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Moab UMTRA Project
Groundwater and Surface Water Monitoring Report
January through June 2024

Revision 0

October 2024

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Revision 0

Review and Approval

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Revision History

Revision	Date	Description
0	October 2024	Initial issue.

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Acronyms and Abbreviations

bgs	below ground surface
CCB	continuing calibration blank
CCV	continuing calibration verification
CF	Configuration
cfs	cubic feet per second
CFR	Code of Federal Regulations
cm	centimeter
COC	chain-of-custody
CRI	reporting limit verification
DOE	U.S. Department of Energy
EB	equipment blank
EIS	Environmental Impact Statement
EDD	electronic data deliverable
EPA	U.S. Environmental Protection Agency
ft	feet or foot
ICP	inductively coupled plasma
ICV	initial calibration verification
IDL	instrument detection limit
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
µmhos	micro mhos
MB	method blank
MDL	method detection limit
mg/L	milligrams per liter
MS	matrix spike
MSD	matrix spike duplicate
PCOC	Potential Contaminant of Concern
QC	quality control
r^2	correlation coefficient
RIN	report identification number
RL	reporting limit
RPD	relative percent difference
SD	serial dilution
SDG	sample data group
UMTRA	Uranium Mill Tailings Remedial Action

1.0 Introduction

1.1 Purpose

The purpose of this semi-annual report is to present the results and provide interpretation of the data associated with groundwater and surface water samples collected from the U.S. Department of Energy (DOE) Moab Uranium Mill Tailings Remedial Action (UMTRA) Project site during the first half of calendar year 2024. The results of the data validation process are also presented.

The site wide sampling event took place from January through February 2024. Samples were collected from site-wide groundwater and surface water locations shown on Figures 1 and 2, respectively. In April 2024 samples were collected from the Interim Action Well Field Configuration (CF) 4 monitoring wells, with locations are shown on Figure 3.

Samples were also collected from wells 0202 and 0205 at Crescent Junction on April 4, June 5, and June 16, 2024. These locations are shown on Figure 4.

1.2 Scope

This report presents a summary of sampling events and data assessments, including a summary of the anomalous data generated by the validation process and results for these events. Sampling and analyses were conducted in accordance with the *Moab UMTRA Project Groundwater/ Surface Water Sampling and Analysis Plan* (DOE-EM/GJRAC1830). All data validation follows criteria in the *Moab UMTRA Project Standard Practice for Validation of Laboratory Data* (DOE-EM/GJRAC1855). The Site Wide Sampling event was validated to Level 3, and the CF4 and Crescent Junction sampling events were validated at level 2.

The documentation associated with the January through February 2024 site-wide sampling event is provided in Appendix A. Appendices B and C provide similar documentation for the CF4 and Crescent Junction sampling events, respectively.

All Colorado River flows discussed in this document were measured from the U.S. Geological Survey Cisco gaging station number 09180500. River elevation data were collected adjacent to the site, and river flows are reported as cubic feet per second (cfs).

The Minimums and Maximums analyses were generated by the Moab Environmental Sampling (MESa) database to determine if the applicable data were within a normal statistical range. The new data set was compared to the historical data to determine if the new data fall outside the historical range. The results are not considered anomalous if: (1) identified low concentrations are the result of low detection limits, (2) the concentration detected is less or more than 50 percent of historical minimum or maximum values, or (3) there were fewer than five historical samples for comparison. Anomalous results are provided in tables in the "Data Assessment" section for each sampling event.

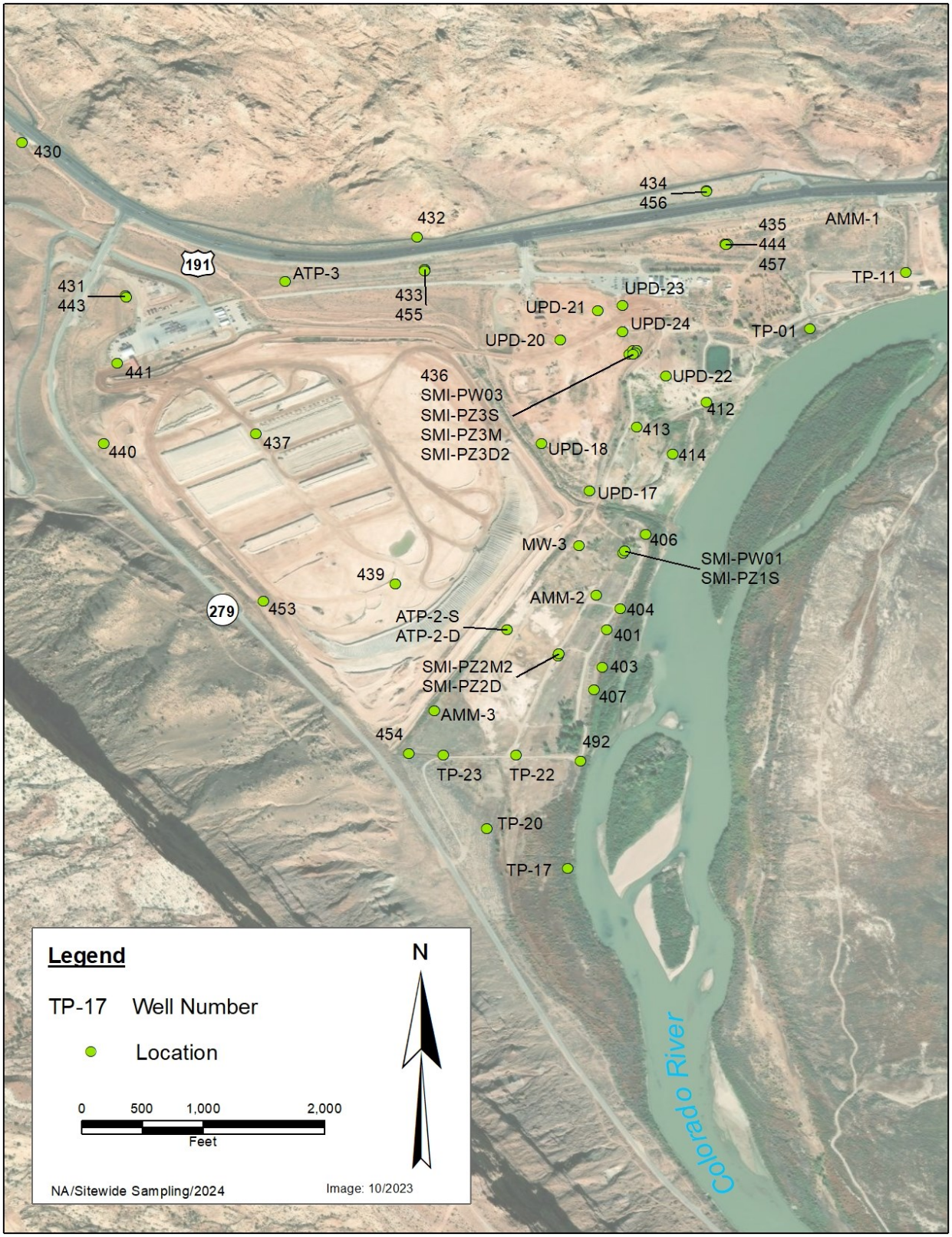

Figure 1. 2024 Site-wide Groundwater Sampling Locations

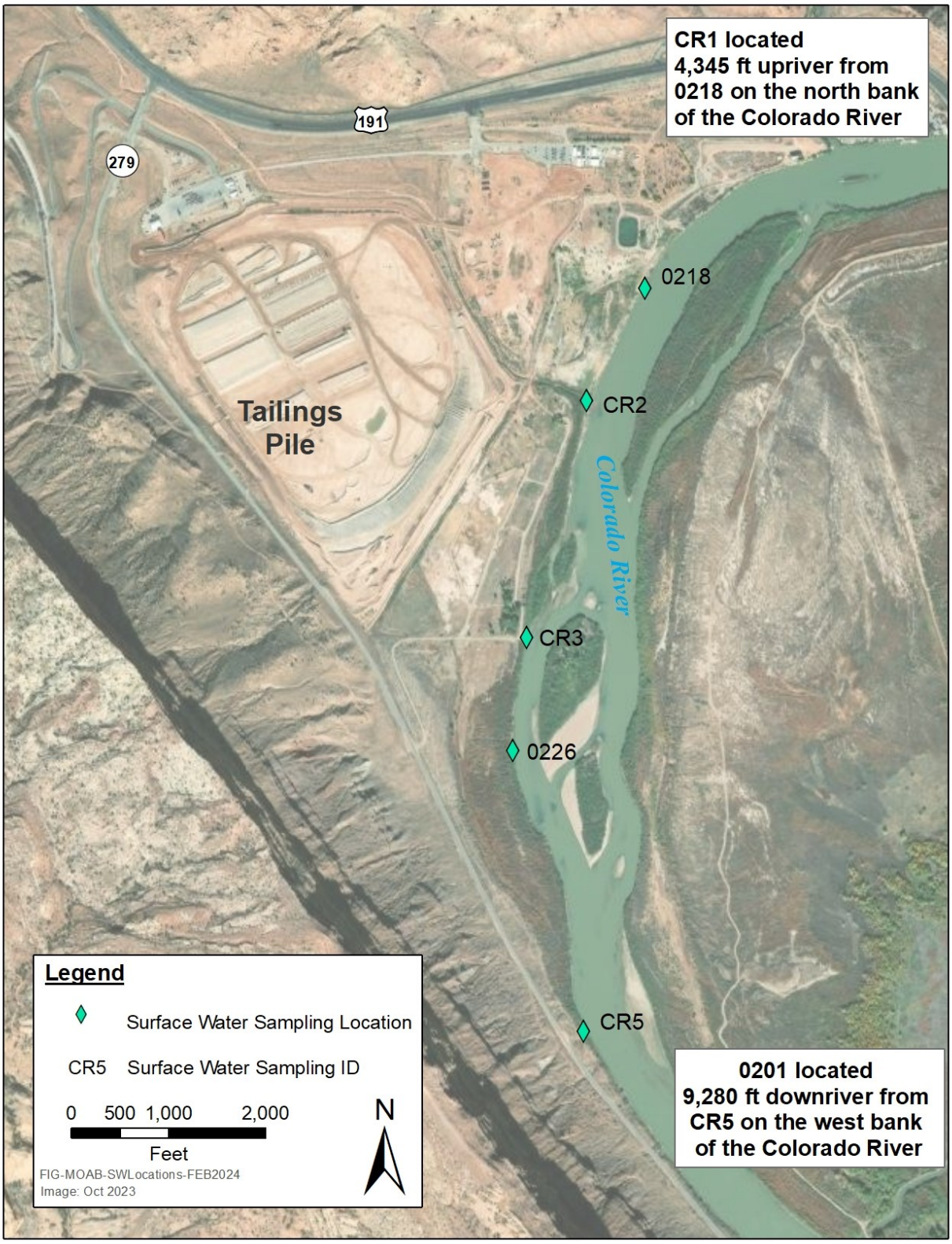

Figure 2. 2024 Surface Water Sampling Locations

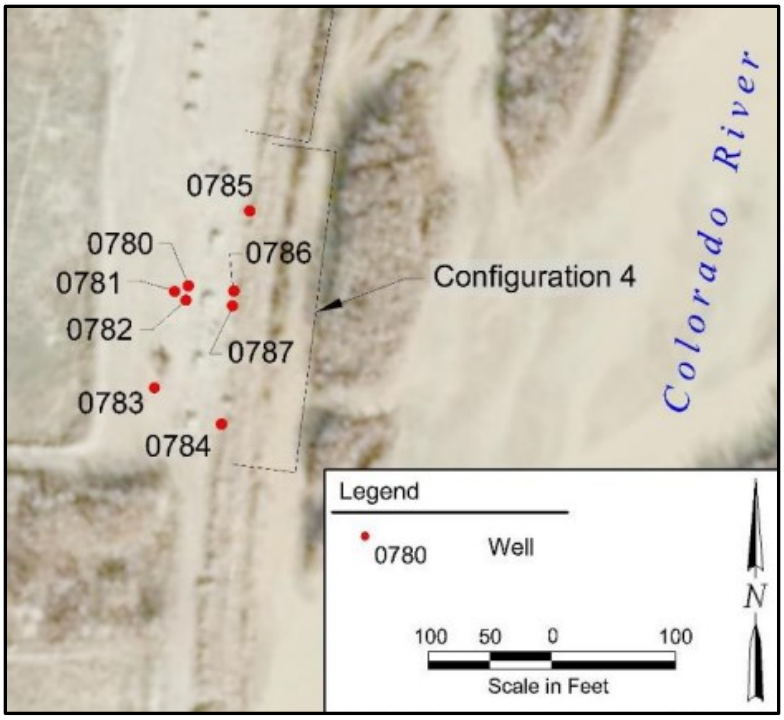

Figure 3. CF4 Sampling Locations

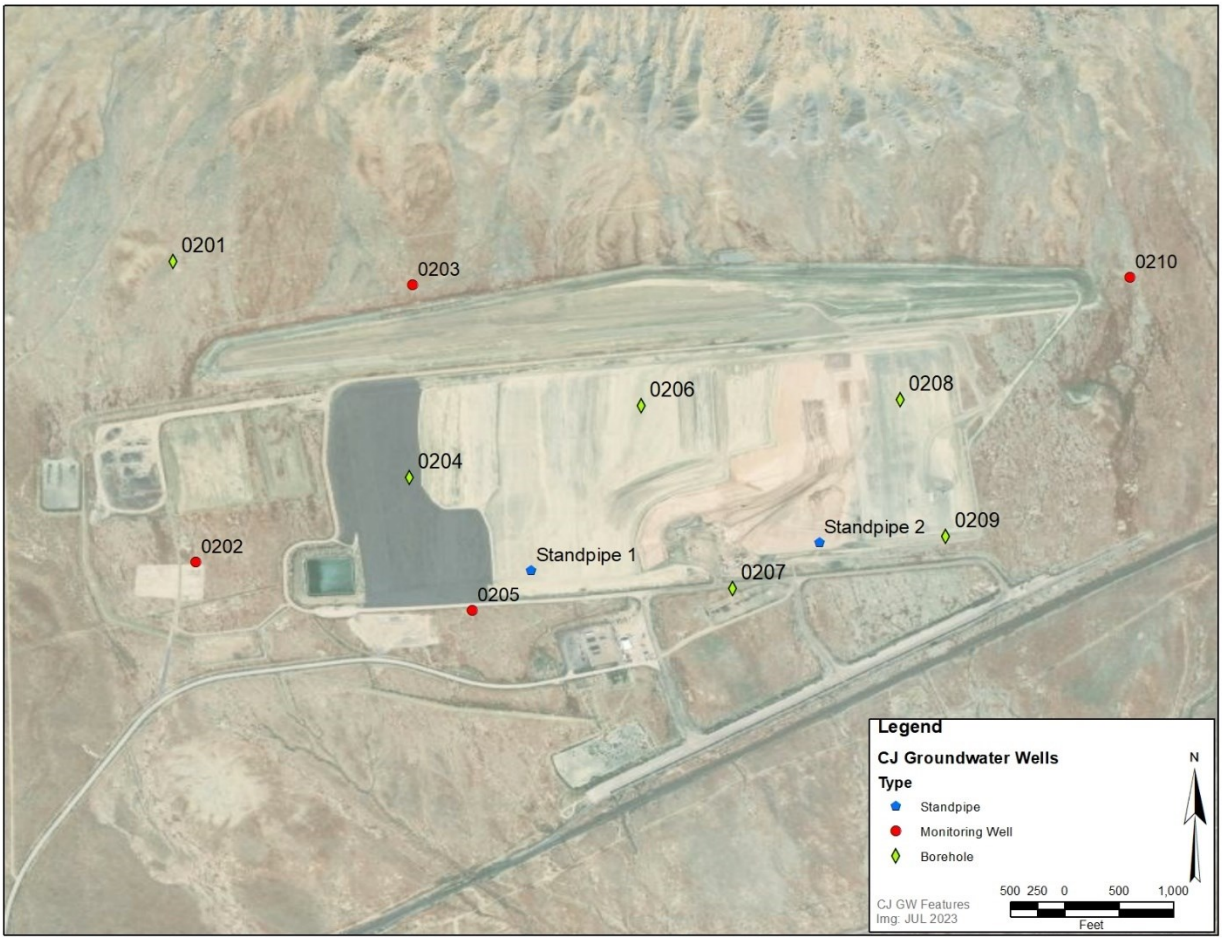

Figure 4. Crescent Junction Sampling Locations

1.3 Data Validation Definitions

The following definitions are associated with the data validation process and apply to Section 3.0. Data validation details are provided in the following sections of this report for the individual sampling events.

Laboratory Instrument Calibration
Compliance requirements for satisfactory instrument calibration are established to ensure the instrument is capable of producing acceptable qualitative and quantitative data for all analytes. Initial calibration demonstrates 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 the instrument continues to produce acceptable qualitative and quantitative data.

Method and Calibration Blanks
Method blanks (MBs) are analyzed to assess any contamination that may have occurred during sample preparation. Both initial calibration blanks and continuing calibration blanks (CCBs) are analyzed to assess instrument contamination before and during sample analysis. Depending on method requirements, detected sample results greater than the method detection limit (MDL) or instrument detection limit (IDL) are qualified "J" when the detections are less than five times the blank concentration. Non-detects are not qualified.

Equipment Blanks
An equipment blank (EB) is a sample of analyte-free media collected from a rinse of non-dedicated sampling equipment used to sample surface water. EBs are collected to document adequate decontamination of non-dedicated equipment. One EB should be prepared with each preparation batch.

Laboratory Control Sample Duplicates
Laboratory Control Sample Duplicates (LCSDs) that contain known concentrations of the analyte of interest are prepared in the laboratory. Matrix spike (MS) samples may not be generated due to a limited sample volume. Instead, laboratory control sample duplicates LCSDs are performed. The results are used to demonstrate the laboratory is in control of the preparation and analysis of samples.

Matrix Spike and Replicate Analysis
MS sample analysis, performed at a frequency of one per 20 samples unless otherwise noted, is a measure of the ability to recover analytes in a particular matrix. The MS sample results are required to be within the recovery limits.

Laboratory Replicate Analysis
The laboratory replicates results demonstrate acceptable laboratory precision. The relative percent difference (RPD) values for the reported matrix spike duplicate (MSD) results for all other analytes should be less than 20 percent for results greater than five times the RL.

Field Duplicate Analysis
Field duplicate samples are collected and analyzed as an indication of the overall precision of the measurement process. The precision observed includes both field and laboratory precision and has more variability than laboratory replicates, which measure only laboratory performance. The

duplicate results must meet the U.S. Environmental Protection Agency (EPA)-recommended laboratory duplicate criteria of less than 20 RPD for results that are greater than five times the RL.

Laboratory Control Samples
LCSs provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. Per national environmental laboratory accreditation requirements provided by the National Environmental Laboratory Accreditation Institute, an MS may be used in place of an LCS provided the acceptance criteria are as stringent.

Metals Serial Dilution
Serial dilution (SD) samples are prepared and analyzed for the metals analyses to monitor chemical or physical interferences in the sample matrix.

Detection Limits/Dilutions
Dilutions are prepared in a consistent and acceptable manner when they are required. CRIs are re-run at the beginning of each analytical run as a measure of accuracy near the RL. CRIs were made at the required frequency to verify the linearity of the calibration curve near the RL.

2.0 January through February 2024 Site-wide Sampling Event

2.1 Summary

Sixty-seven groundwater and surface water samples (including QA samples) were collected as part of the site-wide event when the Colorado River is at base flow conditions. Groundwater sampling was conducted to assess any changes and trends in water quality and the surface water samples were collected to assess surface water quality adjacent to the site compared to up- and down-stream water quality. All samples were submitted to GEL Laboratories for ammonia, arsenic, copper, manganese, selenium, sulfate, total dissolved solids, and uranium analysis.

2.2 January through February 2024 Site-wide Sampling Event Data Assessment

2.2.1 Laboratory Performance Assessment
This validation was performed according to *Standard Practice for Validation of Laboratory Data.* The procedure was applied at Level 3, Data Deliverables Examination. All analyses were successfully completed.

General Information and Validation Results

RIN	2401146
Laboratory:	GEL Laboratories, Charleston, SC
SDG Numbers:	652082, 653792, 654655, 655490
Analysis:	Metals and Inorganics
Validator:	James Ritchey, Thomas Prichard
Review Date:	September 2024

The samples were prepared and analyzed using accepted procedures as shown in Table 1. Analytical results were qualified as listed in Table 2. Refer to Table 3 for an explanation of the data qualifiers applied.

Table 1. 2024 Site-wide Sampling Event, Analytes and Methods

Analyte	Preparation Method	Analytical Method
Ammonia as N, NH3-N	EPA 350.1	EPA 350.1
Uranium	SW-846 3005A	SW-846 6020A
Arsenic	SW-846 3005A	ICP-MS 6020B
Copper	SW-846 3005A	SW-846 6020B
Manganese	SW-846 3005A	SW-846 6020B
Selenium	SW-846 3005A	ICP-MS 6020B
Sulfate	EPA 300.0	EPA 300.0
Total Dissolved Solids	NA	SM 2540C

Table 2. 2024 Site-wide Sampling Event, Data Qualifiers

Flag	Reason	Sample Number	Analyte	Location
J	MS-1	652082001 - 054	Metals	All
		653792001 - 048	Metals	All
		654655001 - 060	Metals	All
		655790001 - 039	Metals	All
J	MSD-1	652082001 - 054	Metals	All
		653792001 - 048	Metals	All
		654655001 - 060	Metals	All
		655790001 - 039	Metals	All
J	D-1	652082001 - 054	Selenium	All
		653792001 - 048	Selenium	All
		654655001 - 060	Sulfate, TDS	All
		655790001 - 039	Arsenic	All
J	B-1	652082002, -006, -024, -025, -040, -053	Arsenic	0412,0413,0457, AMM-1,TP-01,UPD-22
		655490018, -020, -028, -035, -039	Arsenic	SMI-PZ3M, SMI-PZ3S, UPD-20, UPD-23, UPD-24
		655490018, -020, -028, -035, -039	Copper	SMI-PZ3M, SMI-PZ3S, UPD-20, UPD-23, UPD-24
		652082002, -012, -014, -032, -035, -040, -048, -050, -053	Selenium	0412, 0414, 0431, 0435, SMI-PZ2D, SMI-PZ2M2, TP-11, TP-22, TP-23, UPD-22
		653792005	Selenium	
		655490018, -020, -028, -035, -039	Selenium	SMI-PZ3M, SMI-PZ3S, UPD-20, UPD-23, UPD-24
		652082042	Uranium	TP-11, ATP-2-D
		653792036	Uranium	TP-11, ATP-2-D
		655490018, -020, -028, -035, -039	Uranium	SMI-PZ3M, SMI-PZ3S, UPD-20, UPD-23, UPD-24

Notes: “J” indicates results are estimated and becomes “UJ” for analytical results lower than the detection limit.

Table 3. 2024 Site-wide Sampling Event, Reason Codes for Data Flags

Reason Code	Qualifier (Detects)	Qualifier (Non-detects)	Explanation
MS-1	J	U	No MS data was included in narrative.
MSD-1	J	U	No MSD data was included in the narrative.
MS-2	J	U	The MS failed due to a low percent recovery.
MS-3	J	R	MS returned value out of range
D-1	J	U	Samples did not meet recommended duplicate criteria.
B-1	J	-	Analyte was detected in blank.

Notes: "J" indicates results are estimated and becomes "UJ" for analytical results lower than the detection limit. U indicates the result is below the detection limit.

Sample Shipping/Receiving

GEL Laboratories in Charleston, South Carolina received a total of 67 samples for RIN 2401146 in four shipments. The four SDGs were accompanied by a Chain of Custody (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 forms and the sample tickets, had no errors or omissions.

Preservation and Holding Times

All of the SDGs were received intact. All four SDGs were received with compliant temperatures according to laboratory requirements. SDG64655 was marked as "≤ 6°C" which does not fully indicate it met the site requirement of ≤ 4°C. All samples were analyzed within the applicable holding.

Case Narratives

The case narratives were reviewed, and all detects where found to be within quality control procedures except for the following:

Laboratory Instrument Calibration

Method SW-846 6020A, Uranium

The initial calibrations were all performed using four calibration standards and one blank, resulting in calibration curves with correlation coefficient (r^2) values greater than 0.995. The values of the calibration curve intercepts for uranium were positive and less than 3 times the IDL.

Initial calibration verification (ICV) and continuing calibration verification (CCV) checks were made at the required frequency. All calibration checks met the acceptance criteria. Internal standard recoveries were stable and within acceptable ranges.

Method ICP-MS 6020B, Arsenic, Copper, Manganese, and Selenium

The initial calibrations were all performed using four calibration standards and one blank, resulting in calibration curves with correlation coefficient (r^2) values greater than 0.995.

Initial calibration verification (ICV) and continuing calibration verification (CCV) checks were made at the required frequency. All calibration checks met the acceptance criteria. Internal standard recoveries were stable and within acceptable ranges.

EPA 350.1, Ammonia as N
Initial calibrations for ammonia as N on all SDGs were performed using five calibration standards and one blank.

ICV and CCV checks were made at the required frequency. All calibration check results for all SDGs were within the acceptance criteria.

EPA 300.0, Sulfate
Initial calibrations for sulfate on all SDGs were performed using five calibration standards and one blank.

ICV and CCV checks were made at the required frequency. All calibration check results for all SDGs were within the acceptance criteria.

Method and Calibration Blanks
Method blanks (MBs) are analyzed to assess any contamination that may have occurred during sample preparation. Both initial calibration blanks (ICB) and continuing calibration blanks (CCBs) are analyzed to assess instrument contamination prior to and during sample analysis.

In SDG 652082, arsenic and selenium were identified in the MBs and in CCBs, including uranium. Affected results are flagged "J" for reason "B-1".

In SDG 654655, arsenic and selenium were also found in the MBs. Affected results were also flagged "J" for reason "B-1".

In SDG 655490, arsenic, copper, selenium, and uranium were found in the MBs. Affected results were also flagged "J" for reason "B-1" The narrative also indicates that all metals for samples 655490018 (SMI-PZ3M), 655490020 (SMI-PZ3S), 655490028 (UPD-20), 655490035 (UPD-23) and 655490039 (UPD-24) did not meet criteria. However, concentrations were at least ten time greater than the CBB and potential laboratory contamination would be minimal.

Equipment Blanks
One equipment blank (Location 0999) was collected after the surface water tubing was decontaminated. Ammonia, arsenic, and uranium were detectable in the equipment blank. All other ammonia results were higher but for three samples that were indetectable. All other sample results for arsenic were undetectable. Uranium detected in the equipment blank was significantly lower than all other sample results.

Matrix Spike Analysis
For all of the uranium, arsenic, copper, manganese, and selenium SDGs, the LCS was used in place of a matrix spike. Therefore, all metals data was flagged "J' for reason MS-1.
For SDG 652082, an ammonia matrix spike returned a value out of range (74%). Associated samples were flagged "J" ("R" for non-detects).

Laboratory Replicate Analysis
The laboratory replicates results demonstrate acceptable laboratory precision. The relative percent difference (RPD) values for the reported matrix spike duplicate (MSD) results for all other analytes should be less than 20 percent for results greater than 5 times the RL.

The metals SDGs did not contain an MS or MSD sample. Therefore, all of the uranium, arsenic, copper, manganese, and selenium data were flagged "J" for reason MS-1 and MSD-1.

Field Duplicate Analysis
Field duplicate samples are collected and analyzed as an indication of overall precision of the measurement process. The precision observed includes both field and laboratory precision and has more variability than laboratory replicates, which measure only laboratory performance. Four duplicate samples were collected from locations 0413, ATP-3, SMI-PW01, and SMI-PZ3D2. The U.S. Environmental Protection Agency (EPA) has a recommended laboratory duplicate criterion of less than 20 percent relative difference (RPD) for results that are greater than 5 times the RL. In SDG 652082 (0413), arsenic did not meet the recommended criterion. Selenium was also outside the criteria, but the result was less than 5x the PZL and the difference was less than the MDL. In SDG 653792 (ATP-3), selenium did not meet the recommended criterion. In SDG 654655 (SMI-PW01), TDS and sulfate were outside the criterion. And in SDG 655490 (SMI-PZ3D2), selenium did not meet the criteria; however, the sample result was estimated, and the duplicate result was non-detect.

Laboratory Control Samples
Laboratory control samples (LCS) provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. LCS results were acceptable for ammonia analyses. Per national environmental laboratory accreditation requirements provided by the National Environmental Laboratory Accreditation Conference Institute, an MS may be used in place of an LCS provided the acceptance criteria are as stringent. However, LCSs were run for analyses in all SDGs for this event.

Metals Serial Dilution
Serial dilution (SD) samples are prepared and analyzed for the metals analyses to monitor chemical or physical interferences in the sample matrix. Serial Dilutions were run for all metals analyses in all SDGs. In SDG 655490, a dilution result was outside the acceptance criteria for manganese (63.3%) and matrix suppression may be suspected.

Detection Limits/Dilutions
Dilutions were prepared in a consistent and acceptable manner when they were required. 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.

Electronic Data Deliverable Files
The Electronic Data Deliverable (EDD) files arrived February 5, February 21, February 28, and March 6, 2024; respectively for SDGs 652082, 653792, 654655, and 655490. The contents of the EDD were manually examined to ensure all and only the requested data were delivered in compliance with requirements and that the sample results accurately reflected the data contained in the sample data package.

2.2.2 Minimums and Maximums Report and Anomalous Data Review
Based on the definition of an anomalous data point, fourteen of the results are considered anomalous data points (eight low, six high). See Table 4 for the location and analyte of the anomalous data. The database Minimums and Maximums Report is provided in Appendix A.

Table 4. Anomalous Data Associated with the 2024 Site-wide Sampling Event

Location	Sample Date	Concentration (mg/L)	Historical Min (mg/L)	Historical Max (mg/L)	Disposition
Ammonia Total as N					
0453	1/30/2024	53.7	110	510	These concentrations are all lower than the historical minimum and will continue to be monitored to determine if this is indicative of a trend.
0456	1/29/2024	0.017	0.049	0.2	
0457	1/16/2024	0.02	0.0581	1.0	
AMM-2	1/16/2024	167	890	385	
ATP-3	1/31/2024	0.025	0.1	1.0	
TP-11	1/15/2024	0.146	0.46	1.5	
TP-17	2/7/2024	0.017	0.2	7.3	
Manganese					
0413	1/17/2024	0.416	0.0395	0.2	These concentrations are higher than historical results but have been sampled relatively few times for this analyte. Locations will continue to be monitored to determine if this is indicative of a trend.
TP-20	1/16/2024	0.538	0.041	0.2	
Selenium					
0404	2/5/2024	0.163	0.008	0.0397	These concentrations are higher than historical results, but all locations have been sampled less than ten times for this analyte. Still establishing a representative range.
0414	1/15/2024	0.188	0.022	0.087	
0439	2/13/2024	0.06	0.0016	0.0066	
Total Dissolved Solids					
ATP-2-S	1/29/2024	2550	6500	14000	Concentration lower than historical minimum, has been sampled less than 10 times for this analyte. Will continue to sample.
Uranium					
TP-20	1/16/2024	0.0704	0.0005	0.044	This location will continue to be monitored to determine if the most recent concentration is indicative of a trend.

2.3 January through February 2024 Site-wide Sampling Event Results

In addition to ammonia and uranium, during the recent site-wide event samples were also analyzed for the five other potential contaminants of concern (PCOCs) (arsenic, copper, manganese, selenium, and sulfate) that were identified in the screening process and presented in Appendix A-2 of the EIS. The groundwater system underlying the site is not a drinking water source, and these analyses were for informational purposes only. Results for each of these PCOCs are discussed individually below.

Ammonia
Samples have been analyzed for ammonia consistently since initial characterization of the site because it is one of the two primary (the other being uranium) site contaminants. There are no regulatory groundwater ammonia standards; however, provided in the EIS is a proposed standard of 3 mg/L for the site based on dilution factors and surface water impacts. With the exception of upgradient and other locations beyond the extent of the ammonia plume, groundwater samples collected across the majority of the site exceed this 3 mg/L ammonia concentration. More detailed information regarding the ammonia results is provided below.

Arsenic
Since 2022, arsenic has been part of the standard sampling suite. During this most recent event, one location had a concentration that exceeded the 40 CFR 192 Sub A, Table 1 standard of 0.05 mg/L.

Table 5. 2024 Site-wide Groundwater Locations Exceeding the 0.05 mg/L Arsenic Groundwater Standard

Well Number	Date	Location	Sample Depth (ft bgs)	Arsenic Concentration (mg/L)
UPD-24	2/13/2024	NE Uranium Plume Area	27	0.292

Copper
The only applicable groundwater standard for copper is the EPA Action Level of 1.3 mg/L. Samples were collected from 62 locations, and the concentrations ranged from 0.003 (the detection limit) to 0.0388 mg/L. Therefore, none of these exceeded this action level.

Manganese
The only applicable groundwater standard for manganese is an EPA Secondary Drinking Water Regulation of 0.05 mg/L. Samples were collected from 62 locations during this recent event, and 40 were above the 0.05 mg/L concentration. Table 6 provides the locations, sample depths, and associated results.

Table 6. 2024 Site-wide Groundwater Locations Exceeding the Manganese 0.05 mg/L Drinking Water Standard

Well Number	Date	Location	Sample Depth (ft bgs)	Manganese Concentration (mg/L)
0401	2/5/2024	CF2	18	3.59
0403	2/5/2024	CF1	18	1.47
0407	2/5/2024	CF1	18	1.99
0413	1/17/2024	NE Uranium Plume Area	10	0.416
0414	1/15/2024	NE Uranium Plume Area	7.5	0.805
0431	1/30/24	N of Queue	91	0.0923
0434	1/29/2024	Upgradient of site	80	0.351

Table 6. 2024 Site-wide Groundwater Locations Exceeding the Manganese 0.05 mg/L Drinking Water Standard (continued)

Well Number	Date	Location	Sample Depth (ft bgs)	Manganese Concentration (mg/L)
0435	1/16/2024	Upgradient of site	173	0.67
0436	2/13/2024	NE Uranium Plume Area	197	3.45
0437	1/30/2024	On Tailings Pile	NA	0.14
0439	2/13/2024	On Tailings Pile	NA	0.186
0444	1/16/2024	Upgradient of site	116	1.76
0453	1/30/2024	Within CA along SR-279	80	0.318
0454	1/16/2024	Along SW Site Boundary	13	1.48
0455	2/5/2024	Upgradient of site	46	0.0955
0457	1/16/2024	Upgradient of site	29	0.631
0492	2/7/2024	Along S Site Boundary	18	4.38
AMM-2	1/16/2024	Near CF5	48	0.179
AMM-3	1/29/2024	Base of tailings pile	48	3.19
ATP-2-D	1/29/2024	Base of tailings pile	88	1.23
ATP-2-S	1/29/2024	Base of tailings pile	25	0.0593
ATP-3	1/31/2024	Upgradient of site	51	0.352
MW-3	1/29/2024	Near CF5	44	4.68
SMI-PW01	2/5/2024	CF5 Vicinity	40	0.0611
SMI-PW03	2/13/2024	NE Uranium Plume Area	60	1.19
SMI-PZ1S	2/5/2024	CF5 Vicinity	18	0.993
SMI-PZ2D	1/16/2024	CF5 Vicinity	75	5.88
SMI-PZ2M2	1/16/2024	CF5 Vicinity	56	5.42
SMI-PZ3D2	1/16/2024	NE Uranium Plume Area	78	0.158
SMI-PZ3M	2/13/2024	NE Uranium Plume Area	59	0.984
SMI-PZ3S	2/13/2024	NE Uranium Plume Area	25	0.0504
TP-01	1/15/2024	NE Uranium Plume Area	22	0.688
TP-11	1/15/2024	E edge of site	30	1.65
TP-17	2/7/2024	NE Uranium Plume Area	17	2.02
TP-20	1/16/2024	Along SW Site Boundary	32	0.538
TP-23	1/16/2024	Along SW Site Boundary	25	4.41
UPD-17	2/14/2024	NE Uranium Plume Area	14	0.378
UPD-20	2/14/2024	NE Uranium Plume Area	17	0.401
UPD-22	1/15/2024	NE Uranium Plume Area	9	0.0596
UPD-24	2/13/2024	NE Uranium Plume Area	27	0.0723

Selenium

Similar to the samples collected for arsenic analysis, since 2022 all sitewide samples were analyzed for selenium. Of the 62 samples collected, 39 had selenium concentrations above the 0.01 mg/L standard (40 CFR 192 Sub A, Table 1). These results presented in Table 7.

Table 7. 2024 Site-wide Groundwater Locations Exceeding the 0.01 mg/L Selenium Groundwater Standard

Well Number	Date	Location	Sample Depth (ft bgs)	Selenium Concentration (mg/L)
0404	2/5/2024	CF2	18	0.163
0406	1/29/2024	Moab Wash	18	0.158
0413	1/17/2024	NE Uranium Plume Area	10	0.0853
0414	1/15/2024	NE Uranium Plume Area	7.5	0.188
0431	1/30/2024	N of Queue	91	0.0198
0434	1/29/2024	Upgradient of site	80	0.0283
0435	1/16/2024	Upgradient of site	173	0.249
0436	2/13/2024	NE Uranium Plume Area	196	0.0965
0437	1/30/2024	On Tailings Pile	NA	0.116
0439	2/13/2024	On Tailings Pile	NA	0.06
0440	1/30/2024	Along SW Site Boundary	117	0.103
0441	1/30/2024	Along SW Site Boundary	53	0.783
0443	1/30/2024	Upgradient of site	73	0.0224
0444	1/16/2024	Upgradient of site	116	0.346
0453	1/30/2024	Within CA along SR-279	80	0.301
0454	1/16/2024	Along SW Site Boundary	13	0.326
0456	1/29/2024	Upgradient of site	53	0.0229
0457	1/16/2024	Upgradient of site	29	0.0131
AMM-1	1/15/2024	E edge of site	19	0.028
AMM-2	1/16/2024	Near CF5	48	0.0351
ATP-2-D	1/29/2024	Base of tailings pile	88	0.195
MW-3	1/29/2024	Near CF5	44	0.0221
SMI-PW01	2/5/2024	CF5 Vicinity	40	0.0981
SMI-PZ1S	2/5/2024	CF5 Vicinity	18	0.146
SMI-PZ2D	1/16/2024	CF5 Vicinity	75	0.17
SMI-PZ2M2	1/16/2024	CF5 Vicinity	56	0.085
SMI-PZ3D2	2/13/2024	NE Uranium Plume Area	78	0.0677
SMI-PZ3S	2/13/2024	NE Uranium Plume Area	25	0.0277
TP-01	1/15/2024	NE Uranium Plume Area	22	0.0283
TP-17	2/7/2024	South of site along river	17	0.0102
TP-20	1/16/2024	South of site	32	0.459
TP-22	1/16/2024	CF5 Vicinity	17	0.123
TP-23	1/16/2024	CF5 Vicinity	25	0.0279
UPD-17	2/14/2024	NE Uranium Plume Area	14	0.166
UPD-18	2/14/2024	NE Uranium Plume Area	13	0.092
UPD-21	2/13/2024	NE Uranium Plume Area	25	0.0871
UPD-22	1/15/2024	NE Uranium Plume Area	9	0.0168
UPD-23	2/13/2024	NE Uranium Plume Area	29	0.0628
UPD-24	2/13/2024	NE Uranium Plume Area	27	0.0265

Sulfate

Similar to manganese, there is only an EPA Secondary Drinking Water Regulation for sulfate, which is 250 mg/L. Of the 62 locations sampled, 55 exceeded this standard (refer to results in Appendix A). The sulfate concentration ranged from 154 to 14,800 mg/L, with a geometric mean of 1,932 mg/L. The high concentrations can be attributed to the presence of the naturally occurring brine within the groundwater system.

Uranium

All samples collected during this event were analyzed for uranium. Table 20 presents all locations sampled that exceeded the 0.044 mg/L uranium groundwater standard. This standard is based on Table 1 in *Title 40 Code of Federal Regulations Part 192 (40 CFR 192) "Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, Subpart A, Standards for the Control of Residual Radioactive Materials from Inactive Uranium Processing Sites*," assuming uranium-234 and uranium-238 activities are in equilibrium.

Table 8. 2024 Site-wide Groundwater Locations Exceeding the 0.044 mg/L Uranium Groundwater Standard

Well Number	Date	Location	Sample Depth (ft bgs)	Uranium Concentration (mg/L)
0401	2/5/2024	CF2	18	1.68
0403	2/5/2024	CF1	18	0.3
0404	2/5/2024	CF2	18	1.25
0406	1/29/2024	Moab Wash	18	1.03
0407	2/5/2024	CF1	18	1.22
0412	1/15/2024	North of Moab Wash	9.5	3.19
0413	1/17/2024	NE Uranium Plume Area	10	3.05
0414	1/15/2024	NE Uranium Plume Area	7.5	5.41
0437	1/30/2024	On Tailings Pile	NA	2.47
0439	2/13/2024	On Tailings Pile	NA	1.48
0441	1/30/2024	Along SW Site Boundary	53	0.0539
0453	1/30/2024	Within CA along SR-279	80	1.96
0454	1/16/2024	Along SW Site Boundary	13	1.37
0492	2/7/2024	Along S Site Boundary	18	1.53
AMM-2	1/16/204	Near CF5	48	1.97
AMM-3	1/29/2024	Base of tailings pile	48	1.87
MW-3	1/29/2024	Near CF5	44	2.36
SMI-PW01	2/5/2024	CF5 Vicinity	40	1.61
SMI-PW03	2/13/2024	NE Uranium Plume Area	60	0.301

Table 8. 2024 Sampling Events, Groundwater Locations Exceeding the 0.044 mg/L UMTRA Uranium Groundwater Standard (continued)

Well Number	Date	Location	Sample Depth (ft bgs)	Uranium Concentration (mg/L)
SMI-PZ1S	2/5/2024	CF5 Vicinity	18	1.07
SMI-PZ2D	1/16/2024	CF5 Vicinity	75	1.15
SMI-PZ2M2	1/16/2024	CF5 Vicinity	56	4.27
SMI-PZ3D2	2/13/2024	NE Uranium Plume Area	78	0.645
SMI-PZ3M	2/13/2024	NE Uranium Plume Area	59	0.3661
SMI-PZ3S	2/13/2024	NE Uranium Plume Area	25	1.41
TP-01	1/15/2024	NE Uranium Plume Area	22	0.0583
TP-20	1/16/2024	South of site	32	0.0704
TP-22	1/16/2024	CF5 Vicinity	17	0.733
TP-23	1/16/2024	CF5 Vicinity	25	2.85
UPD-17	2/14/2024	NE Uranium Plume Area	14	1.22
UPD-18	2/14/2024	NE Uranium Plume Area	13	0.714
UPD-20	2/14/2024	NE Uranium Plume Area	25	0.0554
UPD-21	2/13/2024	NE Uranium Plume Area	25	6.38
UPD-22	2/13/2024	NE Uranium Plume Area	9	2.78
UPD-23	2/13/2024	NE Uranium Plume Area	29	0.69
UPD-24	2/13/2024	NE Uranium Plume Area	27	3.18

Notes: NE = northeastern; SW = southwestern

To more easily present the trends observed in the water chemistry for the site-wide locations, the site was divided into six areas. These include:

- The Northeastern Base of the Tailings Pile
- The Northeastern Uranium Plume Area
- The Southeastern Base of the Tailings Pile
- The Southwestern Site Boundary
- The Site Boundary along the Colorado River
- The Southern and Off-site Areas

All results since 2010 are plotted against the Colorado River flow to determine if the river stage may impact the concentrations. Refer to Figure 1 for the site-wide groundwater sampling locations.

2.3.1 Northeastern Base of Tailings Pile

Figures 5 and 6 are time versus ammonia and uranium concentration plots, respectively, for locations UPD-17 and UPD-18. Because of these location's proximity to the Colorado River and Moab Wash (in which the Colorado River tends to flood during peak runoff), prior to 2019 ammonia concentrations (Figure 5) have displayed a general trend of higher ammonia concentrations during river base flows and, conversely, lower concentrations during the spring runoff (or higher flows). Since 2019 the ammonia concentrations have not followed this trend, and most recently the concentrations have increased at both locations and are still within the historical range. Overall, the ammonia concentrations have been gradually decreasing at approximately the same rate.

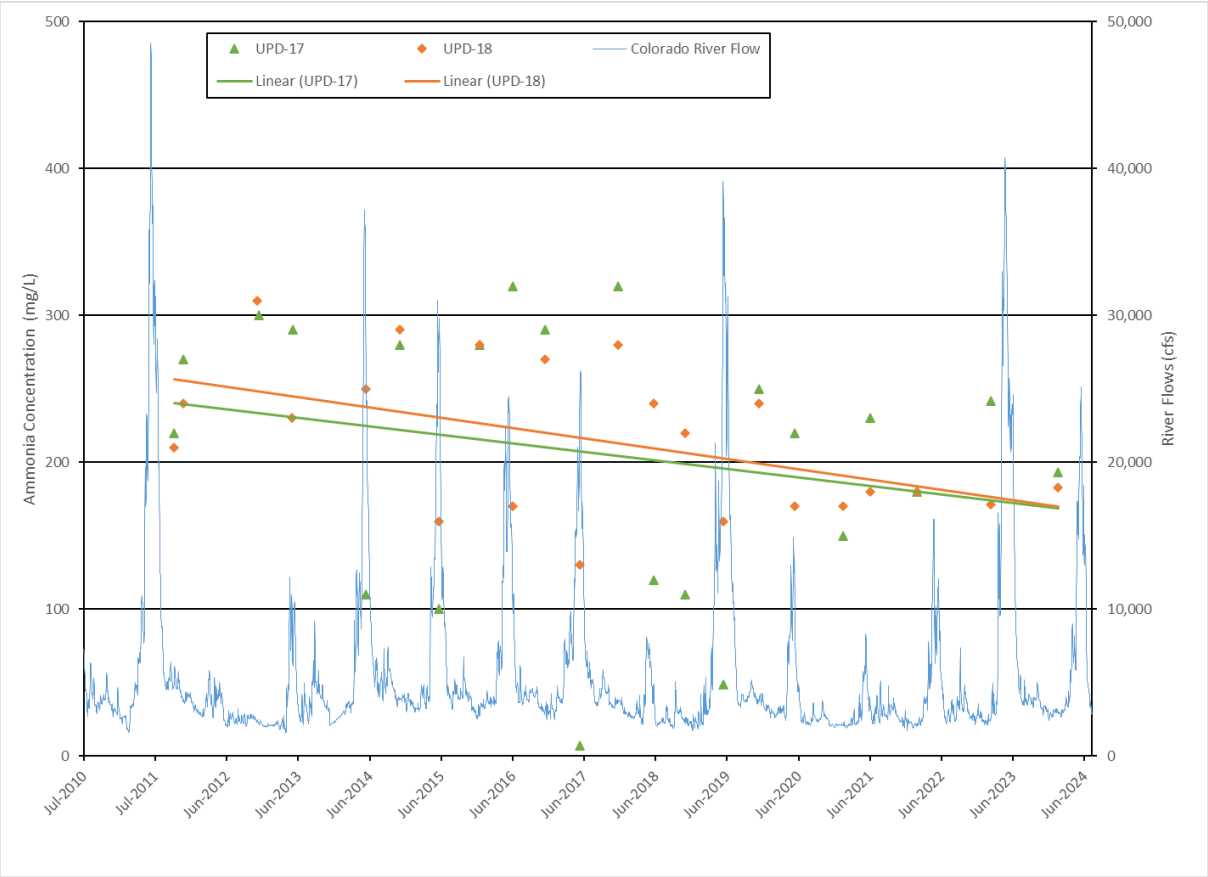

Figure 5. Wells UPD-17 and UPD-18 Time versus Ammonia Concentration Plot

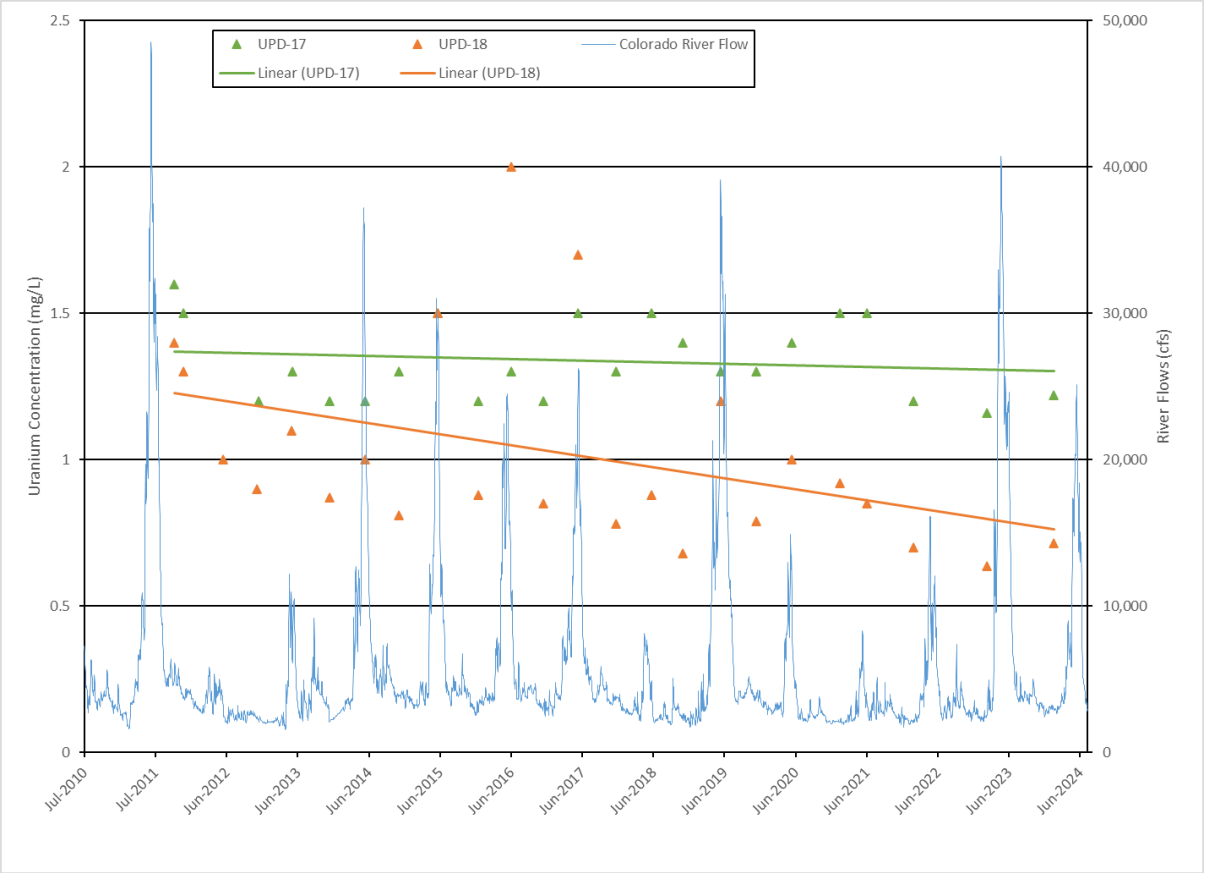

Figure 6. Wells UPD-17 and UPD-18 Time versus Uranium Concentration Plot

Uranium concentrations (Figure 6) tend to increase during higher river stages, where oxygenated water enters the subsurface and increases the uranium solubility. This geochemical reaction is especially evident in the samples collected from the well UPD-18. In the past 10 years the uranium concentrations in samples collected from UPD-17 have slightly decreased, and the concentrations have decreased in the samples collected from UPD-18.

2.3.2 Northeastern Uranium Plume Area

Due to the number of wells associated with the northeastern uranium plume, this area of the site was further subdivided into the center of the plume, the northern edge of plume area, and the northeastern edge of the plume area.

Center of Northeastern Uranium Plume Area

Figures 7 and 8 are the time versus ammonia and uranium concentration plots, respectively, for the center of the northeastern uranium plume area, which includes locations UPD-20, 0411, 0413, and 0414 (listed from upgradient to downgradient). It has not been possible to collect a sample from 0411 over the past several years due to insufficient or no water present in the well.

Well 0413 is approximately 650 ft from the Colorado River, and the ammonia concentrations (Figure 7) collected from this location have been consistently higher since 2011 compared to the samples collected from well 0414. Well 0413 is less susceptible to impacts of the river stage compared to well 0414 (located only 250 ft from the river) when this area is not flooded. Trendlines indicate ammonia concentrations over the past 10 years have steadily increased. However, results from this latest event are outside the ranges of pervious samples with 0413 being the lowest in recent past and 0414 being the highest.

The uranium concentration (Figure 8) in the sample collected from well UPD-20 was again just above the 0.044 mg/L standard (as it has been since this well was installed in 2011), with a concentration of 0.0554 mg/L. Since 2012 the concentration has ranged from 0.055 to 0.095 mg/L with this latest result being the lowest. The uranium concentrations in samples collected from wells 0413 and 0414 have generally been similar since June 2013. Recently the trendlines suggest the uranium concentrations in the samples collected from 0413 have increased and decreased in samples collected from 0414 over the past 10 years.

Northern Edge of Uranium Plume Area

The ammonia and uranium concentrations associated with samples collected from locations in the northern edge of the plume area displayed in Figures 9 and 10, respectively. These wells include 0410, UPD-21, UPD-23, and UPD-24, all of which were sampled at a depth of approximately 25 ft bgs. It has not been possible to sample well 0410 in the past due to low water volume.

As shown in Figure 9, the ammonia concentrations in samples collected from UPD-21, UPD-23, and UPD-24 during this site-wide event were less than 10 mg/L. UPD-23 ammonia concentrations have displayed a slight increase over time, but the latest result is still within historical range. Historically, this area of the site has had the highest uranium concentrations (Figure 10) in groundwater, particularly in wells UPD-21 and -24. The uranium concentration collected from well UPD-23 remains lower than 1.0 mg/L and has not significantly changed since 2012, suggesting the uranium plume has not extended to the north/northeast during this time. The trendlines displayed in Figure 8 suggests that the UPD-21 and UPD-24 concentrations continue to decrease.

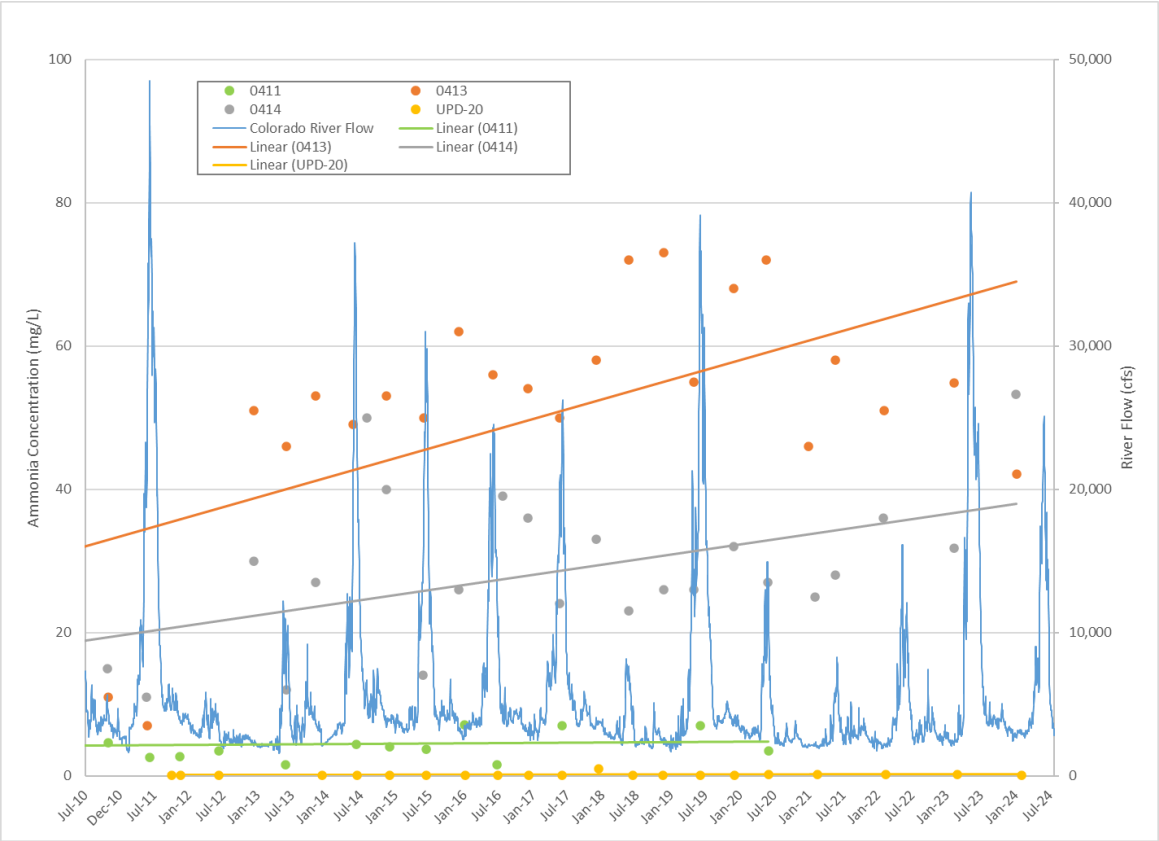

Figure 7. Center of Northeastern Uranium Plume Area Observation Wells 0411, 0413, 0414, and UPD-20 Time versus Ammonia Concentration Plot

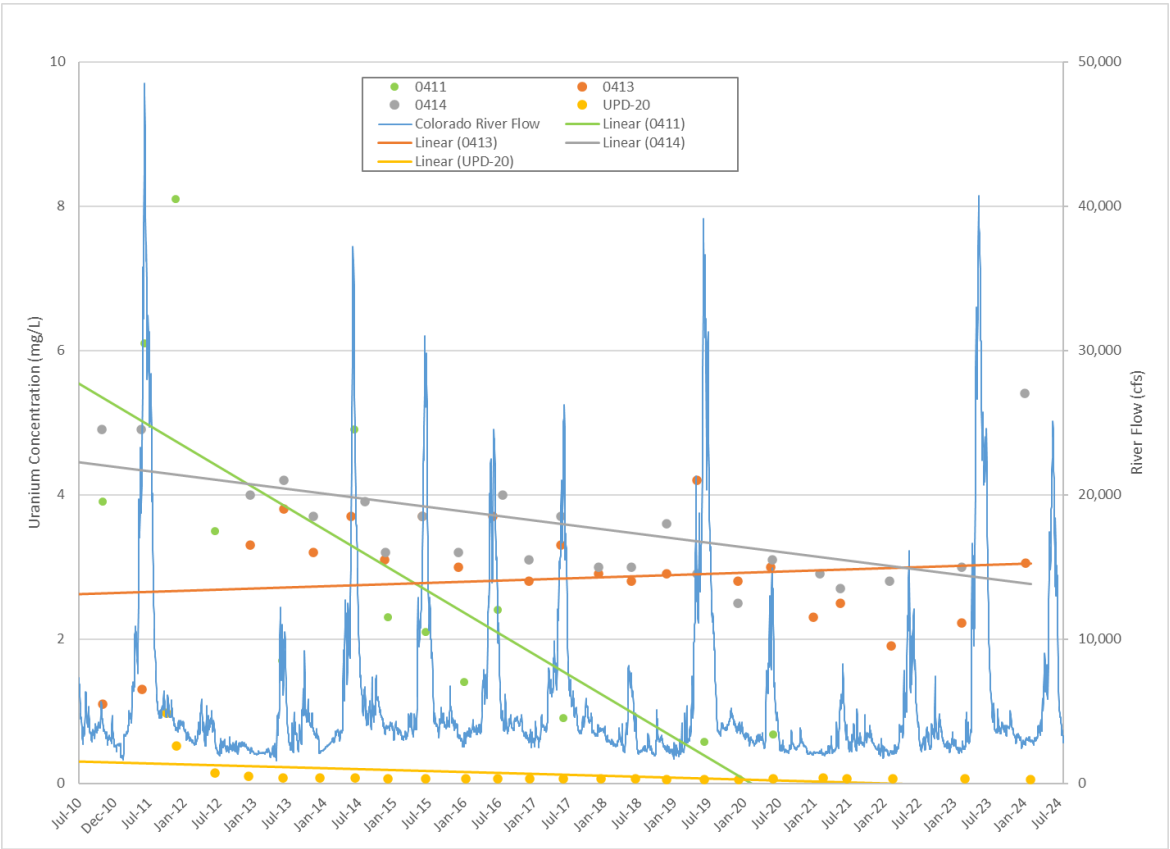

Figure 8. Center of Northeastern Uranium Plume Area Observation Wells 0411, 0413, 0414, and UPD-20 Time versus Uranium Concentration Plot

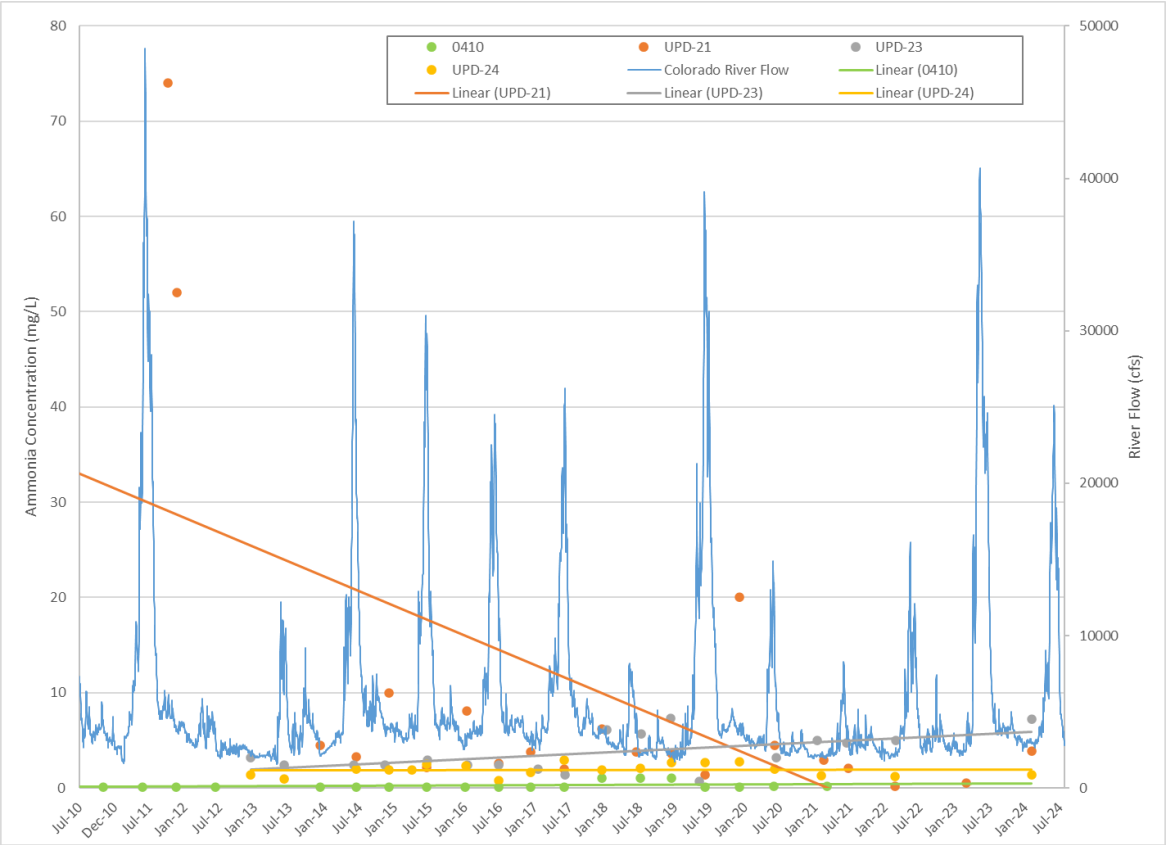

Figure 9. Northern Edge of Uranium Plume Area Observation Wells 0410, UPD-21, UPD-23, and UPD-24 Time versus Ammonia Concentration Plot

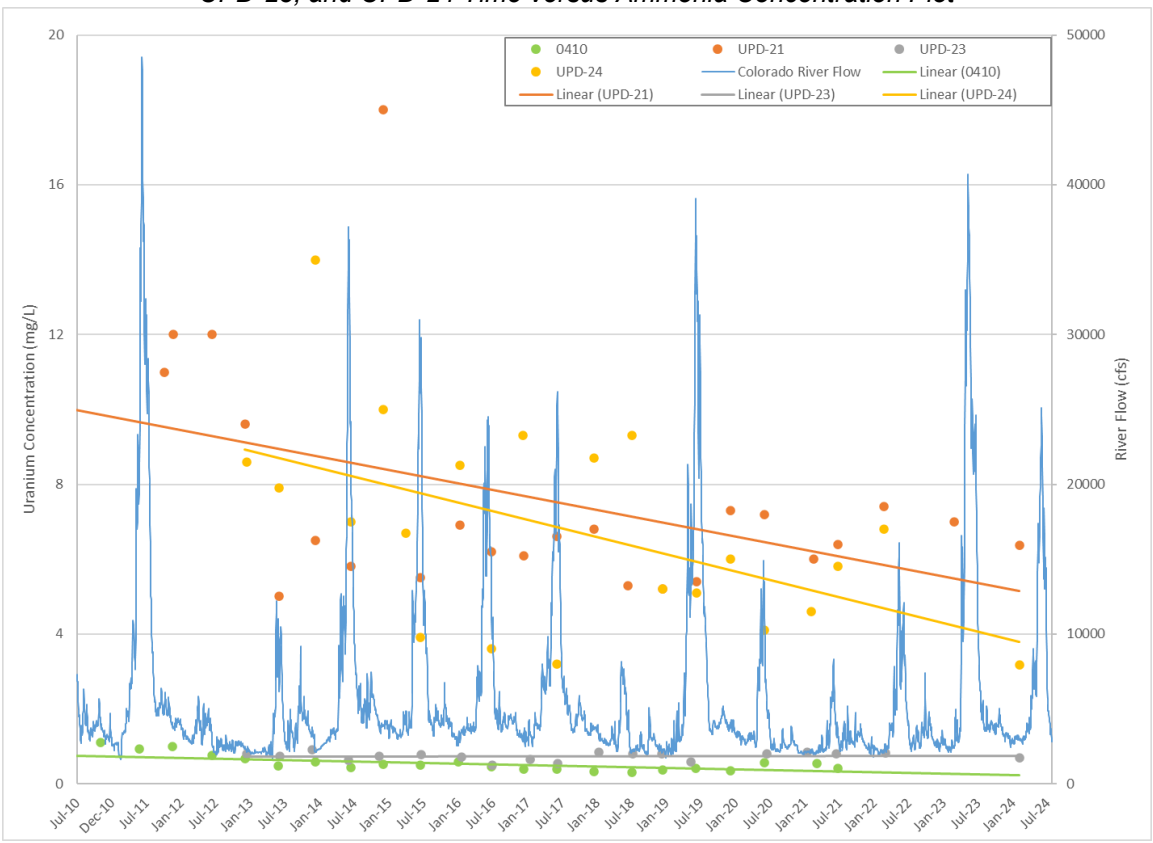

Figure 10. Northern Edge of Uranium Plume Area Observation Wells 0410, UPD-21, UPD-23, and UPD-24 Time versus Uranium Concentration Plot

Northeastern Edge of Uranium Plume Area

Figures 11 and 12 display ammonia and uranium concentration data for the wells located in the vicinity of the northeastern edge of the plume area. This includes wells SMI-PZ3S, UPD-22, 0412, and SMI-MW01 (listed from upgradient to downgradient). Well SMI-PZ3S is located approximately 850 ft from the riverbank, and SMI-MW01 is only 50 ft off the bank. Well 0412 is near SMI-MW01, approximately 60 ft upgradient, but sampled at different depths (11 and 16 ft bgs, respectively). It has not been possible to sample well 0412 in recent years due to low groundwater elevations and well SMI-MW01 was submerged and filled in during the high river stage in 2023.

As Figure 11 exhibits, the ammonia concentrations associated with the sampling of these wells increases moving away from the riverbank. The fluctuations displayed in the concentrations associated with 0412 are a function of detection limits. The concentrations measured in the samples collected from SMI-MW01 and 0412 have remained below 3 mg/L since 2010, suggesting this area is close to the edge of the ammonia plume. Through 2015 the concentrations measured in samples collected from well UPD-22 were below 5 mg/L, increased to nearly 10 mg/L in 2017 and have gradually decreased suggesting minimal plume movement.

With this set of wells located downgradient of the former processing area, the uranium concentrations are impacted by the upgradient conditions. However, consistently the uranium concentrations measured in the samples collected from the well closest to the former processing area cluster (SMI-PZ3S) are the lowest of this set of wells. Additionally, well SMI-PZ3S is near UPD-24 (approximately 200 ft downgradient), but the concentrations are significantly different. As shown in Figure 12 moving in the southeast (downgradient) direction concentrations generally increase, with the highest associated with the sample collected from well 0412. The concentration increase in the downgradient direction suggests the uranium plume is being impacted by another source, possibly the remnants of the berm that was in place during mill site operations through 2011. The latest results continue to support this.

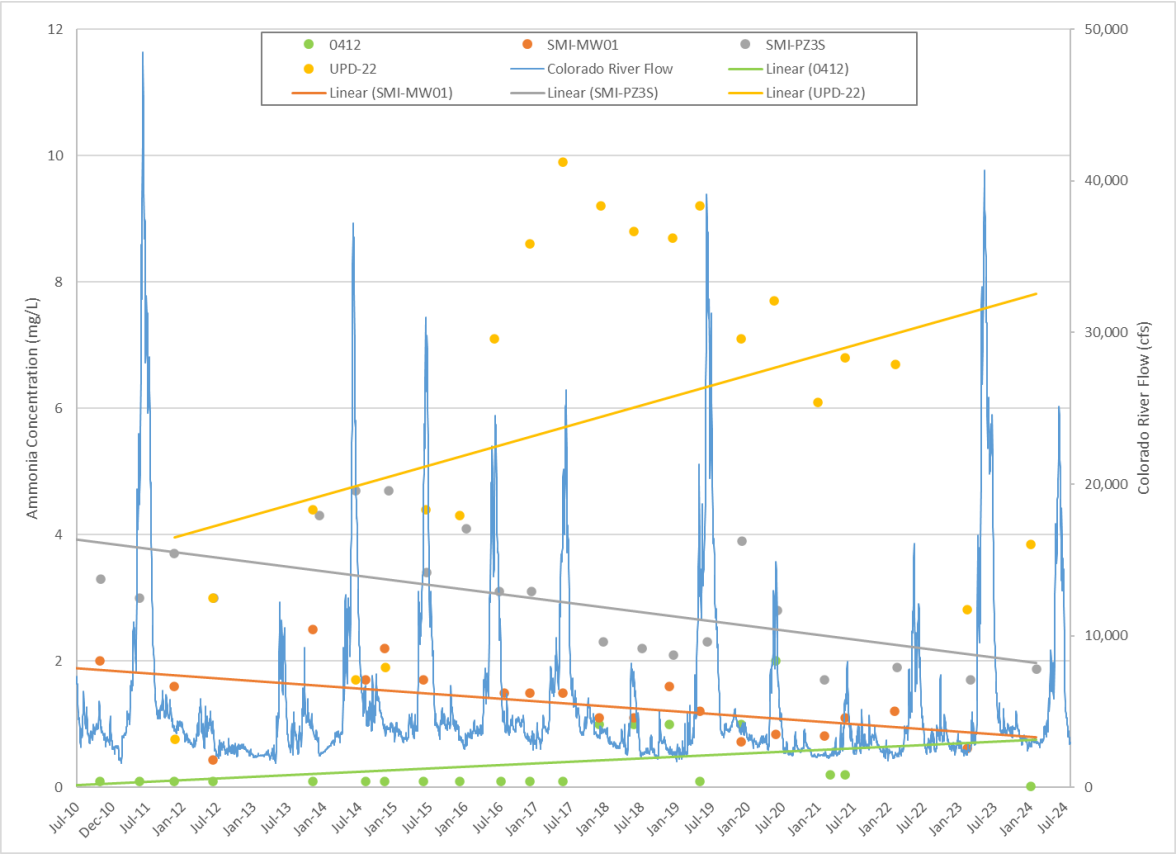

Figure 11. Northeastern Edge of Uranium Plume Area Observation Wells 0412, SMI-MW01, SMI-PZ3S, and UPD-22 Time versus Ammonia Concentration Plot

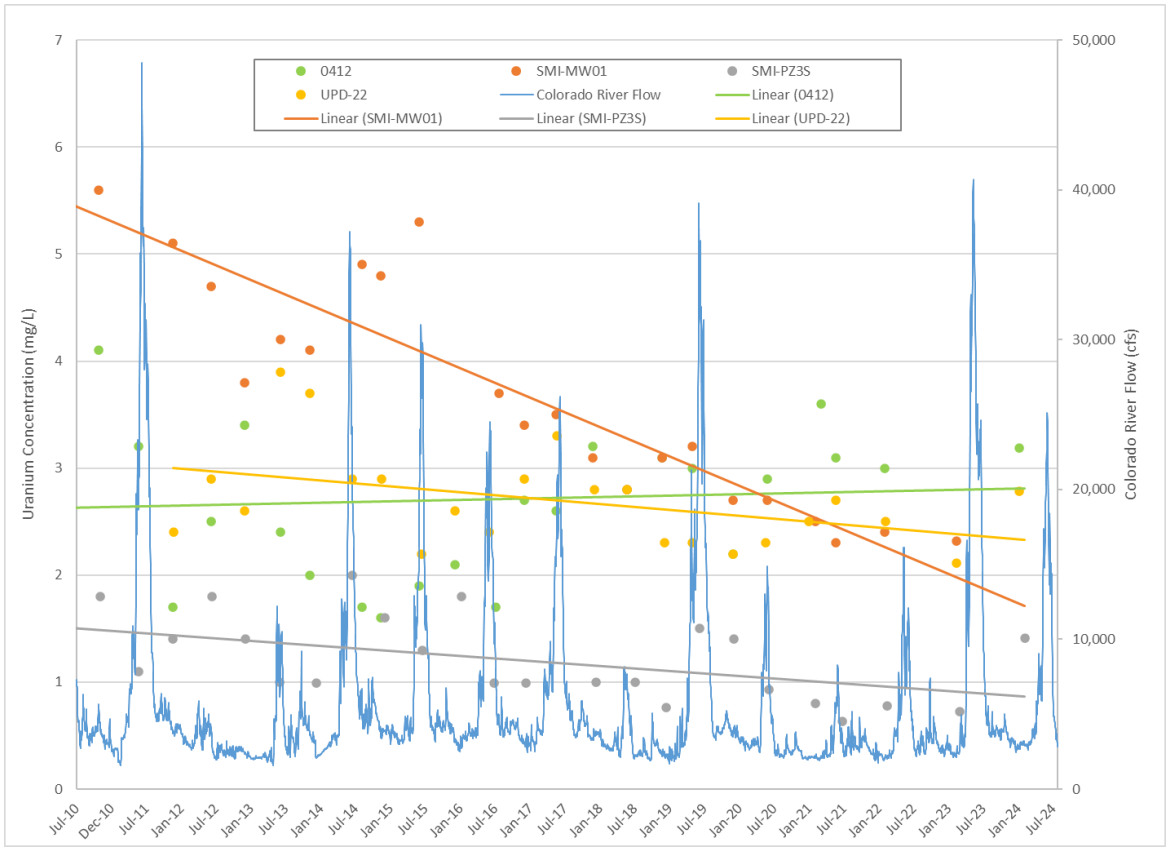

Figure 12. Northeastern Edge of Uranium Plume Area Observation Wells 0412, SMI-MW01, SMI-PZ3S, and UPD-22 Time versus Uranium Concentration Plot

2.3.3 Southeastern Base of Tailings Pile

The time versus ammonia and uranium concentration plots for the area near the base of the tailings pile are presented in Figures 13 and 14 for wells 0454, AMM-3, ATP-2-S, ATP-2-D, and MW-3 (listed from south to north). These wells are sampled over a variety of depths, ranging from 13 to 88 ft bgs. They are also located at approximately the same ground surface elevation.

Starting from the southern corner of the base of the pile, the samples collected 13 ft bgs from well 0454 provide ammonia concentrations in the shallowest zone. Figure 13 displays how this zone of the plume is impacted by the river stage, with a significant decrease when the river is experiencing spring runoff flows. Because this well is located in a slight depression off the southern tip of the pile, it is susceptible to being submerged during flood events (most recently in 2023). Between July 2017 and January 2019 ammonia concentrations were comparable to those in samples collected from other wells along the tailings pile base, approximately 400 mg/L. The concentration decreased to 55 mg/L during the 2019 flood and has continued to rebound. Based on the recent event, the 0454 concentration has increased similar to AMM-3 and MW-3.

Wells ATP-2-S and ATP-2-D are contained within a well cluster that is located near the center of the tailings pile base. Since 2010 ammonia concentrations have been similar from depths of 25 and 88 ft bgs. This not only provides a general idea of the depth of the plume, but also suggests there is minimal impact from the river stage on the ammonia plume down to a depth of at least 25 ft bgs. However, the ATP-2-S ammonia concentration decreased significantly during the 2020 and 2021 sampling events before returning to pre-flood levels. Something similar may have occurred following the 2023 well field flooding event, causing the concentration to drop significantly. The well ATP-2-D concentration slightly dropped from previous results, again suggesting that a depth of 88 ft bgs the plume was not impacted by flooding. Well MW-3 is located near the northeastern end of the plume, and ammonia concentrations in samples collected at this location are similar and tend to mimic those associated with the ATP-2-D.

Well 0454 displays the impact of the river stage on the uranium concentration in the shallowest zone (Figure 14), where uranium concentrations tend to decrease in response to high river flows. The samples collected from well MW-3 continue to have had the highest uranium concentration of this group of wells consistently since 2011, while concentrations in wells ATP-2-S and ATP-2-D have all been less than 0.015 mg/L since 2010. One would expect the ATP well concentrations to be higher, especially in the sample associated with ATP-2-S (from 25 ft bgs), since the samples collected along the base of the tailings between 13 ft bgs (well 0454) and 44 ft bgs (well MW-3) range from 1.7 to 2.7 mg/L. Subsurface geochemical changes may be impacting the uranium concentrations in this location.

2.3.4 Southwestern Site Boundary

Figures 15 and 16 are time versus concentration plots for ammonia and uranium, respectively, for locations 0441, 0440, 0453, and 0454 (listed from northwest to southeast). These locations are all along the furthest western extent of the alluvial aquifer. Due to the varying topography along this boundary, sample depths range from 13 to 117 ft bgs. The results associated with well 0454 are again presented in this section because in addition to being located along the base of the tailings pile, it is also along this site boundary. Water levels in well 0453 have often dropped below the level of the bladder pump, preventing consistent sample collection. Also, this well is located along the tailings pile boundary that has recently been impacted by the excavation activities.

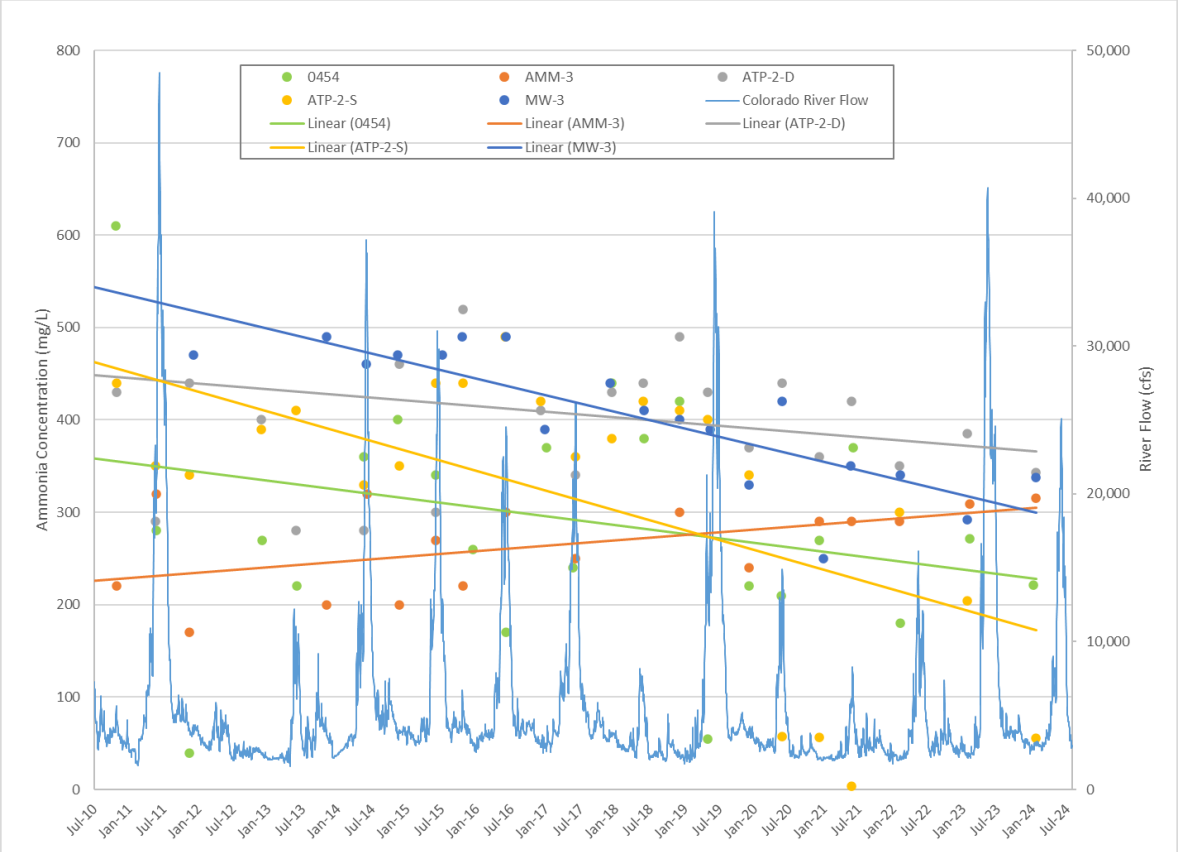

Figure 13. Base of Tailings Pile Observation Wells 0454, AMM-3, ATP-2-S, ATP-2-D, and MW-3 Time versus Ammonia Concentration Plot

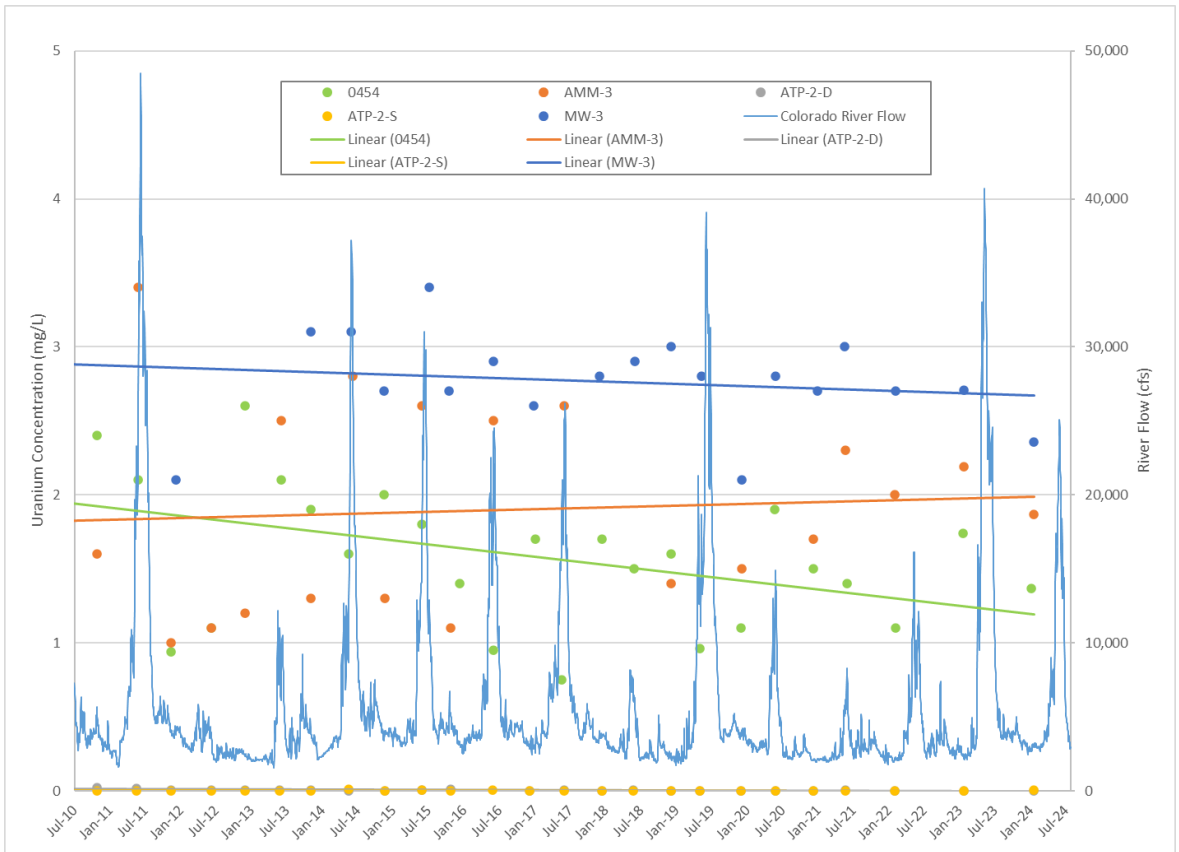

Figure 14. Base of Tailings Pile Observation Wells 0454, AMM-3, ATP-2-S, ATP-2-D, and MW-3 Time versus Uranium Concentration Plot

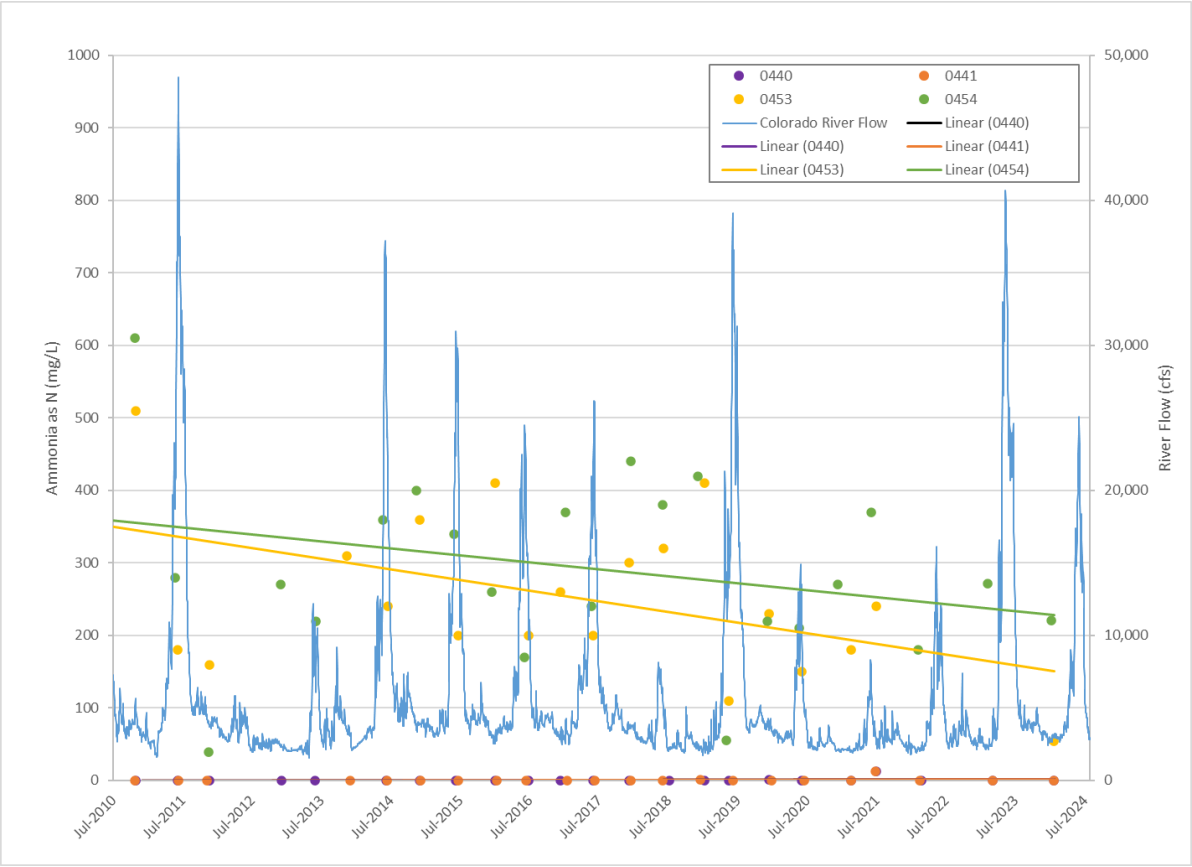

Figure 15. Southwestern Boundary Observation Wells 0453, 0454, 0440, and 0441 Time versus Ammonia Concentration Plot

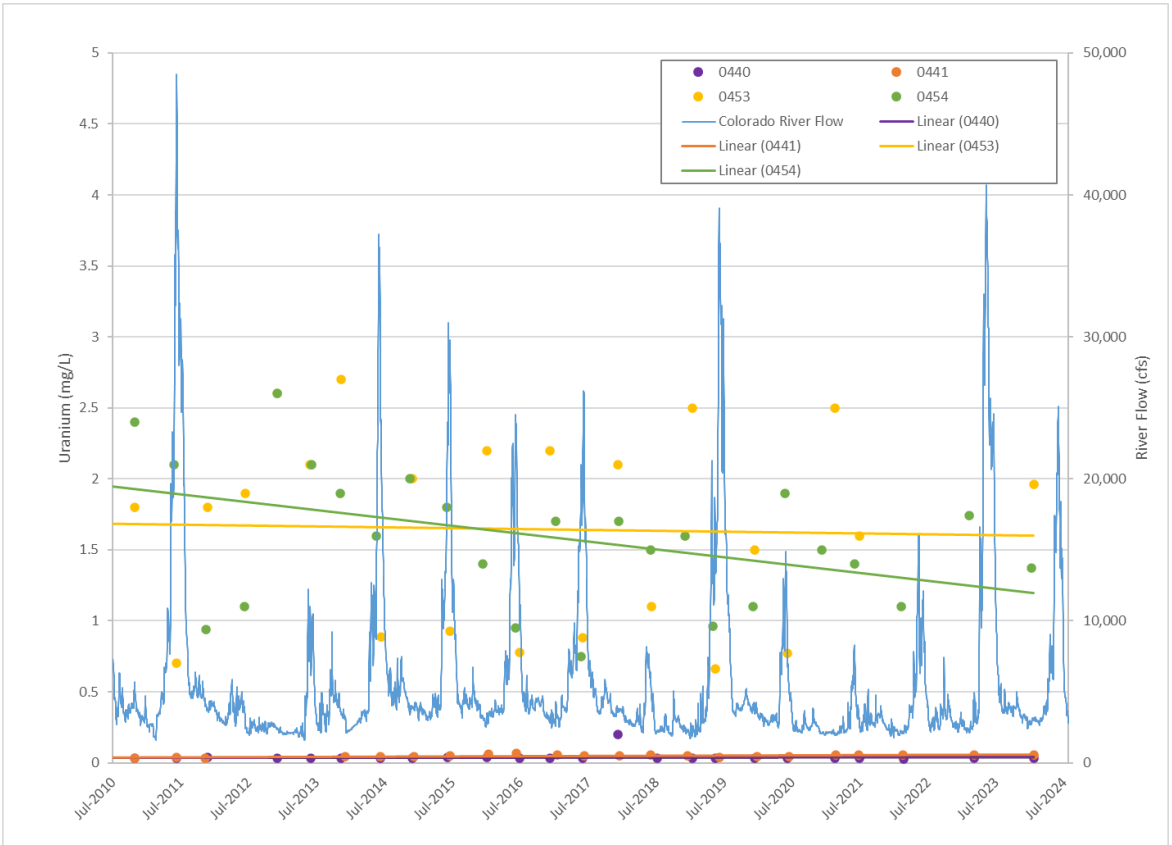

Figure 16. Southwestern Boundary Observation Wells 0453, 0454, 0440, and 0441 Time versus Uranium Concentration Plot

Ammonia concentrations at wells 0453 and 0454 continue to exhibit a decreasing trend (Figure 15). The well 0454 ammonia concentrations were significantly lower compared to recent results. This is likely a result of flooding impacts. Samples collected from upgradient wells 0440 and 0441 indicate the ammonia concentrations remain at background levels.

Wells 0453 and 0454 uranium concentrations (Figure 16) also display significant seasonal fluctuations. Results indicate the concentrations associated with well 0453 tend to increase during base river flows, while the well 0454 uranium concentrations increase during higher spring runoff flows. This may be attributed to well 0454 closer proximity to the river compared to well 0453 and different geochemical conditions at these locations. The sample collected from well 0440 (0.032 mg/L) is below the 0.044 mg/L uranium UMTRA standard, and the most recent 0441concentration is just above the standard (0.054 mg/L). These data suggest there has been minimal plume migration in the northwest corner.

2.3.5 Site Boundary along the Colorado River

Figures 17 and 18 are the time versus ammonia and uranium concentration plots, respectively, for the locations sampled along the riverbank. Wells TP-17, 0492, 0407, 0401, 0404, and TP-01 (listed from the south to the north) were sampled from depths ranging from 17 to 28 ft bgs. Because these wells are located along the riverbank, the water chemistry has historically been heavily influenced by the Colorado River stage fluctuations. Well SMI-MW01 was not sampled this event due to flood damaged to the well.

The results presented in Figure 17 suggest the ammonia plume continues migrating to the south since 2017, based on the sample data collected from well 0492. Between November 2011 and January 2017, the ammonia concentrations associated with this location were below 10 mg/L. Since that time the concentrations have ranged from 16 to 300 mg/L. It is possible that this increase is in response to low river stages between August 2017 and April 2019, allowing for uninhibited migration from the upgradient plume source. While ammonia concentrations increased in samples collected from wells 0401, 0407, and 0404 during this same timeframe, ammonia concentrations have gradually decreased since the December 2018, though concentrations can still vary from year to year. The lowest ammonia concentrations continue to be associated with the samples collected from the wells TP-17 and TP-01. The data continue to suggest the plume is contained within the area bounded to the south by TP-17 and TP-01 to the north.

As displayed in Figure 17, the uranium concentration in the sample from 0492 continued to decrease during the most recent event after a peak of 3.1 mg/L in 2021, the highest concentration detected since 2006. The uranium concentrations in samples collected from 0401 and 0404 have remained consistent over the past five years (both between 1 and 2 mg/L), suggesting no significant plume migration in this area of the plume. Similar to ammonia concentrations, low uranium concentrations in wells TP-01 and TP-17 indicate the plume is contained to the area between these locations. While the most recent concentration at TP-01 (0.058 mg/L) is just above the UMTRA standard (0.044 mg/L), it has not shown significant change in the last 10 years. Concentrations in TP-17 remain below the UMTRA standard.

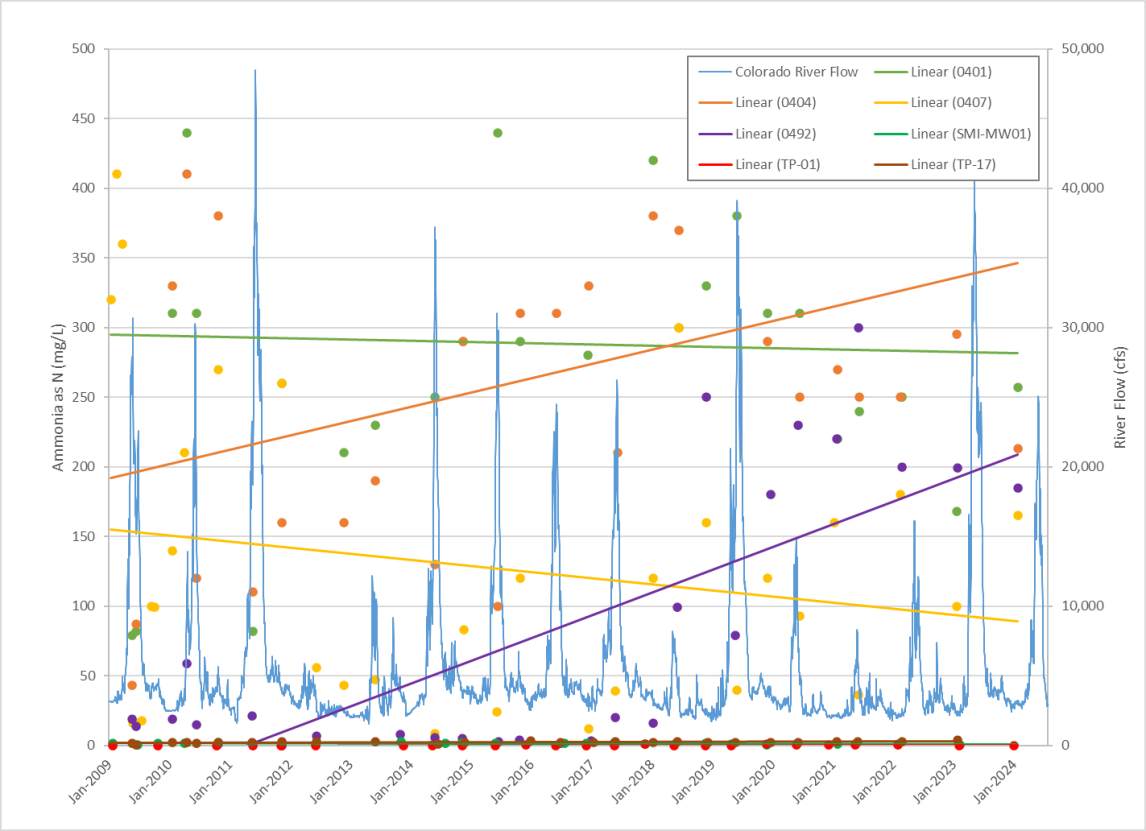

Figure 17. Riverbank Observation Wells TP-17, 0492, 0407, 0401, 0404, SMI-MW01, and TP-01 Time versus Ammonia Concentration Plot

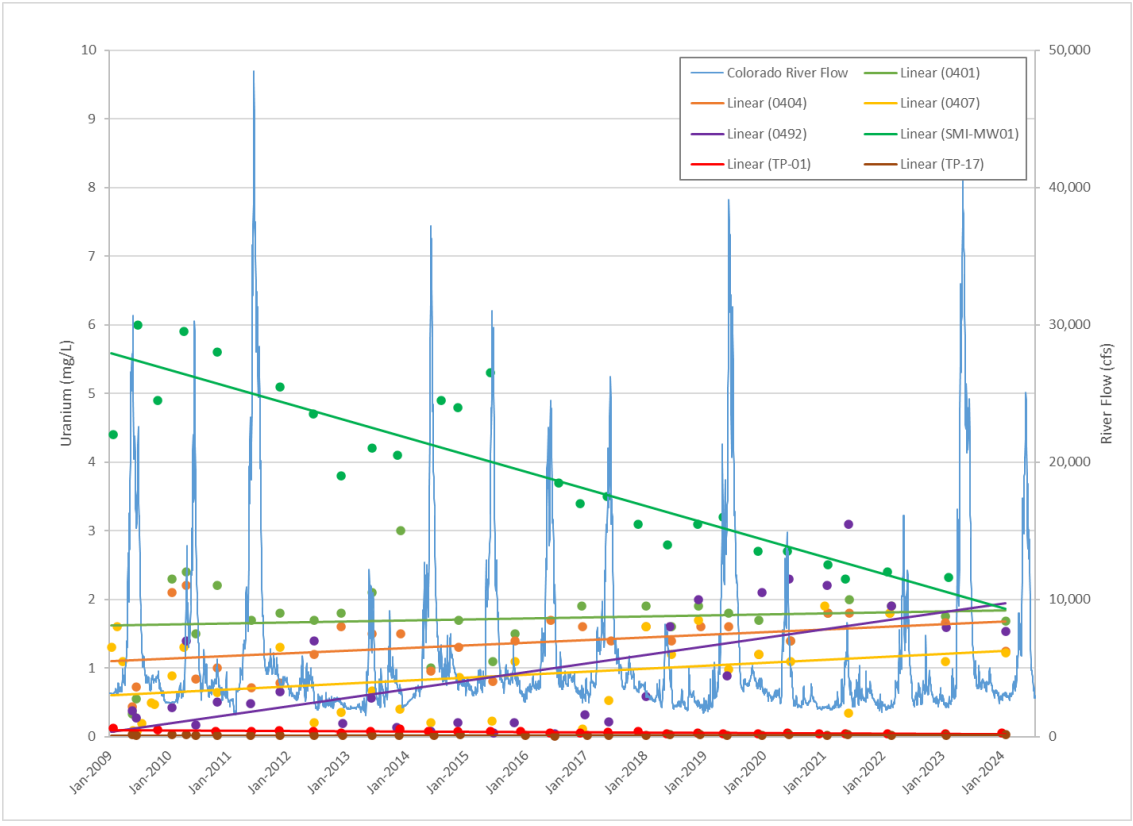

Figure 18. Riverbank Observation Wells TP-17, 0492, 0407, 0401, 0404, SMI-MW01, and TP-01 Time versus Uranium Concentration Plot

2.3.6 Southern and Off-site Areas

Figures 19 and 20 are the plots for four locations sampled at the southern end of the site, wells TP-17, TP-20, TP-23, and 0454. Well TP-17 is located along the riverbank, TP-20 is located approximately 500 ft off the riverbank, and TP-23 and 0454 are located closer to the toe of the tailings pile. Sample depths range from 13 ft bgs (well 0454) to 32 ft bgs (TP-20).

Ammonia concentrations (Figure 19) in samples collected from wells TP-17 and TP-20 have consistently been below 5 mg/L since 2000, suggesting the ammonia plume has not significantly migrated past these locations during this time period. Groundwater flow is likely impeded by groundwater density differences related to the presence of the high-density brine unit. During this sampling event specific conductance values were above 106,000 micro-ohms per centimeter (µmhos/cm) at a depth of just 28 ft bgs and more than 136,000 µmhos/cm at a depth 32 ft bgs for wells TP-17 and TP-20 (respectively). These values suggest the brine unit is near the groundwater surface in this area of the site.

Ammonia concentrations in samples collected from well 0454 are impacted by flood events, as evidenced by the significant decrease observed in 2019. The specific conductance during this recent sampling event was more than 48,000 µmhos/cm at a depth of only 13 ft bgs, near the southwestern boundary of the groundwater system. Likewise, the sample from TP-23 was collected with a specific conductance of approximately 32,000 µmhos/cm at a depth of 25 ft bgs. Well TP-23 is located 225 ft directly east of 0454, and the result from these samples provides insight into the ammonia concentration vertical profile in this portion of the ammonia plume. The ammonia concentration in TP-23 dropped to the lowest value recorded since 2011 (57.5 mg/L) whereas 0454 had ammonia value of 221 mg/L (within the historical range). Both concentrations decreased from the last sample, possibly in response to the 2023 flood.

Similar to the ammonia concentration results, uranium concentrations measured from wells TP-17 and TP-20 (Figure 20) suggest no uranium plume migration in this area of the site, likely due to the presence of brine in near the groundwater surface. The sample collected from well TP-17 continues to be below the 0.044 mg/L UMTRA standard (since 2008), while the concentrations in samples from location TP-20 have been at or below this standard since 1997. Trendlines presented in Figure 18 indicate the uranium concentrations have generally decreased over the past 10 years.

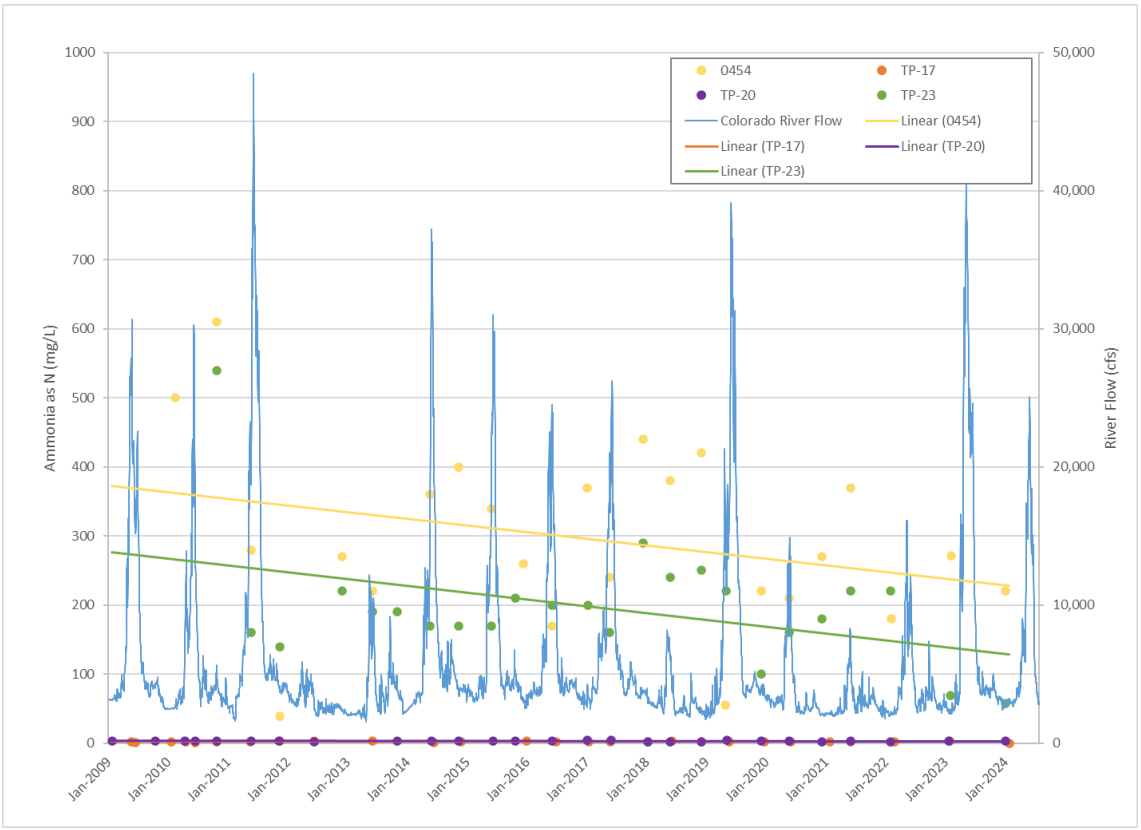

Figure 19. South of Site Observation Wells TP-17, TP-20, TP-23, and 0454 Time versus Ammonia Concentration Plot

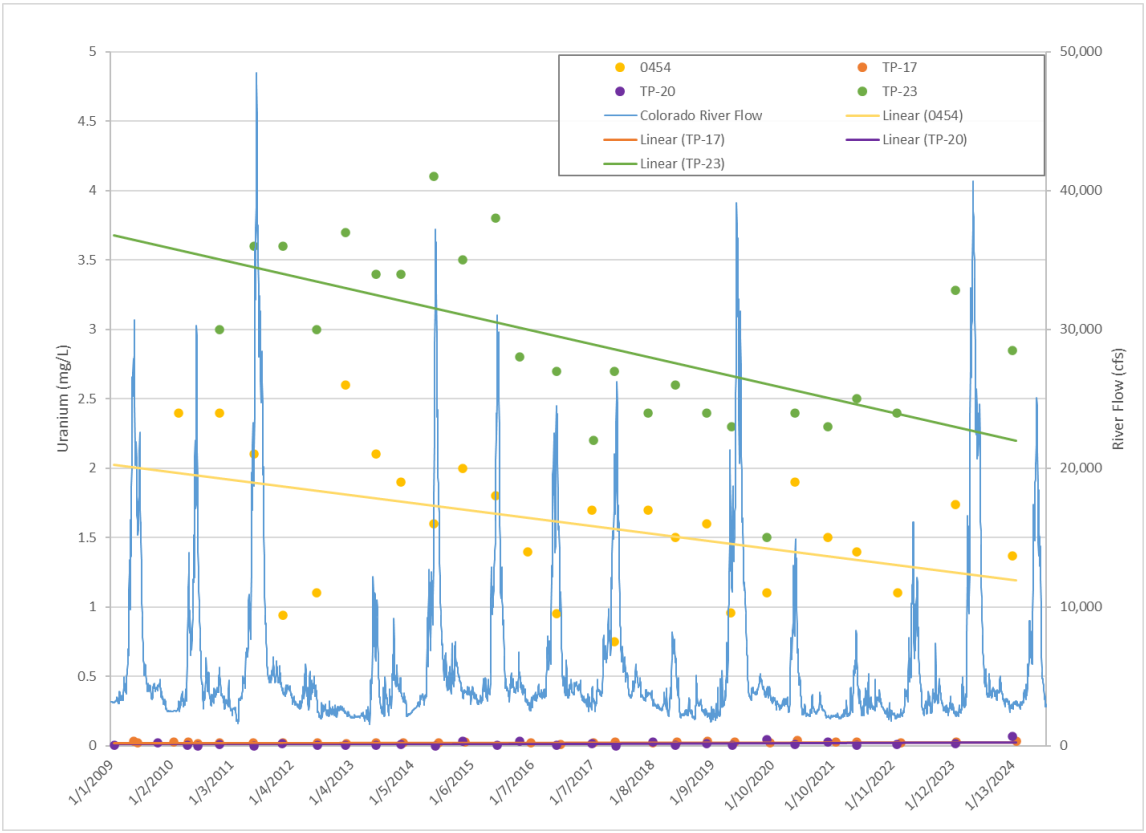

Figure 20. South of Site Observation Wells TP-17, TP-20, TP-23, and 0454 Time versus Uranium Concentration Plot

2.3.7 Surface Water Sampling Results

Table 9 presents the ammonia results from the surface water samples collected in February 2024 from locations 0201, 0218, 0226, CR1, CR2, CR3, and CR5 (as shown in Figure 2). The ammonia results are used along with the temperature and pH data to derive applicable EPA criteria for both acute and chronic levels. These criteria are presented with the ammonia results in Table 25 and represent a snapshot at the time the samples were collected.

Table 9. 2024 Site-wide Surface Water Ammonia Concentrations and Comparisons to EPA Acute and Chronic Criteria

Location	Date	Temp (°C)	pH	February 2023 Ammonia as N (mg/L)	EPA - Acute Total as N (mg/L)*	EPA - Chronic Total as N (mg/L)**
0201	2/6/2024	5.8	8.27	0.074	4.9	1.1
0218	2/6/2024	5.4	8.72	0.057	2.3	0.57
0226	2/7/2024	6.5	8.42	0.229	4.1	0.95
CR1	2/6/2024	5.4	8.4	0.042	4.1	0.95
CR2	2/6/2024	5.7	8.27	0.088	4.9	1.1
CR3	2/7/2024	7.7	8.31	0.658	4.9	1.1
CR5	2/6/2024	5.5	8.3	0.108	4.9	1.1

Notes: *U.S. EPA Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater State (Effective April 2013), Table N.4. Temperature and pH-Dependent Values, Acute Concentration of Total Ammonia as N (mg/L)
**U.S. EPA Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater State (Effective April 2013), Table 6. Temperature and pH-Dependent Values, Chronic Concentration of Total Ammonia as N (mg/L)

All locations had ammonia concentrations below both the acute and chronic thresholds.

2.4 Groundwater Surface Elevations

Water level data to generate the groundwater surface contour map were collected in January through February 2024. The Colorado River mean daily flows during this time period ranged from 2,670 to 3,230 cfs, which correlates to a river surface elevation at the river inlet of 3,953.31 to 3,953.58 feet above mean sea level. These flows ranged from below average to average according to the historical USGS data.

River elevations fluctuated approximately 0.27 ft during this time period. The water level data collected during this time frame could therefore be used to generate the groundwater surface contour map displayed in Figure 21. The groundwater flow direction and the gradient displayed in this contour map are comparable to historical contour maps generated using groundwater data collected during river base flow conditions.

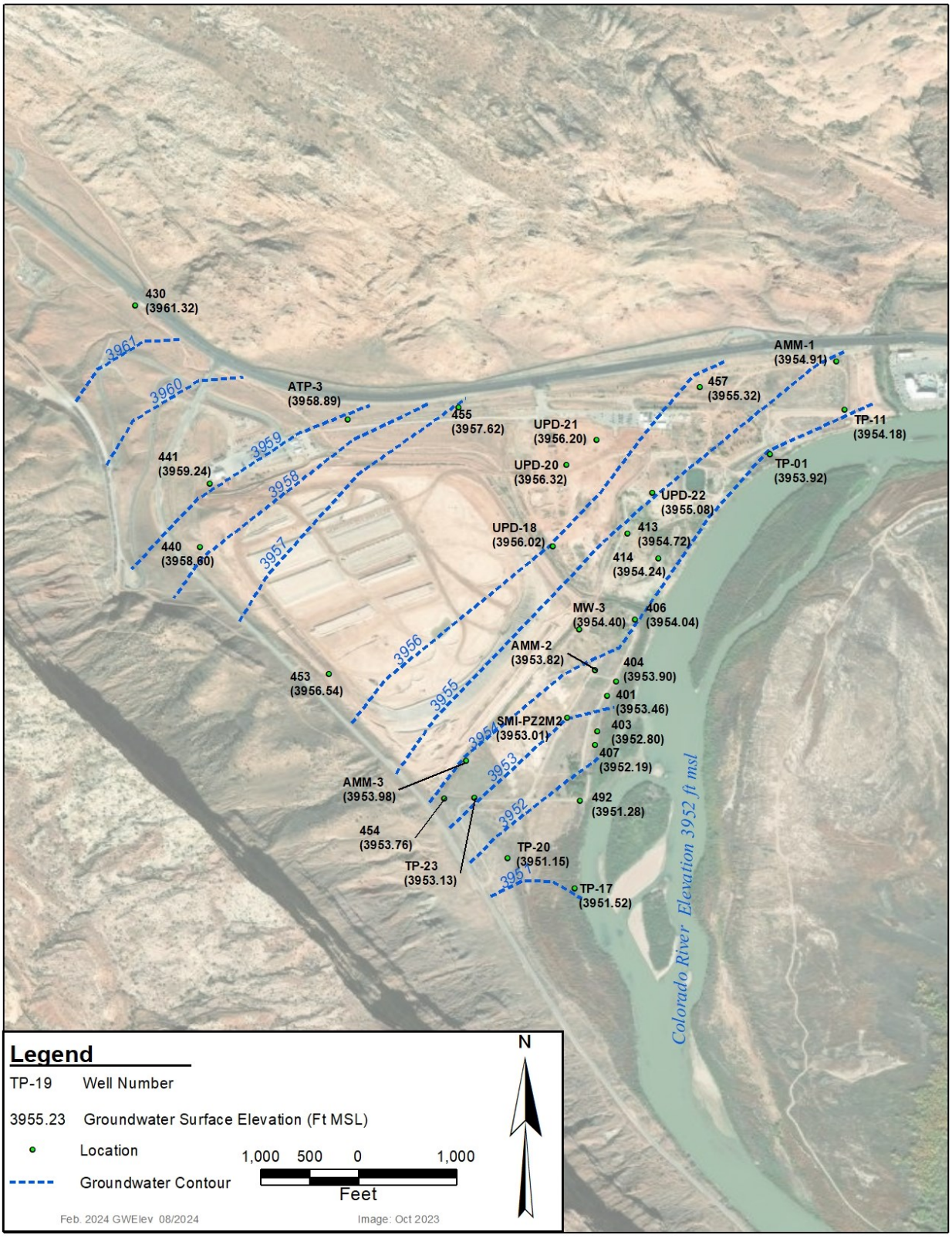

Figure 21. Site-wide Groundwater Elevations, January through February 2024

2.5 Contaminant Distribution

Figures 22 and 23 are maps showing shallow groundwater ammonia and uranium plumes, respectively, using data collected during the January through February 2024 site-wide event. Data collected typically from less than 50 ft bgs were used to generate these plume maps.

During river base flows, contaminant concentrations tend to rebound after being diluted during spring runoff peak flows. Minimal plume migration has occurred since the previous site-wide event, as discussed in Sections 4.3.4, 4.3.5, and 4.3.6. In general, the plume maps are comparable to previous plume maps generated using data collected during the river base flows.

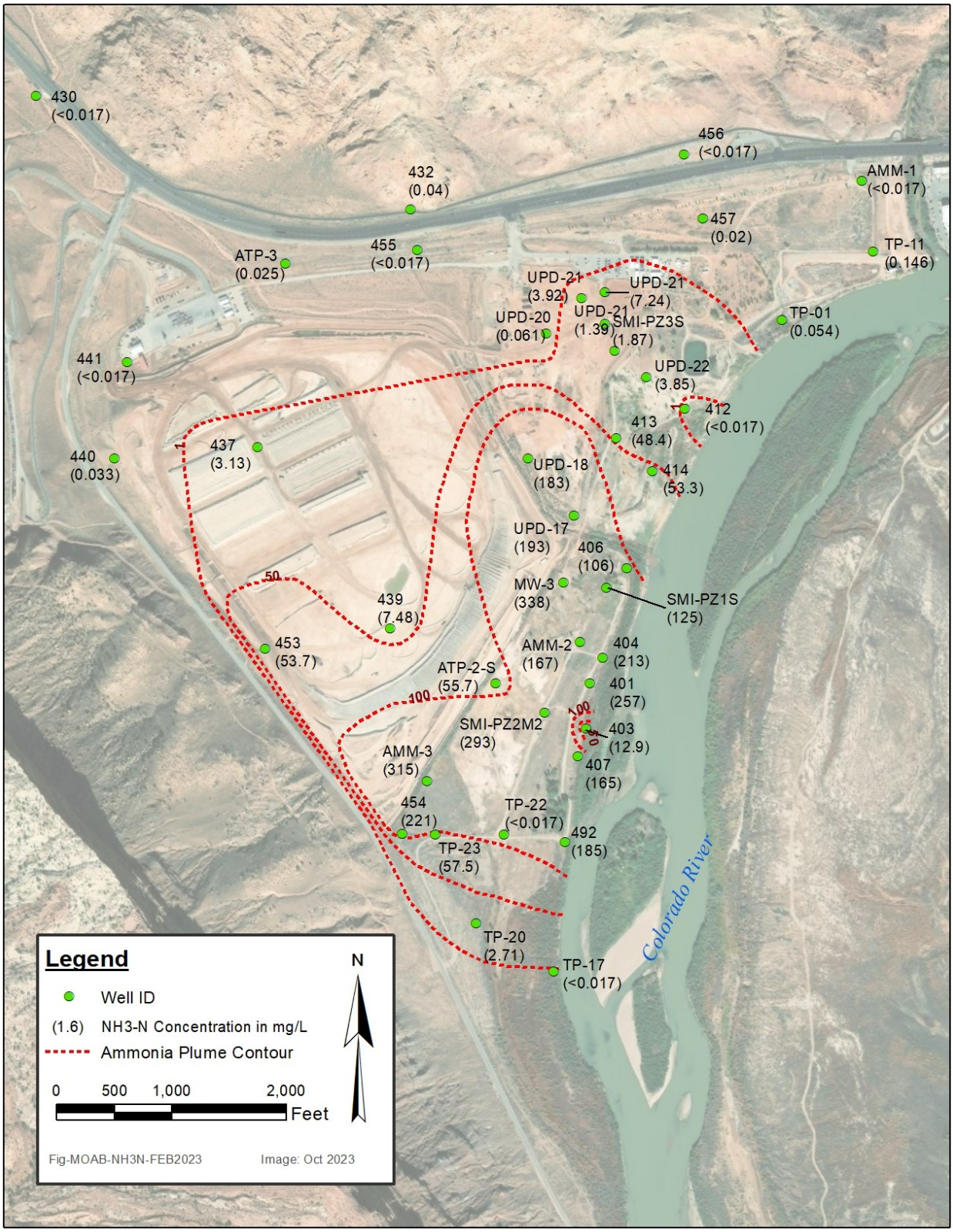

Figure 22. Ammonia Plume in Shallow Groundwater, January through February 2024

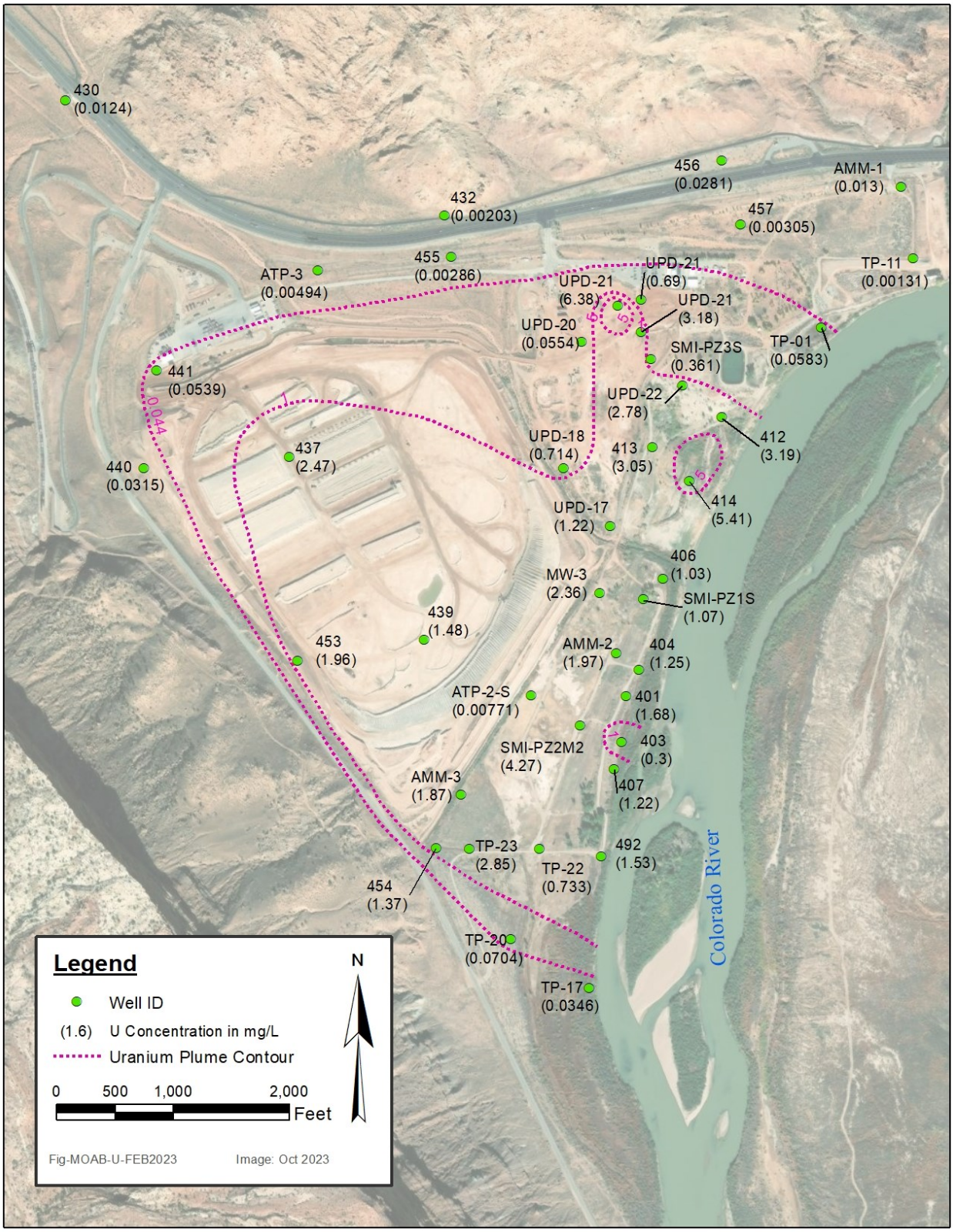

Figure 23. Uranium Plume in Shallow Groundwater, January through February 2024

3.0 April 2024 CF4 Sampling Event

3.1 Summary

In April 2024, groundwater samples were collected from the eight CF4 monitoring wells to determine the impact of the freshwater injection system on the shallow aquifer. These ground water samples were collected to determine how the freshwater injection system impacts shallow zone ammonia concentrations, particularly downgradient of the CF4 injection wells.

3.2 April 2024 CF4 Sampling Event Data Assessment

3.2.1 Laboratory Performance Assessment

This validation was performed according to *Standard Practice for Validation of Laboratory Data.* The procedure was applied at Level 2, Data Deliverables Examination. All analyses were successfully completed.

General Information and Validation Results

RIN	2404147
Laboratory:	GEL Laboratories, Charleston, SC
SDG Numbers:	663008
Analysis:	Uranium, Ammonia as N
Validator:	Thomas Prichard
Review Date:	May 2024

The samples were prepared and analyzed using accepted procedures as shown in Table 10. Analytical results were qualified as listed in Table 11. Refer to Table 12 for an explanation of the data qualifiers applied.

Table 10. 2024 CF4 Sampling Event, Analytes and Methods

Analyte	Preparation Method	Analytical Method
Ammonia as N, NH3-N	EPA 350.1	EPA 350.1
Uranium	SW-846 3005A	EPA 6020B

Table 11. 2024 CF4 Sampling Event, Data Qualifiers

Flag	Reason	Sample Number	Analyte	Locations
J	DUP-1	SDG 663008	Ammonia as N	All

Notes: “J” indicates results are estimated and becomes “UJ” for analytical results lower than the detection limit.

Table 12. 2024 CF4 Sampling Event, Reason Codes for Data Flags

Reason Code	Qualifier (Detects)	Qualifier (Non-detects)	Explanation
DUP-1	J	N/A	Field duplicate results exceed criterion.

Notes: “J” indicates results are estimated and becomes “UJ” for analytical results lower than the detection limit. U indicates the result is below the detection limit.

Sample Shipping/Receiving
Gel Laboratories Charleston, South Carolina, received samples from RIN 2404147 in a shipment of one cooler. The shipment (SDG 663008) contained nine ground water samples (includes one duplicate) from the CF4 monitoring wells. The temperature of the cooler was 5°C and it arrived on April 12, 2024 (Tracking number 1ZE243120192112247). The temperature was still considered in acceptable range according to the lab's criterion.

The COC forms were checked to confirm that all of the samples were listed on the form with sample collection dates and times, and signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents, including the COC forms and the sample tickets, had no errors or omissions.

Preservation and Holding Times
The samples were received in the correct container types and had been preserved correctly for the requested analyses. The samples were analyzed within the applicable holding time.

Case Narratives
The case narratives were reviewed, and all detects were found to be within quality-control procedure.

Field Duplicate Analysis
Field duplicate samples are collected and analyzed as an indication of overall precision of the measurement process. The precision observed includes both field and laboratory precision and has more variability than laboratory replicates, which measure only laboratory performance. One field duplicate was collected from 0782. The U.S. Environmental Protection Agency (EPA) has a recommended laboratory duplicate criterion of less than 20 percent relative difference (RPD) for results that are greater than 5 times the RL. A field duplicate was collected at well 0407 (obscured location 2000). Results for ammonia as N had a relative percent difference of 28%, exceeding this criterion. All results for ammonia as N should be flagged "J", "UJ".

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

Electronic Data Deliverable Files
The Electronic Data Deliverable (EDD) files arrived on May 9, 2024. The contents of the EDD were manually examined to ensure all and only the requested data were delivered in compliance with requirements and that the sample results accurately reflected the data contained in the sample data package

3.2.2 Minimums and Maximums Report and Anomalous Data Review
Based on the definition of an anomalous data point, there were no anomalous data values associated with this sampling event. The database Minimums and Maximums Report is provided in Appendix B.

3.3 April 2024 CF4 Sampling Event Results

The CF4 injection wells are screened and deliver fresh water into the subsurface from 15 to 35 feet (ft) below ground surface (bgs). April 2024 ammonia concentrations are presented in

Table 13. Baseline concentrations represent sample results from January 2021, when limited freshwater was injected (less than 50,000 gal) for the six months leading up to that sample collection date.

Prior to sampling in April 2024, the injection system had not been operational (primarily due to system repairs) since the beginning of March. In February 2024 approximately 600,000 gal had been injected, and the system was shut down again in December 2023 and January 2024.

The April 2024 concentrations are indicative of how the groundwater system in the vicinity of CF4 rebounds once the freshwater injection system operations are limited or suspended (Table 13). Analytical results indicate the ammonia concentrations in all monitoring wells, except for 0784, increased significantly. The ammonia concentration in the sample from 0784 remained below 1 mg/L. An upcoming subsurface investigation may provide some insight as to why this location appears to not be impacted by the injection system operation and has consistently had less than 5 mg/L ammonia despite the injected freshwater volumes.

Table 13. 2024 CF4 Sampling Event Results and Comparison to Baseline Concentrations

Location	Sample Depth (ft bgs)	Upgradient or Downgradient of Injection Wells	Baseline* Concentration (mg/L)	April 2024 Ammonia Concentration (mg/L)
0780	28	Upgradient	250	289
0781	46	Upgradient	1,200	983
0782	33	Upgradient	290	869
0783	18	Upgradient	60	67.3
0784	18	Downgradient	5.1	0.08
0785	18	Downgradient	88	182
0786	28	Downgradient	450	1,430
0787	36	Downgradient	1,200	1,070

Figures 24 through 26 present the ammonia concentrations in the vicinity of CF4 since 2019 detected in samples from the shallowest (18 ft bgs), middle (28 to 33 ft bgs) and deep (36 to 46 ft bgs) zones, respectively. To exhibit how these concentrations respond to injection system operations, the weekly volumes of freshwater injection are also included.

Ammonia concentrations significantly decrease when the injection system is operational, particularly downgradient from the CF4 injection wells and in the zone less than 35 ft bgs (Figures 24 and 25). Below the 15 to 35 ft bgs injection zone the ammonia concentrations are also impacted (Figure 26), but to a lesser degree.

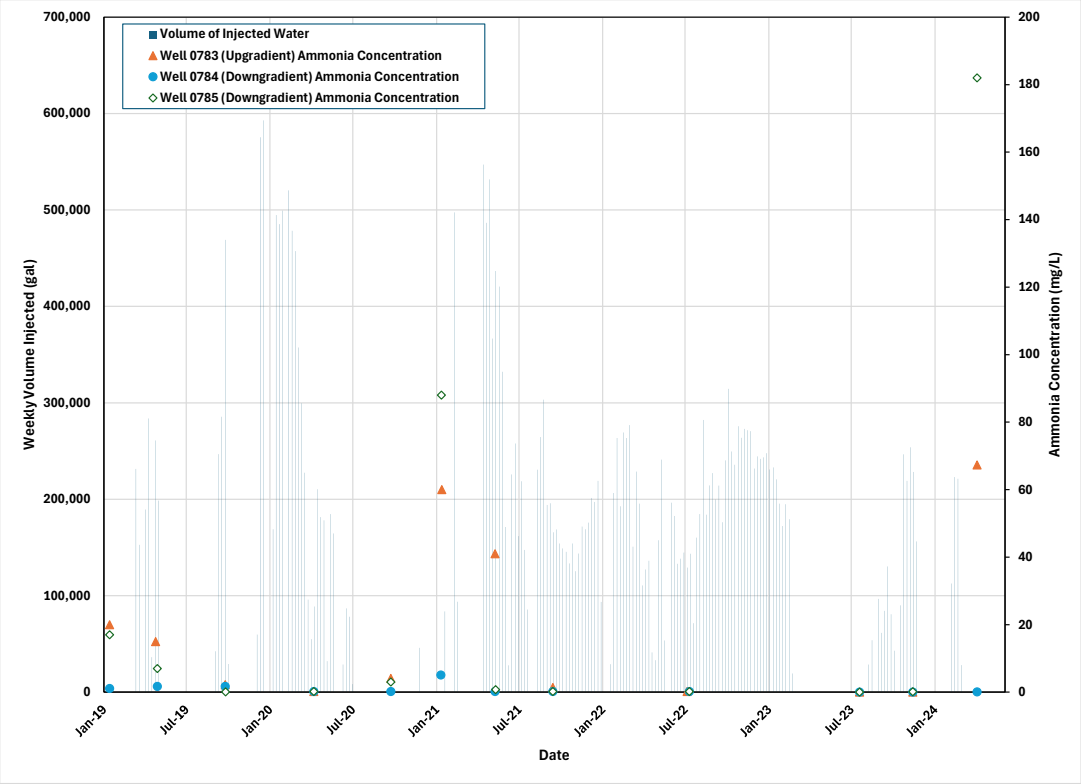

Figure 24. Shallow Zone (18 ft bgs) Ammonia Concentrations in Response to Injected Freshwater Volume, 2019 through 2024

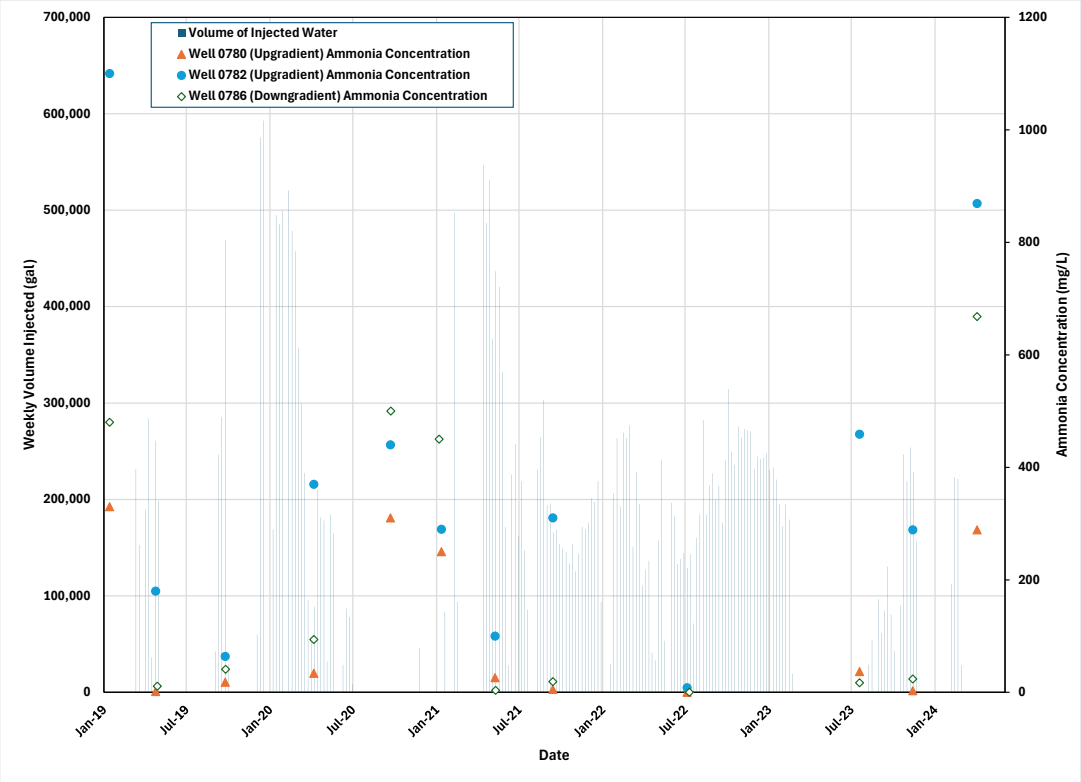

Figure 25. Middle Zone (28 to 33 ft bgs) Ammonia Concentrations in Response to Injected Freshwater Volume, 2019 through 2024

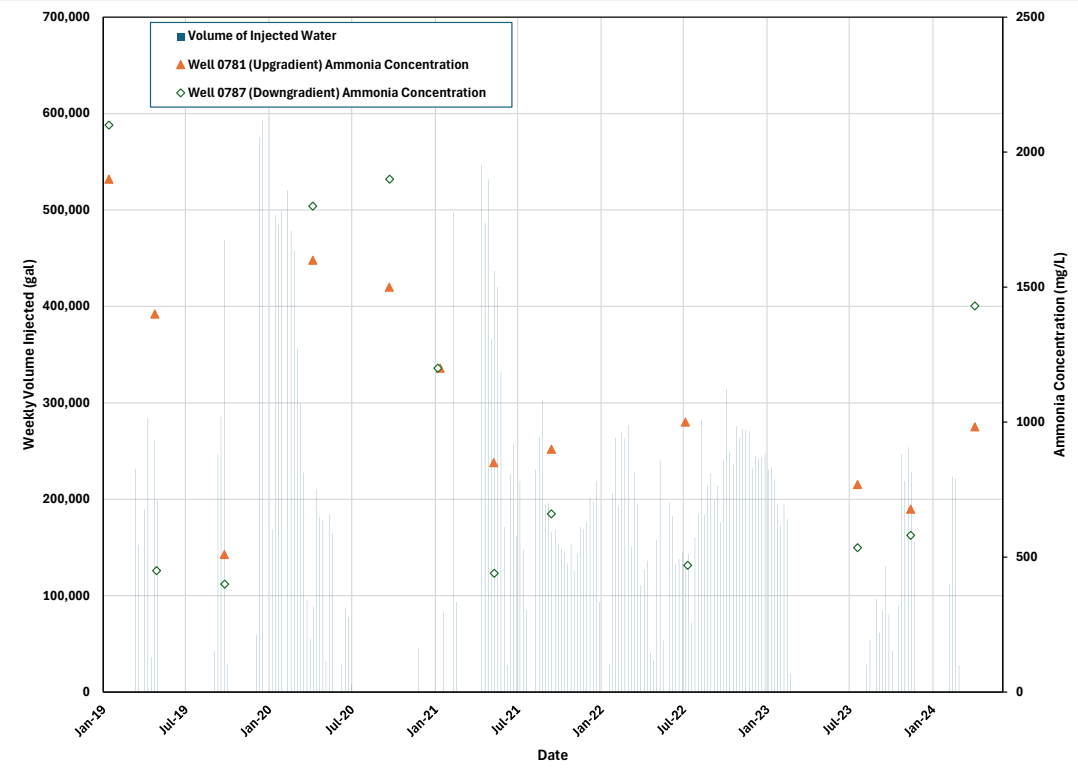

Figure 26. Deep Zone (36 to 46 ft bgs) Ammonia Concentrations in Response to Injected Freshwater Volume, 2019 through 2024

4.0 April through June 2024 Crescent Junction Sampling Event

4.1 Summary

Groundwater samples were collected from wells 0202 and 0205 at Crescent Junction as part of the quarterly monitoring at the Crescent Junction Site. If water is present in any of the four monitoring wells during a monitoring event, a sample may be collected. These samples were collected to compare to previous results and provide further data regarding the water source recharging these wells. Like previous events, these samples were analyzed for metals, inorganics, and isotopic uranium.

4.2 April through June 2024 Crescent Junction Data Assessment

4.2.1 Laboratory Performance Assessment

This validation was performed according to *Standard Practice for Validation of Laboratory Data*. The procedure was applied at Level 2, Data Deliverables Examination. All analyses were successfully completed. The samples were prepared and analyzed using accepted procedures listed in Table 14.

General Information and Validation Results

RIN	2404148 and 2406149
Laboratory:	Gel Laboratories LLC, Charleston, South Carolina
SDG Numbers:	663006 (RIN 2404148), 670751, and 671810 (both RIN 2406149)
Analysis:	Inorganics and Metals
Validator:	Thomas Prichard and James Ritchey
Review Date:	May and September 2024

Table 14. 2024 Crescent Junction Sampling Events, Analytes and Methods

Analyte	Preparation Method	Analytical Method
Ammonia as N, NH3-N	EPA 350.1	EPA 350.1
Nitrate/Nitrite as N	N/A	EPA 353.2 Rev 2.0
Bromide	N/A	EPA 300.0 Rev 2.1
Chloride	N/A	EPA 300.0 Rev 2.1
Fluoride	N/A	EPA 300.0 Rev 2.1
Sulfate	N/A	EPA 300.0 Rev 2.1
Arsenic, Barium, Boron, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Potassium, Selenium, Silver, Sodium	SW 3005 Rev A	EPA 6010D
Uranium	SW 3005 Rev A	EPA 6020B

Data Qualifier Summary

Analytical results were qualified as listed in Table 15. Refer to Table 16 below for an explanation of the data qualifiers applied.

Table 15. 2024 Crescent Junction Sampling Events, Data Qualifiers

Sample Number	Locations	Analyte	Flag	Reason
SDG 663006	0202 and 0205	Lead	J	B-1
SDG 670571	0202 and 0205	Nitrate/Nitrite as N	J	T-1

Table 16. 2024 Crescent Junction Sampling Events, Reason Codes for Data Flags

Reason Code	Qualifier (Detects)	Qualifier (Non-Detects)	Explanation
B-1	J	N/A	Method blank contained analyte.
T-1	J	UJ	Shipment received outside acceptable temperature range.

Notes: J indicates results are estimated and becomes a UJ for analytical results below the detection limit.

Sample Shipping/Receiving

RIN 2404148

Gel Laboratories Charleston, South Carolina, received two samples for RIN 2404148 in a shipment of one cooler. The shipment (SDG 663006) contained one ground water sample from Crescent Junction well 0202 and another from well 0205. The temperature of the cooler was 5°C and it arrived on April 12, 2024 (Tracking number 1ZE243120192112247). The temperature was still considered in acceptable range according to the lab's criterion.

RIN 2406149

In response to the significantly higher nitrate/nitrite as N concentrations measured in the RIN 2404148 samples, wells 0202 and 0205 were resampled on June 5. Due to shipping issues (Tracking number 1ZE243121599715736) these samples arrived on June 7, 2024, at the analytical laboratory with a temperature of 14°C. This temperature was considered outside the acceptable range, and data were flagged "J" for reason T-1.

The wells were resampled again on June 12 and arrived at the laboratory on June 14, 2024, with a temperature of 1°C, within the acceptable range.

The COC forms were checked to confirm that all of the samples were listed on the form with sample collection dates and times, and signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents, including the COC forms and the sample tickets, had no errors or omissions.

Preservation and Holding Times

The samples were received in the correct container types and had been preserved correctly for the requested analyses. The samples were analyzed within the applicable holding time.

Case Narratives

The case narratives were reviewed, and all detects were found to be within quality-control procedure.

Method Blank

Uranium and lead were present at levels above the MDL in the method blank. All uranium concentrations were large enough that the data was not adversely affected. Concentrations for lead should be flagged "J".

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

Electronic Data Deliverable File
The RIN2404148 EDD file arrived on May 9, 2024. Subsequent sampling events (RIN 2406149) EDDs were received on June 18 and July 10, 2024. The contents of the EDD were manually examined to ensure all and only the requested data were delivered in compliance with requirements and that the sample results accurately reflected the data contained in the sample data package.

4.2.2 Minimums and Maximums Report and Anomalous Data Review

The database Minimums and Maximums Report is provided in Appendix C. Initially there were three anomalous data points that lay outside of the historical result range from the April 2024 RIN 2404148 sampling event. The samples collected from 0202 and 0205 contained nitrate/nitrite as N concentrations that were more than three times the previous maximum concentration detected. These values were considered suspect, and subsequent sampling in June 2024 verified that these results were not accurate and considered invalid.

The RIN 2404148 sample collected from well 0202 had a lead concentration that was also 50% above the historical maximum (Table 17).

Table 17. Anomalous Data Associated with the 2024 Crescent Junction Sampling Events

Location	Analyte	04/09/2024 Concentration (mg/L)	Historical Minimum (mg/L)	Historical Maximum (mg/L)	Disposition
Well 0202	Lead	0.0776	0.0013 (U)	0.013 (U)	Limited number of samples collected, still establishing concentration range.

(U) – Results are below the detection limit.

4.3 April through June 2024 Crescent Junction Sampling Event Results

Figures 27 through 29 display ammonia total as N, nitrate/nitrite as N, and uranium concentrations (respectively) in the Crescent Junction wells. Ammonia concentrations (Figure 27) in samples from both wells display a gradual decrease since 2019. Nitrite/nitrite concentrations (Figure 28) within samples collected from well 0205 have been exhibiting a decreasing trend, while the 0202 concentrations continue to fluctuate. Figure 29 presents the total uranium concentrations, in addition to the 0.044 mg/L UMTRA uranium standard. Since 2021 the 0205 concentrations have increased, and the 0202 concentrations have fluctuated between 0.02 and 0.05 mg/L. As of early April 2024, the concentrations were below this standard.

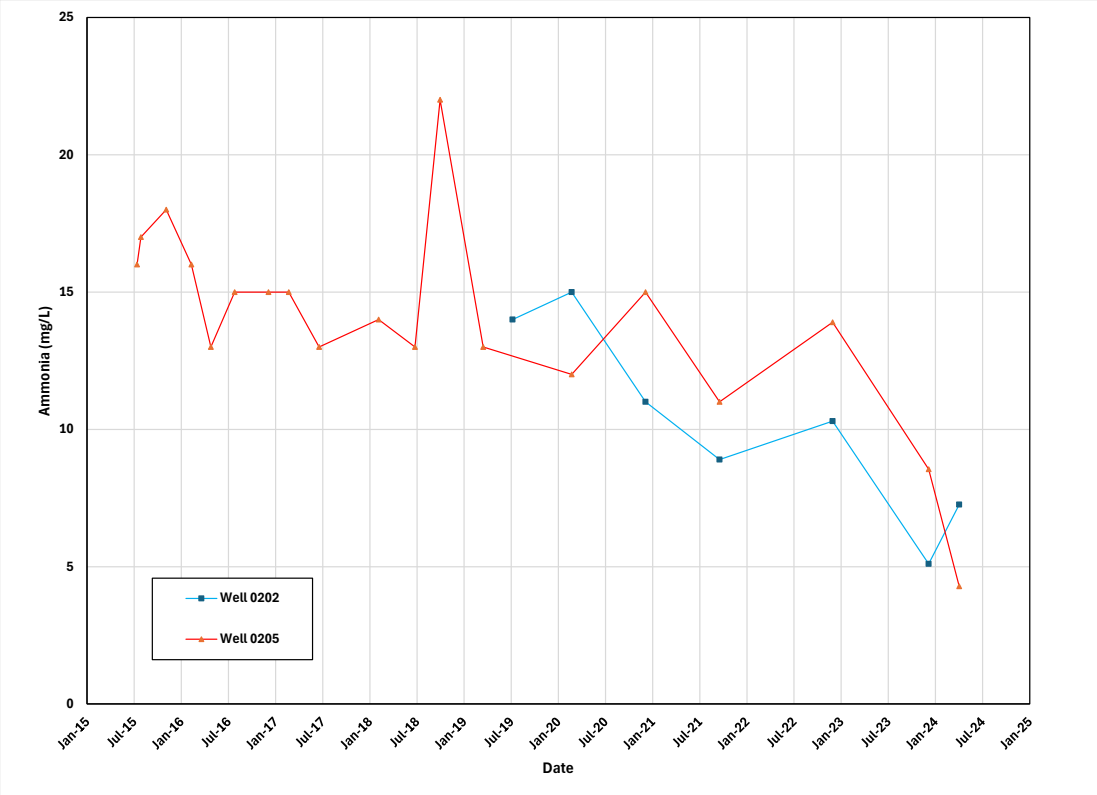

Figure 27. Wells 0202 and 0205 Ammonia Concentrations vs Time, 2015 through 2024

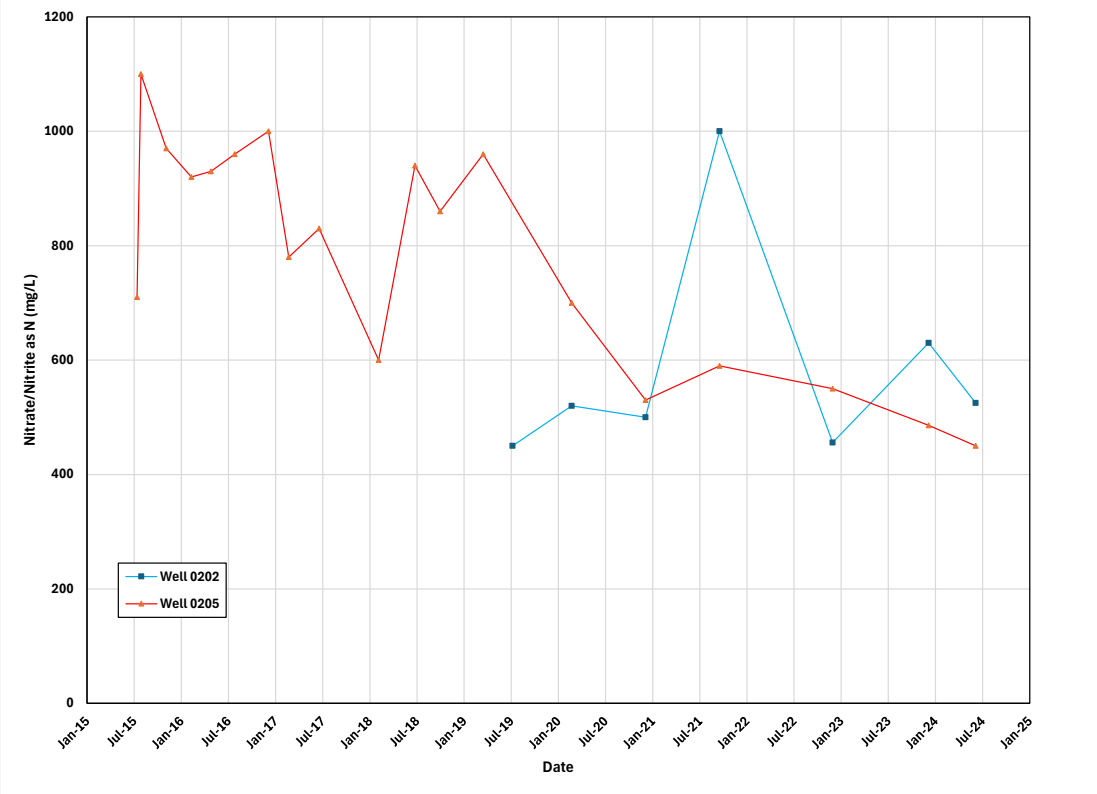

Figure 28. Wells 0202 and 0205 Nitrate/Nitrite Concentrations vs Time, 2015 through 2024

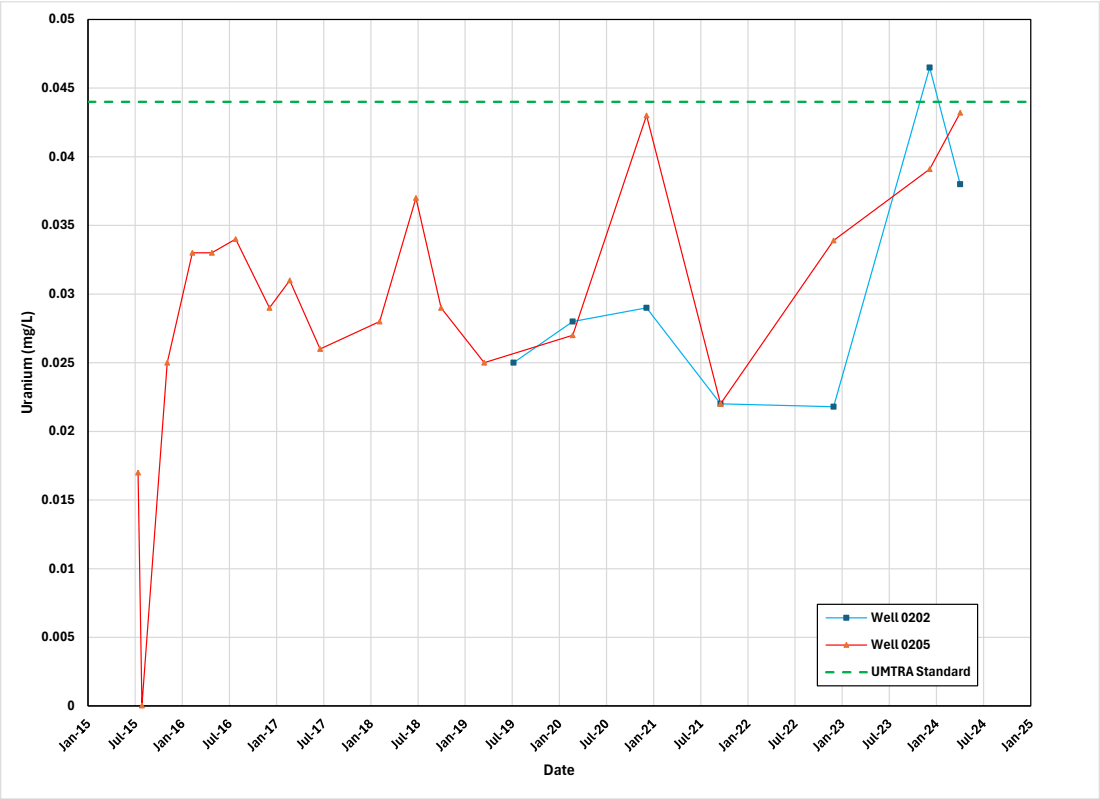

Figure 29. Wells 0202 and 0205 Uranium Concentrations vs Time, 2015 through 2024

Investigations (Nolan, et al 2002 and Walvoord, et al 2003) have encountered naturally occurring elevated nitrate/nitrite concentrations in desert environments. In addition, another investigation (DOE 2011) detected elevated nitrate/nitrite (more than 1,000 mg/L) and uranium (up to 1.9 mg/L) concentrations that were present in regional Mancos Shale seep water samples. This suggests that these analytes are likely naturally occurring in the water sampled from wells 0202 and 0205.

5.0 Conclusions

5.1 January through February 2024 Site-wide Sampling Event

The rationale for conducting the January-February 2023 site-wide sampling event was to collect data from the site during Colorado River base flows and to assess any changes in the contaminant plume migration or trends in the groundwater system water chemistry. Of the PCOCS for which analyses were run, two of these (selenium and uranium) had results exceeding 40 CFR 192 Sub A standards, two exceeded secondary EPA drinking water standards (manganese and sulfate), and ammonia exceeded the concentration recommended by USFWS.

Surface water sampling was also conducted to assess surface water quality adjacent to the site compared to upstream and downstream water quality. Ammonia concentrations from the seven surface water samples collected during this sampling event were below the applicable EPA criteria (for a suitable habitat) for both acute and chronic concentrations.

In general, there was minimal plume migration based on the groundwater samples collected from wells located along the plume boundaries.

5.2 April 2024 CF4 Sampling Event

Ground water samples were collected from the CF4 observation wells in April 2024. Analytical results show that the ammonia concentrations were elevated due to limited operation of the injection system. Based on data collected over the past five years, the injection system is effective at decreasing the ammonia concentrations 15 to 35 ft bgs, both upgradient and downgradient of the CF4 injection wells.

5.3 April through June 2024 Crescent Junction Sampling Events

The groundwater in wells 0202 and 0205 have a similar geochemistry and will continue to be monitored on an annual basis (at a minimum) for fluctuations in analyte concentrations. Current data indicates since 2021 a downward trend in ammonia and nitrate/nitrite concentrations while the uranium concentrations have fluctuated. Uranium and nitrate concentrations are still within natural levels for the underlying Mancos Shale.

6.0 References

40 CFR 192A (Code of Federal Regulations) Subpart A, "Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, Standards for the Control of Residual Radioactive Materials from Inactive Uranium Processing Sites."

DOE (U.S. Department of Energy), *Characterization of Groundwater Brine Zones at the Moab Project Site (Phase 1)* (GJO-2002-333-TAR, GJO-MOA 19.1.2-3).

DOE (U.S. Department of Energy), *Moab UMTRA Project Groundwater/ Surface Water Sampling and Analysis Plan* (DOE-EM/GJRAC1830).

DOE (U.S. Department of Energy), *Moab UMTRA Project Standard Practice for Validation of Laboratory Data* (DOE-EM/GJRAC1855).

DOE (U.S. Department of Energy), Legacy Management Environmental Sciences Laboratory, 2011. *Natural Contamination from the Mancos Shale* (LLMS/S07480, ESL-RPT-2011-01).

Nolan, B.T. Hitt, K.J, and Ruddy, B.C., 2002, "Probability of Nitrate Contamination of Recently Recharged Groundwaters in the Conterminous United States," Environmental Science and Technology, v. 36, no. 10, p. 2138-2145.

Walvoord, M.A., Phillips, F.M., Stonestrom, D.A., Evans, R.D., Hartsough, P.C., Newman, B.D., and R.G. Striegl, R.G., 2003, "A Reservoir of Nitrate Beneath Desert Soils," Science, Vol. 302, p. 1021-1024.

Appendix A.
January through February 2024 Site Wide Sampling Event

Water Sampling Field Activities Verification
Water Quality Data
Minimums and Maximums Report
Blanks Report
Water Level Data
Trip Report

Appendix A. January - February 2024 Site Wide Sampling Event
Water Sampling Field Activities Verification

Sampling Event/RIN	Site Wide Sampling Event / RIN 2401146	**Date(s) of Water Sampling**	January 15 – February 14, 2024
Date(s) of Verification	October 2023	**Name of Verifier**	T. Prichard, J. Ritchey

		Response (Yes, No, NA)	Comments
1.	Is the Sampling Analysis Plan (SAP) the primary document directing field procedures?	Yes	
2.	List other documents, standard operating procedures, instructions.	NA	
3.	Were the sampling locations specified in the planning documents sampled?	Yes	
4.	Was a pre-trip calibration conducted as specified in the aforementioned documents?	Yes	
5.	Was an operational check of the field equipment conducted in accordance with the SAP?	Yes	
6.	Did the operational checks meet criteria?	Yes	
7.	Were the number and types (alkalinity, temperature, electrical conductivity, pH, turbidity, oxidation reduction potential) of field measurements taken as specified?	Yes	Field measurements for temperature, pH, turbidity, oxidation reduction potential, and conductivity were collected.
8.	Was the category of the well documented?	Yes	
9.	Were the following conditions met when purging a Category I well:		
	Was one pump/tubing volume purged before sampling?	Yes	
	Did the water level stabilize before sampling?	Yes	
	Did pH, specific conductance, and turbidity measurements stabilize before sampling?	Yes	
	Was the flow rate less than 500 milliliters per minute?	Yes	
	If a portable pump was used, was there a 4-hour delay between pump installation and sampling?	N/A	
10.	Were the following conditions met when purging a Category II well:		
	Was the flow rate less than 500 milliliters per minute?	NA	
	Was one pump/tubing volume removed before sampling?	NA	
11.	Were duplicates taken at a frequency of one per 20 samples?	Yes	A duplicate was collected from locations 0413 (2000), ATP-3 (2001), SMI-PW01 (2002), and SMI-PZ3D2 (2004) .

Appendix A. January - February 2024 Site Wide Sampling Event
Water Sampling Field Activities Verification

Sampling Event/RIN	Site Wide Sampling Event / RIN 2401146	**Date(s) of Water Sampling**	January 15 – March 14, 2024
Date(s) of Verification	October 2024	**Name of Verifier**	J. Ritchey

	Response (Yes, No, NA)	Comments
12. Were EBs taken at a frequency of one per 20 samples that were collected with non-dedicated equipment?	NA	An equipment blank (2004) was collected on non-dedicated surface water sampling equipment.
13. Were trip blanks prepared and included with each shipment of volatile organic compound samples?	NA	
14. Were quality-control samples assigned a fictitious site identification number?	Yes	
Was the true identity of the samples recorded on the quality assurance sample log?	Yes	
15. Were samples collected in the containers specified?	Yes	
16. Were samples filtered and preserved as specified?	Yes	
17. Were the number and types of samples collected as specified?	Yes	
18. Were COC records completed, and was sample custody maintained?	Yes	
19. Are field data sheets signed and dated by both team members?	Yes	
20. Was all other pertinent information documented on the field data sheets?	NA	
21. Was the presence or absence of ice in the cooler documented at every sample location?	Yes	
22. Were water levels measured at the locations specified in the planning documents?	Yes	

Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	0201	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.0740			0.017	-
	mg/L	0218	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.0570			0.017	-
	mg/L	0226	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.229			0.017	-
	mg/L	0401	WL	02/05/2024	0001	18.00	257			17	-
	mg/L	0403	WL	02/05/2024	0001	18.00	12.9			0.17	-
	mg/L	0404	WL	02/05/2024	0001	18.00	213			17	-
	mg/L	0406	WL	01/29/2024	0001	18.00	106			1.7	-
	mg/L	0407	WL	02/05/2024	0001	17.00	165			17	-
	mg/L	0412	WL	01/15/2024	0001	9.50	0.0170	U		0.017	-
	mg/L	0413	WL	01/17/2024	0001	10.50	42.1			1.7	-
	mg/L	0413	WL	01/17/2024	0002	7.48 - 12.40	48.4			1.7	-
	mg/L	0414	WL	01/15/2024	0001	7.50	53.3			1.7	-
	mg/L	0430	WL	02/06/2024	0001	101.00	0.0170	U		0.017	-
	mg/L	0431	WL	01/30/2024	0001	91.00	0.0200	J		0.017	-
	mg/L	0432	WL	01/29/2024	0001	55.00	0.0400	J		0.017	-
	mg/L	0433	WL	02/05/2024	0001	99.00	0.0170	U		0.017	-
	mg/L	0434	WL	01/29/2024	0001	35.00	0.0880			0.017	-
	mg/L	0435	WL	01/16/2024	0001	173.00	1.84			0.085	-
	mg/L	0436	WL	02/13/2024	0001	197.00	3.07			0.085	-
	mg/L	0437	WL	01/30/2024	0001	97.00	3.13			0.034	-
	mg/L	0439	WL	02/13/2024	0001	118.00	7.48			0.085	-
	mg/L	0440	WL	01/30/2024	0001	117.00	0.0330	J		0.017	-
	mg/L	0441	WL	01/30/2024	0001	53.00	0.0170	U		0.017	-
	mg/L	0443	WL	01/30/2024	0001	73.00	0.0170	U		0.017	-
	mg/L	0444	WL	01/16/2024	0001	116.00	1.74			0.085	-
	mg/L	0453	WL	01/30/2024	0001	80.00	53.7			0.85	-
	mg/L	0454	WL	01/16/2024	0001	13.00	221			8.5	-
	mg/L	0455	WL	02/05/2024	0001	46.00	0.0170	U		0.017	-
	mg/L	0456	WL	01/29/2024	0001	53.00	0.0170	U		0.017	-
	mg/L	0457	WL	01/16/2024	0001	29.00	0.0200	J		0.017	-
	mg/L	0492	WL	02/07/2024	0001	18.00	185			17	-

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Ammonia Total as N	mg/L	AMM-1-19	WL	01/15/2024	0001	19.00	0.0170	U	0.017	-
	mg/L	AMM-2	WL	01/16/2024	0001	48.00	167		8.5	-
	mg/L	AMM-3	WL	01/29/2024	0001	48.00	315		8.5	-
	mg/L	ATP-2-D	WL, PZ	01/29/2024	0001	88.00	343		3.4	-
	mg/L	ATP-2-S	WL, PZ	01/29/2024	0001	25.00	55.7		0.85	-
	mg/L	ATP-3	WL	01/31/2024	0001	51.00	0.0170	U	0.017	-
	mg/L	ATP-3	WL	01/31/2024	0002	53.00 - 63.00	0.0250	J	0.017	-
	mg/L	CR1	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.0420	J	0.017	-
	mg/L	CR2	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.0880		0.017	-
	mg/L	CR3	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.658		0.017	-
	mg/L	CR5	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.108		0.017	-
	mg/L	MW-3	WL	01/29/2024	0001	44.00	338		3.4	-
	mg/L	SMI-PW01	WL	02/05/2024	0001	40.00	298		17	-
	mg/L	SMI-PW01	WL	02/05/2024	0002	20.09 - 60.09	306		17	-
	mg/L	SMI-PW03	WL	02/13/2024	0001	60.00	47.4		0.85	-
	mg/L	SMI-PZ1S	WL	02/05/2024	0001	18.00	125		17	-
	mg/L	SMI-PZ2D	WL	01/16/2024	0001	75.00	327		8.5	-
	mg/L	SMI-PZ2M2	WL	01/16/2024	0001	56.00	293		8.5	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0001	78.00	298		4.25	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0002	75.28 - 80.28	320		4.25	-
	mg/L	SMI-PZ3M	WL	02/13/2024	0001	59.00	26.6		0.85	-
	mg/L	SMI-PZ3S	WL	02/13/2024	0001	25.00	1.87		0.017	-
	mg/L	TP-01	WL	01/15/2024	0001	22.00	0.0540		0.017	-
	mg/L	TP-11	WL	01/15/2024	0001	30.00	0.146		0.017	-
	mg/L	TP-17	WL	02/07/2024	0001	28.00	0.0170	U	0.017	-
	mg/L	TP-20	WL	01/16/2024	0001	32.00	2.71		0.085	-
	mg/L	TP-22	WL	01/16/2024	0001	17.00	0.0170	U	0.017	-
	mg/L	TP-23	WL	01/16/2024	0001	25.00	57.5		8.5	-
	mg/L	UPD-17	WL	02/14/2024	0001	14.50	193		3.4	-
	mg/L	UPD-18	WL	02/14/2024	0001	13.00	183		3.4	-
	mg/L	UPD-20	WL	02/14/2024	0001	17.00	0.0610		0.017	-
	mg/L	UPD-21	WL	02/13/2024	0001	25.00	3.92		0.085	-
	mg/L	UPD-22	WL	01/15/2024	0001	9.00	3.85		0.085	-
	mg/L	UPD-23	WL	02/13/2024	0001	26.00	7.24		0.085	-
	mg/L	UPD-24	WL	02/13/2024	0001	27.00	1.39		0.017	-

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA QA	DETECTION LIMIT	UN-CERTAINTY
Arsenic	mg/L	0201	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00500	U		0.005	-
	mg/L	0218	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00500	U		0.005	-
	mg/L	0226	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.00500	U		0.005	-
	mg/L	0401	WL	02/05/2024	0001	18.00	0.00500	U		0.005	-
	mg/L	0403	WL	02/05/2024	0001	18.00	0.00500	U		0.005	-
	mg/L	0404	WL	02/05/2024	0001	18.00	0.00500	U		0.005	-
	mg/L	0406	WL	01/29/2024	0001	18.00	0.0187	B		0.005	-
	mg/L	0407	WL	02/05/2024	0001	17.00	0.00500	U		0.005	-
	mg/L	0412	WL	01/15/2024	0001	9.50	0.0131	B		0.005	-
	mg/L	0413	WL	01/17/2024	0001	10.50	0.0158	B		0.005	-
	mg/L	0413	WL	01/17/2024	0002	7.48 - 12.40	0.0312			0.005	-
	mg/L	0414	WL	01/15/2024	0001	7.50	0.00500	U		0.005	-
	mg/L	0430	WL	02/06/2024	0001	101.00	0.00500	U		0.005	-
	mg/L	0431	WL	01/30/2024	0001	91.00	0.00500	U		0.005	-
	mg/L	0432	WL	01/29/2024	0001	55.00	0.00500	U		0.005	-
	mg/L	0433	WL	02/05/2024	0001	99.00	0.00500	U		0.005	-
	mg/L	0434	WL	01/29/2024	0001	35.00	0.00500	U		0.005	-
	mg/L	0435	WL	01/16/2024	0001	173.00	0.0500	U		0.05	-
	mg/L	0436	WL	02/13/2024	0001	197.00	0.00500	U		0.005	-
	mg/L	0437	WL	01/30/2024	0001	97.00	0.00500	U		0.005	-
	mg/L	0439	WL	02/13/2024	0001	118.00	0.00788	J		0.005	-
	mg/L	0440	WL	01/30/2024	0001	117.00	0.00500	U		0.005	-
	mg/L	0441	WL	01/30/2024	0001	53.00	0.00500	U		0.005	-
	mg/L	0443	WL	01/30/2024	0001	73.00	0.00500	U		0.005	-
	mg/L	0444	WL	01/16/2024	0001	116.00	0.0500	U		0.05	-
	mg/L	0453	WL	01/30/2024	0001	80.00	0.00739	B		0.005	-
	mg/L	0454	WL	01/16/2024	0001	13.00	0.0500	U		0.05	-
	mg/L	0455	WL	02/05/2024	0001	46.00	0.00500	U		0.005	-
	mg/L	0456	WL	01/29/2024	0001	53.00	0.00500	U		0.005	-
	mg/L	0457	WL	01/16/2024	0001	29.00	0.00500	U		0.005	-
	mg/L	0492	WL	02/07/2024	0001	18.00	0.00500	U		0.005	-

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Arsenic	mg/L	AMM-1-19	WL	01/15/2024	0001	19.00	0.00500	U	0.005	-
	mg/L	AMM-2	WL	01/16/2024	0001	48.00	0.00500	U	0.005	-
	mg/L	AMM-3	WL	01/29/2024	0001	48.00	0.00500	U	0.005	-
	mg/L	ATP-2-D	WL, PZ	01/29/2024	0001	88.00	0.00500	U	0.005	-
	mg/L	ATP-2-S	WL, PZ	01/29/2024	0001	25.00	0.00500	U	0.005	-
	mg/L	ATP-3	WL	01/31/2024	0001	51.00	0.00500	U	0.005	-
	mg/L	ATP-3	WL	01/31/2024	0002	53.00 - 63.00	0.00500	U	0.005	-
	mg/L	CR1	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00500	U	0.005	-
	mg/L	CR2	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00500	U	0.005	-
	mg/L	CR3	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.00500	U	0.005	-
	mg/L	CR5	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00500	U	0.005	-
	mg/L	MW-3	WL	01/29/2024	0001	44.00	0.00500	U	0.005	-
	mg/L	SMI-PW01	WL	02/05/2024	0001	40.00	0.00500	U	0.005	-
	mg/L	SMI-PW01	WL	02/05/2024	0002	20.09 - 60.09	0.00500	U	0.005	-
	mg/L	SMI-PW03	WL	02/13/2024	0001	60.00	0.00505	J	0.005	-
	mg/L	SMI-PZ1S	WL	02/05/2024	0001	18.00	0.00500	U	0.005	-
	mg/L	SMI-PZ2D	WL	01/16/2024	0001	75.00	0.0500	U	0.05	-
	mg/L	SMI-PZ2M2	WL	01/16/2024	0001	56.00	0.00500	U	0.005	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0001	78.00	0.0121	J	0.005	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0002	75.28 - 80.28	0.00500	U	0.005	-
	mg/L	SMI-PZ3M	WL	02/13/2024	0001	59.00	0.00500	U	0.005	-
	mg/L	SMI-PZ3S	WL	02/13/2024	0001	25.00	0.0188	J	0.005	-
	mg/L	TP-01	WL	01/15/2024	0001	22.00	0.00500	U	0.005	-
	mg/L	TP-11	WL	01/15/2024	0001	30.00	0.00500	U	0.005	-
	mg/L	TP-17	WL	02/07/2024	0001	28.00	0.00500	U	0.005	-
	mg/L	TP-20	WL	01/16/2024	0001	32.00	0.0500	U	0.05	-
	mg/L	TP-22	WL	01/16/2024	0001	17.00	0.00500	U	0.005	-
	mg/L	TP-23	WL	01/16/2024	0001	25.00	0.00500	U	0.005	-
	mg/L	UPD-17	WL	02/14/2024	0001	14.50	0.0249	J	0.005	-
	mg/L	UPD-18	WL	02/14/2024	0001	13.00	0.0171	J	0.005	-
	mg/L	UPD-20	WL	02/14/2024	0001	17.00	0.00595	J	0.005	-
	mg/L	UPD-21	WL	02/13/2024	0001	25.00	0.00578	J	0.005	-
	mg/L	UPD-22	WL	01/15/2024	0001	9.00	0.0115	B	0.005	-
	mg/L	UPD-23	WL	02/13/2024	0001	26.00	0.00645	J	0.005	-
	mg/L	UPD-24	WL	02/13/2024	0001	27.00	0.292		0.005	-

Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Copper	mg/L	0201	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00300	U			0.003	-
	mg/L	0218	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00300	U			0.003	-
	mg/L	0226	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.00300	U			0.003	-
	mg/L	0401	WL	02/05/2024	0001	18.00	0.00300	U			0.003	-
	mg/L	0403	WL	02/05/2024	0001	18.00	0.00300	U			0.003	-
	mg/L	0404	WL	02/05/2024	0001	18.00	0.00300	U			0.003	-
	mg/L	0406	WL	01/29/2024	0001	18.00	0.00723	B			0.003	-
	mg/L	0407	WL	02/05/2024	0001	17.00	0.00300	U			0.003	-
	mg/L	0412	WL	01/15/2024	0001	9.50	0.00300	U			0.003	-
	mg/L	0413	WL	01/17/2024	0001	10.50	0.00300	U			0.003	-
	mg/L	0413	WL	01/17/2024	0002	7.48 - 12.40	0.00300	U			0.003	-
	mg/L	0414	WL	01/15/2024	0001	7.50	0.00300	U			0.003	-
	mg/L	0430	WL	02/06/2024	0001	101.00	0.00300	U			0.003	-
	mg/L	0431	WL	01/30/2024	0001	91.00	0.00522	B			0.003	-
	mg/L	0432	WL	01/29/2024	0001	55.00	0.00300	U			0.003	-
	mg/L	0433	WL	02/05/2024	0001	99.00	0.00300	U			0.003	-
	mg/L	0434	WL	01/29/2024	0001	35.00	0.00507	B			0.003	-
	mg/L	0435	WL	01/16/2024	0001	173.00	0.00300	U			0.003	-
	mg/L	0436	WL	02/13/2024	0001	197.00	0.00300	U			0.003	-
	mg/L	0437	WL	01/30/2024	0001	97.00	0.00801	B			0.003	-
	mg/L	0439	WL	02/13/2024	0001	118.00	0.00300	U			0.003	-
	mg/L	0440	WL	01/30/2024	0001	117.00	0.00399	B			0.003	-
	mg/L	0441	WL	01/30/2024	0001	53.00	0.00562	B			0.003	-
	mg/L	0443	WL	01/30/2024	0001	73.00	0.00300	U			0.003	-
	mg/L	0444	WL	01/16/2024	0001	116.00	0.00300	U			0.003	-
	mg/L	0453	WL	01/30/2024	0001	80.00	0.00829	B			0.003	-
	mg/L	0454	WL	01/16/2024	0001	13.00	0.00300	U			0.003	-
	mg/L	0455	WL	02/05/2024	0001	46.00	0.00300	U			0.003	-
	mg/L	0456	WL	01/29/2024	0001	53.00	0.00300	U			0.003	-
	mg/L	0457	WL	01/16/2024	0001	29.00	0.00300	U			0.003	-
	mg/L	0492	WL	02/07/2024	0001	18.00	0.00300	U			0.003	-

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Copper	mg/L	AMM-1-19	WL	01/15/2024 0001	19.00	0.00300	U	0.003	-
	mg/L	AMM-2	WL	01/16/2024 0001	48.00	0.00300	U	0.003	-
	mg/L	AMM-3	WL	01/29/2024 0001	48.00	0.0139	B	0.003	-
	mg/L	ATP-2-D	WL, PZ	01/29/2024 0001	88.00	0.00573	B	0.003	-
	mg/L	ATP-2-S	WL, PZ	01/29/2024 0001	25.00	0.00352	B	0.003	-
	mg/L	ATP-3	WL	01/31/2024 0001	51.00	0.00300	U	0.003	-
	mg/L	ATP-3	WL	01/31/2024 0002	53.00 - 63.00	0.00300	U	0.003	-
	mg/L	CR1	SL, RIV	02/06/2024 0001	0.00 - 0.00	0.00300	U	0.003	-
	mg/L	CR2	SL, RIV	02/06/2024 0001	0.00 - 0.00	0.00300	U	0.003	-
	mg/L	CR3	SL, RIV	02/07/2024 0001	0.00 - 0.00	0.00300	U	0.003	-
	mg/L	CR5	SL, RIV	02/06/2024 0001	0.00 - 0.00	0.00300	U	0.003	-
	mg/L	MW-3	WL	01/29/2024 0001	44.00	0.00557	B	0.003	-
	mg/L	SMI-PW01	WL	02/05/2024 0001	40.00	0.00300	U	0.003	-
	mg/L	SMI-PW01	WL	02/05/2024 0002	20.09 - 60.09	0.00300	U	0.003	-
	mg/L	SMI-PW03	WL	02/13/2024 0001	60.00	0.00300	U	0.003	-
	mg/L	SMI-PZ1S	WL	02/05/2024 0001	18.00	0.00300	U	0.003	-
	mg/L	SMI-PZ2D	WL	01/16/2024 0001	75.00	0.0388		0.003	-
	mg/L	SMI-PZ2M2	WL	01/16/2024 0001	56.00	0.0113	B	0.003	-
	mg/L	SMI-PZ3D2	WL	02/13/2024 0001	78.00	0.00300	U	0.003	-
	mg/L	SMI-PZ3D2	WL	02/13/2024 0002	75.28 - 80.28	0.00300	U	0.003	-
	mg/L	SMI-PZ3M	WL	02/13/2024 0001	59.00	0.00300	U	0.003	-
	mg/L	SMI-PZ3S	WL	02/13/2024 0001	25.00	0.00300	U	0.003	-
	mg/L	TP-01	WL	01/15/2024 0001	22.00	0.00300	U	0.003	-
	mg/L	TP-11	WL	01/15/2024 0001	30.00	0.00300	U	0.003	-
	mg/L	TP-17	WL	02/07/2024 0001	28.00	0.00300	U	0.003	-
	mg/L	TP-20	WL	01/16/2024 0001	32.00	0.00300	U	0.003	-
	mg/L	TP-22	WL	01/16/2024 0001	17.00	0.00684	B	0.003	-
	mg/L	TP-23	WL	01/16/2024 0001	25.00	0.00522	B	0.003	-
	mg/L	UPD-17	WL	02/14/2024 0001	14.50	0.00300	U	0.003	-
	mg/L	UPD-18	WL	02/14/2024 0001	13.00	0.00300	U	0.003	-
	mg/L	UPD-20	WL	02/14/2024 0001	17.00	0.00300	U	0.003	-
	mg/L	UPD-21	WL	02/13/2024 0001	25.00	0.00300	U	0.003	-
	mg/L	UPD-22	WL	01/15/2024 0001	9.00	0.00300	U	0.003	-
	mg/L	UPD-23	WL	02/13/2024 0001	26.00	0.00300	U	0.003	-
	mg/L	UPD-24	WL	02/13/2024 0001	27.00	0.00300	U	0.003	-

Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

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	0201	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.0106		0.002	-
	mg/L	0218	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00980	B	0.002	-
	mg/L	0226	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.0196		0.002	-
	mg/L	0401	WL	02/05/2024	0001	18.00	3.590		0.002	-
	mg/L	0403	WL	02/05/2024	0001	18.00	1.470		0.002	-
	mg/L	0404	WL	02/05/2024	0001	18.00	0.0134		0.002	-
	mg/L	0406	WL	01/29/2024	0001	18.00	0.0203		0.002	-
	mg/L	0407	WL	02/05/2024	0001	17.00	1.990		0.002	-
	mg/L	0412	WL	01/15/2024	0001	9.50	0.00754	B	0.002	-
	mg/L	0413	WL	01/17/2024	0001	10.50	0.416		0.002	-
	mg/L	0413	WL	01/17/2024	0002	7.48 - 12.40	0.396		0.002	-
	mg/L	0414	WL	01/15/2024	0001	7.50	0.805		0.002	-
	mg/L	0430	WL	02/06/2024	0001	101.00	0.0171		0.002	-
	mg/L	0431	WL	01/30/2024	0001	91.00	0.0923		0.002	-
	mg/L	0432	WL	01/29/2024	0001	55.00	0.00200	U	0.002	-
	mg/L	0433	WL	02/05/2024	0001	99.00	0.00200	U	0.002	-
	mg/L	0434	WL	01/29/2024	0001	35.00	0.351		0.002	-
	mg/L	0435	WL	01/16/2024	0001	173.00	0.670		0.002	-
	mg/L	0436	WL	02/13/2024	0001	197.00	3.450		0.002	-
	mg/L	0437	WL	01/30/2024	0001	97.00	0.140		0.002	-
	mg/L	0439	WL	02/13/2024	0001	118.00	0.186		0.002	-
	mg/L	0440	WL	01/30/2024	0001	117.00	0.00200	U	0.002	-
	mg/L	0441	WL	01/30/2024	0001	53.00	0.00200	U	0.002	-
	mg/L	0443	WL	01/30/2024	0001	73.00	0.00200	U	0.002	-
	mg/L	0444	WL	01/16/2024	0001	116.00	1.760		0.002	-
	mg/L	0453	WL	01/30/2024	0001	80.00	0.318		0.002	-
	mg/L	0454	WL	01/16/2024	0001	13.00	1.480		0.002	-
	mg/L	0455	WL	02/05/2024	0001	46.00	0.0955		0.002	-
	mg/L	0456	WL	01/29/2024	0001	53.00	0.00796	B	0.002	-
	mg/L	0457	WL	01/16/2024	0001	29.00	0.631		0.002	-
	mg/L	0492	WL	02/07/2024	0001	18.00	4.380		0.002	-

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Manganese	mg/L	AMM-1-19	WL	01/15/2024	0001	19.00	0.00200	U	0.002	-
	mg/L	AMM-2	WL	01/16/2024	0001	48.00	0.179		0.002	-
	mg/L	AMM-3	WL	01/29/2024	0001	48.00	3.190		0.002	-
	mg/L	ATP-2-D	WL, PZ	01/29/2024	0001	88.00	1.230		0.002	-
	mg/L	ATP-2-S	WL, PZ	01/29/2024	0001	25.00	0.0593		0.002	-
	mg/L	ATP-3	WL	01/31/2024	0001	51.00	0.349		0.002	-
	mg/L	ATP-3	WL	01/31/2024	0002	53.00 - 63.00	0.352		0.002	-
	mg/L	CR1	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.0109		0.002	-
	mg/L	CR2	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.0117		0.002	-
	mg/L	CR3	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.0488		0.002	-
	mg/L	CR5	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.0158		0.002	-
	mg/L	MW-3	WL	01/29/2024	0001	44.00	4.680		0.002	-
	mg/L	SMI-PW01	WL	02/05/2024	0001	40.00	0.0580		0.002	-
	mg/L	SMI-PW01	WL	02/05/2024	0002	20.09 - 60.09	0.0611		0.002	-
	mg/L	SMI-PW03	WL	02/13/2024	0001	60.00	1.190		0.002	-
	mg/L	SMI-PZ1S	WL	02/05/2024	0001	18.00	0.993		0.002	-
	mg/L	SMI-PZ2D	WL	01/16/2024	0001	75.00	5.880		0.002	-
	mg/L	SMI-PZ2M2	WL	01/16/2024	0001	56.00	5.420		0.002	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0001	78.00	0.158		0.002	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0002	75.28 - 80.28	0.154		0.002	-
	mg/L	SMI-PZ3M	WL	02/13/2024	0001	59.00	0.984		0.002	-
	mg/L	SMI-PZ3S	WL	02/13/2024	0001	25.00	0.0504		0.002	-
	mg/L	TP-01	WL	01/15/2024	0001	22.00	0.688		0.002	-
	mg/L	TP-11	WL	01/15/2024	0001	30.00	1.650		0.002	-
	mg/L	TP-17	WL	02/07/2024	0001	28.00	2.020		0.002	-
	mg/L	TP-20	WL	01/16/2024	0001	32.00	0.538		0.002	-
	mg/L	TP-22	WL	01/16/2024	0001	17.00	0.00200	U	0.002	-
	mg/L	TP-23	WL	01/16/2024	0001	25.00	4.410		0.002	-
	mg/L	UPD-17	WL	02/14/2024	0001	14.50	0.378		0.002	-
	mg/L	UPD-18	WL	02/14/2024	0001	13.00	0.00635	J	0.002	-
	mg/L	UPD-20	WL	02/14/2024	0001	17.00	0.401		0.002	-
	mg/L	UPD-21	WL	02/13/2024	0001	25.00	0.0245		0.002	-
	mg/L	UPD-22	WL	01/15/2024	0001	9.00	0.0596		0.002	-
	mg/L	UPD-23	WL	02/13/2024	0001	26.00	0.00527	J	0.002	-
	mg/L	UPD-24	WL	02/13/2024	0001	27.00	0.0723		0.002	-

Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Oxidation Reduction Potential	mV	0201	SL, RIV	02/06/2024	N001	0.00 - 0.00	160		-	-
	mV	0218	SL, RIV	02/06/2024	N001	0.00 - 0.00	135		-	-
	mV	0226	SL, RIV	02/07/2024	N001	0.00 - 0.00	85		-	-
	mV	0401	WL	02/05/2024	N001	18.00	190		-	-
	mV	0403	WL	02/05/2024	N001	18.00	213		-	-
	mV	0404	WL	02/05/2024	N001	18.00	184		-	-
	mV	0406	WL	01/29/2024	N001	18.00	65		-	-
	mV	0407	WL	02/05/2024	N001	17.00	233		-	-
	mV	0412	WL	01/15/2024	N001	9.50	93		-	-
	mV	0413	WL	01/17/2024	N001	10.50	163		-	-
	mV	0414	WL	01/15/2024	N001	7.50	42		-	-
	mV	0430	WL	02/06/2024	N001	101.00	214		-	-
	mV	0431	WL	01/30/2024	N001	91.00	205		-	-
	mV	0432	WL	01/29/2024	N001	55.00	111		-	-
	mV	0433	WL	02/05/2024	N001	99.00	130		-	-
	mV	0434	WL	01/29/2024	N001	35.00	-95		-	-
	mV	0435	WL	01/16/2024	N001	173.00	-241		-	-
	mV	0436	WL	02/13/2024	N001	197.00	-233		-	-
	mV	0437	WL	01/30/2024	N001	97.00	130		-	-
	mV	0439	WL	02/13/2024	N001	118.00	95		-	-
	mV	0440	WL	01/30/2024	N001	117.00	157		-	-
	mV	0441	WL	01/30/2024	N001	53.00	152		-	-
	mV	0443	WL	01/30/2024	N001	73.00	186		-	-
	mV	0444	WL	01/16/2024	N001	116.00	-182		-	-
	mV	0453	WL	01/30/2024	N001	80.00	172		-	-
	mV	0454	WL	01/16/2024	N001	13.00	52		-	-
	mV	0455	WL	02/05/2024	N001	46.00	120		-	-
	mV	0456	WL	01/29/2024	N001	53.00	47		-	-
	mV	0457	WL	01/16/2024	N001	29.00	-146		-	-
	mV	0492	WL	02/07/2024	N001	18.00	134		-	-
	mV	AMM-1-19	WL	01/15/2024	N001	19.00	246		-	-

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Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Oxidation Reduction Potential	mV	AMM-2	WL	01/16/2024	N001	48.00	79		-	-
	mV	AMM-3	WL	01/29/2024	N001	48.00	-33		-	-
	mV	ATP-2-D	WL, PZ	01/29/2024	N001	88.00	-284		-	-
	mV	ATP-2-S	WL, PZ	01/29/2024	N001	25.00	-158		-	-
	mV	ATP-3	WL	01/31/2024	N001	51.00	204		-	-
	mV	CR1	SL, RIV	02/06/2024	N001	0.00 - 0.00	144		-	-
	mV	CR2	SL, RIV	02/06/2024	N001	0.00 - 0.00	131		-	-
	mV	CR3	SL, RIV	02/07/2024	N001	0.00 - 0.00	116		-	-
	mV	CR5	SL, RIV	02/06/2024	N001	0.00 - 0.00	74		-	-
	mV	MW-3	WL	01/29/2024	N001	44.00	134		-	-
	mV	SMI-PW01	WL	02/05/2024	N001	40.00	119		-	-
	mV	SMI-PW03	WL	02/13/2024	N001	60.00	193		-	-
	mV	SMI-PZ1S	WL	02/05/2024	N001	18.00	121		-	-
	mV	SMI-PZ2D	WL	01/16/2024	N001	75.00	-118		-	-
	mV	SMI-PZ2M2	WL	01/16/2024	N001	56.00	85		-	-
	mV	SMI-PZ3D2	WL	02/13/2024	N001	78.00	2113		-	-
	mV	SMI-PZ3M	WL	02/13/2024	N001	59.00	199		-	-
	mV	SMI-PZ3S	WL	02/13/2024	N001	25.00	188		-	-
	mV	TP-01	WL	01/15/2024	N001	22.00	27		-	-
	mV	TP-11	WL	01/15/2024	N001	30.00	-40		-	-
	mV	TP-17	WL	02/07/2024	N001	28.00	-34		-	-
	mV	TP-20	WL	01/16/2024	N001	32.00	-219		-	-
	mV	TP-22	WL	01/16/2024	N001	17.00	141		-	-
	mV	TP-23	WL	01/16/2024	N001	25.00	78		-	-
	mV	UPD-17	WL	02/14/2024	N001	14.50	244		-	-
	mV	UPD-18	WL	02/14/2024	N001	13.00	239		-	-
	mV	UPD-20	WL	02/14/2024	N001	17.00	184		-	-
	mV	UPD-21	WL	02/13/2024	N001	25.00	47		-	-
	mV	UPD-22	WL	01/15/2024	N001	9.00	97		-	-
	mV	UPD-23	WL	02/13/2024	N001	26.00	136		-	-
	mV	UPD-24	WL	02/13/2024	N001	27.00	72		-	-

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Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
pH	s.u.	0201	SL, RIV	02/06/2024	N001	0.00 - 0.00	8.27				-	-
	s.u.	0218	SL, RIV	02/06/2024	N001	0.00 - 0.00	8.72				-	-
	s.u.	0226	SL, RIV	02/07/2024	N001	0.00 - 0.00	8.42				-	-
	s.u.	0401	WL	02/05/2024	N001	18.00	6.77				-	-
	s.u.	0403	WL	02/05/2024	N001	18.00	7.16				-	-
	s.u.	0404	WL	02/05/2024	N001	18.00	6.83				-	-
	s.u.	0406	WL	01/29/2024	N001	18.00	7.05				-	-
	s.u.	0407	WL	02/05/2024	N001	17.00	7.13				-	-
	s.u.	0412	WL	01/15/2024	N001	9.50	7.50				-	-
	s.u.	0413	WL	01/17/2024	N001	10.50	7.61				-	-
	s.u.	0414	WL	01/15/2024	N001	7.50	6.97				-	-
	s.u.	0430	WL	02/06/2024	N001	101.00	7.21				-	-
	s.u.	0431	WL	01/30/2024	N001	91.00	7.06				-	-
	s.u.	0432	WL	01/29/2024	N001	55.00	7.44				-	-
	s.u.	0433	WL	02/05/2024	N001	99.00	7.45				-	-
	s.u.	0434	WL	01/29/2024	N001	35.00	6.94				-	-
	s.u.	0435	WL	01/16/2024	N001	173.00	7.01				-	-
	s.u.	0436	WL	02/13/2024	N001	197.00	7.09				-	-
	s.u.	0437	WL	01/30/2024	N001	97.00	7.34				-	-
	s.u.	0439	WL	02/13/2024	N001	118.00	6.92				-	-
	s.u.	0440	WL	01/30/2024	N001	117.00	6.95				-	-
	s.u.	0441	WL	01/30/2024	N001	53.00	7.00				-	-
	s.u.	0443	WL	01/30/2024	N001	73.00	7.19				-	-
	s.u.	0444	WL	01/16/2024	N001	116.00	6.88				-	-
	s.u.	0453	WL	01/30/2024	N001	80.00	7.00				-	-
	s.u.	0454	WL	01/16/2024	N001	13.00	6.87				-	-
	s.u.	0455	WL	02/05/2024	N001	46.00	7.54				-	-
	s.u.	0456	WL	01/29/2024	N001	53.00	7.46				-	-
	s.u.	0457	WL	01/16/2024	N001	29.00	7.72				-	-
	s.u.	0492	WL	02/07/2024	N001	18.00	7.03				-	-
	s.u.	AMM-1-19	WL	01/15/2024	N001	19.00	7.32				-	-

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Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
pH	s.u.	AMM-2	WL	01/16/2024	N001	48.00	6.87				-	-
	s.u.	AMM-3	WL	01/29/2024	N001	48.00	6.89				-	-
	s.u.	ATP-2-D	WL, PZ	01/29/2024	N001	88.00	8.21				-	-
	s.u.	ATP-2-S	WL, PZ	01/29/2024	N001	25.00	8.88				-	-
	s.u.	ATP-3	WL	01/31/2024	N001	51.00	7.52				-	-
	s.u.	CR1	SL, RIV	02/06/2024	N001	0.00 - 0.00	8.40				-	-
	s.u.	CR2	SL, RIV	02/06/2024	N001	0.00 - 0.00	8.27				-	-
	s.u.	CR3	SL, RIV	02/07/2024	N001	0.00 - 0.00	8.31				-	-
	s.u.	CR5	SL, RIV	02/06/2024	N001	0.00 - 0.00	8.30				-	-
	s.u.	MW-3	WL	01/29/2024	N001	44.00	6.84				-	-
	s.u.	SMI-PW01	WL	02/05/2024	N001	40.00	6.91				-	-
	s.u.	SMI-PW03	WL	02/13/2024	N001	60.00	7.46				-	-
	s.u.	SMI-PZ1S	WL	02/05/2024	N001	18.00	6.88				-	-
	s.u.	SMI-PZ2D	WL	01/16/2024	N001	75.00	6.81				-	-
	s.u.	SMI-PZ2M2	WL	01/16/2024	N001	56.00	7.00				-	-
	s.u.	SMI-PZ3D2	WL	02/13/2024	N001	78.00	7.14				-	-
	s.u.	SMI-PZ3M	WL	02/13/2024	N001	59.00	7.47				-	-
	s.u.	SMI-PZ3S	WL	02/13/2024	N001	25.00	7.97				-	-
	s.u.	TP-01	WL	01/15/2024	N001	22.00	7.46				-	-
	s.u.	TP-11	WL	01/15/2024	N001	30.00	7.39				-	-
	s.u.	TP-17	WL	02/07/2024	N001	28.00	7.19				-	-
	s.u.	TP-20	WL	01/16/2024	N001	32.00	6.97				-	-
	s.u.	TP-22	WL	01/16/2024	N001	17.00	6.95				-	-
	s.u.	TP-23	WL	01/16/2024	N001	25.00	6.91				-	-
	s.u.	UPD-17	WL	02/14/2024	N001	14.50	6.86				-	-
	s.u.	UPD-18	WL	02/14/2024	N001	13.00	6.93				-	-
	s.u.	UPD-20	WL	02/14/2024	N001	17.00	7.45				-	-
	s.u.	UPD-21	WL	02/13/2024	N001	25.00	7.39				-	-
	s.u.	UPD-22	WL	01/15/2024	N001	9.00	7.66				-	-
	s.u.	UPD-23	WL	02/13/2024	N001	26.00	7.51				-	-
	s.u.	UPD-24	WL	02/13/2024	N001	27.00	7.75				-	-

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Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Selenium	mg/L	0201	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00600	U			0.006	-
	mg/L	0218	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00600	U			0.006	-
	mg/L	0226	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.00600	U			0.006	-
	mg/L	0401	WL	02/05/2024	0001	18.00	0.00600	U			0.006	-
	mg/L	0403	WL	02/05/2024	0001	18.00	0.00600	U			0.006	-
	mg/L	0404	WL	02/05/2024	0001	18.00	0.163				0.006	-
	mg/L	0406	WL	01/29/2024	0001	18.00	0.158				0.006	-
	mg/L	0407	WL	02/05/2024	0001	17.00	0.00600	U			0.006	-
	mg/L	0412	WL	01/15/2024	0001	9.50	0.00770	B			0.006	-
	mg/L	0413	WL	01/17/2024	0001	10.50	0.0649				0.006	-
	mg/L	0413	WL	01/17/2024	0002	7.48 - 12.40	0.0853				0.006	-
	mg/L	0414	WL	01/15/2024	0001	7.50	0.188	B			0.06	-
	mg/L	0430	WL	02/06/2024	0001	101.00	0.00629	B			0.006	-
	mg/L	0431	WL	01/30/2024	0001	91.00	0.0198	B			0.006	-
	mg/L	0432	WL	01/29/2024	0001	55.00	0.00600	U			0.006	-
	mg/L	0433	WL	02/05/2024	0001	99.00	0.00883	B			0.006	-
	mg/L	0434	WL	01/29/2024	0001	35.00	0.0283	B			0.006	-
	mg/L	0435	WL	01/16/2024	0001	173.00	0.249	B			0.06	-
	mg/L	0436	WL	02/13/2024	0001	197.00	0.0965	J			0.06	-
	mg/L	0437	WL	01/30/2024	0001	97.00	0.116				0.006	-
	mg/L	0439	WL	02/13/2024	0001	118.00	0.0600	U			0.06	-
	mg/L	0440	WL	01/30/2024	0001	117.00	0.103	B			0.06	-
	mg/L	0441	WL	01/30/2024	0001	53.00	0.783				0.06	-
	mg/L	0443	WL	01/30/2024	0001	73.00	0.0224	B			0.006	-
	mg/L	0444	WL	01/16/2024	0001	116.00	0.346				0.06	-
	mg/L	0453	WL	01/30/2024	0001	80.00	0.301				0.006	-
	mg/L	0454	WL	01/16/2024	0001	13.00	0.326				0.06	-
	mg/L	0455	WL	02/05/2024	0001	46.00	0.00600	U			0.006	-
	mg/L	0456	WL	01/29/2024	0001	53.00	0.0229	B			0.006	-
	mg/L	0457	WL	01/16/2024	0001	29.00	0.0131	B			0.006	-
	mg/L	0492	WL	02/07/2024	0001	18.00	0.00600	U			0.006	-

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Selenium	mg/L	AMM-1-19	WL	01/15/2024	0001	19.00	0.0280	B	0.006	-
	mg/L	AMM-2	WL	01/16/2024	0001	48.00	0.0351		0.006	-
	mg/L	AMM-3	WL	01/29/2024	0001	48.00	0.00600	U	0.006	-
	mg/L	ATP-2-D	WL, PZ	01/29/2024	0001	88.00	0.195	B	0.06	-
	mg/L	ATP-2-S	WL, PZ	01/29/2024	0001	25.00	0.00600	U	0.006	-
	mg/L	ATP-3	WL	01/31/2024	0001	51.00	0.00992	B	0.006	-
	mg/L	ATP-3	WL	01/31/2024	0002	53.00 - 63.00	0.00600	U	0.006	-
	mg/L	CR1	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00600	U	0.006	-
	mg/L	CR2	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00605	B	0.006	-
	mg/L	CR3	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.0108	B	0.006	-
	mg/L	CR5	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00600	U	0.006	-
	mg/L	MW-3	WL	01/29/2024	0001	44.00	0.0221	B	0.006	-
	mg/L	SMI-PW01	WL	02/05/2024	0001	40.00	0.0906		0.006	-
	mg/L	SMI-PW01	WL	02/05/2024	0002	20.09 - 60.09	0.0981		0.006	-
	mg/L	SMI-PW03	WL	02/13/2024	0001	60.00	0.00600	U	0.006	-
	mg/L	SMI-PZ1S	WL	02/05/2024	0001	18.00	0.146		0.006	-
	mg/L	SMI-PZ2D	WL	01/16/2024	0001	75.00	0.170	B	0.06	-
	mg/L	SMI-PZ2M2	WL	01/16/2024	0001	56.00	0.0850	B	0.06	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0001	78.00	0.0677		0.006	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0002	75.28 - 80.28	0.0728		0.006	-
	mg/L	SMI-PZ3M	WL	02/13/2024	0001	59.00	0.00600	U	0.006	-
	mg/L	SMI-PZ3S	WL	02/13/2024	0001	25.00	0.0277	J	0.006	-
	mg/L	TP-01	WL	01/15/2024	0001	22.00	0.0283	B	0.006	-
	mg/L	TP-11	WL	01/15/2024	0001	30.00	0.00610	B	0.006	-
	mg/L	TP-17	WL	02/07/2024	0001	28.00	0.0102	B	0.006	-
	mg/L	TP-20	WL	01/16/2024	0001	32.00	0.459		0.06	-
	mg/L	TP-22	WL	01/16/2024	0001	17.00	0.123	B	0.06	-
	mg/L	TP-23	WL	01/16/2024	0001	25.00	0.0279	B	0.006	-
	mg/L	UPD-17	WL	02/14/2024	0001	14.50	0.166		0.006	-
	mg/L	UPD-18	WL	02/14/2024	0001	13.00	0.0920		0.006	-
	mg/L	UPD-20	WL	02/14/2024	0001	17.00	0.00600	U	0.006	-
	mg/L	UPD-21	WL	02/13/2024	0001	25.00	0.0871		0.006	-
	mg/L	UPD-22	WL	01/15/2024	0001	9.00	0.0168	B	0.006	-
	mg/L	UPD-23	WL	02/13/2024	0001	26.00	0.0628		0.006	-
	mg/L	UPD-24	WL	02/13/2024	0001	27.00	0.0265	J	0.006	-

Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Specific Conductance	umhos/cm	0201	SL, RIV	02/06/2024	N001	0.00 - 0.00	1304				-	-
	umhos/cm	0218	SL, RIV	02/06/2024	N001	0.00 - 0.00	1272				-	-
	umhos/cm	0226	SL, RIV	02/07/2024	N001	0.00 - 0.00	1509				-	-
	umhos/cm	0401	WL	02/05/2024	N001	18.00	13028				-	-
	umhos/cm	0403	WL	02/05/2024	N001	18.00	2972				-	-
	umhos/cm	0404	WL	02/05/2024	N001	18.00	10605				-	-
	umhos/cm	0406	WL	01/29/2024	N001	18.00	8090				-	-
	umhos/cm	0407	WL	02/05/2024	N001	17.00	8203				-	-
	umhos/cm	0412	WL	01/15/2024	N001	9.50	1640				-	-
	umhos/cm	0413	WL	01/17/2024	N001	10.50	7500				-	-
	umhos/cm	0414	WL	01/15/2024	N001	7.50	12008				-	-
	umhos/cm	0430	WL	02/06/2024	N001	101.00	6011				-	-
	umhos/cm	0431	WL	01/30/2024	N001	91.00	35379				-	-
	umhos/cm	0432	WL	01/29/2024	N001	55.00	3317				-	-
	umhos/cm	0433	WL	02/05/2024	N001	99.00	5021				-	-
	umhos/cm	0434	WL	01/29/2024	N001	35.00	49				-	-
	umhos/cm	0435	WL	01/16/2024	N001	173.00	125384				-	-
	umhos/cm	0436	WL	02/13/2024	N001	197.00	132670				-	-
	umhos/cm	0437	WL	01/30/2024	N001	97.00	10630				-	-
	umhos/cm	0439	WL	02/13/2024	N001	118.00	11019				-	-
	umhos/cm	0440	WL	01/30/2024	N001	117.00	8536				-	-
	umhos/cm	0441	WL	01/30/2024	N001	53.00	19529				-	-
	umhos/cm	0443	WL	01/30/2024	N001	73.00	7004				-	-
	umhos/cm	0444	WL	01/16/2024	N001	116.00	122323				-	-
	umhos/cm	0453	WL	01/30/2024	N001	80.00	29753				-	-
	umhos/cm	0454	WL	01/16/2024	N001	13.00	48189				-	-
	umhos/cm	0455	WL	02/05/2024	N001	46.00	2994				-	-
	umhos/cm	0456	WL	01/29/2024	N001	53.00	8040				-	-
	umhos/cm	0457	WL	01/16/2024	N001	29.00	5887				-	-
	umhos/cm	0492	WL	02/07/2024	N001	18.00	9934				-	-
	umhos/cm	AMM-1-19	WL	01/15/2024	N001	19.00	12284				-	-

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Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Specific Conductance	umhos/cm	AMM-2	WL	01/16/2024	N001	48.00	15314		-	-
	umhos/cm	AMM-3	WL	01/29/2024	N001	48.00	19528		-	-
	umhos/cm	ATP-2-D	WL, PZ	01/29/2024	N001	88.00	116903		-	-
	umhos/cm	ATP-2-S	WL, PZ	01/29/2024	N001	25.00	8505		-	-
	umhos/cm	ATP-3	WL	01/31/2024	N001	51.00	2544		-	-
	umhos/cm	CR1	SL, RIV	02/06/2024	N001	0.00 - 0.00	1309		-	-
	umhos/cm	CR2	SL, RIV	02/06/2024	N001	0.00 - 0.00	1275		-	-
	umhos/cm	CR3	SL, RIV	02/07/2024	N001	0.00 - 0.00	1443		-	-
	umhos/cm	CR5	SL, RIV	02/06/2024	N001	0.00 - 0.00	1323		-	-
	umhos/cm	MW-3	WL	01/29/2024	N001	44.00	20397		-	-
	umhos/cm	SMI-PW01	WL	02/05/2024	N001	40.00	12416		-	-
	umhos/cm	SMI-PW03	WL	02/13/2024	N001	60.00	9654		-	-
	umhos/cm	SMI-PZ1S	WL	02/05/2024	N001	18.00	9127		-	-
	umhos/cm	SMI-PZ2D	WL	01/16/2024	N001	75.00	101263		-	-
	umhos/cm	SMI-PZ2M2	WL	01/16/2024	N001	56.00	46718		-	-
	umhos/cm	SMI-PZ3D2	WL	02/13/2024	N001	78.00	19825		-	-
	umhos/cm	SMI-PZ3M	WL	02/13/2024	N001	59.00	7050		-	-
	umhos/cm	SMI-PZ3S	WL	02/13/2024	N001	25.00	4801		-	-
	umhos/cm	TP-01	WL	01/15/2024	N001	22.00	8250		-	-
	umhos/cm	TP-11	WL	01/15/2024	N001	30.00	16181		-	-
	umhos/cm	TP-17	WL	02/07/2024	N001	28.00	106001		-	-
	umhos/cm	TP-20	WL	01/16/2024	N001	32.00	136102		-	-
	umhos/cm	TP-22	WL	01/16/2024	N001	17.00	37273		-	-
	umhos/cm	TP-23	WL	01/16/2024	N001	25.00	32567		-	-
	umhos/cm	UPD-17	WL	02/14/2024	N001	14.50	9720		-	-
	umhos/cm	UPD-18	WL	02/14/2024	N001	13.00	8206		-	-
	umhos/cm	UPD-20	WL	02/14/2024	N001	17.00	3526		-	-
	umhos/cm	UPD-21	WL	02/13/2024	N001	25.00	4302		-	-
	umhos/cm	UPD-22	WL	01/15/2024	N001	9.00	3593		-	-
	umhos/cm	UPD-23	WL	02/13/2024	N001	26.00	3982		-	-
	umhos/cm	UPD-24	WL	02/13/2024	N001	27.00	3977		-	-

Report generated with the Moab Environmental Sampling Database System, (MESa)

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Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Sulfate	mg/L	0201	SL, RIV	02/06/2024	0001	0.00 - 0.00	230		6.65	-
	mg/L	0218	SL, RIV	02/06/2024	0001	0.00 - 0.00	228		6.65	-
	mg/L	0226	SL, RIV	02/07/2024	0001	0.00 - 0.00	234		6.65	-
	mg/L	0401	WL	02/05/2024	0001	18.00	6650		66.5	-
	mg/L	0403	WL	02/05/2024	0001	18.00	1430		66.5	-
	mg/L	0404	WL	02/05/2024	0001	18.00	5520		66.5	-
	mg/L	0406	WL	01/29/2024	0001	18.00	2860		66.5	-
	mg/L	0407	WL	02/05/2024	0001	17.00	3720		66.5	-
	mg/L	0412	WL	01/15/2024	0001	9.50	294		66.5	-
	mg/L	0413	WL	01/17/2024	0001	10.50	1840		66.5	-
	mg/L	0413	WL	01/17/2024	0002	7.48 - 12.40	1710		66.5	-
	mg/L	0414	WL	01/15/2024	0001	7.50	3630		66.5	-
	mg/L	0430	WL	02/06/2024	0001	101.00	154		6.65	-
	mg/L	0431	WL	01/30/2024	0001	91.00	1810		66.5	-
	mg/L	0432	WL	01/29/2024	0001	55.00	416		66.5	-
	mg/L	0433	WL	02/05/2024	0001	99.00	438		66.5	-
	mg/L	0434	WL	01/29/2024	0001	35.00	1670		66.5	-
	mg/L	0435	WL	01/16/2024	0001	173.00	4090		66.5	-
	mg/L	0436	WL	02/13/2024	0001	197.00	4500		66.5	-
	mg/L	0437	WL	01/30/2024	0001	97.00	3900		66.5	-
	mg/L	0439	WL	02/13/2024	0001	118.00	4990		66.5	-
	mg/L	0440	WL	01/30/2024	0001	117.00	2370		66.5	-
	mg/L	0441	WL	01/30/2024	0001	53.00	1970		66.5	-
	mg/L	0443	WL	01/30/2024	0001	73.00	510		66.5	-
	mg/L	0444	WL	01/16/2024	0001	116.00	3920		66.5	-
	mg/L	0453	WL	01/30/2024	0001	80.00	7410		66.5	-
	mg/L	0454	WL	01/16/2024	0001	13.00	4310		66.5	-
	mg/L	0455	WL	02/05/2024	0001	46.00	433		66.5	-
	mg/L	0456	WL	01/29/2024	0001	53.00	827		66.5	-
	mg/L	0457	WL	01/16/2024	0001	29.00	518		66.5	-
	mg/L	0492	WL	02/07/2024	0001	18.00	4780		66.5	-

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Sulfate	mg/L	AMM-1-19	WL	01/15/2024 0001	19.00	952	66.5	-
	mg/L	AMM-2	WL	01/16/2024 0001	48.00	7080	66.5	-
	mg/L	AMM-3	WL	01/29/2024 0001	48.00	14800	133	-
	mg/L	ATP-2-D	WL, PZ	01/29/2024 0001	88.00	5250	66.5	-
	mg/L	ATP-2-S	WL, PZ	01/29/2024 0001	25.00	1380	66.5	-
	mg/L	ATP-3	WL	01/31/2024 0001	51.00	315	66.5	-
	mg/L	ATP-3	WL	01/31/2024 0002	53.00 - 63.00	321	66.5	-
	mg/L	CR1	SL, RIV	02/06/2024 0001	0.00 - 0.00	227	6.65	-
	mg/L	CR2	SL, RIV	02/06/2024 0001	0.00 - 0.00	230	6.65	-
	mg/L	CR3	SL, RIV	02/07/2024 0001	0.00 - 0.00	270	6.65	-
	mg/L	CR5	SL, RIV	02/06/2024 0001	0.00 - 0.00	228	6.65	-
	mg/L	MW-3	WL	01/29/2024 0001	44.00	10000	133	-
	mg/L	SMI-PW01	WL	02/05/2024 0001	40.00	6080	66.5	-
	mg/L	SMI-PW01	WL	02/05/2024 0002	20.09 - 60.09	6260	66.5	-
	mg/L	SMI-PW03	WL	02/13/2024 0001	60.00	788	66.5	-
	mg/L	SMI-PZ1S	WL	02/05/2024 0001	18.00	4580	66.5	-
	mg/L	SMI-PZ2D	WL	01/16/2024 0001	75.00	7190	66.5	-
	mg/L	SMI-PZ2M2	WL	01/16/2024 0001	56.00	13000	133	-
	mg/L	SMI-PZ3D2	WL	02/13/2024 0001	78.00	2790	66.5	-
	mg/L	SMI-PZ3D2	WL	02/13/2024 0002	75.28 - 80.28	2720	66.5	-
	mg/L	SMI-PZ3M	WL	02/13/2024 0001	59.00	731	66.5	-
	mg/L	SMI-PZ3S	WL	02/13/2024 0001	25.00	631	66.5	-
	mg/L	TP-01	WL	01/15/2024 0001	22.00	843	66.5	-
	mg/L	TP-11	WL	01/15/2024 0001	30.00	1730	66.5	-
	mg/L	TP-17	WL	02/07/2024 0001	28.00	7030	66.5	-
	mg/L	TP-20	WL	01/16/2024 0001	32.00	4640	66.5	-
	mg/L	TP-22	WL	01/16/2024 0001	17.00	11600	133	-
	mg/L	TP-23	WL	01/16/2024 0001	25.00	9710	133	-
	mg/L	UPD-17	WL	02/14/2024 0001	14.50	3490	66.5	-
	mg/L	UPD-18	WL	02/14/2024 0001	13.00	2660	66.5	-
	mg/L	UPD-20	WL	02/14/2024 0001	17.00	524	66.5	-
	mg/L	UPD-21	WL	02/13/2024 0001	25.00	608	66.5	-
	mg/L	UPD-22	WL	01/15/2024 0001	9.00	415	66.5	-
	mg/L	UPD-23	WL	02/13/2024 0001	26.00	780	66.5	-
	mg/L	UPD-24	WL	02/13/2024 0001	27.00	590	66.5	-

Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Temperature	C	0201	SL, RIV	02/06/2024	N001	0.00 - 0.00	5.80		-	-
	C	0218	SL, RIV	02/06/2024	N001	0.00 - 0.00	5.40		-	-
	C	0226	SL, RIV	02/07/2024	N001	0.00 - 0.00	6.50		-	-
	C	0401	WL	02/05/2024	N001	18.00	16.10		-	-
	C	0403	WL	02/05/2024	N001	18.00	14.30		-	-
	C	0404	WL	02/05/2024	N001	18.00	16.80		-	-
	C	0406	WL	01/29/2024	N001	18.00	15.40		-	-
	C	0407	WL	02/05/2024	N001	17.00	14.90		-	-
	C	0412	WL	01/15/2024	N001	9.50	15.00		-	-
	C	0413	WL	01/17/2024	N001	10.50	11.80		-	-
	C	0414	WL	01/15/2024	N001	7.50	13.10		-	-
	C	0430	WL	02/06/2024	N001	101.00	18.20		-	-
	C	0431	WL	01/30/2024	N001	91.00	17.60		-	-
	C	0432	WL	01/29/2024	N001	55.00	19.30		-	-
	C	0433	WL	02/05/2024	N001	99.00	18.70		-	-
	C	0434	WL	01/29/2024	N001	35.00	18.90		-	-
	C	0435	WL	01/16/2024	N001	173.00	16.40		-	-
	C	0436	WL	02/13/2024	N001	197.00	17.40		-	-
	C	0437	WL	01/30/2024	N001	97.00	17.00		-	-
	C	0439	WL	02/13/2024	N001	118.00	16.40		-	-
	C	0440	WL	01/30/2024	N001	117.00	18.10		-	-
	C	0441	WL	01/30/2024	N001	53.00	17.50		-	-
	C	0443	WL	01/30/2024	N001	73.00	18.20		-	-
	C	0444	WL	01/16/2024	N001	116.00	16.60		-	-
	C	0453	WL	01/30/2024	N001	80.00	14.80		-	-
	C	0454	WL	01/16/2024	N001	13.00	16.80		-	-
	C	0455	WL	02/05/2024	N001	46.00	18.50		-	-
	C	0456	WL	01/29/2024	N001	53.00	18.10		-	-
	C	0457	WL	01/16/2024	N001	29.00	16.70		-	-
	C	0492	WL	02/07/2024	N001	18.00	15.50		-	-
	C	AMM-1-19	WL	01/15/2024	N001	19.00	14.80		-	-

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Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Temperature	C	AMM-2	WL	01/16/2024	N001	48.00	16.30		-	-
	C	AMM-3	WL	01/29/2024	N001	48.00	18.80		-	-
	C	ATP-2-D	WL, PZ	01/29/2024	N001	88.00	16.40		-	-
	C	ATP-2-S	WL, PZ	01/29/2024	N001	25.00	16.00		-	-
	C	ATP-3	WL	01/31/2024	N001	51.00	17.90		-	-
	C	CR1	SL, RIV	02/06/2024	N001	0.00 - 0.00	5.40		-	-
	C	CR2	SL, RIV	02/06/2024	N001	0.00 - 0.00	5.70		-	-
	C	CR3	SL, RIV	02/07/2024	N001	0.00 - 0.00	7.70		-	-
	C	CR5	SL, RIV	02/06/2024	N001	0.00 - 0.00	5.50		-	-
	C	MW-3	WL	01/29/2024	N001	44.00	16.70		-	-
	C	SMI-PW01	WL	02/05/2024	N001	40.00	14.80		-	-
	C	SMI-PW03	WL	02/13/2024	N001	60.00	17.30		-	-
	C	SMI-PZ1S	WL	02/05/2024	N001	18.00	13.40		-	-
	C	SMI-PZ2D	WL	01/16/2024	N001	75.00	16.00		-	-
	C	SMI-PZ2M2	WL	01/16/2024	N001	56.00	15.70		-	-
	C	SMI-PZ3D2	WL	02/13/2024	N001	78.00	16.90		-	-
	C	SMI-PZ3M	WL	02/13/2024	N001	59.00	17.00		-	-
	C	SMI-PZ3S	WL	02/13/2024	N001	25.00	17.40		-	-
	C	TP-01	WL	01/15/2024	N001	22.00	17.20		-	-
	C	TP-11	WL	01/15/2024	N001	30.00	16.90		-	-
	C	TP-17	WL	02/07/2024	N001	28.00	13.20		-	-
	C	TP-20	WL	01/16/2024	N001	32.00	16.00		-	-
	C	TP-22	WL	01/16/2024	N001	17.00	17.50		-	-
	C	TP-23	WL	01/16/2024	N001	25.00	18.30		-	-
	C	UPD-17	WL	02/14/2024	N001	14.50	15.20		-	-
	C	UPD-18	WL	02/14/2024	N001	13.00	16.00		-	-
	C	UPD-20	WL	02/14/2024	N001	17.00	17.40		-	-
	C	UPD-21	WL	02/13/2024	N001	25.00	18.00		-	-
	C	UPD-22	WL	01/15/2024	N001	9.00	16.70		-	-
	C	UPD-23	WL	02/13/2024	N001	26.00	17.20		-	-
	C	UPD-24	WL	02/13/2024	N001	27.00	17.70		-	-

Report generated with the Moab Environmental Sampling Database System, (MESa)

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GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Total Dissolved Solids	mg/L	0201	SL, RIV	02/06/2024	0001	0.00 - 0.00	754		4.76	-
	mg/L	0218	SL, RIV	02/06/2024	0001	0.00 - 0.00	738		4.76	-
	mg/L	0226	SL, RIV	02/07/2024	0001	0.00 - 0.00	742		4.76	-
	mg/L	0401	WL	02/05/2024	0001	18.00	9620		23.8	-
	mg/L	0403	WL	02/05/2024	0001	18.00	2350		23.8	-
	mg/L	0404	WL	02/05/2024	0001	18.00	7400		23.8	-
	mg/L	0406	WL	01/29/2024	0001	18.00	6020		4.76	-
	mg/L	0407	WL	02/05/2024	0001	17.00	6400		23.8	-
	mg/L	0412	WL	01/15/2024	0001	9.50	948		4.76	-
	mg/L	0413	WL	01/17/2024	0001	10.50	4480		23.8	-
	mg/L	0413	WL	01/17/2024	0002	7.48 - 12.40	4220		23.8	-
	mg/L	0414	WL	01/15/2024	0001	7.50	9350		23.8	-
	mg/L	0430	WL	02/06/2024	0001	101.00	3290		4.76	-
	mg/L	0431	WL	01/30/2024	0001	91.00	23400		23.8	-
	mg/L	0432	WL	01/29/2024	0001	55.00	1810		4.76	-
	mg/L	0433	WL	02/05/2024	0001	99.00	2740		23.8	-
	mg/L	0434	WL	01/29/2024	0001	35.00	31300		4.76	-
	mg/L	0435	WL	01/16/2024	0001	173.00	97300		23.8	-
	mg/L	0436	WL	02/13/2024	0001	197.00	102000		4.76	-
	mg/L	0437	WL	01/30/2024	0001	97.00	8010		23.8	-
	mg/L	0439	WL	02/13/2024	0001	118.00	10200		4.76	-
	mg/L	0440	WL	01/30/2024	0001	117.00	5940		23.8	-
	mg/L	0441	WL	01/30/2024	0001	53.00	15800		23.8	-
	mg/L	0443	WL	01/30/2024	0001	73.00	4320		23.8	-
	mg/L	0444	WL	01/16/2024	0001	116.00	92200		23.8	-
	mg/L	0453	WL	01/30/2024	0001	80.00	23200		23.8	-
	mg/L	0454	WL	01/16/2024	0001	13.00	31000		23.8	-
	mg/L	0455	WL	02/05/2024	0001	46.00	1730		23.8	-
	mg/L	0456	WL	01/29/2024	0001	53.00	4760		4.76	-
	mg/L	0457	WL	01/16/2024	0001	29.00	3180		23.8	-
	mg/L	0492	WL	02/07/2024	0001	18.00	7230		23.8	-

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Total Dissolved Solids	mg/L	AMM-1-19	WL	01/15/2024 0001	19.00	6730	23.8	-
	mg/L	AMM-2	WL	01/16/2024 0001	48.00	12000	23.8	-
	mg/L	AMM-3	WL	01/29/2024 0001	48.00	18300	4.76	-
	mg/L	ATP-2-D	WL, PZ	01/29/2024 0001	88.00	84900	4.76	-
	mg/L	ATP-2-S	WL, PZ	01/29/2024 0001	25.00	2550	4.76	-
	mg/L	ATP-3	WL	01/31/2024 0001	51.00	1340	23.8	-
	mg/L	ATP-3	WL	01/31/2024 0002	53.00 - 63.00	1370	23.8	-
	mg/L	CR1	SL, RIV	02/06/2024 0001	0.00 - 0.00	722	4.76	-
	mg/L	CR2	SL, RIV	02/06/2024 0001	0.00 - 0.00	738	4.76	-
	mg/L	CR3	SL, RIV	02/07/2024 0001	0.00 - 0.00	820	4.76	-
	mg/L	CR5	SL, RIV	02/06/2024 0001	0.00 - 0.00	754	4.76	-
	mg/L	MW-3	WL	01/29/2024 0001	44.00	18200	4.76	-
	mg/L	SMI-PW01	WL	02/05/2024 0001	40.00	9210	23.8	-
	mg/L	SMI-PW01	WL	02/05/2024 0002	20.09 - 60.09	8820	23.8	-
	mg/L	SMI-PW03	WL	02/13/2024 0001	60.00	5350	4.76	-
	mg/L	SMI-PZ1S	WL	02/05/2024 0001	18.00	6710	23.8	-
	mg/L	SMI-PZ2D	WL	01/16/2024 0001	75.00	74400	23.8	-
	mg/L	SMI-PZ2M2	WL	01/16/2024 0001	56.00	37400	23.8	-
	mg/L	SMI-PZ3D2	WL	02/13/2024 0001	78.00	12000	4.76	-
	mg/L	SMI-PZ3D2	WL	02/13/2024 0002	75.28 - 80.28	11800	4.76	-
	mg/L	SMI-PZ3M	WL	02/13/2024 0001	59.00	4140	4.76	-
	mg/L	SMI-PZ3S	WL	02/13/2024 0001	25.00	2820	4.76	-
	mg/L	TP-01	WL	01/15/2024 0001	22.00	4910	23.8	-
	mg/L	TP-11	WL	01/15/2024 0001	30.00	9820	23.8	-
	mg/L	TP-17	WL	02/07/2024 0001	28.00	75700	23.8	-
	mg/L	TP-20	WL	01/16/2024 0001	32.00	103000	23.8	-
	mg/L	TP-22	WL	01/16/2024 0001	17.00	30200	23.8	-
	mg/L	TP-23	WL	01/16/2024 0001	25.00	30000	23.8	-
	mg/L	UPD-17	WL	02/14/2024 0001	14.50	6810	4.76	-
	mg/L	UPD-18	WL	02/14/2024 0001	13.00	5220	4.76	-
	mg/L	UPD-20	WL	02/14/2024 0001	17.00	2050	4.76	-
	mg/L	UPD-21	WL	02/13/2024 0001	25.00	2660	4.76	-
	mg/L	UPD-22	WL	01/15/2024 0001	9.00	1770	23.8	-
	mg/L	UPD-23	WL	02/13/2024 0001	26.00	2560	4.76	-
	mg/L	UPD-24	WL	02/13/2024 0001	27.00	2340	4.76	-

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Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Turbidity	NTU	0201	SL, RIV	02/06/2024	N001	0.00 - 0.00	170.00		-	-
	NTU	0218	SL, RIV	02/06/2024	N001	0.00 - 0.00	318.00		-	-
	NTU	0226	SL, RIV	02/07/2024	N001	0.00 - 0.00	377.00		-	-
	NTU	0401	WL	02/05/2024	N001	18.00	5.49		-	-
	NTU	0403	WL	02/05/2024	N001	18.00	4.91		-	-
	NTU	0404	WL	02/05/2024	N001	18.00	4.34		-	-
	NTU	0406	WL	01/29/2024	N001	18.00	6.92		-	-
	NTU	0407	WL	02/05/2024	N001	17.00	4.37		-	-
	NTU	0412	WL	01/15/2024	N001	9.50	6.77		-	-
	NTU	0413	WL	01/17/2024	N001	10.50	25.60		-	-
	NTU	0414	WL	01/15/2024	N001	7.50	112.00		-	-
	NTU	0430	WL	02/06/2024	N001	101.00	1.15		-	-
	NTU	0431	WL	01/30/2024	N001	91.00	2.81		-	-
	NTU	0432	WL	01/29/2024	N001	55.00	5.61		-	-
	NTU	0433	WL	02/05/2024	N001	99.00	12.90		-	-
	NTU	0434	WL	01/29/2024	N001	35.00	4.21		-	-
	NTU	0435	WL	01/16/2024	N001	173.00	2.07		-	-
	NTU	0436	WL	02/13/2024	N001	197.00	6.97		-	-
	NTU	0437	WL	01/30/2024	N001	97.00	2.42		-	-
	NTU	0439	WL	02/13/2024	N001	118.00	10.80		-	-
	NTU	0440	WL	01/30/2024	N001	117.00	38.10		-	-
	NTU	0441	WL	01/30/2024	N001	53.00	4.78		-	-
	NTU	0443	WL	01/30/2024	N001	73.00	3.92		-	-
	NTU	0444	WL	01/16/2024	N001	116.00	5.13		-	-
	NTU	0453	WL	01/30/2024	N001	80.00	11.90		-	-
	NTU	0454	WL	01/16/2024	N001	13.00	15.90		-	-
	NTU	0455	WL	02/05/2024	N001	46.00			-	-
	NTU	0456	WL	01/29/2024	N001	53.00			-	-
	NTU	0457	WL	01/16/2024	N001	29.00	4.11		-	-
	NTU	0492	WL	02/07/2024	N001	18.00	4.58		-	-
	NTU	AMM-1-19	WL	01/15/2024	N001	19.00	1.35		-	-

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GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

PARAMETER	UNITS	LOCATION ID	LOC TYPE, SUBTYPE	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB DATA QA	DETECTION LIMIT	UN-CERTAINTY
Turbidity	NTU	AMM-2	WL	01/16/2024	N001	48.00	10.60		-	-
	NTU	AMM-3	WL	01/29/2024	N001	48.00	8.78		-	-
	NTU	ATP-2-D	WL, PZ	01/29/2024	N001	88.00	24.40		-	-
	NTU	ATP-2-S	WL, PZ	01/29/2024	N001	25.00	10.20		-	-
	NTU	ATP-3	WL	01/31/2024	N001	51.00	6.24		-	-
	NTU	CR1	SL, RIV	02/06/2024	N001	0.00 - 0.00	265.00		-	-
	NTU	CR2	SL, RIV	02/06/2024	N001	0.00 - 0.00	267.00		-	-
	NTU	CR3	SL, RIV	02/07/2024	N001	0.00 - 0.00	186.00		-	-
	NTU	CR5	SL, RIV	02/06/2024	N001	0.00 - 0.00	256.00		-	-
	NTU	MW-3	WL	01/29/2024	N001	44.00	9.02		-	-
	NTU	SMI-PW01	WL	02/05/2024	N001	40.00	3.72		-	-
	NTU	SMI-PW03	WL	02/13/2024	N001	60.00	22.80		-	-
	NTU	SMI-PZ1S	WL	02/05/2024	N001	18.00	9.87		-	-
	NTU	SMI-PZ2D	WL	01/16/2024	N001	75.00	1.58		-	-
	NTU	SMI-PZ2M2	WL	01/16/2024	N001	56.00	3.52		-	-
	NTU	SMI-PZ3D2	WL	02/13/2024	N001	78.00	5.20		-	-
	NTU	SMI-PZ3M	WL	02/13/2024	N001	59.00	8.17		-	-
	NTU	SMI-PZ3S	WL	02/13/2024	N001	25.00	8.94		-	-
	NTU	TP-01	WL	01/15/2024	N001	22.00	4.25		-	-
	NTU	TP-11	WL	01/15/2024	N001	30.00	18.50		-	-
	NTU	TP-17	WL	02/07/2024	N001	28.00	5.41		-	-
	NTU	TP-20	WL	01/16/2024	N001	32.00	4.67		-	-
	NTU	TP-22	WL	01/16/2024	N001	17.00	11.30		-	-
	NTU	TP-23	WL	01/16/2024	N001	25.00	18.10		-	-
	NTU	UPD-17	WL	02/14/2024	N001	14.50	5.47		-	-
	NTU	UPD-18	WL	02/14/2024	N001	13.00	35.60		-	-
	NTU	UPD-20	WL	02/14/2024	N001	17.00	20.60		-	-
	NTU	UPD-21	WL	02/13/2024	N001	25.00	16.40		-	-
	NTU	UPD-22	WL	01/15/2024	N001	9.00	5.60		-	-
	NTU	UPD-23	WL	02/13/2024	N001	26.00	28.90		-	-
	NTU	UPD-24	WL	02/13/2024	N001	27.00	16.90		-	-

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GENERAL WATER QUALITY DATA BY PARAMETER (USEE205) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 7:21 AM

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	0201	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00519				6.7E-05	-
	mg/L	0218	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00563				6.7E-05	-
	mg/L	0226	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.00700				6.7E-05	-
	mg/L	0401	WL	02/05/2024	0001	18.00	1.680				0.000335	-
	mg/L	0403	WL	02/05/2024	0001	18.00	0.300				6.7E-05	-
	mg/L	0404	WL	02/05/2024	0001	18.00	1.250				6.7E-05	-
	mg/L	0406	WL	01/29/2024	0001	18.00	1.030				6.7E-05	-
	mg/L	0407	WL	02/05/2024	0001	17.00	1.220				6.7E-05	-
	mg/L	0412	WL	01/15/2024	0001	9.50	3.190				6.7E-05	-
	mg/L	0413	WL	01/17/2024	0001	10.50	3.050				6.7E-05	-
	mg/L	0413	WL	01/17/2024	0002	7.48 - 12.40	2.950				6.7E-05	-
	mg/L	0414	WL	01/15/2024	0001	7.50	5.410				0.000335	-
	mg/L	0430	WL	02/06/2024	0001	101.00	0.0124				6.7E-05	-
	mg/L	0431	WL	01/30/2024	0001	91.00	0.0106				0.000335	-
	mg/L	0432	WL	01/29/2024	0001	55.00	0.00203				6.7E-05	-
	mg/L	0433	WL	02/05/2024	0001	99.00	0.00207				6.7E-05	-
	mg/L	0434	WL	01/29/2024	0001	35.00	0.0264				0.000335	-
	mg/L	0435	WL	01/16/2024	0001	173.00	0.0366				0.00168	-
	mg/L	0436	WL	02/13/2024	0001	197.00	0.00905				0.00168	-
	mg/L	0437	WL	01/30/2024	0001	97.00	2.470				6.7E-05	-
	mg/L	0439	WL	02/13/2024	0001	118.00	1.480				0.00134	-
	mg/L	0440	WL	01/30/2024	0001	117.00	0.0315				6.7E-05	-
	mg/L	0441	WL	01/30/2024	0001	53.00	0.0539				0.000335	-
	mg/L	0443	WL	01/30/2024	0001	73.00	0.0116				6.7E-05	-
	mg/L	0444	WL	01/16/2024	0001	116.00	0.0247				0.00168	-
	mg/L	0453	WL	01/30/2024	0001	80.00	1.960				0.000335	-
	mg/L	0454	WL	01/16/2024	0001	13.00	1.370				0.000335	-
	mg/L	0455	WL	02/05/2024	0001	46.00	0.00286				6.7E-05	-
	mg/L	0456	WL	01/29/2024	0001	53.00	0.0281				6.7E-05	-
	mg/L	0457	WL	01/16/2024	0001	29.00	0.00305				6.7E-05	-
	mg/L	0492	WL	02/07/2024	0001	18.00	1.530				6.7E-05	-

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Uranium	mg/L	AMM-1-19	WL	01/15/2024	0001	19.00	0.0130	0.000335	-
	mg/L	AMM-2	WL	01/16/2024	0001	48.00	1.970	0.000335	-
	mg/L	AMM-3	WL	01/29/2024	0001	48.00	1.870	0.000335	-
	mg/L	ATP-2-D	WL, PZ	01/29/2024	0001	88.00	0.00168 U	0.00168	-
	mg/L	ATP-2-S	WL, PZ	01/29/2024	0001	25.00	0.00771	6.7E-05	-
	mg/L	ATP-3	WL	01/31/2024	0001	51.00	0.00489	6.7E-05	-
	mg/L	ATP-3	WL	01/31/2024	0002	53.00 - 63.00	0.00494	6.7E-05	-
	mg/L	CR1	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00550	6.7E-05	-
	mg/L	CR2	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00703	6.7E-05	-
	mg/L	CR3	SL, RIV	02/07/2024	0001	0.00 - 0.00	0.0142	6.7E-05	-
	mg/L	CR5	SL, RIV	02/06/2024	0001	0.00 - 0.00	0.00616	6.7E-05	-
	mg/L	MW-3	WL	01/29/2024	0001	44.00	2.360	0.000335	-
	mg/L	SMI-PW01	WL	02/05/2024	0001	40.00	1.600	0.000335	-
	mg/L	SMI-PW01	WL	02/05/2024	0002	20.09 - 60.09	1.610	0.000335	-
	mg/L	SMI-PW03	WL	02/13/2024	0001	60.00	0.301	0.000335	-
	mg/L	SMI-PZ1S	WL	02/05/2024	0001	18.00	1.070	6.7E-05	-
	mg/L	SMI-PZ2D	WL	01/16/2024	0001	75.00	1.150	0.00168	-
	mg/L	SMI-PZ2M2	WL	01/16/2024	0001	56.00	4.270	0.000335	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0001	78.00	0.634	0.00134	-
	mg/L	SMI-PZ3D2	WL	02/13/2024	0002	75.28 - 80.28	0.645	0.00134	-
	mg/L	SMI-PZ3M	WL	02/13/2024	0001	59.00	0.361	6.7E-05	-
	mg/L	SMI-PZ3S	WL	02/13/2024	0001	25.00	1.410	6.7E-05	-
	mg/L	TP-01	WL	01/15/2024	0001	22.00	0.0583	0.000335	-
	mg/L	TP-11	WL	01/15/2024	0001	30.00	0.00131	0.000335	-
	mg/L	TP-17	WL	02/07/2024	0001	28.00	0.0346	0.00168	-
	mg/L	TP-20	WL	01/16/2024	0001	32.00	0.0704	0.00168	-
	mg/L	TP-22	WL	01/16/2024	0001	17.00	0.733	0.000335	-
	mg/L	TP-23	WL	01/16/2024	0001	25.00	2.850	0.000335	-
	mg/L	UPD-17	WL	02/14/2024	0001	14.50	1.220	0.00134	-
	mg/L	UPD-18	WL	02/14/2024	0001	13.00	0.714	0.00067	-
	mg/L	UPD-20	WL	02/14/2024	0001	17.00	0.0554	6.7E-05	-
	mg/L	UPD-21	WL	02/13/2024	0001	25.00	6.380	0.0067	-
	mg/L	UPD-22	WL	01/15/2024	0001	9.00	2.780	6.7E-05	-
	mg/L	UPD-23	WL	02/13/2024	0001	26.00	0.690	6.7E-05	-
	mg/L	UPD-24	WL	02/13/2024	0001	27.00	3.180	6.7E-05	-

RECORDS: SELECTED FROM USEE205 WHERE RIN = '2401146' AND (DataValidationQualifiers IS NULL OR (DataValidationQualifiers NOT LIKE '%N%' AND DataValidationQualifiers NOT LIKE '%R%' AND DataValidationQualifiers NOT LIKE '%X%'))

Report generated with the Moab Environmental Sampling Database System, (MESa) Page 26

Appendix A. January - February 2024 Site Wide Sampling Event
Water Quality Data

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

LAB QUALIFERS:

*	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 compund (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 QUALIFERS:

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.	N	Presumptive evidence that analyte is present. The analyte is "tentatively identified".	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.

Appendix A. January - February 2024 Site Wide Sampling Event Minimums and Maximums Report

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2401146

Comparison: History Begin Date: 01/01/2010

Report Date: 10/3/2024 7:19 AM

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
MOA01	0218	02/06/2024	Ammonia Total as N	0.057			2	U		0.0687			26	23
MOA01	0401	02/05/2024	Selenium	0.006	U		0.06	U		0.0094		J	10	1
MOA01	0403	02/05/2024	Manganese	1.47			4			1.7			5	0
MOA01	0403	02/05/2024	Total Dissolved Solids	2350			8580			3900			6	0
MOA01	0404	02/05/2024	Manganese	0.0134			4.9			0.0212			6	0
MOA01	0404	02/05/2024	Selenium	0.163			0.0397			0.012			7	0
MOA01	0412	01/15/2024	Selenium	0.0077	B		0.051			0.0099	J		7	0
MOA01	0413	01/17/2024	Arsenic	0.0158	B		0.0443			0.031			5	0
MOA01	0413	01/17/2024	Manganese	0.396			0.14			0.037			5	0
MOA01	0413	01/17/2024	Manganese	0.416			0.14			0.037			5	0
MOA01	0414	01/15/2024	Arsenic	0.005	U		0.018	J		0.00761	B		6	0
MOA01	0414	01/15/2024	Selenium	0.188	B		0.087	J		0.022		J	8	0
MOA01	0414	01/15/2024	Total Dissolved Solids	9350			8410			3000			5	0
MOA01	0430	02/06/2024	Ammonia Total as N	0.017	U		13	N		0.018	J		16	14
MOA01	0431	01/30/2024	Total Dissolved Solids	23400			22700			16000			5	0
MOA01	0433	02/05/2024	Ammonia Total as N	0.017	U		1	U		0.022	J		16	15
MOA01	0434	01/29/2024	Total Dissolved Solids	31300			31000			19000			5	0
MOA01	0435	01/16/2024	Total Dissolved Solids	97300			96000			58000			5	0
MOA01	0439	02/13/2024	Selenium	0.06	U		0.0066	U		0.0016			8	2
MOA01	0440	01/30/2024	Selenium	0.103	B		0.07			0.037			8	1
MOA01	0441	01/30/2024	Total Dissolved Solids	15800			12800			2800			6	0
MOA01	0443	01/30/2024	Total Dissolved Solids	4320			4100			2800			5	0
MOA01	0444	01/16/2024	Total Dissolved Solids	92200			91000			58000			5	0
MOA01	0444	01/16/2024	Uranium	0.0247			0.02			0.014			13	0
MOA01	0453	01/30/2024	Ammonia Total as N	53.7			510		J	110			22	0

Report generated with the Moab Environmental Sampling Database System, (MESa)

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Appendix A. January - February 2024 Site Wide Sampling Event Minimums and Maximums Report

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2401146

Comparison: History Begin Date: 01/01/2010

Report Date: 10/3/2024 7:19 AM

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
MOA01	0453	01/30/2024	Total Dissolved Solids	23200			23000			20000			6	0
MOA01	0455	02/05/2024	Ammonia Total as N	0.017	U		15			0.021	J		13	10
MOA01	0456	01/29/2024	Ammonia Total as N	0.017	U		0.2	U		0.049	J		13	12
MOA01	0457	01/16/2024	Ammonia Total as N	0.02	J		1	U		0.0581			17	16
MOA01	AMM-1-19	01/15/2024	Uranium	0.013			0.0097			0.0047		J	5	0
MOA01	AMM-2	01/16/2024	Ammonia Total as N	167			890		J	385			30	0
MOA01	AMM-2	01/16/2024	Selenium	0.0351			0.0244	B		0.0076	J		6	0
MOA01	AMM-3	01/29/2024	Total Dissolved Solids	18300			18100			12000			6	0
MOA01	ATP-2-S	01/29/2024	Total Dissolved Solids	2550			14000			6500			8	0
MOA01	ATP-3	01/31/2024	Ammonia Total as N	0.025	J		1	U		0.1	U		12	9
MOA01	CR1	02/06/2024	Ammonia Total as N	0.042	J		2	U		0.078			28	24
MOA01	CR2	02/06/2024	Ammonia Total as N	0.088			2	UN		0.0906			21	18
MOA01	CR3	02/07/2024	Manganese	0.0488			0.0382			0.0027	B		5	0
MOA01	SMI-PZ2D	01/16/2024	Ammonia Total as N	327			1100			340			10	0
MOA01	SMI-PZ2D	01/16/2024	Uranium	1.15			1.07			0.24			10	0
MOA01	SMI-PZ2M2	01/16/2024	Total Dissolved Solids	37400			80000			43000			5	0
MOA01	SMI-PZ2M2	01/16/2024	Uranium	4.27			3.63			0.5			22	0
MOA01	TP-01	01/15/2024	Ammonia Total as N	0.054			1	U		0.0549			22	18
MOA01	TP-01	01/15/2024	Total Dissolved Solids	4910			4900			3100			5	0
MOA01	TP-11	01/15/2024	Ammonia Total as N	0.146			0.93			0.46			21	0
MOA01	TP-17	02/07/2024	Ammonia Total as N	0.017	U		3.7			1.1			24	0
MOA01	TP-20	01/16/2024	Manganese	0.538			0.2			0.041	B		5	0
MOA01	TP-20	01/16/2024	Uranium	0.0704			0.044			0.0005	B		28	0
MOA01	TP-22	01/16/2024	Total Dissolved Solids	30200			26000			19000			5	0
MOA01	TP-22	01/16/2024	Uranium	0.733			0.58			0.21			24	0

Report generated with the Moab Environmental Sampling Database System, (MESa)

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Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2401146

Comparison: History Begin Date: 01/01/2010

Report Date: 10/3/2024 7:19 AM

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
MOA01	TP-23	01/16/2024	Ammonia Total as N	57.5			540		J	69			23	0
MOA01	TP-23	01/16/2024	Total Dissolved Solids	30000			41000			31300			5	0
MOA01	UPD-17	02/14/2024	Arsenic	0.0249	J		0.0206	B		0.016			6	0
MOA01	UPD-17	02/14/2024	Selenium	0.166			0.133			0.081	J		6	0
MOA01	UPD-20	02/14/2024	Ammonia Total as N	0.061			14	N		0.1	U		21	17
MOA01	UPD-20	02/14/2024	Arsenic	0.00595	J		0.005	U		0.00045	J		5	1
MOA01	UPD-20	02/14/2024	Uranium	0.0554			0.97			0.056			23	0
MOA01	UPD-21	02/13/2024	Arsenic	0.00578	J		0.005	U		0.0012	J		5	2
MOA01	UPD-21	02/13/2024	Selenium	0.0871			0.14			0.098	J		6	0
MOA01	UPD-22	01/15/2024	Arsenic	0.0115	B		0.011	J		0.0031			6	1
MOA01	UPD-22	01/15/2024	Selenium	0.0168	B		0.0638			0.02	J		5	0
MOA01	UPD-24	02/13/2024	Arsenic	0.292			0.26			0.19			7	0
MOA01	UPD-24	02/13/2024	Selenium	0.0265	J		0.091			0.051			7	0
MOA01	UPD-24	02/13/2024	Uranium	3.18			14			3.2			25	0

Note: all concentrations are in mg/L

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

LAB QUALIFERS:

- * 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.

Report generated with the Moab Environmental Sampling Database System, (MESa)

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Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2401146

Comparison: History Begin Date: 01/01/2010

Report Date: 10/3/2024 7:19 AM

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 compund (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 QUALIFERS:

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.	N	Presumptive evidence that analyte is present. The analyte is "tentatively identified".	Q	Qualitative result due to sampling technique
R	Unusable result.	U	Parameter analyzed for but was not detected.	X	Location is undefined.

Report generated with the Moab Environmental Sampling Database System, (MESa)

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Appendix A. January - February 2024 Site Wide Sampling Event
Blanks Report

BLANKS REPORT

LAB: GEL Laboratories of Ohio LLC

RIN: 2401146

Report Date: 10/7/2024 10:10 AM

Parameter	Site Code	Location Code	Sample Date	ID	Units	Result	Qualifiers Lab	Qualifiers Data	Detection Limit	Uncertainty	Sample Type
Ammonia Total as N	MOA01	0999	02/07/2024	0002	mg/L	0.033	J		0.017		E
Arsenic	MOA01	0999	02/07/2024	0002	mg/L	0.00879	B		0.005		E
Copper	MOA01	0999	02/07/2024	0002	mg/L	0.003	U		0.003		E
Manganese	MOA01	0999	02/07/2024	0002	mg/L	0.002	U		0.002		E
Selenium	MOA01	0999	02/07/2024	0002	mg/L	0.006	U		0.006		E
Sulfate	MOA01	0999	02/07/2024	0002	mg/L	0.133	U		0.133		E
Total Dissolved Solids	MOA01	0999	02/07/2024	0002	mg/L	2.38	U		2.38		E
Uranium	MOA01	0999	02/07/2024	0002	mg/L	0.000562			6.7E-05		E

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

LAB QUALIFERS:

* 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 QUALIFERS:

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.

N Presumptive evidence that analyte is present. The analyte is "tentatively identified".

Q Qualitative result due to sampling technique

R Unusable result.

U Parameter analyzed for but was not detected.

X Location is undefined.

SAMPLE TYPES:

E EQUIPMENT BLANK

Appendix A. January - February 2024 Site Wide Sampling Event
Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 3:59 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT DATE	MEASUREMENT TIME	DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
0414	O	3959.20	01/15/2024		4.96	3954.24	
0430	U	4022.10	02/06/2024		60.78	3961.32	
0431	O	4007.21	01/30/2024		48.00	3959.21	
0432	U	4001.57	01/29/2024		42.53	3959.04	
0433	O	3989.99	02/05/2024		32.19	3957.80	
0434	U	3990.21	01/29/2024		34.47	3955.74	
ATP-2-D	O	3962.17	01/29/2024		6.76	3955.41	
MW-3	O	3965.98	01/29/2024		11.58	3954.40	
TP-11	O	3966.61	01/15/2024		12.43	3954.18	
0201	D	-	02/06/2024			-	
0218	O	-	02/06/2024			-	
0226	O	-	02/07/2024			-	
AMM-3	O	3962.90	01/29/2024		8.92	3953.98	
0401		3967.36	02/05/2024		13.90	3953.46	
0403	O	3968.95	02/05/2024		16.15	3952.80	
0404	O	3968.30	02/05/2024		14.40	3953.90	
0406	O	3964.59	01/29/2024		10.55	3954.04	
0407	O	3969.09	02/05/2024		16.90	3952.19	
0412	O	3962.48	01/15/2024		8.11	3954.37	
0413	O	3963.19	01/17/2024		8.47	3954.72	
CR1	U	-	02/06/2024			-	
CR2	O	-	02/06/2024			-	
CR3	O	-	02/07/2024			-	
CR5	D	-	02/06/2024			-	
TP-01	O	3967.71	01/15/2024		13.79	3953.92	
0435	O	3971.67	01/16/2024		15.00	3956.67	
0436	O	3970.80	02/13/2024		10.90	3959.90	
0437	O	4048.25	01/30/2024		48.45	3999.80	
0439	O	4055.27	02/13/2024		17.82	4037.45	
0440	O	4070.63	01/30/2024		112.03	3958.60	
0441		4008.64	01/30/2024		49.40	3959.24	

Report generated with the Moab Environmental Sampling Database System, (MESa)

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Appendix A. January - February 2024 Site Wide Sampling Event
Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE MOA01, Moab Site

REPORT DATE: 10/3/2024 3:59 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT DATE	MEASUREMENT TIME	DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
0443	O	4006.72	01/30/2024		47.34	3959.38	
0444	O	3970.99	01/16/2024		15.40	3955.59	
0453		4031.29	01/30/2024		74.75	3956.54	
0454		3966.53	01/16/2024		12.77	3953.76	
0455	O	3990.20	02/05/2024		32.58	3957.62	
0456	U	3990.46	01/29/2024		34.73	3955.73	
0457	O	3971.30	01/16/2024		15.98	3955.32	
ATP-2-S	O	3962.17	01/29/2024		6.99	3955.18	
ATP-3	O	3998.29	01/31/2024		39.40	3958.89	
TP-17	D	3963.69	02/07/2024		12.17	3951.52	
TP-20	D	3967.55	01/16/2024		16.40	3951.15	
TP-22		3966.51	01/16/2024		13.88	3952.63	
TP-23		3962.60	01/16/2024		9.47	3953.13	
UPD-17		3970.71	02/14/2024		12.96	3957.75	
UPD-18		3968.74	02/14/2024		12.72	3956.02	
UPD-20		3978.70	02/14/2024		22.38	3956.32	
UPD-21		3981.47	02/13/2024		25.27	3956.20	
UPD-22		3966.20	01/15/2024		11.12	3955.08	
UPD-23		3982.38	02/13/2024		26.67	3955.71	
UPD-24		3977.10	02/13/2024		21.53	3955.57	
0492		3967.56	02/07/2024		16.28	3951.28	
SMI-PW01	O	3963.96	02/05/2024		9.90	3954.06	
SMI-PW03	O	3975.09	02/13/2024		19.65	3955.44	
SMI-PZ1S	O	3964.13	02/05/2024		10.11	3954.02	
AMM-1-19	U	3971.90	01/15/2024		16.99	3954.91	
AMM-2	O	3964.09	01/16/2024		10.27	3953.82	
SMI-PZ2D	O	3967.38	01/16/2024		15.51	3951.87	
SMI-PZ2M2	O	3967.18	01/16/2024		14.17	3953.01	
SMI-PZ3D2	O	3975.13	02/13/2024		19.80	3955.33	
SMI-PZ3M	O	3975.23	02/13/2024		19.76	3955.47	
SMI-PZ3S	O	3975.03	02/13/2024		19.67	3955.36	

Report generated with the Moab Environmental Sampling Database System, (MESa) Page 2

RECORDS: SELECTED FROM USEE700 WHERE RIN = '2401146'

FLOW CODES:
D : DOWN GRADIENT
O : ON-SITE
U : UPGRADIENT

WATER LEVEL FLAGS:

Date: March 16, 2024
To: Ken Pill
From: James Ritchey
Subject: January 2023 Site Wide Sampling Event

Site: Moab – Site Wide Sampling Event – January 2024
Date of Sampling Event: January 15 – February 14, 2024
Team Members: T. Prichard and J. Ritchey

RIN Number Assigned: All samples were assigned to RIN 2401146.

Sample Shipment: Four coolers were shipped overnight to GEL Laboratory from Moab, Utah, on Jan 17, Jan 31, Feb 7, and Feb 14 of 2024 (Tracking numbers: 1ZE243121398423824, 1ZE243120190051914, 1ZE243121396747318, and 1ZE243121391471142).

Number of Locations Sampled: The purpose of the Site Wide Sampling Event is to update contaminant plume maps. A total of 62 locations (seven surface samples and 55 monitoring wells) were sampled during this event. Including four duplicates and an equipment blank, a total of 67 samples were collected during the Jan 2024 Site Wide Sampling Event.

Locations Not Sampled/Reason: Well 0410 did not provide enough water to sample. Well 411 was dry. Well SMI-MW01 had been buried and filled in with sediment during the 2023 flood event. The well was relocated but could not be cleared before the sampling event.

Field Variance: None.

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

False ID	True ID	Sample Type	Associated matrix
2000	0413	Duplicate from 10.5 ft bgs	Ground Water
2001	ATP-3	Duplicate from 51 ft bgs	Ground Water
2002	SMI-PW01	Duplicate from 40 ft bgs	Ground Water
2003	0999	Equipment blank	DI Water
2004	SMI-PZ3D2	Duplicate from 78 ft bgs	Ground Water

Location Specific Information/Water Level Measurements: All of the observation wells were sampled using a peristaltic pump and dedicated tubing unless otherwise noted. The surface water samples were collected with dedicated surface water tubing that was decontaminated with Alconox® and de-ionized water between locations. Water level data are provided in the table below. These data represent depth to water (ft btoc) measurements. The table below provides additional information:

Location	Date	Sample Depth (ft bgs)	Depth to Water (ft btoc)	Comments
0201	2/06/24	NA	NA	Surface water. River is turbid. Sampled at 8ft out, 2ft deep. Tamarisk bank with a prescribed burn the week prior.
0218	2/06/24	NA	NA	Sampled at rocky point 10ft out, 1ft deep.
0226	2/07/24	NA	NA	Surface water. Turbid. Steep tamarisk bank. Sampled 2ft out, 8in deep.
0401	2/05/24	18	13.9	
0403	2/05/24	18	16.15	
0404	2/05/24	18	14.4	
0406	1/29/24	18	10.55	
0407	2/05/24	17	16.9	
0412	1/15/24	9.5	8.11	TD= ~8.92ft btoc with skinny dipper.
0413	1/17/24	10.5	8.47	Duplicate Jan 018 – 2000 – 10:40
0414	1/15/24	7.5	4.96	Cap had come off in flood. Dirt in tubing. Sulfur smell. Replace tubing recommended. Well needs to be developed.
0430	2/06/24	101	60.78	Bladder pump. Sage brush is overgrowing the well.
0431	1/30/24	91	48	
0432	1/29/24	55	42.53	Bladder pump.
0433	2/05/24	99	32.19	Bladder pump.
0434	1/29/24	35	34.47	Bladder pump.
0435	1/16/24	173	15	
0436	02/13/24	197	10.9	Tubing is brittle. Floaties. Hole in the pump head tubing.
0437	1/30/24	97*	48.45	
0439	2/13/24	118*	17.82	Sample depth based on previously surveyed elevation.
0440	1/30/24	117	112.03	
0441	1/30/224	53	49.4	Bladder pump.
0443	1/30/224	73	47.34	
0444	1/16/24	116	15.4	Bit of fragrance. A little sulphury.
0453	1/30/24	80	74.75	Pump was pulled to measure water level: 74.75. In 2023, pump was unable to pull water at a water level of 75.06ft btoc.
0454	1/16/24	13	12.77	
0455	2/05/24	46	32.58	Inertia pump. To be filtered in lab.
0456	1/29/24	53	34.73	Inertia pump. Smelly. To be filtered in lab.
0457	1/16/24	29	15.98	
0492	2/07/24	18	16.28	
AMM-1-19	01/15/24	19	16.99	
AMM-2	1/16/24	48	10.27	
AMM-3	1/29/24	48	8.92	
ATP-2-D	1/29/24	88	6.76	Grayish water.
ATP-2-S	1/29/24	25	6.99	
ATP-3	1/31/24	51	39.4	Duplicate 2001 – Jan 034.
CR1	02/06/24	NA	NA	Surface water. River is turbid. Storm systems are passing through. Water truck is pulling(?) water from just upstream. Sampled at 10ft out, 2ft deep.

CR2	02/06/24	NA	NA	River is turbid. Sampling from a rocky point at the mouth of Moab wash. 7ft out, 1ft deep.
CR3	02/07/24	NA	NA	Surface water. Turbid. Mudflat. Sampled at 1ft out, 3in deep. Equipment blank 2003 – JAN 054
CR5	02/06/24	NA	NA	River is turbid. Windy. Sampled off a point of rocks at 8ft out, 2ft deep.
MW-3	1/29/24	44	11.58	
SMI-PW01	2/05/24	40	9.9	Duplicate 2002 – JAN 041 – 14:40. Sampling mark at 40ft bgs.
SMI-PW03	2/13/24	60	19.65	
SMI-PZ1S	2/05/24	18	10.11	
SMI-PZ2D	1/16/24	75	15.51	
SMI-PZ2M2	1/16/24	56	14.17	
SMI-PZ3D2	2/13/24	78	19.8	Duplicate 2004 – JAN 058 – 09:50.
SMI-PZ3M	2/13/24	59	19.76	
SMI-PZ3S	2/13/24	25	19.67	
TP-01	1/15/24	22	13.79	Needs new pump head tubing.
TP-11	1/15/24	30	12.43	Tubing slightly stuck. Slight sulfur smell. Turbidity stabilized.
TP-17	2/7/24	28	12.17	Sulfur smell. Black water.
TP-20	1/16/24	32	16.4	Kinda stinky water.
TP-22	1/16/24	17	13.88	Dewatered at 2.0L. Let recharge and sampled later.
TP-23	1/16/24	25	9.47	
UPD-17	2/14/24	14.5	12.96	
UPD-18	2/14/24	13	12.72	
UPD-20	2/14/24	17	22.38	
UPD-21	2/13/24	25	25.27	Used smaller diameter tubing. Sampled just above bottom.
UPD-22	1/15/24	9	11.12	
UPD-23	2/13/24	26	26.67	Well is crooked; possibly collided with during Atlas demolition. Total depth: 28.23ft btoc. Very little water. Single parameter reading and unfiltered partial sample collected. Will return tomorrow. 02/14/24 depth to water: 26.74ft btoc.
UPD-24	2/13/24	27	21.53	

Notes: ft bgs = feet below ground surface

Well Inspection Summary: A well inspection was not conducted.

Equipment: None.

Regulatory: None.

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

Date	Daily Mean Flow (cfs)
1/15/2024	Ice
1/16/2024	Ice
1/17/2024	Ice
1/18/2024	Ice
1/19/2024	Ice
1/20/2024	Ice
1/21/2024	3,120
1/22/2024	3,120
1/23/2024	3,170
1/24/2024	3,150
1/25/2024	3,090
1/26/2024	3,060
1/27/2024	3,090
1/28/2024	3,050
1/29/2024	3,010
1/30/2024	2,970
1/31/2024	3,010
2/1/2024	3,010
2/2/2024	3,010
2/3/2024	3,060
2/4/2024	3,230
2/5/2024	3,210
2/6/2024	3,080
2/7/2024	2,940
2/8/2024	3,230
2/9/2024	3,160
2/10/2024	3,140
2/11/2024	3,060
2/12/2024	3,010
2/13/2024	2,940
2/14/2024	2,900

Corrective Action Required/Taken: None.

Appendix B.
April 2024 CF4 Sampling Event

Water Sampling Field Activities Verification
Water Quality Data
Minimums and Maximums Report
Water Level Data
Trip Report

Appendix B. April 2024 CF4 Sampling Event
Water Sampling field Activities Verification

Sampling Event/RIN	CF4 Sampling Event / RIN 240417	**Date(s) of Water Sampling**	April 3, 2024
Date(s) of Verification	June 2023	**Name of Verifier**	T. Prichard, J. Ritchey

	Response (Yes, No, NA)	Comments
1. Is the Sampling Analysis Plan (SAP) the primary document directing field procedures?	Yes	
2. List other documents, standard operating procedures, instructions.	NA	
3. Were the sampling locations specified in the planning documents sampled?	Yes	
4. Was a pre-trip calibration conducted as specified in the aforementioned documents?	Yes	
5. Was an operational check of the field equipment conducted in accordance with the SAP?	Yes	
6. Did the operational checks meet criteria?	Yes	
7. Were the number and types (alkalinity, temperature, electrical conductivity, pH, turbidity, oxidation reduction potential) of field measurements taken as specified?	Yes	Field measurements for temperature, pH, turbidity, oxidation reduction potential, and conductivity were collected.
8. Was the category of the well documented?	Yes	
9. Were the following conditions met when purging a Category I well:		
Was one pump/tubing volume purged before sampling?	Yes	
Did the water level stabilize before sampling?	Yes	
Did pH, specific conductance, and turbidity measurements stabilize before sampling?	Yes	
Was the flow rate less than 500 milliliters per minute?	Yes	
If a portable pump was used, was there a 4-hour delay between pump installation and sampling?	N/A	
10. Were the following conditions met when purging a Category II well:		
Was the flow rate less than 500 milliliters per minute?	NA	
Was one pump/tubing volume removed before sampling?	NA	
11. Were duplicates taken at a frequency of one per 20 samples?	Yes	A duplicate was collected from location 0787 (2000).

Appendix B. April 2024 CF4 Sampling Event
Water Sampling field Activities Verification

Sampling Event/RIN	CF4 Sampling Event / RIN 240417	**Date(s) of Water Sampling**	April 3, 2024
Date(s) of Verification	June 2023	**Name of Verifier**	T. Prichard, J. Ritchey

	Response (Yes, No, NA)	Comments
12. Were EBs taken at a frequency of one per 20 samples that were collected with non-dedicated equipment?	NA	
13. Were trip blanks prepared and included with each shipment of volatile organic compound samples?	NA	
14. Were quality-control samples assigned a fictitious site identification number?	Yes	
Was the true identity of the samples recorded on the quality assurance sample log?	Yes	
15. Were samples collected in the containers specified?	Yes	
16. Were samples filtered and preserved as specified?	Yes	
17. Were the number and types of samples collected as specified?	Yes	
18. Were COC records completed, and was sample custody maintained?	Yes	
19. Are field data sheets signed and dated by both team members?	Yes	
20. Was all other pertinent information documented on the field data sheets?	NA	
21. Was the presence or absence of ice in the cooler documented at every sample location?	Yes	
22. Were water levels measured at the locations specified in the planning documents?	Yes	

Appendix B. April 2024 CF4 Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE MOA01, Moab Site

LOCATION: 0780 <well> Configuration 4

REPORT DATE: 10/2/2024 2:55 PM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/03/2024	0001	28.00	289				17	-
Oxidation Reduction Potential	mV	04/03/2024	N001	28.00	190				-	-
pH	s.u.	04/03/2024	N001	28.00	6.88				-	-
Specific Conductance	umhos/cm	04/03/2024	N001	28.00	17182				-	-
Temperature	C	04/03/2024	N001	28.00	14.90				-	-
Turbidity	NTU	04/03/2024	N001	28.00	1.96				-	-
Uranium	mg/L	04/03/2024	0001	28.00	2.300				6.7E-05	-

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE MOA01, Moab Site

LOCATION: 0781 <well> Configuration 4

REPORT DATE: 10/2/2024 2:55 PM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/03/2024	0001	46.00	983				17	-
Oxidation Reduction Potential	mV	04/03/2024	N001	46.00	216				-	-
pH	s.u.	04/03/2024	N001	46.00	6.82				-	-
Specific Conductance	umhos/cm	04/03/2024	N001	46.00	79298				-	-
Temperature	C	04/03/2024	N001	46.00	16.10				-	-
Turbidity	NTU	04/03/2024	N001	46.00	6.27				-	-
Uranium	mg/L	04/03/2024	0001	46.00	1.960				0.00168	-

Report generated with the Moab Environmental Sampling Database System, (MESa)

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Appendix B. April 2024 CF4 Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE MOA01, Moab Site

LOCATION: 0782 <well> Configuration 4

REPORT DATE: 10/2/2024 2:55 PM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/03/2024	0001	33.00	869				17	-
Oxidation Reduction Potential	mV	04/03/2024	N001	33.00	217				-	-
pH	s.u.	04/03/2024	N001	33.00	6.92				-	-
Specific Conductance	umhos/cm	04/03/2024	N001	33.00	56793				-	-
Temperature	C	04/03/2024	N001	33.00	15.40				-	-
Turbidity	NTU	04/03/2024	N001	33.00	5.76				-	-
Uranium	mg/L	04/03/2024	0001	33.00	3.430				0.00335	-

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE MOA01, Moab Site

LOCATION: 0783 <well> Configuration 4

REPORT DATE: 10/2/2024 2:55 PM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/03/2024	0001	18.00	67.3				1.7	-
Oxidation Reduction Potential	mV	04/03/2024	N001	18.00	180				-	-
pH	s.u.	04/03/2024	N001	18.00	6.92				-	-
Specific Conductance	umhos/cm	04/03/2024	N001	18.00	10072				-	-
Temperature	C	04/03/2024	N001	18.00	14.20				-	-
Turbidity	NTU	04/03/2024	N001	18.00	2.10				-	-
Uranium	mg/L	04/03/2024	0001	18.00	0.950				6.7E-05	-

Appendix B. April 2024 CF4 Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE MOA01, Moab Site

LOCATION: 0784 <well> Configuration 4

REPORT DATE: 10/2/2024 2:55 PM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/03/2024	0001	18.00	0.0820				0.017	-
Oxidation Reduction Potential	mV	04/03/2024	N001	18.00	140				-	-
pH	s.u.	04/03/2024	N001	18.00	7.50				-	-
Specific Conductance	umhos/cm	04/03/2024	N001	18.00	15				-	-
Temperature	C	04/03/2024	N001	18.00	12.10				-	-
Turbidity	NTU	04/03/2024	N001	18.00	1.92				-	-
Uranium	mg/L	04/03/2024	0001	18.00	0.0341				6.7E-05	-

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE MOA01, Moab Site

LOCATION: 0785 <well> Configuration 4

REPORT DATE: 10/2/2024 2:55 PM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/03/2024	0001	18.00	182				17	-
Oxidation Reduction Potential	mV	04/03/2024	N001	18.00	119				-	-
pH	s.u.	04/03/2024	N001	18.00	7.45				-	-
Specific Conductance	umhos/cm	04/03/2024	N001	18.00	2176				-	-
Temperature	C	04/03/2024	N001	18.00	11.60				-	-
Turbidity	NTU	04/03/2024	N001	18.00	3.88				-	-
Uranium	mg/L	04/03/2024	0001	18.00	0.0765				6.7E-05	-

Appendix B. April 2024 CF4 Sampling Event
Water Quality Data

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE MOA01, Moab Site

LOCATION: 0786 <well> Configuration 4

REPORT DATE: 10/2/2024 2:55 PM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/03/2024	0001	28.00	668				17	-
Oxidation Reduction Potential	mV	04/03/2024	N001	28.00	147				-	-
pH	s.u.	04/03/2024	N001	28.00	6.93				-	-
Specific Conductance	umhos/cm	04/03/2024	N001	28.00	29142				-	-
Temperature	C	04/03/2024	N001	28.00	12.80				-	-
Turbidity	NTU	04/03/2024	N001	28.00	1.67				-	-
Uranium	mg/L	04/03/2024	0001	28.00	3.250				6.7E-05	-

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE MOA01, Moab Site

LOCATION: 0787 <well> Configuration 4

REPORT DATE: 10/2/2024 2:55 PM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/03/2024	0001	36.00	1430				17	-
	mg/L	04/03/2024	0002	35.44 - 45.21	1070				17	-
Oxidation Reduction Potential	mV	04/03/2024	N001	36.00	179				-	-
pH	s.u.	04/03/2024	N001	36.00	6.85				-	-
Specific Conductance	umhos/cm	04/03/2024	N001	36.00	73880				-	-
Temperature	C	04/03/2024	N001	36.00	14.30				-	-
Turbidity	NTU	04/03/2024	N001	36.00	1.94				-	-
Uranium	mg/L	04/03/2024	0001	36.00	2.460				0.00168	-
	mg/L	04/03/2024	0002	35.44 - 45.21	2.490				0.00168	-

RECORDS: SELECTED FROM USEE105 WHERE RIN = '2404147' AND (DataValidationQualifiers IS NULL OR (DataValidationQualifiers NOT LIKE '%N%' AND DataValidationQualifiers NOT LIKE '%R%' AND DataValidationQualifiers NOT LIKE '%X%'))

Appendix B. April 2024 CF4 Sampling Event
Water Quality Data

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

LAB QUALIFERS:

*	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 QUALIFERS:

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

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

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2404147

Comparison: All Historical Data

Report Date: 9/25/2024 9:22 AM

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
MOA01	0782	04/03/2024	Uranium	3.43			3			0.014			64	0
MOA01	0786	04/03/2024	Uranium	3.25			3.2		F	0.007			61	0

Note: all concentrations are in mg/L

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

LAB QUALIFERS:

*	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 QUALIFERS:

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.

N Presumptive evidence that analyte is present. The analyte is "tentatively identified".

Q Qualitative result due to sampling technique

R Unusable result.

U Parameter analyzed for but was not detected.

X Location is undefined.

Appendix B. April 2024 CF4 Sampling Event
Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE MOA01, Moab Site

REPORT DATE: 10/2/2024 2:31 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT DATE	MEASUREMENT TIME	DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
0780		3968.45	04/03/2024		15.78	3952.67	
0781		3968.56	04/03/2024		15.23	3953.33	
0782		3968.46	04/03/2024		15.77	3952.69	
0783		3966.16	04/03/2024		14.18	3951.98	
0784		3968.73	04/03/2024		16.70	3952.03	
0785		3969.24	04/03/2024		16.46	3952.78	
0786		3968.14	04/03/2024		15.69	3952.45	
0787		3968.43	04/03/2024		15.67	3952.76	

RECORDS: SELECTED FROM USEE700 WHERE RIN = '2404147'

FLOW CODES:

WATER LEVEL FLAGS:

Appendix B. April 2024 CF4 Sampling Event
Trip Report

Date: April 17, 2024
To: Ken Pill
From: James Ritchey
Subject: April 2024 Sampling Event

Site: Moab –CF4 Sampling Event – April 2024
Date of Sampling Event: April 3, 2024
Team Members: T. Prichard, J. Ritchey
RIN Number Assigned: All samples were assigned to RIN 2404147.
Sample Shipment: One cooler was shipped overnight UPS to Gel Laboratory from Moab, Utah on April 11, 2024 (Tracking number 1ZE243120192112247).

April 2024 Configuration 4 Sampling

Number of Locations Sampled: Eight observation wells (0780, 0781, 0782, 0783, 0784, 0785, 0786, and 0787) and one duplicate were sampled during the April 2024 Sampling Event.

Locations Not Sampled: None.

Field Variance: None.

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
2000	0787	Duplicate from 36 ft bgs	Ground Water	APR 007

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

Well No.	Date	Time	Depth to Water (ft btoc)	Sample Depth (ft bgs)
0780	4/3/2024	14:00	15.78	28
0781	4/3/2024	14:10	15.23	46
0782	4/3/2024	14:25	15.77	32
0783	4/3/2024	14:40	14.18	18
0784	4/3/2024	15:00	-	18
0785	4/3/2024	15:45	16.46	18
0786	4/3/2024	15:30	15.69	28
0787	4/3/2024	15:15	15.67	36

Site Issues: According to the USGS Cisco Gaging Station (Station No. 09180700), the mean daily Colorado River flows during this sampling event are provided below:

Date	Daily Mean Flow (cfs)
4/3/2024	3,560

Equipment Issues: None.

Corrective Action Required/Taken: None.

Appendix C.
April through June 2024 Crescent Junction Sampling Events

Water Sampling Field Activities Verification
Water Quality Data
Minimums and Maximums Report
Water Level Data
Trip Report

Appendix C. April through June 2024 Crescent Junction Sampling Events
Water Sampling Field Activities Verification

Sampling Event/RIN	April through June 2024 CJ Sampling Event / RINs 240418 and 2406149	**Date(s) of Water Sampling**	April 12, June 5, and June 12, 2024
Date(s) of Verification	June 2023	**Name of Verifier**	T. Prichard, J. Ritchey

	Response (Yes, No, NA)	Comments
1. Is the Sampling Analysis Plan (SAP) the primary document directing field procedures?	Yes	
2. List other documents, standard operating procedures, instructions.	NA	
3. Were the sampling locations specified in the planning documents sampled?	Yes	
4. Was a pre-trip calibration conducted as specified in the aforementioned documents?	Yes	
5. Was an operational check of the field equipment conducted in accordance with the SAP?	Yes	
6. Did the operational checks meet criteria?	Yes	
7. Were the number and types (alkalinity, temperature, electrical conductivity, pH, turbidity, oxidation reduction potential) of field measurements taken as specified?	Yes	Field measurements for temperature, pH, turbidity, oxidation reduction potential, and conductivity were collected.
8. Was the category of the well documented?	Yes	
9. Were the following conditions met when purging a Category I well:		
Was one pump/tubing volume purged before sampling?	Yes	
Did the water level stabilize before sampling?	Yes	
Did pH, specific conductance, and turbidity measurements stabilize before sampling?	Yes	
Was the flow rate less than 500 milliliters per minute?	Yes	
If a portable pump was used, was there a 4-hour delay between pump installation and sampling?	N/A	
10. Were the following conditions met when purging a Category II well:		
Was the flow rate less than 500 milliliters per minute?	NA	
Was one pump/tubing volume removed before sampling?	NA	
11. Were duplicates taken at a frequency of one per 20 samples?	NA	Only two samples collected, no duplicate

Appendix C. April through June 2024 Crescent Junction Sampling Events
Water Sampling Field Activities Verification

Sampling Event/RIN	April through June 2024 CJ Sampling Event / RINs 240418 and 2406149	**Date(s) of Water Sampling**	April 12, June 5, and June 12, 2024
Date(s) of Verification	June 2023	**Name of Verifier**	T. Prichard, J. Ritchey

	Response (Yes, No, NA)	Comments
12. Were EBs taken at a frequency of one per 20 samples that were collected with non-dedicated equipment?	NA	
13. Were trip blanks prepared and included with each shipment of volatile organic compound samples?	NA	
14. Were quality-control samples assigned a fictitious site identification number?	Yes	
Was the true identity of the samples recorded on the quality assurance sample log?	Yes	
15. Were samples collected in the containers specified?	Yes	
16. Were samples filtered and preserved as specified?	Yes	
17. Were the number and types of samples collected as specified?	Yes	
18. Were COC records completed, and was sample custody maintained?	Yes	
19. Are field data sheets signed and dated by both team members?	Yes	
20. Was all other pertinent information documented on the field data sheets?	NA	
21. Was the presence or absence of ice in the cooler documented at every sample location?	Yes	
22. Were water levels measured at the locations specified in the planning documents?	Yes	

Appendix C. April through June 2024 Crescent Junction Sampling Events
Water Quality Data

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE CRJ01, Crescent Junction Site

LOCATION: 0202 <well>

REPORT DATE: 10/7/2024 11:58 AM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/09/2024	0001	60.00	7.26				0.17	-
Arsenic	mg/L	04/09/2024	0001	60.00	0.0500	U			0.05	-
Barium	mg/L	04/09/2024	0001	60.00	0.0100	U			0.01	-
Bromide	mg/L	04/09/2024	0001	60.00	34.0				3.35	-
Cadmium	mg/L	04/09/2024	0001	60.00	0.0100	U			0.01	-
Calcium	mg/L	04/09/2024	0001	60.00	452.000				0.5	-
Chloride	mg/L	04/09/2024	0001	60.00	2850				33.5	-
Chromium	mg/L	04/09/2024	0001	60.00	0.0100	U			0.01	-
Cobalt	mg/L	04/09/2024	0001	60.00	0.0100	U			0.01	-
Copper	mg/L	04/09/2024	0001	60.00	0.0300	U			0.03	-
Fluoride	mg/L	04/09/2024	0001	60.00	1.65	U			1.65	-
Iron	mg/L	04/09/2024	0001	60.00	0.300	U			0.3	-
Lead	mg/L	04/09/2024	0001	60.00	0.0776	B			0.033	-
Magnesium	mg/L	04/09/2024	0001	60.00	1390.000				5.5	-
Manganese	mg/L	04/09/2024	0001	60.00	0.566				0.02	-
MOLYBDENUM	ug/L	04/09/2024	0001	60.00	20.0	U			20	-
Nitrate + Nitrite as Nitrogen	mg/L	06/05/2024	0001	60.00	561		J		17	-
	mg/L	06/12/2024	0001	60.00	525				8.5	-
Oxidation Reduction Potential	mV	04/09/2024	N001	60.00	189				-	-
	mV	06/05/2024	N001	60.00	234				-	-
	mV	06/12/2024	N001	60.00	230				-	-

pH	s.u.	04/09/2024	N001	60.00	6.85	-	-
	s.u.	06/05/2024	N001	60.00	6.86	-	-
	s.u.	06/12/2024	N001	60.00	6.87	-	-
Selenium	mg/L	04/09/2024	0001	60.00	0.592	0.06	-
Sodium	mg/L	04/09/2024	0001	60.00	11600.000	5	-
Specific Conductance	umhos/cm	04/09/2024	N001	60.00	42408	-	-
	umhos/cm	06/05/2024	N001	60.00	43499	-	-
	umhos/cm	06/12/2024	N001	60.00	44030	-	-
Sulfate	mg/L	04/09/2024	0001	60.00	21700	266	-
Temperature	C	04/09/2024	N001	60.00	14.90	-	-
	C	06/05/2024	N001	60.00	19.50	-	-
	C	06/12/2024	N001	60.00	23.20	-	-
Turbidity	NTU	04/09/2024	N001	60.00	3.37	-	-
	NTU	06/05/2024	N001	60.00	3.89	-	-
	NTU	06/12/2024	N001	60.00	3.26	-	-
Uranium	mg/L	04/09/2024	0001	60.00	0.0380	0.000335	-

Appendix C. April through June 2024 Crescent Junction Sampling Events
Water Quality Data

GENERAL WATER QUALITY DATA BY LOCATION (USEE105) FOR SITE CRJ01, Crescent Junction Site

LOCATION: 0205 <well>

REPORT DATE: 10/7/2024 11:58 AM

PARAMETER	UNITS	SAMPLE: DATE	ID	DEPTH RANGE (FT BLS)	RESULT	QUALIFIERS: LAB	DATA	QA	DETECTION LIMIT	UN-CERTAINTY
Ammonia Total as N	mg/L	04/09/2024	0001	68.00	4.29				0.17	-
Arsenic	mg/L	04/09/2024	0001	68.00	0.0500	U			0.05	-
Barium	mg/L	04/09/2024	0001	68.00	0.0100	U			0.01	-
Bromide	mg/L	04/09/2024	0001	68.00	6.79	J			3.35	-
Cadmium	mg/L	04/09/2024	0001	68.00	0.0100	U			0.01	-
Calcium	mg/L	04/09/2024	0001	68.00	381.000				0.5	-
Chloride	mg/L	04/09/2024	0001	68.00	1110				33.5	-
Chromium	mg/L	04/09/2024	0001	68.00	0.0100	U			0.01	-
Cobalt	mg/L	04/09/2024	0001	68.00	0.0100	U			0.01	-
Copper	mg/L	04/09/2024	0001	68.00	0.0300	U			0.03	-
Fluoride	mg/L	04/09/2024	0001	68.00	1.65	U			1.65	-
Iron	mg/L	04/09/2024	0001	68.00	0.300	U			0.3	-
Lead	mg/L	04/09/2024	0001	68.00	0.0330	U			0.033	-
Magnesium	mg/L	04/09/2024	0001	68.00	1360.000				5.5	-
Manganese	mg/L	04/09/2024	0001	68.00	0.259				0.02	-
MOLYBDENUM	ug/L	04/09/2024	0001	68.00	20.0	U			20	-
Nitrate + Nitrite as Nitrogen	mg/L	06/05/2024	0001	68.00	427		J		8.5	-
	mg/L	06/12/2024	0001	68.00	450				8.5	-
Oxidation Reduction Potential	mV	04/09/2024	N001	68.00	206				-	-
	mV	06/05/2024	N001	68.00	202				-	-
	mV	06/12/2024	N001	68.00	181				-	-
pH	s.u.	04/09/2024	N001	68.00	6.95				-	-

	s.u.	06/05/2024	N001	68.00	6.96	-	-
	s.u.	06/12/2024	N001	68.00	6.98	-	-
Selenium	mg/L	04/09/2024	0001	68.00	2.370	0.06	-
Sodium	mg/L	04/09/2024	0001	68.00	8140.000	5	-
Specific Conductance	umhos/cm	04/09/2024	N001	68.00	34257	-	-
	umhos/cm	06/05/2024	N001	68.00	33018	-	-
	umhos/cm	06/12/2024	N001	68.00	33167	-	-
Sulfate	mg/L	04/09/2024	0001	68.00	21300	266	-
Temperature	C	04/09/2024	N001	68.00	15.50	-	-
	C	06/05/2024	N001	68.00	18.40	-	-
	C	06/12/2024	N001	68.00	19.20	-	-
Turbidity	NTU	04/09/2024	N001	68.00	3.95	-	-
	NTU	06/05/2024	N001	68.00	5.29	-	-
	NTU	06/12/2024	N001	68.00	10.80	-	-
Uranium	mg/L	04/09/2024	0001	68.00	0.0432	0.000335	-

RECORDS: SELECTED FROM USEE105 WHERE Date Sampled BETWEEN '04/01/2024' AND '07/31/2024' AND ((Site Code='CRJ01' AND LocationCode='0202') OR (SiteCode='CRJ01' AND LocationCode='0205')) AND (DataValidationQualifiers IS NULL OR (DataValidationQualifiers NOT LIKE '%N%' AND DataValidationQualifiers NOT LIKE '%R%' AND DataValidationQualifiers NOT LIKE '%X%'))

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

LAB QUALIFERS:

- * 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 QUALIFERS:

F Low flow sampling method used.

L Less than 3 bore volumes purged prior to sampling.

R Unusable result.

G Possible grout contamination, pH > 9.

N Presumptive evidence that analyte is present. The analyte is "tentatively identified".

U Parameter analyzed for but was not detected.

J Estimated value.

Q Qualitative result due to sampling technique

X Location is undefined.

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

Appendix C. April through June 2024 Crescent Junction Sampling Events
Minimums and Maximums Report

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2404148

Comparison: All Historical Data

Report Date: 9/25/2024 9:24 AM

				Current			Historical Maximum			Historical Minimum			Count	
					Qualifiers			Qualifiers			Qualifiers			
Site Code	Location Code	Sample Date	Analyte	Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
CRJ01	0202	04/09/2024	Calcium	452			440		J	200			9	0
CRJ01	0202	04/09/2024	Lead	0.0776	B		0.013	U		0.0013	B	U	8	6
CRJ01	0205	04/09/2024	Ammonia Total as N	4.29			22			8.55			20	0
CRJ01	0205	04/09/2024	Barium	0.01	U		3.5			0.012	J		13	0
CRJ01	0205	04/09/2024	Chloride	1110			28000			2110			20	0
CRJ01	0205	04/09/2024	Copper	0.03	U		0.023			0.0016	J		20	11
CRJ01	0205	04/09/2024	Magnesium	1360			1280			140			20	0
CRJ01	0205	04/09/2024	Manganese	0.259			0.71			0.29			20	0
CRJ01	0205	04/09/2024	Uranium	0.0432			0.043		J	2.9E-05	U		20	3

Note: all concentrations are in mg/L

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

LAB QUALIFERS:

- * 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 QUALIFERS:

F Low flow sampling method used.

L Less than 3 bore volumes purged prior to sampling.

R Unusable result.

G Possible grout contamination, pH > 9.

N Presumptive evidence that analyte is present. The analyte is "tentatively identified".

U Parameter analyzed for but was not detected.

J Estimated value.

Q Qualitative result due to sampling technique

X Location is undefined.

Appendix C. April through June 2024 Crescent Junction Sampling Events
Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE CRJ01, Crescent Junction Site

REPORT DATE: 10/2/2024 2:32 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT DATE	MEASUREMENT TIME	DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
0202		-	04/09/2024		48.23	(48.23)	
			06/05/2024		48.30	(48.30)	
			06/12/2024		49.45	(49.45)	
0205		-	04/09/2024		43.96	(43.96)	
			06/05/2024		43.74	(43.74)	
			06/12/2024		43.18	(43.18)	

RECORDS: SELECTED FROM USEE700 WHERE RIN = '2404148'

FLOW CODES:

WATER LEVEL FLAGS:

Appendix C. April through June 2024 Crescent Junction Sampling Events Trip Report

Date: October 2, 2024
To: Ken Pill
From: James Ritchey
Subject: April and June 2024 CJ Sampling Event

Site: Crescent Junction – Well 0202 and 0205 Sampling Event – April and June 2024
Date of Sampling Event: April 12, 2024
Team Members: T. Prichard and J. Ritchey
RIN Number Assigned: All samples were assigned to RINs 2404148 (April) and 2406149 (June).

Sample Shipments: The RIN 2404148 samples were shipped overnight UPS to ALS Laboratory from Moab, Utah on April 11 of 2024 (Tracking number: 1ZE243120192112247). The RIN 2406149 samples were shipped in two coolers overnight UPS to Gel Laboratory from Moab, Utah on June 6 and 13 of 2024 (Tracking numbers: 1ZE243121599715736 and 1ZE243120197035349).

RIN 2404148 Number of Locations Sampled: One sample was collected from each well 0202 and well 0205 during the April 2024 CJ sampling event.

RIN 2604149 Number of Locations Sampled: Two samples were collected from each well 0202 and well 0205 during the June 2024 CJ sampling event totaling to four samples.

Locations Not Sampled/Reason: None.
Field Variance: None.
Quality Control Sample Cross Reference: None.

Location Specific Information: Wells 0202 and 0205 were sampled using a non-dedicated submersible pump with non-dedicated tubing. The table below provides additional information:

Location	Date	Sample Depth (ft btoc)	Depth to Water (ft btoc)	Comments
0202	4/9/2024	60	48.23	Slight yellow color.
	6/5/2024	60	48.30	Yellow tinge to water. Area around well recently graded.
	6/12/2024	60	49.45	Yellow tinge. Not distinct smell.
0205	4/9/2024	68	43.96	Yellow color.
	6/5/2024	68	43.74	Yellow tinge to water. More yellow than 0202.
	6/12/2024	68	43.18	Yellow color.

Notes: ft btoc = feet below top of casing.

Well Inspection Summary: A well inspection was not conducted.
Equipment: None.
Regulatory: None.
Site Issues: None.
Corrective Action Required/Taken: None.