11300	858	10500	1.09
8/30/16	ND	5050	ND	52.4	11700	599	10700	1.03
8/29/17	ND	38500	ND	51.2	111000	ND	75600	1.07
8/1/2018	ND	7390	ND	36.2	14900	ND	12500	1.07
8/1/2018 (cell 65 - Duplicate of Cell 2 Slimes)	ND	6860	ND	29.8	10700	3440	12600	1.06
8/21/2019	ND	1750	ND	62.5	9300	484	9150	1.03
8/19/2020	ND	5180	ND	86.0	8680	917	8760	1.08
9/1/21	ND	2780	ND	63.0	9210	582	9040	1.07
8/24/22	ND	1050	ND	28.5	9210	ND	4590	1.05

Cell 3
Additional Radiological Analyses

Date	Thorium-228 (pCi/L)	Thorium-230 (pCi/L)	Thorium-232 (pCi/L)	Radium-226 (pCi/L)	Uranium-233/234 (pCi/L)	Uranium-235/236 (pCi/L)	Uranium-238 (pCi/L)	Specific Gravity
8/4/15	ND	123000	1640	448	184000	10300	191000	1.21
5/28/15	798	131000	1290	202	557000	37900	591000	1.29
8/30/16	983	72500	1670	584	1960000	130000	2060000	1.62
8/30/16 (cell 65 - Duplicate of Cell 3)	ND	67000	788	640	2520000	130000	2490000	1.53
8/29/17	ND	ND	ND	101	37600	ND	32800	0.989
8/1/18	ND	28100	2310	79.8	398000	24000	468000	1.21
8/21/19	ND	6610	ND	48.0	6640	ND	5780	1.07
8/19/20	Not Sampled - Dry							
9/1/21	ND	31.2	ND	ND	144	ND	209	0.984
8/24/22	Not Sampled - Dry							

Cell 4A
Additional Radiological Analyses

Date	Thorium-228 (pCi/L)	Thorium-230 (pCi/L)	Thorium-232 (pCi/L)	Radium-226 (pCi/L)	Uranium-233/234 (pCi/L)	Uranium-235/236 (pCi/L)	Uranium-238 (pCi/L)	Specific Gravity
8/4/15	ND	374000	3490	663	57500	3720	64400	1.11
5/28/15	327	405000	3440	ND	61200	4030	62700	1.07
5/28/2015 (Cell 65 - Duplicate of Cell 4A)	265	315000	3790	772	58600	3020	58300	NS
8/30/16	ND	466000	2870	1050	61100	3320	70900	1.10
8/29/17	ND	4450000	47700	759	637000	30600	692000	1.09
8/29/17 (Cell 65 - Duplicate of Cell 4A)	ND	4080000	11000	822	602000	44900	616000	1.12
8/1/18	1970	539000	8230	59.2	88700	9900	86300	1.10
8/21/19	941	430000	2870	260	9350	674	10900	1.02
8/19/20	1040	521000	4130	395	17200	991	13700	1.10
8/19/2020 (Cell 65 - Duplicate of Cell 4A)	ND	488000	2200	372	14100	1000	14300	1.11
9/1/21	1000	662000	6240	686	18000	1150	17900	1.11
8/24/22	1370	707000	4740	578	26300	ND	21800	1.16

Cell 4A LDS
Additional Radiological Analyses

Date	Thorium-228 (pCi/L)	Thorium-230 (pCi/L)	Thorium-232 (pCi/L)	Radium-226 (pCi/L)	Uranium-233/234 (pCi/L)	Uranium-235/236 (pCi/L)	Uranium-238 (pCi/L)	Specific Gravity
8/4/15	ND	25300	ND	19.3	9380	504	10800	1.07
5/28/15	ND	25300	ND	19.3	9380	504	10800	NS
8/30/16	ND	134000	1130	51.1	46200	1900	40400	1.10
8/29/17	ND	5410000	49200	286	852000	66200	851000	1.17
8/1/18	ND	76000	ND	38.2	28800	ND	30500	1.05
8/21/19	1060	366000	2230	73.4	13500	738	13000	1.02
8/19/20	ND	39500	ND	18.6	19000	711	16600	1.07
9/1/21	462	101000	731	33.4	38200	1720	37500	1.08
8/24/22	272	63600	405	6.44	42600	2580	40800	1.07
8/24/22 Duplicate of Cell 4A LDS	272	63600	405	6.44	42600	2580	40800	1.01

Cell 4B

Additional Radiological Analyses

Date	Thorium-228 (pCi/L)	Thorium-230 (pCi/L)	Thorium-232 (pCi/L)	Radium-226 (pCi/L)	Uranium-233/234 (pCi/L)	Uranium-235/236 (pCi/L)	Uranium-238 (pCi/L)	Specific Gravity
8/4/15	ND	410000	2210	611	63500	3710	67000	1.12
5/28/15	122	346000	3790	544	65000	3870	66100	1.08
8/30/16	ND	595000	3510	715	90200	4090	90100	1.13
8/29/17	ND	3390000	56000	489	76000	8100	92700	1.07
8/1/18	ND	461000	7360	307	13700	ND	8420	1.08
8/21/19	1080	434000	3490	296	11600	563	10800	1.10
8/19/20	1280	606000	4320	360	17000	1080	17700	1.11
9/1/21	1590	523000	3240	495	58400	3780	60000	1.25
8/24/22	ND	11200	ND	23.6	ND	ND	ND	1.07

Cell 4B LDS

Additional Radiological Analyses

Date	Thorium-228 (pCi/L)	Thorium-230 (pCi/L)	Thorium-232 (pCi/L)	Radium-226 (pCi/L)	Uranium-233/234 (pCi/L)	Uranium-235/236 (pCi/L)	Uranium-238 (pCi/L)	Specific Gravity
8/4/15	ND	452000	3660	161	62600	3890	60900	1.12
8/4/15 (Cell 65 - Duplicate of Cell 4B LDS)	ND	436000	4000	125	62600	2680	61300	1.12
5/28/15	334	487000	5430	55.2	63500	3900	65500	NS
8/30/16	ND	368000	1010	104	78600	3820	78900	1.11
8/29/17	4680	5220000	43200	143	846000	64200	894000	1.07
8/1/18	1520	424000	5130	88.3	14300	ND	18400	1.09
8/21/19	1030	368000	2650	105	8840	412	9600	1.05
8/19/20	888	541000	4070	153	11700	749	14500	1.11
9/1/21	803	452000	3110	174	10700	631	11400	1.10
8/24/22	ND	232000	1470	56.5	8580	365	7950	1.07

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 (Cell 4A LDS)
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 - 591138	3.0 °C
EL - C22081104	3.6 °C

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 (Hg 245.1)	E200.7 and E200.8 and E245.1 (Hg)
Gross Alpha	E900.0 or E900.1 or E903.0	E903.0
VOCs	SW8260B or SW8260C or SW8260D	SW8260D
Chloride	A4500-Cl B or E300.0	E300.0
Fluoride	A4500-F C or E300.0	A4500-F C
Sulfate	A4500-SO4 E or E300.0	E300.0
TDS	A2540 C	A2540C
Carbonate as CO3, Bicarbonate as HCO3	A2320 B	A2320B
pH	Not Specified	A4500-H B
Conductivity	Not Specified	A2510B
SVOCs	SW8270D	SW8270E

** - 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 (2-Butanone)	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	*
Calcium, Magnesium, Potassium, Sodium	*
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	*
Benz(a)anthracene	10
Benzidine	*
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	*
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	*
N-Nitrosodi-n-propylamine	10
N-Nitrosodiphenylamine	10
Pentachlorophenol	50
Phenanthrene	10
Phenol	10
Pyrene	10
Pyridine	*

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 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

Lab Report	Constituent	Result	Units
GEL - 591138	2-Butanone	ND	ug/L
	Acetone	ND	ug/L
	Benzene	ND	ug/L
	Carbon tetrachloride	ND	ug/L
	Chloroform	ND	ug/L
	Chloromethane	ND	ug/L
	Methylene Chloride	ND	ug/L
	Naphthalene	ND	ug/L
	Tetrahydrofuran	ND	ug/L
	Toluene	ND	ug/L
	Xylenes	ND	ug/L

E-6 Duplicate Sample Relative Percent Difference**

Major Ions (mg/l)	Cell 4A LDS	Cell 65	RPD %
Carbonate	<3	<3	NC
Bicarbonate	<6	<6	NC
Calcium	468	471	0.6
Chloride	6270	5970	4.9
Fluoride	1990	2080	4.4
Magnesium	4310	4360	1.2
Nitrogen-Ammonia	3500	3500	0.0
Nitrogen-Nitrate	96	96	0.0
Potassium	678	679	0.1
Sodium	8630	8710	0.9
Sulfate	66300	59900	10.1
pH (s.u.)	2.5	2.5	0.0
TDS	91400	93200	2.0
Conductivity (umhos/cm)	55400	55400	0.0
Metals (mg/l)			
Arsenic	24500	21700	12.1
Beryllium	252	261	3.5
Cadmium	3150	3220	2.2
Chromium	5720	5820	1.7
Cobalt	26900	27100	0.7
Copper	289000	292000	1.0
Iron	1100000	1110000	0.9
Lead	1390	1390	0.0
Manganese	191000	192000	0.5
Mercury	<0.1	<0.1	NC
Molybdenum	2940	2990	1.7
Nickel	51200	52000	1.6
Selenium	2000	1980	1.0
Silver	192	199	3.6
Thallium	325	309	5.0
Tin	<500	<500	NC
Uranium	116000	109000	6.2
Vanadium	472000	477000	1.1
Zinc	256000	258000	0.8
Radiologics (pCi/l)			
Gross Alpha*	34200	32100	7.41
VOCS (ug/L)			
Acetone	161	121	28.4
Benzene	<5	<5	NC
Carbon tetrachloride	<5	<5	NC
Chloroform	70.5	65.2	7.8
Chloromethane	5.15	<5	NC
MEK	50	40.7	20.5
Methylene Chloride	<25	<25	NC
Naphthalene	<5	<5	NC
Tetrahydrofuran	61.6	56.4	8.8
Toluene	<5	<5	NC
Xylenes	<15	<15	NC
SVOCS (ug/L)			
1,2,4-Trichlorobenzene	<30	<30	NC
1,2-Dichlorobenzene	<30	<30	NC
1,3-Dichlorobenzene	<30	<30	NC
1,4-Dichlorobenzene	<30	<30	NC
1-Methylnaphthalene	<3	<3	NC
2,4,5-Trichlorophenol	<30	<30	NC
2,4,6-Trichlorophenol	<30	<30	NC
2,4-Dichlorophenol	<30	<30	NC
2,4-Dimethylphenol	<30	<30	NC
2,4-Dinitrophenol	<50	<50	NC
2,4-Dinitrotoluene	<30	<30	NC
2,6-Dinitrotoluene	<30	<30	NC
2-Chloronaphthalene	<4.1	<4.1	NC

E-6 Duplicate Sample Relative Percent Difference**

Major Ions (mg/l)	Cell 4A LDS	Cell 65	RPD %
2-Chlorophenol	<30	<30	NC
2-Methylnaphthalene	<3	<3	NC
2-Methylphenol	<30	<30	NC
2-Nitrophenol	<30	<30	NC
3&4-Methylphenol	<37	<37	NC
3,3´-Dichlorobenzidine	<33	<33	NC
4,6-Dinitro-2-methylphenol	<30	<30	NC
4-Bromophenyl phenyl ether	<30	<30	NC
4-Chloro-3-methylphenol	<30	<30	NC
4-Chlorophenyl phenyl ether	<30	<30	NC
4-Nitrophenol	<30	<30	NC
Acenaphthene	<3	<3	NC
Acenaphthylene	<3	<3	NC
Anthracene	<3	<3	NC
Azobenzene (1,2-Diphenylhydrazine)	<30	<30	NC
Benz(a)anthracene	<3	<3	NC
Benzidine	<39	<39	NC
Benzo(a)pyrene	<3	<3	NC
Benzo(b)fluoranthene	<3	<3	NC
Benzo(g,h,i)perylene	<3	<3	NC
Benzo(k)fluoranthene	<3	<3	NC
Bis(2-chloroethoxy)methane	<30	<30	NC
Bis(2-chloroethyl) ether	<30	<30	NC
Bis(2-chloroisopropyl) ether	<30	<30	NC
Bis(2-ethylhexyl) phthalate	<3	<3	NC
Butyl benzyl phthalate	<3	<3	NC
Chrysene	<3	<3	NC
Dibenz(a,h)anthracene	<3	<3	NC
Diethyl phthalate	<3	<3	NC
Dimethyl phthalate	<3	<3	NC
Di-n-butyl phthalate	<3	<3	NC
Di-n-octyl phthalate	<3	<3	NC
Fluoranthene	<3	<3	NC
Fluorene	<3	<3	NC
Hexachlorobenzene	<30	<30	NC
Hexachlorobutadiene	<30	<30	NC
Hexachlorocyclopentadiene	<30	<30	NC
Hexachloroethane	<30	<30	NC
Indeno(1,2,3-cd)pyrene	<3	<3	NC
Isophorone	<35	<35	NC
Naphthalene	<3	<3	NC
Nitrobenzene	<30	<30	NC
N-Nitrosodimethylamine	<30	<30	NC
N-Nitrosodi-n-propylamine	<30	<30	NC
N-Nitrosodiphenylamine	<30	<30	NC
Pentachlorophenol	<30	<30	NC
Phenanthrene	<3	<3	NC
Phenol	<30	<30	NC
Pyrene	<3	<3	NC
Pyridine	<30	<30	NC

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.

NC = Not Calculated.

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	58700	937	Y	15	NA
Cell 2 Slimes	1970	54.2	Y	15	NA
Cell 3	Not Sampled - dry		NC	15	NA
Cell 4A	197000	454	Y	15	NA
Cell 4A LDS	34200	198	Y	15	NA
Cell 4B	6210	86.3	Y	15	NA
Cell 4B LDS	97600	331	Y	15	NA
Cell 65 (Duplicate of Cell 4A LDS)	32100	203	Y	15	NA

GWQS = Groundwater Quality Standard

NA - the counting error is less than 20% of the activity as required by the GWDP and this check column is not applicable.

NC = Not calculated. The sample results are nondetect and the check is not applicable.

E-8: Laboratory Matrix QC

Matrix Spike % Recovery Comparison

Lab Report	Sample ID	Analyte	MS %REC	MSD %REC	REC Range	RPD
C22081104	N/A	Uranium*	NC	NC	70 - 130	NC
591138	Cell 1	Chloroform	65	66	69 - 133	2
591138	Cell 1	Methylene Chloride	60	63	62 - 125	5
591138	Cell 1	Naphthalene	56	62	61 - 134	9
591138	N/A	60 of 62 SVOCs	0	0	Misc	>150
591138	Cell 1	Gross Alpha*	NC	NC	70 - 130	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.

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

LCS % Recovery

All Laboratory Control Samples were within acceptance limits.

Laboratory Duplicate % Recovery Comparison

All Laboratory Duplicates were within acceptance limits.

Method Blanks

Lab Report	Lab Sample ID	Analyte	Blank Result	RL	Units
C22081104	ACID220830_A	Total Acidity As Ca CO3	2	NA	mg/L
C22081104	ACID220828_A	Total Alkalinity as CaCO3	2.0	2	mg/L
C22081104	R286371 - MB	Conductivity	3.0	1	umhos/cm
C22081104	IC3-C_2208829A - MB	Chloride	0.02	0.01	mg/L
C22081104	IC3-C_2208829A - MB	Sulfate	0.3	0.2	mg/L
C22081104	MB-170022	Uranium	0.1	0.09	mg/L
C22081104	LRB	Thallium	0.0004	0.0003	mg/L
C22081104	LRB	Uranium	0.00004	0.00003	mg/L
C22081104	LRB	Silver	0.00002	0.00001	mg/L
C22081104	LRB	Uranium	0.00006	0.00003	mg/L

Surrogate % Recovery

Lab Report	Well/Sample	Analyte	Surrogate %REC	Lab Specified REC Range
591138	N/A - SVOC MSD	2-Fluorobiphenyl	36	39 - 112
591138	N/A - SVOC MSD	Nitrobenzene-d5	33	39 - 112