

Office of Environmental Management – Grand Junction



January 2006 Water Sampling

**Validation Data Package for
Ground Water Interim Action
Monthly Sampling
Moab, Utah**

April 2006



U.S. Department
of Energy

Office of Environmental Management

Moab, Utah

January 2006

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Sampling Event Summary

Site: Moab, Utah

Sampling Period: January 17–26, 2006

The purpose of this sampling was to collect data that can be used to evaluate the performance of all configurations of the Interim Action well field. This report is a compilation of all sampling activities conducted during the month of January.

Sampling and analysis, as usual, were conducted in accordance with the *Operations, Maintenance, and Performance Monitoring Plan for the Interim Action Ground Water Treatment System*, March 2005. Although not listed here, the normal set of locations were sampled. Please refer to the attached trip reports for specific sampled locations and an explanation of why some locations were not sampled.

According to the United States Geological Survey Cisco Gaging Station, the mean daily Colorado River flow rates varied between 2,670 and 3,190 cubic feet (ft) per second.

Time versus concentration graphs for selected key performance indicator wells and major contaminants of concern are included. Data presented in these graphs indicate that contaminant concentrations are at expected levels. Ammonia and uranium concentrations have generally stabilized.

Configuration 1 and Configuration 3 extraction wells were not operating due to winter conditions. These remediation wells had been shut down on December 7, 2005. Therefore, the January sampling event was limited to the Configuration 2 area.

Contaminant concentrations in wells near the Configuration 2 well field generally continued to be suppressed by the injection of freshwater. Several wells had been identified in the past several Validation Data Package reports for further evaluation of ammonia and uranium concentrations. These wells include 0408 (screened 13 to 18 feet below ground surface [bgs]), 0588 (screened 25 to 35 ft bgs), and 0589 (screened 43 to 53 ft bgs). Time versus concentration graphs for these wells that were included in the past several reports showed some fluctuations in ammonia and uranium concentrations, especially in wells 0588 and 0589. Some of these successive fluctuations from relatively low to moderate concentration is attributed to data for two different depths in the same well being plotted on the graph. The data for well 0588 is for the 34-ft bgs interval, but previously had included a few data points for samples from the 26-ft depth. Data for well 0589, which is for the 44-ft interval, also previously had included a few data points from a different (52-ft) depth. The corrected graphs are included in this report, and the data indicate there are still fluctuations in the uranium concentrations in these three wells, especially during the past 6 months. These trends will continue to be evaluated in upcoming monthly reports.

There were five anomalous data points identified. The methane and phosphorous concentrations for observation well 0589 were higher than the previous maximum concentrations. Dissolved organic carbon concentration was lower than previous minimums. The other two anomalous data points were for sulfate (low) at well 0580 and uranium (low) at well 0590.

The data validations indicate that the data meet the quality control criteria specified for this project. No significant discrepancies were noted regarding sample shipping and receiving, preservation and holding times, instrument calibration, method blanks, or matrix spikes, etc., except as qualified.

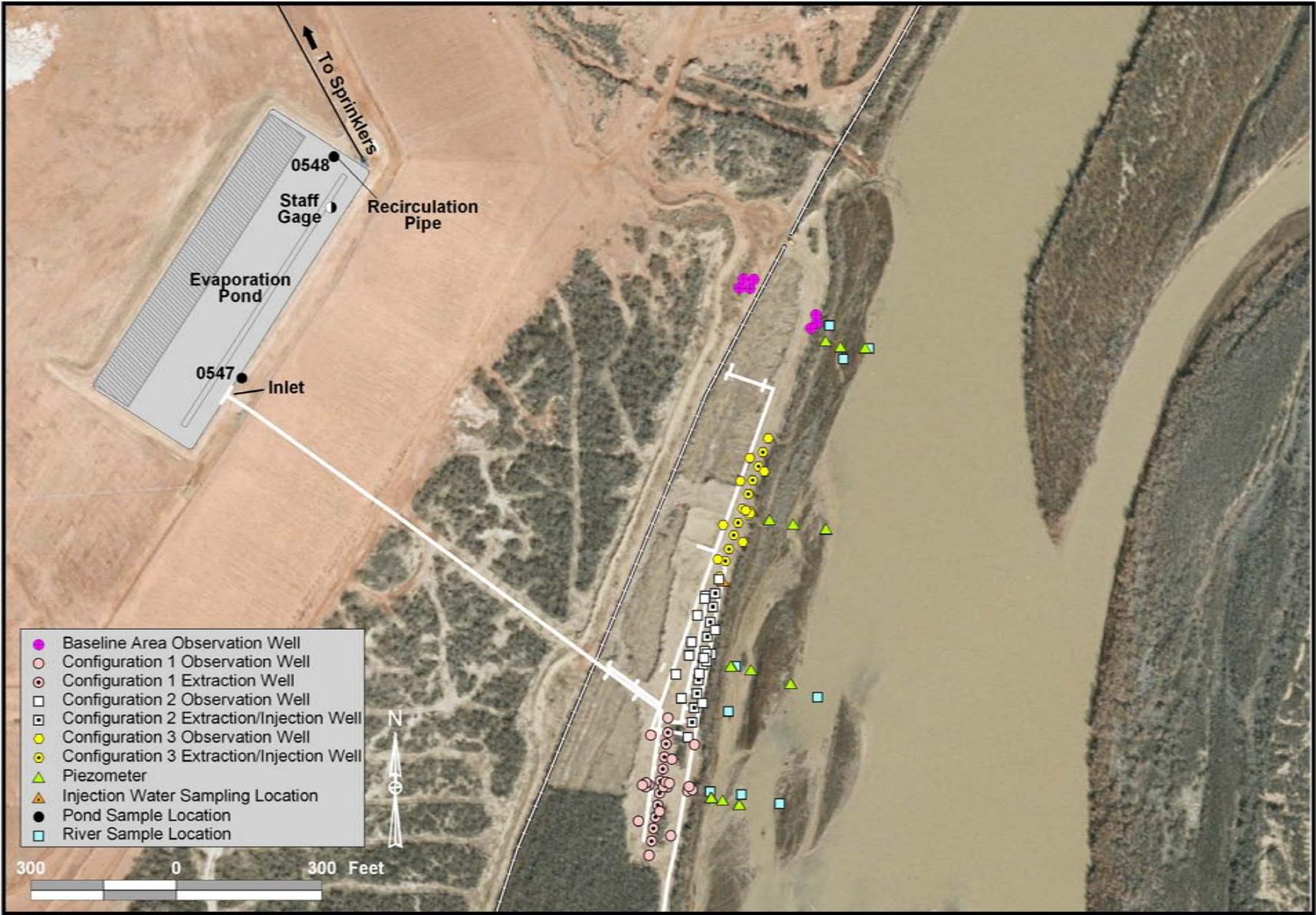


John R. Ford
Ground Water Lead



Date

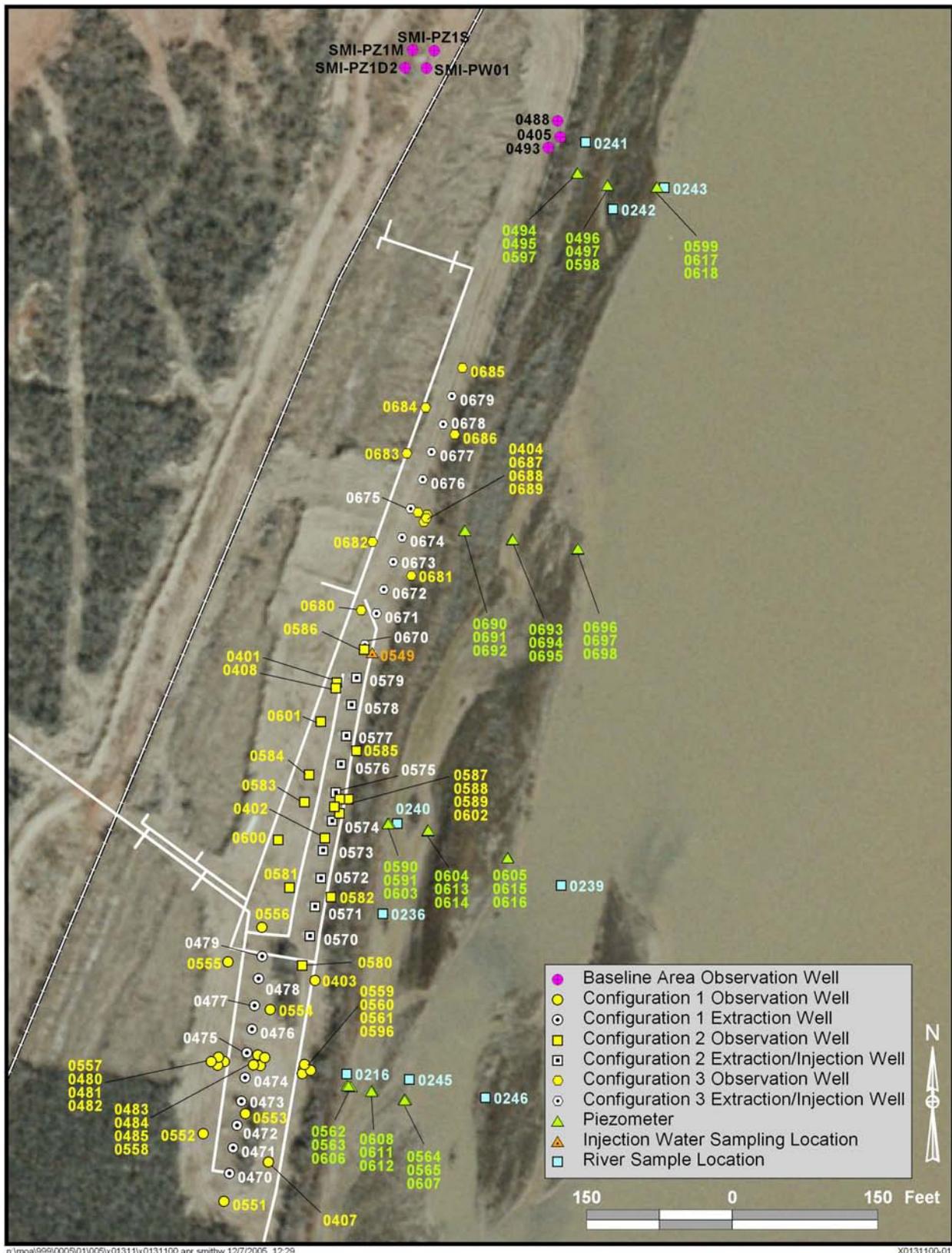
Sample Location Maps



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

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X0128500-01



Existing Well Locations

Data Assessment Summary

Water Sampling Field Activities Verification Checklist

Project	<u>Moab, Utah</u>	Date(s) of Water Sampling	<u>January 17–26, 2006</u>
Date(s) of Verification	<u>March 6, 2006</u>	Name of Verifier	<u>Jeff Price</u>

	Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures? List other documents, SOP's, instructions.	<u>Yes</u>	
	<u>NA</u>	
2. Were the sampling locations specified in the planning documents sampled?	<u>No</u>	<u>See trip report for explanation.</u>
3. Was a pre-trip calibration conducted as specified in the above-named documents?	<u>Yes</u>	
4. Was an operational check of the field equipment conducted twice daily? Did the operational checks meet criteria?	<u>Yes</u>	
	<u>Yes</u>	
5. Were the number and types (alkalinity, temperature, Ec, pH, turbidity, DO, ORP) of field measurements taken as specified?	<u>Yes</u>	
6. Was the category of the well documented?	<u>Yes</u>	
7. Were the following conditions met when purging a Category I well:		
Was one pump/tubing volume purged prior to sampling?	<u>Yes</u>	
Did the water level stabilize prior to sampling?	<u>Yes</u>	
Did pH, specific conductance, and turbidity measurements stabilize prior to sampling?	<u>Yes</u>	
Was the flow rate less than 500 mL/min?	<u>Yes</u>	
If a portable pump was used, was there a 4-hour delay between pump installation and sampling?	<u>NA</u>	

Water Sampling Field Activities Verification Checklist (continued)

	Response (Yes, No, NA)	Comments
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	
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment?	Yes	
11. Were trip blanks prepared and included with each shipment of VOC samples?	NA	
12. Were QC 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	

Laboratory Performance Assessment

General Information

Requisition No. (RIN): 06010289
 Sample Event: January 24–25, 2006
 Site(s): Moab, Utah
 Laboratory: Paragon Analytics
 Work Order No.: 0601168
 Analysis: Metals and Inorganics
 Validator: Steve Donovan
 Review Date: March 2, 2005

This validation was performed according to the *Environmental Procedures Catalog (STO 6)*, “Standard Practice for Validation of Laboratory Data”, GT-9(P). 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	MCAWW 350.1	MCAWW 350.1
Bromide, Br	MIS-A-038	SW-846 9056	SW-846 9056
Chloride, Cl	MIS-A-039	SW-846 9056	SW-846 9056
Sulfate, SO ₄	MIS-A-044	SW-846 9056	SW-846 9056
Total Dissolved Solids, TDS	WCH-A-033	MCAWW 160.1	MCAWW 160.1
Uranium, U	GJO-01	SW-846 3005A	SW-846 6020A

Data Qualifier Summary

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

Table 2. Data Qualifiers

Sample Number	Location	Analyte	Flag	Reason
0601168-27	2239 (Equipment Blank)	U	U	Less than 5 times the calibration blank

Sample Shipping/Receiving

Paragon Analytics in Fort Collins, Colorado, received 27 samples on January 27, 2006, accompanied by a Chain of Custody (COC) form. The COC form was checked to confirm that all of the samples were listed on the forms with collection dates and times, and that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents, including the COC form and the sample tickets, had no errors or omissions.

Preservation and Holding Times

The sample shipment was received cool and intact, with interior cooler temperatures of 1.8 °C and 2.2 °C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses, and all samples were analyzed within the applicable holding times.

Laboratory Instrument Calibration

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for all analytes. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear curve. Compliance requirements for continuing calibration checks are established to ensure that the instrument continues to be capable of producing acceptable qualitative and quantitative data. All laboratory instrument calibrations were performed correctly in accordance with the cited methods.

Method SW-846 6020A

Calibration for uranium was performed on February 15, 2006. The initial calibration was performed using six calibration standards, resulting in a calibration curve with a correlation coefficient (r^2) value greater than 0.995. The absolute value of the curve intercept was less than 3 times the Method Detection Limit (MDL). Calibration and laboratory spike standards were prepared from independent sources. Initial and continuing calibration verification (CCV) checks were made at the required frequency, resulting in four CCVs. All calibration check results met the acceptance criteria. A reporting limit verification check was made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit. The check was within the acceptance criteria range. Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries were stable and within acceptable ranges.

Method SW-846 9056

The initial calibrations for bromide, chloride, and sulfate were performed using five calibration standards each on January 31, 2006. The calibration curve r^2 values were greater than 0.995 and intercepts were less than 3 times the MDL. Initial calibration and calibration check standards were prepared from independent sources. Initial and continuing calibration checks were made at the required frequency resulting in eight CCVs. The calibration checks met the acceptance criteria.

Method MCAWW 350.1

The initial calibrations for ammonia as N were performed using six calibration standards on January 30, 2006, resulting in a calibration curve with an r^2 value greater than 0.995 and an intercept less than 3 times the MDL. Initial and continuing calibration checks were made at the required frequency resulting in seven CCVs. All calibration check results were within the acceptance criteria.

Method MCAWW 160.1

There is no initial or continuing calibration requirement associated with the determination of total dissolved solids (TDS).

Method and Calibration Blanks

The initial and continuing uranium calibration blanks were below the practical quantitation limits but greater than the MDL. The uranium result for sample 0601168-27 was less than 5 times the concentration of the associated continuing calibration blank and is qualified as "U". The bromide, chloride, sulfate, ammonia as N, TDS method blanks, and initial and continuing calibration blanks were below the MDLs.

Inductively Coupled Plasma Interference Check Sample Analysis

Inductively coupled plasma interference check samples were analyzed at the required frequency to verify the instrumental interelement and background correction factors. All check sample results met the acceptance criteria.

Matrix Spike Analysis

Matrix spike and matrix spike duplicate (MS/MSD) pairs were analyzed for uranium, bromide, and ammonia as N as a measure of method performance in the sample matrix. The MS recoveries met the recovery and precision criteria for all analytes.

Laboratory Replicate Analysis

The relative percent difference (RPD) values for the laboratory replicate sample and MSD sample results for all analytes were less than 20 percent, indicating acceptable laboratory precision.

Laboratory Control Samples

Laboratory control samples (LCS) were analyzed at the correct frequency to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. The results were acceptable for all analytes.

Metals Serial Dilution

Serial dilutions were performed during the uranium analysis to monitor physical or chemical interferences that may exist in the sample matrix. The results met the acceptance criteria for samples where the concentration of the undiluted sample was greater than 100 times the reporting limit.

Detection Limits/Dilutions

Samples were diluted in a consistent and acceptable manner when required. The samples were diluted prior to analysis of uranium to reduce interferences. The required detection limits were achieved for all analytes.

Completeness

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

Chromatography Peak Integration

The integration of analyte peaks was reviewed for all ion chromatography data. There were no manual integrations performed, and all peak integrations were satisfactory.

Electronic Data Deliverable File

The electronic data deliverable (EDD) file arrived on February 23, 2006. The Sample Management System EDD validation module was used to verify that the EDD file was complete and in compliance with requirements. The module compares the contents of the file to the requested analyses to ensure all and only the requested data are delivered. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package.

General Information

Requisition No. (RIN): 06010290
Sample Event: January 18–19, 2006
Site(s): Moab, Utah
Laboratory: Severn Trent, St. Louis
Work Order No.: F6A230164
Analysis: Metals, Inorganics
Validator: Steve Donovan
Review Date: March 2, 2006

This validation was performed according to the *Environmental Procedures Catalog* (STO 6), “Standard Practice for Validation of Laboratory Data,” GT-9(P). See attached Data Validation Worksheets for supporting documentation on the data review and 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 3.

Table 3. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Ammonia as N, NH ₃ -N	WCH-A-005	MCAWW 350.1	MCAWW 350.1
Bromide, Br	MIS-A-038	MCAWW 300.0A	MCAWW 300.0A
Chemical Oxygen Demand, COD	WCH-A-010	MCAWW 410.4	MCAWW 410.4
Chloride, Cl	MIS-A-039	MCAWW 300.0A	MCAWW 300.0A
Dissolved Organic Carbon, DOC	WCH-A-024	MCAWW 415.1	MCAWW 415.1
Iron, Fe	GJO-16	SW-846 3005A	SW-846 6010B
Manganese, Mn	GJO-17	SW-846 3005A	SW-846 6010B
Nitrite/Nitrate as N, NO ₂ /NO ₃ -N	WCH-A-005	MCAWW 353.2	MCAWW 353.2
Phosphate as P	WCH-A-029	MCAWW 365.2	MCAWW 365.2
Selenium, Se	GJO-14	SW-846 3005A	SW-846 6020A
Sulfate, SO ₄	MIS-A-044	MCAWW 300.0A	MCAWW 300.0A
Total Dissolved Solids, TDS	WCH-A-033	MCAWW 160.1	MCAWW 160.1
Total Inorganic Carbon, TIC	GJO-49	MCAWW 415.1	MCAWW 415.1
Total Kjeldahl Nitrogen, TKN	WCH-A-039	MCAWW 351.2	MCAWW 351.2
Total Organic Carbon, TOC	WCH-A-025	MCAWW 415.1	MCAWW 415.1
Uranium, U	GJO-01	SW-846 3005A	SW-846 6020A

Data Qualifier Summary

Analytical results were qualified as listed in Table 4. Refer to the following sections for an explanation of the data qualifiers applied.

Table 4. Data Qualifiers

Sample Number	Location	Analyte	Flag	Reason
F6A230164-001	0588	Fe	U	Less than 5 times the calibration blank
F6A230164-001	0588	TKN	J	MS failure
F6A230164-001	0588	TIC	J	MS failure
F6A230164-001	0588	TOC	J	MS failure
F6A230164-003	0589	Fe	U	Less than 5 times the calibration blank
F6A230164-003	0589	TKN	J	MS failure
F6A230164-003	0589	TIC	J	MS failure
F6A230164-003	0589	TOC	J	MS failure
F6A230164-005	0591	Fe	U	Less than 5 times the calibration blank
F6A230164-005	0591	TKN	J	MS failure
F6A230164-005	0591	TIC	J	MS failure
F6A230164-005	0591	TOC	J	MS failure
F6A230164-007	0602	Fe	U	Less than 5 times the calibration blank
F6A230164-007	0602	TKN	J	MS failure
F6A230164-007	0602	TIC	J	MS failure
F6A230164-007	0602	TOC	J	MS failure
F6A230164-009	0603	Fe	U	Less than 5 times the calibration blank
F6A230164-009	0603	TKN	J	MS failure
F6A230164-009	0603	TIC	J	MS failure
F6A230164-009	0603	TOC	J	MS failure
F6A230164-013	2281 (0602 Dup)	Fe	U	Less than 5 times the calibration blank
F6A230164-013	2281 (0602 Dup)	TKN	J	MS failure
F6A230164-013	2281 (0602 Dup)	TIC	J	MS failure
F6A230164-013	2281 (0602 Dup)	TOC	J	MS failure
F6A230164-015	2282 (Equip Blank)	TKN	J	MS failure
F6A230164-015	2282 (Equip Blank)	TOC	J	MS failure

Sample Shipping/Receiving

Severn Trent Laboratories in St. Louis, Missouri, received 16 water samples on January 21, 2006, accompanied by a COC form. The COC form was checked to confirm that all of the samples were listed on the 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 form and the sample tickets, had no errors or omissions.

Preservation and Holding Times

The sample shipment was received cool and intact with the temperature within the coolers of 4 °C, which complies with requirements. All samples were received in the correct container types and had been preserved correctly for the requested analyses. All samples were analyzed within the applicable holding times.

Laboratory Instrument Calibration

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for all analytes. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear curve. Compliance requirements for continuing calibration checks are established to ensure that the instrument continues to be capable of producing acceptable qualitative and quantitative data. All laboratory instrument calibrations were performed correctly in accordance with the cited methods.

Method SW-846 6010B

Calibrations for iron and manganese were performed on January 24, 2006, using three calibration standards resulting in calibration curves with r^2 values greater than 0.995. The absolute values of the calibration curve intercepts were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and CCV checks were made at the required frequency, resulting in three CCVs. All calibration checks met the acceptance criteria. Reporting limit verification checks were made at the beginning and end of the analytical sequence to verify the linearity of the calibration curve near the practical quantitation limit. All results were within the acceptance range.

Method SW-846 6020A

Calibrations for selenium and uranium were performed on January 24, 2006, and January 25, 2006. The initial calibrations were performed using five calibration standards resulting in calibration curves with r^2 values greater than 0.995. The absolute values of the curve intercepts were less than 3 times the MDL. Calibration and laboratory spike standards were prepared from independent sources. Initial and CCV checks were made at the required frequency resulting in nine CCVs. All calibration check results met the acceptance criteria. A reporting limit verification check was made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit. The check results for all analytes were within the acceptance criteria range. Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries were stable and within acceptable ranges.

Method MCAWW 300.0A

The initial calibrations for bromide, chloride, and sulfate were performed using five calibration standards each on January 24, 2006. The calibration curve r^2 values were greater than 0.995 and intercepts were less than 3 times the MDL. Initial calibration and calibration check standards were prepared from independent sources. Initial and continuing calibration checks were made at the required frequency, resulting in five CCVs. All calibration checks met the acceptance criteria.

Method MCAWW 160.1

There is no initial or continuing calibration requirement associated with the determination of TDS.

Method MCAWW 350.1

The initial calibrations for ammonia as N were performed using six calibration standards on January 26, 2006, resulting in a calibration curve with an r^2 value greater than 0.995 and an intercept less than 3 times the MDL. Initial and CCV checks were made at the required frequency resulting in five CCVs. All calibration check results met the acceptance criteria.

Method MCAWW 351.2

The initial calibrations for total Kjeldahl nitrogen were performed using five calibration standards on January 26, 2006, resulting in calibration curves with r^2 values greater than 0.995 and intercepts less than 3 times the MDL. Initial and CCV checks were made at the required frequency resulting in four CCVs. All calibration check results met the acceptance criteria.

Method MCAWW 353.2

The initial calibrations for nitrite/nitrate as N were performed using seven calibration standards on January 27, 2006, resulting in calibration curves with r^2 values greater than 0.995 and intercepts less than 3 times the MDL. Initial and CCV checks were made at the required frequency resulting in seven CCVs. All calibration check results met the acceptance criteria.

Method MCAWW 365.2

The initial calibrations for phosphate as P were performed using four calibration standards on January 25, 2006, resulting in calibration curves with r^2 values greater than 0.995 and intercepts less than 3 times the MDL. Initial and CCV checks were made at the required frequency resulting in four CCVs. All calibration check results met the acceptance criteria.

Method MCAWW 410.4

There is no initial or continuing calibration requirement associated with the determination of chemical oxygen demand.

Method MCAWW 415.1 Organic Carbon, Total and Dissolved

The initial calibrations for organic carbon were performed using three calibration standards on January 27, 2006, and January 28, 2006, resulting in calibration curves with r^2 values greater than 0.995 and an intercept less than 3 times the MDL. Initial and CCV checks were made at the required frequency resulting in five CCVs. All calibration check results met the acceptance criteria.

Method MCAWW 415.1 Total Inorganic Carbon

The initial calibrations for total inorganic carbon were performed using three calibration standards on January 29, 2006, resulting in calibration curves with r^2 values greater than 0.995 and intercepts less than 3 times the MDL. Initial and CCV checks were made at the required frequency resulting in four CCVs. All calibration check results met the acceptance criteria.

Method and Calibration Blanks

Method blanks are analyzed to assess any contamination that may have occurred during sample preparation. Calibration blanks are analyzed to assess instrument contamination prior to and during sample analysis. All method blanks and calibration blanks were below the required detection limits. In cases where blank concentration exceeds the instrument detection limit, the associated sample results are qualified with a “U” flag (not detected) when the sample result is greater than the MDL but less than 5 times the blank concentration.

Inductively Coupled Plasma Interference Check Sample Analysis

Inductively coupled plasma interference check samples were analyzed at the required frequency to verify the instrumental interference and background correction factors. All check sample results met the acceptance criteria.

Matrix Spike Analysis

MS samples were analyzed for all analytes as a measure of method performance in the sample matrix. The spike recoveries met the recovery and precision criteria for all analytes with the following exceptions. The total organic carbon, total inorganic carbon, and total Kjeldahl nitrogen spike recoveries were outside the acceptance range. All results are qualified with a “J” flag as estimated values.

Laboratory Replicate Analysis

The RPD values for the laboratory replicate sample and MSD sample results for all analytes were less than 20 percent for results that are greater than five times the practical quantitation limit, indicating acceptable laboratory precision.

Laboratory Control Samples

The LCS were analyzed at the correct frequency to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. The results were acceptable for all analytes.

Metals Serial Dilution

Serial dilutions were performed during the metals analysis to monitor physical or chemical interferences that may exist in the sample matrix. All results met the acceptance criteria.

Detection Limits/Dilutions

Samples were diluted in a consistent and acceptable manner when required. The samples were diluted prior to analysis of uranium to reduce interferences. The required detection limits were achieved for all analytes.

Completeness

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

Chromatography Peak Integration

The integration of analyte peaks was reviewed for all ion chromatography data. There were no manual integrations performed, and all peak integrations were satisfactory.

Electronic Data Deliverable File

The EDD file arrived on January 31, 2006. The Sample Management System EDD validation module was used to verify that the EDD file was complete and in compliance with requirements. The module compares the contents of the file to the requested analyses to ensure all and only the requested data are delivered. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package.

General Information

Requisition No. (RIN): 06010291
Sample Event: January 18–19, 2006
Site(s): Moab, Utah
Laboratory: Microseeps, Pittsburgh, PA
Work Order No.: P0601294
Analysis: Dissolved Gasses, Reduced Metals
Validator: Steve Donovan
Review Date: March 2, 2006

This validation was performed according to the *Environmental Procedures Catalog* (STO 6), “Standard Practice for Validation of Laboratory Data,” GT-9(P). See attached Data Validation Worksheets for supporting documentation on the data review and 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 5.

Table 5. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Dissolved Gasses	GJO-52	AM20GAX	AM20GAX
Manganese (II)	GJO-53	Mod.7199	Mod.7199
Iron (II)	GJO-54	Mod.7199	Mod.7199

Data Qualifier Summary

None of the analytical results required qualification.

Sample Shipping/Receiving

Microseeps, located in Pittsburgh, Pennsylvania, received eight water samples accompanied by a COC form on January 21, 2006. The COC form was checked to confirm that all of the samples were listed on the form with collection dates and times, and that signatures and dates were present, indicating sample relinquishment and receipt. The COC form was complete with no errors or omissions.

Preservation and Holding Times

The sample shipment was received cool and intact on January 21, 2006. All samples were received in the correct container types and had been preserved correctly for the requested analyses. There are no standard holding times for these analytes, and the analyses were completed as quickly as possible.

Laboratory Instrument Calibration

Data for this RIN were reported at Analysis Service Level C (results plus quality control) and do not include calibration data.

Method Blanks

All method blank results were below the practical quantitation limits.

Matrix Spike Analysis

MS and MSD were analyzed for carbon dioxide, methane, iron (II), and manganese (II) as a measure of method performance in the sample matrix. The MS/MSD analyses resulted in acceptable recovery and precision for all analytes.

Laboratory Replicate Analysis

The RPD values for the LCS duplicate samples and MSD sample results for all analytes were less than 20 percent, indicating acceptable precision.

Laboratory Control Samples

The LCS were analyzed at the correct frequency to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. The LCS results were acceptable for all analysis categories.

Detection Limits/Dilutions

Samples were diluted in a consistent and acceptable manner when required. The required detection limits were met for all analytes.

Completeness

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

Electronic Data Deliverable File

The EDD file arrived on December 12, 2005. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package.

Field Analyses/Activities

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

Field Activities

All monitor well results were purged and sampled using the low-flow sampling method; extraction wells are not sampled using the low-flow sampling method.

Two equipment blanks were collected and analyzed for the same constituents as the Moab environmental samples. Analyte concentrations measured in the equipment blanks, with the exception of one ammonia, chloride, and total kjeldahl result, were below their respective contract-required detection limits and are considered acceptable. Three duplicate samples were collected. There are no established regulatory criteria for the evaluation of field duplicate samples; therefore, U.S. Environmental Protection Agency (EPA) guidance for laboratory duplicates (which is conservative for field duplicates) was used to assess the precision of the field duplicates. With the exception of one dissolved organic carbon, methane, phosphorous, total inorganic carbon, and total organic carbon, all other results met the criteria of +/-20 RPD and are considered acceptable.

Certification

Results were reported in correct units for all analytes requested. Appropriate contract-required laboratory qualifiers and target analyte lists were used. The required detection limits 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: Steve Donivan 4-27-06
Steve Donivan Date

Field Activities Validation Lead: for Ford 4-27-06
for Jeff Price Date

Attachment 1

Data Presentation

Minimums and Maximums Report

Minimums and Maximums Report

The Minimums and Maximums Report is generated by a data validation application (DataVal) used to query the SEEPro database. The DataVal 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.

SAMPLING DATA VALIDATION MINIMUMS AND MAXIMUMS REPORT -- No Field Parameters

LAB CODE: PAR, PARAGON (Fort Collins, CO)

LAB REQUISITION(S): 06010289

HISTORY BEGIN DATE: comparing to all historical data

REPORT DATE: 04/17/06 09:24:59: AM

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	0550	01/25/2006	Chloride	150		130		21		8	0
MOA01	0550	01/25/2006	Uranium	0.007	E	0.0065		0.0015		8	0
MOA01	0580	01/25/2006	Sulfate	280		8100	F	720	F	19	0
MOA01	0580	01/25/2006	Total Dissolved Solids	850		16000	F	1400	F	19	0
MOA01	0582	01/24/2006	Chloride	200		3300	F	210	F	15	0
MOA01	0590	01/24/2006	Uranium	0.001	Q	2	F	0.0066	QF	6	0

SAMPLING DATA VALIDATION MINIMUMS AND MAXIMUMS REPORT -- No Field Parameters

LAB CODE: PAR, PARAGON (Fort Collins, CO)

LAB REQUISITION(S): 06010289

HISTORY BEGIN DATE: comparing to all historical data

REPORT DATE: 04/17/06 09:24:59: AM

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

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

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

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

SAMPLING DATA VALIDATION MINIMUMS AND MAXIMUMS REPORT -- No Field Parameters

LAB CODE: STS, SEVERN TRENT ST. LOUIS (Earth City, MO)

LAB REQUISITION(S): 06010290

HISTORY BEGIN DATE: comparing to all historical data

REPORT DATE: 04/17/06 09:46:42: AM

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	0589	01/19/2006	Chemical Oxygen Demand	2810		2250	F	14	B	F	5	0
MOA01	0589	01/19/2006	Dissolved Organic Carbon	0.47	U	1500	H JF	5.3	B	JF	5	0
MOA01	0589	01/19/2006	Phosphorus	0.411		0.185	JF	0.021	B	F	5	0

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

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

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

SAMPLING DATA VALIDATION MINIMUMS AND MAXIMUMS REPORT -- No Field Parameters

LAB CODE: MSP, MICROSEEPS LABORATORY (Pittsburgh, PA)

LAB REQUISITION(S): 06010291

HISTORY BEGIN DATE: comparing to all historical data

REPORT DATE: 04/17/06 09:51:11: AM

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	0589	01/19/2006	Methane	6.9		3.8	F	2.2	F	5	0
MOA01	0602	01/18/2006	Dissolved Oxygen	6.4		4.3	F	1.15	F	6	0
MOA01	0602	01/18/2006	Dissolved Oxygen	5.9		4.3	F	1.15	F	6	0

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

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

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

Anomalous Data Review Checksheet

Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Alkalinity, Total (As CaCO3)	mg/L	0401	WL	01/25/2006	0001	18.00 - 18.00	162	F	#	-	-	
	mg/L	0402	WL	01/24/2006	0001	17.00 - 17.00	388	F	#	-	-	
	mg/L	0408	WL	01/25/2006	0001	26.00 - 26.00	456	F	#	-	-	
	mg/L	0550	IS, IHYD	01/25/2006	0001	0.00 - 0.00	150		#	-	-	
	mg/L	0580	WL	01/25/2006	0001	18.00 - 18.00	248		#	-	-	
	mg/L	0581	WL	01/24/2006	0001	18.00 - 18.00	316		#	-	-	
	mg/L	0582	WL	01/24/2006	0001	18.00 - 18.00	228		#	-	-	
	mg/L	0583	WL	01/24/2006	0001	18.00 - 18.00	532		#	-	-	
	mg/L	0584	WL	01/24/2006	0001	18.00 - 18.00	494		#	-	-	
	mg/L	0585	WL	01/25/2006	0001	18.00 - 18.00	216		#	-	-	
	mg/L	0586	WL	01/25/2006	0001	18.00 - 18.00	406		#	-	-	
	mg/L	0587	WL	01/24/2006	0001	18.00 - 18.00	350		#	-	-	
	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	240	F	#	-	-	
	mg/L	0588	WL	01/24/2006	0001	34.00 - 34.00	614		#	-	-	
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	680	F	#	-	-	
	mg/L	0589	WL	01/24/2006	0001	52.00 - 52.00	474		#	-	-	
	mg/L	0600	WL	01/24/2006	0001	27.00 - 27.00	828	F	#	-	-	
	mg/L	0601	WL	01/25/2006	0001	28.00 - 28.00	836	F	#	-	-	
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	300	F	#	-	-	
	mg/L	N3-8.3	WL, PZ	01/25/2006	0001	24.00 - 24.00	404	F	#	-	-	
Ammonia Total as N	mg/L	0236	SL, RIV	01/24/2006	0001	0.30 - 0.30	76		#	10	-	
	mg/L	0239	SL, RIV	01/24/2006	0001	0.40 - 0.40	0.78		#	0.1	-	
	mg/L	0239	SL, RIV	01/24/2006	0002	0.40 - 0.40	0.79		#	0.1	-	
	mg/L	0240	SL, RIV	01/24/2006	0001	0.40 - 0.40	69		#	10	-	
	mg/L	0401	WL	01/25/2006	0001	18.00 - 18.00	2.5	F	#	0.1	-	
	mg/L	0402	WL	01/24/2006	0001	17.00 - 17.00	40	F	#	1	-	

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Ammonia Total as N	mg/L	0408	WL	01/25/2006	0001	26.00 - 26.00	280		F	#	10	-
	mg/L	0550	IS, IHYD	01/25/2006	0001	0.00 - 0.00	0.1	U		#	0.1	-
	mg/L	0580	WL	01/25/2006	0001	18.00 - 18.00	21			#	0.5	-
	mg/L	0581	WL	01/24/2006	0001	18.00 - 18.00	150			#	10	-
	mg/L	0582	WL	01/24/2006	0001	18.00 - 18.00	60			#	10	-
	mg/L	0582	WL	01/24/2006	0002	18.00 - 18.00	56			#	10	-
	mg/L	0583	WL	01/24/2006	0001	18.00 - 18.00	240			#	10	-
	mg/L	0584	WL	01/24/2006	0001	18.00 - 18.00	310			#	10	-
	mg/L	0585	WL	01/25/2006	0001	18.00 - 18.00	35			#	1	-
	mg/L	0586	WL	01/25/2006	0001	18.00 - 18.00	140			#	10	-
	mg/L	0587	WL	01/24/2006	0001	18.00 - 18.00	33			#	1	-
	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	55.100		F	#	0.878	-
	mg/L	0588	WL	01/24/2006	0001	34.00 - 34.00	290			#	10	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	870.000		F	#	5.49	-
	mg/L	0589	WL	01/24/2006	0001	52.00 - 52.00	940			#	50	-
	mg/L	0590	WL, PZ	01/24/2006	0001	1.50 - 1.50	64		Q	#	10	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	145.000		QF	#	2.19	-
	mg/L	0600	WL	01/24/2006	0001	27.00 - 27.00	610		F	#	20	-
	mg/L	0601	WL	01/25/2006	0001	28.00 - 28.00	410		F	#	10	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	147.000		F	#	2.19	-
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	150.000		F	#	2.19	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	384.000		QF	#	5.49	-
	mg/L	0605	WL, PZ	01/24/2006	0001	9.90 - 9.90	360		QF	#	10	-
	mg/L	0613	WL, PZ	01/24/2006	0001	1.70 - 1.70	140		QF	#	10	-
	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	408.000		QF	#	4.39	-
	mg/L	0615	WL, PZ	01/24/2006	0001	1.90 - 1.90	33		QF	#	1	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Ammonia Total as N	mg/L	0616	WL, PZ	01/24/2006	0001	5.80 - 5.80	240		QF	#	10	-
	mg/L	N3-4.3	WL, PZ	01/25/2006	0001	14.00 - 14.00	6.6		QF	#	0.5	-
	mg/L	N3-8.3	WL, PZ	01/25/2006	0001	24.00 - 24.00	0.1	U	F	#	0.1	-
Bromide	mg/L	0236	SL, RIV	01/24/2006	0001	0.30 - 0.30	2	U		#	2	-
	mg/L	0239	SL, RIV	01/24/2006	0001	0.40 - 0.40	0.4	U		#	0.4	-
	mg/L	0239	SL, RIV	01/24/2006	0002	0.40 - 0.40	0.4	U		#	0.4	-
	mg/L	0240	SL, RIV	01/24/2006	0001	0.40 - 0.40	2	U		#	2	-
	mg/L	0401	WL	01/25/2006	0001	18.00 - 18.00	0.4	U	F	#	0.4	-
	mg/L	0402	WL	01/24/2006	0001	17.00 - 17.00	1	U	F	#	1	-
	mg/L	0408	WL	01/25/2006	0001	26.00 - 26.00	2	U	F	#	2	-
	mg/L	0550	IS, IHYD	01/25/2006	0001	0.00 - 0.00	0.4	U		#	0.4	-
	mg/L	0580	WL	01/25/2006	0001	18.00 - 18.00	0.4	U		#	0.4	-
	mg/L	0581	WL	01/24/2006	0001	18.00 - 18.00	2	U		#	2	-
	mg/L	0582	WL	01/24/2006	0001	18.00 - 18.00	1	U		#	1	-
	mg/L	0582	WL	01/24/2006	0002	18.00 - 18.00	1	U		#	1	-
	mg/L	0583	WL	01/24/2006	0001	18.00 - 18.00	4	U		#	4	-
	mg/L	0584	WL	01/24/2006	0001	18.00 - 18.00	4	U		#	4	-
	mg/L	0585	WL	01/25/2006	0001	18.00 - 18.00	1	U		#	1	-
	mg/L	0586	WL	01/25/2006	0001	18.00 - 18.00	2	U		#	2	-
	mg/L	0587	WL	01/24/2006	0001	18.00 - 18.00	1	U		#	1	-
	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.35		F	#	0.026	-
	mg/L	0588	WL	01/24/2006	0001	34.00 - 34.00	10	U		#	10	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	257	U	F	#	257	-
	mg/L	0589	WL	01/24/2006	0001	52.00 - 52.00	20	U		#	20	-
	mg/L	0590	WL, PZ	01/24/2006	0001	1.50 - 1.50	1	U	Q	#	1	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.10	B	QF	#	0.026	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Bromide	mg/L	0600	WL	01/24/2006	0001	27.00 - 27.00	4	U	F	#	4	-
	mg/L	0601	WL	01/25/2006	0001	28.00 - 28.00	4	U	F	#	4	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	0.30		F	#	0.026	-
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	0.28		F	#	0.026	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.53		QF	#	0.026	-
	mg/L	0604	WL, PZ	01/18/2006	0001	7.80 - 7.80	0.026	U	QF	#	0.026	-
	mg/L	0605	WL, PZ	01/24/2006	0001	9.90 - 9.90	4	U	QF	#	4	-
	mg/L	0613	WL, PZ	01/24/2006	0001	1.70 - 1.70	2	U	QF	#	2	-
	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	2.8		QF	#	0.026	-
	mg/L	0615	WL, PZ	01/24/2006	0001	1.90 - 1.90	1	U	QF	#	1	-
	mg/L	0616	WL, PZ	01/24/2006	0001	5.80 - 5.80	2	U	QF	#	2	-
	mg/L	N3-4.3	WL, PZ	01/25/2006	0001	14.00 - 14.00	1	U	QF	#	1	-
	mg/L	N3-8.3	WL, PZ	01/25/2006	0001	24.00 - 24.00	1	U	F	#	1	-
Carbon Dioxide	mg/L	0588	WL	01/18/2006	0002	26.00 - 26.00	15.000		F	#	0.53	-
	mg/L	0589	WL	01/19/2006	0002	44.00 - 44.00	71.000		F	#	0.53	-
	mg/L	0591	WL, PZ	01/18/2006	0002	4.40 - 4.40	4.500	J	QF	#	0.53	-
	mg/L	0602	WL	01/18/2006	0002	18.00 - 18.00	7.800		F	#	0.53	-
	mg/L	0602	WL	01/18/2006	0004	18.00 - 18.00	8.400		F	#	0.53	-
	mg/L	0603	WL, PZ	01/18/2006	0002	9.70 - 9.70	1.100	J	QF	#	0.53	-
	mg/L	0604	WL, PZ	01/18/2006	0002	7.80 - 7.80	1.100	J	QF	#	0.53	-
	mg/L	0614	WL, PZ	01/18/2006	0002	5.60 - 5.60	48.000		QF	#	0.53	-
Chemical Oxygen Demand	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	66.0		F	#	9.2	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	2810		F	#	18.3	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	29.0		QF	#	9.2	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	28.0		F	#	9.2	-
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	25.0		F	#	9.2	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Chemical Oxygen Demand	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	320		QF	#	9.2	-
Chloride	mg/L	0236	SL, RIV	01/24/2006	0001	0.30 - 0.30	770			#	20	-
	mg/L	0239	SL, RIV	01/24/2006	0001	0.40 - 0.40	160			#	4	-
	mg/L	0239	SL, RIV	01/24/2006	0002	0.40 - 0.40	160			#	4	-
	mg/L	0240	SL, RIV	01/24/2006	0001	0.40 - 0.40	670			#	20	-
	mg/L	0401	WL	01/25/2006	0001	18.00 - 18.00	150		F	#	4	-
	mg/L	0402	WL	01/24/2006	0001	17.00 - 17.00	380		F	#	10	-
	mg/L	0408	WL	01/25/2006	0001	26.00 - 26.00	1000		F	#	40	-
	mg/L	0550	IS, IHYD	01/25/2006	0001	0.00 - 0.00	150			#	4	-
	mg/L	0580	WL	01/25/2006	0001	18.00 - 18.00	140			#	4	-
	mg/L	0581	WL	01/24/2006	0001	18.00 - 18.00	730			#	20	-
	mg/L	0582	WL	01/24/2006	0001	18.00 - 18.00	200			#	10	-
	mg/L	0582	WL	01/24/2006	0002	18.00 - 18.00	210			#	10	-
	mg/L	0583	WL	01/24/2006	0001	18.00 - 18.00	1400			#	40	-
	mg/L	0584	WL	01/24/2006	0001	18.00 - 18.00	1400			#	40	-
	mg/L	0585	WL	01/25/2006	0001	18.00 - 18.00	240			#	10	-
	mg/L	0586	WL	01/25/2006	0001	18.00 - 18.00	710			#	20	-
	mg/L	0587	WL	01/24/2006	0001	18.00 - 18.00	240			#	10	-
	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	1180		F	#	12.5	-
	mg/L	0588	WL	01/24/2006	0001	34.00 - 34.00	6400			#	100	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	20400		F	#	250	-
	mg/L	0589	WL	01/24/2006	0001	52.00 - 52.00	32000			#	1000	-
mg/L	0590	WL, PZ	01/24/2006	0001	1.50 - 1.50	460		Q	#	20	-	
mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	216		QF	#	2.5	-	
mg/L	0600	WL	01/24/2006	0001	27.00 - 27.00	2800		F	#	100	-	
mg/L	0601	WL	01/25/2006	0001	28.00 - 28.00	1700		F	#	40	-	

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Chloride	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	241	F	#	2.5	-	
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	234	F	#	2.5	-	
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	1580	QF	#	12.5	-	
	mg/L	0604	WL, PZ	01/18/2006	0001	7.80 - 7.80	410	QF	#	5	-	
	mg/L	0605	WL, PZ	01/24/2006	0001	9.90 - 9.90	180	QF	#	4	-	
	mg/L	0613	WL, PZ	01/24/2006	0001	1.70 - 1.70	520	QF	#	20	-	
	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	3830	QF	#	125	-	
	mg/L	0615	WL, PZ	01/24/2006	0001	1.90 - 1.90	240	QF	#	10	-	
	mg/L	0616	WL, PZ	01/24/2006	0001	5.80 - 5.80	580	QF	#	20	-	
	mg/L	N3-4.3	WL, PZ	01/25/2006	0001	14.00 - 14.00	770	QF	#	10	-	
mg/L	N3-8.3	WL, PZ	01/25/2006	0001	24.00 - 24.00	480	F	#	10	-		
Dissolved Organic Carbon	mg/L	0588	WL	01/18/2006	N001	26.00 - 26.00	1.3	F	#	0.47	-	
	mg/L	0589	WL	01/19/2006	N001	44.00 - 44.00	0.47	U	F	#	0.47	-
	mg/L	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	1.6		QF	#	0.47	-
	mg/L	0602	WL	01/18/2006	N001	18.00 - 18.00	0.47	U	F	#	0.47	-
	mg/L	0602	WL	01/18/2006	N003	18.00 - 18.00	1.2		F	#	0.47	-
	mg/L	0603	WL, PZ	01/18/2006	N001	9.70 - 9.70	3.0		QF	#	0.47	-
Dissolved Oxygen	mg/L	0401	WL	01/25/2006	N001	18.00 - 18.00	1.52	F	#	-	-	
	mg/L	0402	WL	01/24/2006	N001	17.00 - 17.00	1.50	F	#	-	-	
	mg/L	0408	WL	01/25/2006	N001	26.00 - 26.00	0.38	F	#	-	-	
	mg/L	0550	IS, IHYD	01/25/2006	N001	0.00 - 0.00	8.37		#	-	-	
	mg/L	0580	WL	01/25/2006	N001	18.00 - 18.00	0.81		#	-	-	
	mg/L	0581	WL	01/24/2006	N001	18.00 - 18.00	1.00		#	-	-	
	mg/L	0582	WL	01/24/2006	N001	18.00 - 18.00	1.33		#	-	-	
	mg/L	0583	WL	01/24/2006	N001	18.00 - 18.00	1.31		#	-	-	
	mg/L	0584	WL	01/24/2006	N001	18.00 - 18.00	0.97		#	-	-	

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			
				DATE	ID			LAB	DATA QA	DETECTION LIMIT	UN-CERTAINTY
Dissolved Oxygen	mg/L	0585	WL	01/25/2006	N001	18.00 - 18.00	0.72		#	-	-
	mg/L	0586	WL	01/25/2006	N001	18.00 - 18.00	0.51		#	-	-
	mg/L	0587	WL	01/24/2006	N001	18.00 - 18.00	1.52		#	-	-
	mg/L	0588	WL	01/18/2006	0002	26.00 - 26.00	5.000	F	#	0.07	-
	mg/L	0588	WL	01/18/2006	N001	26.00 - 26.00	2.04	F	#	-	-
	mg/L	0588	WL	01/24/2006	N001	34.00 - 34.00	0.86		#	-	-
	mg/L	0589	WL	01/19/2006	0002	44.00 - 44.00	4.500	F	#	0.07	-
	mg/L	0589	WL	01/19/2006	N001	44.00 - 44.00	2.46	F	#	-	-
	mg/L	0589	WL	01/24/2006	N001	52.00 - 52.00	0.89		#	-	-
	mg/L	0590	WL, PZ	01/24/2006	N001	1.50 - 1.50	5.81	Q	#	-	-
	mg/L	0591	WL, PZ	01/18/2006	0002	4.40 - 4.40	4.700	QF	#	0.07	-
	mg/L	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	8.00	QF	#	-	-
	mg/L	0600	WL	01/24/2006	N001	27.00 - 27.00	0.83	F	#	-	-
	mg/L	0601	WL	01/25/2006	N001	28.00 - 28.00	0.34	F	#	-	-
	mg/L	0602	WL	01/18/2006	0002	18.00 - 18.00	5.900	F	#	0.07	-
	mg/L	0602	WL	01/18/2006	0004	18.00 - 18.00	6.400	F	#	0.07	-
	mg/L	0602	WL	01/18/2006	N001	18.00 - 18.00	1.54	F	#	-	-
	mg/L	0603	WL, PZ	01/18/2006	0002	9.70 - 9.70	4.600	QF	#	0.07	-
	mg/L	0603	WL, PZ	01/18/2006	N001	9.70 - 9.70	8.62	QF	#	-	-
	mg/L	0604	WL, PZ	01/18/2006	0002	7.80 - 7.80	4.800	QF	#	0.07	-
	mg/L	0604	WL, PZ	01/18/2006	N001	7.80 - 7.80	6.46	QF	#	-	-
	mg/L	0605	WL, PZ	01/24/2006	N001	9.90 - 9.90	4.01	QF	#	-	-
	mg/L	0613	WL, PZ	01/24/2006	N001	1.70 - 1.70	6.72	QF	#	-	-
	mg/L	0614	WL, PZ	01/18/2006	0002	5.60 - 5.60	5.800	QF	#	0.07	-
	mg/L	0614	WL, PZ	01/18/2006	N001	5.60 - 5.60	7.13	QF	#	-	-
	mg/L	0615	WL, PZ	01/24/2006	N001	1.90 - 1.90	6.26	QF	#	-	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Dissolved Oxygen	mg/L	0616	WL, PZ	01/24/2006	N001	5.80 - 5.80	7.64		QF	#	-	-
	mg/L	N3-4.3	WL, PZ	01/25/2006	N001	14.00 - 14.00	0.90		QF	#	-	-
	mg/L	N3-8.3	WL, PZ	01/25/2006	N001	24.00 - 24.00	0.20		F	#	-	-
Iron	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.0251	B	UF	#	0.0074	-
	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.03		F	#	0.03	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	0.0515	B	UF	#	0.0074	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	0.014		F	#	0.03	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.0111	B	UQF	#	0.0074	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.03	U	QF	#	0.03	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	0.0211	B	UF	#	0.0074	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	0.03	U	F	#	0.03	-
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	0.0198	B	UF	#	0.0074	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.0195	B	UQF	#	0.0074	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.03		QF	#	0.03	-
	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	0.98		QF	#	0.03	-
Iron (II)	mg/L	0588	WL	01/18/2006	0002	26.00 - 26.00	1.0	U	F	#	0.1	-
	mg/L	0589	WL	01/19/2006	0002	44.00 - 44.00	1.0	U	F	#	0.1	-
	mg/L	0591	WL, PZ	01/18/2006	0002	4.40 - 4.40	1.0	U	QF	#	0.1	-
	mg/L	0602	WL	01/18/2006	0002	18.00 - 18.00	1.0	U	F	#	0.1	-
	mg/L	0602	WL	01/18/2006	0004	18.00 - 18.00	1.0	U	F	#	0.1	-
	mg/L	0603	WL, PZ	01/18/2006	0002	9.70 - 9.70	1.2		QF	#	0.1	-
	mg/L	0604	WL, PZ	01/18/2006	0002	7.80 - 7.80	1.0	U	QF	#	0.1	-
	mg/L	0614	WL, PZ	01/18/2006	0002	5.60 - 5.60	1.0	U	QF	#	0.1	-
Manganese	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.838		F	#	0.001	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	5.350		F	#	0.001	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.311		QF	#	0.001	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Manganese	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	0.668	F #	0.001	-
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	0.563	F #	0.001	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	1.480	QF #	0.001	-
Manganese (II)	mg/L	0588	WL	01/18/2006	0002	26.00 - 26.00	1.0	J F #	-	-
	mg/L	0589	WL	01/19/2006	0002	44.00 - 44.00	9.7	F #	-	-
	mg/L	0591	WL, PZ	01/18/2006	0002	4.40 - 4.40	2.8	QF #	-	-
	mg/L	0602	WL	01/18/2006	0002	18.00 - 18.00	0.5	J F #	-	-
	mg/L	0602	WL	01/18/2006	0004	18.00 - 18.00	0.5	J F #	-	-
	mg/L	0603	WL, PZ	01/18/2006	0002	9.70 - 9.70	5.4	QF #	-	-
	mg/L	0604	WL, PZ	01/18/2006	0002	7.80 - 7.80	1.0	U QF #	-	-
	mg/L	0614	WL, PZ	01/18/2006	0002	5.60 - 5.60	6.9	QF #	-	-
Methane	ug/L	0588	WL	01/18/2006	0002	26.00 - 26.00	8.700	F #	0.011	-
	ug/L	0589	WL	01/19/2006	0002	44.00 - 44.00	6.900	F #	0.011	-
	ug/L	0591	WL, PZ	01/18/2006	0002	4.40 - 4.40	5.500	QF #	0.011	-
	ug/L	0602	WL	01/18/2006	0002	18.00 - 18.00	4.600	F #	0.011	-
	ug/L	0602	WL	01/18/2006	0004	18.00 - 18.00	7.800	F #	0.011	-
	ug/L	0603	WL, PZ	01/18/2006	0002	9.70 - 9.70	3.500	QF #	0.011	-
	ug/L	0604	WL, PZ	01/18/2006	0002	7.80 - 7.80	3.400	QF #	0.011	-
	ug/L	0614	WL, PZ	01/18/2006	0002	5.60 - 5.60	15.000	QF #	0.011	-
Nitrate + Nitrite as Nitrogen	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	2.930	F #	0.0269	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	18.900	F #	0.108	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	3.890	QF #	0.0269	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	2.190	F #	0.0108	-
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	1.680	F #	0.0054	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.750	QF #	0.0054	-
	mg/L	0604	WL, PZ	01/18/2006	0001	7.80 - 7.80	0.0527	QF #	0.0027	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			UN-CERTAINTY
				DATE	ID			LAB	DATA	QA	
Nitrate + Nitrite as Nitrogen	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	365.000	QF	#	1.08	-
Nitrogen, Total	mg/L	0588	WL	01/18/2006	0002	26.00 - 26.00	20.000	F	#	0.06	-
	mg/L	0589	WL	01/19/2006	0002	44.00 - 44.00	12.000	F	#	0.06	-
	mg/L	0591	WL, PZ	01/18/2006	0002	4.40 - 4.40	27.000	QF	#	0.06	-
	mg/L	0602	WL	01/18/2006	0002	18.00 - 18.00	20.000	F	#	0.06	-
	mg/L	0602	WL	01/18/2006	0004	18.00 - 18.00	25.000	F	#	0.06	-
	mg/L	0603	WL, PZ	01/18/2006	0002	9.70 - 9.70	23.000	QF	#	0.06	-
	mg/L	0604	WL, PZ	01/18/2006	0002	7.80 - 7.80	17.000	QF	#	0.06	-
	mg/L	0614	WL, PZ	01/18/2006	0002	5.60 - 5.60	27.000	QF	#	0.06	-
Oxidation Reduction Potent	mV	0401	WL	01/25/2006	N001	18.00 - 18.00	128.8	F	#	-	-
	mV	0402	WL	01/24/2006	N001	17.00 - 17.00	167.7	F	#	-	-
	mV	0408	WL	01/25/2006	N001	26.00 - 26.00	153.6	F	#	-	-
	mV	0550	IS, IHYD	01/25/2006	N001	0.00 - 0.00	159.0		#	-	-
	mV	0580	WL	01/25/2006	N001	18.00 - 18.00	167		#	-	-
	mV	0581	WL	01/24/2006	N001	18.00 - 18.00	185.5		#	-	-
	mV	0582	WL	01/24/2006	N001	18.00 - 18.00	166.5		#	-	-
	mV	0583	WL	01/24/2006	N001	18.00 - 18.00	167.1		#	-	-
	mV	0584	WL	01/24/2006	N001	18.00 - 18.00	171.9		#	-	-
	mV	0585	WL	01/25/2006	N001	18.00 - 18.00	148.1		#	-	-
	mV	0586	WL	01/25/2006	N001	18.00 - 18.00	149.3		#	-	-
	mV	0587	WL	01/24/2006	N001	18.00 - 18.00	145.7		#	-	-
	mV	0588	WL	01/18/2006	N001	26.00 - 26.00	135.7	F	#	-	-
	mV	0588	WL	01/24/2006	N001	34.00 - 34.00	141.8		#	-	-
	mV	0589	WL	01/19/2006	N001	44.00 - 44.00	115.4	F	#	-	-
	mV	0589	WL	01/24/2006	N001	52.00 - 52.00	131		#	-	-
	mV	0590	WL, PZ	01/24/2006	N001	1.50 - 1.50	-66.1	Q	#	-	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Oxidation Reduction Potent	mV	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	128.2	QF	#	-	-	
	mV	0600	WL	01/24/2006	N001	27.00 - 27.00	187.2	F	#	-	-	
	mV	0601	WL	01/25/2006	N001	28.00 - 28.00	161.5	F	#	-	-	
	mV	0602	WL	01/18/2006	N001	18.00 - 18.00	153.3	F	#	-	-	
	mV	0603	WL, PZ	01/18/2006	N001	9.70 - 9.70	136.6	QF	#	-	-	
	mV	0604	WL, PZ	01/18/2006	N001	7.80 - 7.80	138.7	QF	#	-	-	
	mV	0605	WL, PZ	01/24/2006	N001	9.90 - 9.90	143.9	QF	#	-	-	
	mV	0613	WL, PZ	01/24/2006	N001	1.70 - 1.70	108.4	QF	#	-	-	
	mV	0614	WL, PZ	01/18/2006	N001	5.60 - 5.60	251.2	QF	#	-	-	
	mV	0615	WL, PZ	01/24/2006	N001	1.90 - 1.90	66.3	QF	#	-	-	
	mV	0616	WL, PZ	01/24/2006	N001	5.80 - 5.80	135.8	QF	#	-	-	
	mV	N3-4.3	WL, PZ	01/25/2006	N001	14.00 - 14.00	-103.9	QF	#	-	-	
	mV	N3-8.3	WL, PZ	01/25/2006	N001	24.00 - 24.00	-132.8	F	#	-	-	
	pH	s.u.	0401	WL	01/25/2006	N001	18.00 - 18.00	7.54	F	#	-	-
s.u.		0402	WL	01/24/2006	N001	17.00 - 17.00	6.82	F	#	-	-	
s.u.		0408	WL	01/25/2006	N001	26.00 - 26.00	7.06	F	#	-	-	
s.u.		0550	IS, IHYD	01/25/2006	N001	0.00 - 0.00	7.89		#	-	-	
s.u.		0580	WL	01/25/2006	N001	18.00 - 18.00	7.27		#	-	-	
s.u.		0581	WL	01/24/2006	N001	18.00 - 18.00	7.11		#	-	-	
s.u.		0582	WL	01/24/2006	N001	18.00 - 18.00	7.63		#	-	-	
s.u.		0583	WL	01/24/2006	N001	18.00 - 18.00	6.93		#	-	-	
s.u.		0584	WL	01/24/2006	N001	18.00 - 18.00	6.96		#	-	-	
s.u.		0585	WL	01/25/2006	N001	18.00 - 18.00	7.40		#	-	-	
s.u.		0586	WL	01/25/2006	N001	18.00 - 18.00	7.03		#	-	-	
s.u.		0587	WL	01/24/2006	N001	18.00 - 18.00	6.87		#	-	-	
s.u.		0588	WL	01/18/2006	N001	26.00 - 26.00	7.41	F	#	-	-	

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
pH	s.u.	0588	WL	01/24/2006	N001	34.00 - 34.00	7.04			#	-	-
	s.u.	0589	WL	01/19/2006	N001	44.00 - 44.00	6.87	F		#	-	-
	s.u.	0589	WL	01/24/2006	N001	52.00 - 52.00	6.84			#	-	-
	s.u.	0590	WL, PZ	01/24/2006	N001	1.50 - 1.50	7.60	Q		#	-	-
	s.u.	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	9.10	QF		#	-	-
	s.u.	0600	WL	01/24/2006	N001	27.00 - 27.00	6.87	F		#	-	-
	s.u.	0601	WL	01/25/2006	N001	28.00 - 28.00	6.90	F		#	-	-
	s.u.	0602	WL	01/18/2006	N001	18.00 - 18.00	8.03	F		#	-	-
	s.u.	0603	WL, PZ	01/18/2006	N001	9.70 - 9.70	9.09	QF		#	-	-
	s.u.	0604	WL, PZ	01/18/2006	N001	7.80 - 7.80	9.14	QF		#	-	-
	s.u.	0605	WL, PZ	01/24/2006	N001	9.90 - 9.90	9.19	QF		#	-	-
	s.u.	0613	WL, PZ	01/24/2006	N001	1.70 - 1.70	8.63	QF		#	-	-
	s.u.	0614	WL, PZ	01/18/2006	N001	5.60 - 5.60	7.20	QF		#	-	-
	s.u.	0615	WL, PZ	01/24/2006	N001	1.90 - 1.90	7.39	QF		#	-	-
	s.u.	0616	WL, PZ	01/24/2006	N001	5.80 - 5.80	9.36	QF		#	-	-
	s.u.	N3-4.3	WL, PZ	01/25/2006	N001	14.00 - 14.00	8.24	QF		#	-	-
	s.u.	N3-8.3	WL, PZ	01/25/2006	N001	24.00 - 24.00	8.44	F		#	-	-
	Phosphorus	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.0929	F		#	0.0101
mg/L		0589	WL	01/19/2006	0001	44.00 - 44.00	0.411	F		#	0.0101	-
mg/L		0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.0412	B	QF	#	0.0101	-
mg/L		0602	WL	01/18/2006	0001	18.00 - 18.00	0.204	F		#	0.0101	-
mg/L		0602	WL	01/18/2006	0003	18.00 - 18.00	0.0757	F		#	0.0101	-
mg/L		0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.0535		QF	#	0.0101	-
Selenium	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.0042	B	F	#	0.00057	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	0.00057	U	F	#	0.00057	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.0066		QF	#	0.00057	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Selenium	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	0.0081	F	#	0.00057	-	
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	0.0080	F	#	0.00057	-	
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.0031	B	QF	#	0.00057	-
Specific Conductance	umhos/cm	0401	WL	01/25/2006	N001	18.00 - 18.00	1292		F	#	-	-
	umhos/cm	0402	WL	01/24/2006	N001	17.00 - 17.00	4253		F	#	-	-
	umhos/cm	0408	WL	01/25/2006	N001	26.00 - 26.00	10690		F	#	-	-
	umhos/cm	0550	IS, IHYD	01/25/2006	N001	0.00 - 0.00	1255			#	-	-
	umhos/cm	0580	WL	01/25/2006	N001	18.00 - 18.00	1433			#	-	-
	umhos/cm	0581	WL	01/24/2006	N001	18.00 - 18.00	7433			#	-	-
	umhos/cm	0582	WL	01/24/2006	N001	18.00 - 18.00	2208			#	-	-
	umhos/cm	0583	WL	01/24/2006	N001	18.00 - 18.00	14110			#	-	-
	umhos/cm	0584	WL	01/24/2006	N001	18.00 - 18.00	13560			#	-	-
	umhos/cm	0585	WL	01/25/2006	N001	18.00 - 18.00	2531			#	-	-
	umhos/cm	0586	WL	01/25/2006	N001	18.00 - 18.00	7206			#	-	-
	umhos/cm	0587	WL	01/24/2006	N001	18.00 - 18.00	3364			#	-	-
	umhos/cm	0588	WL	01/18/2006	N001	26.00 - 26.00	5714		F	#	-	-
	umhos/cm	0588	WL	01/24/2006	N001	34.00 - 34.00	26900			#	-	-
	umhos/cm	0589	WL	01/19/2006	N001	44.00 - 44.00	60390		F	#	-	-
	umhos/cm	0589	WL	01/24/2006	N001	52.00 - 52.00	83960			#	-	-
	umhos/cm	0590	WL, PZ	01/24/2006	N001	1.50 - 1.50	5030		Q	#	-	-
	umhos/cm	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	3926		QF	#	-	-
	umhos/cm	0600	WL	01/24/2006	N001	27.00 - 27.00	22900		F	#	-	-
	umhos/cm	0601	WL	01/25/2006	N001	28.00 - 28.00	16460		F	#	-	-
umhos/cm	0602	WL	01/18/2006	N001	18.00 - 18.00	3625		F	#	-	-	
umhos/cm	0603	WL, PZ	01/18/2006	N001	9.70 - 9.70	7723		QF	#	-	-	
umhos/cm	0604	WL, PZ	01/18/2006	N001	7.80 - 7.80	8819		QF	#	-	-	

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Specific Conductance	umhos/cm	0605	WL, PZ	01/24/2006	N001	9.90 - 9.90	6944	QF	#	-	-	
	umhos/cm	0613	WL, PZ	01/24/2006	N001	1.70 - 1.70	6789	QF	#	-	-	
	umhos/cm	0614	WL, PZ	01/18/2006	N001	5.60 - 5.60	24310	QF	#	-	-	
	umhos/cm	0615	WL, PZ	01/24/2006	N001	1.90 - 1.90	1829	QF	#	-	-	
	umhos/cm	0616	WL, PZ	01/24/2006	N001	5.80 - 5.80	2505	QF	#	-	-	
	umhos/cm	N3-4.3	WL, PZ	01/25/2006	N001	14.00 - 14.00	3501	QF	#	-	-	
	umhos/cm	N3-8.3	WL, PZ	01/25/2006	N001	24.00 - 24.00	2619	F	#	-	-	
Sulfate	mg/L	0236	SL, RIV	01/24/2006	0001	0.30 - 0.30	2800		#	50	-	
	mg/L	0239	SL, RIV	01/24/2006	0001	0.40 - 0.40	250		#	10	-	
	mg/L	0239	SL, RIV	01/24/2006	0002	0.40 - 0.40	250		#	10	-	
	mg/L	0240	SL, RIV	01/24/2006	0001	0.40 - 0.40	2700		#	50	-	
	mg/L	0401	WL	01/25/2006	0001	18.00 - 18.00	250	F	#	10	-	
	mg/L	0402	WL	01/24/2006	0001	17.00 - 17.00	1300	F	#	25	-	
	mg/L	0408	WL	01/25/2006	0001	26.00 - 26.00	4300	F	#	100	-	
	mg/L	0550	IS, IHYD	01/25/2006	0001	0.00 - 0.00	250		#	10	-	
	mg/L	0580	WL	01/25/2006	0001	18.00 - 18.00	280		#	10	-	
	mg/L	0581	WL	01/24/2006	0001	18.00 - 18.00	2500		#	50	-	
	mg/L	0582	WL	01/24/2006	0001	18.00 - 18.00	620		#	25	-	
	mg/L	0582	WL	01/24/2006	0002	18.00 - 18.00	640		#	25	-	
	mg/L	0583	WL	01/24/2006	0001	18.00 - 18.00	5500		#	100	-	
	mg/L	0584	WL	01/24/2006	0001	18.00 - 18.00	5400		#	100	-	
	mg/L	0585	WL	01/25/2006	0001	18.00 - 18.00	690		#	25	-	
	mg/L	0586	WL	01/25/2006	0001	18.00 - 18.00	2700		#	50	-	
	mg/L	0587	WL	01/24/2006	0001	18.00 - 18.00	1100		#	25	-	
	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	1160	F	#	30.6	-	
	mg/L	0588	WL	01/24/2006	0001	34.00 - 34.00	6700		#	250	-	

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Sulfate	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	10200	F	#	612	-	
	mg/L	0589	WL	01/24/2006	0001	52.00 - 52.00	8900		#	50	-	
	mg/L	0590	WL, PZ	01/24/2006	0001	1.50 - 1.50	1900	Q	#	50	-	
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	1140	QF	#	6.1	-	
	mg/L	0600	WL	01/24/2006	0001	27.00 - 27.00	9500	F	#	250	-	
	mg/L	0601	WL	01/25/2006	0001	28.00 - 28.00	7200	F	#	100	-	
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	1190	F	#	6.1	-	
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	1120	F	#	6.1	-	
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	3000	QF	#	30.6	-	
	mg/L	0604	WL, PZ	01/18/2006	0001	7.80 - 7.80	3560	QF	#	30.6	-	
	mg/L	0605	WL, PZ	01/24/2006	0001	9.90 - 9.90	520	QF	#	10	-	
	mg/L	0613	WL, PZ	01/24/2006	0001	1.70 - 1.70	1900	QF	#	50	-	
	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	7580	QF	#	30.6	-	
	mg/L	0615	WL, PZ	01/24/2006	0001	1.90 - 1.90	830	QF	#	25	-	
	mg/L	0616	WL, PZ	01/24/2006	0001	5.80 - 5.80	1800	QF	#	50	-	
	mg/L	N3-4.3	WL, PZ	01/25/2006	0001	14.00 - 14.00	130	QF	#	2.5	-	
	mg/L	N3-8.3	WL, PZ	01/25/2006	0001	24.00 - 24.00	240	F	#	2.5	-	
Temperature	C	0401	WL	01/25/2006	N001	18.00 - 18.00	8.58	F	#	-	-	
	C	0402	WL	01/24/2006	N001	17.00 - 17.00	13.39	F	#	-	-	
	C	0408	WL	01/25/2006	N001	26.00 - 26.00	10.66	F	#	-	-	
	C	0550	IS, IHYD	01/25/2006	N001	0.00 - 0.00	4.68		#	-	-	
	C	0580	WL	01/25/2006	N001	18.00 - 18.00	12.60		#	-	-	
	C	0581	WL	01/24/2006	N001	18.00 - 18.00	12.70		#	-	-	
	C	0582	WL	01/24/2006	N001	18.00 - 18.00	12.82		#	-	-	
	C	0583	WL	01/24/2006	N001	18.00 - 18.00	14.96		#	-	-	
	C	0584	WL	01/24/2006	N001	18.00 - 18.00	14.51		#	-	-	

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Temperature	C	0585	WL	01/25/2006	N001	18.00 - 18.00	10.65		#	-	-	
	C	0586	WL	01/25/2006	N001	18.00 - 18.00	11.92		#	-	-	
	C	0587	WL	01/24/2006	N001	18.00 - 18.00	13.57		#	-	-	
	C	0588	WL	01/18/2006	N001	26.00 - 26.00	13.40	F	#	-	-	
	C	0588	WL	01/24/2006	N001	34.00 - 34.00	12.94		#	-	-	
	C	0589	WL	01/19/2006	N001	44.00 - 44.00	9.15	F	#	-	-	
	C	0589	WL	01/24/2006	N001	52.00 - 52.00	13.15		#	-	-	
	C	0590	WL, PZ	01/24/2006	N001	1.50 - 1.50	6.97	Q	#	-	-	
	C	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	5.81	QF	#	-	-	
	C	0600	WL	01/24/2006	N001	27.00 - 27.00	14.41	F	#	-	-	
	C	0601	WL	01/25/2006	N001	28.00 - 28.00	12.16	F	#	-	-	
	C	0602	WL	01/18/2006	N001	18.00 - 18.00	12.63	F	#	-	-	
	C	0603	WL, PZ	01/18/2006	N001	9.70 - 9.70	5.93	QF	#	-	-	
	C	0604	WL, PZ	01/18/2006	N001	7.80 - 7.80	6.84	QF	#	-	-	
	C	0605	WL, PZ	01/24/2006	N001	9.90 - 9.90	8.24	QF	#	-	-	
	C	0613	WL, PZ	01/24/2006	N001	1.70 - 1.70	5.25	QF	#	-	-	
	C	0614	WL, PZ	01/18/2006	N001	5.60 - 5.60	5.19	QF	#	-	-	
	C	0615	WL, PZ	01/24/2006	N001	1.90 - 1.90	6.13	QF	#	-	-	
	C	0616	WL, PZ	01/24/2006	N001	5.80 - 5.80	7.96	QF	#	-	-	
	C		N3-4.3	WL, PZ	01/25/2006	N001	14.00 - 14.00	9.45	QF	#	-	-
C		N3-8.3	WL, PZ	01/25/2006	N001	24.00 - 24.00	13.89	F	#	-	-	
Total Dissolved Solids	mg/L	0236	SL, RIV	01/24/2006	0001	0.30 - 0.30	6000		#	200	-	
	mg/L	0239	SL, RIV	01/24/2006	0001	0.40 - 0.40	830		#	40	-	
	mg/L	0239	SL, RIV	01/24/2006	0002	0.40 - 0.40	810		#	40	-	
	mg/L	0240	SL, RIV	01/24/2006	0001	0.40 - 0.40	5800		#	200	-	
	mg/L	0401	WL	01/25/2006	0001	18.00 - 18.00	830	F	#	40	-	

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Total Dissolved Solids	mg/L	0402	WL	01/24/2006	0001	17.00 - 17.00	3200	F	#		80	-
	mg/L	0408	WL	01/25/2006	0001	26.00 - 26.00	8100	F	#		200	-
	mg/L	0550	IS, IHYD	01/25/2006	0001	0.00 - 0.00	810		#		40	-
	mg/L	0580	WL	01/25/2006	0001	18.00 - 18.00	850		#		40	-
	mg/L	0581	WL	01/24/2006	0001	18.00 - 18.00	5200		#		200	-
	mg/L	0582	WL	01/24/2006	0001	18.00 - 18.00	1400		#		40	-
	mg/L	0582	WL	01/24/2006	0002	18.00 - 18.00	1400		#		40	-
	mg/L	0583	WL	01/24/2006	0001	18.00 - 18.00	11000		#		400	-
	mg/L	0584	WL	01/24/2006	0001	18.00 - 18.00	11000		#		400	-
	mg/L	0585	WL	01/25/2006	0001	18.00 - 18.00	1700		#		80	-
	mg/L	0586	WL	01/25/2006	0001	18.00 - 18.00	5700		#		200	-
	mg/L	0587	WL	01/24/2006	0001	18.00 - 18.00	2600		#		80	-
	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	3380	F	#		3.5	-
	mg/L	0588	WL	01/24/2006	0001	34.00 - 34.00	22000		#		1000	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	41900	F	#		3.5	-
	mg/L	0589	WL	01/24/2006	0001	52.00 - 52.00	64000		#		2000	-
	mg/L	0590	WL, PZ	01/24/2006	0001	1.50 - 1.50	4000	Q	#		80	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	2020	QF	#		3.5	-
	mg/L	0600	WL	01/24/2006	0001	27.00 - 27.00	19000	F	#		1000	-
	mg/L	0601	WL	01/25/2006	0001	28.00 - 28.00	13000	F	#		400	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	1890	F	#		3.5	-
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	1840	F	#		3.5	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	5300	QF	#		3.5	-
	mg/L	0605	WL, PZ	01/24/2006	0001	9.90 - 9.90	10000	QF	#		400	-
	mg/L	0613	WL, PZ	01/24/2006	0001	1.70 - 1.70	4100	QF	#		200	-
	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	24900	QF	#		3.5	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Total Dissolved Solids	mg/L	0615	WL, PZ	01/24/2006	0001	1.90 - 1.90	2000	QF	#	80	-	
	mg/L	0616	WL, PZ	01/24/2006	0001	5.80 - 5.80	3800	QF	#	200	-	
	mg/L	N3-4.3	WL, PZ	01/25/2006	0001	14.00 - 14.00	1900	QF	#	80	-	
	mg/L	N3-8.3	WL, PZ	01/25/2006	0001	24.00 - 24.00	1600	F	#	80	-	
Total Inorganic Carbon	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	3.8	JF	#	0.22	-	
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	92.8	JF	#	2.2	-	
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	54.2	QJF	#	2.2	-	
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	33.9	JF	#	2.2	-	
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	5.1	JF	#	0.22	-	
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	23.5	QJF	#	2.2	-	
Total Kjeldahl Nitrogen	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	78.6	JF	#	6.1	-	
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	1440	JF	#	245	-	
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	238	QJF	#	24.5	-	
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	234	JF	#	24.5	-	
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	240	JF	#	24.5	-	
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	640	QJF	#	97.9	-	
Total Organic Carbon	mg/L	0588	WL	01/18/2006	N001	26.00 - 26.00	0.95	U	JF	#	0.95	-
	mg/L	0589	WL	01/19/2006	N001	44.00 - 44.00	3.4		JF	#	0.47	-
	mg/L	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	2.8		QJF	#	0.47	-
	mg/L	0602	WL	01/18/2006	N001	18.00 - 18.00	1.5	B	JF	#	0.95	-
	mg/L	0602	WL	01/18/2006	N003	18.00 - 18.00	0.95	U	JF	#	0.95	-
	mg/L	0603	WL, PZ	01/18/2006	N001	9.70 - 9.70	4.0		QJF	#	0.47	-
Turbidity	NTU	0401	WL	01/25/2006	N001	18.00 - 18.00	5.91		F	#	-	-
	NTU	0402	WL	01/24/2006	N001	17.00 - 17.00	1.94		F	#	-	-
	NTU	0408	WL	01/25/2006	N001	26.00 - 26.00	970		F	#	-	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY	
				DATE	ID			LAB	DATA	QA			
Turbidity	NTU	0550	IS, IHYD	01/25/2006	N001	0.00 - 0.00	34.0				#	-	-
	NTU	0580	WL	01/25/2006	N001	18.00 - 18.00	8.66				#	-	-
	NTU	0581	WL	01/24/2006	N001	18.00 - 18.00	8.11				#	-	-
	NTU	0582	WL	01/24/2006	N001	18.00 - 18.00	3.58				#	-	-
	NTU	0583	WL	01/24/2006	N001	18.00 - 18.00	2.32				#	-	-
	NTU	0584	WL	01/24/2006	N001	18.00 - 18.00	8.04				#	-	-
	NTU	0585	WL	01/25/2006	N001	18.00 - 18.00	9.41				#	-	-
	NTU	0586	WL	01/25/2006	N001	18.00 - 18.00	4.87				#	-	-
	NTU	0587	WL	01/24/2006	N001	18.00 - 18.00	1.86				#	-	-
	NTU	0588	WL	01/18/2006	N001	26.00 - 26.00	1.70		F		#	-	-
	NTU	0588	WL	01/24/2006	N001	34.00 - 34.00	1.56				#	-	-
	NTU	0589	WL	01/19/2006	N001	44.00 - 44.00	2.03		F		#	-	-
	NTU	0589	WL	01/24/2006	N001	52.00 - 52.00	9.66				#	-	-
	NTU	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	727			QF	#	-	-
	NTU	0600	WL	01/24/2006	N001	27.00 - 27.00	8.74		F		#	-	-
	NTU	0601	WL	01/25/2006	N001	28.00 - 28.00	4.78		F		#	-	-
	NTU	0602	WL	01/18/2006	N001	18.00 - 18.00	5.96		F		#	-	-
	NTU	0604	WL, PZ	01/18/2006	N001	7.80 - 7.80	148			QF	#	-	-
	NTU	0614	WL, PZ	01/18/2006	N001	5.60 - 5.60	33.2			QF	#	-	-
	NTU	0616	WL, PZ	01/24/2006	N001	5.80 - 5.80	22.0			QF	#	-	-
NTU		N3-8.3	WL, PZ	01/25/2006	N001	24.00 - 24.00	3.64		F	#	-	-	
Uranium	mg/L	0236	SL, RIV	01/24/2006	0001	0.30 - 0.30	0.740				#	2.4E-05	-
	mg/L	0239	SL, RIV	01/24/2006	0001	0.40 - 0.40	0.016				#	1.2E-05	-
	mg/L	0239	SL, RIV	01/24/2006	0002	0.40 - 0.40	0.016				#	2.4E-06	-
	mg/L	0240	SL, RIV	01/24/2006	0001	0.40 - 0.40	0.840				#	2.4E-05	-
	mg/L	0401	WL	01/25/2006	0001	18.00 - 18.00	0.072		F		#	2.4E-06	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Uranium	mg/L	0402	WL	01/24/2006	0001	17.00 - 17.00	0.460	F	#		2.4E-05	-
	mg/L	0408	WL	01/25/2006	0001	26.00 - 26.00	1.300	F	#		4.7E-05	-
	mg/L	0550	IS, IHYD	01/25/2006	0001	0.00 - 0.00	0.007	E	#		2.4E-06	-
	mg/L	0580	WL	01/25/2006	0001	18.00 - 18.00	0.170		#		1.2E-05	-
	mg/L	0581	WL	01/24/2006	0001	18.00 - 18.00	0.870		#		2.4E-05	-
	mg/L	0582	WL	01/24/2006	0001	18.00 - 18.00	0.220		#		1.2E-05	-
	mg/L	0582	WL	01/24/2006	0002	18.00 - 18.00	0.190		#		1.2E-05	-
	mg/L	0583	WL	01/24/2006	0001	18.00 - 18.00	2.000		#		0.00012	-
	mg/L	0584	WL	01/24/2006	0001	18.00 - 18.00	1.900		#		0.00012	-
	mg/L	0585	WL	01/25/2006	0001	18.00 - 18.00	0.230		#		2.4E-05	-
	mg/L	0586	WL	01/25/2006	0001	18.00 - 18.00	0.840		#		2.4E-05	-
	mg/L	0587	WL	01/24/2006	0001	18.00 - 18.00	0.500		#		2.4E-05	-
	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.239	F	#		0.00068	-
	mg/L	0588	WL	01/24/2006	0001	34.00 - 34.00	2.100		#		0.00012	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	2.330	F	#		0.00068	-
	mg/L	0589	WL	01/24/2006	0001	52.00 - 52.00	1.900		#		0.00012	-
	mg/L	0590	WL, PZ	01/24/2006	0001	1.50 - 1.50	0.001	Q	#		2.4E-06	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.0910	QF	#		0.00068	-
	mg/L	0600	WL	01/24/2006	0001	27.00 - 27.00	3.200	F	#		0.00024	-
	mg/L	0601	WL	01/25/2006	0001	28.00 - 28.00	2.600	F	#		0.00012	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	0.251	F	#		0.00068	-
	mg/L	0602	WL	01/18/2006	0003	18.00 - 18.00	0.207	F	#		0.00068	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.0292	QF	#		0.00068	-
	mg/L	0605	WL, PZ	01/24/2006	0001	9.90 - 9.90	0.250	QF	#		0.00012	-
	mg/L	0616	WL, PZ	01/24/2006	0001	5.80 - 5.80	0.042	QF	#		2.4E-06	-
	mg/L	N3-4.3	WL, PZ	01/25/2006	0001	14.00 - 14.00	0.018	QF	#		2.4E-06	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:10 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Uranium	mg/L	N3-8.3	WL, PZ	01/25/2006	0001	24.00 - 24.00	0.045	F #	2.4E-06	-

RECORDS: SELECTED FROM USEE200 WHERE site_code='MOA01' AND quality_assurance = TRUE AND (data_validation_qualifiers IS NULL OR data_validation_qualifiers NOT LIKE '%R%' AND data_validation_qualifiers NOT LIKE '%X%') AND cas in('ALKALINITY','NH3+NH4-N','BROMIDE','00124-38-9','COD','CHLORIDE','DOC','07782-44-7','07439-89-6','FE (II)','07439-96-5','MN (II)','000074-82-8','NO3+NO2 AS N','07727-37-9','ORP','PH','007723-14-0','07782-49-2','EC','SULFATE','TMP','TDS','TIC','TKN','TOC','TURBIDITY','07440-61-1') AND DATE_SAMPLED between #1/15/2006# and #1/27/2006#

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

LOCATION TYPES: IS INJECTION SYSTEM SL SURFACE LOCATION WL WELL

LOCATION SUBTYPES: IHYD Injection System Hydrant PZ Piezometer RIV River

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: 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
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Z Laboratory defined (USEPA CLP organic) 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.

Environmental Sciences Laboratory
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:14 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN-CERTAINTY
				DATE	ID			LAB	DATA	QA		
Biochemical Oxygen Dema	mg/L	0588	WL	01/18/2006	N001	26.00 - 26.00	-1.26	F	#	0.1	-	
	mg/L	0589	WL	01/19/2006	N001	44.00 - 44.00	-1.24	F	#	0.1	-	
	mg/L	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	4.9	QF	#	0.1	-	
	mg/L	0602	WL	01/18/2006	N001	18.00 - 18.00	-0.86	F	#	0.1	-	
	mg/L	0603	WL, PZ	01/18/2006	N001	9.70 - 9.70	7.92	QF	#	0.1	-	
	mg/L	0604	WL, PZ	01/18/2006	N001	7.80 - 7.80	-2.54	QF	#	0.1	-	
	mg/L	0614	WL, PZ	01/18/2006	N001	5.60 - 5.60	3.33	QF	#	0.1	-	
Nitrifying Bacteria	cfu/mL	0588	WL	01/18/2006	N001	26.00 - 26.00	1000	F	#	1000	-	
	cfu/mL	0589	WL	01/19/2006	N001	44.00 - 44.00	1000	U	F	#	1000	-
	cfu/mL	0591	WL, PZ	01/18/2006	N001	4.40 - 4.40	10000		QF	#	1000	-
	cfu/mL	0602	WL	01/18/2006	N001	18.00 - 18.00	1000	U	F	#	1000	-
	cfu/mL	0603	WL, PZ	01/18/2006	N001	9.70 - 9.70	1000	U	QF	#	1000	-
	cfu/mL	0604	WL, PZ	01/18/2006	N001	7.80 - 7.80	1000	U	QF	#	1000	-
	cfu/mL	0614	WL, PZ	01/18/2006	N001	5.60 - 5.60	100000	U	QF	#	1000	-
Nitrite as Nitrogen	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.012	F	#	0.005	-	
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	0.017	F	#	0.005	-	
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.077		QF	#	0.005	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	0.005	U	F	#	0.005	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.043		QF	#	0.005	-
	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	3.05		QF	#	0.005	-
ortho-Phosphate	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.3	U	F	#	0.3	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	0.3	U	F	#	0.3	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.3	U	QF	#	0.3	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	0.3	U	F	#	0.3	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.3	U	QF	#	0.3	-
	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	0.4		QF	#	0.3	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:14 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE:		DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS:			DETECTION LIMIT	UN- CERTAINTY
				DATE	ID			LAB	DATA	QA		
Sulfide	mg/L	0588	WL	01/18/2006	0001	26.00 - 26.00	0.01	U	F	#	0.01	-
	mg/L	0589	WL	01/19/2006	0001	44.00 - 44.00	0.01	U	F	#	0.01	-
	mg/L	0591	WL, PZ	01/18/2006	0001	4.40 - 4.40	0.01	U	QF	#	0.01	-
	mg/L	0602	WL	01/18/2006	0001	18.00 - 18.00	0.01	U	F	#	0.01	-
	mg/L	0603	WL, PZ	01/18/2006	0001	9.70 - 9.70	0.01	U	QF	#	0.01	-
	mg/L	0614	WL, PZ	01/18/2006	0001	5.60 - 5.60	0.01	U	QF	#	0.01	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 2:14 pm

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
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RECORDS: SELECTED FROM USEE200 WHERE site_code='MOA01' AND quality_assurance = TRUE AND (data_validation_qualifiers IS NULL OR data_validation_qualifiers NOT LIKE '%R%' AND data_validation_qualifiers NOT LIKE '%X%') AND cas in('00010-26-4','NITRIF BACTE','NITRITE AS N','00011-36-9','SULFIDE') AND DATE_SAMPLED between #1/15/2006# and #1/27/2006#

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

LOCATION TYPES: WL WELL

LOCATION SUBTYPES: PZ Piezometer

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: 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
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Z Laboratory defined (USEPA CLP organic) 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. | |

QA QUALIFIER: # = validated according to Quality Assurance guidelines.

Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE MOA01, Moab Site
 REPORT DATE: 4/17/2006 11:17 am

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
			DATE	TIME			
0401	O	3969.60	01/25/2006	15:28	15.76	3953.84	
0402	O	3968.63	01/24/2006	14:35	15.25	3953.38	
0408	O	3969.17	01/25/2006	14:50	15.28	3953.89	
0580		3969.32	01/25/2006	13:10	16.35	3952.97	
0581		3969.02	01/24/2006	16:14	15.72	3953.30	
0582		3969.65	01/24/2006	15:35	16.23	3953.42	
0583		3969.64	01/24/2006	13:35	16.11	3953.53	
0584		3969.13	01/24/2006	14:00	15.47	3953.66	
0585		3969.36	01/25/2006	13:53	15.63	3953.73	
0586		3969.20	01/25/2006	16:00	15.06	3954.14	
0587		3968.89	01/24/2006	13:05	15.33	3953.56	
0588		3968.82	01/18/2006	14:30	15.12	3953.70	
		3968.82	01/24/2006	12:41	15.29	3953.53	
0589		3968.87	01/19/2006	09:35	15.05	3953.82	
		3968.87	01/24/2006	12:08	15.12	3953.75	
0590		3956.70	01/19/2006	14:38	3.80	3952.90	
0591		3953.99	01/17/2006	15:57	1.23	3952.76	
0600		3968.77	01/24/2006	15:06	15.49	3953.28	
0601		3968.73	01/25/2006	14:20	15.02	3953.71	
0602		3969.40	01/18/2006	15:50	15.89	3953.51	
0603		3955.39	01/17/2006	15:43	2.82	3952.57	
0604		3958.11	01/17/2006	15:30	9.07	3949.04	
0605		3956.10	01/19/2006	14:15	3.75	3952.35	
0613		3957.11	01/19/2006	14:25	3.94	3953.17	
0614		3955.33	01/17/2006	15:16	2.43	3952.90	
0615		3957.10	01/19/2006	14:20	4.09	3953.01	
0616		3955.26	01/19/2006	14:05	2.69	3952.57	
N3-4.3	C	3964.71	01/25/2006	10:05	4.03	3960.68	
N3-8.3	C	3965.03	01/25/2006	10:10	4.37	3960.66	
W1-10	C	3965.56	01/25/2006		20.21	3945.35	

STATIC WATER LEVELS (USEE700) FOR SITE MOA01, Moab Site
REPORT DATE: 4/17/2006 11:17 am

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
			DATE	TIME			

RECORDS: SELECTED FROM USEE700 WHERE site_code='MOA01' AND LOG_DATE between #1/16/2006# and #1/27/2006#

FLOW CODES: C CROSS GRADIENT O ON-SITE

WATER LEVEL FLAGS:

Blanks Report

BLANKS REPORT

LAB CODE: STS, SEVERN TRENT ST. LOUIS (Earth City, MO)

LAB REQUISITION(S): 06010290

REPORT DATE: 04/17/06 09:46:26: AM

PARAMETER	SITE CODE	LOCATION ID	SAMPLE DATE	SAMPLE ID	UNITS	RESULT	QUALIFIERS LAB DATA	DETECTION LIMIT	UNCERTAINTY	SAMPLE TYPE
Ammonia Total as N	MOA01	0999	01/19/2006	0001	mg/L	0.19		0.0055		E
Bromide	MOA01	0999	01/19/2006	0001	mg/L	0.026	U	0.026		E
Chemical Oxygen Demand	MOA01	0999	01/19/2006	0001	mg/L	14	B	9.2		E
Chloride	MOA01	0999	01/19/2006	0001	mg/L	0.44		0.025		E
Dissolved Organic Carbon	MOA01	0999	01/19/2006	N001	mg/L	0.47	U	0.47		E
Iron	MOA01	0999	01/19/2006	0001	mg/L	0.0074	U	0.0074		E
Manganese	MOA01	0999	01/19/2006	0001	mg/L	0.001	U	0.001		E
Nitrate + Nitrite as Nitrogen	MOA01	0999	01/19/2006	0001	mg/L	0.0027	U	0.0027		E
Phosphorus	MOA01	0999	01/19/2006	0001	mg/L	0.0363	B	0.0101		E
Selenium	MOA01	0999	01/19/2006	0001	mg/L	0.00057	U	0.00057		E
Sulfate	MOA01	0999	01/19/2006	0001	mg/L	0.48	B	0.061		E
Total Dissolved Solids	MOA01	0999	01/19/2006	0001	mg/L	3.5	U	3.5		E
Total Inorganic Carbon	MOA01	0999	01/19/2006	0001	mg/L	0.22	U	0.22		E
Total Kjeldahl Nitrogen	MOA01	0999	01/19/2006	0001	mg/L	2.3	J	0.61		E
Total Organic Carbon	MOA01	0999	01/19/2006	N001	mg/L	0.47	U J	0.47		E
Uranium	MOA01	0999	01/19/2006	0001	mg/L	0.00014	U	0.00014		E

BLANKS REPORT

LAB CODE: STS, SEVERN TRENT ST. LOUIS (Earth City, MO)

LAB REQUISITION(S): 06010290

REPORT DATE: 04/17/06 09:46:26: AM

PARAMETER	SITE CODE	LOCATION ID	SAMPLE DATE	ID	UNITS	RESULT	QUALIFIERS LAB DATA	DETECTION LIMIT	UNCERTAINTY	SAMPLE TYPE
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SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

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

SAMPLE TYPES:

- E EQUIPMENT BLANK

BLANKS REPORT

LAB CODE: PAR, PARAGON (Fort Collins, CO)

LAB REQUISITION(S): 06010289

REPORT DATE: 04/17/06 09:24:25: AM

PARAMETER	SITE CODE	LOCATION ID	SAMPLE DATE	SAMPLE ID	UNITS	RESULT	QUALIFIERS LAB DATA	DETECTION LIMIT	UNCERTAINTY	SAMPLE TYPE
Ammonia Total as N	MOA01	0999	01/25/2006	0001	mg/L	0.1	U	0.1		E
Bromide	MOA01	0999	01/25/2006	0001	mg/L	0.2	U	0.2		E
Chloride	MOA01	0999	01/25/2006	0001	mg/L	0.2	U	0.2		E
Sulfate	MOA01	0999	01/25/2006	0001	mg/L	0.5	U	0.5		E
Total Dissolved Solids	MOA01	0999	01/25/2006	0001	mg/L	20	U	20		E
Uranium	MOA01	0999	01/25/2006	0001	mg/L	0.000028	B U	0.000024		E

BLANKS REPORT

LAB CODE: PAR, PARAGON (Fort Collins, CO)

LAB REQUISITION(S): 06010289

REPORT DATE: 04/17/06 09:24:25: AM

PARAMETER	SITE CODE	LOCATION ID	SAMPLE DATE	ID	UNITS	RESULT	QUALIFIERS LAB DATA	DETECTION LIMIT	UNCERTAINTY	SAMPLE TYPE
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SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- C Pesticide result confirmed by GC-MS.
- M GFAA duplicate injection precision not met.
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- S Result determined by method of standard addition (MSA).
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- D Analyte determined in diluted sample.
- P > 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- > Result above upper detection limit.
- J Estimated

DATA QUALIFIERS:

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

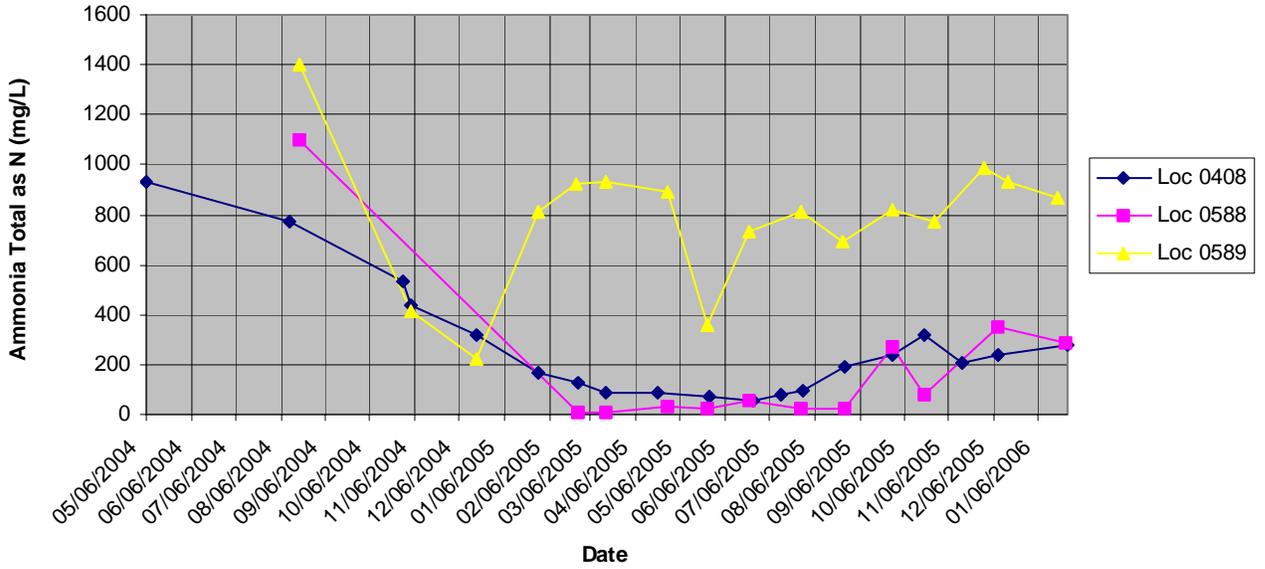
SAMPLE TYPES:

- E EQUIPMENT BLANK

Time Versus Concentration Graphs

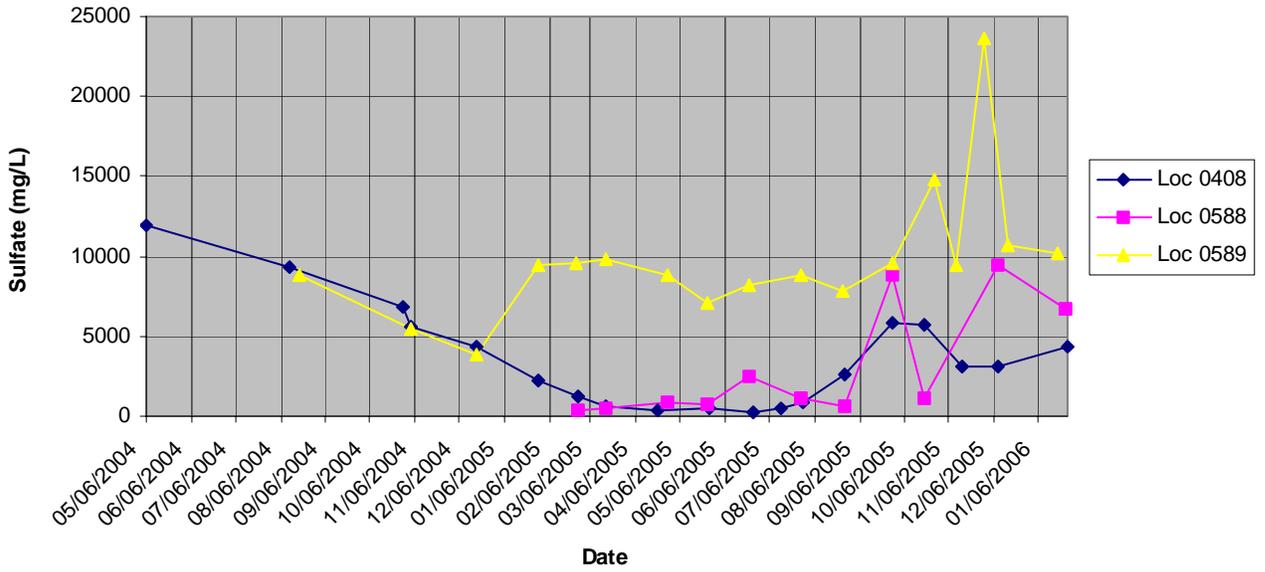
Moab Site (MOA01)

Ammonia Total as N Concentration



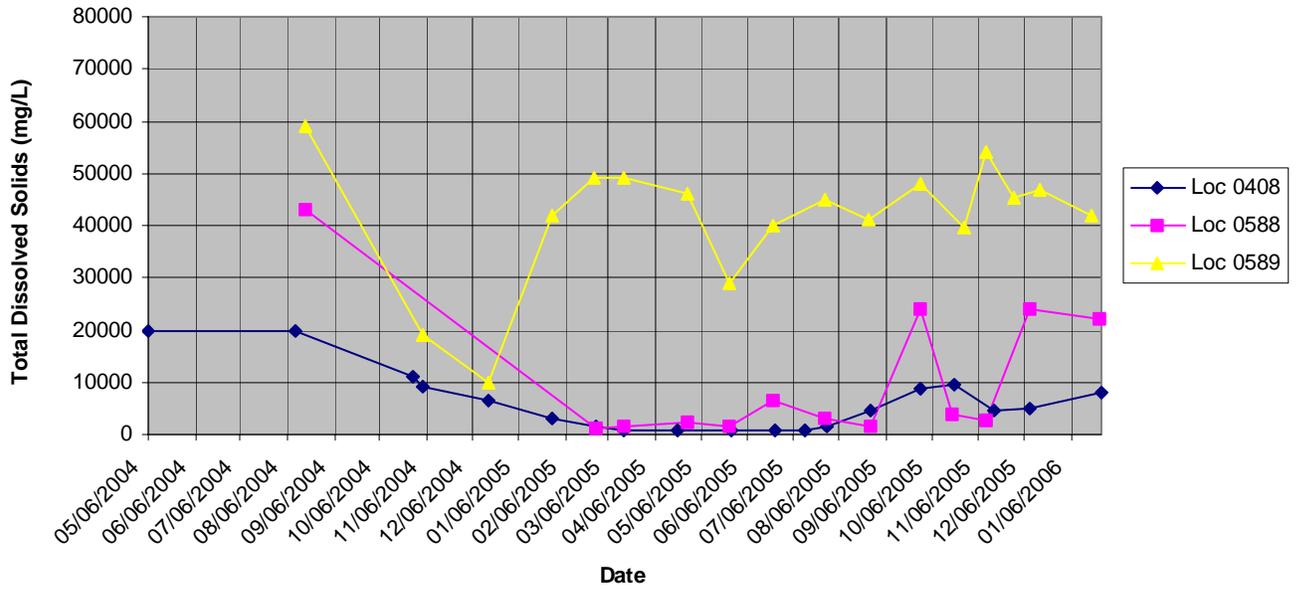
Moab Site (MOA01)

Sulfate Concentration



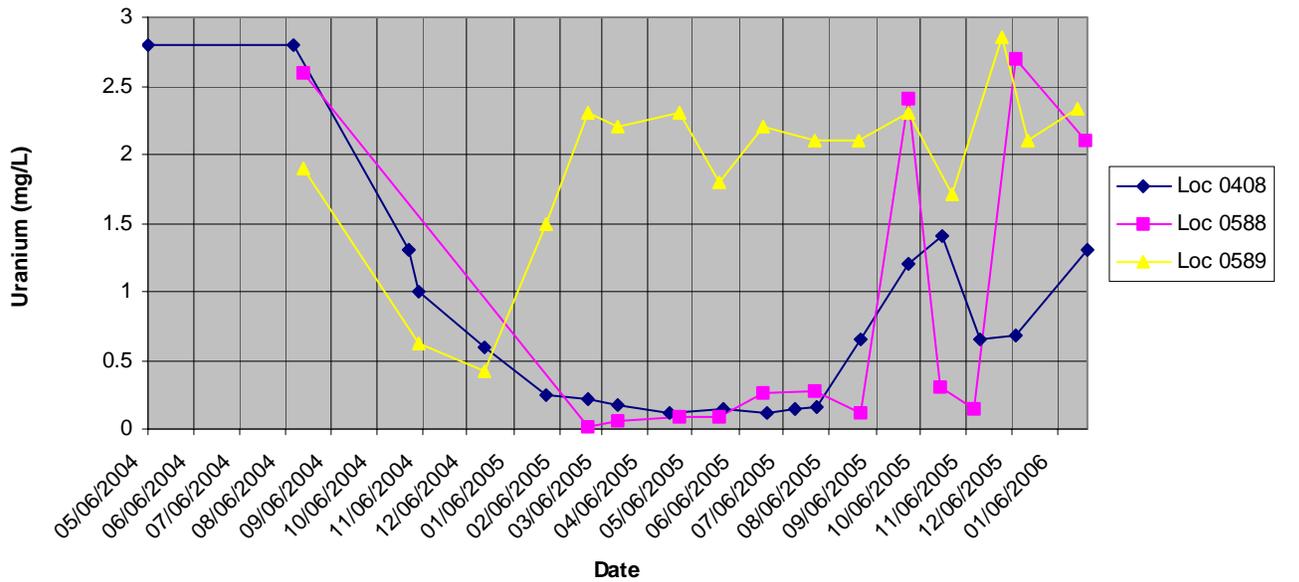
Moab Site (MOA01)

Total Dissolved Solids Concentration



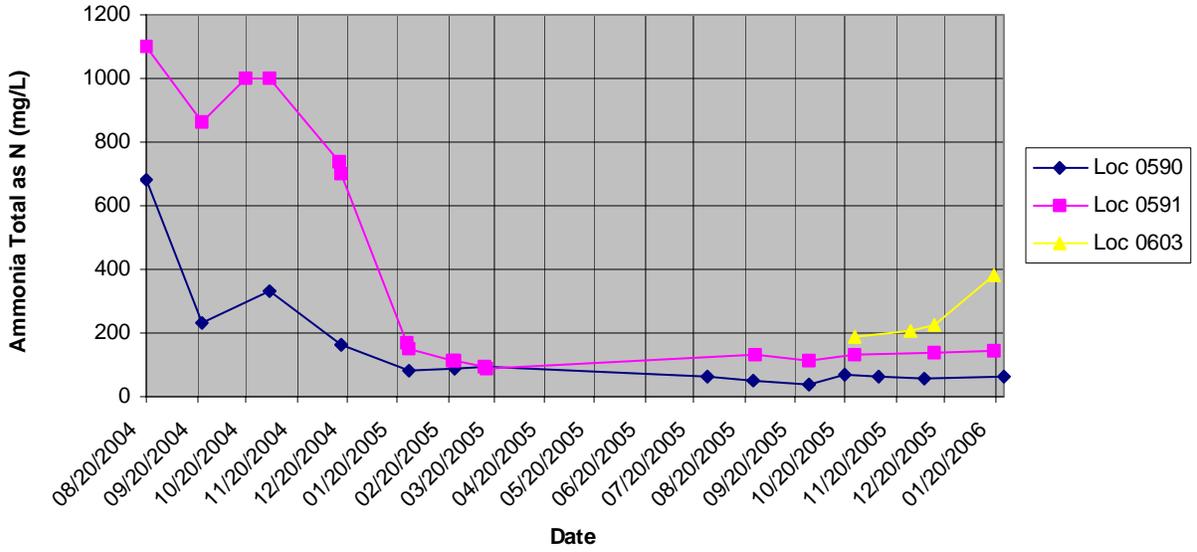
Moab Site (MOA01)

Uranium Concentration



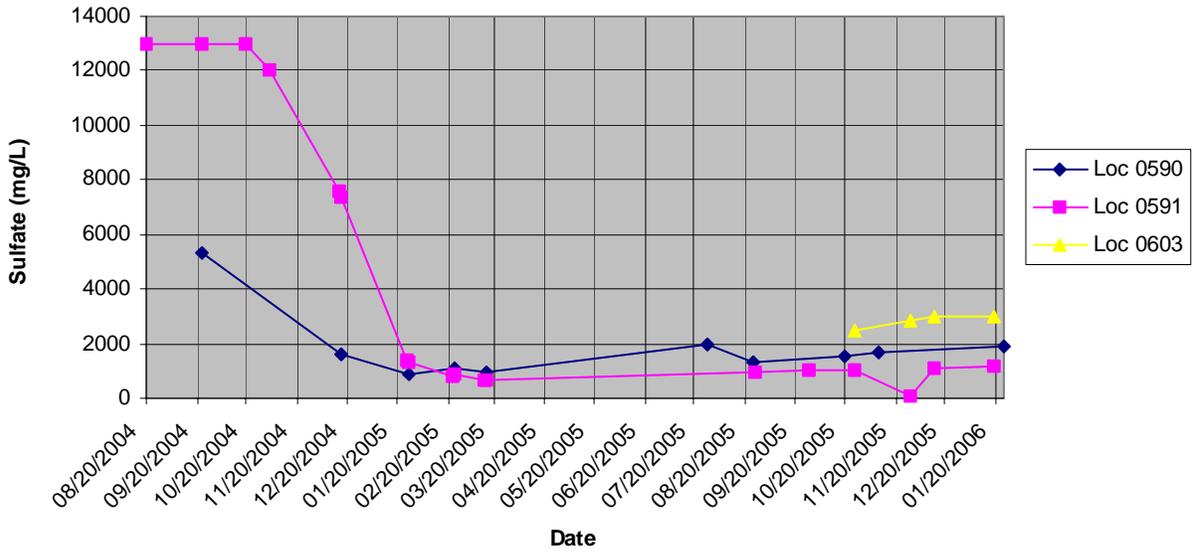
Moab Site (MOA01)

Ammonia Total as N Concentration



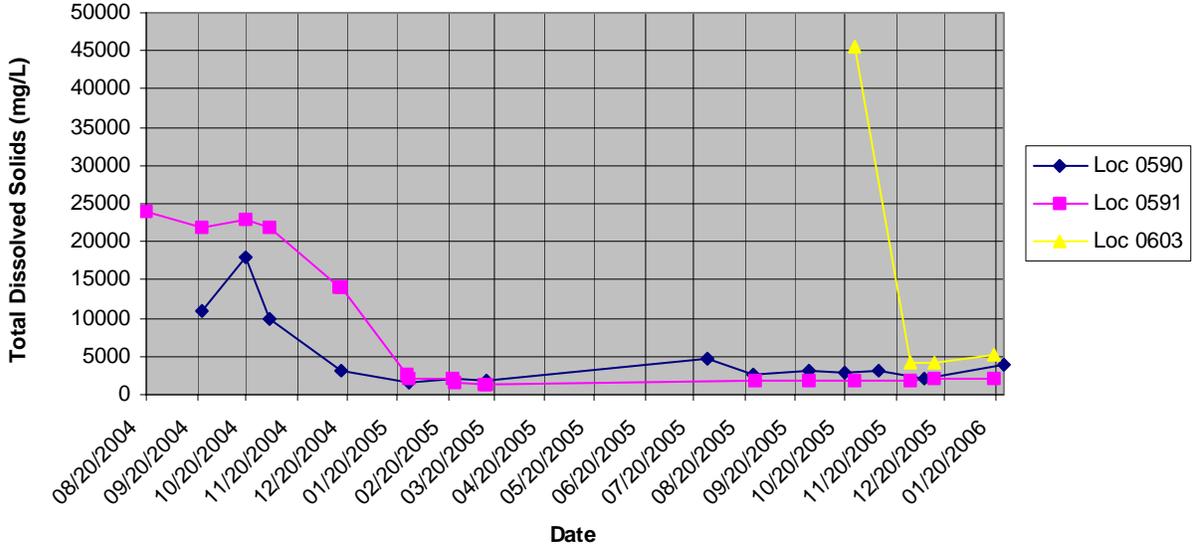
Moab Site (MOA01)

Sulfate Concentration



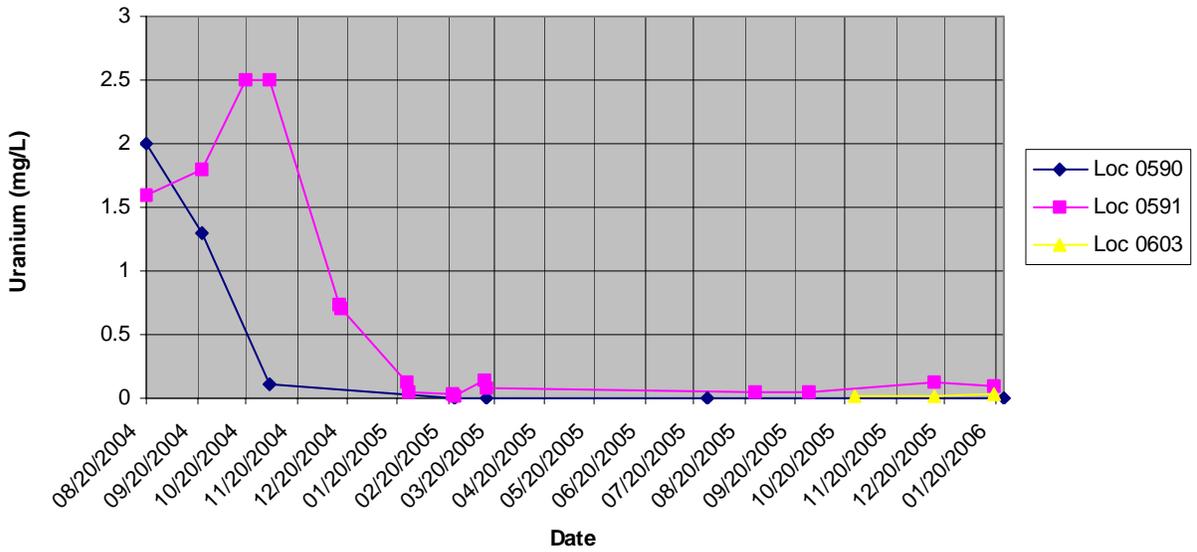
Moab Site (MOA01)

Total Dissolved Solids Concentration



Moab Site (MOA01)

Uranium Concentration



Attachment 2

Trip Reports

DATE: February 8, 2006

TO: John Ford

FROM: K. G. Pill

SUBJECT: Trip Report

Site: Moab – Interim Action Configuration 2 Injection Test Sampling – January 2006

Date of Sampling Event: January 19, 23–26, 2006.

Team Members: Emile Bettez, Steve Back, and Ken Pill

Sampling Event Background: The injection test had been running approximately 1 year and 14 weeks (since October 6, 2004) prior to this monthly sampling event.

Number of Locations Sampled: Fifteen Configuration 2 observation wells (0401, 0402, 0408, 0580 through 0589, 0600, and 0601), five piezometers (0590, 0605, 0613, 0615, and 0616), three surface locations (0236, 0239, and 0240), and one injection water sample (0550). Including one equipment blank and two duplicates, a total of **27** samples were collected.

Locations Not Sampled/Reason: Observation wells 0588 (from 26 ft bgs), 0589 (from 44 ft bgs), and 0602 were sampled as part of the biogeochemical sampling during the previous week (the week of January 16, 2006). Piezometers 0591, 0603, 0604, and 0614 were also sampled at this time. Due to the short time frame between this sampling event and the biogeochemical sampling event, these locations were not sampled.

Sample Analysis: Submitted samples were analyzed for ammonia as N, bromide, chloride, sulfate, TDS, and uranium.

Field Variance: Only a 125-mL sample was collected for uranium analysis, as opposed to the standard 500-milliliter (mL) sample volume. No other metals are being sampled, and this volume is sufficient for the uranium analysis. Limited sample volume was available for analysis from locations 0590, 0613, and 0615. These samples were split and preserved as directed by the laboratory for proper analysis.

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
2237	0239	Surface Water Duplicate	Ground Water	NFB-017
2238	0582	Duplicate from 18 ft bgs	Ground Water	NFB-031
2239	N/A	Equipment Blank – GW Equip	DI Water	NFB-040

RIN Number Assigned: All samples were assigned to RIN **06010289**.

Sample Shipment: Samples were shipped in two coolers overnight FedEx to Paragon Analytics, Inc. from Moab, Utah, on January 26, 2006 (Airbill No. 8527 5847 7473).

Location Specific Information – CF2 Observation Wells: All observation wells were sampled using micro-purge techniques with a peristaltic pump 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)
0401	1/25/06	15:28	15.76	18
0402	1/24/06	14:35	15.25	17
0408	1/25/06	14:50	15.28	26
0580	1/25/06	13:10	16.35	18
0581	1/24/06	16:14	15.72	18
0582	1/24/06	15:35	16.23	18
0583	1/24/06	13:35	16.11	18
0584	1/24/06	14:00	15.47	18
0585	1/25/06	13:53	15.63	18
0586	1/25/06	16:00	15.06	18
0587	1/24/06	13:05	15.33	18
0588	1/24/06	12:41	15.29	34
0589	1/24/06	12:08	15.12	52
0600	1/24/06	15:06	15.49	27
0601	1/25/06	14:20	15.02	28

Location Specific Information – Piezometer Sampling: All piezometers were purged on January 19, and sampled on January 24 and 25, 2006 (if necessary). The table below presents the water level, stick up height, and depth to the river surface for the piezometers prior to the initial purge.

PZ No.	Date	Time	Depth to Water (ft btoc)	Stick Up Height (ft)	Depth to River Surface (ft btoc)
0590	1/19/06	14:38	3.80	3.4	Dry at base
0605	1/19/06	14:15	3.75	2.0	Dry at base
0613	1/19/06	14:25	3.94	3.2	Dry at base
0615	1/19/06	14:20	4.09	3.1	Dry at base
0616	1/19/06	14:05	2.69	1.2	Dry at base

Limited sample volume was available for analysis from locations 0590, 0613, and 0615. These samples were split and preserved as directed by the laboratory for proper analysis.

Location Specific Information – Surface Water Sampling: The location 0236 sample was collected from a stagnant body of water that was frozen on the surface, from a depth of 0.3 ft below the water surface. The sample collected from location 0240 was also collected from a stagnant body of water that was frozen over, from a depth of approximately 0.4 ft below the surface, and 4 ft off the bank. Location 0240 was sampled just south of the previous locations because of ice buildup on the bank, and it was very shallow just north of the piezometers. Sample depth was approximately 0.4 ft below the surface (photos attached).

Location Specific Information – Injection Water Sampling: The freshwater injection source was sampled from the injection well 0570 well head, prior to the well head filter. No freshwater was available from the hydrant located off the southern end of the Configuration 2 well field, the usual source of this sample (no irrigation is taking place off the well field at the time of this sampling event).

Well Inspection Summary: A well inspection was not conducted.

Equipment: No issues to report.

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)
01/18/2006	2,900
01/19/2006	2,960
01/20/2006	3,190
01/21/2006	3,190
01/22/2006	2,950
01/23/2006	2,770
01/24/2006	2,680
01/25/2006	2,670
01/26/2006	2,830
01/27/2006	3,070

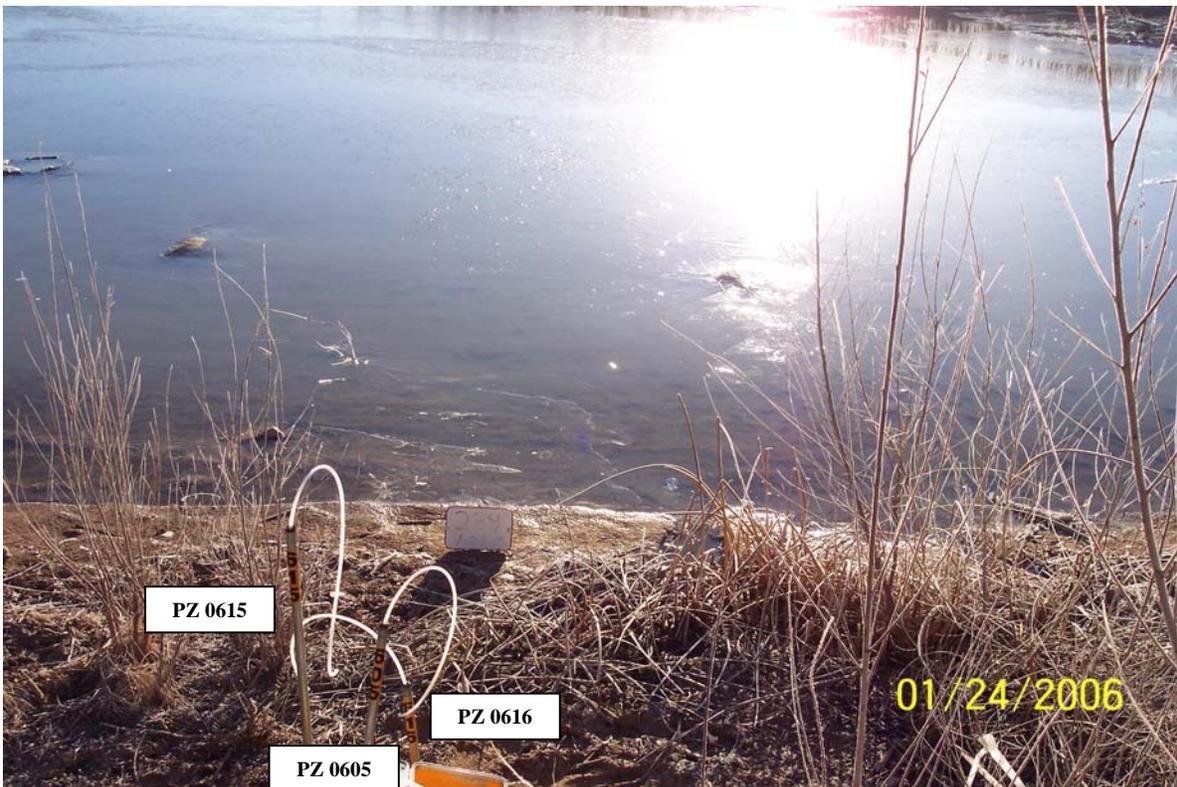
Corrective Action Required/Taken: None.

(KGP/lcg)

cc: C. I. Bahrke, Stoller (e)
L. E. Cummins, Stoller (e)
S. E. Donivan, Stoller (e)
K. E. Karp, Stoller (e)
K. E. Miller, Stoller
K. G. Pill, Stoller (e)
J. E. Price, Stoller (e)
Document Production (e)



Piezometer 0590 and Surface Water 0240



Piezometers 0605, 0615, and 0616



Surface Water 0239



Surface Water 0236

DATE: February 8, 2006

TO: John Ford

FROM: K. G. Pill

SUBJECT: Trip Report

Site: Moab – Interim Action Configuration 2 Well Field Biogeochemical Sampling Event – January 2006

Date of Sampling Event: January 17–19, 2006.

Team Members: Emile Bettez and Steve Back.

Sampling Event Background: This biogeochemical sampling was designed to relatively measure microorganism populations in an area where the shallow aquifer intersects the riverbed of the Moab site, and evaluate the attenuation of contaminant concentrations in ground water and the river because of biologically mediated reactions. Specific locations from Configuration 2 were sampled. This event represents the fourth time (monthly since October 2005) biogeochemical sampling has been performed within Configuration 2.

Number of Locations Sampled: Three Configuration 2 observation wells (0588, 0589, and 0602), and four piezometers (0591, 0603, 0604, and 0614). Including one equipment blank and one duplicate, a total of nine samples were collected and sent to Severn Trent Laboratories for analysis. Only eight samples (an equipment blank was not included) were collected and sent to Microseeps, Inc. for analysis.

Locations Not Sampled/Reason: None.

Sample Analysis: Submitted samples were analyzed by Severn Trent Laboratories in St. Louis, Microseeps, Inc. in Pittsburgh, and the Grand Junction Office Environmental Science Laboratory (ESL) for the following analytes:

Analyte	Laboratory	Priority
Nitrate / Nitrite as N	Severn Trent	High
Ferrous Iron / Divalent Manganese	Microseeps	
Carbon Dioxide / Methane / Nitrogen / Oxygen	Microseeps	
Bromide / Chloride / Sulfate	Severn Trent	
Nitrifying Bacteria	ESL	
Biological Oxygen Demand	ESL	

Analyte	Laboratory	Priority
Total Dissolved Solids	Severn Trent	
Total Iron	ESL	
Nitrite (as N)	ESL	
Sulfide	ESL	
Orthophosphate	ESL	
Ammonia (as N)	Severn Trent	
Dissolved Organic Carbon / Total Inorganic Carbon	Severn Trent	
Iron / Manganese / Selenium / Uranium	Severn Trent	
Total Organic Carbon	Severn Trent	
Chemical Oxygen Demand / Total Phosphorus / Total Kjeldahl Nitrogen	Severn Trent	Low

The analytes are listed from high to low priority for locations in which sufficient sample volume was not available (i.e., riverbed piezometers) for complete analyses.

Field Variance: Only a 125-mL sample was collected for uranium analysis, as opposed to the standard 500-mL sample volume. No other metals are being sampled, and this volume is sufficient for the uranium analysis. Two ticket numbers were assigned to the duplicate QA/QC sample because the samples were submitted to two different labs for analysis.

Limited sample volume was available for analysis from piezometers 0604 and 0614. These samples were analyzed for highest priority analytes, and split and preserved as directed by the laboratory for proper analysis.

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
2283 and 2281	0602	Duplicate from 18 ft bgs	Ground Water	NFB 007 and NFB 009
2282	NA	Equipment Blank – GW Equip	DI Water	NFB 011

RIN Numbers Assigned: Because of the nature of this sampling effort (analysis by two different labs), two RIN numbers were assigned. All samples submitted to Severn Trent Laboratories were assigned to RIN **06010290**. Samples submitted to Microseeps, Inc. were assigned RIN **06010291**.

Sample Shipment: Two coolers were sent overnight FedEx (one cooler to Microseeps, Inc., and the other to Severn Trent Laboratories) from Moab, Utah, on January 20, 2006 (Airbill Nos. 8531 7064 2729 and 8531 7064 2718, respectively).

Location Specific Information – Configuration 2 Observation Wells: All observation wells were sampled using micro-purge techniques with a peristaltic pump and dedicated downhole tubing. Sample depths and water levels for each observation well are listed below.

