

Office of Environmental Management – Grand Junction



January 2008 Validation Data Package
for the Performance Assessment of the
Monthly Sampling for the Ground Water
Interim Action

Moab UMTRA Project

October 2008



U.S. Department
of Energy

Office of Environmental Management

January 2008 Water Sampling

**Validation Data Package
for Performance Assessment of
the Monthly Sampling for the
Ground Water Interim Action
Moab, Utah**

October 2008

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1.0 Sampling Event Summary

This section contains the Summary Criteria with a sample location map (Section 1.1), an Executive Summary (Section 1.2), and the Sampling and Analyses (Section 1.3) for the January 2008 Monthly Sampling event.

1.1 Summary Criteria

Site: Moab, Utah

Sampling Period: January 7 - 10, 2008

The purpose of this sampling was to collect data that can be used to evaluate the performance of all configurations of the ground water Interim Action well field. All sampling locations are shown on Figure 1.

1. As a result of this sampling event, is there any indication of anomalous data that may be related to well field pump rate changes, river flow, or other known causes?

No.

2. Were all Interim Action well-field pumps operating within the planned parameters?

Yes. As scheduled, only Configuration 1 was actively extracting ground water during the time this sampling event was completed.

3. Was the evaporation pond functioning properly?

Yes. The pond level was between 4.5 and 4.7 feet (ft) during this sampling event and in the process of slowly filling up over the winter as Configuration 1 continued pumping over the winter.

4. Were all proposed well (ground water) and surface-water locations sampled during this event?

Yes.

5. Were there any site activities that have impacted or may impact the Interim Action system?

No.

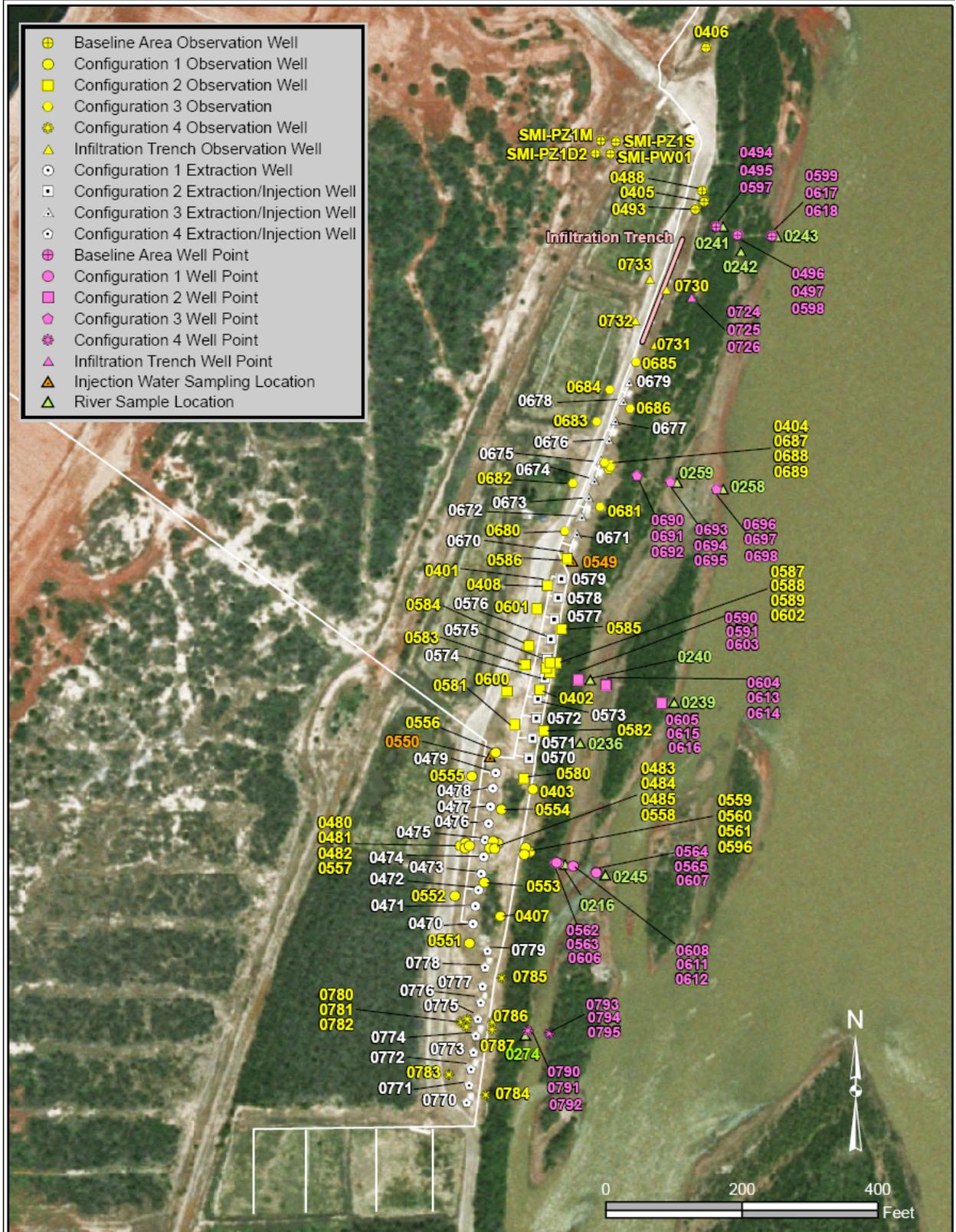


Figure 1. Sample Locations at the Interim Action Well Field and Baseline Area (may include locations not sampled)

1.2 Executive Summary

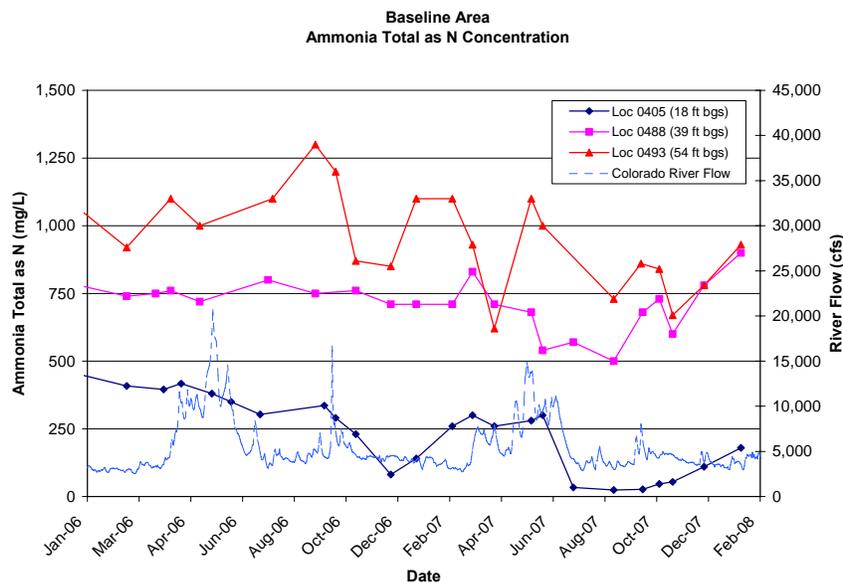
This validation data package (VDP) presents the validated data associated with the ground water and surface water samples collected during the January 2008 monthly sampling event at the former uranium tailings processing site in Moab, Utah. This VDP includes a discussion of the data validation process in Section 2.0 with a description of how these data are qualified based on field and laboratory verification assessments (Sections 2.1 and 2.2). Attachment 1 contains the Trip Report detailing the field events associated with this sampling event.

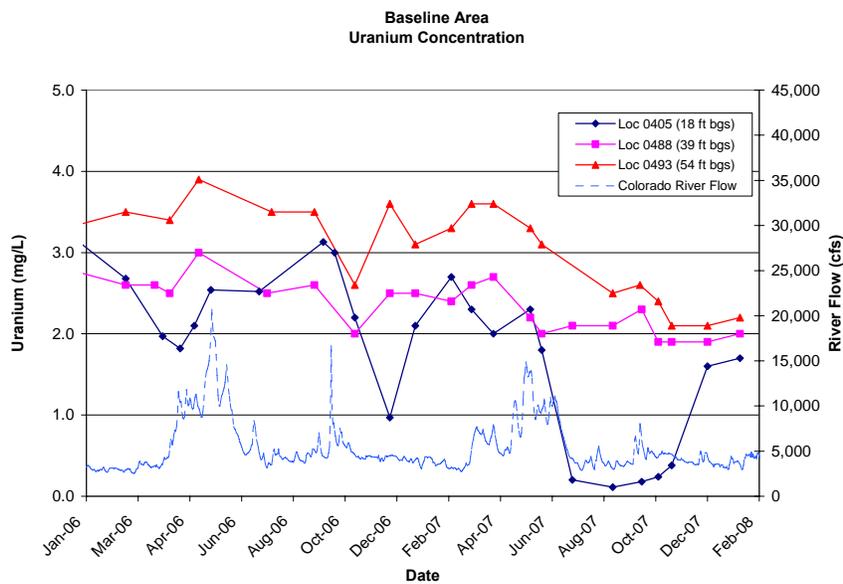
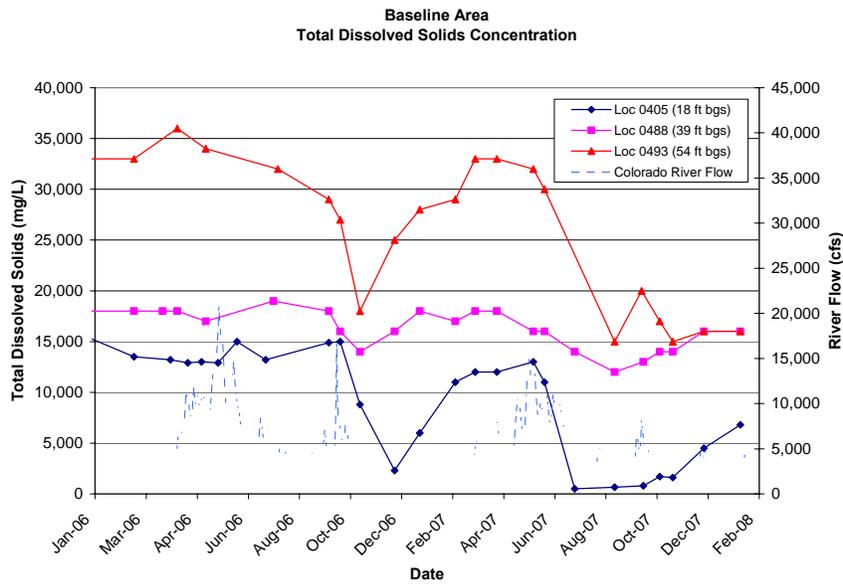
A list of flagged data is presented in Table 2 in Section 2.2. No data were rejected (flagged as “R”) as a result of this validation process. A Minimums and Maximums Report (presented in Section 3.1) was generated to determine if the data are within a normal statistical range. Any anomalous data, based on the results of the Minimums and Maximums Report, are presented in Section 3.2.

While independent of the data validation process, a brief summary of the most recent concentration trends based on the January 2008 data is provided for the Baseline Area and Configurations 3, 2, 1, and 4 (listed from north to south) within the well field. Time versus concentration (ammonia, total dissolved solids [TDS], and uranium) plots for selected performance indicator monitoring wells located upgradient or downgradient within the Interim Action well field are presented to display historical trends exhibited by the data over the past two years. Colorado River flows over the same time frame are also plotted to determine whether the magnitude of river flows influences analyte concentrations.

Baseline Area

The latest sampling indicates the ammonia, TDS, and uranium concentrations in samples from each location continue to gradually rebound or have stabilized. Uranium concentrations in the sample from well 0405 that previously had rebounded at a faster rate (compared to the ammonia and TDS concentrations) have slowed to increase at approximately the same rate.

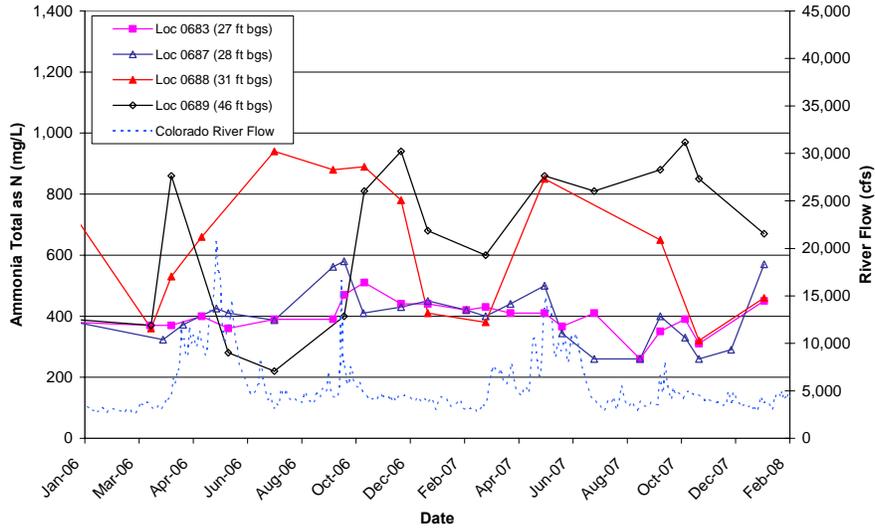




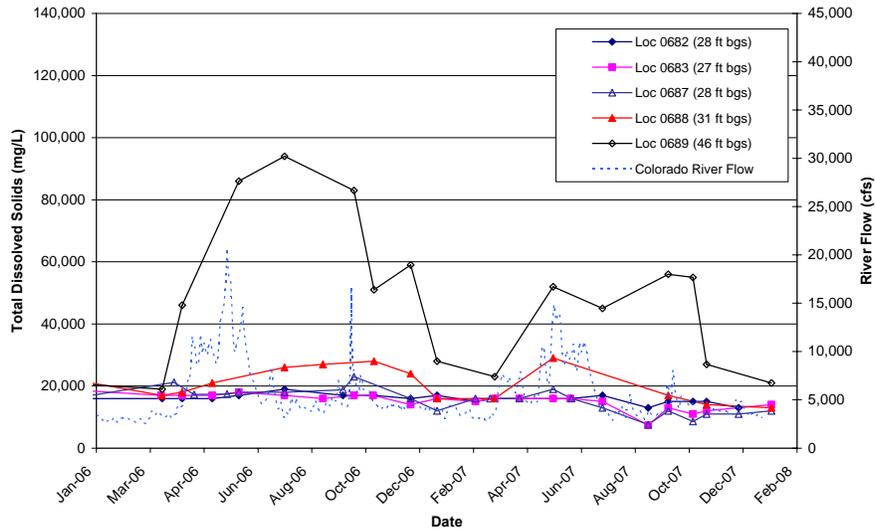
Configuration 3

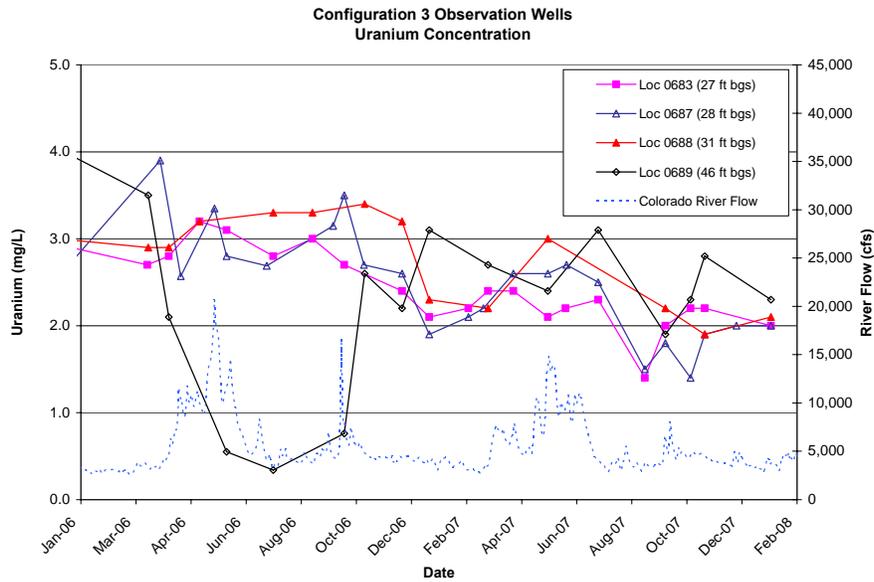
Analytes in samples collected from below 39 ft below ground surface (bgs) exhibit fluctuation and are greater in uranium and TDS than the shallower samples (less than 30 ft bgs). With the exception of the sample collected from 46 ft bgs (location 0689), ammonia has increased in all wells sampled this past month.

**Configuration 3 Observation Wells
Ammonia Total as N Concentration**



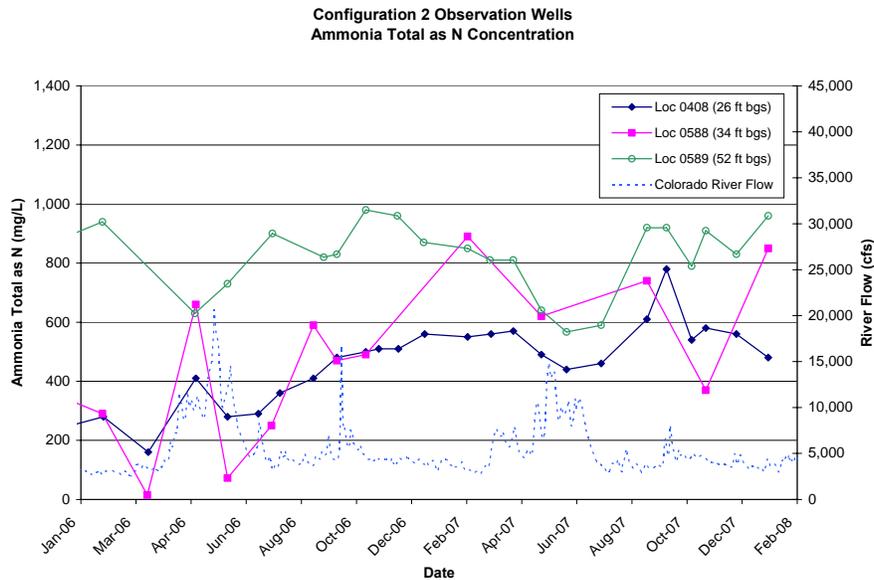
**Configuration 3 Observation Wells
Total Dissolved Solids Concentration**



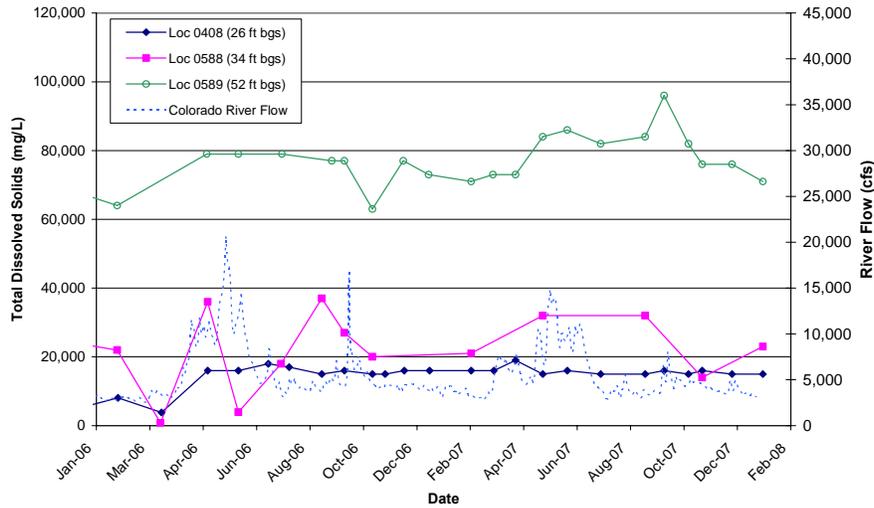


Configuration 2

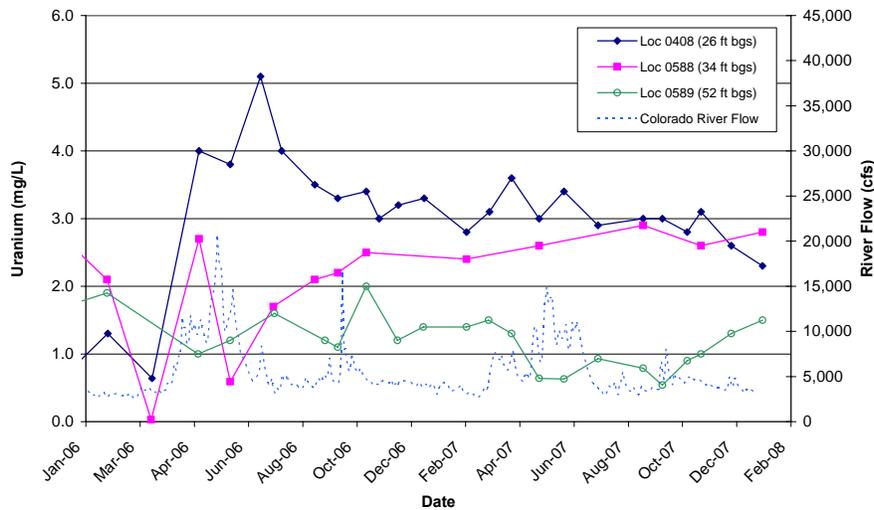
Sampling during January 2008 indicates that the TDS and uranium concentrations have not significantly fluctuated over the past three months. However, ammonia concentrations have increased in the samples collected from 34 and 52 ft bgs (locations 0588 and 0589) and only slightly decreased in the sample from 26 ft bgs (location 0408).



**Configuration 2 Observation Wells
Total Dissolved Solids Concentration**



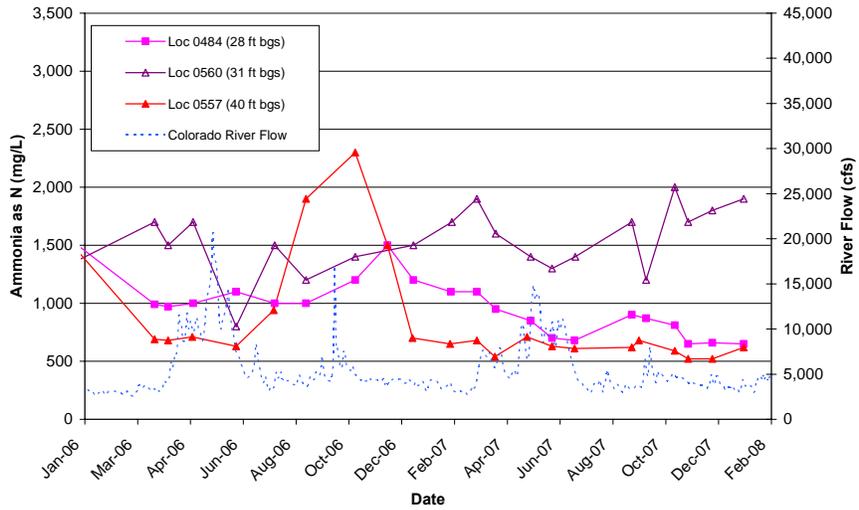
**Configuration 2 Observation Wells
Uranium Concentration**



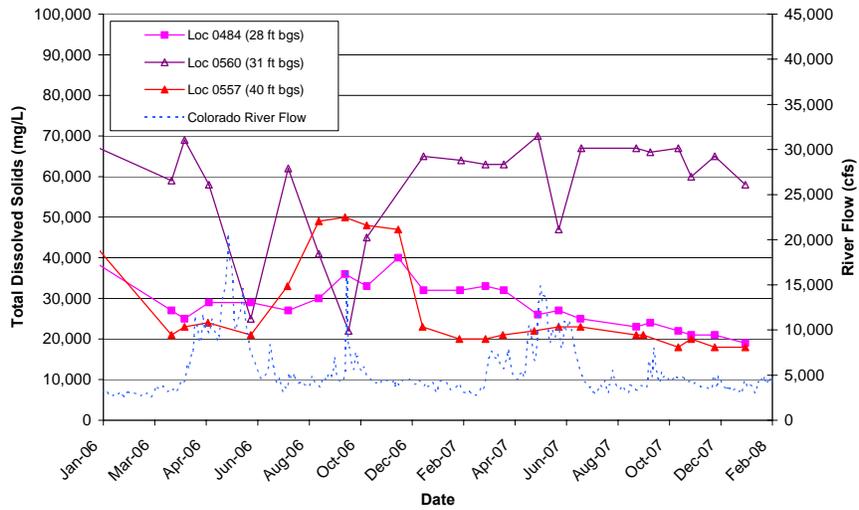
Configuration 1

In general, the samples collected in January 2008 indicate no significant changes in the analyte concentrations as shown on time versus concentration plots for Configuration 1 observation wells. Concentrations in the downgradient locations (0484 and 0560) exhibited the same general trend as the upgradient (0557) location.

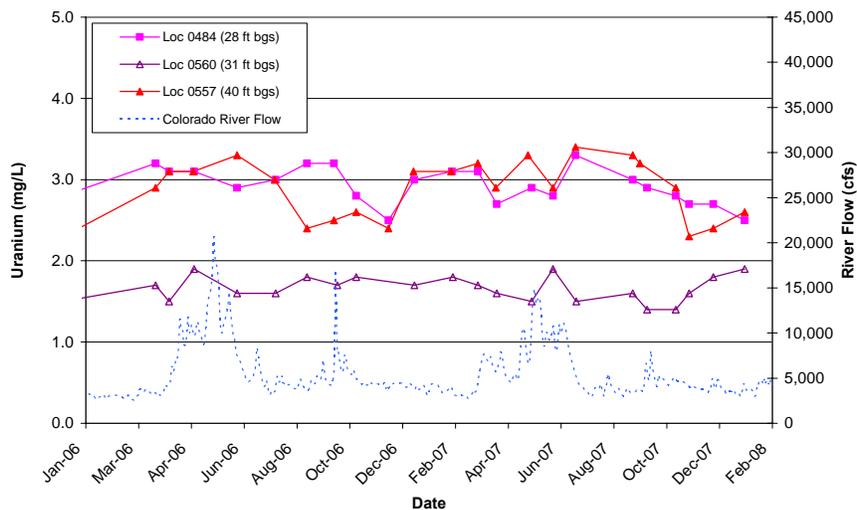
**Configuration 1 Observation Wells
Ammonia Total as N Concentration**



**Configuration 1 Observation Wells
Total Dissolved Solids Concentration**



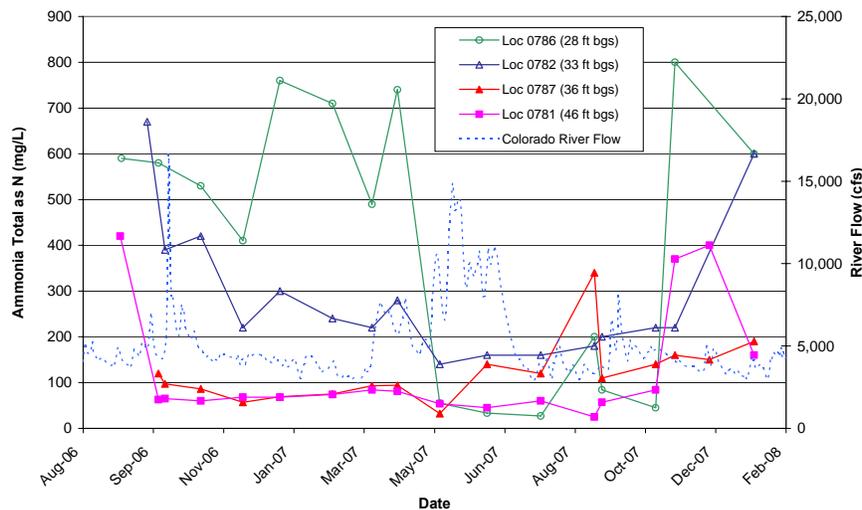
Configuration 1 Observation Wells
Uranium Concentration



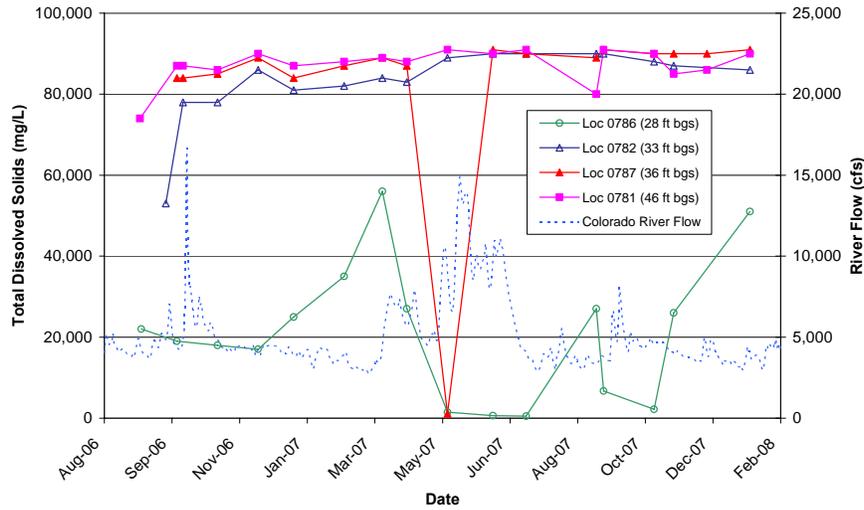
Configuration 4

The samples collected indicate the ammonia concentrations continue to fluctuate, similar to the past three months. During this same time period, only the sample collected from downgradient location 0786 exhibited any variability in TDS and uranium concentrations.

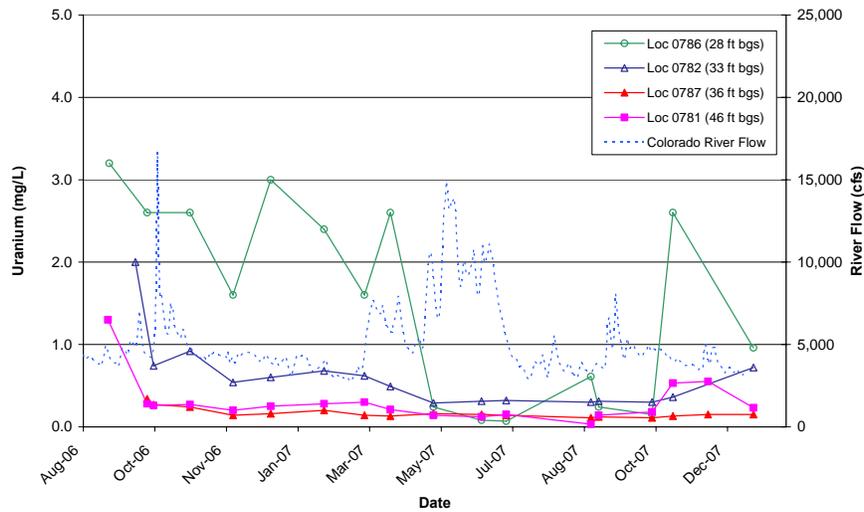
Configuration 4 Observation Wells
Ammonia Total as N Concentration



Configuration 4 Observation Wells
Total Dissolved Solids Concentration



Configuration 4 Observation Wells
Uranium Concentration



Surface Water Sampling Results

Surface water locations were not sampled as part of this sampling event.

2.0 Data Assessment Summary

This section contains the Water Sampling Field Activities Verification (Section 2.1), the Laboratory Performance Assessments (Section 2.2), the Field Analyses/Activities (Section 2.3), and Certification (Section 2.4).

2.1 Water Sampling Field Activities Verification

The field activities verification process for this sampling event was documented using the following checklist. As the checklist exhibits, all sampling was conducted following the applicable procedures.

Water Sampling Field Activities Verification Checklist

Sampling Event / RIN	January 2008 Monthly / 0801006	Date(s) of Water Sampling	January 7 – 10, 2008
Date(s) of Verification	July 2, 2008	Name of Verifier	Rachel Cowan

	Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures? List other documents, standard operating procedures, instructions.	Yes	
	NA	
2. Were the sampling locations specified in the planning documents sampled?	Yes	
3. Was a pre-trip calibration conducted as specified in the aforementioned documents?	Yes	
4. Was an operational check of the field equipment conducted twice daily? Did the operational checks meet criteria?	No	Daily calibration field checks are missing for the afternoons of 1/8/2008, 1/9/2008, and 1/10/2008.
	Yes	
5. Were the number and types (alkalinity, temperature, electrical conductivity, pH, turbidity, dissolved oxygen, oxidation reduction potential) of field measurements taken as specified?	Yes	
6. Was the category of the well documented?	Yes	
7. Were the following conditions met when purging a Category I well: Was one pump/tubing volume purged prior to sampling?	Yes	
Did the water level stabilize prior to sampling?	Yes	
Did pH, specific conductance, and turbidity measurements stabilize prior to sampling?	Yes	
Was the flow rate less than 500 milliliters per minute (mL/min)?	Yes	
If a portable pump was used, was there a 4-hour delay between pump installation and sampling?	NA	

Water Sampling Field Activities Verification Checklist

- | | | |
|---|-----|--|
| 8. Were the following conditions met when purging a Category II well: | | |
| Was the flow rate less than 500 mL/min? | Yes | |
| Was one pump/tubing volume removed prior to sampling? | Yes | |
| 9. Were duplicates taken at a frequency of one per 20 samples? | Yes | Two duplicates were taken from two different locations; however, they were assigned the same number. The lab assigned one of the duplicates a different number. |
| 10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment? | NA | Ground water samples are collected on dedicated equipment; however, the surface water samples are not. There were no surface water samples collected for this event. |
| 11. Were trip blanks prepared and included with each shipment of volatile organic compound samples? | NA | |
| 12. Were Quality Control samples assigned a fictitious site identification number? | Yes | |
| Was the true identity of the samples recorded on the Quality Assurance Sample Log? | Yes | |
| 13. Were samples collected in the containers specified? | Yes | |
| 14. Were samples filtered and preserved as specified? | Yes | |
| 15. Were the number and types of samples collected as specified? | Yes | |
| 16. Were chain-of-custody (COC) records completed, and was sample custody maintained? | Yes | |
| 17. Are field data sheets signed and dated by both team members? | Yes | |
| 18. Was all other pertinent information documented on the field data sheets? | Yes | |
| 19. Was the presence or absence of ice in the cooler documented at every sample location? | Yes | |
| 20. Were water levels measured at the locations specified in the planning documents? | Yes | |

2.2 Laboratory Performance Assessment

General Information

Requisition No. (RIN): 0801006
 Sample Event: Interim Action Well Field Monthly Sampling, January 2008
 Site(s): Moab, UT
 Laboratory: Paragon Analytics, Fort Collins, CO
 Sample Data Group (SDG) No.: 0801068 and 0801088
 Analysis: Metals and Inorganics
 Validator: Rebecca Hollis
 Review Date: 18 June 2008

This validation was performed according to the *Environmental Procedures Catalog*, “Standard Practice for Validation of Laboratory Data,” GT-9(P) (2006). A Level 1 validation was performed on 100 percent of the samples, which included review of the chain of custody, case narratives, field and sample identifications, holding times, and preservation and cooler receipt. When the case narrative identified items of concern, these items were further investigated in a targeted Level 3 validation. All analyses were successfully completed. The samples were prepared and analyzed using accepted procedures based on methods specified by line item code, which are listed in Table 1.

Table 1. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Ammonia as N, NH ₃ -N	WCH-A-005	EPA 350.1	EPA 350.1
Bromide	MIS-A-038	SW-846 -846 9056	SW-846 8469056
Chloride	MIS-A-039	SW-846 -846 9056	SW-846 8469056
Copper	MET-A-022	SW-846 -846 3005A	SW-846 8466010B
Manganese	GJO-17	SW-846 -846 3005A	SW-846 8466010B
Selenium	GJO-14	SW-846 -846 3005A	SW-846 8466020A
Sulfate	MIS-A-044	SW-846 -846 9056	SW846 9056
Total Dissolved Solids	WIC-A-033	MCAWW 160.1	MCAWW 160.1
Uranium	GJO-01	SW-846 -846 3005A	SW-846 6020A

Data Qualifier Summary

Analytical results were qualified as listed in Table 2. Refer to the attached validation worksheets and Table 3 below for an explanation of the data qualifiers applied.

Table 2. Data Qualifiers

Sample Number	Location	Analyte	Flag	Reason
All in SDG 0801088	All in SDG 0801088	Ammonia as N	J	MS1
0801068-21 and 0801068-22	0782 and 0786	Ammonia as N	J	RS1
0801068-1 through -14, 0801068-16 through -19, 0801088-9 through -11	0403, 0407, 0408, 0471, 0473, 0475, 0477, 0479, 0480, 0484, 0485, 0557, 0559, 0560, 0585, 0587, 0588, 0589, 0787, 2363, 2364	Bromide	J	CV2
All SDG 0801068	All in SDG 0801068	Chloride, Copper, Manganese, Selenium, Sulfate, Uranium	J	RS1
All samples	All locations	Copper, Manganese	J	MS1, LCS1
0801068-1 through 0801068-18, 0801068-20, 0801068-22, 0801088-1 through 0801088-6, 0801088-8, 0801088-10, and 0801088-11	403, 407, 408, 471, 473, 475, 477, 479, 480, 484, 485, 557, 559, 560, 561, 585, 587, 588, 781, and 786	Manganese	J	SD1
All in SDG 0801088	All in SDG 0801088	Selenium	J	MS1, LCS1
0801088-1 and 0801088-11	0405 and 2364	Selenium	J	SD1
All in SDG 0801068	All in SDG 0801068	Uranium	J	MS1, SD1, LCS1

Notes: Flags are for detects. See reason codes below for non-detect codes.

Table 3. Reason Codes for Data Flags

Reason Code	Qualifier (Detects)	Qualifier (Non-Detects)	Explanation
CV2	J	UJ	Results for the affected analyte(s) are regarded as estimated (J) because the percent recovery of the initial or continuing calibration verification standards is between 75 to 89%.
LCS1	J	UJ	Results for the affected analyte(s) are regarded as estimated (J) because the laboratory control sample was not analyzed at the proper frequency as stated in the appropriate analytical method.
MS1	J	UJ	Results for the affected analyte(s) are regarded as estimated (J) because the matrix spike sample was (a) from another client, (b) of dissimilar matrix, (c) a field blank or equipment blank, or (d) not analyzed at the proper frequency as stated in the appropriate analytical method.

RS1	J	UJ	Results for the affected analyte(s) are regarded as estimated (J) because (a) the replicate sample, matrix spike duplicate, or laboratory control sample duplicate was not analyzed at the appropriate frequency for each matrix or for each data package, or (b) a field blank or equipment blank was used for the replicate analysis.
SD1	J	Not applicable	Results for the affected analyte(s) are regarded as estimated (J) because the frequency requirements for serial dilution analysis were not met and the sample result is greater than or equal to 50 times the practical quantitation limit.

Sample Shipping/Receiving

Paragon Analytics in Fort Collins, Colorado, received a total of 33 samples for RIN 0801006. Twenty two of the samples arrived on January 10, 2008, under UPS tracking number 1Z5W1Y510196883294. Eleven of the samples arrived on January 11, 2008 under tracking numbers 1Z5W1Y510195520507. All sample groups were accompanied by Chain of Custody (COC) forms. The COC forms were checked to confirm that all of the samples were listed on each form with sample collection dates and times, and that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents, including the COC forms and the sample tickets, had no errors or omissions, with the following exception:

Paragon Analytics noted a discrepancy for sample 0801068-7 from location 0688-31 (NFC338). The four bottles of this sample appeared to be mislabeled, with the sample requiring preservation being at pH 7 and those requiring no preservation being at pH 1.3; therefore, on January 14, 2008, this sample was cancelled.

Preservation and Holding Times

The sample shipments were received intact with the temperatures within the coolers both at 1.4°C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses with the exception of sample 0801008-7 from location 0688-31, which was cancelled due to preservation and labeling concerns. All samples were analyzed within the applicable holding times.

Case Narratives

The case narratives were reviewed and all results met quality control requirements with the following exceptions:

Instrument Calibration

Method SW-846 9056, Bromide

Bromide results for samples 0801068-1 through -14, 0801068-16 through -19, and 0801088-9 through -11 were “J” flagged for the January sampling events. The results of the continuing calibration verification check samples associated with these samples were not within the acceptable recovery range.

Matrix Spike and Replicate Analysis

Matrix spike (MS) sample analysis, performed at a frequency of one per 20 samples unless otherwise noted, is performed as a measure of the ability to recover analytes in a particular matrix. Replicate analysis consists of matrix spike duplicate (MSD) samples and field duplicates, analyzed at a frequency of one per 20 samples per method or procedural requirements. These replicate samples are indicators of laboratory precision for each sample matrix.

Method EPA 350.1, Ammonia as N

For ammonia as N analysis, only two MSs were analyzed for the 22 samples in SDG 0801068. Although method 350.1 requires MSs to be analyzed for at least 10 percent of the samples, based on professional judgment a frequency of two per 22 is acceptable. One of the two MSs had an ammonia concentration in the native sample greater than four times the spike concentration. Based on validation protocol, qualification requirements are not applicable when the native sample concentration exceeds four times the spike concentration. The remaining MS was acceptable; therefore, no qualification for SDG 0801068 was required.

For SDG 0801088, no MSs were analyzed. For this reason, all associated samples were “J” flagged.

To meet replicate requirements for SDG 0801068, two MSDs were analyzed. However, the second of these was out of the analytical range of the instrument and hence no relative percent difference could be calculated. Therefore samples 0801068-21 and 0801068-22 were “J” flagged for lack of replicate results.

For SDG0801088, no MSD was analyzed. However, a field duplicate was submitted for blind testing that met the precision requirements. Sample 0801088-5 (field ID 0683) was chosen for duplication. The duplicate sample was analyzed under the false ID 0801088-10 (field ID 2363). The acceptable results for this field duplicate meet the replicate requirements for ammonia; therefore, no qualification is required.

Method SW-846 9056, Chloride

For both SDGs the MS samples had concentrations in the native sample above the instrument’s analytical range. Based on validation protocol, qualification requirements are not applicable when the native sample concentration exceeds four times the spike concentration. Therefore no qualifiers were applied.

Neither SDG met replicate requirements based on MSD results because the results were out of the analytical range of the instrument so no relative percent difference could be calculated. For SDG 0801088, a field duplicate was analyzed (sample 0801088-5 /field ID 0683 and false sample ID 0801088-10/field ID 2363) and met the precision requirements; therefore, no qualification was required for SDG0801088, but all samples in SDG0801068 were “J” qualified.

Method SW-846 6010B, Copper

The designated quality control samples were not selected for copper MS analysis for SDGs 0801068 or 0801088. All associated copper results were “J” flagged for these SDGs.

Neither SDG met replicate requirements based on MSD results because the MSD samples were not selected as the quality control samples for the analytical run. For SDG 0801088, a field duplicate was analyzed (sample 0801088-5 /field ID 0683 and false sample ID 0801088-10/field ID 2363) and met the precision requirements; therefore, no qualification was required for SDG 0801088, but all samples in SDG 0801068 were “J” qualified.

Method SW-846 6010B, Manganese

The designated quality control samples were not selected for manganese MS analysis for SDGs 0801068 or 0801088. All associated manganese results were “J” flagged for these SDGs.

Neither SDG met replicate requirements based on MSD results because the MSD samples were not selected as the quality control samples for the analytical run. For SDG 0801088, a field duplicate was analyzed (sample 0801088-5 /field ID 0683 and false sample ID 0801088-10/field ID 2363) and met the precision requirements; therefore, no qualification was required for SDG 0801088, but all samples in SDG 0801068 were “J” qualified.

Method SW-846 6020A, Selenium

The designated quality control sample was not selected for selenium matrix spike analysis for SDG 0801088. All associated selenium results were “J” flagged for this SDG.

Neither SDG met replicate requirements based on MSD results because the MSD samples were not selected as the quality control samples for the analytical run. For SDG 0801088, a field duplicate was analyzed (sample 0801088-5 /field ID 0683 and false sample ID 0801088-10/field ID 2363) and met the precision requirements; therefore, no qualification was required for SDG 0801088, but all samples in SDG 0801068 were “J” qualified.

Method SW-846 9056, Sulfate

For both SDGs the MS samples had concentrations in the native sample above the instrument’s analytical range. Based on validation protocol, qualification requirements are not applicable when the native sample concentration exceeds four times the spike concentration; therefore, no qualifiers were applied.

Neither SDG met replicate requirements based on MSD results because the results were out of the analytical range of the instrument so no relative percent difference could be calculated. For SDG 0801088, a field duplicate was analyzed (sample 0801088-5 /field ID 0683 and false sample ID 0801088-10/field ID 2363) and met the precision requirements; therefore, no qualification was required for SDG 0801088, but all samples in SDG 0801068 were “J” qualified.

Method SW-846 6020A, Uranium

The designated quality control sample was not selected for uranium MS analysis for SDG 0801068. All associated uranium results were “J” flagged for these SDGs.

Neither SDG met replicate requirements based on MSD results because the MSD samples were not selected as the quality control samples for the analytical run. For SDG 0801088, a field duplicate was analyzed (sample 0801088-5 /field ID 0683 and false sample ID 0801088-10/field ID 2363) and met the precision requirements; therefore, no qualification was required for SDG 0801088, but all samples in SDG 0801068 were “J” qualified.

Laboratory Control Sample

A laboratory control sample (LCS) must be analyzed at the correct frequency (one LCS per 20 samples) to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. LCSs were prepared and analyzed as appropriate with the following exception:

LCSs were not reported for copper, manganese, or uranium. As a standard practice, Paragon Analytics does not prepare LCSs for samples that were field filtered and acidified and then run directly on the instrument without any additional sample preparation. Per national environmental laboratory accreditation requirements provided by the NELAP institute, an MS may be used in place of an LCS provided the acceptance criteria are as stringent; therefore, no qualification was required because of lack of LCS result. See the MS Analysis section of this report for required qualification.

Detection Limits/Dilutions

The required detection limit (RDL) for all analytes was achieved for all SDGs.

Serial dilution samples were required for inductively coupled plasma sample analysis (copper, manganese, selenium, and uranium). No serial dilution samples were analyzed for copper or manganese in either SDG. No selenium sample was prepared for serial dilution analysis in SDG 0801088, and no uranium sample was prepared for serial dilution analysis in SDG 0801068. For analyses when serial dilution check samples were not analyzed, sample results greater than 50 times the practical quantitation limit (100 times the practical quantitation limit for mass spectrometry) were flagged with a “J” qualifier. This resulted in qualification for the following results:

- Manganese results 0801068-1 through 0801068-18, 0801068-20, 0801068-22, 0801088-1 through 0801088-6, 0801088-8, 0801088-10, and 0801088-11
- Selenium results for sample 0801088-1 and 0801088-11
- All uranium results in SDG 0801068

Completeness

Results were reported in the correct units for all analytes requested using contract-required laboratory qualifiers.

Electronic Data Deliverable File

The Electronic Data Deliverable (EDD) files arrived on January 23 and 25, 2008. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package and that all and only the requested data were delivered.

Report Prepared By: _____

Heidi For

Data Validator

2.3 Field Analyses/Activities

The following information summarizes the field analyses and activities for this sampling event period.

Field Activities

All monitor wells were purged and sampled using the low-flow sampling method; this method was not used at extraction wells. No equipment blanks were collected because only dedicated collection equipment was used. Two duplicate samples were collected. There are no established regulatory criteria for the evaluation of field duplicate samples; therefore, Environmental Protection Agency (EPA) guidance for laboratory duplicates (which is conservative for field duplicates) was used to assess the precision of the field duplicates. All results met the criteria of ± 20 relative percent difference and are considered acceptable.

2.4 Certification

Results were reported in correct units for all analytes requested. Appropriate contract-required laboratory qualifiers and target analyte lists were used. The RDLs were met when possible, or an explanation of why they were not met was given in the laboratory case narrative. All analytical quality control criteria were met except as qualified on the Ground Water Quality Data by Parameter, Surface Water Quality by Parameter, or equipment/trip blank database printouts. The meaning of data qualifiers is defined on the database printouts or defined in the EPA *Contract Laboratory Program Statement of Work for Inorganic Analysis, Multi-Media Multi-Concentration*, Document Number ILMO2.0, 1991. All data in this package are considered validated and may be treated as final results.

Laboratory Validation Lead:

Rebecca Hollis 10/16/08
Date

Ground Water Lead:

Ken Pill 10/16/08
Date

3.0 Data Presentation

This section contains the Minimums and Maximums Report (Section 3.1), the Anomalous Data Review Checksheet (Section 3.2), a table containing the Water Quality and Water Level Data (Sections 3.3 and 3.4, respectively), and the Blanks Report (Section 3.5).

3.1 Minimums and Maximums Report

The Minimums and Maximums Report is generated by the Sample Management System used to query the SEEPro database. The DataVal program compares the new data set with historical data and lists all new data that fall outside the historical data range. Values listed in the report are further screened, and the results are not considered anomalous if: (1) identified low concentrations are the result of low detection limits; (2) the concentration detected is within 50 percent of historical minimum or maximum values; or (3) there were fewer than five historical samples for comparison.

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: PARAGON (Fort Collins, CO)

RIN: 0801006

Comparison: All Historical Data

Report Date: 7/7/2008

Site Code	Location Code	Sample Date	Analyte	Current		Historical Maximum			Historical Minimum			Count	
				Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	Result	Qualifiers Lab Data	N	N Below Detect		
MOA01	0484	01/07/2008	Chloride	5300	J	22000	F	5400	J	38	0		
MOA01	0484	01/07/2008	Total Dissolved Solids	19000		41000	F	21000		38	0		
MOA01	0488	01/09/2008	Ammonia Total as N	900	J	880	F	500	J	48	0		
MOA01	0557	01/07/2008	Chloride	3800	J	39000	F	4400	F	42	0		
MOA01	0559	01/07/2008	Manganese	5.6	J	5.5	F	0.219	E FJ	18	0		
MOA01	0561	01/07/2008	Ammonia Total as N	1300		1100	F	580	F	16	0		
MOA01	0561	01/07/2008	Bromide	15		40	U F	20	U F	10	10		
MOA01	0561	01/07/2008	Chloride	55000	J	53000	F	36000	F	16	0		
MOA01	0585	01/08/2008	Manganese	5.5	J	4.9		4.5	F	5	0		
MOA01	0588	01/08/2008	Sulfate	12000	J	10000	F	240	F	46	0		
MOA01	0589	01/08/2008	Manganese	11	J	10	J	5.1	N F	23	0		
MOA01	0689	01/10/2008	Manganese	3.6	J	7.7		4.4	F	12	0		
MOA01	0781	01/08/2008	Chloride	61000	J	60000	J	30000	J	19	0		
MOA01	0782	01/08/2008	Manganese	9.9	J	8.3	F	6.4	F	10	0		
MOA01	0786	01/08/2008	Chloride	28000	J	27000	F	91	J	16	0		
MOA01	0786	01/08/2008	Sulfate	16000	J	12000	F	170	J	17	0		
MOA01	0787	01/09/2008	Manganese	7.6	J	7.5		0.21	F	12	0		

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- P > 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X,Y,Z Laboratory defined qualifier, see case narrative.

DATA QUALIFIERS:

- | | | | | | |
|---|--|---|---|---|------------------|
| F | Low flow sampling method used. | G | Possible grout contamination, pH > 9. | J | Estimated value. |
| L | Less than 3 bore volumes purged prior to sampling. | Q | Qualitative result due to sampling technique. | R | Unusable result. |
| U | Parameter analyzed for but was not detected. | X | Location is undefined. | | |

3.2 Anomalous Data Review Checksheet

As exhibited by the Minimums and Maximums Report, there are no anomalous data associated with this sampling event.

Site: Moab Processing Site Sampling Date: January 7-10, 2008

Reviewer: Rachel Cowan *Rachel Cowan* 10/16/08
Name Signature Date

Site Lead: Joe Ritchey *Joe Ritchey* 10/16/08
Name Signature Date

3.3 Water Quality Data

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range		Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	(Ft BLS)	Lab		Data	QA			
Alkalinity, Total (As CaCO3)	mg/L	0403	WL	01/08/2008	0001	17	-	17	804			#	
Alkalinity, Total (As CaCO3)	mg/L	0405	WL	01/09/2008	0001	18	-	18	642			#	
Alkalinity, Total (As CaCO3)	mg/L	0407	WL	01/08/2008	0001	17	-	17	264			#	
Alkalinity, Total (As CaCO3)	mg/L	0408	WL	01/08/2008	0001	26	-	26	806			#	
Alkalinity, Total (As CaCO3)	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	760			#	
Alkalinity, Total (As CaCO3)	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	840			#	
Alkalinity, Total (As CaCO3)	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	870			#	
Alkalinity, Total (As CaCO3)	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	830			#	
Alkalinity, Total (As CaCO3)	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	814			#	
Alkalinity, Total (As CaCO3)	mg/L	0480	WL	01/07/2008	0001	18	-	18	804			#	
Alkalinity, Total (As CaCO3)	mg/L	0484	WL	01/07/2008	0001	28	-	28	826			#	
Alkalinity, Total (As CaCO3)	mg/L	0485	WL	01/07/2008	0001	58	-	58	294			#	
Alkalinity, Total (As CaCO3)	mg/L	0488	WL	01/09/2008	0001	39	-	39	1000			#	
Alkalinity, Total (As CaCO3)	mg/L	0493	WL	01/09/2008	0001	46	-	46	890			#	
Alkalinity, Total (As CaCO3)	mg/L	0547	TS	01/10/2008	0001	0	-	0	870			#	
Alkalinity, Total (As CaCO3)	mg/L	0557	WL	01/07/2008	0001	40	-	40	950			#	
Alkalinity, Total (As CaCO3)	mg/L	0559	WL	01/07/2008	0001	19	-	19	676			#	
Alkalinity, Total (As CaCO3)	mg/L	0560	WL	01/07/2008	0001	31	-	31	644			#	
Alkalinity, Total (As CaCO3)	mg/L	0561	WL	01/07/2008	0001	50	-	50	360			#	
Alkalinity, Total (As CaCO3)	mg/L	0585	WL	01/08/2008	0001	18	-	18	786			#	
Alkalinity, Total (As CaCO3)	mg/L	0587	WL	01/08/2008	0001	18	-	18	784			#	
Alkalinity, Total (As CaCO3)	mg/L	0588	WL	01/08/2008	0001	34	-	34	972			#	
Alkalinity, Total (As CaCO3)	mg/L	0589	WL	01/08/2008	0001	52	-	52	486			#	
Alkalinity, Total (As CaCO3)	mg/L	0683	WL	01/09/2008	0001	27	-	27	674			#	
Alkalinity, Total (As CaCO3)	mg/L	0687	WL	01/10/2008	0001	18	-	18	676			#	
Alkalinity, Total (As CaCO3)	mg/L	0688	WL	01/10/2008	0001	31	-	31	758			#	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	(Ft BLS)	Lab	Data		QA				
Alkalinity, Total (As CaCO3)	mg/L	0689	WL	01/10/2008	0001	46	-	46	892			#		
Alkalinity, Total (As CaCO3)	mg/L	0781	WL	01/08/2008	0001	46	-	46	292			#		
Alkalinity, Total (As CaCO3)	mg/L	0782	WL	01/08/2008	0001	31	-	31	344			#		
Alkalinity, Total (As CaCO3)	mg/L	0786	WL	01/08/2008	0001	28	-	28	454			#		
Alkalinity, Total (As CaCO3)	mg/L	0787	WL	01/09/2008	0001	38	-	38	244			#		
Ammonia Total as N	mg/L	0403	WL	01/08/2008	0001	17	-	17	280			#	10	
Ammonia Total as N	mg/L	0405	WL	01/09/2008	0001	18	-	18	180		J	#	10	
Ammonia Total as N	mg/L	0407	WL	01/08/2008	0001	17	-	17	39			#	10	
Ammonia Total as N	mg/L	0408	WL	01/08/2008	0001	26	-	26	480			#	20	
Ammonia Total as N	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	460			#	20	
Ammonia Total as N	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	490			#	10	
Ammonia Total as N	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	360			#	20	
Ammonia Total as N	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	330			#	20	
Ammonia Total as N	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	390			#	20	
Ammonia Total as N	mg/L	0480	WL	01/07/2008	0001	18	-	18	540			#	20	
Ammonia Total as N	mg/L	0484	WL	01/07/2008	0001	28	-	28	650			#	20	
Ammonia Total as N	mg/L	0485	WL	01/07/2008	0001	58	-	58	540			#	20	
Ammonia Total as N	mg/L	0488	WL	01/09/2008	0001	39	-	39	900		J	#	20	
Ammonia Total as N	mg/L	0493	WL	01/09/2008	0001	46	-	46	930		J	#	20	
Ammonia Total as N	mg/L	0547	TS	01/10/2008	0001	0	-	0	460		J	#	20	
Ammonia Total as N	mg/L	0557	WL	01/07/2008	0001	40	-	40	620			#	20	
Ammonia Total as N	mg/L	0559	WL	01/07/2008	0001	19	-	19	280			#	20	
Ammonia Total as N	mg/L	0560	WL	01/07/2008	0001	31	-	31	1900			#	50	
Ammonia Total as N	mg/L	0561	WL	01/07/2008	0001	50	-	50	1300			#	50	
Ammonia Total as N	mg/L	0585	WL	01/08/2008	0001	18	-	18	440			#	20	
Ammonia Total as N	mg/L	0587	WL	01/08/2008	0001	18	-	18	240			#	20	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	Lab	Data	QA						
Ammonia Total as N	mg/L	0588	WL	01/08/2008	0001	34	-	34	850			#	20	
Ammonia Total as N	mg/L	0589	WL	01/08/2008	0001	52	-	52	960			#	20	
Ammonia Total as N	mg/L	0683	WL	01/09/2008	0001	27	-	27	450		J	#	10	
Ammonia Total as N	mg/L	0683	WL	01/09/2008	0002	27	-	27	410		J	#	10	
Ammonia Total as N	mg/L	0687	WL	01/10/2008	0001	18	-	18	570		J	#	20	
Ammonia Total as N	mg/L	0689	WL	01/10/2008	0001	46	-	46	670		J	#	20	
Ammonia Total as N	mg/L	0781	WL	01/08/2008	0001	46	-	46	160			#	10	
Ammonia Total as N	mg/L	0782	WL	01/08/2008	0001	31	-	31	600		J	#	20	
Ammonia Total as N	mg/L	0786	WL	01/08/2008	0001	28	-	28	600		J	#	20	
Ammonia Total as N	mg/L	0787	WL	01/09/2008	0001	38	-	38	190		J	#	20	
Bromide	mg/L	0403	WL	01/08/2008	0001	17	-	17	2	U	J	#	2	
Bromide	mg/L	0405	WL	01/09/2008	0001	18	-	18	2	U		#	2	
Bromide	mg/L	0407	WL	01/08/2008	0001	17	-	17	0.4	U	J	#	0.4	
Bromide	mg/L	0408	WL	01/08/2008	0001	26	-	26	2	U	J	#	2	
Bromide	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	2	U	J	#	2	
Bromide	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	2	U	J	#	2	
Bromide	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	2	U	J	#	2	
Bromide	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	2	U	J	#	2	
Bromide	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	2	U	J	#	2	
Bromide	mg/L	0480	WL	01/07/2008	0001	18	-	18	4	U	J	#	4	
Bromide	mg/L	0484	WL	01/07/2008	0001	28	-	28	4	U	J	#	4	
Bromide	mg/L	0485	WL	01/07/2008	0001	58	-	58	10	U	J	#	10	
Bromide	mg/L	0488	WL	01/09/2008	0001	39	-	39	4	U		#	4	
Bromide	mg/L	0493	WL	01/09/2008	0001	46	-	46	4	U		#	4	
Bromide	mg/L	0547	TS	01/10/2008	0001	0	-	0	4	U		#	4	
Bromide	mg/L	0557	WL	01/07/2008	0001	40	-	40	4	U	J	#	4	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID					Lab	Data	QA		
Bromide	mg/L	0559	WL	01/07/2008	0001	19	-	19	2	U	J	#	2	
Bromide	mg/L	0560	WL	01/07/2008	0001	31	-	31	10	U	J	#	10	
Bromide	mg/L	0561	WL	01/07/2008	0001	50	-	50	15			#	10	
Bromide	mg/L	0585	WL	01/08/2008	0001	18	-	18	2	U	J	#	2	
Bromide	mg/L	0587	WL	01/08/2008	0001	18	-	18	2	U	J	#	2	
Bromide	mg/L	0588	WL	01/08/2008	0001	34	-	34	4	U	J	#	4	
Bromide	mg/L	0589	WL	01/08/2008	0001	52	-	52	20	U	J	#	20	
Bromide	mg/L	0683	WL	01/09/2008	0001	27	-	27	4	U		#	4	
Bromide	mg/L	0683	WL	01/09/2008	0002	27	-	27	4	U	J	#	4	
Bromide	mg/L	0687	WL	01/10/2008	0001	18	-	18	4	U		#	4	
Bromide	mg/L	0689	WL	01/10/2008	0001	46	-	46	4	U		#	4	
Bromide	mg/L	0781	WL	01/08/2008	0001	46	-	46	24			#	10	
Bromide	mg/L	0782	WL	01/08/2008	0001	31	-	31	14			#	10	
Bromide	mg/L	0786	WL	01/08/2008	0001	28	-	28	10	U		#	10	
Bromide	mg/L	0787	WL	01/09/2008	0001	38	-	38	20	U	J	#	20	
Chloride	mg/L	0403	WL	01/08/2008	0001	17	-	17	1500		J	#	20	
Chloride	mg/L	0405	WL	01/09/2008	0001	18	-	18	610			#	20	
Chloride	mg/L	0407	WL	01/08/2008	0001	17	-	17	520		J	#	10	
Chloride	mg/L	0408	WL	01/08/2008	0001	26	-	26	1800		J	#	20	
Chloride	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	2900		J	#	40	
Chloride	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	2400		J	#	40	
Chloride	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	1700		J	#	20	
Chloride	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	1400		J	#	20	
Chloride	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	1500		J	#	20	
Chloride	mg/L	0480	WL	01/07/2008	0001	18	-	18	3500		J	#	40	
Chloride	mg/L	0484	WL	01/07/2008	0001	28	-	28	5300		J	#	100	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	(Ft BLS)	Lab	Data		QA				
Chloride	mg/L	0485	WL	01/07/2008	0001	58	-	58	51000	J	#	1000		
Chloride	mg/L	0488	WL	01/09/2008	0001	39	-	39	1700		#	40		
Chloride	mg/L	0493	WL	01/09/2008	0001	46	-	46	1600		#	40		
Chloride	mg/L	0547	TS	01/10/2008	0001	0	-	0	2300		#	40		
Chloride	mg/L	0557	WL	01/07/2008	0001	40	-	40	3800	J	#	40		
Chloride	mg/L	0559	WL	01/07/2008	0001	19	-	19	1600	J	#	20		
Chloride	mg/L	0560	WL	01/07/2008	0001	31	-	31	34000	J	#	400		
Chloride	mg/L	0561	WL	01/07/2008	0001	50	-	50	55000	J	#	1000		
Chloride	mg/L	0585	WL	01/08/2008	0001	18	-	18	1900	J	#	20		
Chloride	mg/L	0587	WL	01/08/2008	0001	18	-	18	1300	J	#	20		
Chloride	mg/L	0588	WL	01/08/2008	0001	34	-	34	4000	J	#	40		
Chloride	mg/L	0589	WL	01/08/2008	0001	52	-	52	34000	J	#	1000		
Chloride	mg/L	0683	WL	01/09/2008	0001	27	-	27	2000		#	40		
Chloride	mg/L	0683	WL	01/09/2008	0002	27	-	27	2000		#	40		
Chloride	mg/L	0687	WL	01/10/2008	0001	18	-	18	1700		#	40		
Chloride	mg/L	0689	WL	01/10/2008	0001	46	-	46	4000		#	100		
Chloride	mg/L	0781	WL	01/08/2008	0001	46	-	46	61000	J	#	1000		
Chloride	mg/L	0782	WL	01/08/2008	0001	31	-	31	52000	J	#	1000		
Chloride	mg/L	0786	WL	01/08/2008	0001	28	-	28	28000	J	#	400		
Chloride	mg/L	0787	WL	01/09/2008	0001	38	-	38	52000		#	1000		
Copper	mg/L	0403	WL	01/08/2008	0001	17	-	17	0.0035	U	J	#	0.0035	
Copper	mg/L	0405	WL	01/09/2008	0001	18	-	18	0.0056	U	J	#	0.0056	
Copper	mg/L	0407	WL	01/08/2008	0001	17	-	17	0.0007	U	J	#	0.0007	
Copper	mg/L	0408	WL	01/08/2008	0001	26	-	26	0.007	U	J	#	0.007	
Copper	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	0.007	U	J	#	0.007	
Copper	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	0.007	U	J	#	0.007	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID					Lab	Data	QA		
Copper	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	0.0035	U	J	#	0.0035	
Copper	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	0.0035	U	J	#	0.0035	
Copper	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	0.0035	U	J	#	0.0035	
Copper	mg/L	0480	WL	01/07/2008	0001	18	-	18	0.007	U	J	#	0.007	
Copper	mg/L	0484	WL	01/07/2008	0001	28	-	28	0.007	U	J	#	0.007	
Copper	mg/L	0485	WL	01/07/2008	0001	58	-	58	0.017	U	J	#	0.017	
Copper	mg/L	0488	WL	01/09/2008	0001	39	-	39	0.011	U	J	#	0.011	
Copper	mg/L	0493	WL	01/09/2008	0001	46	-	46	0.011	U	J	#	0.011	
Copper	mg/L	0547	TS	01/10/2008	0001	0	-	0	0.011	U	J	#	0.011	
Copper	mg/L	0557	WL	01/07/2008	0001	40	-	40	0.007	U	J	#	0.007	
Copper	mg/L	0559	WL	01/07/2008	0001	19	-	19	0.0035	U	J	#	0.0035	
Copper	mg/L	0560	WL	01/07/2008	0001	31	-	31	0.017	U	J	#	0.017	
Copper	mg/L	0561	WL	01/07/2008	0001	50	-	50	0.017	U	J	#	0.017	
Copper	mg/L	0585	WL	01/08/2008	0001	18	-	18	0.007	U	J	#	0.007	
Copper	mg/L	0587	WL	01/08/2008	0001	18	-	18	0.0035	U	J	#	0.0035	
Copper	mg/L	0588	WL	01/08/2008	0001	34	-	34	0.007	U	J	#	0.007	
Copper	mg/L	0589	WL	01/08/2008	0001	52	-	52	0.035	U	J	#	0.035	
Copper	mg/L	0683	WL	01/09/2008	0001	27	-	27	0.011	U	J	#	0.011	
Copper	mg/L	0683	WL	01/09/2008	0002	27	-	27	0.011	U	J	#	0.011	
Copper	mg/L	0687	WL	01/10/2008	0001	18	-	18	0.011	U	J	#	0.011	
Copper	mg/L	0689	WL	01/10/2008	0001	46	-	46	0.011	U	J	#	0.011	
Copper	mg/L	0781	WL	01/08/2008	0001	46	-	46	0.16	B	J	#	0.017	
Copper	mg/L	0782	WL	01/08/2008	0001	31	-	31	0.035	U	J	#	0.035	
Copper	mg/L	0786	WL	01/08/2008	0001	28	-	28	0.017	U	J	#	0.017	
Copper	mg/L	0787	WL	01/09/2008	0001	38	-	38	0.18	B	J	#	0.056	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID					Lab	Data	QA		
Dissolved Oxygen	mg/L	0403	WL	01/08/2008	0001	17	-	17	1.02			#		
Dissolved Oxygen	mg/L	0405	WL	01/09/2008	0001	18	-	18	1.92			#		
Dissolved Oxygen	mg/L	0407	WL	01/08/2008	0001	17	-	17	0.59			#		
Dissolved Oxygen	mg/L	0408	WL	01/08/2008	0001	26	-	26	1.47			#		
Dissolved Oxygen	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	3.5			#		
Dissolved Oxygen	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	2.82			#		
Dissolved Oxygen	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	5.65			#		
Dissolved Oxygen	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	4.52			#		
Dissolved Oxygen	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	4.34			#		
Dissolved Oxygen	mg/L	0480	WL	01/07/2008	0001	18	-	18	0.79			#		
Dissolved Oxygen	mg/L	0484	WL	01/07/2008	0001	28	-	28	0.73			#		
Dissolved Oxygen	mg/L	0485	WL	01/07/2008	0001	58	-	58	0.86			#		
Dissolved Oxygen	mg/L	0488	WL	01/09/2008	0001	39	-	39	2.3			#		
Dissolved Oxygen	mg/L	0493	WL	01/09/2008	0001	46	-	46	1.59			#		
Dissolved Oxygen	mg/L	0547	TS	01/10/2008	0001	0	-	0	8.1			#		
Dissolved Oxygen	mg/L	0557	WL	01/07/2008	0001	40	-	40	0.86			#		
Dissolved Oxygen	mg/L	0559	WL	01/07/2008	0001	19	-	19	1.81			#		
Dissolved Oxygen	mg/L	0560	WL	01/07/2008	0001	31	-	31	1.31			#		
Dissolved Oxygen	mg/L	0561	WL	01/07/2008	0001	50	-	50	1.47			#		
Dissolved Oxygen	mg/L	0585	WL	01/08/2008	0001	18	-	18	1.7			#		
Dissolved Oxygen	mg/L	0587	WL	01/08/2008	0001	18	-	18	2.26			#		
Dissolved Oxygen	mg/L	0588	WL	01/08/2008	0001	34	-	34	1.97			#		
Dissolved Oxygen	mg/L	0589	WL	01/08/2008	0001	52	-	52	2.01			#		
Dissolved Oxygen	mg/L	0683	WL	01/09/2008	0001	27	-	27	1.31			#		
Dissolved Oxygen	mg/L	0687	WL	01/10/2008	0001	18	-	18	2.56			#		
Dissolved Oxygen	mg/L	0688	WL	01/10/2008	0001	31	-	31	2.03			#		

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
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Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID					Lab	Data	QA		
Dissolved Oxygen	mg/L	0688	WL	01/10/2008	0001	39	-	39	2.91			#		
Dissolved Oxygen	mg/L	0689	WL	01/10/2008	0001	46	-	46	1.8			#		
Dissolved Oxygen	mg/L	0689	WL	01/10/2008	0001	54	-	54	1.98			#		
Dissolved Oxygen	mg/L	0781	WL	01/08/2008	0001	46	-	46	1.19			#		
Dissolved Oxygen	mg/L	0782	WL	01/08/2008	0001	31	-	31	1.54			#		
Dissolved Oxygen	mg/L	0786	WL	01/08/2008	0001	28	-	28	1.83			#		
Dissolved Oxygen	mg/L	0787	WL	01/09/2008	0001	38	-	38	1.11			#		
Manganese	mg/L	0403	WL	01/08/2008	0001	17	-	17	4.6		J	#	0.00082	
Manganese	mg/L	0405	WL	01/09/2008	0001	18	-	18	3.2		J	#	0.00076	
Manganese	mg/L	0407	WL	01/08/2008	0001	17	-	17	1.8		J	#	0.00016	
Manganese	mg/L	0408	WL	01/08/2008	0001	26	-	26	4.8		J	#	0.0016	
Manganese	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	4.3		J	#	0.0016	
Manganese	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	3.8		J	#	0.0016	
Manganese	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	4.1		J	#	0.00082	
Manganese	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	3.6		J	#	0.00082	
Manganese	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	3.9		J	#	0.00082	
Manganese	mg/L	0480	WL	01/07/2008	0001	18	-	18	4.9		J	#	0.0016	
Manganese	mg/L	0484	WL	01/07/2008	0001	28	-	28	5.5		J	#	0.0016	
Manganese	mg/L	0485	WL	01/07/2008	0001	58	-	58	7.5		J	#	0.0041	
Manganese	mg/L	0488	WL	01/09/2008	0001	39	-	39	6.6		J	#	0.0015	
Manganese	mg/L	0493	WL	01/09/2008	0001	46	-	46	7		J	#	0.0015	
Manganese	mg/L	0547	TS	01/10/2008	0001	0	-	0	4.2		J	#	0.0015	
Manganese	mg/L	0557	WL	01/07/2008	0001	40	-	40	5.3		J	#	0.0016	
Manganese	mg/L	0559	WL	01/07/2008	0001	19	-	19	5.6		J	#	0.00082	
Manganese	mg/L	0560	WL	01/07/2008	0001	31	-	31	11		J	#	0.0041	
Manganese	mg/L	0561	WL	01/07/2008	0001	50	-	50	10		J	#	0.0041	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
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Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID					Lab	Data	QA		
Manganese	mg/L	0585	WL	01/08/2008	0001	18	-	18	5.5	J	#	0.0016		
Manganese	mg/L	0587	WL	01/08/2008	0001	18	-	18	3.8	J	#	0.00082		
Manganese	mg/L	0588	WL	01/08/2008	0001	34	-	34	5.2	J	#	0.0016		
Manganese	mg/L	0589	WL	01/08/2008	0001	52	-	52	11	J	#	0.0082		
Manganese	mg/L	0683	WL	01/09/2008	0001	27	-	27	5.1	J	#	0.0015		
Manganese	mg/L	0683	WL	01/09/2008	0002	27	-	27	5.1	J	#	0.0015		
Manganese	mg/L	0687	WL	01/10/2008	0001	18	-	18	4.2	J	#	0.0015		
Manganese	mg/L	0689	WL	01/10/2008	0001	46	-	46	3.6	J	#	0.0015		
Manganese	mg/L	0781	WL	01/08/2008	0001	46	-	46	8.3	J	#	0.0041		
Manganese	mg/L	0782	WL	01/08/2008	0001	31	-	31	9.9	J	#	0.0082		
Manganese	mg/L	0786	WL	01/08/2008	0001	28	-	28	6.3	J	#	0.0041		
Manganese	mg/L	0787	WL	01/09/2008	0001	38	-	38	7.6	J	#	0.0076		
Oxidation Reduction Potential	mV	0403	WL	01/08/2008	0001	17	-	17	217		#			
Oxidation Reduction Potential	mV	0405	WL	01/09/2008	0001	18	-	18	123		#			
Oxidation Reduction Potential	mV	0407	WL	01/08/2008	0001	17	-	17	65		#			
Oxidation Reduction Potential	mV	0408	WL	01/08/2008	0001	26	-	26	121		#			
Oxidation Reduction Potential	mV	0471	WL	01/07/2008	0001	10.3	-	19.7	233		#			
Oxidation Reduction Potential	mV	0473	WL	01/07/2008	0001	10.3	-	19.7	212		#			
Oxidation Reduction Potential	mV	0475	WL	01/07/2008	0001	10.3	-	19.7	213		#			
Oxidation Reduction Potential	mV	0477	WL	01/07/2008	0001	10.3	-	19.7	209		#			
Oxidation Reduction Potential	mV	0479	WL	01/07/2008	0001	9.3	-	23.6	209		#			
Oxidation Reduction Potential	mV	0480	WL	01/07/2008	0001	18	-	18	213		#			
Oxidation Reduction Potential	mV	0484	WL	01/07/2008	0001	28	-	28	121		#			
Oxidation Reduction	mV	0485	WL	01/07/2008	0001	58	-	58	126		#			

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
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Parameter	Units	Location ID	Location Type	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	(Ft BLS)	Lab	Data		QA				
Potential														
Oxidation Reduction Potential	mV	0488	WL	01/09/2008	0001	39	-	39	140			#		
Oxidation Reduction Potential	mV	0493	WL	01/09/2008	0001	46	-	46	121			#		
Oxidation Reduction Potential	mV	0547	TS	01/10/2008	0001	0	-	0	204			#		
Oxidation Reduction Potential	mV	0557	WL	01/07/2008	0001	40	-	40	214			#		
Oxidation Reduction Potential	mV	0559	WL	01/07/2008	0001	19	-	19	95			#		
Oxidation Reduction Potential	mV	0560	WL	01/07/2008	0001	31	-	31	94			#		
Oxidation Reduction Potential	mV	0561	WL	01/07/2008	0001	50	-	50	110			#		
Oxidation Reduction Potential	mV	0585	WL	01/08/2008	0001	18	-	18	109			#		
Oxidation Reduction Potential	mV	0587	WL	01/08/2008	0001	18	-	18	98			#		
Oxidation Reduction Potential	mV	0588	WL	01/08/2008	0001	34	-	34	94			#		
Oxidation Reduction Potential	mV	0589	WL	01/08/2008	0001	52	-	52	105			#		
Oxidation Reduction Potential	mV	0683	WL	01/09/2008	0001	27	-	27	135			#		
Oxidation Reduction Potential	mV	0687	WL	01/10/2008	0001	18	-	18	200			#		
Oxidation Reduction Potential	mV	0688	WL	01/10/2008	0001	31	-	31	101			#		
Oxidation Reduction Potential	mV	0688	WL	01/10/2008	0001	39	-	39	114			#		
Oxidation Reduction Potential	mV	0689	WL	01/10/2008	0001	46	-	46	176			#		
Oxidation Reduction Potential	mV	0689	WL	01/10/2008	0001	54	-	54	194			#		
Oxidation Reduction Potential	mV	0781	WL	01/08/2008	0001	46	-	46	130			#		
Oxidation Reduction Potential	mV	0782	WL	01/08/2008	0001	31	-	31	134			#		
Oxidation Reduction Potential	mV	0786	WL	01/08/2008	0001	28	-	28	93			#		
Oxidation Reduction	mV	0787	WL	01/09/2008	0001	38	-	38	153			#		

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers			Detection Limit	Uncertainty
								Lab	Data	QA		
Potential												
pH	s.u.	0403	WL	01/08/2008	0001	17 - 17	6.84				#	
pH	s.u.	0405	WL	01/09/2008	0001	18 - 18	7.05				#	
pH	s.u.	0407	WL	01/08/2008	0001	17 - 17	7.33				#	
pH	s.u.	0408	WL	01/08/2008	0001	26 - 26	6.73				#	
pH	s.u.	0471	WL	01/07/2008	0001	10.3 - 19.7	6.63				#	
pH	s.u.	0473	WL	01/07/2008	0001	10.3 - 19.7	6.77				#	
pH	s.u.	0475	WL	01/07/2008	0001	10.3 - 19.7	6.78				#	
pH	s.u.	0477	WL	01/07/2008	0001	10.3 - 19.7	6.71				#	
pH	s.u.	0479	WL	01/07/2008	0001	9.3 - 23.6	6.75				#	
pH	s.u.	0480	WL	01/07/2008	0001	18 - 18	6.94				#	
pH	s.u.	0484	WL	01/07/2008	0001	28 - 28	6.91				#	
pH	s.u.	0485	WL	01/07/2008	0001	58 - 58	6.84				#	
pH	s.u.	0488	WL	01/09/2008	0001	39 - 39	6.9				#	
pH	s.u.	0493	WL	01/09/2008	0001	46 - 46	6.89				#	
pH	s.u.	0547	TS	01/10/2008	0001	0 - 0	6.8				#	
pH	s.u.	0557	WL	01/07/2008	0001	40 - 40	6.94				#	
pH	s.u.	0559	WL	01/07/2008	0001	19 - 19	6.96				#	
pH	s.u.	0560	WL	01/07/2008	0001	31 - 31	6.82				#	
pH	s.u.	0561	WL	01/07/2008	0001	50 - 50	6.84				#	
pH	s.u.	0585	WL	01/08/2008	0001	18 - 18	6.69				#	
pH	s.u.	0587	WL	01/08/2008	0001	18 - 18	6.66				#	
pH	s.u.	0588	WL	01/08/2008	0001	34 - 34	6.88				#	
pH	s.u.	0589	WL	01/08/2008	0001	52 - 52	6.68				#	
pH	s.u.	0683	WL	01/09/2008	0001	27 - 27	6.75				#	
pH	s.u.	0687	WL	01/10/2008	0001	18 - 18	6.79				#	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
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Parameter	Units	Location ID	Location Type	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	(Ft BLS)	Lab	Data		QA				
pH	s.u.	0688	WL	01/10/2008	0001	31	-	31	6.79			#		
pH	s.u.	0688	WL	01/10/2008	0001	39	-	39	6.84			#		
pH	s.u.	0689	WL	01/10/2008	0001	54	-	54	6.84			#		
pH	s.u.	0689	WL	01/10/2008	0001	46	-	46	7.02			#		
pH	s.u.	0781	WL	01/08/2008	0001	46	-	46	6.99			#		
pH	s.u.	0782	WL	01/08/2008	0001	31	-	31	6.93			#		
pH	s.u.	0786	WL	01/08/2008	0001	28	-	28	6.71			#		
pH	s.u.	0787	WL	01/09/2008	0001	38	-	38	6.8			#		
Selenium	mg/L	0403	WL	01/08/2008	0001	17	-	17	0.0031		J	#	1.9E-005	
Selenium	mg/L	0405	WL	01/09/2008	0001	18	-	18	0.017		J	#	1.9E-005	
Selenium	mg/L	0407	WL	01/08/2008	0001	17	-	17	0.00018		J	#	1.9E-005	
Selenium	mg/L	0408	WL	01/08/2008	0001	26	-	26	0.0055		J	#	1.9E-005	
Selenium	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	0.0018		J	#	1.9E-005	
Selenium	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	0.002		J	#	1.9E-005	
Selenium	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	0.0032		J	#	1.9E-005	
Selenium	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	0.0046		J	#	1.9E-005	
Selenium	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	0.0042		J	#	1.9E-005	
Selenium	mg/L	0480	WL	01/07/2008	0001	18	-	18	0.004		J	#	1.9E-005	
Selenium	mg/L	0484	WL	01/07/2008	0001	28	-	28	0.0037		J	#	1.9E-005	
Selenium	mg/L	0485	WL	01/07/2008	0001	58	-	58	0.0035		J	#	9.5E-005	
Selenium	mg/L	0488	WL	01/09/2008	0001	39	-	39	0.0093		J	#	3.8E-005	
Selenium	mg/L	0493	WL	01/09/2008	0001	46	-	46	0.01		J	#	3.8E-005	
Selenium	mg/L	0547	TS	01/10/2008	0001	0	-	0	0.0028		J	#	1.9E-005	
Selenium	mg/L	0557	WL	01/07/2008	0001	40	-	40	0.0052		J	#	1.9E-005	
Selenium	mg/L	0559	WL	01/07/2008	0001	19	-	19	0.0018		J	#	1.9E-005	
Selenium	mg/L	0560	WL	01/07/2008	0001	31	-	31	0.0054		J	#	9.5E-005	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
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Parameter	Units	Location ID	Location Type	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	(Ft BLS)	Lab	Data		QA				
Selenium	mg/L	0561	WL	01/07/2008	0001	50	-	50	0.0051	J	#	9.5E-005		
Selenium	mg/L	0585	WL	01/08/2008	0001	18	-	18	0.01	J	#	1.9E-005		
Selenium	mg/L	0587	WL	01/08/2008	0001	18	-	18	0.0076	J	#	1.9E-005		
Selenium	mg/L	0588	WL	01/08/2008	0001	34	-	34	0.0072	J	#	3.8E-005		
Selenium	mg/L	0589	WL	01/08/2008	0001	52	-	52	0.0032	J	#	0.00019		
Selenium	mg/L	0683	WL	01/09/2008	0001	27	-	27	0.024	J	#	9.5E-005		
Selenium	mg/L	0683	WL	01/09/2008	0002	27	-	27	0.023	J	#	9.5E-005		
Selenium	mg/L	0687	WL	01/10/2008	0001	18	-	18	0.02	J	#	9.5E-005		
Selenium	mg/L	0689	WL	01/10/2008	0001	46	-	46	0.0063	J	#	3.8E-005		
Selenium	mg/L	0781	WL	01/08/2008	0001	46	-	46	0.0046	J	#	9.5E-005		
Selenium	mg/L	0782	WL	01/08/2008	0001	31	-	31	0.0037	J	#	9.5E-005		
Selenium	mg/L	0786	WL	01/08/2008	0001	28	-	28	0.0011	J	#	9.5E-005		
Selenium	mg/L	0787	WL	01/09/2008	0001	38	-	38	0.0024	J	#	0.00019		
Specific Conductance	umhos /cm	0403	WL	01/08/2008	0001	17	-	17	15037		#			
Specific Conductance	umhos /cm	0405	WL	01/09/2008	0001	18	-	18	7322		#			
Specific Conductance	umhos /cm	0407	WL	01/08/2008	0001	17	-	17	3310		#			
Specific Conductance	umhos /cm	0408	WL	01/08/2008	0001	26	-	26	15332		#			
Specific Conductance	umhos /cm	0471	WL	01/07/2008	0001	10.3	-	19.7	17374		#			
Specific Conductance	umhos /cm	0473	WL	01/07/2008	0001	10.3	-	19.7	15947		#			
Specific Conductance	umhos /cm	0475	WL	01/07/2008	0001	10.3	-	19.7	14777		#			
Specific Conductance	umhos /cm	0477	WL	01/07/2008	0001	10.3	-	19.7	12553		#			
Specific Conductance	umhos /cm	0479	WL	01/07/2008	0001	9.3	-	23.6	14089		#			
Specific Conductance	umhos /cm	0480	WL	01/07/2008	0001	18	-	18	22297		#			
Specific Conductance	umhos /cm	0484	WL	01/07/2008	0001	28	-	28	25844		#			

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
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Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID					Lab	Data	QA		
Specific Conductance	umhos /cm	0485	WL	01/07/2008	0001	58	-	58	115185			#		
Specific Conductance	umhos /cm	0488	WL	01/09/2008	0001	39	-	39	16330			#		
Specific Conductance	umhos /cm	0493	WL	01/09/2008	0001	46	-	46	16334			#		
Specific Conductance	umhos /cm	0547	TS	01/10/2008	0001	0	-	0	14950			#		
Specific Conductance	umhos /cm	0557	WL	01/07/2008	0001	40	-	40	23486			#		
Specific Conductance	umhos /cm	0559	WL	01/07/2008	0001	19	-	19	14944			#		
Specific Conductance	umhos /cm	0560	WL	01/07/2008	0001	31	-	31	84778			#		
Specific Conductance	umhos /cm	0561	WL	01/07/2008	0001	50	-	50	110403			#		
Specific Conductance	umhos /cm	0585	WL	01/08/2008	0001	18	-	18	15178			#		
Specific Conductance	umhos /cm	0587	WL	01/08/2008	0001	18	-	18	11660			#		
Specific Conductance	umhos /cm	0588	WL	01/08/2008	0001	34	-	34	23483			#		
Specific Conductance	umhos /cm	0589	WL	01/08/2008	0001	52	-	52	79715			#		
Specific Conductance	umhos /cm	0683	WL	01/09/2008	0001	27	-	27	14566			#		
Specific Conductance	umhos /cm	0687	WL	01/10/2008	0001	18	-	18	14494			#		
Specific Conductance	umhos /cm	0688	WL	01/10/2008	0001	31	-	31	14506			#		
Specific Conductance	umhos /cm	0688	WL	01/10/2008	0001	39	-	39	16739			#		
Specific Conductance	umhos /cm	0689	WL	01/10/2008	0001	46	-	46	24454			#		
Specific Conductance	umhos /cm	0689	WL	01/10/2008	0001	54	-	54	46145			#		
Specific Conductance	umhos /cm	0781	WL	01/08/2008	0001	46	-	46	116484			#		
Specific Conductance	umhos /cm	0782	WL	01/08/2008	0001	31	-	31	111386			#		
Specific Conductance	umhos /cm	0786	WL	01/08/2008	0001	28	-	28	58706			#		

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
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Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID					Lab	Data	QA		
Specific Conductance	umhos /cm	0787	WL	01/09/2008	0001	38	-	38	98312			#		
Sulfate	mg/L	0403	WL	01/08/2008	0001	17	-	17	6800	N	J	#	50	
Sulfate	mg/L	0405	WL	01/09/2008	0001	18	-	18	3900			#	50	
Sulfate	mg/L	0407	WL	01/08/2008	0001	17	-	17	910		J	#	10	
Sulfate	mg/L	0408	WL	01/08/2008	0001	26	-	26	8400		J	#	50	
Sulfate	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	6700		J	#	50	
Sulfate	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	6700		J	#	50	
Sulfate	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	6400		J	#	50	
Sulfate	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	5700		J	#	50	
Sulfate	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	6400		J	#	50	
Sulfate	mg/L	0480	WL	01/07/2008	0001	18	-	18	8500		J	#	100	
Sulfate	mg/L	0484	WL	01/07/2008	0001	28	-	28	9100		J	#	100	
Sulfate	mg/L	0485	WL	01/07/2008	0001	58	-	58	6100		J	#	500	
Sulfate	mg/L	0488	WL	01/09/2008	0001	39	-	39	9500			#	100	
Sulfate	mg/L	0493	WL	01/09/2008	0001	46	-	46	9100			#	100	
Sulfate	mg/L	0547	TS	01/10/2008	0001	0	-	0	6300			#	100	
Sulfate	mg/L	0557	WL	01/07/2008	0001	40	-	40	8900		J	#	100	
Sulfate	mg/L	0559	WL	01/07/2008	0001	19	-	19	6300		J	#	50	
Sulfate	mg/L	0560	WL	01/07/2008	0001	31	-	31	10000		J	#	250	
Sulfate	mg/L	0561	WL	01/07/2008	0001	50	-	50	7100		J	#	250	
Sulfate	mg/L	0585	WL	01/08/2008	0001	18	-	18	8100		J	#	50	
Sulfate	mg/L	0587	WL	01/08/2008	0001	18	-	18	6500		J	#	50	
Sulfate	mg/L	0588	WL	01/08/2008	0001	34	-	34	12000		J	#	100	
Sulfate	mg/L	0589	WL	01/08/2008	0001	52	-	52	9200		J	#	100	
Sulfate	mg/L	0683	WL	01/09/2008	0001	27	-	27	7500			#	100	
Sulfate	mg/L	0683	WL	01/09/2008	0002	27	-	27	7200			#	100	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	Lab	Data	QA						
Sulfate	mg/L	0687	WL	01/10/2008	0001	18	-	18	6500			#	100	
Sulfate	mg/L	0689	WL	01/10/2008	0001	46	-	46	9800			#	250	
Sulfate	mg/L	0781	WL	01/08/2008	0001	46	-	46	5800		J	#	500	
Sulfate	mg/L	0782	WL	01/08/2008	0001	31	-	31	6400		J	#	500	
Sulfate	mg/L	0786	WL	01/08/2008	0001	28	-	28	16000		J	#	500	
Sulfate	mg/L	0787	WL	01/09/2008	0001	38	-	38	4700			#	50	
Temperature	C	0403	WL	01/08/2008	0001	17	-	17	14.58			#		
Temperature	C	0405	WL	01/09/2008	0001	18	-	18	15.99			#		
Temperature	C	0407	WL	01/08/2008	0001	17	-	17	15.94			#		
Temperature	C	0408	WL	01/08/2008	0001	26	-	26	14.67			#		
Temperature	C	0471	WL	01/07/2008	0001	10.3	-	19.7	15.51			#		
Temperature	C	0473	WL	01/07/2008	0001	10.3	-	19.7	16.77			#		
Temperature	C	0475	WL	01/07/2008	0001	10.3	-	19.7	15.55			#		
Temperature	C	0477	WL	01/07/2008	0001	10.3	-	19.7	15.67			#		
Temperature	C	0479	WL	01/07/2008	0001	9.3	-	23.6	15.99			#		
Temperature	C	0480	WL	01/07/2008	0001	18	-	18	14.87			#		
Temperature	C	0484	WL	01/07/2008	0001	28	-	28	13.88			#		
Temperature	C	0485	WL	01/07/2008	0001	58	-	58	13.9			#		
Temperature	C	0488	WL	01/09/2008	0001	39	-	39	15.42			#		
Temperature	C	0493	WL	01/09/2008	0001	46	-	46	14			#		
Temperature	C	0547	TS	01/10/2008	0001	0	-	0	14.04			#		
Temperature	C	0557	WL	01/07/2008	0001	40	-	40	14.22			#		
Temperature	C	0559	WL	01/07/2008	0001	19	-	19	14.22			#		
Temperature	C	0560	WL	01/07/2008	0001	31	-	31	12.92			#		
Temperature	C	0561	WL	01/07/2008	0001	50	-	50	13.21			#		
Temperature	C	0585	WL	01/08/2008	0001	18	-	18	14.85			#		

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID					Lab	Data	QA		
Temperature	C	0587	WL	01/08/2008	0001	18	-	18	14.84			#		
Temperature	C	0588	WL	01/08/2008	0001	34	-	34	14.36			#		
Temperature	C	0589	WL	01/08/2008	0001	52	-	52	14			#		
Temperature	C	0683	WL	01/09/2008	0001	27	-	27	14.11			#		
Temperature	C	0687	WL	01/10/2008	0001	18	-	18	14.89			#		
Temperature	C	0688	WL	01/10/2008	0001	31	-	31	13.51			#		
Temperature	C	0688	WL	01/10/2008	0001	39	-	39	14.69			#		
Temperature	C	0689	WL	01/10/2008	0001	46	-	46	13.73			#		
Temperature	C	0689	WL	01/10/2008	0001	54	-	54	14.09			#		
Temperature	C	0781	WL	01/08/2008	0001	46	-	46	13.38			#		
Temperature	C	0782	WL	01/08/2008	0001	31	-	31	12.96			#		
Temperature	C	0786	WL	01/08/2008	0001	28	-	28	14.13			#		
Temperature	C	0787	WL	01/09/2008	0001	38	-	38	12.8			#		
Total Dissolved Solids	mg/L	0403	WL	01/08/2008	0001	17	-	17	12000			#	200	
Total Dissolved Solids	mg/L	0405	WL	01/09/2008	0001	18	-	18	6800			#	200	
Total Dissolved Solids	mg/L	0407	WL	01/08/2008	0001	17	-	17	2100			#	40	
Total Dissolved Solids	mg/L	0408	WL	01/08/2008	0001	26	-	26	15000			#	200	
Total Dissolved Solids	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	13000			#	200	
Total Dissolved Solids	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	13000			#	200	
Total Dissolved Solids	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	12000			#	200	
Total Dissolved Solids	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	11000			#	200	
Total Dissolved Solids	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	12000			#	200	
Total Dissolved Solids	mg/L	0480	WL	01/07/2008	0001	18	-	18	17000			#	200	
Total Dissolved Solids	mg/L	0484	WL	01/07/2008	0001	28	-	28	19000			#	400	
Total Dissolved Solids	mg/L	0485	WL	01/07/2008	0001	58	-	58	88000			#	1000	
Total Dissolved Solids	mg/L	0488	WL	01/09/2008	0001	39	-	39	16000			#	400	

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers		Detection Limit	Uncertainty
				Date	ID					Lab	Data QA		
Total Dissolved Solids	mg/L	0493	WL	01/09/2008	0001	46	-	46	16000		#	400	
Total Dissolved Solids	mg/L	0547	TS	01/10/2008	0001	0	-	0	13000		#	400	
Total Dissolved Solids	mg/L	0557	WL	01/07/2008	0001	40	-	40	18000		#	400	
Total Dissolved Solids	mg/L	0559	WL	01/07/2008	0001	19	-	19	12000		#	200	
Total Dissolved Solids	mg/L	0560	WL	01/07/2008	0001	31	-	31	58000		#	1000	
Total Dissolved Solids	mg/L	0561	WL	01/07/2008	0001	50	-	50	81000		#	1000	
Total Dissolved Solids	mg/L	0585	WL	01/08/2008	0001	18	-	18	14000		#	200	
Total Dissolved Solids	mg/L	0587	WL	01/08/2008	0001	18	-	18	12000		#	200	
Total Dissolved Solids	mg/L	0588	WL	01/08/2008	0001	34	-	34	23000		#	400	
Total Dissolved Solids	mg/L	0589	WL	01/08/2008	0001	52	-	52	71000		#	1000	
Total Dissolved Solids	mg/L	0683	WL	01/09/2008	0001	27	-	27	14000		#	400	
Total Dissolved Solids	mg/L	0683	WL	01/09/2008	0002	27	-	27	14000		#	400	
Total Dissolved Solids	mg/L	0687	WL	01/10/2008	0001	18	-	18	12000		#	400	
Total Dissolved Solids	mg/L	0689	WL	01/10/2008	0001	46	-	46	21000		#	400	
Total Dissolved Solids	mg/L	0781	WL	01/08/2008	0001	46	-	46	90000		#	1000	
Total Dissolved Solids	mg/L	0782	WL	01/08/2008	0001	31	-	31	86000		#	2000	
Total Dissolved Solids	mg/L	0786	WL	01/08/2008	0001	28	-	28	51000		#	1000	
Total Dissolved Solids	mg/L	0787	WL	01/09/2008	0001	38	-	38	91000		#	2000	
Turbidity	NTU	0403	WL	01/08/2008	0001	17	-	17	3.65		#		
Turbidity	NTU	0405	WL	01/09/2008	0001	18	-	18	4.45		#		
Turbidity	NTU	0407	WL	01/08/2008	0001	17	-	17	2.96		#		
Turbidity	NTU	0408	WL	01/08/2008	0001	26	-	26	8.44		#		
Turbidity	NTU	0471	WL	01/07/2008	0001	10.3	-	19.7	4.43		#		
Turbidity	NTU	0473	WL	01/07/2008	0001	10.3	-	19.7	2.68		#		
Turbidity	NTU	0475	WL	01/07/2008	0001	10.3	-	19.7	1.86		#		
Turbidity	NTU	0477	WL	01/07/2008	0001	10.3	-	19.7	3.31		#		

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	(Ft BLS)	Lab	Data		QA				
Turbidity	NTU	0479	WL	01/07/2008	0001	9.3	-	23.6	1.85			#		
Turbidity	NTU	0480	WL	01/07/2008	0001	18	-	18	1			#		
Turbidity	NTU	0484	WL	01/07/2008	0001	28	-	28	4.09			#		
Turbidity	NTU	0485	WL	01/07/2008	0001	58	-	58	7.26			#		
Turbidity	NTU	0488	WL	01/09/2008	0001	39	-	39	3.14			#		
Turbidity	NTU	0493	WL	01/09/2008	0001	46	-	46	1.38			#		
Turbidity	NTU	0547	TS	01/10/2008	0001	0	-	0	4.51			#		
Turbidity	NTU	0557	WL	01/07/2008	0001	40	-	40	7.09			#		
Turbidity	NTU	0559	WL	01/07/2008	0001	19	-	19	4.1			#		
Turbidity	NTU	0560	WL	01/07/2008	0001	31	-	31	1.99			#		
Turbidity	NTU	0561	WL	01/07/2008	0001	50	-	50	0.82			#		
Turbidity	NTU	0585	WL	01/08/2008	0001	18	-	18	2.58			#		
Turbidity	NTU	0587	WL	01/08/2008	0001	18	-	18	3.54			#		
Turbidity	NTU	0588	WL	01/08/2008	0001	34	-	34	3.08			#		
Turbidity	NTU	0589	WL	01/08/2008	0001	52	-	52	3.3			#		
Turbidity	NTU	0683	WL	01/09/2008	0001	27	-	27	4.3			#		
Turbidity	NTU	0687	WL	01/10/2008	0001	18	-	18	6.56			#		
Turbidity	NTU	0688	WL	01/10/2008	0001	31	-	31	1.08			#		
Turbidity	NTU	0688	WL	01/10/2008	0001	39	-	39	1.93			#		
Turbidity	NTU	0689	WL	01/10/2008	0001	46	-	46	2.95			#		
Turbidity	NTU	0689	WL	01/10/2008	0001	54	-	54	7.2			#		
Turbidity	NTU	0781	WL	01/08/2008	0001	46	-	46	1.31			#		
Turbidity	NTU	0782	WL	01/08/2008	0001	31	-	31	1.61			#		
Turbidity	NTU	0786	WL	01/08/2008	0001	28	-	28	2.83			#		
Turbidity	NTU	0787	WL	01/09/2008	0001	38	-	38	1.33			#		

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID	(Ft BLS)	Lab	Data		QA				
Uranium	mg/L	0403	WL	01/08/2008	0001	17	-	17	2.5	J	#	0.0003		
Uranium	mg/L	0405	WL	01/09/2008	0001	18	-	18	1.7		#	0.0003		
Uranium	mg/L	0407	WL	01/08/2008	0001	17	-	17	0.17	J	#	3.E-005		
Uranium	mg/L	0408	WL	01/08/2008	0001	26	-	26	2.3	J	#	0.0003		
Uranium	mg/L	0471	WL	01/07/2008	0001	10.3	-	19.7	2.1	J	#	0.0003		
Uranium	mg/L	0473	WL	01/07/2008	0001	10.3	-	19.7	2.1	J	#	0.0003		
Uranium	mg/L	0475	WL	01/07/2008	0001	10.3	-	19.7	2.3	J	#	0.0003		
Uranium	mg/L	0477	WL	01/07/2008	0001	10.3	-	19.7	2.2	J	#	0.0003		
Uranium	mg/L	0479	WL	01/07/2008	0001	9.3	-	23.6	2.4	J	#	0.0003		
Uranium	mg/L	0480	WL	01/07/2008	0001	18	-	18	2.5	J	#	0.0003		
Uranium	mg/L	0484	WL	01/07/2008	0001	28	-	28	2.5	J	#	0.0003		
Uranium	mg/L	0485	WL	01/07/2008	0001	58	-	58	0.55	J	#	5.9E-005		
Uranium	mg/L	0488	WL	01/09/2008	0001	39	-	39	2		#	0.0003		
Uranium	mg/L	0493	WL	01/09/2008	0001	46	-	46	2.2		#	0.0003		
Uranium	mg/L	0547	TS	01/10/2008	0001	0	-	0	2.3		#	0.0003		
Uranium	mg/L	0557	WL	01/07/2008	0001	40	-	40	2.6	J	#	0.0003		
Uranium	mg/L	0559	WL	01/07/2008	0001	19	-	19	2.4	J	#	0.0003		
Uranium	mg/L	0560	WL	01/07/2008	0001	31	-	31	1.9	J	#	0.0003		
Uranium	mg/L	0561	WL	01/07/2008	0001	50	-	50	0.78	J	#	0.0003		
Uranium	mg/L	0585	WL	01/08/2008	0001	18	-	18	2.3	J	#	0.0003		
Uranium	mg/L	0587	WL	01/08/2008	0001	18	-	18	2.8	J	#	0.0003		
Uranium	mg/L	0588	WL	01/08/2008	0001	34	-	34	2.8	J	#	0.0003		
Uranium	mg/L	0589	WL	01/08/2008	0001	52	-	52	1.5	J	#	0.0003		
Uranium	mg/L	0683	WL	01/09/2008	0001	27	-	27	2		#	0.0003		
Uranium	mg/L	0683	WL	01/09/2008	0002	27	-	27	2.2		#	0.0003		
Uranium	mg/L	0687	WL	01/10/2008	0001	18	-	18	2		#	0.0003		

General Water Quality Data by Parameter (USEE205) FOR SITE MOA01, Moab Site
REPORT DATE: 10/16/2008

Parameter	Units	Location ID	Location Type	Sample		Depth Range (Ft BLS)			Result	Qualifiers			Detection Limit	Uncertainty
				Date	ID					Lab	Data	QA		
Uranium	mg/L	0689	WL	01/10/2008	0001	46	-	46	2.3			#	0.0003	
Uranium	mg/L	0781	WL	01/08/2008	0001	46	-	46	0.23		J	#	3.E-005	
Uranium	mg/L	0782	WL	01/08/2008	0001	31	-	31	0.72		J	#	5.9E-005	
Uranium	mg/L	0786	WL	01/08/2008	0001	28	-	28	0.96		J	#	0.0003	
Uranium	mg/L	0787	WL	01/09/2008	0001	38	-	38	0.15			#	3.E-005	

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- P > 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X,Y,Z Laboratory defined qualifier, see case narrative.

DATA QUALIFIERS:

- F Low flow sampling method used.
- L Less than 3 bore volumes purged prior to sampling.
- U Parameter analyzed for but was not detected.
- G Possible grout contamination, pH > 9.
- Q Qualitative result due to sampling technique.
- X Location is undefined.
- J Estimated value.
- R Unusable result.

QA QUALIFIER:

- # Validated according to quality assurance guidelines.

3.4 Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE MOA01, Moab Site
REPORT DATE: 7/9/2008

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0403	O	3968.95	01/08/2008		16.41	3952.54	
0405	O	3968.47	01/09/2008		14.25	3954.22	
0407	O	3969.09	01/08/2008		16.98	3952.11	
0408	O	3969.17	01/08/2008		15.66	3953.51	
0471		3964.37	01/07/2008		12.92	3951.45	
0473		3964.66	01/07/2008		13.36	3951.3	
0475		3964.97	01/07/2008		14.35	3950.62	
0477		3965.08	01/07/2008		15.22	3949.86	
0479		3964.67	01/07/2008		13.28	3951.39	
0480		3968.65	01/07/2008		16.56	3952.09	
0484		3969.19	01/07/2008		16.51	3952.68	
0485		3968.81	01/07/2008		16.71	3952.1	
0488		3968.48	01/09/2008		14.11	3954.37	
0493		3967.89	01/09/2008		13.76	3954.13	
0557		3968.85	01/07/2008		15.45	3953.4	
0559		3969.92	01/07/2008		17.55	3952.37	
0560		3968.77	01/07/2008		16.31	3952.46	
0561		3968.56	01/07/2008		16.45	3952.11	
0585		3969.36	01/08/2008		15.84	3953.52	
0587		3968.89	01/08/2008		15.58	3953.31	
0588		3968.82	01/08/2008		15.5	3953.32	
0589		3968.87	01/08/2008		15.66	3953.21	
0683		3970.73	01/09/2008		16.59	3954.14	
0687		3969.09	01/10/2008		15.02	3954.07	
0688		3968.66	01/10/2008		14.61	3954.05	
0689		3968.66	01/10/2008		14.81	3953.85	

STATIC WATER LEVELS (USEE700) FOR SITE MOA01, Moab Site
REPORT DATE: 7/9/2008

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0781		3968.56	01/08/2008		16.21	3952.35	
0782		3968.46	01/08/2008		16.64	3951.82	
0786		3968.14	01/08/2008		16.03	3952.11	
0787		3968.43	01/09/2008		16.67	3951.76	

FLOW CODES: B BACKGROUND C CROSS GRADIENT D DOWN GRADIENT O ON SITE
 U UPGRADIENT

WATER LEVEL FLAGS: D Dry

3.5 Blanks Report

There were no surface water samples collected, and as a result no equipment blanks were collected during this event.

Attachment 1

Trip Report



DATE: January 28, 2008

TO: K. Pill

FROM: E. Glowiak

SUBJECT: Trip Report

Site: Moab – Interim Action Well Field Monthly Sampling – January 2008

Date of Sampling Event: January 7-10, 2008

Team Members: Steve Back, Elizabeth Glowiak

RIN Number Assigned: All samples were assigned to RIN 0801006.

Sample Shipment: All samples were shipped in a cooler overnight UPS to Paragon Analytics, Inc. from Moab, Utah, on January 9 and 10, 2008 (Tracking No. 95520507, 96883294).

January 2008 Configuration 1 Sampling

Number of Locations Sampled: Five extraction wells (0471, 0473, 0475, 0477, 0479), nine observation wells (0403, 0407, 0480, 0484, 0485, 0557, 0559, 0560, 0561), and one evaporation pond location (0547), were sampled during the January 2008 sampling event. A total of 15 samples were collected.

Locations Not Sampled: None.

Field Variance: None.

Location Specific Information – Configuration 1 Extraction Wells: Extraction wells were sampled using dedicated submersible pumps.

Well No.	Date	Time	Water Level (ft btoc*)	Pump Intake (ft bgs)
0471	01/07/2008	09:47	12.92	18
0473	01/07/2008	10:03	13.36	18
0475	01/07/2008	10:20	14.35	18
0477	01/07/2008	10:45	15.22	18
0479	01/07/2008	11:00	13.28	23

*Below top of casing.

Location Specific Information – Observation Wells: All observation wells were sampled using micro-purge techniques with a peristaltic pump and dedicated downhole and pump-head tubing. Sample depths and water levels for each observation well are listed below.

Well No.	Date	Time	Depth to Water (ft btoc)	Sample Depth (ft bgs)
0403	01/08/2008	09:11	16.41	17
0407	01/08/2008	09:32	16.98	17
0480	01/07/2008	13:30	16.56	18
0484	01/07/2008	14:17	16.51	28
0485	01/07/2008	14:38	16.71	58
0557	01/07/2008	13:12	15.45	40
0559	01/07/2008	15:52	17.55	19
0560	01/07/2008	14:57	16.31	31
0561	01/07/2008	15:32	16.45	50

January 2008 Configuration 2 Sampling

Number of Locations Sampled: Five Configuration 2 observation wells (0408, 0585, 0587, 0588, 0589) were sampled during the January 2008 sampling event. A total of five samples were collected.

Locations Not Sampled: None.

Field Variance: None.

Location Specific Information – Observation Wells: All observation wells were sampled using micro-purge techniques with a peristaltic pump and dedicated pump-head and downhole tubing. Sample depths and water levels for each observation well are listed below.

Well No.	Date	Time	Depth to Water (ft btoc)	Sample Depth (ft bgs)
0408	01/08/2008	15:32	15.66	26
0585	01/08/2008	15:14	15.84	18
0587	01/08/2008	14:30	15.58	18
0588	01/08/2008	14:50	15.50	34
0589	01/08/2008	14:07	15.66	52

January 2008 Configuration 3 Sampling

Number of Locations Sampled: Three observation wells (0683, 0687, 0689-46) were sampled during the January 2008 sampling event. Including one duplicate, a total of four samples were collected.

Field Variance: Sample location 0688-31 was preserved incorrectly. This location and the duplicate were resampled during the January 2008 routine sampling event and were shipped under RIN 0801007.

Quality Control Sample Cross Reference: Following are the false identifications assigned to the quality control samples:

False ID	True ID	Sample Type	Associated Matrix	Ticket Number
2363	0683	Duplicate from 27 ft bgs	Ground Water	NFC 331

Locations in Which Field Parameters Were Measured Only: Parameters were measured at locations 0688 at 39 ft and 0689 at 46 ft.

Well No.	Date	Time	Depth (ft bgs)	Depth To Water (ft btoc)	Field Parameters					
					Temp (°C)	Spec Cond (µS/cm)	DO (mg/L)	pH	ORP	Turb. (NTUs)
0688	01/10/2008	13:32	39	14.59	14.61	16,739	2.91	6.84	114	1.93
0689	01/10/2008	09:43	54	14.84	14.09	46,145	1.98	6.84	194	7.20

Location Specific Information – Observation Wells: All observation wells were sampled using micro-purge techniques with a peristaltic pump and dedicated pump-head and downhole tubing. Sample depths and water levels for each observation well are listed below.

Well No.	Date	Time	Depth to Water (ft btoc)	Sample Depth (ft bgs)
0683	01/09/2008	15:44	16.59	27
0687	01/10/2008	09:28	15.02	18
0689-46	01/10/2008	13:15	14.81	46

January 2008 Configuration 4 Sampling

Number of Locations Sampled: Four observation wells (0781, 0782, 0786, 0787) were sampled during the January 2008 sampling event. A total of four locations were sampled.

Field Variance: None.

Location Specific Information – Observation Wells: All observation wells were sampled using micro-purge techniques with a peristaltic pump and dedicated pump-head and downhole tubing. Sample depths and water levels for each observation well are listed below.

Well No.	Date	Time	Depth to Water (ft btoc)	Sample Depth (ft bgs)
0781	01/08/2008	11:03	16.21	46
0782	01/08/2008	11:20	16.64	31
0786	01/08/2008	13:42	16.03	28
0787	01/09/2008	13:56	16.67	38

January 2008 Baseline Sampling

Number of Locations Sampled: Three observation wells (0405, 0488, 0493) were sampled during the January 2008 sampling event. A total of three samples were collected.

Field Variance: None.

Location Specific Information – Observation Wells: All observation wells were sampled using micro-purge techniques with a peristaltic pump and dedicated pump-head and downhole tubing. Sample depths and water levels for each observation well are listed below.

Well No.	Date	Time	Depth to Water (ft btoc*)	Sample Depth (ft bgs)
0405	01/09/2008	15:00	14.25	18
0488	01/09/2008	14:25	14.11	39
0493	01/09/2008	15:19	13.76	46

Well Inspection Summary: A well inspection was not conducted.

Site Issues: According to the USGS Cisco Gaging Station (Station No. 09180500), the mean daily Colorado River flows during this sampling event are provided below:

Date	Daily Mean Flow (cfs)
01/07/2008	4,150
01/08/2008	4,150
01/09/2008	3,630
01/10/2008	No data

Equipment Issues: None.

Corrective Action Required/Taken: None.

cc: J.D. Ritchey, P2S
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Attachment 2

Acronyms

AWQC	Ambient Water Quality Criteria
bgs	Below Ground Surface
BLS	Below Land Surface
btoc	Below Top of Casing
cfs	Cubic Feet per Second
COC	Chain of Custody
DO	Dissolved Oxygen
EDD	Electronic Data Deliverable
EPA	Environment Protection Agency
ft	Feet
LCS	Laboratory Control Samples
mg/L	Milligram per Liter
mL/m	Milliliter per Minute
MS	Matrix Spike
MSD	Matrix Spike Duplicate
µmhos/cm	Micro Mhos per Centimeter
µS/cm	Micro Siemens per Centimeter
mV	Millivolt
NTU	Nephelometric Turbidity Unit
ORP	Oxidation Reduction Potential
RIN	Report Identification Number
SDG	Sample Data Group
Spec. Cond.	Special Conditions
SU	Standard Unit
TDS	Total Dissolved Solids
Turb.	Turbidity
UMTRA	Uranium Mill Tailings Remedial Action
USGS	U.S. Geological Survey
VDP	Validation Data Package