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Sent VIA OVERNIGHT DELIVERY

Mr. Rusty Lundberg
Director
Division of Radiation Control
Utah Department of Environmental Quality
195 North 1950 West
P.O. Box 144850
Salt Lake City, UT 84114-4820

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

Dear Mr. Lundberg:

Enclosed are two copies of the White Mesa Uranium Mill Annual Tailings Wastewater Monitoring Report for 2014 as required by the Groundwater Quality Discharge Permit UGW370004, as well as two CDs each containing a word searchable electronic copy of the report.

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

Yours very truly,



ENERGY FUELS RESOURCES (USA) INC.
Jaime Massey
Regulatory Compliance Specialist

cc: Scott A. Bakken
Harold R. Roberts
David E. Turk
Kathy Weinel
Dan Hillsten

White Mesa Uranium Mill

2014 Annual Tailings Cells Wastewater Sampling Report

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



Prepared by:

Energy Fuels Resources (USA) Inc.
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November 24, 2014

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2014 ANNUAL TAILINGS CELLS WASTEWATER SAMPLING REPORT

1.0 INTRODUCTION

This is the 2014 Annual Tailings Cells 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 Tailings Cells Leak Detection Systems and Slimes Drains*, Revision: 2.1, dated July 30, 2012 (the “Sampling Plan”) and approved by the State of Utah Division of Radiation Control (the “DRC”) on August 2, 2012.

Tailings 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 tailings Cells 1, 3, 4A, and 4B, the solutions in the slimes drains in Cells 2, 3, 4A, and 4B (for Cells 3, 4A and 4B after the commencement of dewatering), the solutions in the leak detection system (the “LDS”) in Cell 4A and 4B and any detected solutions in the LDS in Cells 1, 2, and 3 at the time of the August Sampling event. The results of the sampling event are required to be reported to the DRC with the Mill’s Third Quarter Groundwater Monitoring Report due December 1, of each year.

2.0 SUMMARY OF MILL TAILINGS ACTIVITIES IN 2014

This section provides a brief description of each tailings impoundment at the Mill, 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 utilizes tailings and evaporation cells for disposal of Mill effluents as indicated below:

- Cell 1: dedicated to evaporation of Mill waste solutions;
- Cell 2: contains Mill tailings, has an interim cover and is closed to future tailings disposal;
- Cell 3: contains Mill tailings and is in the final stages of filling;
- 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 2014, Cell 1 received fluid from the Mill process, storm water run-off, and Mill laboratory waste. The LDS in Cell 1 was dry in 2014.

2.2 Cell 2

Cell 2 is a 67-acre impoundment built in May of 1980. Cell 2 was taken out of service and covered with interim cover in 2008. Cell 2 is equipped with a LDS, and a slimes drain. The LDS was dry in 2014. As part of closure activities, EFRI began monitoring the slimes drain system in 2008. The fluid from the slimes drain is pumped to Cell 4A. Cell 2 no longer receives any solutions or solids.

2.3 Cell 3

Cell 3 is a 71-acre impoundment built in September 1982. Cell 3 is nearly full of solids and is undergoing pre-closure steps. This cell is equipped with a LDS and a slimes drain. The LDS was dry in 2014 and the slimes drain system will be monitored once dewatering begins. In 2014, Cell 3 received solid Mill waste and solid 11e.2 byproduct material from in situ recovery (“ISR”) facilities.

2.4 Cell 4A

Cell 4A is a 40-acre impoundment built in 2008. This cell is equipped with a LDS and a slimes drain. The slimes drain system will be monitored once dewatering begins. The LDS in Cell 4A was sampled in 2014, as described below. In 2014, Cell 4A received solutions from the Mill process, and solid tailings sands.

2.4 Cell 4B

Cell 4B is a 40-acre impoundment built in 2011. It operates as an evaporation pond which receives solutions only. Cell 4B is equipped with a LDS. In 2014, Cell 4B received fluid from the Mill process. The LDS in Cell 4B was sampled in 2014, as described below.

3.0 SAMPLING EVENTS AND SAMPLING METHODOLOGY

3.1 Sampling Events

Samples of solutions from tailings Cells 1, 3, 4A, and 4B, the Cell 2 slimes drain and the Cell 4A and Cell 4B LDSs were collected on August 19, 2014. During review of the duplicate metals data and gross alpha minus Rn and U (“gross alpha”) data, quality problems were noted. The Quality Assurance Manager (“QAM”) contacted the laboratories and requested a data review and subsequent reanalysis of several samples which were still within the method-specified holding times. The reanalysis of the samples is discussed in Section 4.0 below.

In accordance with the Permit, DRC was notified of the August 19, 2014 sampling event and a DRC representative was present for a part of the sampling. The DRC representative collected a split aliquot of the Tailings Cell 2 slimes drain sample.

Maps showing the locations of the tailings 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 tailings wastewater 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 tailings wastewater samples be analyzed for the water quality parameters listed in Table 2 of the Permit and SVOCs.

3.2 Field Data

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

3.3 Sampling Methodology, Equipment and Decontamination Procedures

As noted in the DRC-approved Sampling Plan, Revision 2.1, dated July 30, 2012, 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 tailings, LDS and slimes drain samples are at a pH of 3.0 or less at the time of collection without additional preservative. The addition of acidic preservatives in the field would add minimal if any protection from biological growth or precipitation. The VOC sample aliquots were preserved in the field.

3.3.1 Tailings Cells

Tailings fluid samples were collected at the tailings cell sampling stations shown on the Figures in Tab B using a ladle as noted in the DRC-approved Sampling Plan, Section 3.1.2.

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

3.3.2 Cell 2 Slimes Drain

Once a tailings cell has started the dewatering procedures, a sample will be collected from the slimes drain system. At this time Cell 2 is the only slimes drain that requires sampling. The location of the slimes drain for Cell 2 is shown in Tab B. While Cells 3, 4A and 4B are equipped with slimes drain sample locations, the Cells are still active 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 DRC-approved Sampling Plan, Section 3.1.3.

Due to the use of 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 DRC-approved Sampling Plan, Section 3.2.1.

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 DRC-approved Sampling Plan, Section 3.2.1.

3.3.5 Cells 1, 2, 3,

The Cells 1, 2, 3 LDSs were not sampled during the 2014 sampling event because the systems were dry.

3.4 Field QC Samples

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

3.5 Laboratory Results

All analytical results were provided by one of the Mill’s two contract analytical laboratories, GEL Laboratories (“GEL”) or Chemtech-Ford (“CTF”).

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

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

4.0 QUALITY ASSURANCE AND DATA EVALUATION

The Permit requires that the annual tailings 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 this requirement, the data validation completed for the tailings 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 QAM performed a QA/QC review to confirm compliance of the monitoring program with the requirements of the Permit, the QAP, and the Sampling Plan. As required, data QA includes preparation and analysis of QC samples in the field, review of field procedures, an analyte completeness review, and quality control review of laboratory data methods and data. Identification of field QC samples that were collected and analyzed is provided in Section 3.4 and 4.3.1. Discussion of adherence to the Sampling Plan is provided in Section 4.1. Analytical completeness review results are provided in Section 4.2. The steps and tests applied to check laboratory data QA/QC are discussed in Section 4.3.

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

4.1 Adherence to Sampling Plan and Permit Requirements

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

4.2 Analyte Completeness Review

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

4.3 Data Validation

The QAP and the Permit identify the data validation steps and data quality control checks required for the tailings wastewater monitoring program. Consistent with these requirements, the QAM performed the following evaluations: a field data QA/QC evaluation, a receipt temperature check, a holding time check, an analytical method check, a reporting limit check, a trip blank check, a QA/QC evaluation of sample duplicates, a gross alpha counting error evaluation and a review of each laboratory’s reported QA/QC information. Each evaluation is discussed in the following sections. Data check tables indicating the results of each test are provided under Tab E.

4.3.1 Field Data QA/QC Evaluation

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

4.3.2 Holding Time Evaluation

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

4.3.3 Laboratory Receipt Temperature Check

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

4.3.4 Analytical Method Check

The analytical methods reported by both laboratories were checked against the required methods specified in the QAP. The review indicated that the tailings program samples were analyzed in accordance with Table 1 of the QAP except for the ammonia analyses presented in Tab C. AWAL, the Mill's usual laboratory suffered a catastrophic fire at their facility in July of 2014 and could not accept Mill samples during the third quarter of 2014. CTF was used for the 2014 tailings sampling program non-radiochemistry analyses. CTF does not have Utah certification for the ammonia methods specified in the DRC-approved QAP; however, CTF does have Utah certification for other ammonia methods. EFRI discussed a method variation with DRC prior to the third quarter sampling events and DRC approved a method variation for ammonia on July 28, 2014 provided that all QAP required RLs could be met. CTF achieved the QAP required RLs with the alternate ammonia method. The tailings program samples were analyzed in accordance with Table 1 of the QAP or the alternate DRC-approved method. 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 concentrations defined in Table 2 of this Permit,

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

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

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

4.3.6 Trip Blank Evaluation

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

4.3.7 QA/QC Evaluation for Sample Duplicates

Section 9.1.4 a) of the QAP states that the relative percent difference (the “RPD”) will be calculated for the comparison of duplicate and original field samples. The QAP acceptance limits for RPDs between the duplicate and original field sample is less than or equal to 20% unless the measured results are less than 5 times the required detection limit. This standard is based on the EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, February 1994, 9240.1-05-01 as cited in the QAP. The RPDs are calculated for all duplicate pairs for all analytes regardless of whether or not the reported concentrations are greater than 5 times the required detection limits; however, data will be considered noncompliant only when the results are greater than 5 times the required detection limit and the RPD is greater than 20%. RPDs are also only calculated when both the sample and the duplicate report a detection for any given analyte. If only one of the pair reports a detection the RPD cannot be calculated. The additional duplicate information is provided for information purposes.

During data review, it was noted that the metals results for sample pair Cell 4A/Cell 65 showed poor reproducibility. The QAM contacted CTF and requested a review of the data. The laboratory investigation noted that there was a sample switch during sample preparation, which resulted in the wrong sample data being reported as for the metals duplicate. Since the metals samples were still within the method-specified holding times, the duplicate sample was reanalyzed and the data re-reported. The reanalysis data showed better agreement with the parent sample and the issue was considered resolved.

The uranium and zinc results for the duplicate sample, Cell 4A/Cell 65, did not meet the duplicate comparability check with an RPD of 25% and 21% respectively. Per the QAP, Revision 7.2, and in response to requests from DRC, a separate corrective action for duplicate RPDs outside of acceptance limits has been developed. The revised procedure for duplicate

results outside of acceptance limits was implemented for the uranium and zinc results in duplicate pair Cell 4A/Cell 65. The corrective actions that were taken (on the reanalysis data) in accordance with the revised procedure are as follows: the QA Manager contacted the Analytical Laboratory and requested a review of the raw data to assure that there were no transcription errors and the data were accurately reported. The laboratory noted that the data were accurate and reported correctly. Reanalysis was not completed as the RPDs above the limit are likely due to interferences caused by the matrix as discussed below.

There is no effect on the usability of the data due to the uranium and zinc 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 Radiologics Counting Error

Section 9.14 of the QAP requires that all gross alpha analysis reported with an activity equal to or greater than the Groundwater Compliance Limit (the “GWCL”) (for the tailings wastewater samples the Groundwater Quality Standard (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 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 duplicate sample did not meet the duplicate comparability check specified in the QAP. Results of the RPD test are provided under Tab E. Per QAP, Revision 7.2, and in response to requests from DRC, 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 QA Manager contacted the Analytical Laboratory and requested a review of the raw data to assure that there were no transcription errors and the data were accurately reported. The laboratory noted that the data were accurate and reported correctly. Reanalysis was not completed as the RPDs above the limit are likely due to interferences caused by the matrix as discussed below.

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

4.3.9 Laboratory Matrix QC Evaluation

Section 9.2 of the QAP requires that the laboratory's QA/QC Manager check the following items in developing data reports: (1) sample preparation information is correct and complete, (2) analysis information is correct and complete, (3) appropriate analytical laboratory procedures are followed, (4) analytical results are correct and complete, (5) QC samples are within established control limits, (6) blanks are within QC limits, (7) special sample preparation and analytical requirements have been met, and (8) documentation is complete. In addition to other laboratory checks described above, EFRI's QA Manager rechecks QC samples and blanks (items (5) and (6)) to confirm that the percent recovery for spikes and the relative percent difference for spike duplicates are within the method-specific required limits, or that the case narrative sufficiently explains any deviation from these limits. Results of this quantitative check are provided under Tab E. All lab QA/QC results from both CTF and GEL met these requirements. There were QC results which did not meet laboratory established acceptance limits, as identified in Tab E and described below.

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

The check samples included at least the following: a method blank, a laboratory control spike ("LCS"), a matrix spike ("MS") and a matrix spike duplicate ("MSD"), or the equivalent, where applicable. It should be noted that:

- Laboratory fortified blanks are equivalent to LCSs.
- Laboratory reagent blanks are equivalent to method blanks.
- Post digestion spikes are equivalent to MSs.
- Post digestion spike duplicates are equivalent to MSDs.
- For method E900.1, used to determine gross alpha, a sample duplicate was used instead of a MSD.

All qualifiers, and the corresponding explanations reported in the QA/QC Summary Reports for any of the check samples for any of the analytical methods were reviewed by the QAM.

The QAP Section 8.1.2 requires that a MS/MSD pair be analyzed with each analytical batch, depending upon the analytical method requirements and/or method limitations. The QAP does not specify acceptance limits for the MS/MSD pair, and the QAP does not specify that the MS/MSD pair be prepared on EFRI samples only. Acceptance limits for MS/MSDs are set by the laboratories. The review of the information provided by the laboratories in the data packages verified that the QAP requirement to analyze a MS/MSD pair with each analytical batch was met. While the QAP does not require it, the recoveries were reviewed for compliance with the

laboratory established acceptance limits. The QAP does not require this level of review and the results of this review are provided for information only.

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

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

The QAP specifies that surrogate compounds shall be employed for all organic analyses, but the QAP does not specify acceptance limits for surrogate recoveries. The analytical data associated with the annual sampling met the requirement specified in the QAP. The information from the Laboratory QA/QC Summary Reports indicates that the surrogate recoveries were within acceptable laboratory limits for the surrogate compounds. 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 recoveries for the quarterly samples were within acceptable laboratory limits for all LCS compounds except as noted in Tab E. The laboratory noted that even though the LCS recovery was outside of the lab control limits it was within Marginal Exceedance limit (± 4 standard deviations of mean recovery) and the batch is considered to be in control based on recoveries of other analytes. There is no effect on the quality or usability of the data because the method was in control as indicated by the recovery in other analytes. Furthermore, there are no requirements in the QAP for LCS recovery assessment.

The QAP Section 8.1.2 requires that each analytical batch shall be accompanied by a reagent blank. Contamination detected in analysis of reagent blanks (method blank) will be used to evaluate any analytical laboratory contamination of environmental samples. The QAP criteria for method blanks states that nonconformance will exist when blanks are within an order of magnitude of the sample results. Iron, calcium, magnesium, potassium, sodium, tin, zinc, manganese and ammonia were reported the method blanks from CTF. The QAP criteria were met for iron, calcium, magnesium, potassium, sodium, zinc, manganese and ammonia because the method blank detections were not within an order of magnitude of the sample results. The method blank detection for tin could not be assessed using the QAP criteria because tin was not

detected in any of the samples above the required RL. The tin detection in the method blank did not affect the samples because there were no detections in the samples which indicates that there were no false positives reported in the samples as a result of laboratory contamination. 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.

4.3.10 Gross Alpha

During the QC review it was noted that the gross alpha samples were not filtered by GEL prior to analysis as requested on the COC. The QAM contacted the laboratory and requested the samples be filtered and reanalyzed. The laboratory filtered the samples and reanalyzed them. All filtering and reanalysis were completed within the method-specified holding time of 6-months. The corrected data are reported in Tab C.

5.0 HISTORIC DATA

The historic analytical data for the tailings wastewater sampling program are included in Tab D. In addition, the minimum and maximum concentrations compiled in the Utah Division of Radiation Control Groundwater Quality Discharge Permit, Statement of Basis for a Uranium Mining Facility at White Mesa, South of Blanding, Utah, dated December 1, 2004 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 1.3. As expected, the solutions contained gross alpha, major ions, metals, and one SVOC. VOCs were not detected. Regarding major ions, chloride, fluoride, magnesium, ammonia, potassium, sodium and sulfate were one to three 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 in the gross alpha concentration was noted in the 2014 sample. This increase was likely due to the following factors:

- During the June, July and August 2014 operating period, fresh water was not added to the Mill process. Re-circulated tailings liquids were used for process water. The re-circulated fluids were returned to the tailings system or evaporation ponds following use in the Mill process. This use of re-circulated fluids contributed to the concentration of the fluids in Cell 1.
- During the August 2013 through August 2014 period, the Mill's production was limited resulting in less fresh water added to the Mill process and therefore to the cell. The

decrease in fresh water additions resulted in concentration of the existing fluids due to a lack of dilution.

- Recent drought conditions resulted in less precipitation, less storm water, and less rain water being placed in the cell. Drought conditions also result in increased evaporation. These factors also contributed to concentration of cell fluids.

The fluid levels in Cell 1 dropped 8.16 inches between August 2013 and August 2014. The decrease in fluid levels is further evidence that the increase in the gross alpha results is caused by a lack of dilution and subsequent concentration.

With the exception of gross alpha, the concentrations reported in the 2014 sample remained within historic ranges. It is important to note that not all constituents present in the tailings fluids will exhibit the same behavior as a result of concentration of the tailings fluids and 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.

6.2 Cell 3

Cell 3 solutions were acidic in nature, with a laboratory pH of 2.2. As expected, the solutions contained gross alpha, major ions, and metals. SVOCs and VOCs were not detected. Regarding major ions, chloride, fluoride, magnesium, ammonia, sodium and sulfate were generally one to two orders of magnitude greater in concentration than the other major ions. Metals exhibiting the greatest concentration by at least one order of magnitude greater than the other metals analyzed included arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, selenium, uranium, vanadium and zinc. The gross alpha result decreased from the 2013 sample. When comparing the 2014 data to the 2013 sampling events, the concentrations of major ions and metals reported in the 2014 sample decreased from the 2013 sample, most likely due to the fact that Cell 3 is no longer used for the disposal of fluids in preparation for eventual closure. Cell 3 solutions are limited to a finite pool area of less than ten percent of the cell surface area. The lack of fluids placed in tailings Cell 3 allowed for evaporation and crystallization/solidification/precipitation of the inorganic constituents present in the remaining fluids present, thus reducing the concentration in the fluid sample.

6.3 Cell 4A

Cell 4A solutions were acidic in nature, with a laboratory pH of 1.7. As expected, the solutions contained gross alpha, major ions, metals. SVOCs and VOCs were not detected. Cell 4A 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. An increase in the gross alpha concentration was noted in the 2014 sample. This increase was likely due to the following factors:

- During the June, July and August 2014 operating period, fresh water was not added to the Mill process. Re-circulated tailings liquids were used for process water. The re-circulated fluids were returned to the tailings system or evaporation ponds following use in the Mill process. This use of re-circulated fluids contributed to the concentration of the fluids in Cell 4A.
- During the August 2013 through August 2014 period, the Mill's production was limited resulting in less fresh water added to the Mill process and therefore to the cell. The decrease in fresh water additions resulted in concentration of the existing fluids due to a lack of dilution.
- Recent drought conditions resulted in less precipitation, less storm water, and less rain water being placed in the cell. Drought conditions also result in increased evaporation. These factors also contributed to concentration of cell fluids.

The fluid levels in Cell 4A dropped 11.52 inches between August 2013 and August 2014. The decrease in fluid levels is further evidence that the increase in the gross alpha results is caused by a lack of dilution and subsequent concentration.

With the exception of gross alpha, the concentrations reported in the 2014 sample remained within historic ranges. It is important to note that not all constituents present in the tailings fluids will exhibit the same behavior as a result of concentration of the tailings fluids and the increases in constituent results will not be linear. The individual constituent results are greatly affected by the matrix of the tailings fluids and each constituent will behave differently based on the matrix interactions and the differing solubility properties of the constituent.

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

6.4 Cell 4B

Cell 4B solutions were acidic in nature, with a laboratory pH of 1.6. As expected, the solutions contained gross alpha, major ions, metals and two SVOCs. VOCs were not detected. Cell 4B 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. An increase in the gross alpha concentration was noted in the 2014 sample. This increase was likely due to the following factors:

- During the June, July and August 2014 operating period, fresh water was not added to the Mill process. Re-circulated tailings liquids were used for process water. The re-circulated fluids were returned to the tailings system or evaporation ponds following use in the Mill process. This use of re-circulated fluids contributed to the concentration of the fluids in Cell 4B.

- During the August 2013 through August 2014 period, the Mill's production was limited resulting in less fresh water added to the Mill process and therefore to the cell. The decrease in fresh water additions resulted in concentration of the existing fluids due to a lack of dilution.
- Recent drought conditions resulted in less precipitation, less storm water, and less rain water being placed in the cell. Drought conditions also result in increased evaporation. These factors also contributed to concentration of cell fluids.

The fluid levels in Cell 4B dropped 32.88 inches between August 2013 and August 2014. The decrease in fluid levels is further evidence that the increase in the gross alpha results is caused by a lack of dilution and subsequent concentration.

With the exception of gross alpha, the concentrations reported in the 2014 sample remained within historic ranges. It is important to note that not all constituents present in the tailings fluids will exhibit the same behavior as a result of concentration of the tailings fluids and the increases in constituent results will not be linear. The individual constituent results are greatly affected by the matrix of the tailings fluids and each constituent will behave differently based on the matrix interactions and the differing solubility properties of the constituent.

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

6.5 Cell 2 Slimes Drain

Cell 2 Slimes drain fluid was acidic in nature, with a laboratory pH of 3.1. As expected, the solutions contained gross alpha, major ions, metals and two SVOCs. VOCs were not 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, nickel, selenium, uranium, vanadium and zinc were at least one order of magnitude greater in concentration than other metals analyzed. An increase in the gross alpha concentration was noted in the 2014 sample. The gross alpha result increased but is the same order of magnitude of the historic data. Overall, the concentrations reported in the 2014 sample remained approximately the same as the 2013 sample. Concentration changes noted are within the analytical accuracy of the methods used for analysis.

6.6 Cells 3, 4A and 4B Slimes Drain

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

6.7 Cell 2 Leak Detection System

Consistent with the Permit, Cell 2 LDS was not sampled during the 2014 sampling event. The Cell 2 LDS is now dry and covered to prevent precipitation inflow.

6.8 Cells 1 and 3 Leak Detection System

Consistent with the Permit, Cells 1 and 3 leak detection systems were not sampled during the 2014 sampling event because the systems were dry.

6.9 Cell 4A Leak Detection System

Cell 4A LDS solutions were acidic in nature, with a laboratory pH of 2.4. As expected, the solutions contained gross alpha, major ions, metals and one VOC. SVOCs were not detected. Cell 4A LDS fluid exhibited the highest major ion concentrations for chloride, fluoride, magnesium, ammonia, sodium and sulfate. The metals arsenic, cadmium, chromium, cobalt, copper, iron, manganese, molybdenum, nickel, selenium, uranium, vanadium and zinc were one or more orders of magnitude greater than the other metals analyzed. An increase in the gross alpha concentration was noted in the 2014 sample. The concentrations reported in the Cell 4A LDS fluid are similar to the concentrations reported for the fluid in Cell 4A. Because the Cell 4A LDS fluids are from Cell 4A, the similarities in concentration are expected. The factors and lack of dilution affecting the Cell 4A fluid concentrations will have the same impacts and overall affects on the LDS fluid concentrations. Overall, the concentrations reported in the 2014 Cell 4A LDS sample increased slightly from the 2013 sample. Increases were due to concentration of the Cell 4A fluids caused by a lack of dilution as discussed above.

6.10 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, metals and one VOC. SVOCs were not detected. Cell 4B LDS fluid exhibited the highest major ion concentrations for chloride, magnesium, ammonia, sodium and sulfate. The metals arsenic, cadmium, chromium, cobalt, copper, iron, manganese, molybdenum, nickel, selenium, uranium, vanadium and zinc were one or more orders of magnitude greater than the other metals analyzed. An increase in the gross alpha concentration was noted in the 2014 sample. The concentrations reported in the Cell 4B LDS fluid are similar to the concentrations reported for the fluid in Cell 4B. Because the Cell 4B LDS fluids are from Cell 4B, the similarities in concentration are expected. The factors and lack of dilution affecting the Cell 4B fluid concentrations will have the same impacts and overall affects on the LDS fluid concentrations. Overall, the concentrations reported in the 2014 Cell 4B LDS sample increased slightly from the 2012 sample (no sample was collected in 2013 because the system was dry). Increases were due to concentration of the Cell 4B fluids caused by a lack of dilution as discussed above.

6.11 Summary and Conclusions of Analytical Results

The metals arsenic, cadmium, chromium, cobalt, copper, iron, manganese, molybdenum, nickel, selenium, uranium, vanadium and zinc were generally present in greatest concentration for all samples. For major ions, chloride, fluoride, magnesium, ammonia, sodium, and sulfate were predominant. Increases were noted for several metals and major anions as well as in the gross alpha concentrations. The increased concentrations are indicative of a “concentration effect” and provide information relative to the system as a whole. The individual constituent results are greatly affected by the matrix of the tailings fluids and each constituent will behave differently based on the matrix interactions and the differing solubility properties of the constituent.

The increase in concentrations was expected because less fresh water was used in the Mill process and therefore less fresh water was added to the tailings fluids resulting in diminished dilution and higher constituent concentrations. Evidence of the decreased water addition can be seen in the significant drops in the fluid levels in Cells 1, 4A and 4B and the increased total dissolved solids results for Cells 1, 4A and 4B Cell 4A LDS and Cell 4B LDS. Specifically, Cell 1 fluid levels decreased by 8.16 inches, Cell 4A fluid levels decreased by 11.52 inches and Cell 4B fluid levels decreased by 32.88 inches. Increased evaporation due to drought conditions also contributed to the decrease in fluid levels. The decrease in fluid levels and increased evaporation resulted in an increase in concentrations of certain constituents.

7.0 CORRECTIVE ACTION REPORT

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

7.1 Assessment of Corrective Actions from Previous Period

No corrective action reports were required for the 2013 annual sampling event and as such there is no assessment of previous actions necessary.

7.0 SIGNATURE AND CERTIFICATION

This document was prepared by Energy Fuels Resources (USA) Inc. on November 24, 2014.

ENERGY FUELS RESOURCES (USA) INC.

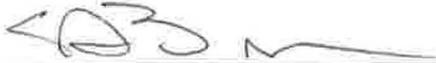
By:



Scott A. Bakken
Director, Permitting & Environmental Affairs

Certification:

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



Scott A. Bakken
Director, Permitting & Environmental Affairs
Energy Fuels Resources (USA) Inc.

TABLES

Table 1 Summary of 2014 Tailings Cell Wastewater Monitoring

Location	Sample Date	Date of Laboratory Report	Work Order Number/Lab Set ID
Cell 1 Tailings Fluid	8/19/2014	GEL – 9/19/2014 (<i>10/14/2014</i>) CTF – 9/15/2014 (<i>10/16/2014</i>)	GEL – 358469 CTF - 1408830
Cell 2 Slimes Drain	8/19/2014	GEL – 9/19/2014 (<i>10/14/2014</i>) CTF – 9/15/2014 (<i>10/16/2014</i>)	GEL – 358469 CTF – 1408830
Cell 3 Tailings Fluid	8/19/2014	GEL – 9/19/2014 (<i>10/14/2014</i>) CTF – 9/15/2014 (<i>10/16/2014</i>)	GEL – 358469 CTF – 1408830
Cell 4A Tailings Fluid	8/19/2014	GEL – 9/19/2014 (<i>10/14/2014</i>) CTF – 9/15/2014 (<i>10/16/2014</i>)	GEL – 358469 CTF – 1408830
Cell 4 LDS	8/19/2014	GEL – 9/19/2014 (<i>10/14/2014</i>) CTF – 9/15/2014 (<i>10/16/2014</i>)	GEL – 358469 CTF – 1408830
Cell 4B Tailings Fluid	8/19/2014	GEL – 9/19/2014 (<i>10/14/2014</i>) CTF – 9/15/2014 (<i>10/16/2014</i>)	GEL – 358469 CTF – 1408830
Cell 65 (Duplicate of Cell 4A Tailings Fluid)	8/19/2014	GEL – 9/19/2014 (<i>10/14/2014</i>) CTF – 9/15/2014 (<i>10/16/2014</i>)	GEL – 358469 CTF - 1408830

Notes:

GEL = GEL Laboratories, LLC

CTF = Chemtech-Ford Laboratories

Date in italics and parentheses reflects the date of the revised report. The reports were revised due to reanalysis of all or part of the constituents due to laboratory errors noted during the data review. All reanalyses were completed within the method-specified holding times.

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- E-3 Analytical Method Check
- E-4 Reporting Limit Evaluation
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Tab A

Tailings and Slimes Drain Field Sheets

Field Data Record-Tailings, LDS and Slimes Drain Sampling

Location: Cell 1 Sampling Personnel: Garrin Palmer, Tanner Holliday

Is this a Slimes Drain? Yes No

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

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Partly Cloudy

Field Parameter Measurements:

-pH NA
 -Temperature (°C) NA

Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Peristaltic Pump	Bailer	Ladle	
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech Ford
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Other Non Radiologies	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GEL
SVOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech Ford
Conductivity	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"

QC Samples Associated with this Location:

- Rinsate Blank
- Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0800. Garrin, Tanner, Dean Henderson Present. Samples were collected at 0815. Left site at 0817.

Field Data Record-Tailings, LDS and Slimes Drain Sampling

Location: Cell 2 Slimes Sampling Personnel: Garrin Palmer, Tanner Holliday

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): 34.10

Weather Conditions at Time of Sampling: Partly Cloudy

Field Parameter Measurements:

-pH NA
 -Temperature (°C) NA

Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ChemTech Ford
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	"
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	"
Other Non Radiologics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	"
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SEL
SVOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ChemTech Ford
Conductivity	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	"

QC Samples Associated with this Location:

- Rinsate Blank
- Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0818. Garrin, Tanner, Dean Henderson present. Samples were collected at 0825. Left site at 0840. Dean split the sample location. Left site at 0845

Field Data Record-Tailings, LDS and Slimes Drain Sampling

Location: Cell 3 Sampling Personnel: Garrin Palmer, Tanner Holliday

Is this a Slimes Drain? Yes No

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

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Partly cloudy

Field Parameter Measurements:

-pH NA
 -Temperature (°C) NA

Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Other Non Radiologics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GEL
SVOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
Conductivity	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"

QC Samples Associated with this Location:

- Rinsate Blank
- Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0855. Garrin, Tanner & Dean Henderson all present. Samples were collected at 0900. Left site at 0910.

Field Data Record-Tailings, LDS and Slimes Drain Sampling

Location: Cell 4A Sampling Personnel: Garcia, Tanner

Is this a Slimes Drain? Yes No

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

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Partly cloudy

Field Parameter Measurements:

-pH NA
 -Temperature (°C) NA

Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Other Non Radiologics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BEL
SVOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
Conductivity	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford

QC Samples Associated with this Location:

Rinsate Blank

Duplicate

Duplicate Sample Name: Cell 65

Notes: Arrived on site at 0917. Garcia, Tanner, Dean present for sampling. Samples were collected at 0925. Left site at 0935

Field Data Record-Tailings, LDS and Slimes Drain Sampling

Location: Cell 4A LDS Sampling Personnel: Garrin, Tanner

Is this a Slimes Drain? ~~Yes~~ No

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

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Partly cloudy

Field Parameter Measurements:

-pH NA
 -Temperature (°C) NA

Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Other Non Radiologics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GFL
SVOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
Conductivity	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"

QC Samples Associated with this Location:

- Rinsate Blank
- Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0936. Garrin, Tanner, Dean present for sampling. Samples were collected at 0940. MS/MSD was done at this location. Filled dedicated stainless steel bucket at LDS discharge then used ladle to fill sample bottles. Left site at 0950.

Field Data Record-Tailings, LDS and Slimes Drain Sampling

Location: Cell 4B Sampling Personnel: Garrin Tanner

Is this a Slimes Drain? Yes No

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

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Partly Cloudy

Field Parameter Measurements:

-pH NA
 -Temperature (°C) NA

Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech - Ford
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Other Non Radiologies	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GEL
SVOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech - Ford
Conductivity	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"

QC Samples Associated with this Location:

- Rinsate Blank
- Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 1002. Garrin Tanner, Dean present for sampling. Samples were collected at 1010. Left site at 1020.

Field Data Record-Tailings, LDS and Slimes Drain Sampling

Location: Cell 4B LDS Sampling Personnel: Garrin, Tanner

Is this a Slimes Drain? Yes No

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

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Partly cloudy

Field Parameter Measurements:

-pH NA
 -Temperature (°C) NA

Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Other Non Radiologics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GEL
SVOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
Conductivity	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"

QC Samples Associated with this Location:

Rinsate Blank

Duplicate

Duplicate Sample Name: _____

Notes: Arrived on site at 0951. Garrin, Tanner, Dean present. Samples were collected at 1000. A stainless steel (dedicated) bucket ~~was~~ was filled at LDS discharge then a ladle was used to fill sample bottles. Left site at 1001.

Field Data Record-Tailings, LDS and Slimes Drain Sampling

Location: Cell 65 Sampling Personnel: Garrin, Tanner

Is this a Slimes Drain? Yes No

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

DTW immediately before sampling (slimes only): NA

Weather Conditions at Time of Sampling: Partly cloudy

Field Parameter Measurements:

-pH NA
 -Temperature (°C) NA

Analytical Parameters/Sample Collection Method:

Parameter	Sample Taken		Filtered		Sampling Method			Lab Name
					Peristaltic Pump	Bailer	Ladle	
VOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
THF	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Nutrients	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Other Non Radiologics	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"
Gross Alpha	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GEL
SVOCs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ChemTech-Ford
Conductivity	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	"

QC Samples Associated with this Location:

Rinsate Blank

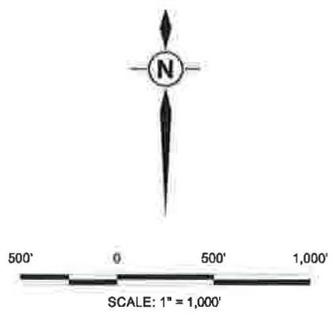
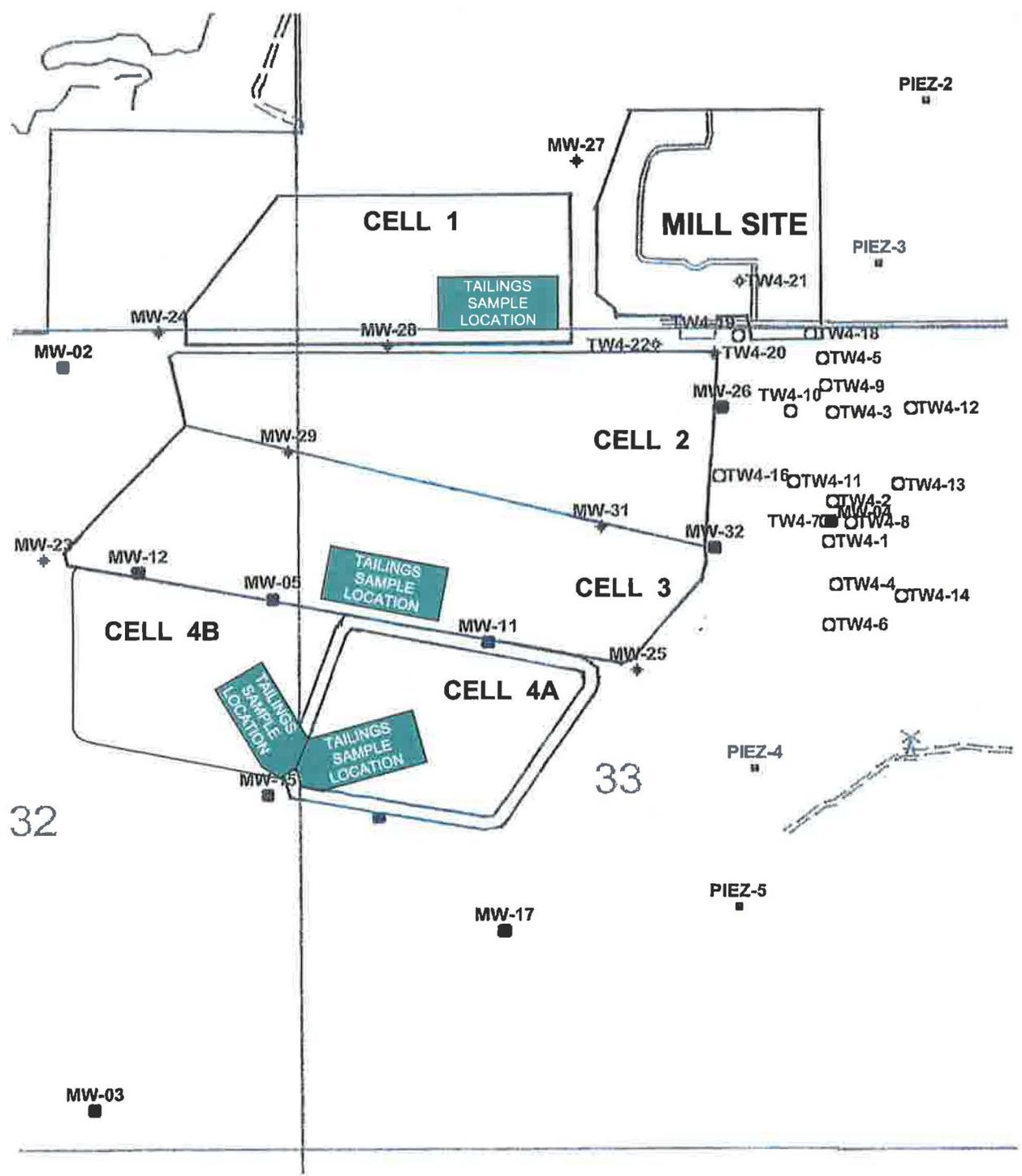
Duplicate

Duplicate Sample Name: _____

Notes: Duplicate of Cell 4A

Tab B

Sample Location Figures



		Project: White Mesa Mill																															
		County: San Juan	State: Utah																														
<table border="1"> <thead> <tr> <th>REVISIONS</th> <th>Date</th> <th>By</th> </tr> </thead> <tbody> <tr> <td></td> <td>10/8/14</td> <td>RE</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>		REVISIONS	Date	By		10/8/14	RE																									Location: T37S, R22E	
REVISIONS	Date	By																															
	10/8/14	RE																															
<h3>Annual Tailings Sample Locations</h3>																																	
Author: _____		Date: 10/8/14	Drafted By: _____																														

Tab C

Laboratory Analytical Reports



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-01

Name: Energy Fuels

Sample Date: 8/19/2014 8:15 AM

Sample Site: Cell 1

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Calculations							
Anions, Total	2910		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cation/Anion Balance	-41		%	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cations, Total	1220		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
TDS Balance	92		%	SM 2340 B	09/12/2014 12:47	9/12/2014 14:28	
Inorganic							
Alkalinity - Bicarbonate (HCO ₃)	ND	1.0	mg/L	SM 2320 B	08/27/2014 10:00	8/28/2014 13:38	
Alkalinity - Carbonate (CO ₃)	ND	1.0	mg/L	SM 2320 B	08/27/2014 10:00	8/28/2014 13:38	
Ammonia as N	5700	25.0	mg/L	SM 4500 NH ₃ -D	09/01/2014 19:00	9/1/2014 19:00	
Chloride	11600	500	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Conductivity	113000	1	umho/cm	EPA 120.1	08/22/2014 13:10	8/25/2014 14:53	
Fluoride	2380	50.0	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Nitrate + Nitrite, Total	53.0	10.0	mg/L	EPA 353.2	09/04/2014 14:15	9/4/2014 14:15	
pH	1.3	0.1	pH Units	SM 4500 H-B	08/21/2014 08:18	8/21/2014 8:18	SPH
Sulfate	124000	1000	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Total Dissolved Solids (TDS)	174000	1000	mg/L	SM 2540 C	08/21/2014 13:32	8/21/2014 13:32	
TDS, Calculated	159000	5	mg/L	SM 2540 C	09/12/2014 12:47	9/12/2014 14:28	
Metals							
Arsenic, Dissolved	249	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Beryllium, Dissolved	0.448	0.010	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 15:59	
Calcium, Dissolved	404	2.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 15:59	
Cadmium, Dissolved	3.06	2.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Cobalt, Dissolved	56.5	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Chromium, Dissolved	13.2	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Copper, Dissolved	3420	10.0	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Iron, Dissolved	2520	11.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 15:59	
Lead, Dissolved	13.5	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Mercury, Dissolved	0.0125	0.0020	mg/L	EPA 245.1	09/05/2014 16:11	9/8/2014 8:45	
Magnesium, Dissolved	5530	2.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 15:59	
Manganese, Dissolved	162	0.800	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 15:59	
Molybdenum, Dissolved	68.8	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Nickel, Dissolved	129	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Potassium, Dissolved	3010	5.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 15:59	
Selenium, Dissolved	3.97	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:10	
Silver, Dissolved	0.336	0.100	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:10	
Tin, Dissolved	ND	17.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 15:59	
Sodium, Dissolved	12200	5.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 15:59	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-01

Name: Energy Fuels

Sample Date: 8/19/2014 8:15 AM

Sample Site: Cell 1

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Metals							
Thallium, Dissolved	0.876	0.0200	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:10	
Vanadium, Dissolved	485	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Zinc, Dissolved	229	5.00	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 15:59	
Radiochemistry							
Uranium, Dissolved	137	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:53	
Semi-Volatile Compounds							
1-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2,4,5-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2,4,6-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2,4-Dichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2,4-Dimethylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2,4-Dinitrophenol	ND	20	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2,4-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2,6-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2-Chloronaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
2-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
3 & 4-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
3,3'-Dichlorobenzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
4-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
4,6-Dinitro-2-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
4-Bromophenyl phenyl ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
4-Chloro-3-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
4-Chlorophenyl Phenyl Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
4-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Acenaphthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Acenaphthylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Azobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Benzidine	41	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-01

Name: Energy Fuels

Sample Date: 8/19/2014 8:15 AM

Sample Site: Cell 1

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Semi-Volatile Compounds							
Benzo (a) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Benzo (a) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Benzo (b) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Benzo (g,h,i) perylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Benzo (k) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Bis (2-chloroethoxy) Methane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Bis (2-chloroethyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Bis (2-chloroisopropyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Bis (2-ethylhexyl) Phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Butylbenzylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Chrysene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Dibenzo (a,h) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Diethylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Dimethyl phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Di-n-butylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Di-n-Octylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Fluorene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Hexachlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Hexachlorobutadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Hexachlorocyclopentadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Hexachloroethane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Indeno (1,2,3-cd) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Isophorone	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Naphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Nitrobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
N-Nitrosodimethylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
N-Nitrosodi-n-propylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
N-Nitrosodiphenylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Pentachlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Phenanthrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Phenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	
Pyridine	32	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 0:37	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-01

Name: Energy Fuels

Sample Date: 8/19/2014 8:15 AM

Sample Site: Cell 1

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Volatile Organic Compounds							
Acetone	ND	700	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Benzene	ND	5.0	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Carbon Tetrachloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Chloroform	ND	70.0	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Chloromethane	ND	30.0	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Methyl Ethyl Ketone	ND	4000	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Methylene Chloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Naphthalene	ND	100	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Tetrahydrofuran	ND	46.0	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Toluene	ND	1000	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	
Xylenes, total	ND	10000	ug/L	EPA 8260B	08/28/2014 18:24	8/28/2014 18:24	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 14, 2014

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

Client Sample ID: Cell 1	Project: DNMI00100
Sample ID: 358469001	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 19-AUG-14 08:15	
Receive Date: 25-AUG-14	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha		3.31E+05	+/-710	16.5	1.00	pCi/L		CXP3	10/13/14	1538	1426429	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			93.2	(25%-125%)

Notes:

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

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



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-02

Name: Energy Fuels

Sample Date: 8/19/2014 8:25 AM

Sample Site: Cell 2 Slimes

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Calculations							
Anions, Total	1400		mcq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cation/Anion Balance	-47		%	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cations, Total	511		mcq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
TDS Balance	86		%	SM 2340 B	09/12/2014 12:47	9/12/2014 14:28	
Inorganic							
Alkalinity - Bicarbonate (HCO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Alkalinity - Carbonate (CO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Ammonia as N	3500	25.0	mg/L	SM 4500 NH ₃ -D	09/01/2014 19:00	9/2/2014 10:00	
Chloride	3720	50	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Conductivity	54100	1	umho/cm	EPA 120.1	08/22/2014 13:20	8/22/2014 13:25	
Fluoride	130	5.0	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Nitrate + Nitrite, Total	35.0	10.0	mg/L	EPA 353.2	09/04/2014 14:15	9/4/2014 14:15	
pH	3.1	0.1	pH Units	SM 4500 H-B	08/21/2014 08:18	8/21/2014 8:18	SPH
Sulfate	62200	1000	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Total Dissolved Solids (TDS)	87000	1000	mg/L	SM 2540 C	08/21/2014 13:32	8/21/2014 13:32	
TDS, Calculated	74900	5	mg/L	SM 2540 C	09/12/2014 12:47	9/12/2014 14:28	
Metals							
Arsenic, Dissolved	19.8	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:57	
Beryllium, Dissolved	0.197	0.010	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	
Calcium, Dissolved	322	2.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	
Cadmium, Dissolved	6.48	2.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:57	
Cobalt, Dissolved	46.7	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:57	
Chromium, Dissolved	1.63	0.100	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	
Copper, Dissolved	126	10.0	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:57	
Iron, Dissolved	2180	11.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	
Lead, Dissolved	0.638	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:14	
Mercury, Dissolved	ND	0.0020	mg/L	EPA 245.1	09/05/2014 16:11	9/8/2014 8:45	
Magnesium, Dissolved	2780	2.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	
Manganese, Dissolved	98.0	0.800	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	
Molybdenum, Dissolved	4.25	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:14	
Nickel, Dissolved	127	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:57	
Potassium, Dissolved	489	5.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	
Selenium, Dissolved	1.02	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:14	
Silver, Dissolved	ND	0.100	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:14	
Tin, Dissolved	ND	17.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	
Sodium, Dissolved	3130	5.0	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-02

Name: Energy Fuels

Sample Date: 8/19/2014 8:25 AM

Sample Site: Cell 2 Slimes

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Metals							
Thallium, Dissolved	0.402	0.0200	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:14	
Vanadium, Dissolved	497	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:57	
Zinc, Dissolved	405	5.00	mg/L	EPA 200.7	08/25/2014 13:09	8/25/2014 16:06	
Radiochemistry							
Uranium, Dissolved	26.4	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 14:57	
Semi-Volatile Compounds							
1-Methylnaphthalene	11	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2,4,5-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2,4,6-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2,4-Dichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2,4-Dimethylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2,4-Dinitrophenol	ND	20	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2,4-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2,6-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2-Chloronaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2-Methylnaphthalene	11	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
2-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
3 & 4-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
3,3'-Dichlorobenzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
4-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
4,6-Dinitro-2-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
4-Bromophenyl phenyl ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
4-Chloro-3-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
4-Chlorophenyl Phenyl Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
4-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Acenaphthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Acenaphthylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Azobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Benzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-02

Name: Energy Fuels

Sample Date: 8/19/2014 8:25 AM

Sample Site: Cell 2 Slimes

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Semi-Volatile Compounds							
Benzo (a) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Benzo (a) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Benzo (b) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Benzo (g,h,i) perylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Benzo (k) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Bis (2-chloroethoxy) Methane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Bis (2-chloroethyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Bis (2-chloroisopropyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Bis (2-ethylhexyl) Phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Butylbenzylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Chrysene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Dibenzo (a,h) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Diethylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Dimethyl phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Di-n-butylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Di-n-Octylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Fluorene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Hexachlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Hexachlorobutadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Hexachlorocyclopentadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Hexachloroethane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Indeno (1,2,3-cd) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Isophorone	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Naphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Nitrobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
N-Nitrosodimethylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
N-Nitrosodi-n-propylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
N-Nitrosodiphenylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Pentachlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Phenanthrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Phenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	
Pyridine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:03	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-02

Name: Energy Fuels

Sample Date: 8/19/2014 8:25 AM

Sample Site: Cell 2 Slimes

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Volatile Organic Compounds							
Acetone	ND	700	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Benzene	ND	5.0	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Carbon Tetrachloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Chloroform	ND	70.0	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Chloromethane	ND	30.0	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Methyl Ethyl Ketone	ND	4000	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Methylene Chloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Naphthalene	ND	100	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Tetrahydrofuran	ND	46.0	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Toluene	ND	1000	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	
Xylenes, total	ND	10000	ug/L	EPA 8260B	08/28/2014 18:41	8/28/2014 18:41	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 14, 2014

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

Client Sample ID:	Cell 2 Slimes	Project:	DNMI00100
Sample ID:	358469002	Client ID:	DNMI001
Matrix:	Ground Water		
Collect Date:	19-AUG-14 08:25		
Receive Date:	25-AUG-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha		6890	+/-98.1	17.5	1.00	pCi/L		CXP3	10/13/14	1537	1426429	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments										
1	EPA 900.1 Modified											
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits							
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			101	(25%-125%)							

Notes:

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

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



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-03

Name: Energy Fuels

Sample Date: 8/19/2014 9:00 AM

Sample Site: Cell 3

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Calculations							
Anions, Total	974		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cation/Anion Balance	-44		%	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cations, Total	377		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
TDS Balance	73		%	SM 2340 B	09/12/2014 12:47	9/12/2014 14:28	
Inorganic							
Alkalinity - Bicarbonate (HCO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Alkalinity - Carbonate (CO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Ammonia as N	3030	25.0	mg/L	SM 4500 NH ₃ -D	09/01/2014 19:00	9/1/2014 19:00	
Chloride	7200	100	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Conductivity	56200	1	umho/cm	EPA 120.1	08/22/2014 13:20	8/22/2014 13:25	
Fluoride	1330	50.0	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Nitrate + Nitrite, Total	59.5	10.0	mg/L	EPA 353.2	09/04/2014 14:15	9/4/2014 14:15	
pH	2.2	0.1	pH Units	SM 4500 H-B	08/21/2014 08:18	8/21/2014 8:18	SPH
Sulfate	37000	1000	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Total Dissolved Solids (TDS)	70100	1000	mg/L	SM 2540 C	08/21/2014 13:32	8/21/2014 13:32	
TDS, Calculated	51200	5	mg/L	SM 2540 C	09/12/2014 12:47	9/12/2014 14:28	
Metals							
Arsenic, Dissolved	2.92	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:17	
Beryllium, Dissolved	0.222	0.010	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	
Calcium, Dissolved	294	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	
Cadmium, Dissolved	2.55	2.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:00	
Cobalt, Dissolved	20.8	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:00	
Chromium, Dissolved	2.38	0.100	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	
Copper, Dissolved	139	10.0	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:00	
Iron, Dissolved	688	11.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	
Lead, Dissolved	1.90	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:17	
Mercury, Dissolved	0.0024	0.0020	mg/L	EPA 245.1	09/05/2014 16:11	9/8/2014 8:45	
Magnesium, Dissolved	1910	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	
Manganese, Dissolved	214	0.800	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	
Molybdenum, Dissolved	2.93	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:17	
Nickel, Dissolved	44.9	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:00	
Potassium, Dissolved	386	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	
Selenium, Dissolved	1.37	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:17	
Silver, Dissolved	0.329	0.100	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:17	
Tin, Dissolved	ND	17.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	
Sodium, Dissolved	3630	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-03

Name: Energy Fuels

Sample Date: 8/19/2014 9:00 AM

Sample Site: Cell 3

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Metals							
Thallium, Dissolved	0.290	0.0200	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:17	
Vanadium, Dissolved	454	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:00	
Zinc, Dissolved	155	5.00	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:24	
Radiochemistry							
Uranium, Dissolved	134	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:00	
Semi-Volatile Compounds							
1-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2,4,5-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2,4,6-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2,4-Dichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2,4-Dimethylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2,4-Dinitrophenol	ND	20	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2,4-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2,6-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2-Chloronaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
2-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
3 & 4-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
3,3'-Dichlorobenzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
4-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
4,6-Dinitro-2-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
4-Bromophenyl phenyl ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
4-Chloro-3-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
4-Chlorophenyl Phenyl Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
4-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Acenaphthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Acenaphthylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Azobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Benzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-03

Name: Energy Fuels

Sample Date: 8/19/2014 9:00 AM

Sample Site: Cell 3

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Semi-Volatile Compounds							
Benzo (a) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Benzo (a) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Benzo (b) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Benzo (g,h,i) perylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Benzo (k) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Bis (2-chloroethoxy) Methane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Bis (2-chloroethyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Bis (2-chloroisopropyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Bis (2-ethylhexyl) Phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Butylbenzylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Chrysene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Dibenzo (a,h) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Diethylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Dimethyl phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Di-n-butylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Di-n-Octylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Fluorene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Hexachlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Hexachlorobutadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Hexachlorocyclopentadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Hexachloroethane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Indeno (1,2,3-cd) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Isophorone	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Naphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Nitrobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
N-Nitrosodimethylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
N-Nitrosodi-n-propylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
N-Nitrosodiphenylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Pentachlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Phenanthrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Phenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	
Pyridine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:30	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-03

Name: Energy Fuels

Sample Site: Cell 3

Comments:

Sample Matrix: Water

PO Number:

Sample Date: 8/19/2014 9:00 AM

Receipt Date: 8/21/2014 8:30 AM

Sampler: Garrin Palmer

Project: White Mesa Mill - Tailings

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Volatile Organic Compounds							
Acetone	ND	700	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Benzene	ND	5.0	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Carbon Tetrachloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Chloroform	ND	70.0	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Chloromethane	ND	30.0	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Methyl Ethyl Ketone	ND	4000	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Methylene Chloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Naphthalene	ND	100	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Tetrahydrofuran	ND	46.0	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Toluene	ND	1000	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	
Xylenes, total	ND	10000	ug/L	EPA 8260B	08/28/2014 18:59	8/28/2014 18:59	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 14, 2014

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

Client Sample ID:	Cell 3	Project:	DNMI00100
Sample ID:	358469003	Client ID:	DNMI001
Matrix:	Ground Water		
Collect Date:	19-AUG-14 09:00		
Receive Date:	25-AUG-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha		19700	+/-168	13.8	1.00	pCi/L		CXP3	10/13/14	1537	1426429	I

The following Analytical Methods were performed:

Method	Description	Analyst Comments										
1	EPA 900.1 Modified											
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits							
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			102	(25%-125%)							

Notes:

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

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



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-04

Name: Energy Fuels

Sample Date: 8/19/2014 9:25 AM

Sample Site: Cell 4A

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Calculations							
Anions, Total	1520		meq/L	SM 1030 E	09/12/2014 12:47	10/16/2014 13:05	
Cation/Anion Balance	-36		%	SM 1030 E	09/12/2014 12:47	10/16/2014 13:05	
Cations, Total	722		meq/L	SM 1030 E	09/12/2014 12:47	10/16/2014 13:05	
TDS Balance	110		%	SM 2340 B	09/12/2014 12:47	10/16/2014 14:28	
Inorganic							
Alkalinity - Bicarbonate (HCO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Alkalinity - Carbonate (CO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Ammonia as N	2730	25.0	mg/L	SM 4500 NH3-D	09/01/2014 19:00	9/1/2014 19:00	
Chloride	5900	100	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Conductivity	73000	1	umho/cm	EPA 120.1	08/22/2014 13:20	8/22/2014 13:25	
Fluoride	1290	50.0	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Nitrate + Nitrite, Total	39.5	10.0	mg/L	EPA 353.2	09/04/2014 14:15	9/4/2014 14:15	
pH	1.7	0.1	pH Units	SM 4500 H-B	08/21/2014 08:18	8/21/2014 8:18	SPH
Sulfate	64900	1000	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Total Dissolved Solids (TDS)	97000	1000	mg/L	SM 2540 C	08/21/2014 13:32	8/21/2014 13:32	
TDS, Calculated	78300	5	mg/L	SM 2540 C	09/12/2014 12:47	10/16/2014 14:28	
Metals							
Arsenic, Dissolved	70.0	5.00	mg/L	EPA 200.8	08/29/2014 11:05	10/9/2014 10:47	
Beryllium, Dissolved	0.190	0.010	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:28	
Calcium, Dissolved	445	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:28	
Cadmium, Dissolved	1.78	0.200	mg/L	EPA 200.8	08/28/2014 10:16	10/9/2014 11:30	
Cobalt, Dissolved	27.5	5.00	mg/L	EPA 200.8	08/28/2014 10:16	10/9/2014 10:47	
Chromium, Dissolved	4.62	0.100	mg/L	EPA 200.7	08/25/2014 13:13	10/10/2014 6:55	
Copper, Dissolved	556	10.0	mg/L	EPA 200.8	08/28/2014 10:16	10/9/2014 10:47	
Iron, Dissolved	2280	11.0	mg/L	EPA 200.7	08/25/2014 13:13	10/10/2014 6:55	
Lead, Dissolved	14.8	5.00	mg/L	EPA 200.8	08/29/2014 11:05	10/9/2014 10:47	
Mercury, Dissolved	0.0025	0.0020	mg/L	EPA 245.1	09/05/2014 16:11	9/8/2014 8:45	
Magnesium, Dissolved	2990	2.0	mg/L	EPA 200.7	08/25/2014 13:13	10/10/2014 6:55	
Manganese, Dissolved	120	0.800	mg/L	EPA 200.7	08/25/2014 13:13	10/10/2014 6:55	
Molybdenum, Dissolved	40.6	5.00	mg/L	EPA 200.8	08/29/2014 11:05	10/9/2014 10:47	
Nickel, Dissolved	54.1	5.00	mg/L	EPA 200.8	08/28/2014 10:16	10/9/2014 10:47	
Potassium, Dissolved	724	5.0	mg/L	EPA 200.7	08/25/2014 13:13	10/10/2014 6:55	
Selenium, Dissolved	2.00	0.500	mg/L	EPA 200.8	08/29/2014 11:05	10/9/2014 11:30	
Silver, Dissolved	0.197	0.100	mg/L	EPA 200.8	08/29/2014 11:05	10/9/2014 12:13	
Tin, Dissolved	ND	17.0	mg/L	EPA 200.7	08/25/2014 13:13	10/10/2014 6:55	
Sodium, Dissolved	7190	5.0	mg/L	EPA 200.7	08/25/2014 13:13	10/10/2014 6:55	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-04

Name: Energy Fuels

Sample Date: 8/19/2014 9:25 AM

Sample Site: Cell 4A

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Metals							
Thallium, Dissolved	0.376	0.0200	mg/L	EPA 200.8	08/29/2014 11:05	10/9/2014 12:13	
Vanadium, Dissolved	535	5.00	mg/L	EPA 200.8	08/28/2014 10:16	10/9/2014 10:47	
Zinc, Dissolved	169	5.00	mg/L	EPA 200.7	08/25/2014 13:13	10/10/2014 6:55	
Radiochemistry							
Uranium, Dissolved	159	5.00	mg/L	EPA 200.8	08/28/2014 10:16	10/9/2014 10:47	
Semi-Volatile Compounds							
1-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2,4,5-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2,4,6-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2,4-Dichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2,4-Dimethylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2,4-Dinitrophenol	ND	20	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2,4-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2,6-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2-Chloronaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
2-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
3 & 4-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
3,3'-Dichlorobenzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
4-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
4,6-Dinitro-2-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
4-Bromophenyl phenyl ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
4-Chloro-3-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
4-Chlorophenyl Phenyl Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
4-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Acenaphthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Acenaphthylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Azobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Benzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-04

Name: Energy Fuels

Sample Date: 8/19/2014 9:25 AM

Sample Site: Cell 4A

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Semi-Volatile Compounds							
Benzo (a) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Benzo (a) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Benzo (b) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Benzo (g,h,i) perylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Benzo (k) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Bis (2-chloroethoxy) Methane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Bis (2-chloroethyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Bis (2-chloroisopropyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Bis (2-ethylhexyl) Phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Butylbenzylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Chrysene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Dibenzo (a,h) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Diethylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Dimethyl phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Di-n-butylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Di-n-Octylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Fluorene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Hexachlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Hexachlorobutadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Hexachlorocyclopentadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Hexachloroethane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Indeno (1,2,3-cd) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Isophorone	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Naphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Nitrobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
N-Nitrosodimethylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
N-Nitrosodi-n-propylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
N-Nitrosodiphenylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Pentachlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Phenanthrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Phenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	
Pyridine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 1:56	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-04

Name: Energy Fuels

Sample Date: 8/19/2014 9:25 AM

Sample Site: Cell 4A

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Volatile Organic Compounds							
Acetone	ND	700	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Benzene	ND	5.0	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Carbon Tetrachloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Chloroform	ND	70.0	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Chloromethane	ND	30.0	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Methyl Ethyl Ketone	ND	4000	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Methylene Chloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Naphthalene	ND	100	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Tetrahydrofuran	ND	46.0	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Toluene	ND	1000	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	
Xylenes, total	ND	10000	ug/L	EPA 8260B	08/28/2014 19:17	8/28/2014 19:17	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 14, 2014

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

Client Sample ID: Cell 4A	Project: DNMI00100
Sample ID: 358469004	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 19-AUG-14 09:25	
Receive Date: 25-AUG-14	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha		2.40E+05	+/-577	13.6	1.00	pCi/L		CXP3	10/13/14	1537	1426429	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments										
1	EPA 900.1 Modified											
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits							
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			101	(25%-125%)							

Notes:

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

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



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-05

Name: Energy Fuels

Sample Date: 8/19/2014 9:40 AM

Sample Site: Cell 4A LDS

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Calculations							
Anions, Total	1280		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cation/Anion Balance	-42		%	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cations, Total	530		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
TDS Balance	85		%	SM 2340 B	09/12/2014 12:47	9/12/2014 14:28	
Inorganic							
Alkalinity - Bicarbonate (HCO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Alkalinity - Carbonate (CO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Ammonia as N	2920	25.0	mg/L	SM 4500 NH ₃ -D	09/01/2014 19:00	9/1/2014 19:00	
Chloride	4200	100	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Conductivity	53600	1	umho/cm	EPA 120.1	08/22/2014 13:20	8/22/2014 13:25	
Fluoride	1320	50.0	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Nitrate + Nitrite, Total	39.0	10.0	mg/L	EPA 353.2	09/04/2014 14:15	9/4/2014 14:15	
pH	2.4	0.1	pH Units	SM 4500 H-B	08/21/2014 08:18	8/21/2014 8:18	SPH
Sulfate	56000	1000	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Total Dissolved Solids (TDS)	81900	1000	mg/L	SM 2540 C	08/21/2014 13:32	8/21/2014 13:32	
TDS, Calculated	69700	5	mg/L	SM 2540 C	09/12/2014 12:47	9/12/2014 14:28	
Metals							
Arsenic, Dissolved	51.2	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:19	
Beryllium, Dissolved	0.185	0.010	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	
Calcium, Dissolved	336	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	
Cadmium, Dissolved	4.72	2.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:19	
Cobalt, Dissolved	41.2	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:19	
Chromium, Dissolved	2.78	0.100	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	
Copper, Dissolved	439	10.0	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:19	
Iron, Dissolved	1850	11.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	
Lead, Dissolved	0.991	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:24	
Mercury, Dissolved	ND	0.0020	mg/L	EPA 245.1	09/05/2014 16:11	9/8/2014 8:45	
Magnesium, Dissolved	2690	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	
Manganese, Dissolved	98.6	0.800	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	
Molybdenum, Dissolved	3.97	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:24	
Nickel, Dissolved	99.3	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:19	
Potassium, Dissolved	415	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	
Selenium, Dissolved	2.17	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:24	
Silver, Dissolved	ND	0.100	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:24	
Tin, Dissolved	ND	17.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	
Sodium, Dissolved	4190	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-05

Name: Energy Fuels

Sample Date: 8/19/2014 9:40 AM

Sample Site: Cell 4A LDS

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Metals							
Thallium, Dissolved	0.522	0.0200	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:24	
Vanadium, Dissolved	510	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:19	
Zinc, Dissolved	306	5.00	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:32	
Radiochemistry							
Uranium, Dissolved	82.2	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:19	
Semi-Volatile Compounds							
1-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2,4,5-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2,4,6-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2,4-Dichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2,4-Dimethylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2,4-Dinitrophenol	ND	20	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2,4-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2,6-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2-Chloronaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
2-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
3 & 4-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
3,3'-Dichlorobenzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
4-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
4,6-Dinitro-2-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
4-Bromophenyl phenyl ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
4-Chloro-3-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
4-Chlorophenyl Phenyl Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
4-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Acenaphthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Acenaphthylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Azobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Benzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-05

Name: Energy Fuels

Sample Date: 8/19/2014 9:40 AM

Sample Site: Cell 4A LDS

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Semi-Volatile Compounds							
Benzo (a) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Benzo (a) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Benzo (b) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Benzo (g,h,i) perylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Benzo (k) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Bis (2-chloroethoxy) Methane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Bis (2-chloroethyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Bis (2-chloroisopropyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Bis (2-ethylhexyl) Phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Butylbenzylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Chrysene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Dibenzo (a,h) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Diethylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Dimethyl phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Di-n-butylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Di-n-Octylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Fluorene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Hexachlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Hexachlorobutadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Hexachlorocyclopentadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Hexachloroethane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Indeno (1,2,3-cd) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Isophorone	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Naphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Nitrobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
N-Nitrosodimethylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
N-Nitrosodi-n-propylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
N-Nitrosodiphenylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Pentachlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Phenanthrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Phenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	
Pyridine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:22	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-05

Name: Energy Fuels

Sample Date: 8/19/2014 9:40 AM

Sample Site: Cell 4A LDS

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Volatile Organic Compounds							
Acetone	ND	700	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Benzene	ND	5.0	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Carbon Tetrachloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Chloroform	95.0	70.0	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Chloromethane	ND	30.0	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Methyl Ethyl Ketone	ND	4000	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Methylene Chloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Naphthalene	ND	100	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Tetrahydrofuran	ND	46.0	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Toluene	ND	1000	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	
Xylenes, total	ND	10000	ug/L	EPA 8260B	08/28/2014 19:35	8/28/2014 19:35	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 14, 2014

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

Client Sample ID: Cell 4A LDS	Project: DNMI00100
Sample ID: 358469005	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 19-AUG-14 09:40	
Receive Date: 25-AUG-14	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha		61800	+/-289	13.1	1.00	pCi/L		CXP3	10/13/14	1537	1426429	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			103	(25%-125%)

Notes:

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

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



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-06

Name: Energy Fuels

Sample Date: 8/19/2014 10:10 AM

Sample Site: Cell 4B

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Calculations							
Anions, Total	2110		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cation/Anion Balance	-47		%	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cations, Total	758		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
TDS Balance	86		%	SM 2340 B	09/12/2014 12:47	9/12/2014 14:28	
Inorganic							
Alkalinity - Bicarbonate (HCO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Alkalinity - Carbonate (CO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Ammonia as N	5380	25.0	mg/L	SM 4500 NH ₃ -D	09/01/2014 19:00	9/1/2014 19:00	
Chloride	7300	100	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Conductivity	90100	1	umho/cm	EPA 120.1	08/22/2014 13:20	8/22/2014 13:25	
Fluoride	1150	50.0	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Nitrate + Nitrite, Total	47.0	10.0	mg/L	EPA 353.2	09/04/2014 14:15	9/4/2014 14:15	
pH	1.6	0.1	pH Units	SM 4500 H-B	08/21/2014 08:18	8/21/2014 8:18	SPH
Sulfate	91500	1000	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Total Dissolved Solids (TDS)	131000	1000	mg/L	SM 2540 C	08/21/2014 13:32	8/21/2014 13:32	
TDS, Calculated	113000	5	mg/L	SM 2540 C	09/12/2014 12:47	9/12/2014 14:28	
Metals							
Arsenic, Dissolved	70.4	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Beryllium, Dissolved	0.275	0.010	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:44	
Calcium, Dissolved	366	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:44	
Cadmium, Dissolved	2.29	2.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Cobalt, Dissolved	24.6	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Chromium, Dissolved	6.94	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Copper, Dissolved	368	10.0	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Iron, Dissolved	2480	11.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:44	
Lead, Dissolved	10.9	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Mercury, Dissolved	ND	0.0020	mg/L	EPA 245.1	09/05/2014 16:11	9/8/2014 8:45	
Magnesium, Dissolved	3310	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:44	
Manganese, Dissolved	129	0.800	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:44	
Molybdenum, Dissolved	29.0	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Nickel, Dissolved	42.0	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Potassium, Dissolved	989	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:44	
Selenium, Dissolved	5.01	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:32	
Silver, Dissolved	0.142	0.100	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:32	
Tin, Dissolved	ND	17.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:44	
Sodium, Dissolved	7100	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:44	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-06

Name: Energy Fuels

Sample Date: 8/19/2014 10:10 AM

Sample Site: Cell 4B

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Metals							
Thallium, Dissolved	0.258	0.0200	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:32	
Vanadium, Dissolved	666	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Zinc, Dissolved	144	5.00	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:44	
Radiochemistry							
Uranium, Dissolved	133	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:26	
Semi-Volatile Compounds							
1-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2,4,5-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2,4,6-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2,4-Dichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2,4-Dimethylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2,4-Dinitrophenol	ND	20	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2,4-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2,6-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2-Chloronaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
2-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
3 & 4-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
3,3'-Dichlorobenzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
4-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
4,6-Dinitro-2-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
4-Bromophenyl phenyl ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
4-Chloro-3-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
4-Chlorophenyl Phenyl Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
4-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Acenaphthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Acenaphthylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Azobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Benzidine	26	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-06

Name: Energy Fuels

Sample Date: 8/19/2014 10:10 AM

Sample Site: Cell 4B

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Semi-Volatile Compounds							
Benzo (a) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Benzo (a) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Benzo (b) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Benzo (g,h,i) perylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Benzo (k) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Bis (2-chloroethoxy) Methane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Bis (2-chloroethyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Bis (2-chloroisopropyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Bis (2-ethylhexyl) Phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Butylbenzylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Chrysene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Dibenzo (a,h) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Diethylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Dimethyl phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Di-n-butylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Di-n-Octylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Fluorene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Hexachlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Hexachlorobutadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Hexachlorocyclopentadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Hexachloroethane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Indeno (1,2,3-cd) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Isophorone	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Naphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Nitrobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
N-Nitrosodimethylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
N-Nitrosodi-n-propylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
N-Nitrosodiphenylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Pentachlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Phenanthrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Phenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	
Pyridine	15	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 2:48	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-06

Name: Energy Fuels

Sample Date: 8/19/2014 10:10 AM

Sample Site: Cell 4B

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Volatile Organic Compounds							
Acetone	ND	700	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Benzene	ND	5.0	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Carbon Tetrachloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Chloroform	ND	70.0	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Chloromethane	ND	30.0	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Methyl Ethyl Ketone	ND	4000	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Methylene Chloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Naphthalene	ND	100	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Tetrahydrofuran	ND	46.0	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Toluene	ND	1000	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	
Xylenes, total	ND	10000	ug/L	EPA 8260B	08/28/2014 19:52	8/28/2014 19:52	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 14, 2014

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

Client Sample ID:	Cell 4B	Project:	DNMI00100
Sample ID:	358469006	Client ID:	DNMI001
Matrix:	Ground Water		
Collect Date:	19-AUG-14 10:10		
Receive Date:	25-AUG-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha		1.48E+05	+/-446	16.6	1.00	pCi/L		CXP3	10/13/14	1537	1426429	I

The following Analytical Methods were performed:

Method	Description	Analyst Comments										
1	EPA 900.1 Modified											
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits							
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			104	(25%-125%)							

Notes:

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

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



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-07

Name: Energy Fuels

Sample Date: 8/19/2014 10:00 AM

Sample Site: Cell 4B LDS

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Calculations							
Anions, Total	1910		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cation/Anion Balance	-43		%	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cations, Total	760		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
TDS Balance	80		%	SM 2340 B	09/12/2014 12:47	9/12/2014 14:28	
Inorganic							
Alkalinity - Bicarbonate (HCO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Alkalinity - Carbonate (CO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Ammonia as N	5240	25.0	mg/L	SM 4500 NH ₃ -D	09/01/2014 19:00	9/1/2014 19:00	
Chloride	6900	100	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Conductivity	76300	1	umho/cm	EPA 120.1	08/22/2014 13:20	8/22/2014 13:25	
Fluoride	970	50.0	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Nitrate + Nitrite, Total	43.0	10.0	mg/L	EPA 353.2	09/04/2014 14:15	9/4/2014 14:15	
pH	2.2	0.1	pH Units	SM 4500 H-B	08/21/2014 08:18	8/21/2014 8:18	SPH
Sulfate	82300	1000	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Total Dissolved Solids (TDS)	129000	1000	mg/L	SM 2540 C	08/21/2014 13:32	8/21/2014 13:32	
TDS, Calculated	103000	5	mg/L	SM 2540 C	09/12/2014 12:47	9/12/2014 14:28	
Metals							
Arsenic, Dissolved	67.8	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:30	
Beryllium, Dissolved	0.282	0.010	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:47	
Calcium, Dissolved	308	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:47	
Cadmium, Dissolved	2.29	2.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:30	
Cobalt, Dissolved	23.3	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:30	
Chromium, Dissolved	6.16	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:30	
Copper, Dissolved	308	10.0	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:30	
Iron, Dissolved	2590	11.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:47	
Lead, Dissolved	4.12	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:35	
Mercury, Dissolved	0.0020	0.0020	mg/L	EPA 245.1	09/05/2014 16:11	9/8/2014 8:45	
Magnesium, Dissolved	3400	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:47	
Manganese, Dissolved	144	0.800	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:47	
Molybdenum, Dissolved	24.3	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:30	
Nickel, Dissolved	40.1	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:30	
Potassium, Dissolved	952	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:47	
Selenium, Dissolved	4.08	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:35	
Silver, Dissolved	0.119	0.100	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:35	
Tin, Dissolved	ND	17.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:47	
Sodium, Dissolved	6920	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:47	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-07

Name: Energy Fuels

Sample Date: 8/19/2014 10:00 AM

Sample Site: Cell 4B LDS

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Metals							
Thallium, Dissolved	0.336	0.0200	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:35	
Vanadium, Dissolved	671	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:30	
Zinc, Dissolved	144	5.00	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:47	
Radiochemistry							
Uranium, Dissolved	143	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:30	
Semi-Volatile Compounds							
1-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2,4,5-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2,4,6-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2,4-Dichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2,4-Dimethylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2,4-Dinitrophenol	ND	20	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2,4-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2,6-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2-Chloronaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
2-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
3 & 4-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
3,3'-Dichlorobenzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
4-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
4,6-Dinitro-2-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
4-Bromophenyl phenyl ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
4-Chloro-3-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
4-Chlorophenyl Phenyl Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
4-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Acenaphthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Acenaphthylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Azobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Benzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-07

Name: Energy Fuels

Sample Date: 8/19/2014 10:00 AM

Sample Site: Cell 4B LDS

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Semi-Volatile Compounds							
Benzo (a) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Benzo (a) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Benzo (b) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Benzo (g,h,i) perylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Benzo (k) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Bis (2-chloroethoxy) Methane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Bis (2-chloroethyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Bis (2-chloroisopropyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Bis (2-ethylhexyl) Phthalate	27	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Butylbenzylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Chrysene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Dibenzo (a,h) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Diethylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Dimethyl phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Di-n-butylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Di-n-Octylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Fluorene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Hexachlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Hexachlorobutadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Hexachlorocyclopentadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Hexachloroethane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Indeno (1,2,3-cd) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Isophorone	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Naphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Nitrobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
N-Nitrosodimethylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
N-Nitrosodi-n-propylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
N-Nitrosodiphenylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Pentachlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Phenanthrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Phenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	
Pyridine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:14	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-07

Name: Energy Fuels

Sample Date: 8/19/2014 10:00 AM

Sample Site: Cell 4B LDS

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Volatile Organic Compounds							
Acetone	ND	700	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Benzene	ND	5.0	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Carbon Tetrachloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Chloroform	ND	70.0	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Chloromethane	ND	30.0	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Methyl Ethyl Ketone	ND	4000	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Methylene Chloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Naphthalene	ND	100	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Tetrahydrofuran	75.6	46.0	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Toluene	ND	1000	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	
Xylenes, total	ND	10000	ug/L	EPA 8260B	08/28/2014 20:10	8/28/2014 20:10	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 14, 2014

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

Client Sample ID: Cell 4B LDS	Project: DNMI00100
Sample ID: 358469007	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 19-AUG-14 10:00	
Receive Date: 25-AUG-14	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha		1.81E+05	+/-499	14.7	1.00	pCi/L		CXP3	10/13/14	1537	1426429	I

The following Analytical Methods were performed:

Method	Description	Analyst Comments										
1	EPA 900.1 Modified											
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits							
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			96.4	(25%-125%)							

Notes:

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

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



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-08

Name: Energy Fuels

Sample Date: 8/19/2014 9:40 AM

Sample Site: Cell 65

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Calculations							
Anions, Total	1520		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cation/Anion Balance	-39		%	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
Cations, Total	675		meq/L	SM 1030 E	09/12/2014 12:47	9/12/2014 13:05	
TDS Balance	84		%	SM 2340 B	09/12/2014 12:47	9/12/2014 14:28	
Inorganic							
Alkalinity - Bicarbonate (HCO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Alkalinity - Carbonate (CO ₃)	ND	1.0	mg/L	SM 2320 B	09/02/2014 00:00	9/2/2014 16:01	
Ammonia as N	2780	25.0	mg/L	SM 4500 NH ₃ -D	09/01/2014 19:00	9/1/2014 19:00	
Chloride	5800	100	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Conductivity	72800	1	umho/cm	EPA 120.1	08/22/2014 13:20	8/22/2014 13:25	
Fluoride	1290	50.0	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Nitrate + Nitrite, Total	42.5	10.0	mg/L	EPA 353.2	09/04/2014 14:15	9/4/2014 14:15	
pH	1.7	0.1	pH Units	SM 4500 H-B	08/21/2014 08:18	8/21/2014 8:18	SPH
Sulfate	65300	1000	mg/L	EPA 300.0	08/29/2014 17:00	8/29/2014 17:00	
Total Dissolved Solids (TDS)	100000	1000	mg/L	SM 2540 C	08/21/2014 13:32	8/21/2014 13:32	
TDS, Calculated	83700	5	mg/L	SM 2540 C	09/12/2014 12:47	9/12/2014 14:28	
Metals							
Arsenic, Dissolved	66.9	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:33	
Beryllium, Dissolved	0.188	0.010	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	
Calcium, Dissolved	406	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	
Cadmium, Dissolved	1.63	0.0200	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:39	
Cobalt, Dissolved	23.4	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:33	
Chromium, Dissolved	4.42	0.100	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	
Copper, Dissolved	491	10.0	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:33	
Iron, Dissolved	2280	11.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	
Lead, Dissolved	12.3	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:33	
Mercury, Dissolved	ND	0.0020	mg/L	EPA 245.1	09/05/2014 16:11	9/8/2014 8:45	
Magnesium, Dissolved	2890	2.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	
Manganese, Dissolved	115	0.800	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	
Molybdenum, Dissolved	34.8	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:33	
Nickel, Dissolved	48.2	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:33	
Potassium, Dissolved	644	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	
Selenium, Dissolved	2.24	0.0500	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:39	
Silver, Dissolved	0.222	0.100	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:39	
Tin, Dissolved	ND	17.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	
Sodium, Dissolved	6380	5.0	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-08

Name: Energy Fuels

Sample Date: 8/19/2014 9:40 AM

Sample Site: Cell 65

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Metals							
Thallium, Dissolved	0.377	0.0200	mg/L	EPA 200.8	08/29/2014 11:05	8/29/2014 13:39	
Vanadium, Dissolved	491	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:33	
Zinc, Dissolved	137	5.00	mg/L	EPA 200.7	08/25/2014 13:13	8/25/2014 16:51	
Radiochemistry							
Uranium, Dissolved	124	5.00	mg/L	EPA 200.8	08/28/2014 10:16	8/28/2014 15:33	
Semi-Volatile Compounds							
1-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
1,2,4-Trichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
1,2-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
1,3-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
1,4-Dichlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2,4,5-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2,4,6-Trichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2,4-Dichlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2,4-Dimethylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2,4-Dinitrophenol	ND	20	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2,4-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2,6-Dinitrotoluene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2-Chloronaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2-Methylnaphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
2-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
3 & 4-Methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
3,3'-Dichlorobenzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
4-Chlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
4,6-Dinitro-2-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
4-Bromophenyl phenyl ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
4-Chloro-3-methylphenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
4-Chlorophenyl Phenyl Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
4-Nitrophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Acenaphthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Acenaphthylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Azobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Benzidine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-08

Name: Energy Fuels

Sample Date: 8/19/2014 9:40 AM

Sample Site: Cell 65

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Semi-Volatile Compounds							
Benzo (a) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Benzo (a) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Benzo (b) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Benzo (g,h,i) perylene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Benzo (k) fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Bis (2-chloroethoxy) Methane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Bis (2-chloroethyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Bis (2-chloroisopropyl) Ether	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Bis (2-ethylhexyl) Phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Butylbenzylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Chrysene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Dibenzo (a,h) anthracene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Diethylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Dimethyl phthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Di-n-butylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Di-n-Octylphthalate	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Fluoranthene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Fluorene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Hexachlorobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Hexachlorobutadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Hexachlorocyclopentadiene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Hexachloroethane	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Indeno (1,2,3-cd) pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Isophorone	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Naphthalene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Nitrobenzene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
N-Nitrosodimethylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
N-Nitrosodi-n-propylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
N-Nitrosodiphenylamine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Pentachlorophenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Phenanthrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Phenol	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Pyrene	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	
Pyridine	ND	10	ug/L	EPA 8270D	08/22/2014 07:52	8/28/2014 3:40	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-08

Name: Energy Fuels

Sample Date: 8/19/2014 9:40 AM

Sample Site: Cell 65

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler: Garrin Palmer

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Volatile Organic Compounds							
Acetone	ND	700	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Benzene	ND	5.0	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Carbon Tetrachloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Chloroform	ND	70.0	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Chloromethane	ND	30.0	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Methyl Ethyl Ketone	ND	4000	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Methylene Chloride	ND	5.0	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Naphthalene	ND	100	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Tetrahydrofuran	ND	46.0	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Toluene	ND	1000	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	
Xylenes, total	ND	10000	ug/L	EPA 8260B	08/28/2014 20:28	8/28/2014 20:28	



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Lab Sample No.: 1408830-09

Name: Energy Fuels

Sample Date: 8/19/2014 12:00 AM

Sample Site: Trip Blank

Receipt Date: 8/21/2014 8:30 AM

Comments:

Sampler:

Sample Matrix: Water

Project: White Mesa Mill - Tailings

PO Number:

Project Number: White Mesa Mill - Groundwater

Parameter	Sample Result	Minimum Reporting Limit	Units	Analytical Method	Preparation Date/Time	Analysis Date/Time	Flag
Volatile Organic Compounds							
Acetone	ND	700	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Benzene	ND	5.0	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Carbon Tetrachloride	ND	5.0	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Chloroform	ND	70.0	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Chloromethane	ND	30.0	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Methyl Ethyl Ketone	ND	4000	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Methylene Chloride	ND	5.0	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Naphthalene	ND	100	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Tetrahydrofuran	ND	46.0	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Toluene	ND	1000	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	
Xylenes, total	ND	10000	ug/L	EPA 8260B	08/27/2014 14:08	8/27/2014 14:08	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: October 14, 2014

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

Client Sample ID: Cell 65	Project: DNMI00100
Sample ID: 358469008	Client ID: DNMI001
Matrix: Ground Water	
Collect Date: 19-AUG-14 09:40	
Receive Date: 25-AUG-14	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Total Alpha Radium, Liquid "As Received"												
Gross Radium Alpha		1.66E+05	+/-421	11.5	1.00	pCi/L		CXP3	10/14/14	1009	1426429	1

The following Analytical Methods were performed:

Method	Description	Analyst Comments										
1	EPA 900.1 Modified											
Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits							
Barium Carrier	GFPC, Total Alpha Radium, Liquid "As Received"			104	(25%-125%)							

Notes:

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

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



10/16/2014

Work Order: 1408830

Energy Fuels

Attn: Garrin Palmer

6425 South Highway 191

Blanding, UT 84511

Client Service Contact: 801.262.7299

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.



Approved By:


Dave Gayer, Laboratory Director



Case Narrative for Sample Delivery Group - 1408830

Energy Fuels

<u>SampleID</u>	<u>SampleName</u>	<u>Matrix</u>	<u>Sampled</u>	<u>Received</u>
1408830-01	Cell 1	Water	08/19/2014	08/21/2014
1408830-02	Cell 2 Slimes	Water	08/19/2014	08/21/2014
1408830-03	Cell 3	Water	08/19/2014	08/21/2014
1408830-04	Cell 4A	Water	08/19/2014	08/21/2014
1408830-05	Cell 4A LDS	Water	08/19/2014	08/21/2014
1408830-05RE	Cell 4A LDS	Water	08/19/2014	08/21/2014
1408830-06	Cell 4B	Water	08/19/2014	08/21/2014
1408830-07	Cell 4B LDS	Water	08/19/2014	08/21/2014
1408830-08	Cell 65	Water	08/19/2014	08/21/2014
1408830-09	Trip Blank	Water	08/19/2014	08/21/2014

Method Blanks

All method blanks were below the Minimum Reporting Limit (MRL) except for those mentioned in the QC report.

Laboratory Control Samples

All Laboratory Control Sample (LCS) recoveries were within laboratory control limits.

Holding Times

All preparations and analyses were performed within holding times

Matrix Spike/Matrix Spike Duplicate

All Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries were within control except for those mentioned in the QC report.

Surrogates

All surrogates were within laboratory control limits.

Analytical Summary - 1408830

Lab ID: 1408830-01

Client ID: Cell 1

Matrix: Water

Analyses

EPA 120.1

EPA 200.7

EPA 200.8

EPA 245.1

EPA 300.0

EPA 353.2

EPA 8260B

EPA 8270D

SM 1030 E

SM 2320 B

SM 2340 B

SM 2540 C

SM 4500 H-B

SM 4500 NH3-D

Lab ID: 1408830-02

Client ID: Cell 2 Slimes

Matrix: Water

Analyses

EPA 120.1

EPA 200.7

EPA 200.8

EPA 245.1

EPA 300.0

EPA 353.2

EPA 8260B

EPA 8270D

SM 1030 E

SM 2320 B

SM 2340 B

SM 2540 C

SM 4500 H-B

SM 4500 NH3-D

Lab ID: 1408830-03

Client ID: Cell 3

Matrix: Water

Analyses

EPA 120.1

EPA 200.7
EPA 200.8
EPA 245.1
EPA 300.0
EPA 353.2
EPA 8260B
EPA 8270D
SM 1030 E
SM 2320 B
SM 2340 B
SM 2540 C
SM 4500 H-B
SM 4500 NH3-D

Lab ID: 1408830-04

Client ID: Cell 4A

Matrix: Water

Analyses

EPA 120.1
EPA 200.7
EPA 200.8
EPA 245.1
EPA 300.0
EPA 353.2
EPA 8260B
EPA 8270D
SM 1030 E
SM 2320 B
SM 2340 B
SM 2540 C
SM 4500 H-B
SM 4500 NH3-D

Lab ID: 1408830-05

Client ID: Cell 4A LDS

Matrix: Water

Analyses

EPA 120.1
EPA 200.7
EPA 200.8
EPA 245.1
EPA 300.0
EPA 353.2
EPA 8260B
EPA 8270D
SM 1030 E

SM 2320 B
SM 2340 B
SM 2540 C
SM 4500 H-B
SM 4500 NH3-D

Lab ID: 1408830-05RE1
Client ID: Cell 4A LDS
Matrix: Water

Analyses

EPA 200.8

Lab ID: 1408830-06
Client ID: Cell 4B
Matrix: Water

Analyses

EPA 120.1
EPA 200.7
EPA 200.8
EPA 245.1
EPA 300.0
EPA 353.2
EPA 8260B
EPA 8270D
SM 1030 E
SM 2320 B
SM 2340 B
SM 2540 C
SM 4500 H-B
SM 4500 NH3-D

Lab ID: 1408830-07
Client ID: Cell 4B LDS
Matrix: Water

Analyses

EPA 120.1
EPA 200.7
EPA 200.8
EPA 245.1
EPA 300.0
EPA 353.2
EPA 8260B
EPA 8270D
SM 1030 E
SM 2320 B
SM 2340 B

SM 2540 C
SM 4500 H-B
SM 4500 NH3-D

Lab ID: 1408830-08

Client ID: Cell 65

Matrix: Water

Analyses

EPA 120.1

EPA 200.7

EPA 200.8

EPA 245.1

EPA 300.0

EPA 353.2

EPA 8260B

EPA 8270D

SM 1030 E

SM 2320 B

SM 2340 B

SM 2540 C

SM 4500 H-B

SM 4500 NH3-D

Lab ID: 1408830-09

Client ID: Trip Blank

Matrix: Water

Analyses

EPA 8260B

QC Summary for Sample Delivery Group - 1408830

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF	
Calibration Blank - Method EPA 120.1																			
4H22009-CCB1	Conductivity						0.5					4H22009	08/22/14	08/25/14					1
4H22009-CCB2	Conductivity						0.4					4H22009	08/22/14	08/25/14					1
4H22010-CCB1	Conductivity						0.4					4H22010	08/22/14	08/22/14					1
Calibration Check - Method EPA 120.1																			
4H22009-CCV1	Conductivity	99.9		90	110		1410			1410		4H22009	08/22/14	08/25/14					1
4H22009-CCV2	Conductivity	99.4		90	110		1400			1410		4H22009	08/22/14	08/25/14					1
4H22010-CCV1	Conductivity	99.8		90	110		1410			1410		4H22010	08/22/14	08/22/14					1
Duplicate - Method EPA 120.1																			
B408675-DUP1	Conductivity	3.12				20	7980	XXXXXXXX XX	8230			B408675	08/22/14	08/25/14	0.2	1			1
B408675-DUP2	Conductivity	1.49				20	400	XXXXXXXX-XX	406			B408675	08/22/14	08/25/14	0.2	1			1
B408676-DUP1	Conductivity	0.093				20	53600	1408830-05	53600			B408676	08/22/14	08/22/14	0.2	1			1
Initial Cal Blank - Method EPA 120.1																			
4H22009-ICB1	Conductivity						0.5					4H22009	08/22/14	08/25/14					1
4H22010-ICB1	Conductivity						0.4					4H22010	08/22/14	08/22/14					1
Initial Cal Check - Method EPA 120.1																			
4H22009-ICV1	Conductivity	102		90	110		1430			1410		4H22009	08/22/14	08/25/14					1
4H22010-ICV1	Conductivity	101		90	110		1420			1410		4H22010	08/22/14	08/22/14					1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
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Blank - Method EPA 200.7

B408729-BLK1	Beryllium, Dissolved						-0.000					B408729	08/25/14	08/25/14	0.00	0.00	1	
B408729-BLK1	Calcium, Dissolved						0.03					B408729	08/25/14	08/25/14	0.00	0.2	1	
B408729-BLK1	Chromium, Dissolved						-0.000					B408729	08/25/14	08/25/14	0.00	0.00	1	
B408729-BLK1	Iron, Dissolved						0.001					B408729	08/25/14	08/25/14	0.00	0.02	1	
B408729-BLK1	Magnesium, Dissolved						0.01					B408729	08/25/14	08/25/14	0.01	0.2	1	
B408729-BLK1	Manganese, Dissolved						-0.000					B408729	08/25/14	08/25/14	0.00	0.00	1	
B408729-BLK1	Potassium, Dissolved						0.01					B408729	08/25/14	08/25/14	0.04	0.5	1	
B408729-BLK1	Sodium, Dissolved						0.03					B408729	08/25/14	08/25/14	0.02	0.5	1	
B408729-BLK1	Tin, Dissolved						0.0008					B408729	08/25/14	08/25/14	0.00	0.02	1	
B408729-BLK1	Zinc, Dissolved						0.0001					B408729	08/25/14	08/25/14	0.00	0.01	1	
B408730-BLK1	Beryllium, Dissolved						0.0000					B408730	08/25/14	08/25/14	0.00	0.00	1	
B408730-BLK1	Calcium, Dissolved						0.01					B408730	08/25/14	08/25/14	0.00	0.2	1	
B408730-BLK1	Chromium, Dissolved						-0.000					B408730	08/25/14	08/25/14	0.00	0.00	1	
B408730-BLK1	Iron, Dissolved						0.02					B408730	08/25/14	08/25/14	0.00	0.02	1	
QB-01 - The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.																		
B408730-BLK1	Magnesium, Dissolved						0.03					B408730	08/25/14	08/25/14	0.01	0.2	1	
B408730-BLK1	Manganese, Dissolved						0.002					B408730	08/25/14	08/25/14	0.00	0.00	1	
B408730-BLK1	Potassium, Dissolved						0.02					B408730	08/25/14	08/25/14	0.04	0.5	1	
B408730-BLK1	Sodium, Dissolved						0.1					B408730	08/25/14	08/25/14	0.02	0.5	1	
B408730-BLK1	Tin, Dissolved						0.002					B408730	08/25/14	08/25/14	0.00	0.02	1	
B408730-BLK1	Zinc, Dissolved						0.004					B408730	08/25/14	08/25/14	0.00	0.01	1	

Calibration Blank - Method EPA 200.7

4H25014-CCB1	Beryllium, Dissolved						0.0002					4H25014	08/25/14	08/25/14				1
4H25014-CCB1	Calcium, Dissolved						0.004					4H25014	08/25/14	08/25/14				1
4H25014-CCB1	Chromium, Dissolved						0.0002					4H25014	08/25/14	08/25/14				1
4H25014-CCB1	Iron, Dissolved						0.0005					4H25014	08/25/14	08/25/14				1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 42 of 90		
															Analyzed	MDL	MRL
4H25014-CCB1	Magnesium, Dissolved						0.01					4H25014	08/25/14	08/25/14			1
4H25014-CCB1	Manganese, Dissolved						0.0003					4H25014	08/25/14	08/25/14			1
4H25014-CCB1	Potassium, Dissolved						0.01					4H25014	08/25/14	08/25/14			1
4H25014-CCB1	Sodium, Dissolved						0.01					4H25014	08/25/14	08/25/14			1
4H25014-CCB1	Tin, Dissolved						0.003					4H25014	08/25/14	08/25/14			1
4H25014-CCB1	Zinc, Dissolved						0.0005					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Beryllium, Dissolved						0.0002					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Calcium, Dissolved						0.02					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Chromium, Dissolved						0.0003					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Iron, Dissolved						0.02					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Magnesium, Dissolved						0.03					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Manganese, Dissolved						0.002					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Potassium, Dissolved						0.03					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Sodium, Dissolved						0.1					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Tin, Dissolved						0.004					4H25014	08/25/14	08/25/14			1
4H25014-CCB2	Zinc, Dissolved						0.008					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Beryllium, Dissolved						0.0003					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Calcium, Dissolved						0.008					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Chromium, Dissolved						0.0001					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Iron, Dissolved						0.01					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Magnesium, Dissolved						0.02					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Manganese, Dissolved						0.003					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Potassium, Dissolved						0.03					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Sodium, Dissolved						0.2					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Tin, Dissolved						0.003					4H25014	08/25/14	08/25/14			1
4H25014-CCB3	Zinc, Dissolved						0.004					4H25014	08/25/14	08/25/14			1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF	
Calibration Check - Method EPA 200.7																			
4H25014-CCV1	Beryllium, Dissolved	101		90	110		2.03			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV1	Calcium, Dissolved	100		90	110		2.0			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV1	Chromium, Dissolved	97.6		90	110		1.95			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV1	Iron, Dissolved	104		90	110		2.08			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV1	Magnesium, Dissolved	99.4		90	110		2.0			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV1	Manganese, Dissolved	97.8		90	110		1.96			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV1	Potassium, Dissolved	99.7		90	110		19.9			20.0		4H25014	08/25/14	08/25/14					1
4H25014-CCV1	Sodium, Dissolved	97.5		90	110		19.5			20.0		4H25014	08/25/14	08/25/14					1
4H25014-CCV1	Tin, Dissolved	99.9		90	110		2.00			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV1	Zinc, Dissolved	102		90	110		2.04			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Beryllium, Dissolved	101		90	110		2.01			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Calcium, Dissolved	92.5		90	110		1.9			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Chromium, Dissolved	98.1		90	110		1.96			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Iron, Dissolved	102		90	110		2.04			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Magnesium, Dissolved	99.6		90	110		2.0			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Manganese, Dissolved	98.4		90	110		1.97			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Potassium, Dissolved	99.2		90	110		19.8			20.0		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Sodium, Dissolved	98.2		90	110		19.6			20.0		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Tin, Dissolved	100		90	110		2.01			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV2	Zinc, Dissolved	100		90	110		2.01			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV3	Beryllium, Dissolved	101		90	110		2.01			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV3	Calcium, Dissolved	99.3		90	110		2.0			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV3	Chromium, Dissolved	97.7		90	110		1.95			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV3	Iron, Dissolved	104		90	110		2.08			2.00		4H25014	08/25/14	08/25/14					1
4H25014-CCV3	Magnesium, Dissolved	100		90	110		2.0			2.00		4H25014	08/25/14	08/25/14					1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
4H25014-CCV3	Manganese, Dissolved	98.1		90	110		1.96			2.00		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-CCV3	Potassium, Dissolved	100		90	110		20.0			20.0		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-CCV3	Sodium, Dissolved	98.0		90	110		19.6			20.0		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-CCV3	Tin, Dissolved	99.0		90	110		1.98			2.00		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-CCV3	Zinc, Dissolved	103		90	110		2.05			2.00		4H25014	08/25/14	08/25/14	08/25/14			1

Initial Cal Blank - Method EPA 200.7

4H25014-ICB1	Beryllium, Dissolved						0.0002					4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICB1	Calcium, Dissolved						0.01					4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICB1	Chromium, Dissolved						0.0002					4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICB1	Iron, Dissolved						0.004					4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICB1	Magnesium, Dissolved						0.005					4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICB1	Manganese, Dissolved						0.0002					4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICB1	Potassium, Dissolved						0.01					4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICB1	Sodium, Dissolved						0.002					4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICB1	Tin, Dissolved						0.004					4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICB1	Zinc, Dissolved						0.0002					4H25014	08/25/14	08/25/14	08/25/14			1

Initial Cal Check - Method EPA 200.7

4H25014-ICV1	Beryllium, Dissolved	99.8		95	105		2.00			2.00		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICV1	Calcium, Dissolved	101		95	105		2.0			2.00		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICV1	Chromium, Dissolved	97.1		95	105		1.94			2.00		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICV1	Iron, Dissolved	102		95	105		2.05			2.00		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICV1	Magnesium, Dissolved	97.1		95	105		1.9			2.00		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICV1	Manganese, Dissolved	97.8		95	105		1.96			2.00		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICV1	Potassium, Dissolved	99.7		95	105		19.9			20.0		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICV1	Sodium, Dissolved	97.4		95	105		19.5			20.0		4H25014	08/25/14	08/25/14	08/25/14			1
4H25014-ICV1	Tin, Dissolved	99.8		95	105		2.00			2.00		4H25014	08/25/14	08/25/14	08/25/14			1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed MDL	MRL	DF
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4H25014-ICV1	Zinc, Dissolved	99.3		95	105		1.99			2.00		4H25014	08/25/14	08/25/14			1
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LCS - Method EPA 200.7

B408729-BS1	Beryllium, Dissolved	97.1		85	115		0.194			0.200		B408729	08/25/14	08/25/14	0.00	0.00	1
B408729-BS1	Calcium, Dissolved	91.8		85	115		9.4			10.2		B408729	08/25/14	08/25/14	0.00	0.2	1
B408729-BS1	Chromium, Dissolved	98.5		85	115		0.197			0.200		B408729	08/25/14	08/25/14	0.00	0.00	1
B408729-BS1	Iron, Dissolved	97.9		85	115		0.20			0.200		B408729	08/25/14	08/25/14	0.00	0.02	1
B408729-BS1	Magnesium, Dissolved	99.6		85	115		10.2			10.2		B408729	08/25/14	08/25/14	0.01	0.2	1
B408729-BS1	Manganese, Dissolved	99.5		85	115		0.199			0.200		B408729	08/25/14	08/25/14	0.00	0.00	1
B408729-BS1	Potassium, Dissolved	93.3		85	115		7.5			8.00		B408729	08/25/14	08/25/14	0.04	0.5	1
B408729-BS1	Sodium, Dissolved	96.4		85	115		9.6			10.0		B408729	08/25/14	08/25/14	0.02	0.5	1
B408729-BS1	Tin, Dissolved	102		85	155		0.20			0.200		B408729	08/25/14	08/25/14	0.00	0.02	1
B408729-BS1	Zinc, Dissolved	94.9		85	115		0.19			0.200		B408729	08/25/14	08/25/14	0.00	0.01	1
B408730-BS1	Beryllium, Dissolved	96.7		85	115		0.193			0.200		B408730	08/25/14	08/25/14	0.00	0.00	1
B408730-BS1	Calcium, Dissolved	91.8		85	115		9.4			10.2		B408730	08/25/14	08/25/14	0.00	0.2	1
B408730-BS1	Chromium, Dissolved	97.1		85	115		0.194			0.200		B408730	08/25/14	08/25/14	0.00	0.00	1
B408730-BS1	Iron, Dissolved	107		85	115		0.21			0.200		B408730	08/25/14	08/25/14	0.00	0.02	1
B408730-BS1	Magnesium, Dissolved	95.5		85	115		9.7			10.2		B408730	08/25/14	08/25/14	0.01	0.2	1
B408730-BS1	Manganese, Dissolved	98.1		85	115		0.196			0.200		B408730	08/25/14	08/25/14	0.00	0.00	1
B408730-BS1	Potassium, Dissolved	92.9		85	115		7.4			8.00		B408730	08/25/14	08/25/14	0.04	0.5	1
B408730-BS1	Sodium, Dissolved	96.6		85	115		9.7			10.0		B408730	08/25/14	08/25/14	0.02	0.5	1
B408730-BS1	Tin, Dissolved	101		85	155		0.20			0.200		B408730	08/25/14	08/25/14	0.00	0.02	1
B408730-BS1	Zinc, Dissolved	98.3		85	115		0.20			0.200		B408730	08/25/14	08/25/14	0.00	0.01	1

Matrix Spike - Method EPA 200.7

B408729-MS1	Beryllium, Dissolved	99.7		70	130		0.199	XXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1
B408729-MS1	Calcium, Dissolved	110		70	130		26.6	XXXXXX-XX	15.4	10.2		B408729	08/25/14	08/25/14	0.00	0.2	1
B408729-MS1	Chromium, Dissolved	101		70	130		0.201	XXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 46 of 90 Analyzed MDL	MRL	DF
B408729-MS1	Iron, Dissolved	103		70	130		0.26	XXXXXXXX-XX	0.06	0.200		B408729	08/25/14	08/25/14	0.00	0.02	1
B408729-MS1	Magnesium, Dissolved	109		70	130		15.3	XXXXXXXX-XX	4.2	10.2		B408729	08/25/14	08/25/14	0.01	0.2	1
B408729-MS1	Manganese, Dissolved	101		70	130		0.203	XXXXXXXX-XX	0.001	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1
B408729-MS1	Potassium, Dissolved	97.7		70	130		8.2	XXXXXXXX-XX	0.4	8.00		B408729	08/25/14	08/25/14	0.04	0.5	1
B408729-MS1	Sodium, Dissolved	104		70	130		14.2	XXXXXXXX-XX	3.8	10.0		B408729	08/25/14	08/25/14	0.02	0.5	1
B408729-MS1	Tin, Dissolved	104		70	130		0.21	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.02	1
B408729-MS1	Zinc, Dissolved	98.7		70	130		0.20	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.01	1
B408729-MS2	Beryllium, Dissolved	100		70	130		0.201	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1
B408729-MS2	Calcium, Dissolved	-8.03		70	130		445	XXXXXXXX-XX	446	10.2		B408729	08/25/14	08/25/14	0.00	0.2	1
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																	
B408729-MS2	Chromium, Dissolved	104		70	130		0.209	XXXXXXXX-XX	0.0007	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1
B408729-MS2	Iron, Dissolved	96.9		70	130		0.28	XXXXXXXX-XX	0.08	0.200		B408729	08/25/14	08/25/14	0.00	0.02	1
B408729-MS2	Magnesium, Dissolved	99.5		70	130		162	XXXXXXXX-XX	152	10.2		B408729	08/25/14	08/25/14	0.01	0.2	1
B408729-MS2	Manganese, Dissolved	89.2		70	130		0.369	XXXXXXXX-XX	0.191	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1
B408729-MS2	Potassium, Dissolved	96.0		70	130		18.3	XXXXXXXX-XX	10.6	8.00		B408729	08/25/14	08/25/14	0.04	0.5	1
B408729-MS2	Sodium, Dissolved	-29.2		70	130		355	XXXXXXXX-XX	358	10.0		B408729	08/25/14	08/25/14	0.02	0.5	1
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																	
B408729-MS2	Tin, Dissolved	95.6		70	130		0.20	XXXXXXXX-XX	0.008	0.200		B408729	08/25/14	08/25/14	0.00	0.02	1
B408729-MS2	Zinc, Dissolved	93.6		70	130		0.19	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.01	1
B408730-MS1	Beryllium, Dissolved	72.9		70	130		1.64	1408830-05	0.185	2.00		B408730	08/25/14	08/25/14	0.00	0.01	1
B408730-MS1	Calcium, Dissolved	64.2		70	130		402	1408830-05	336	102		B408730	08/25/14	08/25/14	0.04	2.0	1
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																	
B408730-MS1	Chromium, Dissolved	69.8		70	130		4.18	1408830-05	2.78	2.00		B408730	08/25/14	08/25/14	0.00	0.05	1
QM-010 - The MS recovery was outside acceptance limits but passed Duplicate Spike acceptance limits. The batch was accepted based on the acceptability of the MSD as the batch Spike.																	
B408730-MS1	Iron, Dissolved	655		70	130		1870	1408830-05	1850	2.00		B408730	08/25/14	08/25/14	0.05	0.20	1
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																	
B408730-MS1	Magnesium, Dissolved	84.9		70	130		2780	1408830-05	2690	102		B408730	08/25/14	08/25/14	0.1	2.0	1
B408730-MS1	Manganese, Dissolved	87.5		70	130		100	1408830-05	98.6	2.00		B408730	08/25/14	08/25/14	0.00	0.05	1
B408730-MS1	Potassium, Dissolved	71.0		70	130		472	1408830-05	415	80.0		B408730	08/25/14	08/25/14	0.4	5.0	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
B408730-MS1	Sodium, Dissolved	146		70	130		4330	1408830-05	4190	100		B408730	08/25/14	08/25/14	0.2	5.0	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408730-MS1	Tin, Dissolved	64.9		70	130		1.36	1408830-05	0.06	2.00		B408730	08/25/14	08/25/14	0.02	0.20	1	
QM-RPD - The recovery was outside acceptance limits for the MS and/or MSD. The RPD between the MS and MSD was acceptable and indicates the recovery is due to matrix interference. The batch was accepted based on the acceptable recovery of the LCS and the RPD.																		
B408730-MS1	Zinc, Dissolved	-912		70	130		288	1408830-05	306	2.00		B408730	08/25/14	08/25/14	0.01	0.10	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		

Matrix Spike Dup - Method EPA 200.7

B408729-MSD1	Beryllium, Dissolved	101	1.41	70	130	20	0.202	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1	
B408729-MSD1	Calcium, Dissolved	109	0.103	70	130	20	26.5	XXXXXX-XX	15.4	10.2		B408729	08/25/14	08/25/14	0.00	0.2	1	
B408729-MSD1	Chromium, Dissolved	102	1.71	70	130	20	0.205	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1	
B408729-MSD1	Iron, Dissolved	107	2.94	70	130	20	0.27	XXXXXXXX-XX	0.06	0.200		B408729	08/25/14	08/25/14	0.00	0.02	1	
B408729-MSD1	Magnesium, Dissolved	100	5.82	70	130	20	14.5	XXXXXXXX-XX	4.2	10.2		B408729	08/25/14	08/25/14	0.01	0.2	1	
B408729-MSD1	Manganese, Dissolved	103	1.77	70	130	20	0.206	XXXXXXXX-XX	0.001	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1	
B408729-MSD1	Potassium, Dissolved	99.2	1.44	70	130	20	8.3	XXXXXXXX-XX	0.4	8.00		B408729	08/25/14	08/25/14	0.04	0.5	1	
B408729-MSD1	Sodium, Dissolved	105	0.616	70	130	20	14.3	XXXXXXXX-XX	3.8	10.0		B408729	08/25/14	08/25/14	0.02	0.5	1	
B408729-MSD1	Tin, Dissolved	108	3.42	70	130	20	0.22	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.02	1	
B408729-MSD1	Zinc, Dissolved	101	2.20	70	130	20	0.20	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.01	1	
B408729-MSD2	Beryllium, Dissolved	99.8	0.436	70	130	20	0.200	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1	
B408729-MSD2	Calcium, Dissolved	-97.1	2.06	70	130	20	436	XXXXXXXX-XX	446	10.2		B408729	08/25/14	08/25/14	0.00	0.2	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408729-MSD2	Chromium, Dissolved	97.2	7.13	70	130	20	0.195	XXXXXXXX-XX	0.0007	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1	
B408729-MSD2	Iron, Dissolved	93.1	2.78	70	130	20	0.27	XXXXXXXX-XX	0.08	0.200		B408729	08/25/14	08/25/14	0.00	0.02	1	
B408729-MSD2	Magnesium, Dissolved	62.1	2.38	70	130	20	159	XXXXXXXX-XX	152	10.2		B408729	08/25/14	08/25/14	0.01	0.2	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408729-MSD2	Manganese, Dissolved	98.2	4.75	70	130	20	0.387	XXXXXXXX-XX	0.191	0.200		B408729	08/25/14	08/25/14	0.00	0.00	1	
B408729-MSD2	Potassium, Dissolved	94.9	0.490	70	130	20	18.2	XXXXXXXX-XX	10.6	8.00		B408729	08/25/14	08/25/14	0.04	0.5	1	
B408729-MSD2	Sodium, Dissolved	-63.4	0.967	70	130	20	351	XXXXXXXX-XX	358	10.0		B408729	08/25/14	08/25/14	0.02	0.5	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408729-MSD2	Tin, Dissolved	98.5	2.95	70	130	20	0.20	XXXXXXXX-XX	0.008	0.200		B408729	08/25/14	08/25/14	0.00	0.02	1	

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
B408729-MSD2	Zinc, Dissolved	91.0	2.84	70	130	20	0.18	XXXXXXXX-XX	0	0.200		B408729	08/25/14	08/25/14	0.00	0.01	1	
B408730-MSD1	Beryllium, Dissolved	74.7	2.16	70	130	20	1.68	1408830-05	0.185	2.00		B408730	08/25/14	08/25/14	0.00	0.01	1	
B408730-MSD1	Calcium, Dissolved	62.9	0.324	70	130	20	401	1408830-05	336	102		B408730	08/25/14	08/25/14	0.04	2.0	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408730-MSD1	Chromium, Dissolved	70.4	0.275	70	130	20	4.19	1408830-05	2.78	2.00		B408730	08/25/14	08/25/14	0.00	0.05	1	
B408730-MSD1	Iron, Dissolved	-292	1.02	70	130	20	1850	1408830-05	1850	2.00		B408730	08/25/14	08/25/14	0.05	0.20	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408730-MSD1	Magnesium, Dissolved	57.2	1.02	70	130	20	2750	1408830-05	2690	102		B408730	08/25/14	08/25/14	0.1	2.0	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408730-MSD1	Manganese, Dissolved	-19.8	2.16	70	130	20	98.2	1408830-05	98.6	2.00		B408730	08/25/14	08/25/14	0.00	0.05	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408730-MSD1	Potassium, Dissolved	68.2	0.475	70	130	20	470	1408830-05	415	80.0		B408730	08/25/14	08/25/14	0.4	5.0	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408730-MSD1	Sodium, Dissolved	221	1.70	70	130	20	4410	1408830-05	4190	100		B408730	08/25/14	08/25/14	0.2	5.0	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		
B408730-MSD1	Tin, Dissolved	64.6	0.434	70	130	20	1.35	1408830-05	0.06	2.00		B408730	08/25/14	08/25/14	0.02	0.20	1	
QM-RPD - The recovery was outside acceptance limits for the MS and/or MSD. The RPD between the MS and MSD was acceptable and indicates the recovery is due to matrix interference. The batch was accepted based on the acceptable recovery of the LCS and the RPD.																		
B408730-MSD1	Zinc, Dissolved	65.5	6.56	70	130	20	308	1408830-05	306	2.00		B408730	08/25/14	08/25/14	0.01	0.10	1	
QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.																		

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Cont	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed MDL	MRL	DF
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Blank - Method EPA 200.8

B408836-BLK1	Arsenic, Dissolved						0.0000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Cadmium, Dissolved						-0.000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Chromium, Dissolved						-0.000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Cobalt, Dissolved						-0.000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Copper, Dissolved						-0.000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Lead, Dissolved						0.0000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Molybdenum, Dissolved						-0.000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Nickel, Dissolved						0.0000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Selenium, Dissolved						0.0000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Silver, Dissolved						-0.000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Thallium, Dissolved						-0.000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Uranium, Dissolved						-0.000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-BLK1	Vanadium, Dissolved						0.0000					B408836	08/28/14	08/28/14	0.00	0.00	1
B408889-BLK1	Arsenic, Dissolved						0.0000					B408889	08/29/14	08/29/14	0.00	0.00	1
B408889-BLK1	Cadmium, Dissolved						-0.000					B408889	08/29/14	08/29/14	0.00	0.00	1
B408889-BLK1	Lead, Dissolved						0.0000					B408889	08/29/14	08/29/14	0.00	0.00	1
B408889-BLK1	Molybdenum, Dissolved						0.0000					B408889	08/29/14	08/29/14	0.00	0.00	1
B408889-BLK1	Selenium, Dissolved						0.0000					B408889	08/29/14	08/29/14	0.00	0.00	1
B408889-BLK1	Silver, Dissolved						0.0000					B408889	08/29/14	08/29/14	0.00	0.00	1
B408889-BLK1	Thallium, Dissolved						0.0000					B408889	08/29/14	08/29/14	0.00	0.00	1

Calibration Blank - Method EPA 200.8

4H28008-CCB1	Arsenic, Dissolved						0.0000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Cadmium, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Chromium, Dissolved						0.0001					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Cobalt, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 50 of 90 Analyzed MDL	MRL	DF
4H28008-CCB1	Copper, Dissolved						0.0000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Lead, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Molybdenum, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Nickel, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Selenium, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Silver, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Thallium, Dissolved						0.0000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Uranium, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB1	Vanadium, Dissolved						0.0000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Arsenic, Dissolved						0.0000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Cadmium, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Chromium, Dissolved						0.0000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Cobalt, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Copper, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Lead, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Molybdenum, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Nickel, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Selenium, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Silver, Dissolved						0.0000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Thallium, Dissolved						0.0000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Uranium, Dissolved						-0.000					4H28008	08/28/14	08/28/14			1
4H28008-CCB2	Vanadium, Dissolved						0.0000					4H28008	08/28/14	08/28/14			1
4H29006-CCB1	Arsenic, Dissolved						0.0000					4H29006	08/29/14	08/29/14			1
4H29006-CCB1	Cadmium, Dissolved						0.0000					4H29006	08/29/14	08/29/14			1
4H29006-CCB1	Lead, Dissolved						0.0000					4H29006	08/29/14	08/29/14			1
4H29006-CCB1	Molybdenum, Dissolved						0.0002					4H29006	08/29/14	08/29/14			1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 51 of 90 Analyzed MDL MRL DF
4H29006-CCB1	Selenium, Dissolved						0.0001					4H29006	08/29/14	08/29/14	1
4H29006-CCB1	Silver, Dissolved						0.0003					4H29006	08/29/14	08/29/14	1
4H29006-CCB1	Thallium, Dissolved						0.0000					4H29006	08/29/14	08/29/14	1
4H29006-CCB2	Arsenic, Dissolved						0.0000					4H29006	08/29/14	08/29/14	1
4H29006-CCB2	Cadmium, Dissolved						0.0000					4H29006	08/29/14	08/29/14	1
4H29006-CCB2	Lead, Dissolved						0.0000					4H29006	08/29/14	08/29/14	1
4H29006-CCB2	Molybdenum, Dissolved						0.0003					4H29006	08/29/14	08/29/14	1
4H29006-CCB2	Selenium, Dissolved						0.0000					4H29006	08/29/14	08/29/14	1
4H29006-CCB2	Silver, Dissolved						0.0002					4H29006	08/29/14	08/29/14	1
4H29006-CCB2	Thallium, Dissolved						0.0000					4H29006	08/29/14	08/29/14	1
4H29006-CCB3	Arsenic, Dissolved						0.0002					4H29006	08/29/14	08/29/14	1
4H29006-CCB3	Cadmium, Dissolved						0.0000					4H29006	08/29/14	08/29/14	1
4H29006-CCB3	Lead, Dissolved						-0.000					4H29006	08/29/14	08/29/14	1
4H29006-CCB3	Molybdenum, Dissolved						0.0005					4H29006	08/29/14	08/29/14	1
QB-01 - The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.															
4H29006-CCB3	Selenium, Dissolved						0.0002					4H29006	08/29/14	08/29/14	1
4H29006-CCB3	Silver, Dissolved						0.0003					4H29006	08/29/14	08/29/14	1
4H29006-CCB3	Thallium, Dissolved						0.0000					4H29006	08/29/14	08/29/14	1

Calibration Check - Method EPA 200.8

4H28008-CCV1	Arsenic, Dissolved	97.5		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14	1
4H28008-CCV1	Cadmium, Dissolved	96.9		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14	1
4H28008-CCV1	Chromium, Dissolved	97.8		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14	1
4H28008-CCV1	Cobalt, Dissolved	95.8		90	110		0.038			0.0400		4H28008	08/28/14	08/28/14	1
4H28008-CCV1	Copper, Dissolved	99.6		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14	1
4H28008-CCV1	Lead, Dissolved	97.6		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14	1
4H28008-CCV1	Molybdenum, Dissolved	97.4		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14	1
4H28008-CCV1	Nickel, Dissolved	101		90	110		0.0405			0.0400		4H28008	08/28/14	08/28/14	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 52 of 90		
															Analyzed	MDL	MRL
4H28008-CCV1	Selenium, Dissolved	96.7		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV1	Silver, Dissolved	104		90	110		0.042			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV1	Thallium, Dissolved	99.3		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV1	Uranium, Dissolved	94.6		90	110		0.038			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV1	Vanadium, Dissolved	103		90	110		0.041			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Arsenic, Dissolved	98.6		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Cadmium, Dissolved	94.1		90	110		0.038			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Chromium, Dissolved	99.7		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Cobalt, Dissolved	94.4		90	110		0.038			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Copper, Dissolved	97.6		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Lead, Dissolved	100		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Molybdenum, Dissolved	96.4		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Nickel, Dissolved	101		90	110		0.0405			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Selenium, Dissolved	98.1		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Silver, Dissolved	101		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Thallium, Dissolved	100		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Uranium, Dissolved	95.3		90	110		0.038			0.0400		4H28008	08/28/14	08/28/14			1
4H28008-CCV2	Vanadium, Dissolved	105		90	110		0.042			0.0400		4H28008	08/28/14	08/28/14			1
4H29006-CCV1	Arsenic, Dissolved	100		90	110		0.040			0.0400		4H29006	08/29/14	08/29/14			1
4H29006-CCV1	Cadmium, Dissolved	101		90	110		0.040			0.0400		4H29006	08/29/14	08/29/14			1
4H29006-CCV1	Lead, Dissolved	98.4		90	110		0.039			0.0400		4H29006	08/29/14	08/29/14			1
4H29006-CCV1	Molybdenum, Dissolved	100		90	110		0.040			0.0400		4H29006	08/29/14	08/29/14			1
4H29006-CCV1	Selenium, Dissolved	102		90	110		0.041			0.0400		4H29006	08/29/14	08/29/14			1
4H29006-CCV1	Silver, Dissolved	107		90	110		0.043			0.0400		4H29006	08/29/14	08/29/14			1
4H29006-CCV1	Thallium, Dissolved	99.5		90	110		0.040			0.0400		4H29006	08/29/14	08/29/14			1
4H29006-CCV2	Arsenic, Dissolved	99.6		90	110		0.040			0.0400		4H29006	08/29/14	08/29/14			1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
4H29006-CCV2	Cadmium, Dissolved	95.2		90	110		0.038			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV2	Lead, Dissolved	100		90	110		0.040			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV2	Molybdenum, Dissolved	98.5		90	110		0.039			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV2	Selenium, Dissolved	101		90	110		0.040			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV2	Silver, Dissolved	107		90	110		0.043			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV2	Thallium, Dissolved	104		90	110		0.042			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV3	Arsenic, Dissolved	102		90	110		0.041			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV3	Cadmium, Dissolved	101		90	110		0.040			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV3	Lead, Dissolved	105		90	110		0.042			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV3	Molybdenum, Dissolved	106		90	110		0.042			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV3	Selenium, Dissolved	104		90	110		0.042			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV3	Silver, Dissolved	107		90	110		0.043			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-CCV3	Thallium, Dissolved	105		90	110		0.042			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1

Initial Cal Blank - Method EPA 200.8

4H28008-ICB1	Arsenic, Dissolved						-0.000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Cadmium, Dissolved						-0.000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Chromium, Dissolved						0.0000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Cobalt, Dissolved						0.0000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Copper, Dissolved						-0.000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Lead, Dissolved						-0.000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Molybdenum, Dissolved						0.0000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Nickel, Dissolved						-0.000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Selenium, Dissolved						0.0000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Silver, Dissolved						0.0000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Thallium, Dissolved						0.0000					4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICB1	Uranium, Dissolved						0.0000					4H28008	08/28/14	08/28/14	08/28/14			1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
4H28008-ICB1	Vanadium, Dissolved						0.0000					4H28008	08/28/14	08/28/14	08/28/14			1
4H29006-ICB1	Arsenic, Dissolved						0.0000					4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICB1	Cadmium, Dissolved						0.0000					4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICB1	Lead, Dissolved						0.0000					4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICB1	Molybdenum, Dissolved						0.0003					4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICB1	Selenium, Dissolved						0.0000					4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICB1	Silver, Dissolved						0.0002					4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICB1	Thallium, Dissolved						0.0000					4H29006	08/29/14	08/29/14	08/29/14			1

Initial Cal Check - Method EPA 200.8

4H28008-ICV1	Arsenic, Dissolved	99.2		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Cadmium, Dissolved	102		90	110		0.041			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Chromium, Dissolved	97.7		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Cobalt, Dissolved	93.6		90	110		0.037			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Cooper, Dissolved	99.0		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Lead, Dissolved	102		90	110		0.041			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Molybdenum, Dissolved	98.2		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Nickel, Dissolved	99.2		90	110		0.0397			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Selenium, Dissolved	96.7		90	110		0.039			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Silver, Dissolved	105		90	110		0.042			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Thallium, Dissolved	102		90	110		0.041			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Uranium, Dissolved	101		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H28008-ICV1	Vanadium, Dissolved	99.0		90	110		0.040			0.0400		4H28008	08/28/14	08/28/14	08/28/14			1
4H29006-ICV1	Arsenic, Dissolved	96.3		90	110		0.039			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICV1	Cadmium, Dissolved	97.7		90	110		0.039			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICV1	Lead, Dissolved	98.7		90	110		0.039			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICV1	Molybdenum, Dissolved	99.3		90	110		0.040			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
4H29006-ICV1	Selenium, Dissolved	94.7		90	110		0.038			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICV1	Silver, Dissolved	108		90	110		0.043			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1
4H29006-ICV1	Thallium, Dissolved	102		90	110		0.041			0.0400		4H29006	08/29/14	08/29/14	08/29/14			1

LCS - Method EPA 200.8

B408836-BS1	Arsenic, Dissolved	103		85	115		0.041			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Cadmium, Dissolved	96.2		85	115		0.038			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Chromium, Dissolved	98.6		85	115		0.039			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Cobalt, Dissolved	93.6		85	115		0.037			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Copper, Dissolved	98.2		85	115		0.039			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Lead, Dissolved	99.2		85	115		0.040			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Molybdenum, Dissolved	99.4		85	115		0.040			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Nickel, Dissolved	102		85	115		0.0409			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Selenium, Dissolved	99.0		85	115		0.040			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Silver, Dissolved	91.7		85	115		0.037			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Thallium, Dissolved	101		85	115		0.041			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Uranium, Dissolved	94.8		85	115		0.038			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408836-BS1	Vanadium, Dissolved	99.3		85	115		0.040			0.0400		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
B408889-BS1	Arsenic, Dissolved	99.8		85	115		0.040			0.0400		B408889	08/29/14	08/29/14	08/29/14	0.00	0.00	1
B408889-BS1	Cadmium, Dissolved	99.1		85	115		0.040			0.0400		B408889	08/29/14	08/29/14	08/29/14	0.00	0.00	1
B408889-BS1	Lead, Dissolved	98.1		85	115		0.039			0.0400		B408889	08/29/14	08/29/14	08/29/14	0.00	0.00	1
B408889-BS1	Molybdenum, Dissolved	99.3		85	115		0.040			0.0400		B408889	08/29/14	08/29/14	08/29/14	0.00	0.00	1
B408889-BS1	Selenium, Dissolved	102		85	115		0.041			0.0400		B408889	08/29/14	08/29/14	08/29/14	0.00	0.00	1
B408889-BS1	Silver, Dissolved	103		85	115		0.041			0.0400		B408889	08/29/14	08/29/14	08/29/14	0.00	0.00	1
B408889-BS1	Thallium, Dissolved	98.7		85	115		0.039			0.0400		B408889	08/29/14	08/29/14	08/29/14	0.00	0.00	1

Matrix Spike - Method EPA 200.8

B408836-MS1	Arsenic, Dissolved	102		70	130		0.082	XXXXXX-XX	0.0009	0.0800		B408836	08/28/14	08/28/14	08/28/14	0.00	0.00	1
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QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 56 of 90 Analyzed MDL	MRL	DF
B408836-MS1	Cadmium, Dissolved	96.3		70	130		0.078	XXXXXXXX-XX	0.001	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Chromium, Dissolved	90.0		70	130		0.076	XXXXXXXX-XX	0.004	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Cobalt, Dissolved	84.4		70	130		0.076	XXXXXXXX-XX	0.008	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Copper, Dissolved	86.9		70	130		0.074	XXXXXXXX-XX	0.004	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Lead, Dissolved	94.3		70	130		0.075	XXXXXXXX XX	0	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Molybdenum, Dissolved	105		70	130		0.096	XXXXXXXX XY	0.012	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Nickel, Dissolved	97.1		75	125		0.0856	XXXXXX-XX	0.0079	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Selenium, Dissolved	109		70	130		0.091	XXXXXXXX-XX	0.003	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Silver, Dissolved	87.9		70	130		0.070	XXXXXXXX XX	0	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Thallium, Dissolved	94.2		70	130		0.076	XXXXXXXX-XX	0.0009	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Uranium, Dissolved	98.3		70	130		0.085	XXXXXXXX-XX	0.006	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS1	Vanadium, Dissolved	93.0		70	130		0.076	XXXXXXXX XX	0.001	0.0800		B408836	08/28/14	08/28/14	0.00	0.00	1
B408836-MS2	Arsenic, Dissolved	94.9		70	130		431	1408830-05	51.2	400		B408836	08/28/14	08/28/14	0.80	5.00	1
B408836-MS2	Cadmium, Dissolved	95.8		70	130		388	1408830-05	4.72	400		B408836	08/28/14	08/28/14	0.20	2.00	1
B408836-MS2	Chromium, Dissolved	98.0		70	130		397	1408830-05	4.57	400		B408836	08/28/14	08/28/14	0.80	5.00	1
B408836-MS2	Cobalt, Dissolved	91.7		70	130		408	1408830-05	41.2	400		B408836	08/28/14	08/28/14	0.30	5.00	1
B408836-MS2	Copper, Dissolved	95.9		70	130		823	1408830-05	439	400		B408836	08/28/14	08/28/14	0.30	10.0	1
B408836-MS2	Lead, Dissolved	96.2		70	130		386	1408830-05	0.870	400		B408836	08/28/14	08/28/14	0.40	5.00	1
B408836-MS2	Molybdenum, Dissolved	97.6		70	130		394	1408830-05	3.47	400		B408836	08/28/14	08/28/14	0.30	5.00	1
B408836-MS2	Nickel, Dissolved	99.5		75	125		497	1408830-05	99.3	400		B408836	08/28/14	08/28/14	0.70	5.00	1
B408836-MS2	Selenium, Dissolved	92.3		70	130		371	1408830-05	1.44	400		B408836	08/28/14	08/28/14	0.10	5.00	1
B408836-MS2	Silver, Dissolved	92.9		70	130		372	1408830-05	0	400		B408836	08/28/14	08/28/14	1.00	5.00	1
B408836-MS2	Thallium, Dissolved	97.1		70	130		389	1408830-05	0.460	400		B408836	08/28/14	08/28/14	0.30	2.00	1
B408836-MS2	Uranium, Dissolved	91.3		70	130		447	1408830-05	82.2	400		B408836	08/28/14	08/28/14	0.20	5.00	1
B408836-MS2	Vanadium, Dissolved	100		70	130		911	1408830-05	510	400		B408836	08/28/14	08/28/14	0.50	5.00	1
B408889-MS1	Arsenic, Dissolved	113		70	130		63.4	1408830-05	58.9	4.00		B408889	08/29/14	08/29/14	0.00	0.05	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 57 of 90 Analyzed MDL	MRL	DF
B408889-MS1	Cadmium, Dissolved	94.8		70	130		8.47	1408830-05	4.68	4.00		B408889	08/29/14	08/29/14	0.00	0.02	1
B408889-MS1	Lead, Dissolved	95.2		70	130		4.80	1408830-05	0.991	4.00		B408889	08/29/14	08/29/14	0.00	0.05	1
B408889-MS1	Molybdenum, Dissolved	96.1		70	130		7.81	1408830-05	3.97	4.00		B408889	08/29/14	08/29/14	0.00	0.05	1
B408889-MS1	Selenium, Dissolved	113		70	130		6.70	1408830-05	2.17	4.00		B408889	08/29/14	08/29/14	0.00	0.05	1
B408889-MS1	Silver, Dissolved	96.1		70	130		3.93	1408830-05	0.087	4.00		B408889	08/29/14	08/29/14	0.01	0.05	1
B408889-MS1	Thallium, Dissolved	96.9		70	130		4.40	1408830-05	0.522	4.00		B408889	08/29/14	08/29/14	0.00	0.02	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	MDL	MRL	DF
Blank - Method EPA 245.1																	
B409157-BLK1	Mercury, Dissolved						-0.000					B409157	09/05/14	09/08/14	0.00	0.00	1
Calibration Blank - Method EPA 245.1																	
4I05022-CCB1	Mercury, Dissolved						0.0229					4I05022	09/05/14	09/08/14			1
4I05022-CCB2	Mercury, Dissolved						0.0160					4I05022	09/05/14	09/08/14			1
Calibration Check - Method EPA 245.1																	
4I05022-CCV1	Mercury, Dissolved	106		90	110		5.2800			5.00		4I05022	09/05/14	09/08/14			1
4I05022-CCV2	Mercury, Dissolved	103		90	110		5.1475			5.00		4I05022	09/05/14	09/08/14			1
Initial Cal Blank - Method EPA 245.1																	
4I05022-ICB1	Mercury, Dissolved						-0.012					4I05022	09/05/14	09/08/14			1
Initial Cal Check - Method EPA 245.1																	
4I05022-ICV1	Mercury, Dissolved	101		90	110		5.0494			5.00		4I05022	09/05/14	09/08/14			1
LCS - Method EPA 245.1																	
B409157-BS1	Mercury, Dissolved	106		85	115		0.0053			0.00500		B409157	09/05/14	09/08/14	0.00	0.00	1
Matrix Spike - Method EPA 245.1																	
B409157-MS1	Mercury, Dissolved	113		75	125		0.0059	1408830-05	0.0002	0.00500		B409157	09/05/14	09/08/14	0.00	0.00	1
B409157-MS2	Mercury, Dissolved	114		75	125		0.0057	XXXXXXXX XX	0	0.00500		B409157	09/05/14	09/08/14	0.00	0.00	1
Matrix Spike Dup - Method EPA 245.1																	
B409157-MSD1	Mercury, Dissolved	107	5.02	75	125	20	0.0056	1408830-05	0.0002	0.00500		B409157	09/05/14	09/08/14	0.00	0.00	1
B409157-MSD2	Mercury, Dissolved	121	6.06	75	125	20	0.0060	XXXXXXXX-XX	0	0.00500		B409157	09/05/14	09/08/14	0.00	0.00	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	MDL	MRL	DF
Calibration Blank - Method EPA 300.0																	
4I01001-CCB1	Chloride						0					4I01001	08/29/14	08/29/14			1
4I01001-CCB1	Fluoride						0.0					4I01001	08/29/14	08/29/14			1
4I01001-CCB1	Sulfate						0					4I01001	08/29/14	08/29/14			1
4I01001-CCB2	Chloride						0					4I01001	08/29/14	08/29/14			1
4I01001-CCB2	Fluoride						0.0					4I01001	08/29/14	08/29/14			1
4I01001-CCB2	Sulfate						0					4I01001	08/29/14	08/29/14			1
4I01001-CCB3	Chloride						0					4I01001	08/29/14	08/29/14			1
4I01001-CCB3	Fluoride						0.0					4I01001	08/29/14	08/29/14			1
4I01001-CCB3	Sulfate						0.7					4I01001	08/29/14	08/29/14			1
Calibration Check - Method EPA 300.0																	
4I01001-CCV1	Chloride	100		90	110		20			20.0		4I01001	08/29/14	08/29/14			1
4I01001-CCV1	Fluoride	100		90	110		2.0			2.00		4I01001	08/29/14	08/29/14			1
4I01001-CCV1	Sulfate	100		90	110		40			40.0		4I01001	08/29/14	08/29/14			1
4I01001-CCV2	Chloride	100		90	110		20			20.0		4I01001	08/29/14	08/29/14			1
4I01001-CCV2	Fluoride	95.0		90	110		1.9			2.00		4I01001	08/29/14	08/29/14			1
4I01001-CCV2	Sulfate	100		90	110		40			40.0		4I01001	08/29/14	08/29/14			1
4I01001-CCV3	Chloride	100		90	110		20			20.0		4I01001	08/29/14	08/29/14			1
4I01001-CCV3	Fluoride	95.0		90	110		1.9			2.00		4I01001	08/29/14	08/29/14			1
4I01001-CCV3	Sulfate	102		90	110		41			40.0		4I01001	08/29/14	08/29/14			1
LCSW - Method EPA 300.0																	
B408926-BS1	Chloride	102		90	110		51			50.0		B408926	08/29/14	08/29/14	0.07	1	1
B408926-BS1	Fluoride	100		90	110		5.0			5.00		B408926	08/29/14	08/29/14	0.02	0.1	1
B408926-BS1	Sulfate	100		90	110		100			100		B408926	08/29/14	08/29/14	0.2	1	1
B408926-BS2	Chloride	102		90	110		51			50.0		B408926	08/29/14	08/29/14	0.07	1	1
B408926-BS2	Fluoride	98.0		90	110		4.9			5.00		B408926	08/29/14	08/29/14	0.02	0.1	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
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B408926-BS2	Sulfate	100		90	110		100			100		B408926		08/29/14	08/29/14	0.2	1	1
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LCSW Dup - Method EPA 300.0

B408926-BSD1	Chloride	102	0.00	90	110	20	51			50.0		B408926		08/29/14	08/29/14	0.07	1	1
B408926-BSD1	Fluoride	98.0	2.02	90	110	20	4.9			5.00		B408926		08/29/14	08/29/14	0.02	0.1	1
B408926-BSD1	Sulfate	100	0.00	90	110	200	100			100		B408926		08/29/14	08/29/14	0.2	1	1
B408926-BSD2	Chloride	102	0.00	90	110	20	51			50.0		B408926		08/29/14	08/29/14	0.07	1	1
B408926-BSD2	Fluoride	96.0	2.06	90	110	20	4.8			5.00		B408926		08/29/14	08/29/14	0.02	0.1	1
B408926-BSD2	Sulfate	100	0.00	90	110	200	100			100		B408926		08/29/14	08/29/14	0.2	1	1

Matrix Spike - Method EPA 300.0

B408926-MS1	Chloride	100		80	120		9200	1408830-05	4200	5000		B408926		08/29/14	08/29/14	35	500	500
B408926-MS1 A-01 -	Fluoride	96.0		80	120		1800	1408830-05	1320	500		B408926		08/29/14	08/29/14	10.0	50.0	500
B408926-MS1	Sulfate	100		80	120		66000	1408830-05	56000	10000		B408926		08/29/14	08/29/14	100	500	500
B408926-MS2	Chloride	100		80	120		5200	1408830-05	4200	1000		B408926		08/29/14	08/29/14	7	100	100
B408926-MS2 A-01 -	Fluoride	80.0		80	120		1400	1408830-05	1320	100		B408926		08/29/14	08/29/14	2.0	10.0	100
B408926-MS2	Sulfate	-10.0		80	120		55800	1408830-05	56000	2000		B408926		08/29/14	08/29/14	20	100	100

QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

Matrix Spike Dup - Method EPA 300.0

B408926-MSD1	Chloride	102	1.08	80	120	20	9300	1408830-05	4200	5000		B408926		08/29/14	08/29/14	35	500	500
B408926-MSD1 A-01 -	Fluoride	98.0	0.554	80	120	20	1810	1408830-05	1320	500		B408926		08/29/14	08/29/14	10.0	50.0	500
B408926-MSD1	Sulfate	100	0.00	80	120	20	66000	1408830-05	56000	10000		B408926		08/29/14	08/29/14	100	500	500
B408926-MSD2	Chloride	100	0.00	80	120	20	5200	1408830-05	4200	1000		B408926		08/29/14	08/29/14	7	100	100
B408926-MSD2 A-01 -	Fluoride	80.0	0.00	80	120	20	1400	1408830-05	1320	100		B408926		08/29/14	08/29/14	2.0	10.0	100
B408926-MSD2	Sulfate	-5.00	0.179	80	120	20	55900	1408830-05	56000	2000		B408926		08/29/14	08/29/14	20	100	100

QM-4X - The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

PBW - Method EPA 300.0

B408926-BLK1	Chloride						0.3					B408926		08/29/14	08/29/14	0.07	1	1
B408926-BLK1	Fluoride						0.0					B408926		08/29/14	08/29/14	0.02	0.1	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
B408926-BLK1	Sulfate						0.7					B408926	08/29/14	08/29/14	0.2	1	1	
B408926-BLK2	Chloride						0					B408926	08/29/14	08/29/14	0.07	1	1	
B408926-BLK2	Fluoride						0.0					B408926	08/29/14	08/29/14	0.02	0.1	1	
B408926-BLK2	Sulfate						0					B408926	08/29/14	08/29/14	0.2	1	1	

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed MDL	MRL	DF
Blank - Method EPA 353.2																	
B409111-BLK1	Nitrate + Nitrite, Total						0.04					B409111	09/04/14	09/04/14	0.03	0.1	1
Calibration Blank - Method EPA 353.2																	
4104015-CCB1	Nitrate + Nitrite, Total						0.01					4104015	09/04/14	09/04/14			1
4104015-CCB2	Nitrate + Nitrite, Total						0.02					4104015	09/04/14	09/04/14			1
4104015-CCB3	Nitrate + Nitrite, Total						0.03					4104015	09/04/14	09/04/14			1
Calibration Check - Method EPA 353.2																	
4104015-CCV1	Nitrate + Nitrite, Total	94.0		90	110		0.9			1.00		4104015	09/04/14	09/04/14			1
4104015-CCV2	Nitrate + Nitrite, Total	95.0		90	110		1.0			1.00		4104015	09/04/14	09/04/14			1
4104015-CCV3	Nitrate + Nitrite, Total	95.0		90	110		1.0			1.00		4104015	09/04/14	09/04/14			1
Initial Cal Blank - Method EPA 353.2																	
4104015-ICB1	Nitrate + Nitrite, Total						0.03					4104015	09/04/14	09/04/14			1
Initial Cal Check - Method EPA 353.2																	
4104015-ICV1	Nitrate + Nitrite, Total	94.0		90	110		0.9			1.00		4104015	09/04/14	09/04/14			1
LCS - Method EPA 353.2																	
B409111-BS1	Nitrate + Nitrite, Total	97.0		90	110		1.9			2.00		B409111	09/04/14	09/04/14	0.03	0.1	1
Matrix Spike - Method EPA 353.2																	
B409111-MS1	Nitrate + Nitrite, Total	77.0		80	120		30.6	XXXXXXXX-XX	15.2	20.0		B409111	09/04/14	09/04/14	0.6	2.0	20
QM-05 - The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The analytical batch was accepted based on the acceptable data provided by the Laboratory Control Sample(s) [LCS] and/or LCS Duplicates.																	
B409111-MS2	Nitrate + Nitrite, Total	76.0		80	120		115	1408830-05	39.0	100		B409111	09/04/14	09/04/14	3.0	10.0	100
Matrix Spike Dup - Method EPA 353.2																	
B409111-MSD1	Nitrate + Nitrite, Total	92.0	9.35	80	120	20	33.6	XXXXXXXX-XX	15.2	20.0		B409111	09/04/14	09/04/14	0.6	2.0	20
B409111-MSD2	Nitrate + Nitrite, Total	87.0	9.13	80	120	20	126	1408830-05	39.0	100		B409111	09/04/14	09/04/14	3.0	10.0	100
QM-05 - The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The analytical batch was accepted based on the acceptable data provided by the Laboratory Control Sample(s) [LCS] and/or LCS Duplicates.																	

Blank - Method EPA 8260B

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed MDL	MRL	DF
B408858-BLK1	1,1,1,2-Tetrachloroethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,1,1-Trichloroethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,1,1,2,2-Tetrachloroethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,1,2-Trichloroethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,1,2-Trichlorotrifluoroethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,1-Dichloroethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,1-Dichloroethene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,1-Dichloropropene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,2,3-Trichlorobenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,2,3-Trichloropropane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,2,4-Trichlorobenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,2,4-Trimethylbenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,2-Dibromo-3-chloropropane						0.00				Yes	B408858	08/27/14	08/27/14	1.0	1.0	1
B408858-BLK1	1,2-Dibromoethane (EDB)						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,2-Dichlorobenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,2-Dichloroethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,2-Dichloroethane-d4	109		70	130		10.9			10.0	Yes	B408858	08/27/14	08/27/14			1
B408858-BLK1	1,2-Dichloropropane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,3,5-Trimethylbenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,3-Dichlorobenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,3-Dichloropropane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	1,4-Dichlorobenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	2,2-Dichloropropane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	2-Chlorotoluene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	2-Nitropropane						0.00				Yes	B408858	08/27/14	08/27/14	10.0	10.0	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 64 of 90 Analyzed MDL	MRL	DF
B408858-BLK1	4-Bromofluorobenzene	106		70	130		10.6			10.0	Yes	B408858	08/27/14	08/27/14			1
B408858-BLK1	4-Chlorotoluene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	4-Isopropyltoluene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Acetone						0.00				Yes	B408858	08/27/14	08/27/14	10.0	10.0	1
B408858-BLK1	Acrylonitrile						0.00				Yes	B408858	08/27/14	08/27/14	10.0	10.0	1
B408858-BLK1	Benzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Bromobenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Bromochloromethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Bromodichloromethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Bromoform						0.00				Yes	B408858	08/27/14	08/27/14	1.0	1.0	1
B408858-BLK1	Bromomethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Carbon Disulfide						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Carbon Tetrachloride						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Chlorobenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Chloroethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Chloroform						0.00				Yes	B408858	08/27/14	08/27/14	1.0	1.0	1
B408858-BLK1	Chloromethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	cis-1,2-Dichloroethene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	cis-1,3-Dichloropropene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Cyclohexanone						0.00				Yes	B408858	08/27/14	08/27/14	20.0	20.0	1
B408858-BLK1	Dibromochloromethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Dibromomethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Dichlorodifluoromethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Ethyl Acetate						0.00				Yes	B408858	08/27/14	08/27/14	10.0	10.0	1
B408858-BLK1	Ethyl Ether						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Ethylbenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 65 of 90 Analyzed MDL	MRL	DF
B408858-BLK1	Hexachlorobutadiene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Isobutanol						0.00				Yes	B408858	08/27/14	08/27/14	10.0	10.0	1
B408858-BLK1	Isopropylbenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Methyl Ethyl Ketone						0.00				Yes	B408858	08/27/14	08/27/14	10.0	10.0	1
B408858-BLK1	Methyl Isobutyl Ketone						0.00				Yes	B408858	08/27/14	08/27/14	10.0	10.0	1
B408858-BLK1	Methylene Chloride						0.00				Yes	B408858	08/27/14	08/27/14	1.0	1.0	1
B408858-BLK1	Methyl-tert-butyl ether (MTBE)						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Naphthalene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	n-Butyl Alcohol						0.00				Yes	B408858	08/27/14	08/27/14	40.0	40.0	1
B408858-BLK1	n-Butylbenzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Nitrobenzene						0.00				Yes	B408858	08/27/14	08/27/14	20.0	20.0	1
B408858-BLK1	n-Propyl Benzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	p-Isopropyltoluene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	sec-Butyl Benzene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Styrene						0.00				Yes	B408858	08/27/14	08/27/14	1.0	1.0	1
B408858-BLK1	tert-Butylbenzene						0.00				Yes	B408858	08/27/14	08/27/14	1.0	1.0	1
B408858-BLK1	Tetrachloroethene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Toluene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Toluene-d8	101		70	130		10.1			10.0	Yes	B408858	08/27/14	08/27/14			1
B408858-BLK1	trans-1,2-Dichloroethene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	trans-1,3-Dichloropropene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Trichloroethene						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Trichlorofluoromethane						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Vinyl Chloride						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BLK1	Xylenes, total						0.00				Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408909-BLK1	1,1,1,2-Tetrachloroethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 66 of 90 Analyzed MDL	MRL	DF
B408909-BLK1	1,1,1-Trichloroethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,1,2,2-Tetrachloroethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,1,2-Trichloroethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,1,2-Trichlorotrifluoroethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,1-Dichloroethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,1-Dichloroethene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,1-Dichloropropene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,2,3-Trichlorobenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,2,3-Trichloropropane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,2,4-Trichlorobenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,2,4-Trimethylbenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,2-Dibromo-3-chloropropane						0.00				Yes	B408909	08/28/14	08/28/14	1.0	1.0	1
B408909-BLK1	1,2-Dibromoethane (EDB)						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,2-Dichlorobenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,2-Dichloroethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,2-Dichloroethane-d4	110		70	130		11.0			10.0	Yes	B408909	08/28/14	08/28/14			1
B408909-BLK1	1,2-Dichloropropane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,3,5-Trimethylbenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,3-Dichlorobenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,3-Dichloropropane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	1,4-Dichlorobenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	2,2-Dichloropropane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	2-Chlorotoluene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	2-Nitropropane						0.00				Yes	B408909	08/28/14	08/28/14	10.0	10.0	1
B408909-BLK1	4-Bromofluorobenzene	108		70	130		10.8			10.0	Yes	B408909	08/28/14	08/28/14			1
B408909-BLK1	4-Chlorotoluene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 67 of 90 Analyzed MDL	MRL	DF
B408909-BLK1	4-Isopropyltoluene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Acetone						0.00				Yes	B408909	08/28/14	08/28/14	10.0	10.0	1
B408909-BLK1	Acrylonitrile						0.00				Yes	B408909	08/28/14	08/28/14	10.0	10.0	1
B408909-BLK1	Benzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Bromobenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Bromochloromethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Bromodichloromethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Bromoform						0.00				Yes	B408909	08/28/14	08/28/14	1.0	1.0	1
B408909-BLK1	Bromomethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Carbon Disulfide						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Carbon Tetrachloride						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Chlorobenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Chloroethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Chloroform						0.00				Yes	B408909	08/28/14	08/28/14	1.0	1.0	1
B408909-BLK1	Chloromethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	cis-1,2-Dichloroethene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	cis-1,3-Dichloropropene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Cyclohexanone						0.00				Yes	B408909	08/28/14	08/28/14	20.0	20.0	1
B408909-BLK1	Dibromochloromethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Dibromomethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Dichlorodifluoromethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Ethyl Acetate						0.00				Yes	B408909	08/28/14	08/28/14	10.0	10.0	1
B408909-BLK1	Ethyl Ether						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Ethylbenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Hexachlorobutadiene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BLK1	Isobutanol						0.00				Yes	B408909	08/28/14	08/28/14	10.0	10.0	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF	
B408909-BLK1	Isopropylbenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Methyl Ethyl Ketone						0.00				Yes	B408909	08/28/14	08/28/14	10.0	10.0	1		
B408909-BLK1	Methyl Isobutyl Ketone						0.00				Yes	B408909	08/28/14	08/28/14	10.0	10.0	1		
B408909-BLK1	Methylene Chloride						0.00				Yes	B408909	08/28/14	08/28/14	1.0	1.0	1		
B408909-BLK1	Methyl-tert-butyl ether (MTBE)						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Naphthalene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	n-Butyl Alcohol						0.00				Yes	B408909	08/28/14	08/28/14	40.0	40.0	1		
B408909-BLK1	n-Butylbenzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Nitrobenzene						0.00				Yes	B408909	08/28/14	08/28/14	20.0	20.0	1		
B408909-BLK1	n-Propyl Benzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	p-Isopropyltoluene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	sec-Butyl Benzene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Styrene						0.00				Yes	B408909	08/28/14	08/28/14	1.0	1.0	1		
B408909-BLK1	tert-Butylbenzene						0.00				Yes	B408909	08/28/14	08/28/14	1.0	1.0	1		
B408909-BLK1	Tetrachloroethene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Toluene						0.68				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Toluene-d8	102		70	130		10.2		10.0		Yes	B408909	08/28/14	08/28/14			1		
B408909-BLK1	trans-1,2-Dichloroethene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	trans-1,3-Dichloropropene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Trichloroethene						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Trichlorofluoromethane						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Vinyl Chloride						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
B408909-BLK1	Xylenes, total						0.00				Yes	B408909	08/28/14	08/28/14	0.3	1.0	1		
LCS - Method EPA 8260B																			
B408858-BS1	1,1-Dichloroethene	81.5		70	130		8.15		10.0		Yes	B408858	08/27/14	08/27/14	0.3	1.0	1		
B408858-BS1	1,2-Dichloroethane-d4	106		70	130		10.6		10.0		Yes	B408858	08/27/14	08/27/14			1		

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 69 of 90 Analyzed MDL	MRL	DF
B408858-BS1	4-Bromofluorobenzene	105		70	130		10.5			10.0	Yes	B408858	08/27/14	08/27/14			1
B408858-BS1	Benzene	96.2		70	130		9.62			10.0	Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BS1	Chlorobenzene	93.4		70	130		9.34			10.0	Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BS1	Toluene	95.0		70	130		9.50			10.0	Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408858-BS1	Toluene-d8	101		70	130		10.1			10.0	Yes	B408858	08/27/14	08/27/14			1
B408858-BS1	Trichloroethene	94.3		70	130		9.43			10.0	Yes	B408858	08/27/14	08/27/14	0.3	1.0	1
B408909-BS1	1,1-Dichloroethene	80.5		70	130		8.05			10.0	Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BS1	1,2-Dichloroethane-d4	110		70	130		11.0			10.0	Yes	B408909	08/28/14	08/28/14			1
B408909-BS1	4-Bromofluorobenzene	105		70	130		10.5			10.0	Yes	B408909	08/28/14	08/28/14			1
B408909-BS1	Benzene	99.8		70	130		9.98			10.0	Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BS1	Chlorobenzene	94.5		70	130		9.45			10.0	Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BS1	Toluene	108		70	130		10.8			10.0	Yes	B408909	08/28/14	08/28/14	0.3	1.0	1
B408909-BS1	Toluene-d8	102		70	130		10.2			10.0	Yes	B408909	08/28/14	08/28/14			1
B408909-BS1	Trichloroethene	96.7		70	130		9.67			10.0	Yes	B408909	08/28/14	08/28/14	0.3	1.0	1

Matrix Spike - Method EPA 8260B

B408858-MS1	1,1-Dichloroethene	81.5		70	130		40.8	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408858-MS1	1,2-Dichloroethane-d4	103		70	130		51.4	XXXXXXXX-XX		50.0	Yes	B408858	08/27/14	08/27/14			1
B408858-MS1	4-Bromofluorobenzene	103		70	130		51.7	XXXXXXXX-XX		50.0	Yes	B408858	08/27/14	08/27/14			1
B408858-MS1	Benzene	99.7		70	130		49.8	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408858-MS1	Chlorobenzene	96.4		70	130		48.2	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408858-MS1	Toluene	97.4		70	130		48.7	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408858-MS1	Toluene-d8	101		70	130		50.4	XXXXXX-XX		50.0	Yes	B408858	08/27/14	08/27/14			1
B408858-MS1	Trichloroethene	96.4		70	130		48.2	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408909-MS1	1,1-Dichloroethene	88.2		70	130		44.1	1408830-05	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MS1	1,2-Dichloroethane-d4	120		70	130		59.8	1408830-05		50.0	Yes	B408909	08/28/14	08/28/14			1
B408909-MS1	4-Bromofluorobenzene	107		70	130		53.4	1408830-05		50.0	Yes	B408909	08/28/14	08/28/14			1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 70 of 90 Analyzed MDL	MRL	DF
B408909-MS1	Benzene	107		70	130		53.4	1408830-05	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MS1	Chlorobenzene	101		70	130		50.4	1408830-05	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MS1	Toluene	109		70	130		56.2	1408830-05	1.85	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MS1	Toluene-d8	102		70	130		51.1	1408830-05		50.0	Yes	B408909	08/28/14	08/28/14			1
B408909-MS1	Trichloroethene	102		70	130		51.0	1408830-05	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MS2	1,1-Dichloroethene	88.3		70	130		44.2	XXXXXXXX-XX	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MS2	1,2-Dichloroethane-d4	106		70	130		53.2	XXXXXXXX-XX		50.0	Yes	B408909	08/28/14	08/28/14			1
B408909-MS2	4-Bromofluorobenzene	106		70	130		53.1	XXXXXXXX-XX		50.0	Yes	B408909	08/28/14	08/28/14			1
B408909-MS2	Benzene	106		70	130		52.8	XXXXXXXX-XX	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MS2	Chlorobenzene	99.2		70	130		49.6	XXXXXXXX-XX	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MS2	Toluene	113		70	130		56.9	XXXXXXXX-XX	0.53	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MS2	Toluene-d8	102		70	130		50.8	XXXXXXXX-XX		50.0	Yes	B408909	08/28/14	08/28/14			1
B408909-MS2	Trichloroethene	102		70	130		51.0	XXXXXXXX-XX	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1

Matrix Spike Dup - Method EPA 8260B

B408858-MSD1	1,1-Dichloroethene	83.6	2.54	70	130	20	41.8	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408858-MSD1	1,2-Dichloroethane-d4	106		70	130		53.0	XXXXXXXX-XX		50.0	Yes	B408858	08/27/14	08/27/14			1
B408858-MSD1	4-Bromofluorobenzene	105		70	130		52.4	XXXXXXXX-XX		50.0	Yes	B408858	08/27/14	08/27/14			1
B408858-MSD1	Benzene	103	3.06	70	130	20	51.4	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408858-MSD1	Chlorobenzene	99.1	2.76	70	130	20	49.6	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408858-MSD1	Toluene	102	4.12	70	130	20	50.8	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408858-MSD1	Toluene-d8	102		70	130		50.8	XXXXXXXX-XX		50.0	Yes	B408858	08/27/14	08/27/14			1
B408858-MSD1	Trichloroethene	99.2	2.86	70	130	20	49.6	XXXXXXXX-XX	0	50.0	Yes	B408858	08/27/14	08/27/14	1.5	5.0	1
B408909-MSD1	1,1-Dichloroethene	88.4	0.227	70	130	20	44.2	1408830-05	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MSD1	1,2-Dichloroethane-d4	120		70	130		60.0	1408830-05		50.0	Yes	B408909	08/28/14	08/28/14			1
B408909-MSD1	4-Bromofluorobenzene	106		70	130		53.2	1408830-05		50.0	Yes	B408909	08/28/14	08/28/14			1
B408909-MSD1	Benzene	106	0.845	70	130	20	53.0	1408830-05	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 71 of 90		
															Analyzed	MDL	MRL
B408909-MSD1	Chlorobenzene	98.9	1.80	70	130	20	49.4	1408830-05	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MSD1	Toluene	108	0.831	70	130	20	55.8	1408830-05	1.85	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1
B408909-MSD1	Toluene-d8	102		70	130		50.8	1408830-05		50.0	Yes	B408909	08/28/14	08/28/14			1
B408909-MSD1	Trichloroethene	99.2	2.78	70	130	20	49.6	1408830-05	0	50.0	Yes	B408909	08/28/14	08/28/14	1.5	5.0	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed MDL	MRL	DF
Blank - Method EPA 8270D																	
B408660-BLK1	1,2,4-Trichlorobenzene						0				Yes	B408660	08/22/14	08/27/14 1	5	1	
B408660-BLK1	1,2-Dichlorobenzene						0				Yes	B408660	08/22/14	08/27/14 2	5	1	
B408660-BLK1	1,2-Diphenylhydrazine						0				Yes	B408660	08/22/14	08/27/14 2	10	1	
B408660-BLK1	1,3-Dichlorobenzene						0				Yes	B408660	08/22/14	08/27/14 1	5	1	
B408660-BLK1	1,4-Dichlorobenzene						0				Yes	B408660	08/22/14	08/27/14 0.7	5	1	
B408660-BLK1	2,3,4,6-Tetrachlorophenol						0				Yes	B408660	08/22/14	08/27/14 2	10	1	
B408660-BLK1	2,4,5-Trichlorophenol						0				Yes	B408660	08/22/14	08/27/14 3	10	1	
B408660-BLK1	2,4,6-Tribromophenol	58.0		20	130		58.0			100	Yes	B408660	08/22/14	08/27/14			1
B408660-BLK1	2,4,6-Trichlorophenol						0				Yes	B408660	08/22/14	08/27/14 1	10	1	
B408660-BLK1	2,4-Dichlorophenol						0				Yes	B408660	08/22/14	08/27/14 0.9	10	1	
B408660-BLK1	2,4-Dimethylphenol						0				Yes	B408660	08/22/14	08/27/14 1	10	1	
B408660-BLK1	2,4-Dinitrophenol						0				Yes	B408660	08/22/14	08/27/14 4	10	1	
B408660-BLK1	2,4-Dinitrotoluene						0				Yes	B408660	08/22/14	08/27/14 0.8	5	1	
B408660-BLK1	2,6-Dichlorophenol						0				Yes	B408660	08/22/14	08/27/14 2	10	1	
B408660-BLK1	2,6-Dinitrotoluene						0				Yes	B408660	08/22/14	08/27/14 0.9	5	1	
B408660-BLK1	2-Chloronaphthalene						0				Yes	B408660	08/22/14	08/27/14 0.6	5	1	
B408660-BLK1	2-Chlorophenol						0				Yes	B408660	08/22/14	08/27/14 2	10	1	
B408660-BLK1	2-Fluorobiphenyl	52.0		37	130		26.0			50.0	Yes	B408660	08/22/14	08/27/14			1
B408660-BLK1	2-Fluorophenol	48.0		15	130		48.0			100	Yes	B408660	08/22/14	08/27/14			1
B408660-BLK1	2-Methylnaphthalene						0				Yes	B408660	08/22/14	08/27/14 2	5	1	
B408660-BLK1	2-Methylphenol						0				Yes	B408660	08/22/14	08/27/14 1	10	1	
B408660-BLK1	2-Nitroaniline						0				Yes	B408660	08/22/14	08/27/14 1	5	1	
B408660-BLK1	2-Nitrophenol						0				Yes	B408660	08/22/14	08/27/14 2	10	1	
B408660-BLK1	3 & 4-Methylphenol						0				Yes	B408660	08/22/14	08/27/14 2	10	1	
B408660-BLK1	3,3'-Dichlorobenzidine						0				Yes	B408660	08/22/14	08/27/14 2	10	1	

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Page 73 of 90 Analyzed MDL	MRL	DF
B408660-BLK1	3-Nitroaniline						0				Yes	B408660	08/22/14	08/27/14	0.9	5	1
B408660-BLK1	4,6-Dinitro-2-methylphenol						0				Yes	B408660	08/22/14	08/27/14	1	10	1
B408660-BLK1	4-Bromophenyl phenyl ether						0				Yes	B408660	08/22/14	08/27/14	1	5	1
B408660-BLK1	4-Chloro-3-methylphenol						0				Yes	B408660	08/22/14	08/27/14	2	10	1
B408660-BLK1	4-Chloroaniline						0				Yes	B408660	08/22/14	08/27/14	0.8	5	1
B408660-BLK1	4-Chlorophenyl Phenyl Ether						0				Yes	B408660	08/22/14	08/27/14	0.6	5	1
B408660-BLK1	4-Nitroaniline						0				Yes	B408660	08/22/14	08/27/14	2	5	1
B408660-BLK1	4-Nitrophenol						0				Yes	B408660	08/22/14	08/27/14	4	10	1
B408660-BLK1	Acenaphthene						0				Yes	B408660	08/22/14	08/27/14	2	5	1
B408660-BLK1	Acenaphthylene						0				Yes	B408660	08/22/14	08/27/14	0.5	5	1
B408660-BLK1	Aniline						0				Yes	B408660	08/22/14	08/27/14	0.9	5	1
B408660-BLK1	Anthracene						0				Yes	B408660	08/22/14	08/27/14	0.7	5	1
B408660-BLK1	Azobenzene						0				Yes	B408660	08/22/14	08/27/14	2	5	1
B408660-BLK1	Benzo (a) anthracene						0				Yes	B408660	08/22/14	08/27/14	0.9	5	1
B408660-BLK1	Benzo (a) pyrene						0				Yes	B408660	08/22/14	08/27/14	0.9	5	1
B408660-BLK1	Benzo (b) fluoranthene						0				Yes	B408660	08/22/14	08/27/14	1	5	1
B408660-BLK1	Benzo (g,h,i) perylene						0				Yes	B408660	08/22/14	08/27/14	2	5	1
B408660-BLK1	Benzo (k) fluoranthene						0				Yes	B408660	08/22/14	08/27/14	1	5	1
B408660-BLK1	Benzoic acid						0				Yes	B408660	08/22/14	08/27/14	2	10	1
B408660-BLK1	Benzyl Alcohol						0				Yes	B408660	08/22/14	08/27/14	1	5	1
B408660-BLK1	Bis (2-chloroethoxy) Methane						0				Yes	B408660	08/22/14	08/27/14	0.7	5	1
B408660-BLK1	Bis (2-chloroethyl) Ether						0				Yes	B408660	08/22/14	08/27/14	1	5	1
B408660-BLK1	Bis (2-chloroisopropyl) Ether						0				Yes	B408660	08/22/14	08/27/14	1	5	1
B408660-BLK1	Bis (2-ethylhexyl) Phthalate						0				Yes	B408660	08/22/14	08/27/14	5	10	1
B408660-BLK1	Butylbenzylphthalate						0				Yes	B408660	08/22/14	08/27/14	0.6	5	1
B408660-BLK1	Carbazole						0				Yes	B408660	08/22/14	08/27/14	0.8	5	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
B408660-BLK1	Chrysene						0				Yes	B408660	08/22/14	08/27/14	2	5	1	
B408660-BLK1	Dibenzo (a,h) anthracene						0				Yes	B408660	08/22/14	08/27/14	1	5	1	
B408660-BLK1	Dibenzofuran						0				Yes	B408660	08/22/14	08/27/14	0.6	5	1	
B408660-BLK1	Diethylphthalate						0				Yes	B408660	08/22/14	08/27/14	0.6	5	1	
B408660-BLK1	Dimethyl phthalate						0				Yes	B408660	08/22/14	08/27/14	0.8	5	1	
B408660-BLK1	Di-n-butylphthalate						0				Yes	B408660	08/22/14	08/27/14	3	5	1	
B408660-BLK1	Di-n-Octylphthalate						0				Yes	B408660	08/22/14	08/27/14	0.5	5	1	
B408660-BLK1	Diphenylamine						0				Yes	B408660	08/22/14	08/27/14	2	5	1	
B408660-BLK1	Fluoranthene						0				Yes	B408660	08/22/14	08/27/14	0.6	5	1	
B408660-BLK1	Fluorene						0				Yes	B408660	08/22/14	08/27/14	0.7	5	1	
B408660-BLK1	Hexachlorobenzene						0				Yes	B408660	08/22/14	08/27/14	1	5	1	
B408660-BLK1	Hexachlorobutadiene						0				Yes	B408660	08/22/14	08/27/14	0.5	5	1	
B408660-BLK1	Hexachlorocyclopentadiene						0				Yes	B408660	08/22/14	08/27/14	0.6	10	1	
B408660-BLK1	Hexachloroethane						0				Yes	B408660	08/22/14	08/27/14	0.7	5	1	
B408660-BLK1	Indeno (1,2,3-cd) pyrene						0				Yes	B408660	08/22/14	08/27/14	2	5	1	
B408660-BLK1	Isophorone						0				Yes	B408660	08/22/14	08/27/14	1	5	1	
B408660-BLK1	Naphthalene						0				Yes	B408660	08/22/14	08/27/14	0.9	5	1	
B408660-BLK1	Nitrobenzene						0				Yes	B408660	08/22/14	08/27/14	1	5	1	
B408660-BLK1	Nitrobenzene-d5	56.0		23	130		28.0			50.0	Yes	B408660	08/22/14	08/27/14			1	
B408660-BLK1	N-Nitrosodimethylamine						0				Yes	B408660	08/22/14	08/27/14	0.6	10	1	
B408660-BLK1	N-Nitrosodi-n-propylamine						0				Yes	B408660	08/22/14	08/27/14	0.8	5	1	
B408660-BLK1	N-Nitrosodiphenylamine						0				Yes	B408660	08/22/14	08/27/14	1	5	1	
B408660-BLK1	Pentachlorophenol						0				Yes	B408660	08/22/14	08/27/14	4	10	1	
B408660-BLK1	Phenanthrene						0				Yes	B408660	08/22/14	08/27/14	0.5	5	1	
B408660-BLK1	Phenol						0				Yes	B408660	08/22/14	08/27/14	1	10	1	
B408660-BLK1	Phenol-d5	30.0		5	130		30.0			100	Yes	B408660	08/22/14	08/27/14			1	

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed MDL	MRL	DF
B408660-BLK1	Pvrene						0				Yes	B408660	08/22/14	08/27/14	0.6	5	1
B408660-BLK1	Pyridine						0				Yes	B408660	08/22/14	08/27/14	1	5	1
B408660-BLK1	Terphenyl-dl4	101		31	130		50.3			50.0	Yes	B408660	08/22/14	08/27/14			1

LCS - Method EPA 8270D

B408660-BS1	1,2,4-Trichlorobenzene	41.2		44	142		34			83.3	Yes	B408660	08/22/14	08/27/14	1	5	1
ME - Recovery was outside of the lab control limits but was within Marginal Exceedance limit (± 4 stdev of mean recovery). Batch is considered to be in control based on recoveries of other analytes.																	
B408660-BS1	1,4-Dichlorobenzene	44.4		20	124		37			83.3	Yes	B408660	08/22/14	08/27/14	0.7	5	1
B408660-BS1	2,4,6-Tribromophenol	74.7		20	130		74.7			100	Yes	B408660	08/22/14	08/27/14			1
B408660-BS1	2,4-Dinitrotoluene	65.2		39	139		54			83.3	Yes	B408660	08/22/14	08/27/14	0.8	5	1
B408660-BS1	2-Chlorophenol	57.2		23	134		95			167	Yes	B408660	08/22/14	08/27/14	2	10	1
B408660-BS1	2-Fluorobiphenyl	52.7		37	130		26.3			50.0	Yes	B408660	08/22/14	08/27/14			1
B408660-BS1	2-Fluorophenol	46.3		15	130		46.3			100	Yes	B408660	08/22/14	08/27/14			1
B408660-BS1	4-Chloro-3-methylphenol	50.6		22	147		84			167	Yes	B408660	08/22/14	08/27/14	2	10	1
B408660-BS1	4-Nitrophenol	20.8		1	132		35			167	Yes	B408660	08/22/14	08/27/14	4	10	1
B408660-BS1	Acenaphthene	56.4		47	145		47			83.3	Yes	B408660	08/22/14	08/27/14	2	5	1
B408660-BS1	Nitrobenzene-d5	63.3		23	130		31.7			50.0	Yes	B408660	08/22/14	08/27/14			1
B408660-BS1	N-Nitrosodi-n-propylamine	54.0		1	230		45			83.3	Yes	B408660	08/22/14	08/27/14	0.8	5	1
B408660-BS1	Pentachlorophenol	74.4		14	176		124			167	Yes	B408660	08/22/14	08/27/14	4	10	1
B408660-BS1	Phenol	28.8		5	112		48			167	Yes	B408660	08/22/14	08/27/14	1	10	1
B408660-BS1	Phenol-d5	36.3		5	130		36.3			100	Yes	B408660	08/22/14	08/27/14			1
B408660-BS1	Pvrene	80.8		33	125		67			83.3	Yes	B408660	08/22/14	08/27/14	0.6	5	1
B408660-BS1	Terphenyl-dl4	92.7		31	130		46.3			50.0	Yes	B408660	08/22/14	08/27/14			1

Matrix Spike - Method EPA 8270D

B408660-MS1	1,2,4-Trichlorobenzene	34.4		44	142		29	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	1	5	1
ME - Recovery was outside of the lab control limits but was within Marginal Exceedance limit (± 4 stdev of mean recovery). Batch is considered to be in control based on recoveries of other analytes.																	
B408660-MS1	1,4-Dichlorobenzene	38.4		20	124		32	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	0.7	5	1
B408660-MS1	2,4,6-Tribromophenol	81.3		20	130		81.3	1408830-05		100	Yes	B408660	08/22/14	08/28/14			1
B408660-MS1	2,4-Dinitrotoluene	75.6		39	139		63	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	0.8	5	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed MDL	MRL	DF
B408660-MS1	2-Chlorophenol	56.2		23	134		94	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	2	10	1
B408660-MS1	2-Fluorobiphenyl	50.0		37	130		25.0	1408830-05		50.0	Yes	B408660	08/22/14	08/28/14			1
B408660-MS1	2-Fluorophenol	52.0		15	130		52.0	1408830-05		100	Yes	B408660	08/22/14	08/28/14			1
B408660-MS1	4-Chloro-3-methylphenol	62.0		22	147		103	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	2	10	1
B408660-MS1	4-Nitrophenol	66.0		1	132		110	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	4	10	1
B408660-MS1	Acenaphthene	47.6		47	145		40	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	2	5	1
B408660-MS1	Nitrobenzene-d5	63.3		23	130		31.7	1408830-05		50.0	Yes	B408660	08/22/14	08/28/14			1
B408660-MS1	N-Nitrosodi-n-propylamine	56.0		1	230		47	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	0.8	5	1
B408660-MS1	Pentachlorophenol	92.8		14	176		155	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	4	10	1
B408660-MS1	Phenol	43.6		5	112		73	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	1	10	1
B408660-MS1	Phenol-d5	47.3		5	130		47.3	1408830-05		100	Yes	B408660	08/22/14	08/28/14			1
B408660-MS1	Pyrene	74.4		33	125		62	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	0.6	5	1
B408660-MS1	Terphenyl-d14	86.7		31	130		43.3	1408830-05		50.0	Yes	B408660	08/22/14	08/28/14			1

Matrix Spike Dup - Method EPA 8270D

B408660-MSD1	1,2,4-Trichlorobenzene	34.8	1.16	44	142	80	29	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	1	5	1
ME - Recovery was outside of the lab control limits but was within Marginal Exceedance limit (± 4 stdev of mean recovery). Batch is considered to be in control based on recoveries of other analytes.																	
B408660-MSD1	1,4-Dichlorobenzene	40.8	6.06	20	124	80	34	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	0.7	5	1
B408660-MSD1	2,4,6-Tribromophenol	80.3		20	130		80.3	1408830-05		100	Yes	B408660	08/22/14	08/28/14			1
B408660-MSD1	2,4-Dinitrotoluene	74.8	1.06	39	139	80	62	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	0.8	5	1
B408660-MSD1	2-Chlorophenol	58.0	3.15	23	134	80	97	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	2	10	1
B408660-MSD1	2-Fluorobiphenyl	49.3		37	130		24.7	1408830-05		50.0	Yes	B408660	08/22/14	08/28/14			1
B408660-MSD1	2-Fluorophenol	52.3		15	130		52.3	1408830-05		100	Yes	B408660	08/22/14	08/28/14			1
B408660-MSD1	4-Chloro-3-methylphenol	70.4	12.7	22	147	80	117	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	2	10	1
B408660-MSD1	4-Nitrophenol	57.8	13.2	1	132	80	96	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	4	10	1
B408660-MSD1	Acenaphthene	43.2	9.69	47	145	80	36	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	2	5	1
QM-07 - The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.																	
B408660-MSD1	Nitrobenzene-d5	55.3		23	130		27.7	1408830-05		50.0	Yes	B408660	08/22/14	08/28/14			1
B408660-MSD1	N-Nitrosodi-n-propylamine	52.4	6.64	1	230	80	44	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	0.8	5	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF
B408660-MSD1	Pentachlorophenol	92.0	0.866	14	176	80	153	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	4	10	1	
B408660-MSD1	Phenol	42.4	2.79	5	112	80	71	1408830-05	0	167	Yes	B408660	08/22/14	08/28/14	1	10	1	
B408660-MSD1	Phenol-d5	47.0		5	130		47.0	1408830-05		100	Yes	B408660	08/22/14	08/28/14			1	
B408660-MSD1	Pyrene	77.6	4.21	33	125	80	65	1408830-05	0	83.3	Yes	B408660	08/22/14	08/28/14	0.6	5	1	
B408660-MSD1	Terphenyl-d14	89.3		31	130		44.7	1408830-05		50.0	Yes	B408660	08/22/14	08/28/14			1	

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	MDL	MRL	DF
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Blank - Method SM 2320 B

B408710-BLK1	Alkalinity - Bicarbonate (HCO3)						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408710-BLK1	Alkalinity - Carbonate (CO3)						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408710-BLK1	Alkalinity - CO2						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408710-BLK1	Alkalinity - Hydroxide (OH)						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408710-BLK1	Alkalinity - Total (as CaCO3)						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408710-BLK2	Alkalinity - Bicarbonate (HCO3)						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408710-BLK2	Alkalinity - Carbonate (CO3)						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408710-BLK2	Alkalinity - CO2						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408710-BLK2	Alkalinity - Hydroxide (OH)						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408710-BLK2	Alkalinity - Total (as CaCO3)						0.0					B408710	08/27/14	08/28/14	0.2	1.0	1
B408754-BLK1	Alkalinity - Bicarbonate (HCO3)						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1
B408754-BLK1	Alkalinity - Carbonate (CO3)						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1
B408754-BLK1	Alkalinity - CO2						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1
B408754-BLK1	Alkalinity - Hydroxide (OH)						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1
B408754-BLK1	Alkalinity - Total (as CaCO3)						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1
B408754-BLK2	Alkalinity - Bicarbonate (HCO3)						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1
B408754-BLK2	Alkalinity - Carbonate (CO3)						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1
B408754-BLK2	Alkalinity - CO2						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1
B408754-BLK2	Alkalinity - Hydroxide (OH)						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1
B408754-BLK2	Alkalinity - Total (as CaCO3)						0.0					B408754	09/02/14	09/02/14	0.2	1.0	1

Calibration Blank - Method SM 2320 B

4H28012-CCB1	Alkalinity - Total (as CaCO3)						0.0					4H28012	08/28/14	08/28/14			1
4I02012-CCB1	Alkalinity - Total (as CaCO3)						0.0					4I02012	09/02/14	09/02/14			1

Calibration Check - Method SM 2320 B

4H28012-CCV1	Alkalinity - Total (as CaCO3)	104		90	110		2460			2360		4H28012	08/28/14	08/28/14			1
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QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF	
4I02012-CCV1	Alkalinity - Total (as CaCO3)	100		90	110		2370			2360		4I02012	09/02/14	09/02/14	09/02/14			1	
Initial Cal Blank - Method SM 2320 B																			
4H28012-ICB1	Alkalinity - Total (as CaCO3)						0.0					4H28012	08/28/14	08/28/14	08/28/14			1	
4I02012-ICB1	Alkalinity - Total (as CaCO3)						0.0					4I02012	09/02/14	09/02/14	09/02/14			1	
Initial Cal Check - Method SM 2320 B																			
4H28012-ICV1	Alkalinity - Total (as CaCO3)	102		90	110		2400			2360		4H28012	08/28/14	08/28/14	08/28/14			1	
4I02012-ICV1	Alkalinity - Total (as CaCO3)	101		90	110		2380			2360		4I02012	09/02/14	09/02/14	09/02/14			1	
LCS - Method SM 2320 B																			
B408710-BS1	Alkalinity - Total (as CaCO3)	101		90	110		2390			2360		B408710	08/27/14	08/28/14	0.2	1.0	1		
B408710-BS2	Alkalinity - Total (as CaCO3)	102		90	110		2410			2360		B408710	08/27/14	08/28/14	0.2	1.0	1		
B408754-BS1	Alkalinity - Total (as CaCO3)	100		90	110		2360			2360		B408754	09/02/14	09/02/14	0.2	1.0	1		
B408754-BS2	Alkalinity - Total (as CaCO3)	100		90	110		2370			2360		B408754	09/02/14	09/02/14	0.2	1.0	1		
Matrix Spike - Method SM 2320 B																			
B408710-MS1	Alkalinity - Total (as CaCO3)	102		80	120		677	XXXXXX-XX	629	47.2		B408710	08/27/14	08/28/14	0.2	1.0	1		
B408710-MS2	Alkalinity - Total (as CaCO3)	104		80	120		280	XXXXXX-XX	231	47.2		B408710	08/27/14	08/28/14	0.2	1.0	1		
B408754-MS1	Alkalinity - Total (as CaCO3)			80	120		0.0	1408830-05	0	47.2		B408754	09/02/14	09/02/14	0.2	1.0	1		
QM-05 - The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The analytical batch was accepted based on the acceptable data provided by the Laboratory Control Sample(s) [LCS] and/or LCS Duplicates.																			
B408754-MS2	Alkalinity - Total (as CaCO3)	106		80	120		122	XXXXXXXX-XX	72.0	47.2		B408754	09/02/14	09/02/14	0.2	1.0	1		
Matrix Spike Dup - Method SM 2320 B																			
B408710-MSD1	Alkalinity - Total (as CaCO3)	95.3	0.444	80	120	20	674	XXXXXX-XX	629	47.2		B408710	08/27/14	08/28/14	0.2	1.0	1		
B408710-MSD2	Alkalinity - Total (as CaCO3)	110	1.07	80	120	20	283	XXXXXXXX-XX	231	47.2		B408710	08/27/14	08/28/14	0.2	1.0	1		
B408754-MSD1	Alkalinity - Total (as CaCO3)			80	120	20	0.0	1408830-05	0	47.2		B408754	09/02/14	09/02/14	0.2	1.0	1		
QM-05 - The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The analytical batch was accepted based on the acceptable data provided by the Laboratory Control Sample(s) [LCS] and/or LCS Duplicates.																			
B408754-MSD2	Alkalinity - Total (as CaCO3)	108	0.816	80	120	20	123	XXXXXXXX-XX	72.0	47.2		B408754	09/02/14	09/02/14	0.2	1.0	1		

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	Analyzed	MDL	MRL	DF	
Blank - Method SM 2540 C																			
B408640-BLK1	Total Dissolved Solids (TDS)						6					B408640	08/21/14	08/21/14	10	10	2		
Duplicate - Method SM 2540 C																			
B408640-DUP1	Total Dissolved Solids (TDS)		0.483		20	14900	XXXXXXXX XX	15000				B408640	08/21/14	08/21/14	20	20	4		
B408640-DUP2	Total Dissolved Solids (TDS)		6.50		20	87400	1408830-05	81900				B408640	08/21/14	08/21/14	500	500	100		
Reference - Method SM 2540 C																			
B408640-SRM1	Total Dissolved Solids (TDS)		104	90	110		208			200		B408640	08/21/14	08/21/14	10	10	2		

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	MDL	MRL	DF
Calibration Check - Method SM 4500 H-B																	
4H23011-CCV1	pH	99.6		97	103		7.0			7.00		4H23011	08/23/14	08/23/14			1
Duplicate - Method SM 4500 H-B																	
B408622-DUP1	pH	0.00				3	6.4	XXXXXX-XX	6.4			B408622	08/21/14	08/21/14	0.1	0.1	1
B408622-DUP2	pH	0.00				3	2.4	1408830-05	2.4			B408622	08/21/14	08/21/14	0.1	0.1	1
Initial Cal Check - Method SM 4500 H-B																	
4H23011-ICV1	pH	100		97	103		4.0			4.00		4H23011	08/23/14	08/23/14			1
4H23011-ICV2	pH	100		97	103		7.0			7.00		4H23011	08/23/14	08/23/14			1
4H23011-ICV3	pH	100		97	103		10.0			10.0		4H23011	08/23/14	08/23/14			1
Reference - Method SM 4500 H-B																	
B408622-SRM1	pH	100		95	105		7.0			7.00		B408622	08/21/14	08/21/14	0.1	0.1	1
B408622-SRM2	pH	99.4		95	105		7.0			7.00		B408622	08/21/14	08/21/14	0.1	0.1	1

QC ID	Analyte	% Rec	RPD	LCL	UCL	RPD Max	Result	QC Source	Source Conc	Spk Value	Surr?	Batch	Sampled	Prepared	MDL	MRL	DF
Calibration Blank - Method SM 4500 NH3-D																	
4I01003-CCB1	Ammonia as N						0.1					4I01003	09/01/14	09/01/14			1
4I01003-CCB2	Ammonia as N						0.1					4I01003	09/01/14	09/01/14			1
4I01003-CCB3	Ammonia as N						0.09					4I01003	09/01/14	09/01/14			1
4I01003-CCB4	Ammonia as N						0.1					4I01003	09/01/14	09/01/14			1
Calibration Check - Method SM 4500 NH3-D																	
4I01003-CCV1	Ammonia as N	96.0		90	110		9.6			10.0		4I01003	09/01/14	09/01/14			1
4I01003-CCV2	Ammonia as N	99.0		90	110		9.9			10.0		4I01003	09/01/14	09/01/14			1
4I01003-CCV3	Ammonia as N	99.0		90	110		9.9			10.0		4I01003	09/01/14	09/01/14			1
4I01003-CCV4	Ammonia as N	97.0		90	110		9.7			10.0		4I01003	09/01/14	09/01/14			1
Initial Cal Blank - Method SM 4500 NH3-D																	
4I01003-ICB1	Ammonia as N						0.09					4I01003	09/01/14	09/01/14			1
Initial Cal Check - Method SM 4500 NH3-D																	
4I01003-ICV1	Ammonia as N	100		90	110		10.0			10.0		4I01003	09/01/14	09/01/14			1
LCSW - Method SM 4500 NH3-D																	
B409004-BS1	Ammonia as N	100		90	110		10.0			10.0		B409004	09/01/14	09/01/14	0.03	0.2	1
B409004-BS2	Ammonia as N	99.0		90	110		9.9			10.0		B409004	09/01/14	09/01/14	0.03	0.2	1
Matrix Spike - Method SM 4500 NH3-D																	
B409004-MS1	Ammonia as N	99.4		80	120		5.1	XXXXXXX-XX	0.1	5.00		B409004	09/01/14	09/01/14	0.03	0.2	1
B409004-MS2	Ammonia as N	96.9		80	120		5340	1408830-05	2920	2500		B409004	09/01/14	09/01/14	0.03	0.2	1
Matrix Spike Dup - Method SM 4500 NH3-D																	
B409004-MSD1	Ammonia as N	103	3.85	80	120	20	5.3	XXXXXXX-XX	0.1	5.00		B409004	09/01/14	09/01/14	0.03	0.2	1
B409004-MSD2	Ammonia as N	98.6	0.802	80	120	20	5380	1408830-05	2920	2500		B409004	09/01/14	09/01/14	0.03	0.2	1
PBW - Method SM 4500 NH3-D																	
B409004-BLK1	Ammonia as N						0.09					B409004	09/01/14	09/01/14	0.03	0.2	1
B409004-BLK2	Ammonia as N						0.1					B409004	09/01/14	09/01/14	0.03	0.2	1

Surrogate Summary for Sample Delivery Group - 1408830

QC ID	Surrogate	% Rec	LCL	UCL	Result	Spk Value	Batch	DF
Method EPA 8260B								
1408830-01	1,2-Dichloroethane-d4	127	70	130	63.4	50.0	B408909	1
1408830-01	4-Bromofluorobenzene	108	70	130	54.2	50.0	B408909	1
1408830-01	Toluene-d8	103	70	130	51.6	50.0	B408909	1
1408830-02	1,2-Dichloroethane-d4	125	70	130	62.3	50.0	B408909	1
1408830-02	4-Bromofluorobenzene	109	70	130	54.4	50.0	B408909	1
1408830-02	Toluene-d8	102	70	130	51.2	50.0	B408909	1
1408830-03	1,2-Dichloroethane-d4	120	70	130	60.0	50.0	B408909	1
1408830-03	4-Bromofluorobenzene	108	70	130	54.0	50.0	B408909	1
1408830-03	Toluene-d8	101	70	130	50.6	50.0	B408909	1
1408830-04	1,2-Dichloroethane-d4	119	70	130	59.5	50.0	B408909	1
1408830-04	4-Bromofluorobenzene	109	70	130	54.6	50.0	B408909	1
1408830-04	Toluene-d8	102	70	130	51.0	50.0	B408909	1
1408830-05	1,2-Dichloroethane-d4	122	70	130	61.0	50.0	B408909	1
1408830-05	4-Bromofluorobenzene	111	70	130	55.4	50.0	B408909	1
1408830-05	Toluene-d8	103	70	130	51.4	50.0	B408909	1
1408830-06	1,2-Dichloroethane-d4	127	70	130	63.4	50.0	B408909	1
1408830-06	4-Bromofluorobenzene	110	70	130	54.8	50.0	B408909	1
1408830-06	Toluene-d8	102	70	130	50.8	50.0	B408909	1
1408830-07	1,2-Dichloroethane-d4	124	70	130	62.0	50.0	B408909	1
1408830-07	4-Bromofluorobenzene	111	70	130	55.7	50.0	B408909	1
1408830-07	Toluene-d8	101	70	130	50.3	50.0	B408909	1
1408830-08	1,2-Dichloroethane-d4	126	70	130	62.8	50.0	B408909	1
1408830-08	4-Bromofluorobenzene	111	70	130	55.4	50.0	B408909	1
1408830-08	Toluene-d8	103	70	130	51.4	50.0	B408909	1
1408830-09	1,2-Dichloroethane-d4	113	70	130	11.3	10.0	B408858	1
1408830-09	4-Bromofluorobenzene	108	70	130	10.8	10.0	B408858	1
1408830-09	Toluene-d8	103	70	130	10.3	10.0	B408858	1
B408858-BLK1	1,2-Dichloroethane-d4	109	70	130	10.9	10.0	B408858	1
B408858-BLK1	4-Bromofluorobenzene	106	70	130	10.6	10.0	B408858	1
B408858-BLK1	Toluene-d8	101	70	130	10.1	10.0	B408858	1
B408858-BS1	1,2-Dichloroethane-d4	106	70	130	10.6	10.0	B408858	1
B408858-BS1	4-Bromofluorobenzene	105	70	130	10.5	10.0	B408858	1

QC ID	Surrogate	% Rec	LCL	UCL	Result	Spk Value	Batch	DF
B408858-BS1	Toluene-d8	101	70	130	10.1	10.0	B408858	1
B408858-MS1	1,2-Dichloroethane-d4	103	70	130	51.4	50.0	B408858	1
B408858-MS1	4-Bromofluorobenzene	103	70	130	51.7	50.0	B408858	1
B408858-MS1	Toluene-d8	101	70	130	50.4	50.0	B408858	1
B408858-MSD1	1,2-Dichloroethane-d4	106	70	130	53.0	50.0	B408858	1
B408858-MSD1	4-Bromofluorobenzene	105	70	130	52.4	50.0	B408858	1
B408858-MSD1	Toluene-d8	102	70	130	50.8	50.0	B408858	1
B408909-BLK1	1,2-Dichloroethane-d4	110	70	130	11.0	10.0	B408909	1
B408909-BLK1	4-Bromofluorobenzene	108	70	130	10.8	10.0	B408909	1
B408909-BLK1	Toluene-d8	102	70	130	10.2	10.0	B408909	1
B408909-BS1	1,2-Dichloroethane-d4	110	70	130	11.0	10.0	B408909	1
B408909-BS1	4-Bromofluorobenzene	105	70	130	10.5	10.0	B408909	1
B408909-BS1	Toluene-d8	102	70	130	10.2	10.0	B408909	1
B408909-MS1	1,2-Dichloroethane-d4	120	70	130	59.8	50.0	B408909	1
B408909-MS1	4-Bromofluorobenzene	107	70	130	53.4	50.0	B408909	1
B408909-MS1	Toluene-d8	102	70	130	51.1	50.0	B408909	1
B408909-MS2	1,2-Dichloroethane-d4	106	70	130	53.2	50.0	B408909	1
B408909-MS2	4-Bromofluorobenzene	106	70	130	53.1	50.0	B408909	1
B408909-MS2	Toluene-d8	102	70	130	50.8	50.0	B408909	1
B408909-MSD1	1,2-Dichloroethane-d4	120	70	130	60.0	50.0	B408909	1
B408909-MSD1	4-Bromofluorobenzene	106	70	130	53.2	50.0	B408909	1
B408909-MSD1	Toluene-d8	102	70	130	50.8	50.0	B408909	1

QC ID	Surrogate	% Rec	LCL	UCL	Result	Spk Value	Batch	DF
Method EPA 8270D								
1408830-01	2,4,6-Tribromophenol	96.7	20	130	96.7	100	B408660	1
1408830-01	2-Fluorobiphenyl	62.0	37	130	31.0	50.0	B408660	1
1408830-01	2-Fluorophenol	67.7	15	130	67.7	100	B408660	1
1408830-01	Nitrobenzene-d5	86.7	23	130	43.3	50.0	B408660	1
1408830-01	Phenol-d5	75.7	5	130	75.7	100	B408660	1
1408830-01	Terphenyl-dl4	91.3	31	130	45.7	50.0	B408660	1
1408830-02	2,4,6-Tribromophenol	98.0	20	130	98.0	100	B408660	1
1408830-02	2-Fluorobiphenyl	62.0	37	130	31.0	50.0	B408660	1
1408830-02	2-Fluorophenol	70.0	15	130	70.0	100	B408660	1
1408830-02	Nitrobenzene-d5	80.0	23	130	40.0	50.0	B408660	1
1408830-02	Phenol-d5	67.7	5	130	67.7	100	B408660	1
1408830-02	Terphenyl-dl4	95.3	31	130	47.7	50.0	B408660	1
1408830-03	2,4,6-Tribromophenol	83.7	20	130	83.7	100	B408660	1
1408830-03	2-Fluorobiphenyl	60.0	37	130	30.0	50.0	B408660	1
1408830-03	2-Fluorophenol	69.3	15	130	69.3	100	B408660	1
1408830-03	Nitrobenzene-d5	72.0	23	130	36.0	50.0	B408660	1
1408830-03	Phenol-d5	58.3	5	130	58.3	100	B408660	1
1408830-03	Terphenyl-dl4	98.0	31	130	49.0	50.0	B408660	1
1408830-04	2,4,6-Tribromophenol	93.7	20	130	93.7	100	B408660	1
1408830-04	2-Fluorobiphenyl	60.7	37	130	30.3	50.0	B408660	1
1408830-04	2-Fluorophenol	62.3	15	130	62.3	100	B408660	1
1408830-04	Nitrobenzene-d5	79.3	23	130	39.7	50.0	B408660	1
1408830-04	Phenol-d5	56.7	5	130	56.7	100	B408660	1
1408830-04	Terphenyl-dl4	90.7	31	130	45.3	50.0	B408660	1
1408830-05	2,4,6-Tribromophenol	82.3	20	130	82.3	100	B408660	1
1408830-05	2-Fluorobiphenyl	52.0	37	130	26.0	50.0	B408660	1
1408830-05	2-Fluorophenol	55.0	15	130	55.0	100	B408660	1
1408830-05	Nitrobenzene-d5	64.7	23	130	32.3	50.0	B408660	1
1408830-05	Phenol-d5	48.0	5	130	48.0	100	B408660	1
1408830-05	Terphenyl-dl4	95.3	31	130	47.7	50.0	B408660	1
1408830-06	2,4,6-Tribromophenol	93.7	20	130	93.7	100	B408660	1
1408830-06	2-Fluorobiphenyl	62.0	37	130	31.0	50.0	B408660	1
1408830-06	2-Fluorophenol	63.3	15	130	63.3	100	B408660	1
1408830-06	Nitrobenzene-d5	72.7	23	130	36.3	50.0	B408660	1

QC ID	Surrogate	% Rec	LCL	UCL	Result	Spk Value	Batch	DF
1408830-06	Phenol-d5	65.7	5	130	65.7	100	B408660	1
1408830-06	Terphenyl-d14	99.3	31	130	49.7	50.0	B408660	1
1408830-07	2,4,6-Tribromophenol	95.0	20	130	95.0	100	B408660	1
1408830-07	2-Fluorobiphenyl	62.7	37	130	31.3	50.0	B408660	1
1408830-07	2-Fluorophenol	63.7	15	130	63.7	100	B408660	1
1408830-07	Nitrobenzene-d5	78.7	23	130	39.3	50.0	B408660	1
1408830-07	Phenol-d5	68.0	5	130	68.0	100	B408660	1
1408830-07	Terphenyl-d14	100	31	130	50.0	50.0	B408660	1
1408830-08	2,4,6-Tribromophenol	94.0	20	130	94.0	100	B408660	1
1408830-08	2-Fluorobiphenyl	72.7	37	130	36.3	50.0	B408660	1
1408830-08	2-Fluorophenol	66.7	15	130	66.7	100	B408660	1
1408830-08	Nitrobenzene-d5	80.0	23	130	40.0	50.0	B408660	1
1408830-08	Phenol-d5	63.0	5	130	63.0	100	B408660	1
1408830-08	Terphenyl-d14	97.3	31	130	48.7	50.0	B408660	1
B408660-BLK1	2,4,6-Tribromophenol	58.0	20	130	58.0	100	B408660	1
B408660-BLK1	2-Fluorobiphenyl	52.0	37	130	26.0	50.0	B408660	1
B408660-BLK1	2-Fluorophenol	48.0	15	130	48.0	100	B408660	1
B408660-BLK1	Nitrobenzene-d5	56.0	23	130	28.0	50.0	B408660	1
B408660-BLK1	Phenol-d5	30.0	5	130	30.0	100	B408660	1
B408660-BLK1	Terphenyl-d14	101	31	130	50.3	50.0	B408660	1
B408660-BS1	2,4,6-Tribromophenol	74.7	20	130	74.7	100	B408660	1
B408660-BS1	2-Fluorobiphenyl	52.7	37	130	26.3	50.0	B408660	1
B408660-BS1	2-Fluorophenol	46.3	15	130	46.3	100	B408660	1
B408660-BS1	Nitrobenzene-d5	63.3	23	130	31.7	50.0	B408660	1
B408660-BS1	Phenol-d5	36.3	5	130	36.3	100	B408660	1
B408660-BS1	Terphenyl-d14	92.7	31	130	46.3	50.0	B408660	1
B408660-MS1	2,4,6-Tribromophenol	81.3	20	130	81.3	100	B408660	1
B408660-MS1	2-Fluorobiphenyl	50.0	37	130	25.0	50.0	B408660	1
B408660-MS1	2-Fluorophenol	52.0	15	130	52.0	100	B408660	1
B408660-MS1	Nitrobenzene-d5	63.3	23	130	31.7	50.0	B408660	1
B408660-MS1	Phenol-d5	47.3	5	130	47.3	100	B408660	1
B408660-MS1	Terphenyl-d14	86.7	31	130	43.3	50.0	B408660	1
B408660-MSD1	2,4,6-Tribromophenol	80.3	20	130	80.3	100	B408660	1
B408660-MSD1	2-Fluorobiphenyl	49.3	37	130	24.7	50.0	B408660	1
B408660-MSD1	2-Fluorophenol	52.3	15	130	52.3	100	B408660	1

QC ID	Surrogate	% Rec	LCL	UCL	Result	Spk Value	Batch	DF
B408660-MSD1	Nitrobenzene-d5	55.3	23	130	27.7	50.0	B408660	1
B408660-MSD1	Phenol-d5	47.0	5	130	47.0	100	B408660	1
B408660-MSD1	Terphenyl-d14	89.3	31	130	44.7	50.0	B408660	1

CHEMTECH FORD LABORATORIES

Sample Receipt



CHEMTECH-FORD
LABORATORIES

Work Order # 08530

Delivery Method:

- UPS
- USPS
- FedEx
- Chemtech Courier
- Walk-in
- Courier

Receiving Temperature 41 °C

Sample #	Container	Chemtech Lot # or Preservative	Number of Containers			Misc Volume (oz/mL)	Comments
			Received by Client/Third Party	Received in Lab	Received in Field by Client		
01	W1-3		X				
↓	G1-2				1L		
04	N	296					
↓	AP						
	M	-	X			FILTER IN LAB	
↓	A1/2P						
05	W1-3		X				
	G1-4						
	N	296					
	AP						
	M	-	X			FILTER IN LAB	
	A1/2P						
06-08	W1-3		X				
↓	G1-4						
	N	296					
	AP						
	M	-	X			FILTER IN LAB	
↓	A1/2P						
09	W1-3		X				

Sample Condition
(check if yes)

- Drippy Seal
- Containers intact
- COC/Labels Agree
- Preservation Confirmed
- Received on time
- Correct Container(s)
- Sufficient Sample Volume
- Inert/Seal Preserv (VOC)
- Temperature Blank
- Received within Holding Time

Plastic Containers

- A: Plastic Unpreserved
- B: Miscellaneous Plastic
- C: Cyanide (CN) (H2O)
- F: Sulfide (S²⁻) (Acetate)
- L: Mercury (HG)
- M: Metals (Metals) (HNO₃)
- N: Nutrition (Nutr) (H₂SO₄)
- R: Radiological (RAD)
- S: Sludge (Sludge)
- Q: Plastic Bag
- E: Coliform (Col)

Glass Containers

- D: 625 (No 2520)
- G: Glass Unpreserved
- H: HAAU (HAAU)
- J: 50A/515/525 (No 250)
- K: 311 (H₂O)
- Q: Oil & Grease (HC)
- P: Fluoride (F⁻) (H₂SO₄)
- T: TOC/TOR (H₂PO₄)
- U: 531 (MCA, No 2520)
- V: 524/515 (Ascorbic Acid)
- W: 820 (VOC) (H₂O)
- X: 511 Unpreserved
- Y: 624/554 (No 2520)
- Z: Miscellaneous (Misc)



CHEMTECH-FORD
LABORATORIES

Certificate of Analysis

Report Footnotes

Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit.

1 mg/L = one milligram per liter or 1 mg/Kg = one milligram per kilogram = 1 part per million.

1 ug/L = one microgram per liter or 1 ug/Kg = one microgram per kilogram = 1 part per billion.

1 ng/L = one nanogram per liter or 1 ng/Kg = one nanogram per kilogram = 1 part per trillion.

Flag Descriptions

SPH = Sample submitted past method specified holding time.



October 14, 2014

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

Re: White Mesa Mill GW
Work Order: 358469

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 25, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

Sylainna Rivers
Project Manager

Purchase Order: DW16138
Enclosures



**Energy Fuels Resources (USA), Inc.
White Mesa Mill GW
SDG: 358469**

**Receipt Narrative
for
Energy Fuels Resources (USA), Inc.
SDG: 358469**

October 14, 2014

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on August 25, 2014 for analysis. Chain of custody needed clarification on laboratory filtration request. Analysis was performed on lab filtration under workorder 358469. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

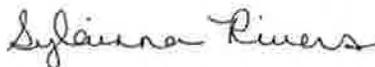
Sample Identification: The laboratory received the following samples:

<u>Laboratory ID</u>	<u>Client ID</u>
358469001	Cell 1
358469002	Cell 2 Slimes
358469003	Cell 3
358469004	Cell 4A
358469005	Cell 4A LDS
358469006	Cell 4B
358469007	Cell 4B LDS
358469008	Cell 65

Case Narrative:

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.



Sylainna Rivers
Project Manager

* Re-log of 355403 New work order 358469 SR 10/14/11

Client: <u>DOM</u>		SDG/AR/COC/Work Order: <u>355403</u>
Received By: <u>P. Went</u>		Date Received: <u>8/25/14</u>
Suspected Hazard Information	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0/cpm</u>
Classified Radioactive II or III by RSO?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Package, COC, and/or Samples marked as beryllium or asbestos containing?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		<input checked="" type="checkbox"/>		Preservation Method: Ice bags Blue ice Dry ice <u>None</u> Other (describe) <u>alc</u> *all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): <u>130462966</u>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles Laboratory)
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?			<input checked="" type="checkbox"/>	Sample ID's affected: <u>CELL 65 TIME ON Sample 09:25</u>
11 Number of containers received match number indicated on COC?			<input checked="" type="checkbox"/>	Sample ID's affected: <u>Lab rec'd (1) container each</u>
12 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>			
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
14 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground <u>UPS</u> Field Services Courier Other <u>1Z 187 Y4Y 02 9348 9662</u>

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials TH Date 08/26/14 Page 1 of 1

GEL Laboratories LLC – Login Review Report

Report Date: 14-OCT-14
 Work Order: 358469
 Page 1 of 2

GEL Work Order/SDG: 358469 Relog of 355403001
 Client SDG: 358469
 Project Manager: Sylainna Rivers
 Project Name: DNMI00100 White Mesa Mill GW
 Purchase Order: DW16138
 Package Level: LEVEL3
 EDD Format: EIM_DNMI

Work Order Due Date: 15-OCT-14
 Package Due Date: 14-OCT-14
 EDD Due Date: 15-OCT-14
 Due Date: 15-OCT-14
 GL Review Fractions: Rad

Collector: C
 Prelogin #: 20140820530
 Project Workdef ID: 1294356
 SDG Status: Closed
 Logged by: HXS1

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
358469001	Cell 1	-Relog from 355403001	19-AUG-14 08:15	25-AUG-14 09:00	-2	1	GROUND WATER	15-OCT-14	20		1		
358469002	Cell 2 Slimes	-Relog from 355403002	19-AUG-14 08:25	25-AUG-14 09:00	-2	1	GROUND WATER	15-OCT-14	20		1		
358469003	Cell 3	-Relog from 355403003	19-AUG-14 09:00	25-AUG-14 09:00	-2	1	GROUND WATER	15-OCT-14	20		1		
358469004	Cell 4A	-Relog from 355403004	19-AUG-14 09:25	25-AUG-14 09:00	-2	1	GROUND WATER	15-OCT-14	20		1		
358469005	Cell 4A LDS	-Relog from 355403005	19-AUG-14 09:40	25-AUG-14 09:00	-2	1	GROUND WATER	15-OCT-14	20		1		
358469006	Cell 4B	-Relog from 355403006	19-AUG-14 10:10	25-AUG-14 09:00	-2	1	GROUND WATER	15-OCT-14	20		1		
358469007	Cell 4B LDS	-Relog from 355403007	19-AUG-14 10:00	25-AUG-14 09:00	-2	1	GROUND WATER	15-OCT-14	20		1		
358469008	Cell 65	-Relog from 355403008	19-AUG-14 09:40	25-AUG-14 09:00	-2	1	GROUND WATER	15-OCT-14	20		1		

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data	Receive Codes
-001 Cell 1	NEW	GFPC, Total Alpha Radium, Liquid	Gross Alpha		Relog of 355403001		
	NEW	Laboratory Composite – FILTER	LAB FILTER				
-002 Cell 2 Slimes	NEW	GFPC, Total Alpha Radium, Liquid	Gross Alpha		Relog of 355403002		
	NEW	Laboratory Composite – FILTER	LAB FILTER				
-003 Cell 3	NEW	GFPC, Total Alpha Radium, Liquid	Gross Alpha		Relog of 355403003		
	NEW	Laboratory Composite – FILTER	LAB FILTER				
-004 Cell 4A	NEW	GFPC, Total Alpha Radium, Liquid	Gross Alpha		Relog of 355403004		
	NEW	Laboratory Composite – FILTER	LAB FILTER				
-005 Cell 4A LDS	NEW	GFPC, Total Alpha Radium, Liquid	Gross Alpha		Relog of 355403005		
	NEW	Laboratory Composite – FILTER	LAB FILTER				
-006 Cell 4B	NEW	GFPC, Total Alpha Radium, Liquid	Gross Alpha		Relog of 355403006		
	NEW	Laboratory Composite – FILTER	LAB FILTER				
-007 Cell 4B LDS	NEW	GFPC, Total Alpha Radium, Liquid	Gross Alpha		Relog of 355403007		
	NEW	Laboratory Composite – FILTER	LAB FILTER				
-008 Cell 65	NEW	GFPC, Total Alpha Radium, Liquid	Gross Alpha		Relog of 355403008		
	NEW	Laboratory Composite – FILTER	LAB FILTER				

GEL Laboratories LLC – Login Review Report

Report Date: 14-OCT-14
 Work Order: 358469
 Page 2 of 2

Product: LABCOMP_L Workdef ID: 1295580 In Product Group? No Group Name: Group Reference:
 Method: Path: Standard
 Product Description: Laboratory Composite – FILTER Product Reference: LAB FILTER
 Samples: 001, 002, 003, 004, 005, 006, 007, 008 Moisture Correction: "As Received"
 Parmname Check: All parmnames scheduled properly

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
							No

Product: GFCTORAL Workdef ID: 1297250 In Product Group? No Group Name: Group Reference:
 Method: EPA 900.1 Modified Path: Standard
 Product Description: GFPC, Total Alpha Radium, Liquid Product Reference: Gross Alpha
 Samples: 001, 002, 003, 004, 005, 006, 007, 008 Moisture Correction: "As Received"
 Parmname Check: All parmnames scheduled properly

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
	Gross Radium Alpha	1	pCi/L	REG	Y	Y	Yes

Action	Product Name	Description	Samples
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Contingent Tests

Login Requirements:

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

**Radiochemistry Case Narrative
Energy Fuels Resources (DNMI)
SDG 358469**

Method/Analysis Information

Product: GFPC, Total Alpha Radium, Liquid

Analytical Method: EPA 900.1 Modified

Analytical Batch Number: 1426429

Sample ID	Client ID
358469001	Cell 1
358469002	Cell 2 Slimes
358469003	Cell 3
358469004	Cell 4A
358469005	Cell 4A LDS
358469006	Cell 4B
358469007	Cell 4B LDS
358469008	Cell 65
1203185350	MB for batch 1426429
1203185354	Laboratory Control Sample (LCS)
1203185351	358469001(Cell 1) Sample Duplicate (DUP)
1203185352	358469001(Cell 1) Matrix Spike (MS)
1203185353	358469001(Cell 1) Matrix Spike Duplicate (MSD)

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

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 358469001 (Cell 1).

QC Information

All of the QC samples meet the required acceptance limits with the following exceptions: The blank, 1203185350 (MB), did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots. All other samples met the detection limits. The matrix spike and matrix spike duplicate, 1203185352 (Cell 1) and 1203185353 (Cell 1), did not meet recovery requirements due to the sample activity being greater than five times the spiked nominal concentration.

Technical Information:

Holding Time

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

Sample Re-prep/Re-analysis

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

Chemical Recoveries

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

Recounts

Sample 358469008 (Cell 65) was recounted to verify sample result. The second count is reported.

Miscellaneous Information:

Data Exception (DER) Documentation

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

Sample-Specific MDA/MDC

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

Additional Comments

Samples were filtered per lab comp instructions and reanalyzed for Total Alpha Radium. Reporting results.

Qualifier Information

Manual qualifiers were not required.

Certification Statement

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

GEL LABORATORIES LLC

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

Qualifier Definition Report for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 358469 GEL Work Order: 358469

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: Heather McCarty

Date: 14 OCT 2014

Title: Analyst II

GEL LABORATORIES LLC

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

QC Summary

Report Date: October 14, 2014

Page 1 of 2

Energy Fuels Resources (USA), Inc.

225 Union Boulevard

Suite 600

Lakewood, Colorado

Contact: Ms. Kathy Weinel

Workorder: 358469

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	1426429										
QC1203185351	358469001	DUP									
Gross Radium Alpha		3.31E+05		3.75E+05	pCi/L	12.3		(0%-20%)	CXP3	10/13/14	15:38
	Uncertainty	+/-710		+/-707							
QC1203185354	LCS										
Gross Radium Alpha	5500			4970	pCi/L		90.3	(75%-125%)		10/13/14	16:31
	Uncertainty			+/-84.9							
QC1203185350	MB										
Gross Radium Alpha			U	-0.45	pCi/L					10/13/14	15:37
	Uncertainty			+/-4.99							
QC1203185352	358469001	MS									
Gross Radium Alpha	5660	3.31E+05		3.10E+05	pCi/L		N/A	(75%-125%)		10/13/14	15:37
	Uncertainty	+/-710		+/-651							
QC1203185353	358469001	MSD									
Gross Radium Alpha	5660	3.31E+05		3.20E+05	pCi/L	3.36	N/A	(0%-20%)		10/13/14	16:32
	Uncertainty	+/-710		+/-670							

Notes:

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

The Qualifiers in this report are defined as follows:

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

Tab D

Chemical and Radiological Summary Tables

Cell 1
Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014
Major Ions (mg/l)											
Carbonate	<5	<1	ND	ND	<1	<1	<1	<1	<1	NS	<1
Bicarbonate	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<1
Calcium	630	307	483.8	604	635	711	577	426	768	NS	404
Chloride	8000	6728	37340	9830	20700	7440	33800	78000	9900	NS	11600
Fluoride	<100	3005	31.72	0.3	0.4	28.4	69.2	62.9	4130	NS	2380
Magnesium	7900	5988	21220	6550	16200	5410	14300	16000	4470	NS	5530
Nitrogen-Ammonia	7800	3353	10628	5250	15200	8120	12900	9750	3900	NS	5700
Nitrogen-Nitrate	<100	41.8	269.4	64.9	142	58	212	556	128	NS	53.0
Potassium	NA	647	5698	1880	4140	1840	4510	9750	6580	NS	3010
Sodium	10000	8638	62600	13200	39000	16700	29500	41700	15900	NS	12200
Sulfate	190000	63667	287600	118000	232000	107000	182000	158000	100000	NS	124000
pH (s.u.)	0.70	1.88	0.80	1.53	1.15	2.73	2.23	1.9	2.74	NS	1.3
TDS	120000	94700	357400	131000	140000	130000	216000	342000	149000	NS	159000
Conductivity (umhos/cm)	NA	NA	NA	NA	365000	110000	112000	136000	94200	NS	113000
Metals (ug/l)											
Arsenic	440000	121267	849000	271000	436000	74400	299000	25500	9800	NS	249000
Beryllium	780	475	2262	500	410	338	1270	3180	415	NS	448
Cadmium	6600	3990	29320	8790	9120	2940	13700	30700	2380	NS	3060
Chromium	13000	6365	29940	6760	18700	5620	22700	12100	8350	NS	13200
Cobalt	120000	NA	88240	23500	97500	16200	56000	53100	25500	NS	56500
Copper	740000	196667	881000	360000	168000	125000	483000	885000	544000	NS	3420000
Iron	3400000	2820000	13480000	3280000	2390000	3400000	8940000	840000	1420000	NS	2520000
Lead	<20000	3393	27420	11200	10600	9240	23600	17000	2810	NS	13500
Manganese	140000	162500	990200	206000	723000	173000	735000	1560000	188000	NS	162000
Mercury	NA	NA	ND	ND	7.61	7.2	61.4	117	6.16	NS	12.5
Molybdenum	240000	50550	415600	106000	142000	35300	235000	434000	16800	NS	68800
Nickel	370000	36950	40860	32000	156000	27500	43700	15000	39100	NS	129000
Selenium	<20000	1862	15420	13000	14800	5220	11600	8090	2690	NS	3970
Silver	<5000	NA	1559.2	449	558	155	1110	4310	329	NS	336
Thallium	45000	NA	407.8	165	387	193	560	13	63.3	NS	876
Tin	<5000	NA	6512	1240	2290	263	1500	<100	<100	NS	<17000
Uranium	105000	134517	788600	416000	578000	159000	838000	1450000	140000	NS	137000
Vanadium	280000	348000	2208200	1200000	773000	752000	2500000	1940000	98200	NS	485000
Zinc	1300000	NA	642940	476000	229000	171000	398000	811000	228000	NS	229000
Radiologics (pCi/l)											
Gross Alpha	NA	169333 ¹	29380	21900	16500	11300	3610	12600	32700	NS	331000
VOCS (ug/L)											
Acetone	35	NA	66.5	110	710	260	80	310	41.1	NS	<700
Benzene	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<5.0
Carbon tetrachloride	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<5.0
Chloroform	8	NA	6.7	6.6	16	4.9	13	19	7.62	NS	<70.0
Chloromethane	NA	NA	ND	9.4	11	4.4	3.6	4.0	5	NS	<30.0

Cell 1
Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014
Major Ions (mg/l)											
MEK	NA	NA	ND	ND	120	65	<1	200	<20	NS	<4000
Methylene Chloride	11	NA	ND	ND	2.0	<1	<1	2	<1	NS	<5.0
Naphthalene	<10000	NA	<10	ND	1.1	5.4	2	3	<1	NS	<100
Tetrahydrofuran	NA	NA	150	<20	<100	<10	<500	2.9	<1	NS	<46.0
Toluene	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<1000
Xylenes	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<10000
SVOCS (ug/L)											
1,2,4-Trichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
1,2-Dichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
1,3-Dichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
1,4-Dichlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
1-Methylnaphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2,4,5-Trichlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2,4,6-Trichlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2,4-Dichlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2,4-Dimethylphenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2,4-Dinitrophenol	NA	NA	NA	NA	<250	<20	<20	<20	<21.6	<20	<20
2,4-Dinitrotoluene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2,6-Dinitrotoluene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2-Chloronaphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2-Chlorophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2-Methylnaphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2-Methylphenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
2-Nitrophenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
3&4-Methylphenol	NA	NA	NA	NA	<22	<10	<10	<10	<10.8	<10	<10
3,3'-Dichlorobenzidine	NA	NA	NA	NA	<100	<10	<10	<10	<10.8	<10	<10
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	<250	<10	<10	<10	<10.8	<10	<10
4-Bromophenyl phenyl ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
4-Chloro-3-methylphenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
4-Nitrophenol	NA	NA	NA	NA	<250	<10	<10	<10	<10.8	<10	<10
Acenaphthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Acenaphthylene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Anthracene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Azobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Benz(a)anthracene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Benzidine	NA	NA	NA	NA	<100	<10	<10	<10	<10.8	<10	41
Benzo(a)pyrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Benzo(b)fluoranthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Benzo(g,h,i)perylene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Benzo(k)fluoranthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Bis(2-chloroethoxy)methane	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Bis(2-chloroethyl) ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Bis(2-chloroisopropyl) ether	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10

Cell 1
Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014
Major Ions (mg/l)											
Bis(2-ethylhexyl) phthalate	NA	NA	NA	NA	<50	27	<10	<10	<10.8	<10	<10
Butyl benzyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Chrysene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Dibenz(a,h)anthracene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Diethyl phthalate	NA	NA	NA	NA	170	<10	<10	<10	<10.8	<10	<10
Dimethyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Di-n-butyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Di-n-octyl phthalate	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Fluoranthene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Fluorene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Hexachlorobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Hexachlorobutadiene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Hexachlorocyclopentadiene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Hexachloroethane	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Isophorone	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Naphthalene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Nitrobenzene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
N-Nitrosodimethylamine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
N-Nitrosodi-n-propylamine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
N-Nitrosodiphenylamine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Pentachlorophenol	NA	NA	NA	NA	<250	<10	<10	<10	<10.8	<10	<10
Phenanthrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Phenol	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Pyrene	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10
Pyridine	NA	NA	NA	NA	<50	<10	<10	<10	<10.8	<10	<10

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

Cell 2 Slimes Drain
Chemical and Radiological Characteristics

Major Ions (mg/l)	2007	2008	2009	2010	2011	2012	2013	2014
Carbonate	ND	ND	<1	<1	<1	<1	<1	<1
Bicarbonate	ND	ND	<1	<1	<1	<1	<1	<1
Calcium	572	528	508	496	474	462	465	322
Chloride	3700	3860	2750	3510	3110	3730	3270	3720
Fluoride	3.3	ND	<0.1	2.4	2.1	1.32	161	130
Magnesium	4100	4030	3750	3790	3640	3760	3320	2780
Nitrogen-Ammonia	4020	3620	3240	3820	2940	3540	1880	3500
Nitrogen-Nitrate	30.9	20.3	38	126	38	27	47.2	35.0
Potassium	636	560	689	620	636	611	622	489
Sodium	4050	4600	4410	4770	4590	4380	3980	3130
Sulfate	60600	74000	72200	63700	64200	58300	83700	62200
pH (s.u.)	3.18	3.24	3.11	3.39	3.18	3.0	3.02	3.1
TDS	84300	74600	84100	79900	80200	83800	92200	87000
Conductivity (umhos/cm)	NA	NA	88700	60200	51400	52900	51100	54100
Metals (ug/l)								
Arsenic	26900	19300	14200	23500	17800	19400	21000	19800
Beryllium	298	245	271	267	231	251	262	197
Cadmium	5500	5840	5510	6370	5580	5290	5780	6480
Chromium	2750	2450	2230	2510	2380	2350	2290	1630
Cobalt	46500	43800	38700	48200	42500	48700	44900	46700
Copper	106000	154000	170000	148000	132000	138000	137000	126000
Iron	2770000	3310000	3230000	2720000	2960000	2850000	2810000	2180000
Lead	566	528	403	586	501	619	515	638
Manganese	117000	130000	160000	144000	123000	141000	122000	98000
Mercury	ND	ND	<0.5	<4	11.1	1.9	<0.5	<0.0020
Molybdenum	4080	3190	2240	4630	3510	3610	3650	4250
Nickel	123000	122000	108000	126000	111000	125000	108000	127000
Selenium	422	647	726	844	714	711	678	1020
Silver	ND	ND	<10	<10	<10	<10	<10	<100
Thallium	361	703	368	470	371	338	278	402
Tin	ND	ND	<100	<100	<100	<100	<100	<17000
Uranium	23000	29200	29900	30600	27100	33400	22800	26400
Vanadium	409000	463000	536000	469000	454000	475000	452000	497000
Zinc	767000	750000	582000	652000	574000	639000	631000	405000
Radiologies (pCi/l)								
Gross Alpha	1290	1570	1580	1000	1230	1370 (2400)*	2270	6890
VOCS (ug/L)								
Acetone	550	410	570	460	690	600	384	<700
Benzene	ND	ND	<1	<1	<1	<1	<1	<5.0
Carbon tetrachloride	ND	ND	<1	<1	<1	<1	<1	<5.0
Chloroform	20	17	16	15	20	16	21.4	<70.0
Chloromethane	1.8	ND	2.2	2.3	2	3	2.04	<30.0
MEK	65	ND	100	83	130	100	95.5	<4000

Cell 2 Slimes Drain
Chemical and Radiological Characteristics

Major Ions (mg/l)	2007	2008	2009	2010	2011	2012	2013	2014
Methylene Chloride	ND	ND	<1	<1	<1	<1	<1	<5.0
Naphthalene	14	7.5	16	17	13	12	16.8	<100
Tetrahydrofuran	15	NA	<100	<10	<10	3.2	3.98	<46.0
Toluene	1.7	ND	2.6	2.6	3	2	3.23	<1000
Xylenes	1.5	ND	<1	2.2	<1	2	5.97	<10000
SVOCS (ug/L)								
1,2,4-Trichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10
1-Methylnaphthalene	NA	NA	<11	<10	<10	<10	<10	11
2,4,5-Trichlorophenol	NA	NA	<11	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	NA	NA	<11	<10	<10	<10	<10	<10
2,4-Dichlorophenol	NA	NA	<11	<10	<10	<10	<10	<10
2,4-Dimethylphenol	NA	NA	<51	<20	<20	<10	<10	<10
2,4-Dinitrophenol	NA	NA	<11	<10	<10	<20	<20	<20
2,4-Dinitrotoluene	NA	NA	<11	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	NA	NA	<11	<10	<10	<10	<10	<10
2-Chloronaphthalene	NA	NA	<11	<10	<10	<10	<10	<10
2-Chlorophenol	NA	NA	<11	<10	<10	<10	<10	<10
2-Methylnaphthalene	NA	NA	<11	<10	<10	<10	<10	11
2-Methylphenol	NA	NA	<11	<10	<10	<10	<10	<10
2-Nitrophenol	NA	NA	<11	<10	<10	<10	<10	<10
3&4-Methylphenol	NA	NA	<21	<10	<10	<10	<10	<10
3,3'-Dichlorobenzidine	NA	NA	<51	<10	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	NA	NA	<11	<10	<10	<10	<10	<10
4-Bromophenyl phenyl ether	NA	NA	<11	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	NA	NA	<11	<10	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	NA	NA	<51	<10	<10	<10	<10	<10
4-Nitrophenol	NA	NA	<11	<10	<10	<10	<10	<10
Acenaphthene	NA	NA	<11	<10	<10	<10	<10	<10
Acenaphthylene	NA	NA	<11	<10	<10	<10	<10	<10
Anthracene	NA	NA	<11	<10	<10	<10	<10	<10
Azobenzene	NA	NA	<11	<10	<10	<10	<10	<10
Benz(a)anthracene	NA	NA	<21	<10	<10	<10	<10	<10
Benzidine	NA	NA	<11	<10	<10	<10	<10	<10
Benzo(a)pyrene	NA	NA	<11	<10	<10	<10	<10	<10
Benzo(b)fluoranthene	NA	NA	<11	<10	<10	<10	<10	<10
Benzo(g,h,i)perylene	NA	NA	<11	<10	<10	<10	<10	<10
Benzo(k)fluoranthene	NA	NA	<11	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	NA	NA	<11	<10	<10	<10	<10	<10
Bis(2-chloroethyl) ether	NA	NA	<11	<10	<10	<10	<10	<10
Bis(2-chloroisopropyl) ether	NA	NA	<11	<10	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	NA	NA	<11	<10	<10	<10	<10	<10
Butyl benzyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10

Cell 2 Slimes Drain
Chemical and Radiological Characteristics

Major Ions (mg/l)	2007	2008	2009	2010	2011	2012	2013	2014
Chrysene	NA	NA	<11	<10	<10	<10	<10	<10
Dibenz(a,h)anthracene	NA	NA	<11	<10	<10	<10	<10	<10
Diethyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10
Dimethyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10
Di-n-butyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10
Di-n-octyl phthalate	NA	NA	<11	<10	<10	<10	<10	<10
Fluoranthene	NA	NA	<11	<10	<10	<10	<10	<10
Fluorene	NA	NA	<11	<10	<10	<10	<10	<10
Hexachlorobenzene	NA	NA	<11	<10	<10	<10	<10	<10
Hexachlorobutadiene	NA	NA	<11	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	NA	NA	<11	<10	<10	<10	<10	<10
Hexachloroethane	NA	NA	<11	<10	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	NA	NA	<11	<10	<10	<10	<10	<10
Isophorone	NA	NA	<11	<10	<10	<10	<10	<10
Naphthalene	NA	NA	<11	<10	<10	<10	<10	<10
Nitrobenzene	NA	NA	<11	<10	<10	<10	<10	<10
N-Nitrosodimethylamine	NA	NA	<11	<10	<10	<10	<10	<10
N-Nitrosodi-n-propylamine	NA	NA	<11	<10	<10	<10	<10	<10
N-Nitrosodiphenylamine	NA	NA	<51	<10	<10	<10	<10	<10
Pentachlorophenol	NA	NA	<11	<10	<10	<10	<10	<10
Phenanthrene	NA	NA	<11	<10	<10	<10	<10	<10
Phenol	NA	NA	<11	10.7	<10	<10	<10	<10
Pyrene	NA	NA	<11	<10	<10	<10	<10	<10
Pyridine	NA	NA	<11	<10	<10	<10	<10	<10

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

Cell 2 LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014
Major Ions (mg/l)						
Carbonate	<1	<1	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	13.0				
Sodium	412	318				
Sulfate	2700	1780				
pH (s.u.)	6.60	7.36				
TDS	6750	5310				
Conductivity (umhos/cm)	11000	6500				
Metals (ug/l)						
Arsenic	<5	<5	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Beryllium	<0.50	<0.50				
Cadmium	33.4	1.10				
Chromium	<25	<25				
Cobalt	314	<10				
Copper	59	12				
Iron	208	37				
Lead	<1.0	<1.0				
Manganese	1810	395				
Mercury	<0.50	0.52				
Molybdenum	21	13				
Nickel	948	<20				
Selenium	7.9	9.4				
Silver	<10	<10				
Thallium	0.92	<0.50				
Tin	<100	<100				
Uranium	83.8	79.6				
Vanadium	22	<15				
Zinc	4220	78				
Radiologics (pCi/l)						
Gross Alpha	13.5	7.3	Not Sampled	Not Sampled	Not Sampled	Not Sampled
VOCS (ug/L)						
Acetone	<20	<20	Not Sampled	Not Sampled	Not Sampled	Not Sampled
Benzene	<1	<1				
Carbon tetrachloride	<1	<1				
Chloroform	<1	<1				
Chloromethane	<1	<1				

Cell 2 LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014
Major Ions (mg/l)						
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
1,2-Dichlorobenzene	NA	<10				
1,3-Dichlorobenzene	NA	<10				
1,4-Dichlorobenzene	NA	<10				
1-Methylnaphthalene	NA	<10				
2,4,5-Trichlorophenol	NA	<10				
2,4,6-Trichlorophenol	NA	<10				
2,4-Dichlorophenol	NA	<10				
2,4-Dimethylphenol	NA	<10				
2,4-Dinitrophenol	NA	<20				
2,4-Dinitrotoluene	NA	<10				
2,6-Dinitrotoluene	NA	<10				
2-Chloronaphthalene	NA	<10				
2-Chlorophenol	NA	<10				
2-Methylnaphthalene	NA	<10				
2-Methylphenol	NA	<10				
2-Nitrophenol	NA	<10				
3&4-Methylphenol	NA	<10				
3,3'-Dichlorobenzidine	NA	<10				
4,6-Dinitro-2-methylphenol	NA	<10				
4-Bromophenyl phenyl ether	NA	<10				
4-Chloro-3-methylphenol	NA	<10				
4-Chlorophenyl phenyl ether	NA	<10				
4-Nitrophenol	NA	<10				
Acenaphthene	NA	<10				
Acenaphthylene	NA	<10				
Anthracene	NA	<10				
Azobenzene	NA	<10				
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				

Cell 2 LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014
Major Ions (mg/l)						
Bis(2-ethylhexyl) phthalate	NA	<10				
Butyl benzyl phthalate	NA	<10				
Chrysene	NA	<10				
Dibenz(a,h)anthracene	NA	<10				
Diethyl phthalate	NA	<10				
Dimethyl phthalate	NA	<10				
Di-n-butyl phthalate	NA	<10				
Di-n-octyl phthalate	NA	<10				
Fluoranthene	NA	<10				
Fluorene	NA	<10				
Hexachlorobenzene	NA	<10				
Hexachlorobutadiene	NA	<10				
Hexachlorocyclopentadiene	NA	<10				
Hexachloroethane	NA	<10				
Indeno(1,2,3-cd)pyrene	NA	<10				
Isophorone	NA	<10				
Naphthalene	NA	<10				
Nitrobenzene	NA	<10				
N-Nitrosodimethylamine	NA	<10				
N-Nitrosodi-n-propylamine	NA	<10				
N-Nitrosodiphenylamine	NA	<10				
Pentachlorophenol	NA	<10				
Phenanthrene	NA	<10				
Phenol	NA	<10				
Pyrene	NA	<10				
Pyridine	NA	<10				

Cell 3
Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014
Major Ions (mg/l)											
Carbonate	NA	<1	ND	ND	<1	<1	<1	<1	<1	NS	<1
Bicarbonate	<5	NA	ND	ND	<1	<1	<1	<1	<1	NS	<1
Calcium	300	418	887	478	628	560	200	591	586	NS	294
Chloride	NA	2460	15965	15400	17200	3470	40400	8880	38400	NS	7200
Fluoride	<100	667	42.8	1.4	0.6	54.8	64.1	2300	12400	NS	1330
Magnesium	5400	3386	15767	13100	17100	2500	22100	5680	15400	NS	1910
Nitrogen-Ammonia	13900	1302	13867	9010	21600	2650	6470	6840	100	NS	3030
Nitrogen-Nitrate	<100	20	102	44	142	26	261	64	277	NS	59.5
Potassium	NA	254	6657	4760	3820	782	2590	1190	2110	NS	386
Sodium	5900	3198	25583	22900	28600	5620	47900	6660	34400	NS	3630
Sulfate	180000	33400	173667	167000	214000	40400	197000	80000	440000	NS	37000
pH (s.u.)	0.82	2.28	1.60	1.79	1.4	2.18	1.27	2.4	1.05	NS	2.2
TDS	189000	51633	228500	193000	243000	56200	296000	120000	410000	NS	70100
Conductivity (umhos/cm)	NA	NA	NA	NA	304000	59800	86400	80300	84300	NS	56200
Metals (ug/l)											
Arsenic	163000	32867	256500	489000	ND	52900	263000	4340	66000	NS	2920
Beryllium	540	430	913	840	905	206	1570	678	2570	NS	222
Cadmium	2600	1958	9260	15400	ND	1960	12200	3460	24000	NS	2550
Chromium	12000	3742	14883	12800	ND	3360	22800	10900	30600	NS	2380
Cobalt	48000	NA	82783	57000	ND	13000	76000	76100	99700	NS	20800
Copper	360000	87333	505000	345000	ND	89000	768000	379000	954000	NS	139000
Iron	2100000	1278333	4874500	4400000	5970000	1460000	1.02E+7	3400000	9700000	NS	688000
Lead	<20000	2507	9647	16900	ND	17200	16700	1860	14400	NS	1900
Manganese	82000	144000	496833	313000	ND	101000	587000	3110000	2470000	NS	214000
Mercury	ND	NA	ND	16	ND	<4	30.9	9.6	21.6	NS	2.4
Molybdenum	52000	12250	122167	209000	14	21300	96200	790	56100	NS	2930
Nickel	170000	20917	131833	241000	ND	23800	75800	150000	122000	NS	44900
Selenium	<2000	910	5856	10200	ND	3080	6900	2460	7060	NS	1370
Silver	<2500	NA	305	1010	ND	101	792	1850	3380	NS	329
Thallium	4700	NA	446	1200	ND	190	518	1080	694	NS	290
Tin	NA	NA	1090	1070	ND	155	325	<100	<100	NS	<17000
Uranium	118000	67833	332333	636000	3690	180000	458000	835000	1200000	NS	134000
Vanadium	210000	158333	935000	1130000	ND	692000	2370000	836000	3220000	NS	454000
Zinc	590000	NA	748833	515000	ND	134000	726000	652000	1430000	NS	155000
Radiologics (pCi/l)											
Gross Alpha	NA	101583 ¹	16533	21700	17000	4030	11100	1530	81900	NS	19700
VOCS (ug/L)											
Acetone	28	NA	80	100	67	37	330	64	302	159	<700
Benzene	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<5.0
Carbon tetrachloride	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<5.0
Chloroform	6	NA	ND	11	4.2	2.6	31	2	56.3	21	<70.0
Chloromethane	NA	NA	ND	ND	1.4	1.8	3.5	1	<5	2.58	<30.0
MEK	NA	NA	ND	ND	<1	<1	67	<20	<100	24.5	<4000

Cell 3
Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014
Major Ions (mg/l)											
Methylene Chloride	10	NA	ND	ND	<1	<1	7.4	<1	6.95	<1	<5.0
Naphthalene	<10000	NA	ND	<10	<1	2.1	1.2	<1	<5	<1	<100
Tetrahydrofuran	NA	NA	150	<20	<100	<10	<10	<1	<5	<1	<46.0
Toluene	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<1000
Xylenes	<5	NA	ND	ND	<1	<1	<1	<1	<5	<1	<10000
SVOCS (ug/L)											
1,2,4-Trichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
1,2-Dichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
1,3-Dichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
1,4-Dichlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
1-Methylnaphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2,4,5-Trichlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2,4,6-Trichlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2,4-Dichlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2,4-Dimethylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2,4-Dinitrophenol	NA	NA	NA	NA	<53	<20	<20	<20	<21.1	<20	<20
2,4-Dinitrotoluene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2,6-Dinitrotoluene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2-Chloronaphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2-Chlorophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2-Methylnaphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2-Methylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
2-Nitrophenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
3&4-Methylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
3,3'-Dichlorobenzidine	NA	NA	NA	NA	<21	<10	<10	<10	<10.5	<10	<10
4,6-Dinitro-2-methylphenol	NA	NA	NA	NA	<53	<10	<10	<10	<10.5	<10	<10
4-Bromophenyl phenyl ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
4-Chloro-3-methylphenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
4-Chlorophenyl phenyl ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
4-Nitrophenol	NA	NA	NA	NA	<53	<10	<10	<10	<10.5	<10	<10
Acenaphthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Acenaphthylene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Anthracene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Azobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Benz(a)anthracene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Benzidine	NA	NA	NA	NA	<21	<10	<10	<10	<10.5	<10	<10
Benzo(a)pyrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Benzo(b)fluoranthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Benzo(g,h,i)perylene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Benzo(k)fluoranthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Bis(2-chloroethoxy)methane	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Bis(2-chloroethyl) ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Bis(2-chloroisopropyl) ether	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10

Cell 3
Chemical and Radiological Characteristics

Constituent	1987	2003 (Avg)	2007 (Avg)	2008	2009	2010	2011	2012	2013	2013 (resample)	2014
Major Ions (mg/l)											
Bis(2-ethylhexyl) phthalate	NA	NA	NA	NA	<11	10.6	<10	<10	<10.5	<10	<10
Butyl benzyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Chrysene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Dibenz(a,h)anthracene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Diethyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Dimethyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Di-n-butyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Di-n-octyl phthalate	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Fluoranthene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Fluorene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Hexachlorobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Hexachlorobutadiene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Hexachlorocyclopentadiene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Hexachloroethane	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Isophorone	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Naphthalene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Nitrobenzene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
N-Nitrosodimethylamine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
N-Nitrosodi-n-propylamine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
N-Nitrosodiphenylamine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Pentachlorophenol	NA	NA	NA	NA	<53	<10	<10	<10	<10.5	<10	<10
Phenanthrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Phenol	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Pyrene	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10
Pyridine	NA	NA	NA	NA	<11	<10	<10	<10	<10.5	<10	<10

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

Cell 4A
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014
Major Ions (mg/l)						
Carbonate	<1	<1	<1	<1	<1	<1
Bicarbonate	<1	<1	<1	<1	<1	<1
Calcium	627	598	558	591	668	445
Chloride	4650	7350	5870	4980	4530	5900
Fluoride	0.3	21.6	30.6	43	1130	1290
Magnesium	3250	4940	4720	2230	3660	2990
Nitrogen-Ammonia	3140	5230	4930	1540	1340	2730
Nitrogen-Nitrate	28	52	44	27	38.2	39.5
Potassium	980	1440	1450	558	773	724
Sodium	5980	11300	11400	7130	6860	7190
Sulfate	67600	87100	267000	64900	83300	64900
pH (s.u.)	1.40	1.99	1.73	1.2	1.47	1.7
TDS	81400	107000	108000	76000	90000	97000
Conductivity (umhos/cm)	131000	101000	82100	78100	66300	73000
Metals (ug/l)						
Arsenic	626000	109000	86600	60500	73700	70000
Beryllium	296	215	323	167	247	190
Cadmium	1920	3670	2190	844	1450	1780
Chromium	3220	7500	5900	5990	5220	4620
Cobalt	9440	26500	22500	22900	22900	27500
Copper	99200	168000	181000	433000	540000	556000
Iron	2360000	2920000	3390000	3190000	2620000	2280000
Lead	5360	11800	11000	5270	11500	14800
Manganese	178000	209000	131000	112000	143000	120000
Mercury	1.19	<4	15.2	2.4	0.786	2.5
Molybdenum	24300	43800	24200	58200	25500	40600
Nickel	17100	40900	43500	41300	43300	54100
Selenium	4620	5810	4460	1310	2080	2000
Silver	78	193	216	127	144	197
Thallium	162	350	410	250	256	376
Tin	257	378	319	169	118	<17000
Uranium	118000	217000	153000	91000	112000	159000
Vanadium	918000	1090000	730000	237000	461000	535000
Zinc	142000	224000	286000	200000	183000	169000
Radiologics (pCi/l)						
Gross Alpha	8910	3400	8290	16300	15800	240000
VOCS (ug/L)						
Acetone	60	55	100	25	28.4	<700
Benzene	<1	<1	<1	<1	<1	<5.0
Carbon tetrachloride	<1	<1	<1	<1	<1	<5.0
Chloroform	4.0	8.5	10	<1	<1	<70.0
Chloromethane	3.4	5.5	7.9	<1	<1	<30.0
MEK	<1	<1	<1	<1	<20	<4000
Methylene Chloride	<1	<1	<1	<20	<1	<5.0

Cell 4A
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014
Major Ions (mg/l)						
Naphthalene	1.8	<1	<1	<1	<1	<100
Tetrahydrofuran	<100	<10	<10	1.36	<1	<46.0
Toluene	<1	<1	<1	<1	<1	<1000
Xylenes	<1	<1	<1	<1	<1	<10000
SVOCS (ug/L)						
1,2,4-Trichlorobenzene	<11	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	<11	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	<11	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	<11	<10	<10	<10	<10	<10
1-Methylnaphthalene	<11	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol	<11	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	<11	<10	<10	<10	<10	<10
2,4-Dichlorophenol	<11	<10	<10	<10	<10	<10
2,4-Dimethylphenol	<11	<10	<10	<10	<10	<10
2,4-Dinitrophenol	<53	<20	<20	<20	<20	<20
2,4-Dinitrotoluene	<11	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	<11	<10	<10	<10	<10	<10
2-Chloronaphthalene	<11	<10	<10	<10	<10	<10
2-Chlorophenol	<11	<10	<10	<10	<10	<10
2-Methylnaphthalene	<11	<10	<10	<10	<10	<10
2-Methylphenol	<11	<10	<10	<10	<10	<10
2-Nitrophenol	<11	<10	<10	<10	<10	<10
3&4-Methylphenol	<11	<10	<10	<10	<10	<10
3,3'-Dichlorobenzidine	<21	<10	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	<53	<10	<10	<10	<10	<10
4-Bromophenyl phenyl ether	<11	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	<11	<10	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	<11	<10	<10	<10	<10	<10
4-Nitrophenol	<53	<10	<10	<10	<10	<10
Acenaphthene	<11	<10	<10	<10	<10	<10
Acenaphthylene	<11	<10	<10	<10	<10	<10
Anthracene	<11	<10	<10	<10	<10	<10
Azobenzene	<11	<10	<10	<10	<10	<10
Benz(a)anthracene	<11	<10	<10	<10	<10	<10
Benzidine	<21	<10	<10	<10	<10	<10
Benzo(a)pyrene	<11	<10	<10	<10	<10	<10
Benzo(b)fluoranthene	<11	<10	<10	<10	<10	<10
Benzo(g,h,i)perylene	<11	<10	<10	<10	<10	<10
Benzo(k)fluoranthene	<11	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	<11	<10	<10	<10	<10	<10
Bis(2-chloroethyl) ether	<11	<10	<10	<10	<10	<10
Bis(2-chloroisopropyl) ether	<11	<10	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	<11	19.6	<10	<10	<10	<10
Butyl benzyl phthalate	<11	<10	<10	<10	<10	<10
Chrysene	<11	<10	<10	<10	<10	<10

Cell 4A
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014
Major Ions (mg/l)						
Dibenz(a,h)anthracene	<11	<10	<10	<10	<10	<10
Diethyl phthalate	<11	<10	<10	<10	<10	<10
Dimethyl phthalate	<11	<10	<10	<10	<10	<10
Di-n-butyl phthalate	<11	<10	<10	<10	<10	<10
Di-n-octyl phthalate	<11	<10	<10	<10	<10	<10
Fluoranthene	<11	<10	<10	<10	<10	<10
Fluorene	<11	<10	<10	<10	<10	<10
Hexachlorobenzene	<11	<10	<10	<10	<10	<10
Hexachlorobutadiene	<11	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	<11	<10	<10	<10	<10	<10
Hexachloroethane	<11	<10	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	<11	<10	<10	<10	<10	<10
Isophorone	<11	<10	<10	<10	<10	<10
Naphthalene	<11	<10	<10	<10	<10	<10
Nitrobenzene	<11	<10	<10	<10	<10	<10
N-Nitrosodimethylamine	<11	<10	<10	<10	<10	<10
N-Nitrosodi-n-propylamine	<11	<10	<10	<10	<10	<10
N-Nitrosodiphenylamine	<11	<10	<10	<10	<10	<10
Pentachlorophenol	<53	<10	<10	<10	<10	<10
Phenanthrene	<11	<10	<10	<10	<10	<10
Phenol	<11	<10	<10	<10	<10	<10
Pyrene	<11	<10	<10	<10	<10	<10
Pyridine	<11	<10	<10	<10	<10	<10

Cell 4A LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014
Major Ions (mg/l)						
Chloroform	23	52	26	42	110	95.0
Chloromethane	7.9	13	3.8	6	9.93	<30.0
MEK	78	50	82	36	<20	<4000
Methylene Chloride	<1	<1	<1	<1	<1	<5.0
Naphthalene	<1	1.5	<1	1	2.35	<100
Tetrahydrofuran	140	158	102	117	39.1	<46.0
Toluene	<1	<1	<1	<1	<1	<1000
Xylenes	<1	<1	<1	<1	<1	<10000
SVOCS (ug/L)						
1,2,4-Trichlorobenzene	<11	<10	<10	<10	<10	<10
1,2-Dichlorobenzene	<11	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	<11	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	<11	<10	<10	<10	<10	<10
1-Methylnaphthalene	<11	<10	<10	<10	<10	<10
2,4,5-Trichlorophenol	<11	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	<11	<10	<10	<10	<10	<10
2,4-Dichlorophenol	<11	<10	<10	<10	<10	<10
2,4-Dimethylphenol	<11	<10	<10	<10	<10	<10
2,4-Dinitrophenol	<54	<20	<20	<20	<20	<20
2,4-Dinitrotoluene	<11	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	<11	<10	<10	<10	<10	<10
2-Chloronaphthalene	<11	<10	<10	<10	<10	<10
2-Chlorophenol	<11	<10	<10	<10	<10	<10
2-Methylnaphthalene	<11	<10	<10	<10	<10	<10
2-Methylphenol	<11	<10	<10	<10	<10	<10
2-Nitrophenol	<11	<10	<10	<10	<10	<10
3&4-Methylphenol	<11	<10	<10	<10	<10	<10
3,3'-Dichlorobenzidine	<22	<10	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	<54	<10	<10	<10	<10	<10
4-Bromophenyl phenyl ether	<11	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	<11	<10	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	<11	<10	<10	<10	<10	<10
4-Nitrophenol	<54	<10	<10	<10	<10	<10
Acenaphthene	<11	<10	<10	<10	<10	<10
Acenaphthylene	<11	<10	<10	<10	<10	<10
Anthracene	<11	<10	<10	<10	<10	<10
Azobenzene	<11	<10	<10	<10	<10	<10
Benz(a)anthracene	<11	<10	<10	<10	<10	<10
Benzidine	<22	<10	<10	<10	<10	<10
Benzo(a)pyrene	<11	<10	<10	<10	<10	<10
Benzo(b)fluoranthene	<11	<10	<10	<10	<10	<10
Benzo(g,h,i)perylene	<11	<10	<10	<10	<10	<10
Benzo(k)fluoranthene	<11	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	<11	<10	<10	<10	<10	<10
Bis(2-chloroethyl) ether	<11	<10	<10	<10	<10	<10

Cell 4A LDS
Chemical and Radiological Characteristics

Constituent	2009	2010	2011	2012	2013	2014
Major Ions (mg/l)						
Bis(2-chloroisopropyl) ether	<11	<10	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	<11	54.9	54.9	16.6	<10	<10
Butyl benzyl phthalate	<11	<10	<10	<10	<10	<10
Chrysene	<11	<10	<10	<10	<10	<10
Dibenz(a,h)anthracene	<11	<10	<10	<10	<10	<10
Diethyl phthalate	<11	<10	<10	<10	<10	<10
Dimethyl phthalate	<11	<10	<10	<10	<10	<10
Di-n-butyl phthalate	<11	<10	<10	<10	<10	<10
Di-n-octyl phthalate	<11	<10	<10	<10	<10	<10
Fluoranthene	<11	<10	<10	<10	<10	<10
Fluorene	<11	<10	<10	<10	<10	<10
Hexachlorobenzene	<11	<10	<10	<10	<10	<10
Hexachlorobutadiene	<11	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	<11	<10	<10	<10	<10	<10
Hexachloroethane	<11	<10	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	<11	<10	<10	<10	<10	<10
Isophorone	<11	<10	<10	<10	<10	<10
Naphthalene	<11	<10	<10	<10	<10	<10
Nitrobenzene	<11	<10	<10	<10	<10	<10
N-Nitrosodimethylamine	<11	<10	<10	<10	<10	<10
N-Nitrosodi-n-propylamine	<11	<10	<10	<10	<10	<10
N-Nitrosodiphenylamine	<11	<10	<10	<10	<10	<10
Pentachlorophenol	<54	<10	<10	<10	<10	<10
Phenanthrene	<11	<10	<10	<10	<10	<10
Phenol	33	23.5	<10	<10	<10	<10
Pyrene	<11	<10	<10	<10	<10	<10
Pyridine	<11	<10	<10	<10	<10	<10

Cell 4B
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014
Major Ions (mg/l)				
Carbonate	<1	<1	<1	<1
Bicarbonate	<1	<1	<1	<1
Calcium	570	580	662	366
Chloride	8290	8170	4570	7300
Fluoride	26.7	23.3	1050	1150
Magnesium	3910	4500	3560	3310
Nitrogen-Ammonia	5220	5580	2060	5380
Nitrogen-Nitrate	39	42	51.4	47.0
Potassium	1370	1650	1110	989
Sodium	9050	11700	3150	7100
Sulfate	134000	119000	98100	91500
pH (s.u.)	1.87	1.5	1.65	1.6
TDS	98000	128000	108000	131000
Conductivity (umhos/cm)	76900	86900	72800	90100
Metals (ug/l)				
Arsenic	67400	80000	65400	70400
Beryllium	311	356	334	275
Cadmium	1990	2540	1990	2290
Chromium	6860	8280	6390	6940
Cobalt	17800	29300	21300	24600
Copper	193000	340000	340000	368000
Iron	2960000	3580000	2830000	2480000
Lead	9960	11600	9820	10900
Manganese	128000	148000	154000	129000
Mercury	13.7	2.6	1.49	<0.0020
Molybdenum	21400	27600	26100	29000
Nickel	33900	50500	35100	42000
Selenium	4670	4470	3900	5010
Silver	137	169	137	142
Thallium	237	368	243	258
Tin	196	215	163	<17000
Uranium	133000	171000	110000	133000
Vanadium	660000	783000	163000	666000
Zinc	191000	270000	184000	144000
Radiologics (pCi/l)				
Gross Alpha	8590	13600	14600	148000
VOCS (ug/L)				
Acetone	130	94	43.5	<700
Benzene	<1	<1	<1	<5.0
Carbon tetrachloride	<1	<1	<1	<5.0
Chloroform	9.4	4	8.06	<70.0
Chloromethane	8.5	8	7.12	<30.0
MEK	<1	<1	<20	<4000

Cell 4B
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014
Major Ions (mg/l)				
Methylene Chloride	<1	<1	<1	<5.0
Naphthalene	<1	<1	<1	<100
Tetrahydrofuran	<10	11.1	<1	<46.0
Toluene	<1	<1	<1	<1000
Xylenes	<1	<1	<1	<10000
SVOCS (ug/L)				
1,2,4-Trichlorobenzene	<10	<10	<10	<10
1,2-Dichlorobenzene	<10	<10	<10	<10
1,3-Dichlorobenzene	<10	<10	<10	<10
1,4-Dichlorobenzene	<10	<10	<10	<10
1-Methylnaphthalene	<10	<10	<10	<10
2,4,5-Trichlorophenol	<10	<10	<10	<10
2,4,6-Trichlorophenol	<10	<10	<10	<10
2,4-Dichlorophenol	<10	<10	<10	<10
2,4-Dimethylphenol	<10	<10	<10	<10
2,4-Dinitrophenol	<20	<20	<20	<20
2,4-Dinitrotoluene	<10	<10	<10	<10
2,6-Dinitrotoluene	<10	<10	<10	<10
2-Chloronaphthalene	<10	<10	<10	<10
2-Chlorophenol	<10	<10	<10	<10
2-Methylnaphthalene	<10	<10	<10	<10
2-Methylphenol	<10	<10	<10	<10
2-Nitrophenol	<10	<10	<10	<10
3&4-Methylphenol	<10	<10	<10	<10
3,3'-Dichlorobenzidine	<10	<10	<10	<10
4,6-Dinitro-2-methylphenol	<10	<10	<10	<10
4-Bromophenyl phenyl ether	<10	<10	<10	<10
4-Chloro-3-methylphenol	<10	<10	<10	<10
4-Chlorophenyl phenyl ether	<10	<10	<10	<10
4-Nitrophenol	<10	<10	<10	<10
Acenaphthene	<10	<10	<10	<10
Acenaphthylene	<10	<10	<10	<10
Anthracene	<10	<10	<10	<10
Azobenzene	<10	<10	<10	<10
Benz(a)anthracene	<10	<10	<10	<10
Benzidine	<10	<10	<10	26
Benzo(a)pyrene	<10	<10	<10	<10
Benzo(b)fluoranthene	<10	<10	<10	<10
Benzo(g,h,i)perylene	<10	<10	<10	<10
Benzo(k)fluoranthene	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	<10	<10	<10	<10
Bis(2-chloroethyl) ether	<10	<10	<10	<10
Bis(2-chloroisopropyl) ether	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	410	19	<10	<10
Butyl benzyl phthalate	<10	<10	<10	<10

Cell 4B
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014
Major Ions (mg/l)				
Chrysene	<10	<10	<10	<10
Dibenz(a,h)anthracene	<10	<10	<10	<10
Diethyl phthalate	<10	<10	<10	<10
Dimethyl phthalate	<10	<10	<10	<10
Di-n-butyl phthalate	<10	<10	<10	<10
Di-n-octyl phthalate	<10	<10	<10	<10
Fluoranthene	<10	<10	<10	<10
Fluorene	<10	<10	<10	<10
Hexachlorobenzene	<10	<10	<10	<10
Hexachlorobutadiene	<10	<10	<10	<10
Hexachlorocyclopentadiene	<10	<10	<10	<10
Hexachloroethane	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene	<10	<10	<10	<10
Isophorone	<10	<10	<10	<10
Naphthalene	<10	<10	<10	<10
Nitrobenzene	<10	<10	<10	<10
N-Nitrosodimethylamine	<10	<10	<10	<10
N-Nitrosodi-n-propylamine	<10	<10	<10	<10
N-Nitrosodiphenylamine	<10	<10	<10	<10
Pentachlorophenol	<10	<10	<10	<10
Phenanthrene	<10	<10	<10	<10
Phenol	<10	<10	<10	<10
Pyrene	<10	<10	<10	<10
Pyridine	<10	<10	<10	15

Cell 4B LDS
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014
Major Ions (mg/l)				
Carbonate	<1	<1	Not Sampled - dry	<1
Bicarbonate	<1	<1		<1
Calcium	486	456		308
Chloride	3630	6850		6900
Fluoride	28.4	22		970
Magnesium	3230	3360		3400
Nitrogen-Ammonia	4260	4090		5240
Nitrogen-Nitrate	30	31		43.0
Potassium	1130	1060		952
Sodium	8240	8080		6920
Sulfate	59900	99100		82300
pH (s.u.)	2.23	2.4		2.2
TDS	85800	90200		129000
Conductivity (umhos/cm)	63000	62400		76300
Metals (ug/l)				
Arsenic	54200	41200	Not Sampled - dry	67800
Beryllium	274	271		282
Cadmium	1670	1740		2290
Chromium	6250	5930		6160
Cobalt	15600	19000		23300
Copper	176000	181000		308000
Iron	2450000	2120000		2590000
Lead	6060	4420		4120
Manganese	118000	162000		144000
Mercury	12.3	3		0.0020
Molybdenum	16700	15000		24300
Nickel	30700	33700		40100
Selenium	3710	2880		4080
Silver	111	117		119
Thallium	179	175		336
Tin	332	<100		<17000
Uranium	111000	132000		143000
Vanadium	518000	428000		671000
Zinc	172000	182000		144000
Radiologics (pCi/l)				
Gross Alpha	6000	7500	Not Sampled - dry	181000
VOCS (ug/L)				
Acetone	390	370	Not Sampled - dry	<700
Benzene	<1	<1		<5.0
Carbon tetrachloride	<1	<1		<5.0
Chloroform	20	19		<70.0
Chloromethane	11	11		<30.0
MEK	240	180		<4000
Methylene Chloride	<1	<1	<5.0	

Cell 4B LDS
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014
Major Ions (mg/l)				
Naphthalene	<1	<1		<100
Tetrahydrofuran	198	322		75.6
Toluene	<1	<1		<1000
Xylenes	<1	<1		<10000
SVOCS (ug/L)				
1,2,4-Trichlorobenzene	<10	<10		<10
1,2-Dichlorobenzene	<10	<10		<10
1,3-Dichlorobenzene	<10	<10		<10
1,4-Dichlorobenzene	<10	<10		<10
1-Methylnaphthalene	<10	<10		<10
2,4,5-Trichlorophenol	<10	<10		<10
2,4,6-Trichlorophenol	<10	<10		<10
2,4-Dichlorophenol	<10	<10		<10
2,4-Dimethylphenol	<10	<10		<10
2,4-Dinitrophenol	<20	<20		<20
2,4-Dinitrotoluene	<10	<10		<10
2,6-Dinitrotoluene	<10	<10		<10
2-Chloronaphthalene	<10	<10		<10
2-Chlorophenol	<10	<10		<10
2-Methylnaphthalene	<10	<10		<10
2-Methylphenol	<10	<10		<10
2-Nitrophenol	<10	<10		<10
3&4-Methylphenol	<10	<10		<10
3,3'-Dichlorobenzidine	<10	<10		<10
4,6-Dinitro-2-methylphenol	<10	<10		<10
4-Bromophenyl phenyl ether	<10	<10		<10
4-Chloro-3-methylphenol	<10	<10		<10
4-Chlorophenyl phenyl ether	<10	<10		<10
4-Nitrophenol	<10	<10		<10
Acenaphthene	<10	<10		<10
Acenaphthylene	<10	<10		<10
Anthracene	<10	<10		<10
Azobenzene	<10	<10		<10
Benz(a)anthracene	<10	<10		<10
Benzidine	<10	<10		<10
Benzo(a)pyrene	<10	<10		<10
Benzo(b)fluoranthene	<10	<10		<10
Benzo(g,h,i)perylene	<10	<10		<10
Benzo(k)fluoranthene	<10	<10		<10
Bis(2-chloroethoxy)methane	<10	<10		<10
Bis(2-chloroethyl) ether	<10	<10		<10
Bis(2-chloroisopropyl) ether	<10	<10		<10
Bis(2-ethylhexyl) phthalate	191	191		27
Butyl benzyl phthalate	<10	<10		<10
Chrysene	<10	<10		<10

Not Sampled -
dry

Cell 4B LDS
Chemical and Radiological Characteristics

Constituent	2011	2012	2013	2014
Major Ions (mg/l)				
Dibenz(a,h)anthracene	<10	<10		<10
Diethyl phthalate	<10	<10		<10
Dimethyl phthalate	<10	<10		<10
Di-n-butyl phthalate	<10	<10		<10
Di-n-octyl phthalate	<10	<10		<10
Fluoranthene	<10	<10		<10
Fluorene	<10	<10		<10
Hexachlorobenzene	<10	<10		<10
Hexachlorobutadiene	<10	<10		<10
Hexachlorocyclopentadiene	<10	<10		<10
Hexachloroethane	<10	<10		<10
Indeno(1,2,3-cd)pyrene	<10	<10		<10
Isophorone	<10	<10		<10
Naphthalene	<10	<10		<10
Nitrobenzene	<10	<10		<10
N-Nitrosodimethylamine	<10	<10		<10
N-Nitrosodi-n-propylamine	<10	<10		<10
N-Nitrosodiphenylamine	<10	<10		<10
Pentachlorophenol	<10	<10		<10
Phenanthrene	<10	<10		<10
Phenol	<10	<10		<10
Pyrene	<10	<10		<10
Pyridine	<10	<10		<10

1980 – 2003 IUC/NRC Tailings Wastewater Samples*¹

Constituent	Minimum	Maximum
pH (Std units)	0.7	2.33
Nutrients (mg/L)		
Ammonia (N)	3.0	13900
Nitrite (N)	<100	<100
Nitrate (N)	24	24
Nitrate+Nitrite (N)	17.0	49.2
Phosphorus – total	88.1	620
TKN (N)	4900	5300
Inorganics (mg/L)		
Bicarbonate (HCO ₃)	<5	<5
Bromide	<500	<500
Carbonate (CO ₃)	<1	<5
Chloride	2110	8000
Cyanide – total	0.022	0.022
Fluoride	0.02	4400
Phosphate	<500	<500
Silica	110	400
Sulfate	29800	190000
Sulfide	<5	<5
TDS	43100	189000
TOC	76.0	81
TSS	31.0	115
Metals (mg/l)		
Aluminum	330	2530
Antimony	<20	<20
Arsenic	0.3	440
Barium	1.021	0.1
Beryllium	0.347	0.78
Boron	3.5	11.3
Cadmium	1.64	6.6
Calcium	90.0	630
Chromium	1.0	13
Cobalt	14.0	120
Copper	72.2	740
Iron	1080	3400
Gallium	<30	<30
Lead	0.21	6.0
Lithium	<10	<20
Magnesium	1800	7900
Manganese	74.0	222
Mercury	0.0008	17.6
Molybdenum	0.44	240
Nickel	7.2	370
Potassium	219.0	828
Selenium	0.18	2.4
Silver	0.005	0.14
Sodium	1400	10000

1980 – 2003 IUC/NRC Tailings Wastewater Samples*¹

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

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

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

Tab E

Quality Assurance and Data Validation Tables

Table E-1 Holding Time Evaluation

	Required Holding Time	Cell 1 Tailings Fluid	Cell 2 Slimes Drain	Cell 3 Tailings Fluid	Cell 4A Tailings Fluid	Cell 4A LDS	Cell 4B Tailings Fluid	Cell 4B LDS	Cell 65 (Duplicate of Cell 4A)
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 tailings 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 DRC.

E-2 Laboratory Receipt Temperature Check

Work Order Number/Lab Set ID	Receipt Temp
GEL - 358469	N/A
CTF - 1408830	4.1°C

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

E-3: Analytical Method Check - Routine Samples

Parameter	QAP/Permit Method	Method Used by Lab
Ammonia (as N)	A4500-NH3 G or E350.1	A4500-NH3 G
Nitrate + Nitrite (as N)	E353.1 or E353.2	E353.2
Metals	E200.7 or E200.8	E200.7 and E200.8
Gross Alpha	E900.0 or E900.1	E900.1
VOCs	SW8260B or SW8260C	SW8260B
Chloride	A4500-Cl B or E300.0	E300.0
Fluoride	A4500-F C or E300.0	E300.0
Sulfate	A4500-SO4 E or E300.0	E300.0
TDS	A2540 C	A2540 C
Carbonate as CO ₃ , Bicarbonate as HCO ₃	A2320 B	A2320 B
pH	A4500 H-B	A4500 H-B
Conductivity	EPA 120.1	EPA 120.1
SVOCs	SW8270D	SW8270D

E-4 Reporting Limit Evaluation

Parameter	Permit-Specified RL
Ammonia (as N)	25 mg/L
Nitrate + Nitrite (as N)	10 mg/L
Metals ug/L	
Arsenic	50
Beryllium	4
Cadmium	5
Chromium	100
Cobalt	730
Copper	1300
Iron	11000
Lead	15
Manganese	800
Mercury	2
Molybdenum	40
Nickel	100
Selenium	50
Silver	100
Thallium	2
Tin	17000
Uranium	30
Vanadium	60
Zinc	5000
Gross Alpha	15
VOCs ug/L	
Acetone	700
Benzene	5
Carbon tetrachloride	5
Chloroform	70
Chloromethane	30
MEK	4000
Methylene Chloride	5
Naphthalene	100
Tetrahydrofuran	46
Toluene	1000
Xylenes	10000
Major Ions	
Chloride	1.0 mg/L
Fluoride	4 mg/L
Sulfate	1000 mg/L
TDS	1000 mg/L
Carbonate as CO ₃ , Bicarbonate as HCO ₃	1*
Calcium, Magnesium, Potassium, Sodium	1*
SVOCs (from the 8270D LLD) ug/L	
1,2,4-Trichlorobenzene	10
1,2-Dichlorobenzene	10

E-4 Reporting Limit Evaluation

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

E-4 Reporting Limit Evaluation

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

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

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

E-5: Trip Blank Evaluation

All trip blanks for the 2014 sampling program were nondetect.

Blank	Sample Date	Laboratory
1	8/19/2014	Chemtech-Ford

E-6 Duplicate Sample Relative Percent Difference

Major Ions (mg/l)	Cell 4A Tailings Fluid	Cell 65	RPD %
Carbonate	<1	<1	NA
Bicarbonate	<1	<1	NA
Calcium	445	406	9
Chloride	5900	5800	2
Fluoride	1290	1290	0
Magnesium	2990	2890	3
Nitrogen-Ammonia	2730	2780	2
Nitrogen-Nitrate	39.5	42.5	7
Potassium	724	644	12
Sodium	7190	6380	12
Sulfate	64900	65300	1
pH (s.u.)	1.7	1.7	0
TDS	97000	100000	3
Conductivity (umhos/cm)	73000	72800	0.3
Metals (ug/l)			
Arsenic	70000	66900	5
Beryllium	190	188	1
Cadmium	1780	1630	9
Chromium	4620	4420	4
Cobalt	27500	23400	16
Copper	556000	491000	12
Iron	2280000	2280000	0
Lead	14800	12300	18
Manganese	120000	115000	4
Mercury	2.5	<2.0	NA
Molybdenum	40600	34800	15
Nickel	54100	48200	12
Selenium	2000	2240	11
Silver	197	222	12
Thallium	376	377	0.3
Tin	<17000	<17000	NA
Uranium	159000	124000	25
Vanadium	535000	491000	9
Zinc	169000	137000	21
Radiologics (pCi/l)			
Gross Alpha*	240000	166000	103.60
VOCS (ug/L)			
Acetone	<700	<700	NA
Benzene	<5.0	<5.0	NA
Carbon tetrachloride	<5.0	<5.0	NA
Chloroform	<70.0	<70.0	NA
Chloromethane	<30.0	<30.0	NA
MEK	<4000	<4000	NA

E-6 Duplicate Sample Relative Percent Difference

Major Ions (mg/l)	Cell 4A Tailings Fluid	Cell 65	RPD %
Methylene Chloride	<5.0	<5.0	NA
Naphthalene	<100	<100	NA
Tetrahydrofuran	<46.0	<46.0	NA
Toluene	<1000	<1000	NA
Xylenes	<10000	<10000	NA
SVOCS (ug/L)			
1,2,4-Trichlorobenzene	<10	<10	NA
1,2-Dichlorobenzene	<10	<10	NA
1,3-Dichlorobenzene	<10	<10	NA
1,4-Dichlorobenzene	<10	<10	NA
1-Methylnaphthalene	<10	<10	NA
2,4,5-Trichlorophenol	<10	<10	NA
2,4,6-Trichlorophenol	<10	<10	NA
2,4-Dichlorophenol	<10	<10	NA
2,4-Dimethylphenol	<10	<10	NA
2,4-Dinitrophenol	<20	<20	NA
2,4-Dinitrotoluene	<10	<10	NA
2,6-Dinitrotoluene	<10	<10	NA
2-Chloronaphthalene	<10	<10	NA
2-Chlorophenol	<10	<10	NA
2-Methylnaphthalene	<10	<10	NA
2-Methylphenol	<10	<10	NA
2-Nitrophenol	<10	<10	NA
3&4-Methylphenol	<10	<10	NA
3,3'-Dichlorobenzidine	<10	<10	NA
4,6-Dinitro-2-methylphenol	<10	<10	NA
4-Bromophenyl phenyl ether	<10	<10	NA
4-Chloro-3-methylphenol	<10	<10	NA
4-Chlorophenyl phenyl ether	<10	<10	NA
4-Nitrophenol	<10	<10	NA
Acenaphthene	<10	<10	NA
Acenaphthylene	<10	<10	NA
Anthracene	<10	<10	NA
Azobenzene	<10	<10	NA
Benz(a)anthracene	<10	<10	NA
Benzidine	<10	<10	NA
Benzo(a)pyrene	<10	<10	NA
Benzo(b)fluoranthene	<10	<10	NA
Benzo(g,h,i)perylene	<10	<10	NA
Benzo(k)fluoranthene	<10	<10	NA
Bis(2-chloroethoxy)methane	<10	<10	NA
Bis(2-chloroethyl) ether	<10	<10	NA
Bis(2-chloroisopropyl) ether	<10	<10	NA

E-6 Duplicate Sample Relative Percent Difference

Major Ions (mg/l)	Cell 4A Tailings Fluid	Cell 65	RPD %
Bis(2-ethylhexyl) phthalate	<10	<10	NA
Butyl benzyl phthalate	<10	<10	NA
Chrysene	<10	<10	NA
Dibenz(a,h)anthracene	<10	<10	NA
Diethyl phthalate	<10	<10	NA
Dimethyl phthalate	<10	<10	NA
Di-n-butyl phthalate	<10	<10	NA
Di-n-octyl phthalate	<10	<10	NA
Fluoranthene	<10	<10	NA
Fluorene	<10	<10	NA
Hexachlorobenzene	<10	<10	NA
Hexachlorobutadiene	<10	<10	NA
Hexachlorocyclopentadiene	<10	<10	NA
Hexachloroethane	<10	<10	NA
Indeno(1,2,3-cd)pyrene	<10	<10	NA
Isophorone	<10	<10	NA
Naphthalene	<10	<10	NA
Nitrobenzene	<10	<10	NA
N-Nitrosodimethylamine	<10	<10	NA
N-Nitrosodi-n-propylamine	<10	<10	NA
N-Nitrosodiphenylamine	<10	<10	NA
Pentachlorophenol	<10	<10	NA
Phenanthrene	<10	<10	NA
Phenol	<10	<10	NA
Pyrene	<10	<10	NA
Pyridine	<10	<10	NA

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

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

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

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	331000	710	Y	15	NA
Cell 2 Slimes	6890	98.1	Y	15	NA
Cell 3	19700	168	Y	15	NA
Cell 4A	240000	577	Y	15	NA
Cell 4A LDS	61800	289	Y	15	NA
Cell 4B	148000	446	Y	15	NA
Cell 65 (Duplicate of Cell 4A)	166000	421	Y	15	NA

GWQS = Groundwater Quality Standard

E-8: Laboratory Matrix QC

Matrix Spike % Recovery Comparison

Lab Report	Sample ID	Analyte	MS %REC	MSD %REC	REC Range	RPD
1408830	N/A	Calcium*	NC	NC	70-130	NC
1408830	N/A	Sodium*	NC	NC	70-130	NC
1408830	Cell 4A LDS	Calcium*	NC	NC	70-130	NC
1408830	Cell 4A LDS	Chromium	69.8	70.4	70-130	0.275
1408830	Cell 4A LDS	Iron*	NC	NC	70-130	NC
1408830	Cell 4A LDS	Sodium*	NC	NC	70-130	NC
1408830	Cell 4A LDS	Tin	64.9	64.6	70-130	0.434
1408830	Cell 4A LDS	Zinc*	NC	NC	70-130	NC
1408830	N/A	Magnesium*	NC	NC	70-130	NC
1408830	Cell 4A LDS	Magnesium*	NC	NC	70-130	NC
1408830	Cell 4A LDS	Manganese*	NC	NC	70-130	NC
1408830	Cell 4A LDS	Potassium*	NC	NC	70-130	NC
1408830	Cell 4A LDS	Sulfate*	NC	NC	90-110	NC
1408830	N/A	Nitrate+Nitrite as N	77	92	90-110	9.35
1408830	Cell 4A LDS	Nitrate+Nitrite as N	76	87	90-110	9.13
1408830	Cell 4A LDS	1,2,4-Trichlorobenzene	34.4	34.8	44 - 142	1.16
1408830	Cell 4A LDS	Acenaphthene	47.6	43.2	47 - 145	9.69
1408830	Cell 4A LDS	Alkalinity	0	0	80 - 120	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.

Method Blank detections

Lab Report	Well/Sample	Analyte	Reported Concentration (mg/L)
1408830	NA	Iron	0.02
1408830	NA	Calcium	0.03
1408830	NA	Iron	0.001
1408830	NA	Magnesium	0.01
1408830	NA	Potassium	0.01
1408830	NA	Sodium	0.03
1408830	NA	Tin	0.008
1408830	NA	Zinc	0.0001
1408830	NA	Calcium	0.01
1408830	NA	Magnesium	0.03
1408830	NA	Manganese	0.002
1408830	NA	Potassium	0.02
1408830	NA	Sodium	0.1
1408830	NA	Tin	0.002
1408830	NA	Zinc	0.004
1408830	NA	Ammonia as N	0.09
1408830	NA	Ammonia as N	0.1

LCS % Recovery

Lab Report	Analyte	LCS %REC	Lab Specified REC Range
1408830	1,2,4-Trichlorobenzene	41.2	44 - 142