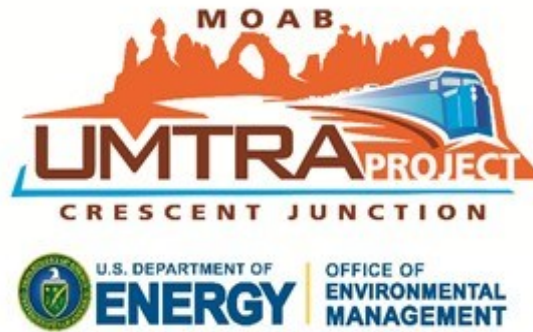




Moab UMTRA Project Groundwater and Surface Water Monitoring Report January through June 2025

Revision 0

October 2025



Office of Environmental Management

**Moab UMTRA Project
Groundwater and Surface Water Monitoring Report January through June 2025**

Revision 0

Review and Approval

10/16/2025

X James Ritchey

James Ritchey
RAC Groundwater Technician
Signed by: JAMES RITCHEY (Affiliate)

10/16/2025

X Ken Pill

Kenneth Pill
RAC Groundwater Manager
Signed by: KENNETH PILL (Affiliate)

10/16/2025

X Greg D. Church

Greg Church
RAC Program Manager
Signed by: GREGORY CHURCH (Affiliate)

Revision History

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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
NELAC	National Environmental Laboratory Accreditation Institute
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 2025. The results of the data validation process are also presented.

The site wide sampling event took place in February 2025. Samples were collected from site-wide groundwater and surface water locations shown on Figures 1 and 2, respectively. In March 2025 samples were collected from a variety of locations within CF1, CF2, CF3, and the Baseline Area. In addition, well SMI-PZ1S was sampled to assess what impact the sand filter flushing discharge has on that area of the site. These locations are displayed on Figure 3.

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 February 2025 Site Wide and March 2025 sampling events were validated to Level 3.

The documentation associated with the February 2025 site-wide sampling event is provided in Appendix A. Appendix B provides similar documentation for the March 2025 sampling event.

All Colorado River flows discussed in this document were measured from the U.S. Geological Survey Cisco gaging station number 09180500, located approximately 30 miles upstream of the site (downstream of the Dolores River confluence with the Colorado River). 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. 2025 Site-wide Groundwater Sampling Locations

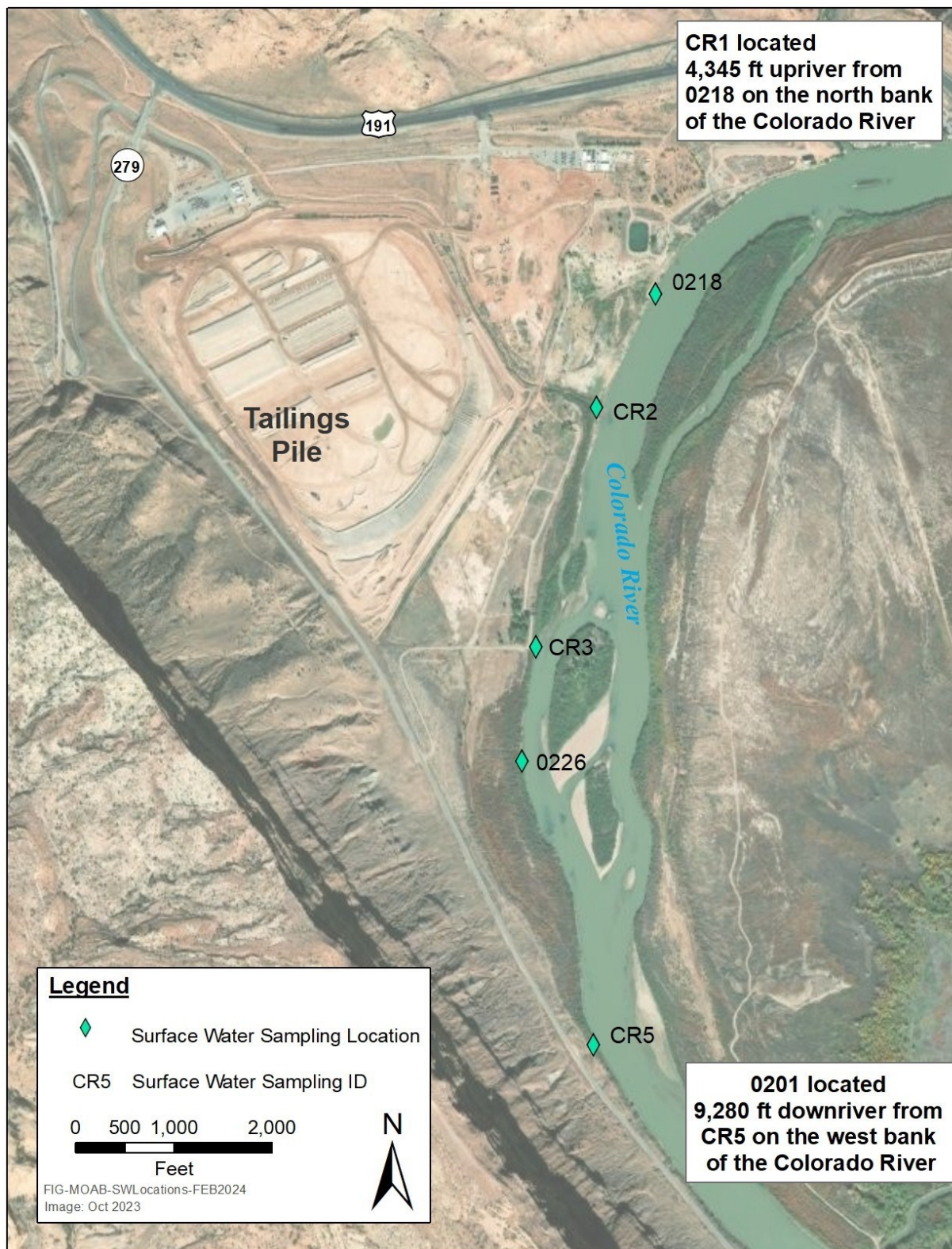


Figure 2. 2025 Surface Water Sampling Locations



Figure 3. Well Field 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 verification (ICV) 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 verification (CCV) are established to ensure the instrument continues to produce acceptable qualitative and quantitative data.

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. 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 Samples

Laboratory control samples (LCSs) provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation.

Matrix Spikes

Matrix spike (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.

Duplicates

Laboratory duplicates may be LCS duplicates (LCSDs) that contain known concentrations of the analyte of interest are prepared in the laboratory, or MS duplicate (MSD) samples. The results are used to demonstrate the laboratory is in control of the preparation and analysis of samples. Field duplicate (FD) samples are collected and analyzed as an indication of the overall precision of the field sampling process as well as the analytical process. The precision observed with FDs includes both field and laboratory precision and has more variability than laboratory duplicates, which measure only laboratory performance. All duplicate results must meet the U.S. Environmental Protection Agency (EPA)-recommended duplicate criteria of less than 20 RPD for results that are greater than five times the RL.

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 February 2025 Site-wide Sampling Event

2.1 Summary

Forty-three groundwater and surface water samples (including QC samples) were collected as part of the site-wide event when the Colorado River was 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, and uranium analysis.

2.2 February 2025 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	2502153	Laboratory: GEL Laboratories, Charleston, SC
SDG Numbers:	709117	
Analysis:	Metals and Inorganics	
Validator:	James Ritchey,	
Review Date:	September 2025	

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. 2025 Site-wide Sampling Event, Analytes and Methods

Analyte	Preparation Method	Analytical Method
Ammonia as N (NH ₃ -N)	EPA 350.1	EPA 350.1
Uranium	SW-846 3005A	SW-846 6020B
Arsenic	SW-846 3005A	SW-846 6010D
Copper	SW-846 3005A	SW-846 6010D
Manganese	SW-846 3005A	SW-846 6010D
Selenium	SW-846 3005A	SW-846 6010D

Table 2. 2025 Site-wide Sampling Event, Data Qualifiers

Flag	Reason	Sample Number	Analyte	Location
J/UJ	MS-1	7091170-02, 03, 06, 08, 09, 12, 13, 15, 18, 19, 21, 23, 26, 27, 30, 32, 34, 35, 37, 39, 42, 43, 45, 48, 49, 51, 43, 55, 58, 60, 61, 63, 66, 68, 70, 71, 73, 75, 77, 80	Ammonia	0201, 0218, 0226, 0401, 0403, 0404, 0406, 0407, 0410, 0412, 0413, 0414, 0437, 0439, 0441, 0453, 0454, 0492, AMM-2, AMM-3, ATP-2-D, CR1, CR2, CR3, CR5, MW-3, SMI-MW01, SMI-PZ3S, RP-01, TP-17, TP-20, TP-22, TP-23, UPD-17, UPD-18, UPD-20, UPD-21, Equipment Blank, and Duplicate
J/UJ	D-1	7091170-07, 10, 11, 14, 16, 20, 22, 24, 36, 38, 44, 46, 47, 57, 64, 67, 69, 72, 81	Arsenic, Selenium, Uranium, Ammonia	0401, 0403, 0404, 0406, 0407, 0412, 0413, 0414, 0454, 0492, AMM-2, AMM-3, ATP-2-D, MW-3, TP-01, TP-20, TP-22, TP-23, UPD-22
		709117002 - 080	Ammonia	All locations except UPD-21, UPD-22, and UPD-24
J/UJ	B-1	7091170- 01, 04, 05, 07, 10, 11, 14, 16, 17, 20, 22, 24, 25, 28, 29	Arsenic	0201, 0218, 0226, 0401, 0403, 0404, 0406, 0407, 0410, 0412, 0413, 0414, 0437, 0439, Duplicate
		7091170- 01, 04, 05, 07, 10, 16, 17, 20, 28, 29, 38, 40, 41, 46, 50, 52, 54, 56, 57, 59	Selenium	0201, 0218, 0226, 0401, 0403, 0407, 0410, 0412, 0439, Duplicate, 0492, Duplicate, Blank, Amm-3, CR1, CR2, CR3, CR5, MW-3, SMI-MW01
		7091170- 82, 83, 85	Ammonia	UPD-21, UPD-22, and UPD-24
NJ/UJ	B-2	7091170-62, 64, 65, 67, 69, 72, 74, 76, 78, 79, 81, 84	Arsenic	SMMI-PZ3S, TP-01, TP-17, TP-20, TP-22, TP-23, UPD-17, UPD-18, UPD-20, UPD-21, UPD-22, UPD-23

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

"N" indicates results in associated blank had a negative value.

Table 3. 2025 Site-wide Sampling Event, Reason Codes for Data Flags

Reason Code	Qualifier (Detects)	Qualifier (Non-detects)	Explanation
MS-1	J	U	The MS failed due to a low percent recovery.
D-1	J	UJ	Samples did not meet recommended duplicate criteria.
B-1	J	-	Analyte was detected in blank.
B-2	NJ	UJ	Absolute blank value was greater than the MDL and less than PQL

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 43 samples (in two coolers) for RIN 2502153 in one shipment (Table 4).

Table 4. 2025 Site-wide Sampling Event Shipping Information

SDG	Sample Cooler	Arrival Date	UPS Tracking Numbers	Arrival Temperature (°C)
709117	1	2/13/2025	1ZE243120195805109	1
709117	2	2/13/2025	1ZE243120196349495	1

The SDG was accompanied by a Chain of Custody (COC) form. The COC form was checked to confirm that all of the samples were listed on each form with sample collection dates and times, and that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents, including the COC form and the sample tickets, had no errors or omissions.

Preservation and Holding Times

All sample bottles of SDG 709117 were received intact. Both coolers were received with compliant temperatures (1°C) according to laboratory and sampling plan requirements (see Table 4). All samples were analyzed within the applicable holding times.

Laboratory Instrument Calibration

All laboratory instrument calibrations were performed correctly in accordance with the cited methods.

Calibration standards were prepared by independent sources. In addition, for Inductively Coupled Plasma (ICP) analytes (uranium, arsenic, and selenium), reporting limit verifications (CRIs) verify the linearity of the calibration curve near the reporting limit (RL). For ICP-Mass Spectrometry (ICP-MS) analytes (uranium, arsenic, and selenium), instrument tuning and performance criteria are checked for mass calibration and resolution verifications. And also for ICP-MS analytes uranium, arsenic, and selenium internal standards are analyzed to indicate stability of the instruments.

SW-846 6020B, 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. CRIs were made at the required frequency to verify the linearity of the calibration curve near the RL. The CRI verifications were within the acceptance criteria range for all SDGs.

Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries were stable and within acceptable ranges.

SW-846 6010A, 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. CRIs were made at the required frequency to verify the linearity of the calibration curve near the RL. The CRI verifications were within the acceptance criteria range for all SDGs.

Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries were stable and within acceptable ranges.

EPA 350.1, Ammonia as N

Initial calibrations for ammonia as N on all SDGs were performed using six calibration standards and one blank. The calibration curve had a correlation coefficient (r^2) value greater than 0.995 in all SDGs.

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

In SDG 709117, arsenic, selenium, and ammonia were identified in the MBs. Also, arsenic, copper, and selenium were detected in CCBs. Results lower than 5x the MDL were flagged “U” for reason B-1. For blanks with a negative result with absolute value over the MDL and less than the PQL, associated results were flagged “NJ” for reason B-2.

Equipment Blanks

One equipment blank (Location 0999) was collected after the surface water tubing was decontaminated. All analytes (ammonia, arsenic, copper, manganese, selenium, and uranium) were undetectable in the equipment blank.

Matrix Spike Analysis

For all metal analyses (uranium, arsenic, copper, manganese, and selenium) within the SDG, LCSs were used in place of matrix spikes. All LCSs were within the appropriate RPDs. For ammonia analysis, two of the three matrix spikes were outside the appropriate range. All associated detectable results were flagged “J” and all non-detect results were flagged “UJ” for reason MS-1.

Laboratory Replicate Analysis

For metals, LCSDs were used instead of MSDs, and all LCSDs were within appropriate RPDs.

Field Duplicate Analysis

Two duplicate samples were collected from locations 0492 and 0439. All associated RPDs were within control except for the following.

Arsenic, selenium, uranium, and ammonia at location 0492 did not meet the recommended criterion. Associated results were flagged “J” for detects and “UJ” for non-detects for reason D-1.

Laboratory Control Samples

LCSs were run for this event, and the LCS results were acceptable for all analyses. All recovery percentages were within an appropriate range.

Metals Serial Dilution

Serial Dilutions were run for all metals analyses in this SDG, and all results were within acceptance criteria.

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 (Table 5).

Table 5. 2025 Site-wide Sampling Event Detection Limits and Dilution Ranges

Analyte	Dilution Range	Max MDL
Ammonia	1 – 500	8.5 mg/L
Arsenic	1 – 10	50.0 µg/L
Copper	1 – 10	30.0 µg/L
Manganese	1 – 10	20.0 µg/L
Selenium	1 – 10	60.0 µg/L
Uranium	1 – 25	1.68 µg/L

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 March 19, 2025. 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, twelve results are considered anomalous data points (ten results were 50% above the historical maximum, and two were more than 50% below the historical minimum). See Table 6 for the location and analyte of the anomalous results. The database Minimums and Maximums Report is provided in Appendix A.

Table 6. Anomalous Data Associated with the 2025 Site-wide Sampling Event

Location	Sample Date	Concentration (mg/L)	Historical Min (mg/L)	Historical Max (mg/L)	Disposition
Ammonia Total as N					
UPD-20	2/11/2025	0.017	0.061	14	These concentrations are lower than the historical minimum and will continue to be monitored to determine if this is indicative of a trend.
CR2	2/5/2025	0.019	0.05	4.635	
Arsenic					
0437	2/12/2025	0.0646	0.0001	0.00532	The location of this well has been significantly impacted by the surface remediation activities, which may have affected the groundwater chemistry in this area.
TP-17	2/5/2025	0.0512	0.0034	0.011	These locations have been analyzed for this analyte less than 10 times, still establishing a representative range.
CR3	2/5/2025	0.00884	0.0006	0.005	
Selenium					
TP-01	2/3/2025	0.0458	0.0015	0.0283	Concentrations have been gradually increasing since 2022 and will continue monitoring.
TP-17	2/5/2025	0.388	0.00041	0.11	This concentration is higher than historical maximum and will continue to monitor to determine if this is indicative of a trend.
UPD-17	2/11/2025	0.326	0.081	0.166	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.
UPD-18	2/11/2025	0.356	0.058	0.098	
UPD-20	2/11/2025	0.162	0.0014	0.0179	
UPD-22	2/4/2025	0.116	0.0168	0.0638	
UPD-24	2/11/2025	0.176	0.0265	0.091	

2.3 February 2025 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 Environmental Impact Statement (EIS). The groundwater aquifer underlying the site is not a drinking water source, and these analyses are 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, the site standard is 3 mg/L, proposed in the EIS, based on dilution factors and surface water impacts. Except for upgradient and other locations beyond the extent of the ammonia plume, 22 of the 33 wells sampled exceeded 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, six samples (Table 7) had concentrations that exceeded the 40 CFR 192 Sub A, Table 1 standard of 0.05 mg/L.

Table 7. 2025 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)
0413	2/3/2025	NE Uranium Plume Area	10.5	0.0542
0437	2/12/2025	On Tailings Pile	90	0.0646
ATP-2-D	2/4/2025	Base of tailings pile	88	0.0587
TP-17	2/5/2025	NE Uranium Plume Area	28	0.0512
TP-20	2/4/2025	NE Uranium Plume Area	32	0.113
UPD-24	2/11/2025	NE Uranium Plume Area	27	0.34

Copper

The only applicable groundwater standard for copper is the EPA Action Level of 1.3 mg/L. The 35 samples analyzed for copper had concentrations from 0.003 (the detection limit) to 0.131 mg/L; none of which exceeded this action level.

Manganese

The only applicable groundwater standard for manganese is an EPA Secondary Drinking Water Regulation of 0.05 mg/L. Thirty-three wells were sampled and analyzed for manganese during this recent event, and 26 results were above the 0.05 mg/L concentration. Table 8 provides the locations and sample depths of these results.

Table 8. 2025 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	2/3/2025	CF2	18	3.47
0403	2/4/2025	CF1	18	1.69
0407	2/4/2025	CF1	18	3.56
0410	2/12/2025	NE Uranium Plume Area	23.5	1.74
0413	2/3/2025	NE Uranium Plume Area	10	0.352
0414	2/3/2025	NE Uranium Plume Area	7.5	0.137
0437	2/12/2025	On Tailings Pile	NA	0.263
0439	2/11/2025	On Tailings Pile	NA	0.215
0453	2/12/2025	Within CA along SR-279	80	0.148
0454	2/4/2025	Along SW Site Boundary	13	2.18
0492	2/5/2025	Along S Site Boundary	18	5.66
AMM-2	2/4/2025	Near CF5	48	0.469
AMM-3	2/4/2025	Base of tailings pile	48	3.29
ATP-2-D	2/4/2025	Base of tailings pile	88	2.14
MW-3	2/4/2025	Near CF5	44	7.16

*Table 8. 2025 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)
SMI-MW01	2/12/2025	CF5 Vicinity	16	1.16
SMI-PZ3S	2/11/2025	NE Uranium Plume Area	25	0.06
TP-01	2/3/2025	NE Uranium Plume Area	22	0.765
TP-17	2/11/2025	NE Uranium Plume Area	17	2.08
TP-20	2/4/2025	Along SW Site Boundary	32	0.333
TP-23	2/4/2025	Along SW Site Boundary	25	4.5
UPD-17	2/11/2025	NE Uranium Plume Area	14	0.651
UPD-20	2/11/2025	NE Uranium Plume Area	17	0.545
UPD-21	2/11/2025	NE Uranium Plume Area	25	0.081
UPD-22	2/4/2025	NE Uranium Plume Area	9	0.0577
UPD-24	2/11/2025	NE Uranium Plume Area	27	0.0708

Selenium

Since 2022, all sitewide samples have been analyzed for selenium. Of the 33 wells sampled, 26 had selenium concentrations above the 0.01 mg/L standard (40 CFR 192 Sub A, Table 1). These results are presented in Table 9.

*Table 9. 2025 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	2/3/2025	CF2	18	0.134
0406	2/3/2025	Moab Wash	18	0.201
0410	2/12/2025	NE Uranium Plume Area	23.5	0.103
0413	2/3/2025	NE Uranium Plume Area	10	0.0844
0414	2/3/2025	NE Uranium Plume Area	7.5	0.154
0437	2/12/2025	On Tailings Pile	NA	0.116
0441	2/11/2025	Along SW Site Boundary	53	0.817
0453	2/12/2025	Within CA along SR-279	80	0.165
0454	2/4/2025	Along SW Site Boundary	13	0.0359
0492	2/5/2025	Upgradient of site	53	0.0102
AMM-2	2/4/2025	Near CF5	48	0.0569
ATP-2-D	2/4/2025	Base of tailings pile	88	0.0706
SMI-MW01	2/12/2025	CF5 Vicinity	40	0.0104
SMI-PZ3S	2/11/2025	NE Uranium Plume Area	25	0.0826
TP-01	2/3/2025	NE Uranium Plume Area	22	0.0458
TP-17	2/5/2025	South of site along river	17	0.388
TP-20	2/4/2025	South of site	32	0.416
TP-22	2/4/2025	CF5 Vicinity	17	0.328
TP-23	2/4/2025	CF5 Vicinity	25	0.368

*Table 9. 2025 Site-wide Groundwater Locations
Exceeding the 0.01 mg/L Selenium Groundwater Standard (continued)*

Well Number	Date	Location	Sample Depth (ft bgs)	Selenium Concentration (mg/L)
UPD-17	2/11/2025	NE Uranium Plume Area	14	0.326
UPD-18	2/11/2025	NE Uranium Plume Area	13	0.356
UPD-20	2/11/2025	NE Uranium Plume Area	17	0.162
UPD-21	2/11/2025	NE Uranium Plume Area	25	0.187
UPD-22	2/4/2025	NE Uranium Plume Area	9	0.116
UPD-23	2/11/2025	NE Uranium Plume Area	29	0.193
UPD-24	2/11/2025	NE Uranium Plume Area	27	0.176

Uranium

All samples collected during this event were analyzed for uranium. Table 10 presents the 30 sample results and their locations 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 10. 2025 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	2/3/2025	CF2	18	1.99
0403	2/4/2025	CF1	18	0.494
0404	2/3/2025	CF2	18	1.78
0406	2/3/2025	Moab Wash	18	0.644
0407	2/4/2025	CF1	18	1.67
0410	2/12/2025	NE Uranium Plume Area	23.5	0.548
0412	2/4/2025	North of Moab Wash	9.5	4.4
0413	2/3/2025	NE Uranium Plume Area	10	2.94
0414	2/3/2025	NE Uranium Plume Area	7.5	3.96
0437	2/12/2025	On Tailings Pile	NA	3.56
0439	2/11/2025	On Tailings Pile	NA	1.36
0441	2/11/2025	Along SW Site Boundary	53	1.34
0453	2/11/2025	Within CA along SR-279	80	0.0549
0454	2/12/2025	Along SW Site Boundary	13	1.28
0492	2/4/2025	Along S Site Boundary	18	1.36
AMM-2	2/5/2025	Near CF5	48	2.59
AMM-3	2/5/2025	Base of tailings pile	48	2.43
MW-3	2/4/2025	Near CF5	44	1.84
SMI-MW01	2/4/2025	CF5 Vicinity	40	1.78
SMI-PZ3S	2/11/2025	NE Uranium Plume Area	25	2.08
TP-01	2/3/2025	NE Uranium Plume Area	22	0.054

*Table 10. 2025 Site-wide Groundwater Locations
Exceeding the 0.044 mg/L Uranium Groundwater Standard (continued)*

Well Number	Date	Location	Sample Depth (ft bgs)	Uranium Concentration (mg/L)
TP-22	2/4/2025	CF5 Vicinity	9	0.525
TP-23	2/4/2025	CF5 Vicinity	26	2.8
UPD-17	2/11/2025	NE Uranium Plume Area	14.5	1.02
UPD-18	2/11/2025	NE Uranium Plume Area	13	0.779
UPD-20	2/11/2025	NE Uranium Plume Area	17	0.0622
UPD-21	2/11/2025	NE Uranium Plume Area	25	4.9
UPD-22	2/4/2025	NE Uranium Plume Area	9	1.89
UPD-23	2/11/2025	NE Uranium Plume Area	26	0.736
UPD-24	2/11/2025	NE Uranium Plume Area	27	1.99

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 (if available) 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 4 and 5 are time versus ammonia and uranium concentration plots, respectively. Samples were collected from 14.5 (UPD-17) and 13 ft bgs (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 4) have displayed a general trend of higher ammonia concentrations during river base flows and, conversely, lower concentrations during the spring runoff (or higher flows). During 2024, ammonia concentrations increased at UPD-18 and decreased at UPD-17. The most recent event followed this same pattern and are still within the historical range. Overall, the ammonia concentrations have been gradually decreasing at approximately the same rate for both locations.

Uranium concentrations (Figure 5) tend to increase during higher river stages, where oxygenated water enters the subsurface and increases the uranium solubility. In the past two years the uranium concentrations have followed the ammonia concentration trends, with UPD-17 decreasing and UPD-18 increasing. As the trend lines display indicate, since 2011 the UPD-17 concentrations have decreased at a lower rate compared to the UPD-18 concentrations.

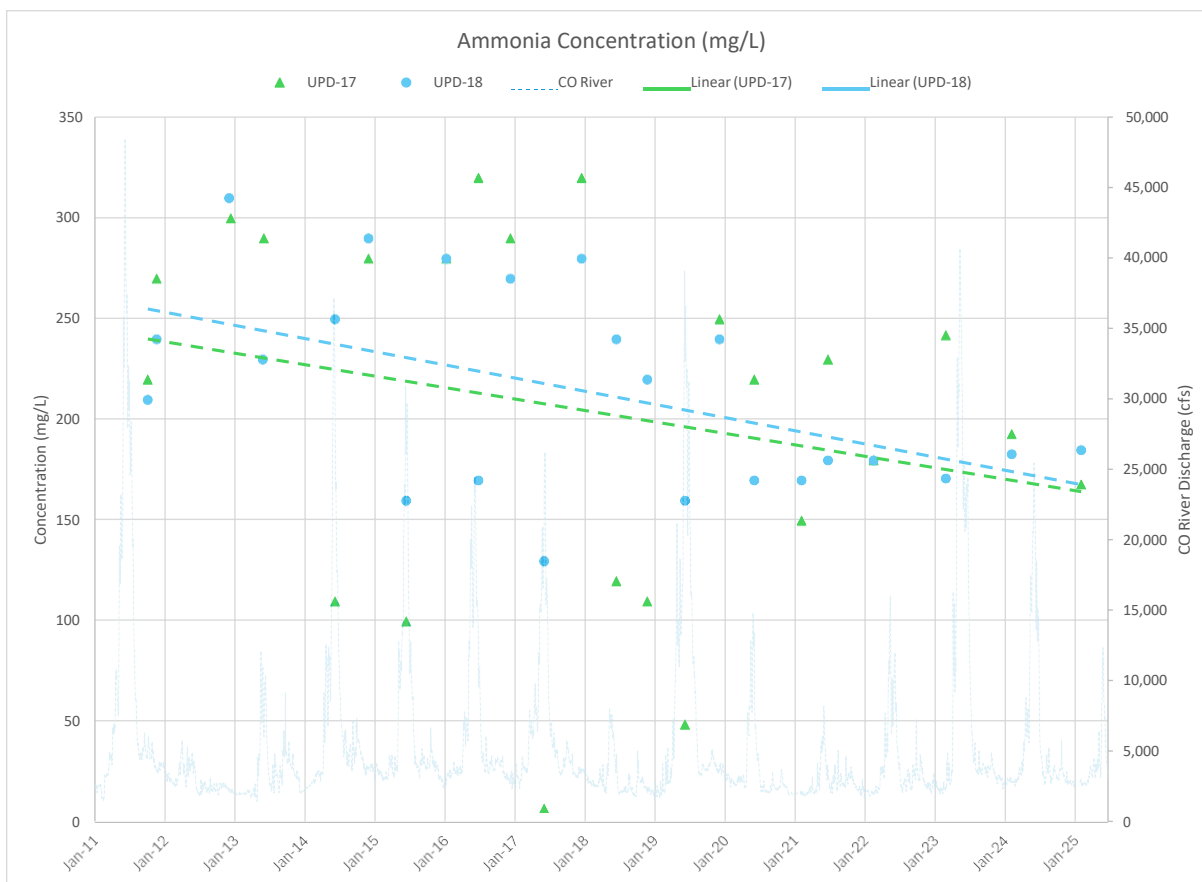


Figure 4. Wells UPD-17 and UPD-18 Time versus Ammonia Concentration Plot

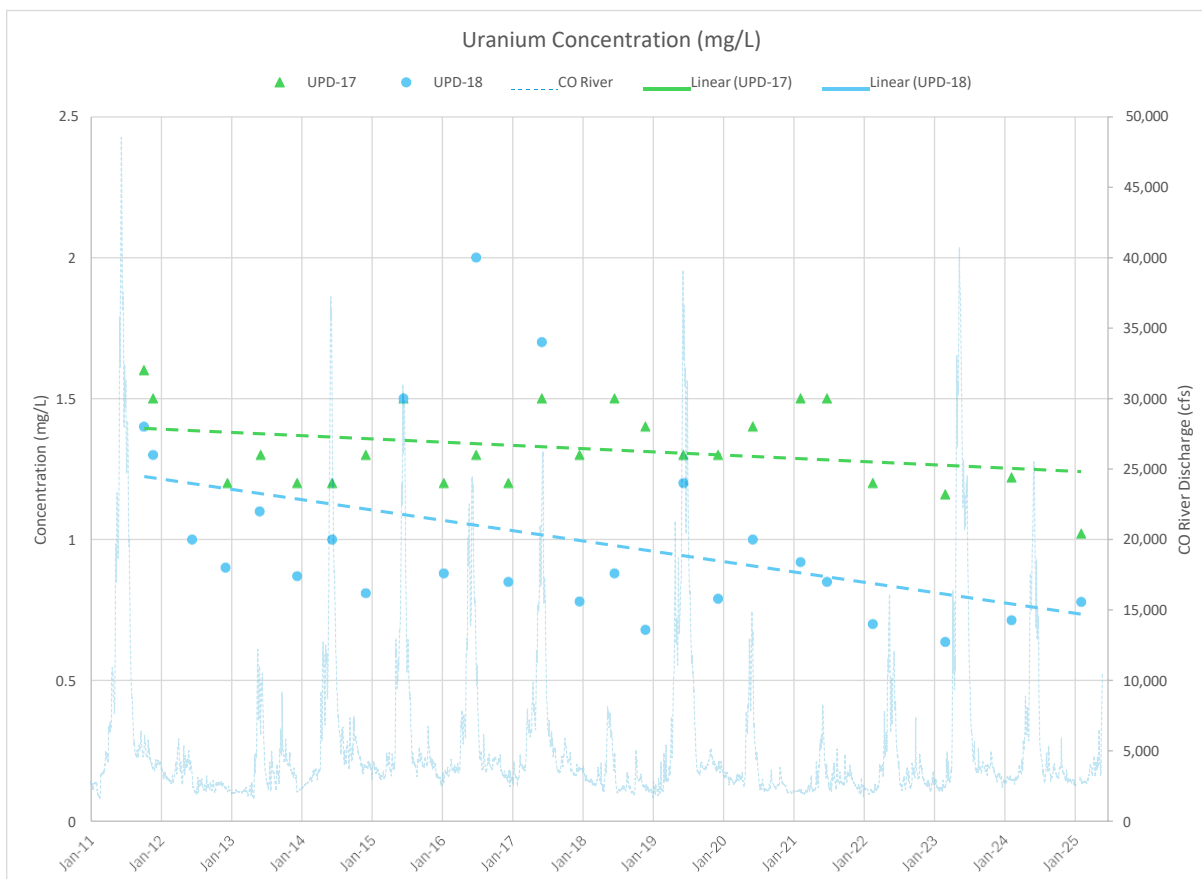


Figure 5. Wells UPD-17 and UPD-18 Time versus Uranium Concentration Plot

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 6 and 7 are the time versus ammonia and uranium concentration plots, respectively, for the center of the northeastern uranium plume area. Samples were collected from locations (listed from upgradient to downgradient) UPD-20 (sampled from 17 ft bgs), 0413 (10.5 ft bgs), and 0414 (7.5 ft bgs).

Well 0413 is approximately 650 ft from the Colorado River, and the ammonia concentrations (Figure 6) collected from this location have been consistently higher since 2011 compared to the samples collected from well 0414 except for the past two years. 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 based on data collected since 2010 indicate ammonia concentrations over the past 15 years at both locations have steadily increased at approximately the same rate. The UPD-20 concentrations remain below 1 mg/L

The uranium concentration (Figure 7) 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 0.0622 mg/L. Since 2012 the concentration has ranged from 0.055 to 0.095 mg/L. The uranium concentrations in samples collected from wells 0413 and 0414 have generally been similar between 2013 and 2022. Recently the trendlines suggest the uranium concentrations in the samples collected from 0413 have slightly increased and decreased in samples collected from 0414 since 2010.

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 8 and 9, 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. Location 0410 was sampled for just the second time since 2020 because previously there was an insufficient volume of water present to collect a sample.

As shown in Figure 8, the ammonia concentrations in samples collected from all four locations during this site-wide event have been below 10 mg/L since 2010. UPD-23 ammonia concentrations have displayed a slight increase since 2013, with the latest result just slightly above the historical range.

Historically, this area of the site has had the highest uranium concentrations (Figure 9) in groundwater, particularly in wells UPD-21 and -24. Uranium concentrations in samples collected from wells 0410 and UPD-23 remain below 1.0 mg/L (and have not significantly changed since 2012) suggesting the uranium plume has not extended to the north/northeast during this time. The UPD-21 and UPD-24 concentrations have both decreased at a similar rate since 2022.

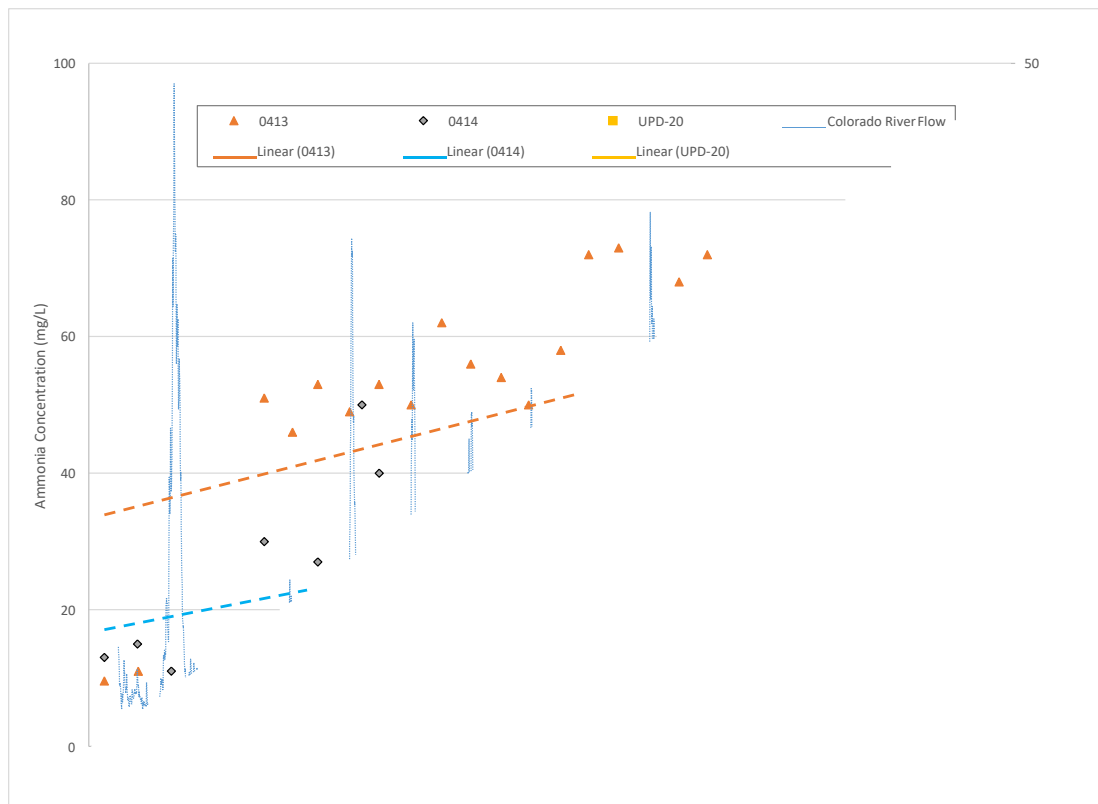


Figure 6. Center of Northeastern Uranium Plume Area Observation Wells 0413, 0414, and UPD-20 Time versus Ammonia Concentration Plot

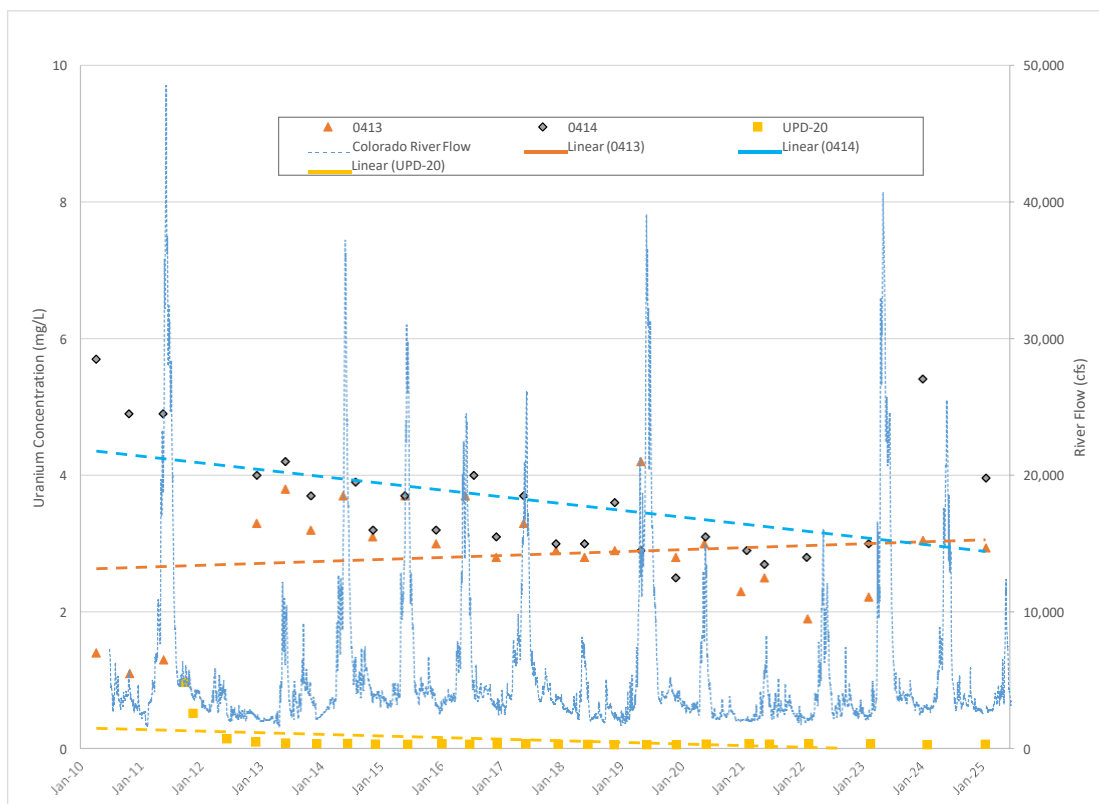


Figure 7. Center of Northeastern Uranium Plume Area Observation Wells 0413, 0414, and UPD-20 Time versus Uranium Concentration Plot

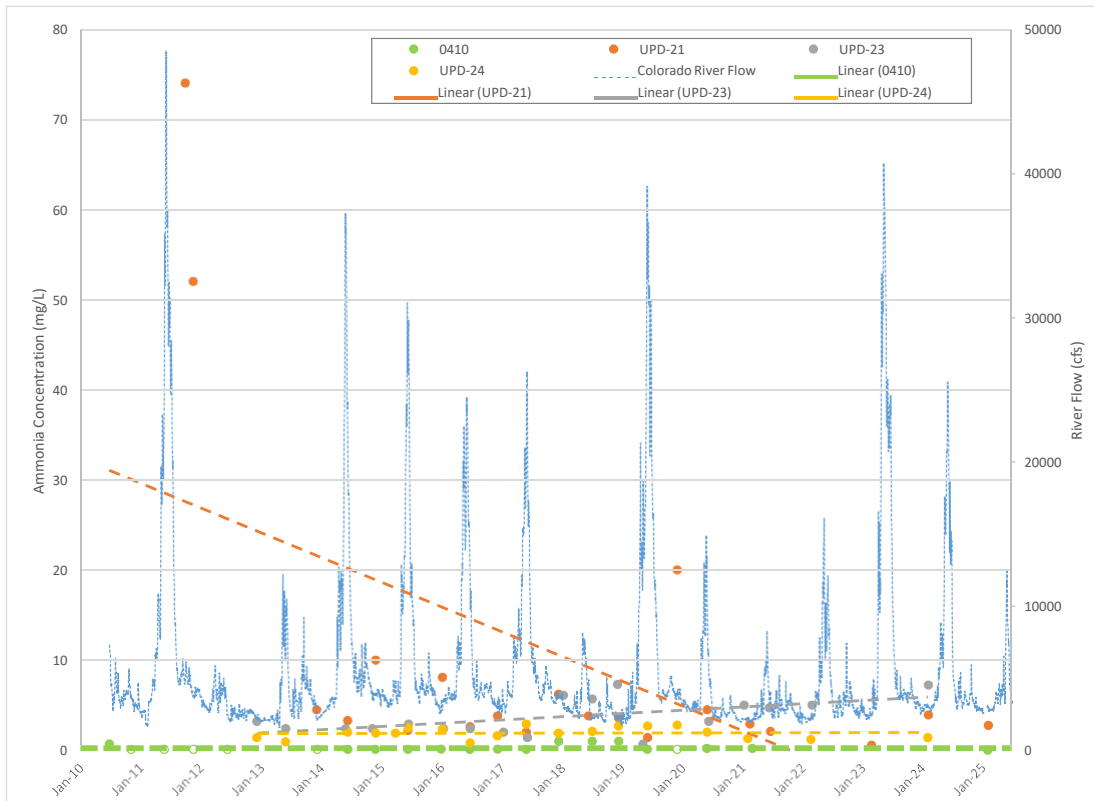


Figure 8. Northern Edge of Uranium Plume Area Observation Wells 0410, UPD-21, UPD-23, and UPD-24 Time versus Ammonia Concentration Plot

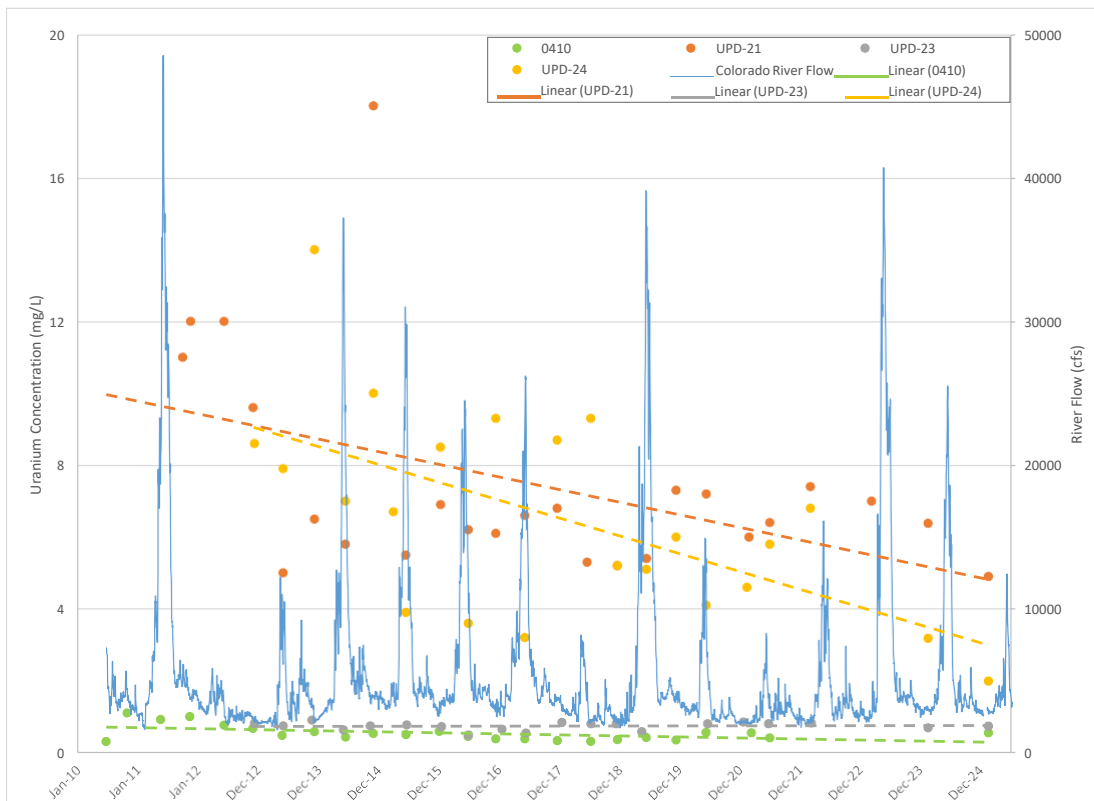


Figure 9. Northern Edge of Uranium Plume Area Observation Wells 0410, UPD-21, UPD-23, and UPD-24 Time versus Uranium Concentration Plot

Northeastern Edge of Uranium Plume Area

Figures 10 and 11 display ammonia and uranium concentration data in the vicinity of the northeastern edge of the plume area. Samples were collected from SMI-PZ3S (sampled from 25 ft bgs), UPD-22 (9 ft bgs), 0412 (9.5 ft bgs), and SMI-MW01 (16 ft bgs). 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.

As Figure 10 exhibits, the ammonia concentrations measured in samples collected from these locations were all below 6 mg/L during this recent event. The fluctuations displayed in the concentrations associated with 0412 are a function of detection limits. The ammonia 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, sharply increased to nearly 10 mg/L in 2017, and gradually decreased through 2023. During the past three sampling events the UPD-22 ammonia concentrations have increased from 2.8 to 5.1 mg/L. The data trendline indicates an increasing concentration since 2011 at UPD-22, while the SMI-PZ3S and SMI-MW01 display a decreasing trend.

As shown in Figure 11 the trend lines indicate that the uranium concentrations have been decreasing in samples collected from SMI-MW01, SMI-PZ3S, and UPD-22, and gradually increasing in the samples collected from 0412. During this most recent sampling event, the uranium concentrations in the sample collected from 0412 are more than two-times the concentrations measured in the three other locations. This suggests the plume may be migrating into this area of the site.

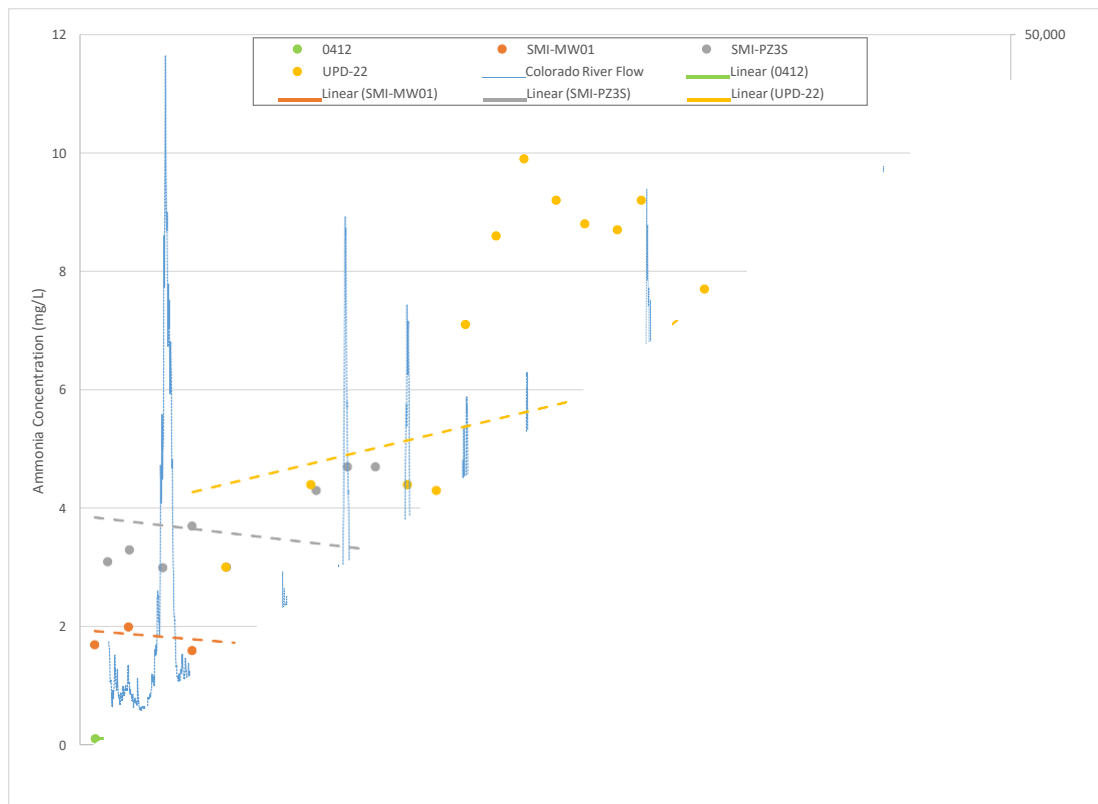


Figure 10. Northeastern Edge of Uranium Plume Area Observation Wells 0412, SMI-MW01, SMI-PZ3S, and UPD-22 Time versus Ammonia Concentration Plot

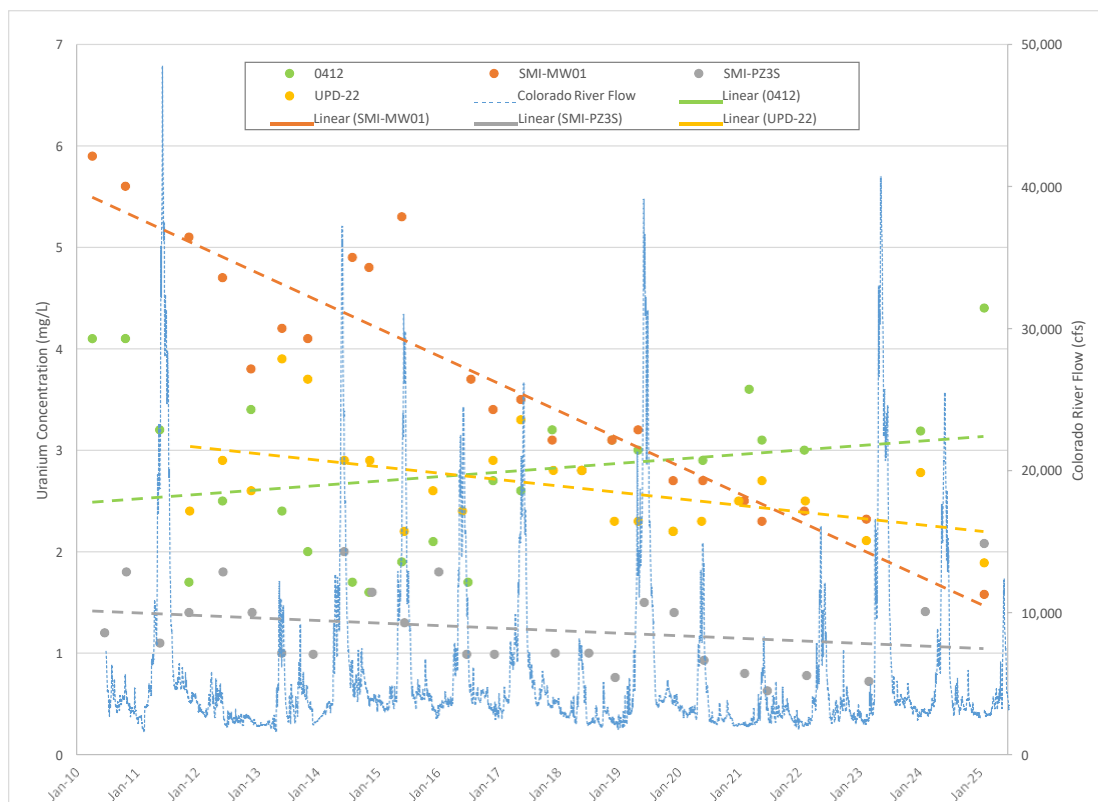


Figure 11. Northeastern Edge of Uranium Plume Area Observation Wells 0412, SMI-MW01, SMI-PZ3S, and UPD-22 Time versus Uranium Concentration Plot

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 12 and 13 for wells 0454, AMM-3, ATP-2-D, and MW-3 (listed from south to north). These wells are sampled over a variety of depths (13, 48, 88, and 16 ft bgs, respectively) and are located at approximately the same ground surface elevation. Historically well ATP-2-S was also sampled, but it was discovered that the well construction did not allow for representative sample collection from this well.

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 12 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 in a slight depression off the southern tip of the pile, it is susceptible to being submerged during flood events (most recently in 2023). The trend lines indicate the ammonia concentrations have generally decreased in samples collected from 0454, MW-3, and ATP-2-D, while increasing in samples collected from AMM-3.

Well 0454 displays the impact of the river stage on the uranium concentration in the shallowest zone (Figure 13), where uranium concentrations tend to decrease in response to high river flows. The concentrations in samples collected from ATP-2-D have been below 0.02 mg/L suggesting that the uranium plume does not vertically extend beyond this depth at this location. Trendlines indicate the uranium concentrations are gradually decreasing at 0454 and MW-3, and only slightly increasing at AMM-3.

2.3.4 Southwestern Site Boundary

Figures 14 and 15 are time versus concentration plots for ammonia and uranium, respectively, for locations 0441, 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, samples were collected from 13 ft bgs (0454), 53 ft bgs (0441), and 80 ft bgs (0453). 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.

Ammonia concentrations at wells 0453 and 0454 continue to exhibit a decreasing trend (Figure 14) since 2010. Samples collected from upgradient well 0441 indicate the ammonia concentrations have remained at background levels.

Wells 0453 and 0454 uranium concentrations (Figure 15) display significant seasonal fluctuations, possibly indicating the impacts of a secondary uranium source (as discussed in the Geosyntec 2024 report). Overall, the concentrations are slightly decreasing, suggesting there has been minimal plume migration in the northwest corner. The sample collected from well 0441 (0.055 mg/L) is just above the 0.044 mg/L uranium UMTRA standard.

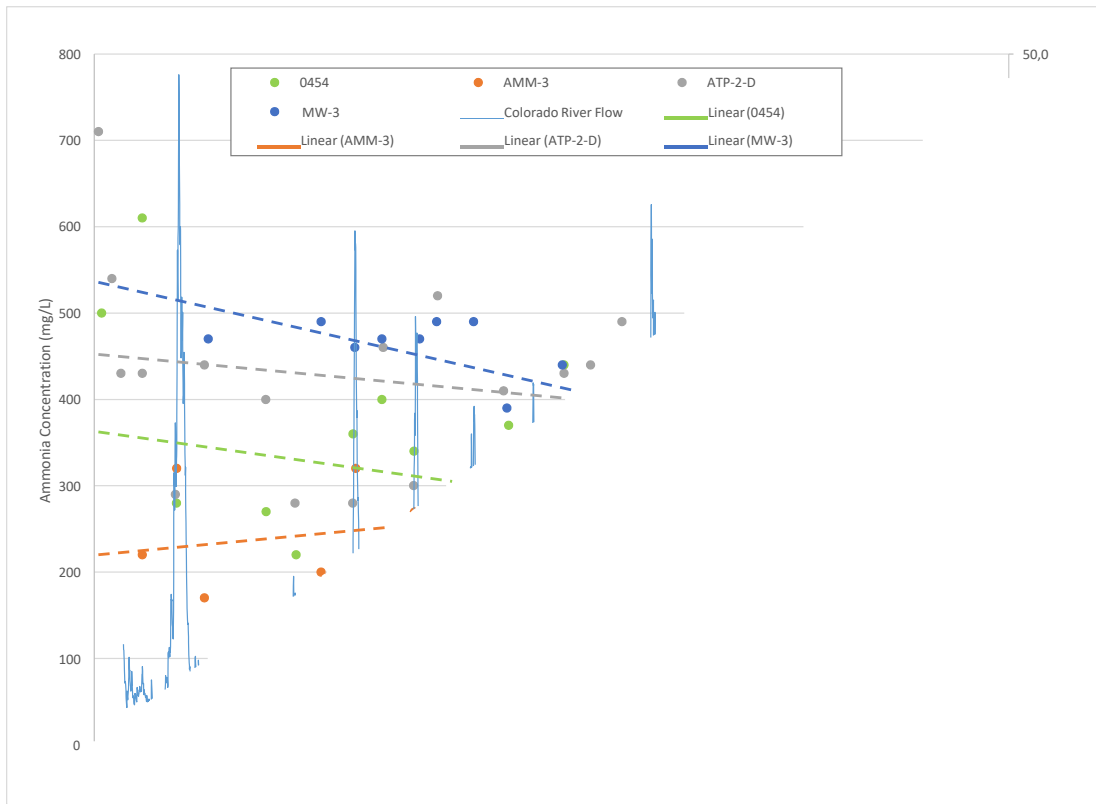


Figure 12. Base of Tailings Pile Observation Wells 0454, AMM-3, ATP-2-D, and MW-3 Time versus Ammonia Concentration Plot

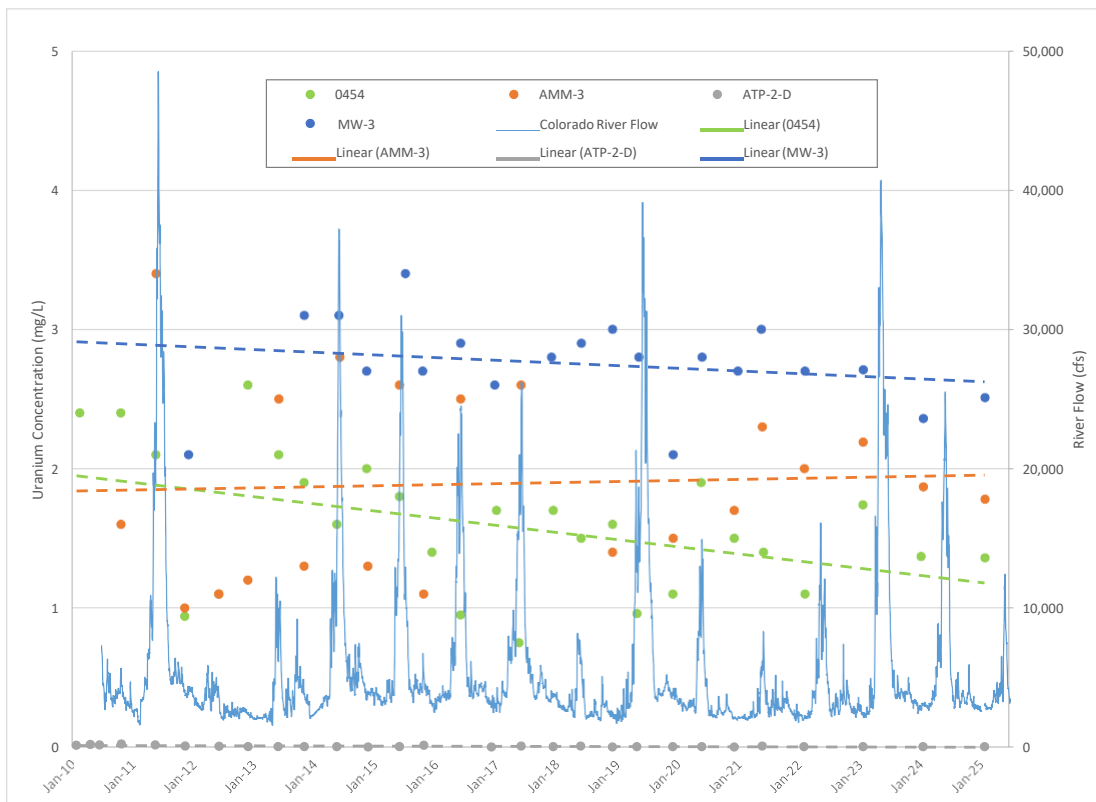


Figure 13. Base of Tailings Pile Observation Wells 0454, AMM-3, ATP-2-D, and MW-3 Time versus Uranium Concentration Plot

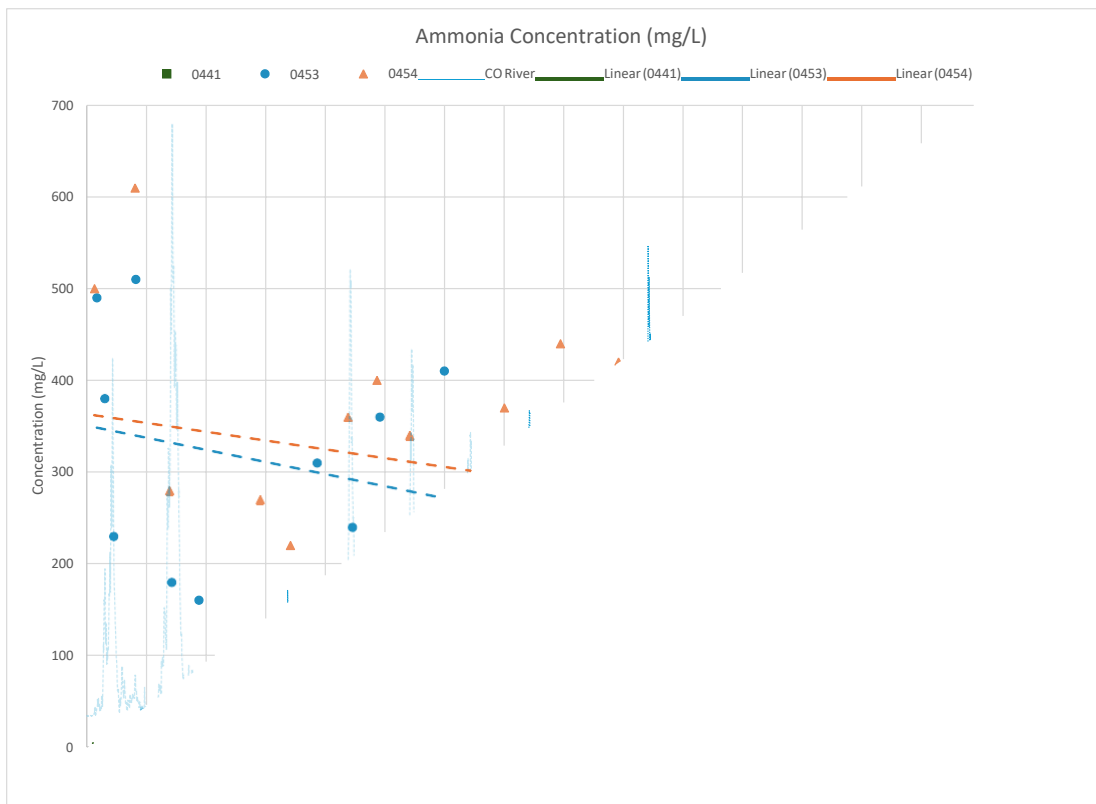


Figure 14. Southwestern Boundary Observation Wells 0453, 0454, and 0441 Time versus Ammonia Concentration Plot

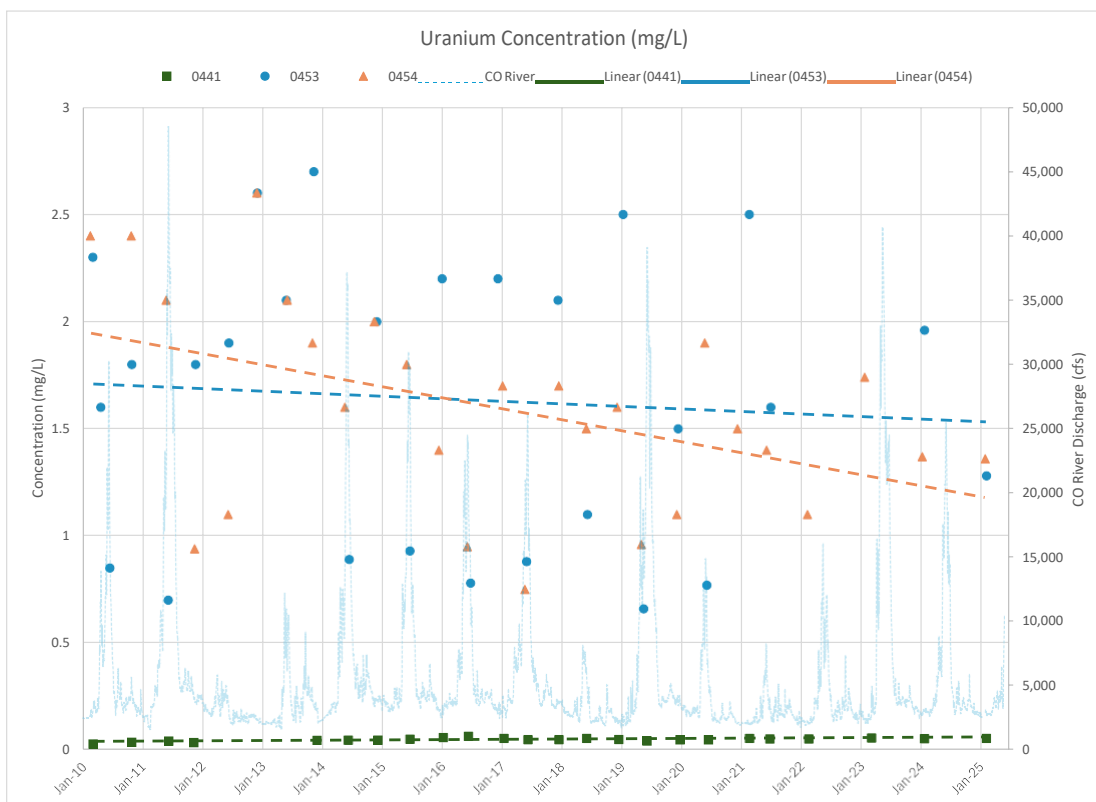


Figure 15. Southwestern Boundary Observation Wells 0453, 0454, and 0441 Time versus Uranium Concentration Plot

2.3.5 Site Boundary along the Colorado River

Figures 16 and 17 are the time versus ammonia and uranium concentration plots, respectively, for the locations sampled along the riverbank. Wells TP-17, 0492, 0407, 0401, 0404, SMI-MW01, and TP-01 (listed from the south to the north) were sampled from various depths. Wells 0492, 0407, 0401, 0404 and SMI-MW01 were all sampled from 16 to 18 ft bgs, while wells TP-01 and TP-17 were sampled from 22 and 28 ft bgs, respectively. Because these wells are located along the riverbank, the water chemistry has historically been heavily influenced by the Colorado River stage fluctuations.

The results presented in Figure 16 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. Compared to the previous event, the ammonia concentration increased from 185 to 301 mg/L during this recent event.

Overall, the ammonia concentrations have increased in samples collected from 0401 and 0492 at approximately the same rate and have decreased in samples collected from 0404 and 0407 at a similar rate. The lowest ammonia concentrations continue to be associated with the samples collected from the wells SMI-MW01, TP-17 and TP-01. The data continues to suggest the plume is contained within the area bound to the south by TP-17 and TP-01 to the north.

Trendlines displayed in Figure 17 suggest the uranium concentrations have significantly decreased in samples collected from SMI-MW01 since 2010 and decreased at a lower rate from 0404 and 0492. Trendlines also suggest the concentrations during this same period have slightly increased at locations 0401 and 0407. 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 (0.054 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.

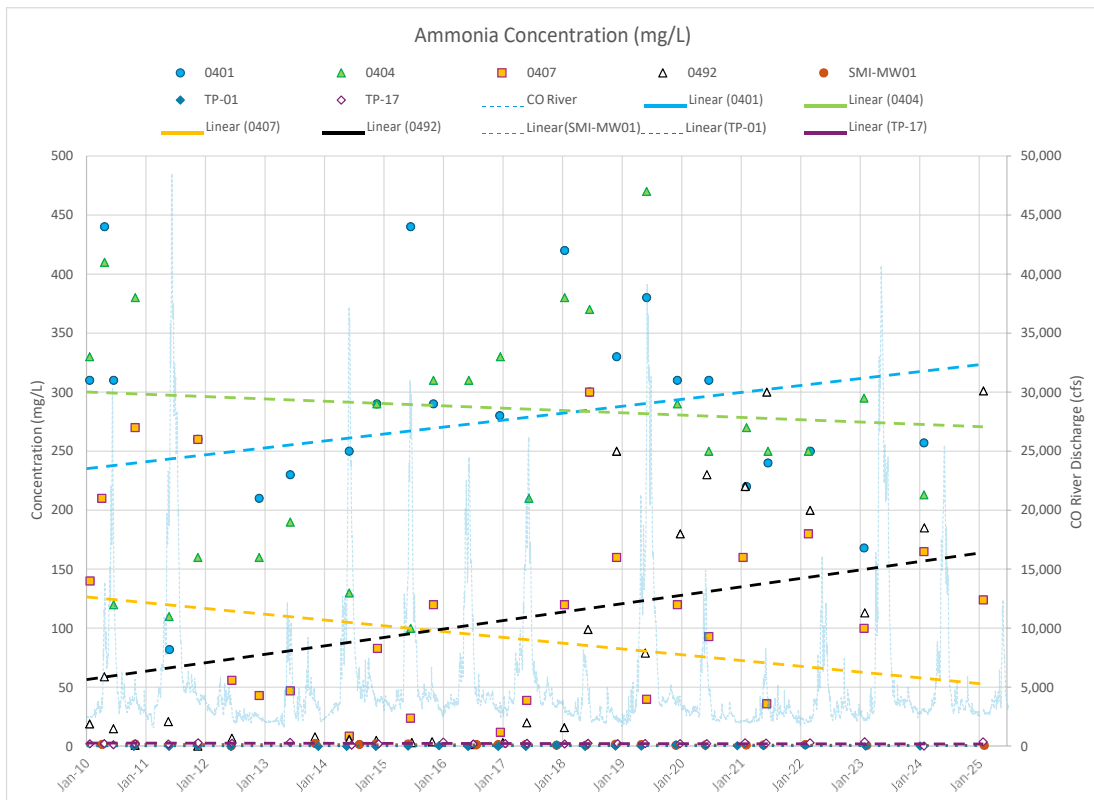


Figure 16. Riverbank Observation Wells TP-17, 0492, 0407, 0401, 0404, SMI-MW01, and TP-01 Time versus Ammonia Concentration Plot

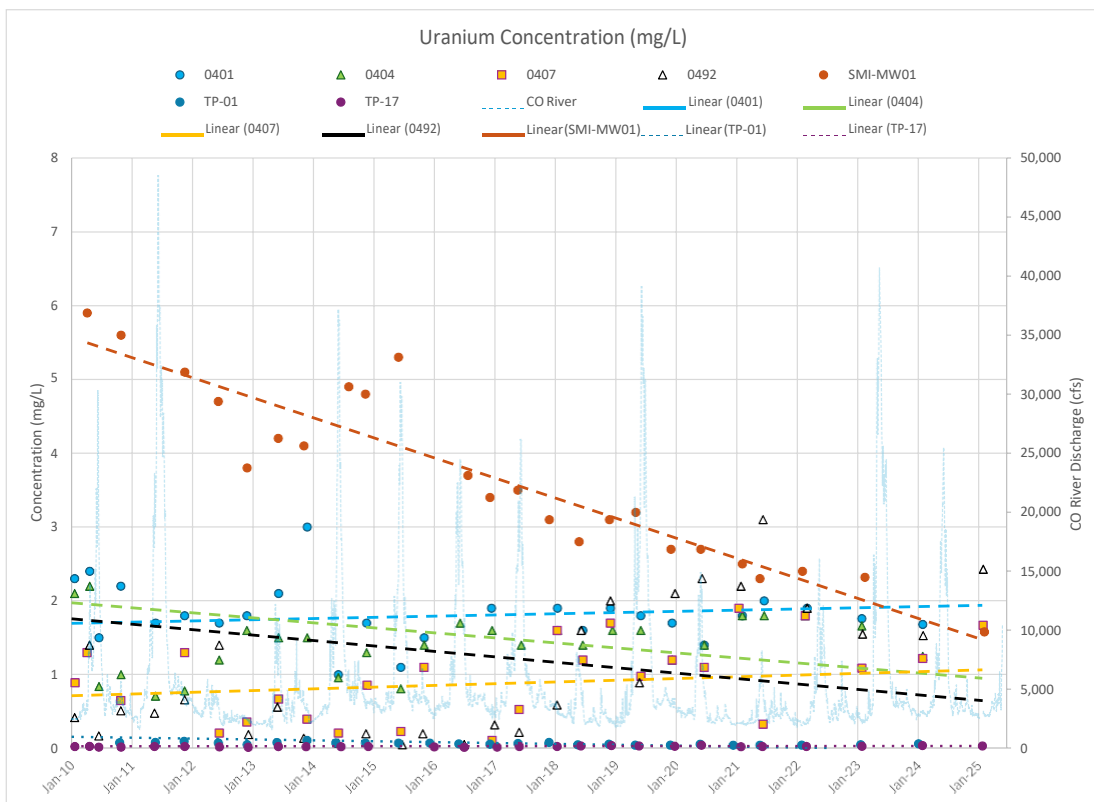


Figure 17. Riverbank Observation Wells TP-17, 0492, 0407, 0401, 0404, SMI-MW01, and TP-01 Time versus Uranium Concentration Plot

2.3.6 Southern and Off-site Areas

Figures 18 and 19 are the plots for four locations sampled at the southern end of the site, wells TP-17, TP-20, TP-23, and 0454 (sampled from 28, 32, 25, and 13 ft bgs, respectively). 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 18) 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. 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 ($\mu\text{mhos/cm}$) at a depth of just 28 ft bgs and more than 134,000 $\mu\text{mhos/cm}$ 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 64,000 $\mu\text{mhos/cm}$ 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 $\mu\text{mhos/cm}$ 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. Ammonia concentrations have decreased at a similar rate in samples collected from 0454 and TP-20 since 2011.

Similar to the ammonia concentration results, uranium concentrations measured from wells TP-17 and TP-20 (Figure 19) suggest no uranium plume migration in this area of the site. 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 that the uranium concentrations in samples from 0454 and TP-23 have also generally decreased at a similar rate over the past 15 years.

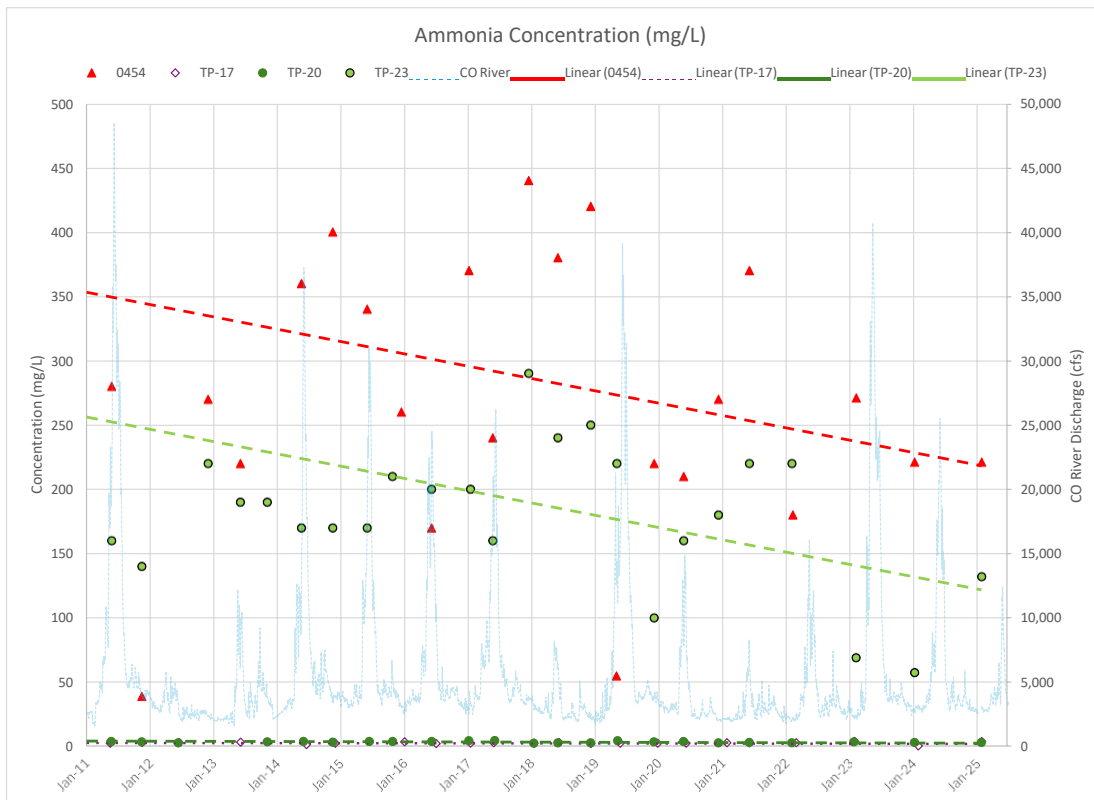


Figure 18. South of Site Observation Wells TP-17, TP-20, TP-23, and 0454 Time versus Ammonia Concentration Plot

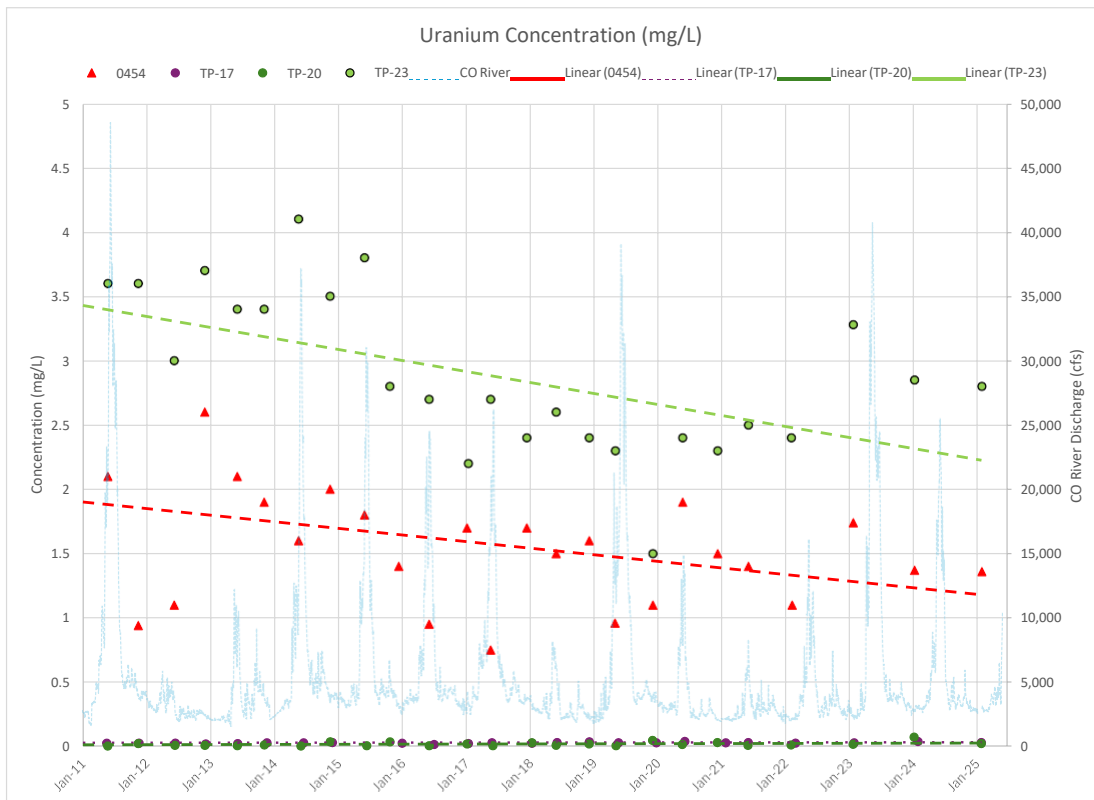


Figure 19. South of Site Observation Wells TP-17, TP-20, TP-23, and 0454 Time versus Uranium Concentration Plot

2.3.7 Surface Water Sampling Results

Table 11 presents the ammonia results from the surface water samples collected in February 2025 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 9 and represent a snapshot at the time the samples were collected.

Table 11. 2025 Site-wide Surface Water Ammonia Concentrations and Comparisons to EPA Acute and Chronic Criteria

Location	Date	Temp (°C)	pH	February 2025 Ammonia as N (mg/L)	EPA - Acute Total as N (mg/L)*	EPA - Chronic Total as N (mg/L)**
0201	2/5/2025	5.9	8.45	0.038	3.3	0.8
0218	2/5/2025	6.4	8.40	0.045	4.1	0.95
0226	2/5/2025	5.3	8.50	0.147	3.3	0.8
CR1	2/5/2025	6.7	8.49	0.017	3.3	0.8
CR2	2/5/2025	5.6	8.52	0.019	3.3	0.8
CR3	2/5/2025	6.1	8.40	0.385	4.1	0.95
CR5	2/5/2025	5.3	8.41	0.105	4.1	0.95

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 surface water locations sampled 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 February 2025. The Colorado River mean daily flows during this sampling event ranged from 2,740 to 3,160 cfs, which correlated to a river surface elevation at the river inlet of 3,953.3 to 3,953.6 feet above mean sea level. These flows were just below average according to the historical USGS data.

River elevations fluctuated approximately 0.3 ft during this time. The water level data collected during this time frame could therefore be used to generate the groundwater surface contour map displayed in Figure 20. 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.

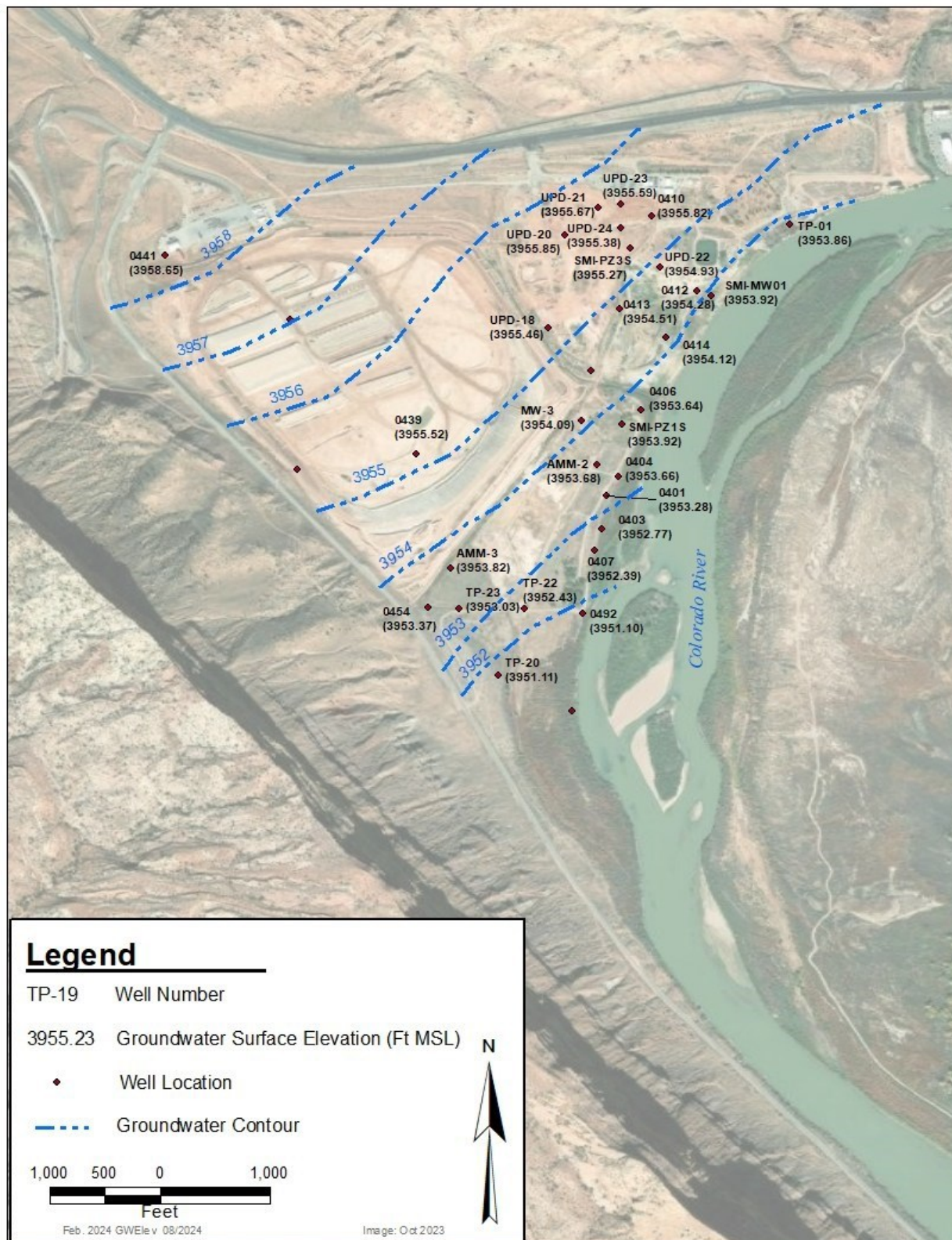


Figure 20. Site-wide Groundwater Elevations, February 2025

2.5 Contaminant Distribution

Figures 21 and 22 are maps showing shallow groundwater ammonia and uranium plumes, respectively, using data collected during the February 2025 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.

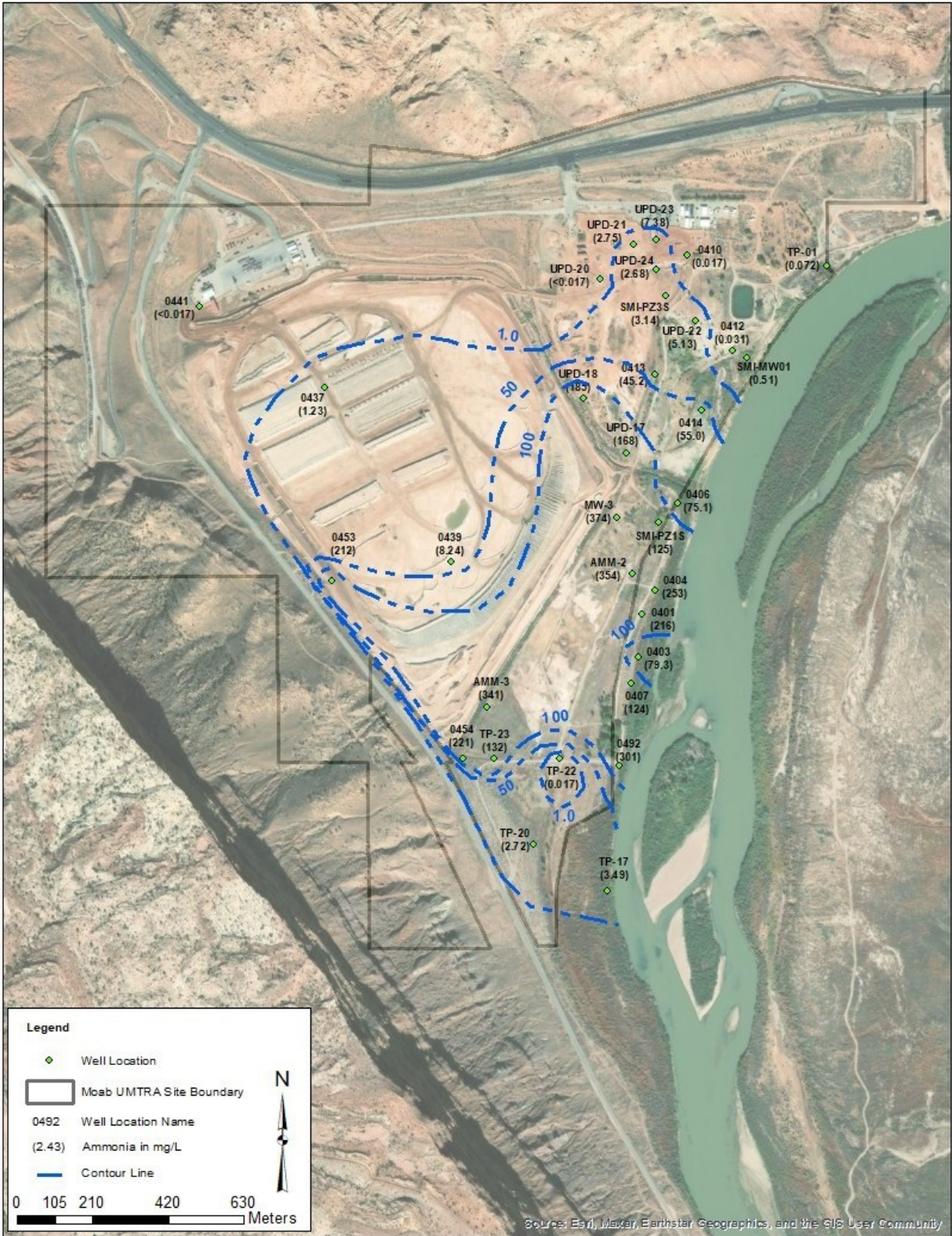


Figure 21. Ammonia Plume in Shallow Groundwater, February 2025

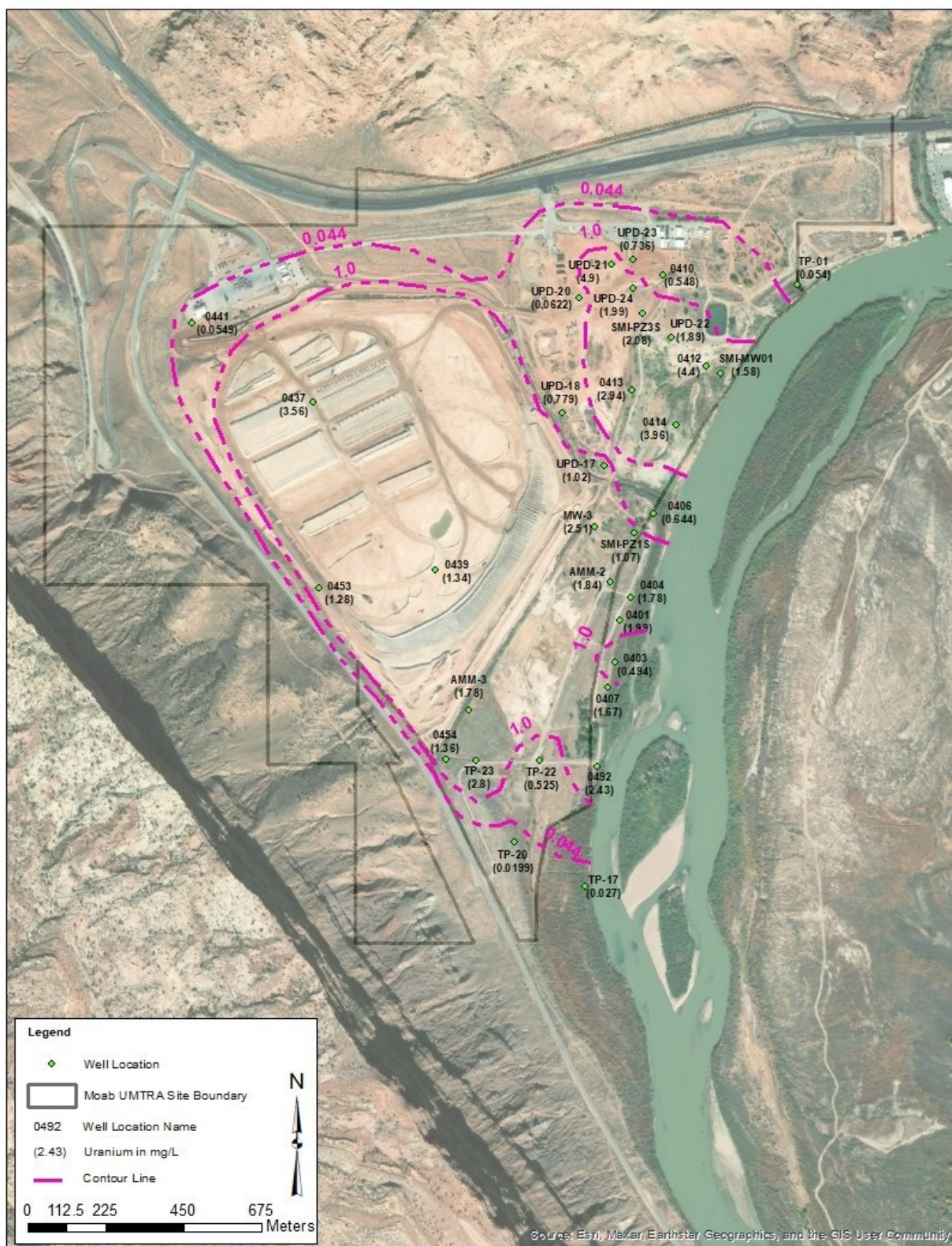


Figure 22. Uranium Plume in Shallow Groundwater, February 2025

3.0 March 2025 Sampling Event

3.1 Summary

In March 2025, groundwater samples were collected from the 18 monitoring wells in CF1, CF2, CF3, and the Baseline Area (Figure 3). In addition, one location (SMI-PZ1S) in the vicinity of the sand filter was sampled to determine the impact of the backflushing associated with the sand filter. These wells in general had not been sampled in several years because they were not associated with the extraction or injection systems and are in general completed at deeper zones of the aquifer.

3.2 March 2025 Sampling Event Data Assessment

3.2.1 Laboratory Performance Assessment

This validation was performed according to the *Environmental Procedures Catalog* (STO 6), “Standard Practice for Validation of Laboratory Data,” GT-9(P) (2006). The procedure was applied at Level 3, Data Deliverables Examination. All analyses were successfully completed.

General Information and Validation Results

RIN 2503154
Laboratory: GEL Laboratories, Charleston, SC
SDG Number: 715817
Analysis: Metals and Inorganics
Validator: James Ritchey
Review Date: September 2025

The samples were prepared and analyzed using accepted procedures as shown in Table 12. Analytical results were qualified as listed in Table 13. Refer to Table 14 for an explanation of the data qualifiers applied.

Table 12. March 2025 Sampling Event, Analytes and Methods

Analyte	Preparation Method	Analytical Method
Ammonia as N, NH ₃ -N	EPA 350.1	EPA 350.1
Uranium	SW-846 3005A	SW-846 6020B
Arsenic	SW-846 3005A	SW-846 6010D
Copper	SW-846 3005A	SW-846 6010D
Manganese	SW-846 3005A	SW-846 6010D
Selenium	SW-846 3005A	SW-846 6010D

Table 13. March 2025 Sampling Event, Data Qualifiers

Flag	Reason	Sample Number	Analyte	Locations
J/UJ	D-1	715810-01, 04, 06, 07, 09, 12, 16, 18, 20, and 21	Selenium	0480, 0481, 0482, 0483, 0485, 0488, 0493, 0557, 0558, 0559
NJ/UJ	B-1	715810-04, 06, 07, 14, 16, 18, 20, and 21	Selenium	0481, 0482, 0483, 0493, 0557, 0558, 0559

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

Table 14. March 2025 Sampling Event, Reason Codes for Data Flags

Reason Code	Qualifier (Detects)	Qualifier (Non-detects)	Explanation
D-1	J	U	Samples did not meet recommended duplicate criterion.
B-1	NJ	UJ	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. "N" indicates the blank result had a negative value.

Sample Shipping/Receiving

Gel Laboratories Charleston, South Carolina, received samples from RIN 2503154 in a shipment of one cooler. The shipment (SDG 715817) contained 21 ground water samples (including one duplicate). The temperature of the cooler was 1°C and it arrived on March 24, 2025 (Tracking number 1ZE243120196266208). The temperature was still considered in acceptable range according to the lab's criterion.

The COC forms were checked to confirm that all 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 times.

Laboratory Instrument Calibration

All laboratory instrument calibrations were performed correctly in accordance with the cited methods. Specific calibration criteria are discussed under the specific method.

SW-846 6020B, 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.

Initial calibration verification (ICV) and continuing calibration verification (CCV) checks were made at the required frequency. All calibration checks met the acceptance criteria. CRIs were made at the required frequency to verify the linearity of the calibration curve near the RL. The CRI verifications were within the acceptance criteria range for all SDGs.

Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries were stable and within acceptable ranges.

SWP-846 6010D, 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.

CRIs were made at the required frequency to verify the linearity of the calibration curve near the RL. The CRI verifications were within the acceptance criteria range for all SDGs.

Mass calibration and resolution verifications were performed at the beginning of each analytical run in accordance with the analytical procedure. Internal standard recoveries were stable and within acceptable ranges.

Method EPA 350.1, Ammonia as N

Initial calibrations for ammonia as N on all SDGs were performed using six calibration standards and one blank. The calibration curve had a correlation coefficient (r^2) value greater than 0.995 in all SDGs.

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

In SDG 715817, selenium was identified in one of the MBs (1206062028). Associated results are flagged “NJ” for reason B-1 due to the result having a negative value greater than the MDL.

Equipment Blanks

One equipment blank (Location 0999) was collected with tubing that was shared between wells. All analytes (ammonia, arsenic, copper, manganese, and selenium) were undetectable in the equipment blank with the exception of uranium. However, since all results had values higher than 5 times the MDL, no results needed to be flagged.

Matrix Spike Analysis

For uranium, arsenic, copper, manganese, and selenium, the LCS was used in place of a matrix spike. Matrix spike data for ammonia was within criteria. LCS results were within criteria for this event.

Duplicate Analysis

LCSD data were used in place of MSD. All LCSD data results within criteria.

Field Duplicate Analysis

One FD sample was collected from location 0493. 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.

Arsenic, copper, and selenium did not meet the recommended criterion, but the results for the sample and duplicate were less than five times the MDL and the differences were less than the MDL. Thus, the results did not require qualification. Selenium was also outside the criterion, and the result was less than 5x the MDL. However, the absolute difference between results was greater than the MDL. As a result, samples results are flagged “J” for detects and “UJ” for non-detects for reason D-1.

Metals Serial Dilution

Serial dilutions were run for all metals analyses in this SDG, and all results were within acceptance criteria.

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 (Table 15).

Table 15. March 2025 Sampling Event Detection Limits and Dilution Ranges

Analyte	Dilution Range	Max MDL
Ammonia	1 – 500	8.5 mg/L
Arsenic	1	5.0 µg/L
Copper	1	3.0 µg/L
Manganese	1	2.0 µg/L
Selenium	1	6.0 µg/L
Uranium	1 – 20	1.34 µg/L

Completeness

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

Electronic Data Deliverable Files

The EDD was received on April 22, 2025. 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

Eleven of the results associated with this sampling event are considered anomalous data points (seven concentrations were 50% above the historical maximum, and four were more than 50% below the historical minimum). See Table 16 for the location and analyte of anomalous data. The database Minimums and Maximums Report is provided in Appendix B.

Table 16. Anomalous Data Associated with the March 2025 Sampling Event

Location	Sample Date	Concentration (mg/L)	Historical Min (mg/L)	Historical Max (mg/L)	Disposition
Copper					
0558	3/13/2025	0.00549	0.014	0.1	This concentration was lower than the historical minimum and will continue to be monitored to determine if this is indicative of a trend.
Manganese					
0488	3/13/2025	0.0287	3.3	7.59	These concentrations are all lower than the historical minimum and will continue to be monitored to determine if this is indicative of a trend.
0687	3/18/2025	0.0161	1.6	7.4	
0688	3/18/2025	0.428	2.5	7.5	
Selenium					
0480	3/13/2025	0.0334	0.001	0.0072	First time analyzed since 2008, conditions may have changed.
0485	3/13/2025	0.0316	0.0059	0.0034	Only sixth time this location has been analyzed for selenium, still establishing range.
0488	3/13/2025	0.316	0.0072	0.1	First time analyzed since 2008, conditions may have changed. Will continue monitoring.
0587	3/20/2025	0.0733	0.012	0.0053	
0689	3/18/2025	0.0232	0.0039	0.015	
Uranium					
0482	3/13/2025	2.2	0.51	1.0	First time analyzed since 2008, conditions may have changed. Will continue monitoring.
0485	3/13/2025	2.1	0.0002	1.4	

3.3 March 2025 Sampling Event Results

In addition to ammonia and uranium, during the March 2025 event samples were also analyzed for the five other potential contaminants of concern (PCOCs) (arsenic, copper, manganese, and selenium). 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 (ammonia and 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. Groundwater samples collected from each of the locations during the March 2025 event exceeded this 3 mg/L

Arsenic

Since 2022, arsenic has been part of the standard sampling suite. During this most recent event, none of the locations had a concentration that exceeded the 40 CFR 192 Sub A, Table 1 standard of 0.05 mg/L.

Copper

The only applicable groundwater standard for copper is the EPA Action Level of 1.3 mg/L. Samples were collected from 20 locations, and the concentrations ranged from 0.003 (the detection limit) to 0.0175 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. All samples collected during this event, with the exception of those collected from 0488 and 0687, exceeded the 0.05 mg/L concentration. Table 17 provides the locations, sample depths, and associated results.

Selenium

Similar to the samples collected for arsenic analysis, since 2022 all samples have been analyzed for selenium. Of the 19 wells sampled, 12 had selenium concentrations above the 0.01 mg/L standard (40 CFR 192 Sub A, Table 1). These results are presented in Table 18.

Uranium

All samples collected from the 19 locations during this event exceeded the 0.044 mg/L uranium groundwater standard (Table 19). 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 17. March 2025 Groundwater Locations Exceeding the Manganese 0.05 mg/L
Drinking Water Standard*

Well Number	Date	Location	Sample Depth (ft bgs)	Manganese Concentration (mg/L)
0480	3/13/2025	CF1	18	4
0481	3/13/2025	CF1	28	2.73
0482	3/13/2025	CF1	58	6.03
0483	3/13/2025	CF1	18	4.4
0485	3/13/2025	CF1	58	5.94
0493	3/18/2025	CF1	54	5.8
0557	3/13/2025	CF1	40	2.77
0558	3/13/2025	CF1	36	5.23
0559	3/13/2025	CF1	19	4.07
0560	3/13/2025	CF1	28	5.56
0561	3/13/2025	CF1	50	5.96
0587	3/20/2025	CF2	18	2.4
0588	3/20/2025	CF2	34	1.81
0589	3/20/2025	CF2	52	6.17
0688	3/18/2025	CF3	39	0.428
0689	3/18/2025	CF3	54	4.72
SMI-PZ1S	3/24/2025	PW01 Cluster	18	0.477

*Table 18. March 2025 Groundwater Locations Exceeding the 0.01 mg/L Selenium
Groundwater Standard*

Well Number	Date	Location	Sample Depth (ft bgs)	Selenium Concentration (mg/L)
0480	3/13/2025	CF1	18	0.0334
0482	3/13/2025	CF1	58	0.0144
0483	3/13/2025	CF1	18	0.0276
0485	3/13/2025	CF1	58	0.0316
0488	3/13/2025	Baseline Area	39	0.316
0493	3/18/2025	Baseline Area	54	0.0212
0558	3/13/2025	CF1	36	0.0101
0587	3/20/2025	CF2	18	0.0733
0588	3/20/2025	CF2	34	0.0169
0687	3/18/2025	CF3	27	0.112
0689	3/18/2025	CF3	54	0.0232
SMI-PZ1S	3/24/2025	PW01 Cluster	18	0.0424

*Table 19. March 2025 Groundwater Locations
Exceeding the 0.044 mg/L Uranium Groundwater Standard*

Well Number	Date	Location	Sample Depth (ft bgs)	Uranium Concentration (mg/L)
0480	3/13/2025	CF1	18	2.19
0481	3/13/2025	CF1	28	2.06
0482	3/13/2025	CF1	58	2.2
0483	3/13/2025	CF1	18	2.03
0485	3/13/2025	CF1	58	2.1
0488	3/13/2025	Baseline Area	39	1.74
0493	3/18/2025	Baseline Area	54	2.28
0557	3/13/2025	CF1	40	2.3
0558	3/13/2025	CF1	36	2.33
0559	3/13/2025	CF1	52	1.56
0560	3/13/2025	CF1	28	2.36
0561	3/13/2025	CF1	50	2.01
0587	3/20/2025	CF2	18	1.19
0588	3/20/2025	CF2	34	2.0
0589	3/20/2025	CF2	52	2.44
0687	3/18/2025	CF3	27	1.76
0688	3/18/2025	CF3	39	2.05
0689	3/18/2025	CF3	54	2.43
SMI-PZ1S	3/24/2025	PW01 Cluster	18	0.292

March 2025 Sampling Event Ammonia and Uranium Concentration Distribution

Ammonia and uranium concentrations are depth dependent. Figure 23 displays the surface elevations, groundwater elevations, sample depth, ammonia and uranium concentrations, and the specific conductance for the locations sampled during this event. As this figure displays, the ammonia and uranium concentrations are elevated at depth.

Geometric mean ammonia and uranium concentrations were calculated for various zones within the aquifer to determine the depth ranges that tend to have the highest concentrations (Table 20). As this table displays, specific conductance increases with depth following the site conceptual model. The highest concentrations are associated with the aquifer zone more than 40 ft bgs.

Table 20. March 2025 Ammonia and Uranium Geomean Concentration Based on Aquifer Zone

Aquifer Zone	Specific Conductance Geometric Mean (umhos/cm)	Ammonia Geometric Mean (mg/L)	Uranium Geometric Mean (mg/L)
Less Than 40 ft bgs	16,663	298	1.97
More Than 40 ft bgs	35,652	390	2.14

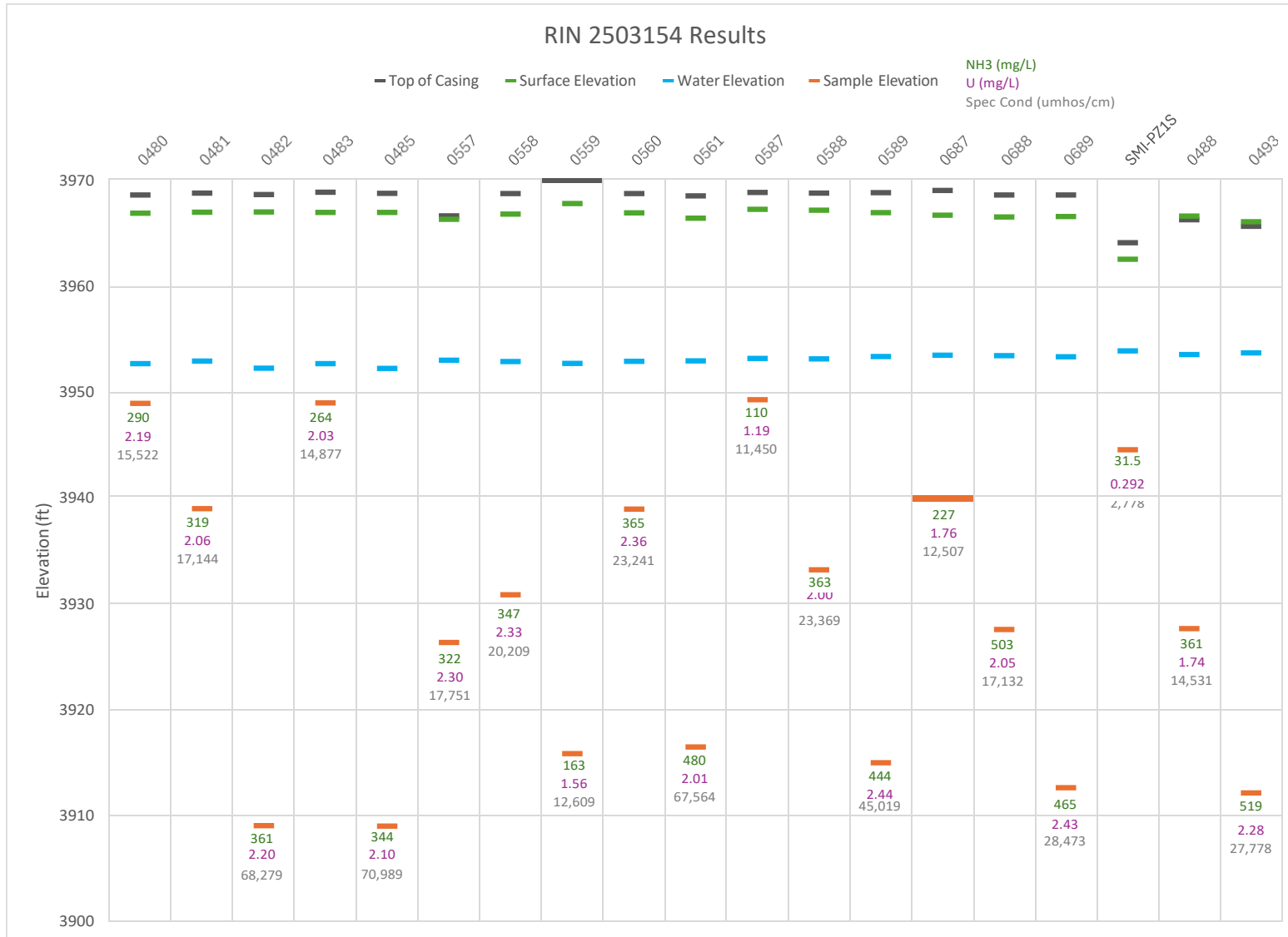


Figure 23. Ammonia and Uranium Concentration Vertical Distribution from the March 2025 Sampling Event

Impacts of Sand Filter Operations in the Vicinity of SMI-PZ1S

Groundwater parameter data have been collected at the Baseline Area and the SMI-PW01 clusters consistently since May 2024. Starting in November 2024 the specific conductance values started to decrease below the well 0405 values, which are considered to represent background conditions. During this time the injection system was consistently running. In addition to injecting water into the CF4 wells, the sand filter was also discharging diverted Colorado River water in the vicinity of the SMI-PW01 as result of the filter backflushing requirements. Figure 24 displays wells 0405 and SMI-PZ1S specific conductance along with the injected volume from May 2024 through July 2025.

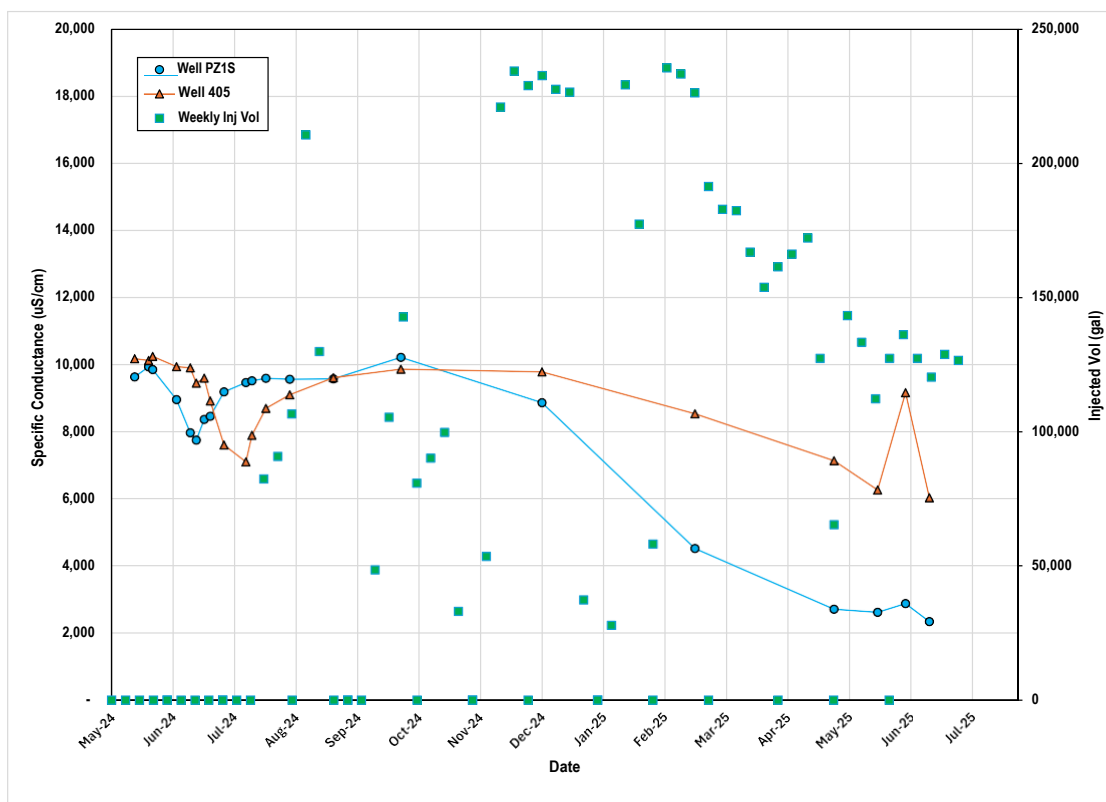


Figure 24. Wells 0405 and SMI-PZ1S Specific Conductance vs Injected Volume, May 2024 through June 2025

While parameter data continued to suggest the effects of this sand filter discharge water on the shallow zone of this area of the site, the impacts on the contaminant concentrations had not been evaluated until the March 2025 event. Using 0405 as a baseline measurement, the SMI-PZ1S specific conductance has decreased approximately 55% in response to the presence of this water. In addition, the ammonia and uranium concentrations (31.5 and 0.292 mg/L) have decreased approximately 75% compared to the samples collected from this same location during 2024 baseflow conditions.

4.0 Conclusions

4.1 February 2025 Site-wide Sampling Event

The rationale for conducting the February 2025 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, results indicate selenium (26 of the 33 locations sampled) and uranium (30 of the 33 locations sampled) had results exceeding 40 CFR 192 Sub A standards. Twenty-six of the 33 wells samples exceeded the 0.05 mg/L manganese secondary EPA drinking water standard, and 22 of the 33 wells sampled exceeded the 3.0 mg/L ammonia 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.

4.2 March 2025 Sampling Event

March 2025 samples were collected from a variety of locations within CF1, CF2, CF3, and the Baseline Area. These wells in general had not been sampled in several years (in some instances since 2018) because they were not associated with the extraction or injection systems and are in general completed at deeper zones of the aquifer. Ammonia and uranium concentrations in the wells completed below 40 ft bgs had higher concentrations compared to the shallower zones, as expected. Except for two of out 19 analyses, the ammonia and uranium concentrations were within their respective historical ranges.

Of the PCOCS for which analyses were run, results indicate selenium (12 of the 19 locations sampled) and uranium (all 19 locations sampled) had results exceeding 40 CFR 192 Sub A standards. Seventeen of the 19 wells samples exceeded the 0.05 mg/L manganese secondary EPA drinking water standard, and all 19 wells sampled exceeded the 3.0 mg/L ammonia concentration recommended by USFWS.

In addition, well SMI-PZ1S was sampled to assess to what degree the sand filter media backflushing is diluting the contaminant concentrations in the area of the site area where this water is discharged onto the surface. Specific conductance concentrations have decreased approximately 55% in response to the presence of this water. The ammonia and uranium concentrations have decreased approximately 75% compared to the samples collected from this location during 2024 baseflow conditions.

5.0 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 I)* (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).

Geosyntec Consultants, 2024, *Secondary Source Investigation Report, Moab Uranium Mill Tailings Remedial Action Project Site*.

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.
February 2025 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. February 2025 Site Wide Sampling Event Water Sampling Field Activities Verification

Sampling Event/RIN	Site Wide Sampling Event / RIN 2502153	Date(s) of Water Sampling	February 3 - 14, 2025
Date(s) of Verification	September 2025	Name of Verifier	J. Ritchey, K. Pill
		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		Duplicates were collected from locations 0492 (2000), and 0439 (2002).

Appendix A. February 2025 Site Wide Sampling Event Water Sampling Field Activities Verification

Sampling Event/RIN	Site Wide Sampling Event / RIN 2502153	Date(s) of Water Sampling	February 3 - 14, 2025
Date(s) of Verification	September 2025	Name of Verifier	J. Ritchey, K. Pill

	Response (Yes, No, NA)	Comments
12. Were EBs taken at a frequency of one per 20 samples that were collected with non-dedicated equipment?	— <u>NA</u>	An equipment blank (2001) was collected on non-dedicated surface water sampling equipment.
13. Were trip blanks prepared and included with each shipment of volatile organic compound samples?	— <u>NA</u>	
14. Were quality-control samples assigned a fictitious site identification number?	— <u>Yes</u>	
Was the true identity of the samples recorded on the quality assurance sample log?	— <u>Yes</u>	
15. Were samples collected in the containers specified?	— <u>Yes</u>	
16. Were samples filtered and preserved as specified?	— <u>Yes</u>	
17. Were the number and types of samples collected as specified?	— <u>Yes</u>	
18. Were COC records completed, and was sample custody maintained?	— <u>Yes</u>	
19. Are field data sheets signed and dated by both team members?	— <u>Yes</u>	
20. Was all other pertinent information documented on the field data sheets?	— <u>NA</u>	
21. Was the presence or absence of ice in the cooler documented at every sample location?	— <u>Yes</u>	
22. Were water levels measured at the locations specified in the planning documents?	— <u>Yes</u>	

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0201 <surface location, river>

REPORT DATE: 9/29/2025 12:59 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	02/05/2025 0001	0.00 - 0.00	0.0380	J	0.017	-
Arsenic	mg/L	02/05/2025 0001	0.00 - 0.00	0.00500	U	0.005	-
Copper	mg/L	02/05/2025 0001	0.00 - 0.00	0.00300	U	0.003	-
Manganese	mg/L	02/05/2025 0001	0.00 - 0.00	0.0204		0.002	-
Oxidation Reduction Potential	mV	02/05/2025 N001	0.00 - 0.00	93		-	-
pH	S.U.	02/05/2025 N001	0.00 - 0.00	8.45		-	-
Selenium	mg/L	02/05/2025 0001	0.00 - 0.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/05/2025 N001	0.00 - 0.00	1192		-	-
Temperature	C	02/05/2025 N001	0.00 - 0.00	5.90		-	-
Turbidity	NTU	02/05/2025 N001	0.00 - 0.00	175.00		-	-
Uranium	mg/L	02/05/2025 0001	0.00 - 0.00	0.00485		0.000335	-

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

LOCATION: 0218 <surface location, river>

REPORT DATE: 9/29/2025 12:59 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	02/05/2025 0001	0.00 - 0.00	0.0450	J	0.017	-
Arsenic	mg/L	02/05/2025 0001	0.00 - 0.00	0.00500	U	0.005	-
Copper	mg/L	02/05/2025 0001	0.00 - 0.00	0.00300	U	0.003	-
Manganese	mg/L	02/05/2025 0001	0.00 - 0.00	0.0236		0.002	-
Oxidation Reduction Potential	mV	02/05/2025 N001	0.00 - 0.00	55		-	-
pH	S.U.	02/05/2025 N001	0.00 - 0.00	8.40		-	-
Selenium	mg/L	02/05/2025 0001	0.00 - 0.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/05/2025 N001	0.00 - 0.00	1194		-	-
Temperature	C	02/05/2025 N001	0.00 - 0.00	6.40		-	-
Turbidity	NTU	02/05/2025 N001	0.00 - 0.00	106.00		-	-
Uranium	mg/L	02/05/2025 0001	0.00 - 0.00	0.00500		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0226 <surface location, river>

REPORT DATE: 9/29/2025 12:59 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	02/05/2025	0001	0.00 - 0.00	0.147		0.017	-
Arsenic	mg/L	02/05/2025	0001	0.00 - 0.00	0.00500	U	0.005	-
Copper	mg/L	02/05/2025	0001	0.00 - 0.00	0.00300	U	0.003	-
Manganese	mg/L	02/05/2025	0001	0.00 - 0.00	0.134		0.002	-
Oxidation Reduction Potential	mV	02/05/2025	N001	0.00 - 0.00	-20		-	-
pH	S.U.	02/05/2025	N001	0.00 - 0.00	8.50		-	-
Selenium	mg/L	02/05/2025	0001	0.00 - 0.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/05/2025	N001	0.00 - 0.00	1264		-	-
Temperature	C	02/05/2025	N001	0.00 - 0.00	5.30		-	-
Turbidity	NTU	02/05/2025	N001	0.00 - 0.00	703.00		-	-
Uranium	mg/L	02/05/2025	0001	0.00 - 0.00	0.00581		0.000335	-

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

LOCATION: 0401 <well> Configuration 2

REPORT DATE: 9/29/2025 12:59 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	02/03/2025	0001	18.00	216		4.25	-
Arsenic	mg/L	02/03/2025	0001	18.00	0.00500	U	0.005	-
Copper	mg/L	02/03/2025	0001	18.00	0.00594	B	0.003	-
Manganese	mg/L	02/03/2025	0001	18.00	3.470		0.002	-
Oxidation Reduction Potential	mV	02/03/2025	N001	18.00	99		-	-
pH	S.U.	02/03/2025	N001	18.00	6.76		-	-
Selenium	mg/L	02/03/2025	0001	18.00	0.00724	B	0.006	-
Specific Conductance	umhos/cm	02/03/2025	N001	18.00	12816		-	-
Temperature	C	02/03/2025	N001	18.00	16.50		-	-
Turbidity	NTU	02/03/2025	N001	18.00	8.84		-	-
Uranium	mg/L	02/03/2025	0001	18.00	1.990		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: [0403 <well> Configuration 1](#)

REPORT DATE: [9/29/2025 12:59 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	02/04/2025	0001	18.00	79.3		1.7	-
Arsenic	mg/L	02/04/2025	0001	18.00	0.00500	U	0.005	-
Copper	mg/L	02/04/2025	0001	18.00	0.00603	B	0.003	-
Manganese	mg/L	02/04/2025	0001	18.00	1.690		0.002	-
Oxidation Reduction Potential	mV	02/04/2025	N001	18.00	213		-	-
pH	S.U.	02/04/2025	N001	18.00	7.05		-	-
Selenium	mg/L	02/04/2025	0001	18.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/04/2025	N001	18.00	5230		-	-
Temperature	C	02/04/2025	N001	18.00	15.20		-	-
Turbidity	NTU	02/04/2025	N001	18.00	3.49		-	-
Uranium	mg/L	02/04/2025	0001	18.00	0.494		0.000335	-

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

LOCATION: [0404 <well> Configuration 3](#)

REPORT DATE: [9/29/2025 12:59 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	02/03/2025	0001	18.00	253		8.5	-
Arsenic	mg/L	02/03/2025	0001	18.00	0.00500	U	0.005	-
Copper	mg/L	02/03/2025	0001	18.00	0.00519	B	0.003	-
Manganese	mg/L	02/03/2025	0001	18.00	0.0145		0.002	-
Oxidation Reduction Potential	mV	02/03/2025	N001	18.00	9		-	-
pH	S.U.	02/03/2025	N001	18.00	6.97		-	-
Selenium	mg/L	02/03/2025	0001	18.00	0.134		0.006	-
Specific Conductance	umhos/cm	02/03/2025	N001	18.00	12010		-	-
Temperature	C	02/03/2025	N001	18.00	16.90		-	-
Turbidity	NTU	02/03/2025	N001	18.00	2.09		-	-
Uranium	mg/L	02/03/2025	0001	18.00	1.780		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0406 <well> Baseline Area

REPORT DATE: 9/29/2025 12:59 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	02/03/2025	0001	18.00	75.1		1.7	-
Arsenic	mg/L	02/03/2025	0001	18.00	0.0248	B	0.005	-
Copper	mg/L	02/03/2025	0001	18.00	0.00382	B	0.003	-
Manganese	mg/L	02/03/2025	0001	18.00	0.0354		0.002	-
Oxidation Reduction Potential	mV	02/03/2025	N001	18.00	3		-	-
pH	S.U.	02/03/2025	N001	18.00	7.24		-	-
Selenium	mg/L	02/03/2025	0001	18.00	0.201		0.006	-
Specific Conductance	umhos/cm	02/03/2025	N001	18.00	4712		-	-
Temperature	C	02/03/2025	N001	18.00	15.20		-	-
Turbidity	NTU	02/03/2025	N001	18.00	8.93		-	-
Uranium	mg/L	02/03/2025	0001	18.00	0.644		0.000335	-

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

LOCATION: 0407 <well> Configuration 1

REPORT DATE: 9/29/2025 12:59 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	02/04/2025	0001	18.00	124		1.7	-
Arsenic	mg/L	02/04/2025	0001	18.00	0.00500	U	0.005	-
Copper	mg/L	02/04/2025	0001	18.00	0.00433	B	0.003	-
Manganese	mg/L	02/04/2025	0001	18.00	3.560		0.002	-
Oxidation Reduction Potential	mV	02/04/2025	N001	18.00	210		-	-
pH	S.U.	02/04/2025	N001	18.00	6.87		-	-
Selenium	mg/L	02/04/2025	0001	18.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/04/2025	N001	18.00	10887		-	-
Temperature	C	02/04/2025	N001	18.00	15.40		-	-
Turbidity	NTU	02/04/2025	N001	18.00	3.70		-	-
Uranium	mg/L	02/04/2025	0001	18.00	1.670		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0410 <well>

REPORT DATE: 9/29/2025 12:59 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	02/12/2025	0001	23.50	0.0170	U	0.017	-
Arsenic	mg/L	02/12/2025	0001	23.50	0.00500	U	0.005	-
Copper	mg/L	02/12/2025	0001	23.50	0.00300	U	0.003	-
Manganese	mg/L	02/12/2025	0001	23.50	1.740		0.002	-
Oxidation Reduction Potential	mV	02/12/2025	N001	23.50	143		-	-
pH	S.U.	02/12/2025	N001	23.50	7.14		-	-
Selenium	mg/L	02/12/2025	0001	23.50	0.103		0.006	-
Specific Conductance	umhos/cm	02/12/2025	N001	23.50	3625		-	-
Temperature	C	02/12/2025	N001	23.50	14.50		-	-
Turbidity	NTU	02/12/2025	N001	23.50	43.00		-	-
Uranium	mg/L	02/12/2025	0001	23.50	0.548		0.000335	-

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

LOCATION: 0412 <well>

REPORT DATE: 9/29/2025 12:59 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	02/04/2025	0001	9.50	0.0310	J	0.017	-
Arsenic	mg/L	02/04/2025	0001	9.50	0.0175	B	0.005	-
Copper	mg/L	02/04/2025	0001	9.50	0.00300	U	0.003	-
Manganese	mg/L	02/04/2025	0001	9.50	0.0195		0.002	-
Oxidation Reduction Potential	mV	02/04/2025	N001	9.50	68		-	-
pH	S.U.	02/04/2025	N001	9.50	7.66		-	-
Selenium	mg/L	02/04/2025	0001	9.50	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/04/2025	N001	9.50	2877		-	-
Temperature	C	02/04/2025	N001	9.50	14.30		-	-
Turbidity	NTU	02/04/2025	N001	9.50	19.80		-	-
Uranium	mg/L	02/04/2025	0001	9.50	4.400		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0413 <well> Well 0413 was resurveyed in 2013 after the ~~north~~ pile cleanup.

Coordinates: 2002 - 2013 State Plane North: 6665542.11 East: 2186158.62
2013 - present State Plane North: 6665509.90 East: 2186256.54

REPORT DATE: 9/29/2025 12:59 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	02/03/2025 0001	10.50	45.2		1.7	-
Arsenic	mg/L	02/03/2025 0001	10.50	0.0542		0.005	-
Copper	mg/L	02/03/2025 0001	10.50	0.00300	U	0.003	-
Manganese	mg/L	02/03/2025 0001	10.50	0.352		0.002	-
Oxidation Reduction Potential	mV	02/03/2025 N001	10.50	52		-	-
pH	S.U.	02/03/2025 N001	10.50	7.62		-	-
Selenium	mg/L	02/03/2025 0001	10.50	0.0844		0.006	-
Specific Conductance	umhos/cm	02/03/2025 N001	10.50	8334		-	-
Temperature	C	02/03/2025 N001	10.50	12.10		-	-
Turbidity	NTU	02/03/2025 N001	10.50	13.70		-	-
Uranium	mg/L	02/03/2025 0001	10.50	2.940		0.000335	-

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

LOCATION: 0414 <well>

REPORT DATE: 9/29/2025 12:59 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	02/03/2025 0001	7.50	55.0		1.7	-
Arsenic	mg/L	02/03/2025 0001	7.50	0.0254	B	0.005	-
Copper	mg/L	02/03/2025 0001	7.50	0.00300	U	0.003	-
Manganese	mg/L	02/03/2025 0001	7.50	0.137		0.002	-
Oxidation Reduction Potential	mV	02/03/2025 N001	7.50	60		-	-
pH	S.U.	02/03/2025 N001	7.50	7.20		-	-
Selenium	mg/L	02/03/2025 0001	7.50	0.154		0.006	-
Specific Conductance	umhos/cm	02/03/2025 N001	7.50	9407		-	-
Temperature	C	02/03/2025 N001	7.50	13.10		-	-
Turbidity	NTU	02/03/2025 N001	7.50	58.80		-	-
Uranium	mg/L	02/03/2025 0001	7.50	3.960		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0437 <well>

REPORT DATE: 9/29/2025 12:59 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	02/12/2025	0001	90.00 - 100.00	1.23		0.17	-
Arsenic	mg/L	02/12/2025	0001	90.00 - 100.00	0.0646		0.005	-
Copper	mg/L	02/12/2025	0001	90.00 - 100.00	0.0119	B	0.003	-
Manganese	mg/L	02/12/2025	0001	90.00 - 100.00	0.263		0.002	-
Oxidation Reduction Potential	mV	02/12/2025	N001	90.00 - 100.00	186		-	-
pH	S.U.	02/12/2025	N001	90.00 - 100.00	7.48		-	-
Selenium	mg/L	02/12/2025	0001	90.00 - 100.00	0.116		0.006	-
Specific Conductance	umhos/cm	02/12/2025	N001	90.00 - 100.00	11596		-	-
Temperature	C	02/12/2025	N001	90.00 - 100.00	16.10		-	-
Turbidity	NTU	02/12/2025	N001	90.00 - 100.00	999.00		-	-
Uranium	mg/L	02/12/2025	0001	90.00 - 100.00	3.560		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0439 <well>

REPORT DATE: 9/29/2025 12:59 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	02/11/2025	0001	110.00 - 120.00	8.24		0.085	-
	mg/L	02/11/2025	0002	110.00 - 120.00	6.75		0.085	-
Arsenic	mg/L	02/11/2025	0001	110.00 - 120.00	0.00500	U	0.005	-
	mg/L	02/11/2025	0002	110.00 - 120.00	0.00500	U	0.005	-
Copper	mg/L	02/11/2025	0001	110.00 - 120.00	0.00346	B	0.003	-
	mg/L	02/11/2025	0002	110.00 - 120.00	0.00300	U	0.003	-
Manganese	mg/L	02/11/2025	0001	110.00 - 120.00	0.215		0.002	-
	mg/L	02/11/2025	0002	110.00 - 120.00	0.208		0.002	-
Oxidation Reduction Potential	mV	02/11/2025	N001	110.00 - 120.00	163		-	-
pH	S.U.	02/11/2025	N001	110.00 - 120.00	6.84		-	-
Selenium	mg/L	02/11/2025	0001	110.00 - 120.00	0.00600	U	0.006	-
	mg/L	02/11/2025	0002	110.00 - 120.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/11/2025	N001	110.00 - 120.00	10573		-	-
Temperature	C	02/11/2025	N001	110.00 - 120.00	16.30		-	-
Turbidity	NTU	02/11/2025	N001	110.00 - 120.00	29.80		-	-
Uranium	mg/L	02/11/2025	0001	110.00 - 120.00	1.340		0.000335	-
	mg/L	02/11/2025	0002	110.00 - 120.00	1.360		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0441 <well> Queue/Support Area

REPORT DATE: 9/29/2025 12:59 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	02/11/2025	0001	53.00	0.0170	U	0.017	-
Arsenic	mg/L	02/11/2025	0001	53.00	0.00500	U	0.005	-
Copper	mg/L	02/11/2025	0001	53.00	0.00652	B	0.003	-
Manganese	mg/L	02/11/2025	0001	53.00	0.00200	U	0.002	-
Oxidation Reduction Potential	mV	02/11/2025	N001	53.00	203		-	-
pH	S.U.	02/11/2025	N001	53.00	7.06		-	-
Selenium	mg/L	02/11/2025	0001	53.00	0.817		0.006	-
Specific Conductance	umhos/cm	02/11/2025	N001	53.00	19922		-	-
Temperature	C	02/11/2025	N001	53.00	16.50		-	-
Turbidity	NTU	02/11/2025	N001	53.00	8.13		-	-
Uranium	mg/L	02/11/2025	0001	53.00	0.0549		0.000335	-

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

LOCATION: 0453 <well> Contaminated Area

REPORT DATE: 9/29/2025 12:59 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	02/12/2025	0001		212		4.25	-
Arsenic	mg/L	02/12/2025	0001		0.00703	B	0.005	-
Copper	mg/L	02/12/2025	0001		0.131		0.003	-
Manganese	mg/L	02/12/2025	0001		0.148		0.002	-
Oxidation Reduction Potential	mV	02/12/2025	N001		223		-	-
pH	S.U.	02/12/2025	N001		7.10		-	-
Selenium	mg/L	02/12/2025	0001		0.165		0.006	-
Specific Conductance	umhos/cm	02/12/2025	N001		42099		-	-
Temperature	C	02/12/2025	N001		15.00		-	-
Turbidity	NTU	02/12/2025	N001		83.90		-	-
Uranium	mg/L	02/12/2025	0001		1.280		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0454 <well>

REPORT DATE: 9/29/2025 12:59 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	02/04/2025 0001	13.00	221		4.25	-
Arsenic	mg/L	02/04/2025 0001	13.00	0.00500	U	0.005	-
Copper	mg/L	02/04/2025 0001	13.00	0.00466	B	0.003	-
Manganese	mg/L	02/04/2025 0001	13.00	2.180		0.002	-
Oxidation Reduction Potential	mV	02/04/2025 N001	13.00	19		-	-
pH	s.u.	02/04/2025 N001	13.00	6.82		-	-
Selenium	mg/L	02/04/2025 0001	13.00	0.0359		0.006	-
Specific Conductance	umhos/cm	02/04/2025 N001	13.00	64325		-	-
Temperature	C	02/04/2025 N001	13.00	16.80		-	-
Turbidity	NTU	02/04/2025 N001	13.00	18.50		-	-
Uranium	mg/L	02/04/2025 0001	13.00	1.360		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: 0492 <well>

REPORT DATE: 9/29/2025 12:59 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	02/05/2025	0001	18.00	301		4.25	-
	mg/L	02/05/2025	0002	14.86 - 19.79	376		4.25	-
Arsenic	mg/L	02/05/2025	0001	18.00	0.0122	B	0.005	-
	mg/L	02/05/2025	0002	14.86 - 19.79	0.00500	U	0.005	-
Copper	mg/L	02/05/2025	0001	18.00	0.00300	U	0.003	-
	mg/L	02/05/2025	0002	14.86 - 19.79	0.00300	U	0.003	-
Manganese	mg/L	02/05/2025	0001	18.00	5.590		0.002	-
	mg/L	02/05/2025	0002	14.86 - 19.79	5.660		0.002	-
Oxidation Reduction Potential	mV	02/05/2025	N001	18.00	217		-	-
pH	S.U.	02/05/2025	N001	18.00	6.92		-	-
Selenium	mg/L	02/05/2025	0001	18.00	0.00600	U	0.006	-
	mg/L	02/05/2025	0002	14.86 - 19.79	0.0102	B	0.006	-
Specific Conductance	umhos/cm	02/05/2025	N001	18.00	17226		-	-
Temperature	C	02/05/2025	N001	18.00	15.90		-	-
Turbidity	NTU	02/05/2025	N001	18.00	6.67		-	-
Uranium	mg/L	02/05/2025	0001	18.00	2.430		0.000335	-
	mg/L	02/05/2025	0002	14.86 - 19.79	2.590		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: AMM-2 <well> East of pile along road.

REPORT DATE: 9/29/2025 12:59 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	02/04/2025	0001	48.00	354		4.25	-
Arsenic	mg/L	02/04/2025	0001	48.00	0.00500	U	0.005	-
Copper	mg/L	02/04/2025	0001	48.00	0.00300	U	0.003	-
Manganese	mg/L	02/04/2025	0001	48.00	0.469		0.002	-
Oxidation Reduction Potential	mV	02/04/2025	N001	48.00	-4		-	-
pH	s.u.	02/04/2025	N001	48.00	6.92		-	-
Selenium	mg/L	02/04/2025	0001	48.00	0.0569		0.006	-
Specific Conductance	umhos/cm	02/04/2025	N001	48.00	16098		-	-
Temperature	C	02/04/2025	N001	48.00	17.30		-	-
Turbidity	NTU	02/04/2025	N001	48.00	5.55		-	-
Uranium	mg/L	02/04/2025	0001	48.00	1.840		0.000335	-

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

LOCATION: AMM-3 <well> Near SE corner of pile.

REPORT DATE: 9/29/2025 12:59 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	02/04/2025	0001	48.00	341		4.25	-
Arsenic	mg/L	02/04/2025	0001	48.00	0.00626	B	0.005	-
Copper	mg/L	02/04/2025	0001	48.00	0.00300	U	0.003	-
Manganese	mg/L	02/04/2025	0001	48.00	3.290		0.002	-
Oxidation Reduction Potential	mV	02/04/2025	N001	48.00	-94		-	-
pH	s.u.	02/04/2025	N001	48.00	7.00		-	-
Selenium	mg/L	02/04/2025	0001	48.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/04/2025	N001	48.00	19157		-	-
Temperature	C	02/04/2025	N001	48.00	19.20		-	-
Turbidity	NTU	02/04/2025	N001	48.00	25.30		-	-
Uranium	mg/L	02/04/2025	0001	48.00	1.780		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: ATP-2-D <well, piezometer> Piezometer; see boring ATP-2

REPORT DATE: 9/29/2025 12:59 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	02/04/2025	0001	88.00	338		4.25	-
Arsenic	mg/L	02/04/2025	0001	88.00	0.0587	B	0.05	-
Copper	mg/L	02/04/2025	0001	88.00	0.0499	B	0.03	-
Manganese	mg/L	02/04/2025	0001	88.00	2.140		0.02	-
Oxidation Reduction Potential	mV	02/04/2025	N001	88.00	-352		-	-
pH	<u>S.U.</u>	02/04/2025	N001	88.00	8.09		-	-
Selenium	mg/L	02/04/2025	0001	88.00	0.0706	B	0.06	-
Specific Conductance	<u>umhos/cm</u>	02/04/2025	N001	88.00	115430		-	-
Temperature	C	02/04/2025	N001	88.00	16.20		-	-
Turbidity	NTU	02/04/2025	N001	88.00	17.20		-	-
Uranium	mg/L	02/04/2025	0001	88.00	0.00168	U	0.00168	-

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

LOCATION: CR1 <surface location, river>

REPORT DATE: 9/29/2025 12:59 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	02/05/2025	0001	0.00 - 0.00	0.0170	U	0.017	-
Arsenic	mg/L	02/05/2025	0001	0.00 - 0.00	0.00500	U	0.005	-
Copper	mg/L	02/05/2025	0001	0.00 - 0.00	0.00300	U	0.003	-
Manganese	mg/L	02/05/2025	0001	0.00 - 0.00	0.0230		0.002	-
Oxidation Reduction Potential	mV	02/05/2025	N001	0.00 - 0.00	83		-	-
pH	<u>S.U.</u>	02/05/2025	N001	0.00 - 0.00	8.49		-	-
Selenium	mg/L	02/05/2025	0001	0.00 - 0.00	0.00600	U	0.006	-
Specific Conductance	<u>umhos/cm</u>	02/05/2025	N001	0.00 - 0.00	1182		-	-
Temperature	C	02/05/2025	N001	0.00 - 0.00	6.70		-	-
Turbidity	NTU	02/05/2025	N001	0.00 - 0.00	52.60		-	-
Uranium	mg/L	02/05/2025	0001	0.00 - 0.00	0.00424		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: CR2 <surface location, river>

REPORT DATE: 9/29/2025 12:59 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	02/05/2025 0001	0.00 - 0.00	0.0190	J	0.017	-
Arsenic	mg/L	02/05/2025 0001	0.00 - 0.00	0.00500	U	0.005	-
Copper	mg/L	02/05/2025 0001	0.00 - 0.00	0.00300	U	0.003	-
Manganese	mg/L	02/05/2025 0001	0.00 - 0.00	0.0243		0.002	-
Oxidation Reduction Potential	mV	02/05/2025 N001	0.00 - 0.00	30		-	-
pH	S.U.	02/05/2025 N001	0.00 - 0.00	8.52		-	-
Selenium	mg/L	02/05/2025 0001	0.00 - 0.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/05/2025 N001	0.00 - 0.00	1206		-	-
Temperature	C	02/05/2025 N001	0.00 - 0.00	5.60		-	-
Turbidity	NTU	02/05/2025 N001	0.00 - 0.00	247.00		-	-
Uranium	mg/L	02/05/2025 0001	0.00 - 0.00	0.00598		0.000335	-

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

LOCATION: CR3 <surface location, river>

REPORT DATE: 9/29/2025 12:59 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	02/05/2025 0001	0.00 - 0.00	0.385		0.085	-
Arsenic	mg/L	02/05/2025 0001	0.00 - 0.00	0.00884	B	0.005	-
Copper	mg/L	02/05/2025 0001	0.00 - 0.00	0.00300	U	0.003	-
Manganese	mg/L	02/05/2025 0001	0.00 - 0.00	0.0646		0.002	-
Oxidation Reduction Potential	mV	02/05/2025 N001	0.00 - 0.00	161		-	-
pH	S.U.	02/05/2025 N001	0.00 - 0.00	8.40		-	-
Selenium	mg/L	02/05/2025 0001	0.00 - 0.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/05/2025 N001	0.00 - 0.00	1268		-	-
Temperature	C	02/05/2025 N001	0.00 - 0.00	6.10		-	-
Turbidity	NTU	02/05/2025 N001	0.00 - 0.00	222.00		-	-
Uranium	mg/L	02/05/2025 0001	0.00 - 0.00	0.00809		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: CR5 <surface location, river>

REPORT DATE: 9/29/2025 12:59 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	02/05/2025	0001	0.00 - 0.00	0.105		0.017	-
Arsenic	mg/L	02/05/2025	0001	0.00 - 0.00	0.00500	U	0.005	-
Copper	mg/L	02/05/2025	0001	0.00 - 0.00	0.00300	U	0.003	-
Manganese	mg/L	02/05/2025	0001	0.00 - 0.00	0.0320		0.002	-
Oxidation Reduction Potential	mV	02/05/2025	N001	0.00 - 0.00	73		-	-
pH	S.U.	02/05/2025	N001	0.00 - 0.00	8.41		-	-
Selenium	mg/L	02/05/2025	0001	0.00 - 0.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/05/2025	N001	0.00 - 0.00	1194		-	-
Temperature	C	02/05/2025	N001	0.00 - 0.00	5.30		-	-
Turbidity	NTU	02/05/2025	N001	0.00 - 0.00	999.00		-	-
Uranium	mg/L	02/05/2025	0001	0.00 - 0.00	0.00527		0.000335	-

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

LOCATION: MW-3 <well> See borehole 8

REPORT DATE: 9/29/2025 12:59 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	02/04/2025	0001	44.00	374		4.25	-
Arsenic	mg/L	02/04/2025	0001	44.00	0.00500	U	0.005	-
Copper	mg/L	02/04/2025	0001	44.00	0.00353	B	0.003	-
Manganese	mg/L	02/04/2025	0001	44.00	7.160		0.002	-
Oxidation Reduction Potential	mV	02/04/2025	N001	44.00	147		-	-
pH	S.U.	02/04/2025	N001	44.00	6.90		-	-
Selenium	mg/L	02/04/2025	0001	44.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	02/04/2025	N001	44.00	22896		-	-
Temperature	C	02/04/2025	N001	44.00	17.00		-	-
Turbidity	NTU	02/04/2025	N001	44.00	4.48		-	-
Uranium	mg/L	02/04/2025	0001	44.00	2.510		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: SMI-MW01 <well>

REPORT DATE: 9/29/2025 12:59 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	02/12/2025 0001	16.00	0.510		0.085	-
Arsenic	mg/L	02/12/2025 0001	16.00	0.00521	B	0.005	-
Copper	mg/L	02/12/2025 0001	16.00	0.00300	U	0.003	-
Manganese	mg/L	02/12/2025 0001	16.00	1.160		0.002	-
Oxidation Reduction Potential	mV	02/12/2025 N001	16.00	-42		-	-
pH	S.U.	02/12/2025 N001	16.00	7.39		-	-
Selenium	mg/L	02/12/2025 0001	16.00	0.0104	B	0.006	-
Specific Conductance	umhos/cm	02/12/2025 N001	16.00	4194		-	-
Temperature	C	02/12/2025 N001	16.00	15.40		-	-
Turbidity	NTU	02/12/2025 N001	16.00	548.00		-	-
Uranium	mg/L	02/12/2025 0001	16.00	1.580		0.000335	-

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

LOCATION: SMI-PZ3S <well>

REPORT DATE: 9/29/2025 12:59 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	02/11/2025 0001	25.00	3.14		0.085	-
Arsenic	mg/L	02/11/2025 0001	25.00	0.0171	B	0.005	-
Copper	mg/L	02/11/2025 0001	25.00	0.00300	U	0.003	-
Manganese	mg/L	02/11/2025 0001	25.00	0.0600		0.002	-
Oxidation Reduction Potential	mV	02/11/2025 N001	25.00	100		-	-
pH	S.U.	02/11/2025 N001	25.00	7.96		-	-
Selenium	mg/L	02/11/2025 0001	25.00	0.0826		0.006	-
Specific Conductance	umhos/cm	02/11/2025 N001	25.00	5084		-	-
Temperature	C	02/11/2025 N001	25.00	17.90		-	-
Turbidity	NTU	02/11/2025 N001	25.00	4.59		-	-
Uranium	mg/L	02/11/2025 0001	25.00	2.080		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: TP-01 <well> Date: GR Elev. Boring Depth fm SMIDoc#2 (ORNL 1/9/98)

REPORT DATE: 9/29/2025 12:59 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	02/03/2025	0001	22.00	0.0720		0.017	-
Arsenic	mg/L	02/03/2025	0001	22.00	0.00500	U	0.005	-
Copper	mg/L	02/03/2025	0001	22.00	0.00485	B	0.003	-
Manganese	mg/L	02/03/2025	0001	22.00	0.765		0.002	-
Oxidation Reduction Potential	mV	02/03/2025	N001	22.00	32		-	-
pH	S.U.	02/03/2025	N001	22.00	7.59		-	-
Selenium	mg/L	02/03/2025	0001	22.00	0.0458		0.006	-
Specific Conductance	umhos/cm	02/03/2025	N001	22.00	8180		-	-
Temperature	C	02/03/2025	N001	22.00	17.60		-	-
Turbidity	NTU	02/03/2025	N001	22.00	2.89		-	-
Uranium	mg/L	02/03/2025	0001	22.00	0.0540		0.000335	-

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

LOCATION: TP-17 <well> Date: GR Elev. Boring Depth fm SMIDoc#2 (ORNL 1/9/98)

REPORT DATE: 9/29/2025 12:59 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	02/05/2025	0001	28.00	3.49		0.085	-
Arsenic	mg/L	02/05/2025	0001	28.00	0.0512	B	0.05	-
Copper	mg/L	02/05/2025	0001	28.00	0.0300	U	0.03	-
Manganese	mg/L	02/05/2025	0001	28.00	2.080		0.02	-
Oxidation Reduction Potential	mV	02/05/2025	N001	28.00	-163		-	-
pH	S.U.	02/05/2025	N001	28.00	7.18		-	-
Selenium	mg/L	02/05/2025	0001	28.00	0.388		0.06	-
Specific Conductance	umhos/cm	02/05/2025	N001	28.00	105673		-	-
Temperature	C	02/05/2025	N001	28.00	14.00		-	-
Turbidity	NTU	02/05/2025	N001	28.00	11.20		-	-
Uranium	mg/L	02/05/2025	0001	28.00	0.0270		0.00168	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: TP-20 <well> Date: 02/04/2025 GR Elev: 6000.00 Boring Depth: 32.00 SMIDoc#2 (ORNL 1/9/98)

REPORT DATE: 9/29/2025 12:59 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	02/04/2025	0001	32.00	2.72		0.085	-
Arsenic	mg/L	02/04/2025	0001	32.00	0.113	B	0.05	-
Copper	mg/L	02/04/2025	0001	32.00	0.0300	U	0.03	-
Manganese	mg/L	02/04/2025	0001	32.00	0.333		0.02	-
Oxidation Reduction Potential	mV	02/04/2025	N001	32.00	-218		-	-
pH	s.u.	02/04/2025	N001	32.00	7.17		-	-
Selenium	mg/L	02/04/2025	0001	32.00	0.416		0.06	-
Specific Conductance	umhos/cm	02/04/2025	N001	32.00	134169		-	-
Temperature	C	02/04/2025	N001	32.00	18.20		-	-
Turbidity	NTU	02/04/2025	N001	32.00	3.81		-	-
Uranium	mg/L	02/04/2025	0001	32.00	0.0199		0.00168	-

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

LOCATION: TP-22 <well>

REPORT DATE: 9/29/2025 12:59 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	02/04/2025	0001	9.00	0.0170	U	0.017	-
Arsenic	mg/L	02/04/2025	0001	9.00	0.00500	U	0.005	-
Copper	mg/L	02/04/2025	0001	9.00	0.0160	B	0.003	-
Manganese	mg/L	02/04/2025	0001	9.00	0.00314	B	0.002	-
Oxidation Reduction Potential	mV	02/04/2025	N001	9.00	69		-	-
pH	s.u.	02/04/2025	N001	9.00	7.04		-	-
Selenium	mg/L	02/04/2025	0001	9.00	0.328		0.06	-
Specific Conductance	umhos/cm	02/04/2025	N001	9.00	30428		-	-
Temperature	C	02/04/2025	N001	9.00	17.80		-	-
Turbidity	NTU	02/04/2025	N001	9.00	199.00		-	-
Uranium	mg/L	02/04/2025	0001	9.00	0.525		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: TP-23 <well>

REPORT DATE: 9/29/2025 12:59 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	02/04/2025 0001	26.00	132		4.25	-
Arsenic	mg/L	02/04/2025 0001	26.00	0.00500	U	0.005	-
Copper	mg/L	02/04/2025 0001	26.00	0.0119	B	0.003	-
Manganese	mg/L	02/04/2025 0001	26.00	4.500		0.002	-
Oxidation Reduction Potential	mV	02/04/2025 N001	26.00	47		-	-
pH	S.U.	02/04/2025 N001	26.00	6.95		-	-
Selenium	mg/L	02/04/2025 0001	26.00	0.368		0.06	-
Specific Conductance	umhos/cm	02/04/2025 N001	26.00	32055		-	-
Temperature	C	02/04/2025 N001	26.00	18.70		-	-
Turbidity	NTU	02/04/2025 N001	26.00	6.86		-	-
Uranium	mg/L	02/04/2025 0001	26.00	2.800		0.000335	-

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

LOCATION: UPD-17 <well>

REPORT DATE: 9/29/2025 12:59 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	02/11/2025 0001	14.50	168		4.25	-
Arsenic	mg/L	02/11/2025 0001	14.50	0.0172	B	0.005	-
Copper	mg/L	02/11/2025 0001	14.50	0.00525	B	0.003	-
Manganese	mg/L	02/11/2025 0001	14.50	0.651		0.002	-
Oxidation Reduction Potential	mV	02/11/2025 N001	14.50	173		-	-
pH	S.U.	02/11/2025 N001	14.50	6.80		-	-
Selenium	mg/L	02/11/2025 0001	14.50	0.326		0.06	-
Specific Conductance	umhos/cm	02/11/2025 N001	14.50	9399		-	-
Temperature	C	02/11/2025 N001	14.50	15.50		-	-
Turbidity	NTU	02/11/2025 N001	14.50	16.00		-	-
Uranium	mg/L	02/11/2025 0001	14.50	1.020		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: UPD-18 <well>

REPORT DATE: 9/29/2025 12:59 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	02/11/2025	0001	13.00	185		4.25	-
Arsenic	mg/L	02/11/2025	0001	13.00	0.0114	B	0.005	-
Copper	mg/L	02/11/2025	0001	13.00	0.00508	B	0.003	-
Manganese	mg/L	02/11/2025	0001	13.00	0.00640	B	0.002	-
Oxidation Reduction Potential	mV	02/11/2025	N001	13.00	185		-	-
pH	s.u.	02/11/2025	N001	13.00	7.04		-	-
Selenium	mg/L	02/11/2025	0001	13.00	0.356		0.06	-
Specific Conductance	umhos/cm	02/11/2025	N001	13.00	8460		-	-
Temperature	C	02/11/2025	N001	13.00	15.70		-	-
Turbidity	NTU	02/11/2025	N001	13.00	8.31		-	-
Uranium	mg/L	02/11/2025	0001	13.00	0.779		0.000335	-

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

LOCATION: UPD-20 <well>

REPORT DATE: 9/29/2025 12:59 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	02/11/2025	0001	17.00	0.0170	U	0.017	-
Arsenic	mg/L	02/11/2025	0001	17.00	0.00500	U	0.005	-
Copper	mg/L	02/11/2025	0001	17.00	0.00471	B	0.003	-
Manganese	mg/L	02/11/2025	0001	17.00	0.545		0.002	-
Oxidation Reduction Potential	mV	02/11/2025	N001	17.00	194		-	-
pH	s.u.	02/11/2025	N001	17.00	7.52		-	-
Selenium	mg/L	02/11/2025	0001	17.00	0.162	B	0.06	-
Specific Conductance	umhos/cm	02/11/2025	N001	17.00	3473		-	-
Temperature	C	02/11/2025	N001	17.00	16.90		-	-
Turbidity	NTU	02/11/2025	N001	17.00	16.80		-	-
Uranium	mg/L	02/11/2025	0001	17.00	0.0622		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: UPD-21 <well>

REPORT DATE: 9/29/2025 12:59 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	02/11/2025	0001	25.00	2.75		0.085	-
Arsenic	mg/L	02/11/2025	0001	25.00	0.00500	U	0.005	-
Copper	mg/L	02/11/2025	0001	25.00	0.00300	U	0.003	-
Manganese	mg/L	02/11/2025	0001	25.00	0.0810		0.002	-
Oxidation Reduction Potential	mV	02/11/2025	N001	25.00	176		-	-
pH	s.u.	02/11/2025	N001	25.00	7.38		-	-
Selenium	mg/L	02/11/2025	0001	25.00	0.187	B	0.06	-
Specific Conductance	umhos/cm	02/11/2025	N001	25.00	4165		-	-
Temperature	C	02/11/2025	N001	25.00	15.10		-	-
Turbidity	NTU	02/11/2025	N001	25.00	9.37		-	-
Uranium	mg/L	02/11/2025	0001	25.00	4.900		0.000335	-

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

LOCATION: UPD-22 <well>

REPORT DATE: 9/29/2025 12:59 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	02/04/2025	0001	9.00	5.13		0.085	-
Arsenic	mg/L	02/04/2025	0001	9.00	0.00500	U	0.005	-
Copper	mg/L	02/04/2025	0001	9.00	0.00300	U	0.003	-
Manganese	mg/L	02/04/2025	0001	9.00	0.0577		0.002	-
Oxidation Reduction Potential	mV	02/04/2025	N001	9.00	-50		-	-
pH	s.u.	02/04/2025	N001	9.00	7.99		-	-
Selenium	mg/L	02/04/2025	0001	9.00	0.116	B	0.06	-
Specific Conductance	umhos/cm	02/04/2025	N001	9.00	3407		-	-
Temperature	C	02/04/2025	N001	9.00	16.50		-	-
Turbidity	NTU	02/04/2025	N001	9.00	7.16		-	-
Uranium	mg/L	02/04/2025	0001	9.00	1.890		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

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

LOCATION: UPD-23 <well>

REPORT DATE: 9/29/2025 12:59 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	02/11/2025	0001	26.00	7.38		0.085	-
Arsenic	mg/L	02/11/2025	0001	26.00	0.00500	U	0.005	-
Copper	mg/L	02/11/2025	0001	26.00	0.00300	U	0.003	-
Manganese	mg/L	02/11/2025	0001	26.00	0.00309	B	0.002	-
Oxidation Reduction Potential	mV	02/11/2025	N001	26.00	149		-	-
pH	S.U.	02/11/2025	N001	26.00	7.61		-	-
Selenium	mg/L	02/11/2025	0001	26.00	0.193	B	0.06	-
Specific Conductance	umhos/cm	02/11/2025	N001	26.00	4057		-	-
Temperature	C	02/11/2025	N001	26.00	15.60		-	-
Turbidity	NTU	02/11/2025	N001	26.00	20.70		-	-
Uranium	mg/L	02/11/2025	0001	26.00	0.736		0.000335	-

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

LOCATION: UPD-24 <well> Added surface elevation from February 2013 survey on 5/8/24.

REPORT DATE: 9/29/2025 12:59 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	02/11/2025	0001	27.00	2.68		0.085	-
Arsenic	mg/L	02/11/2025	0001	27.00	0.340		0.005	-
Copper	mg/L	02/11/2025	0001	27.00	0.00300	U	0.003	-
Manganese	mg/L	02/11/2025	0001	27.00	0.0708		0.002	-
Oxidation Reduction Potential	mV	02/11/2025	N001	27.00	83		-	-
pH	S.U.	02/11/2025	N001	27.00	7.79		-	-
Selenium	mg/L	02/11/2025	0001	27.00	0.176	B	0.06	-
Specific Conductance	umhos/cm	02/11/2025	N001	27.00	3687		-	-
Temperature	C	02/11/2025	N001	27.00	17.80		-	-
Turbidity	NTU	02/11/2025	N001	27.00	4.35		-	-
Uranium	mg/L	02/11/2025	0001	27.00	1.990		0.000335	-

Appendix A. February 2025 Site Wide Sampling Event Water Quality Data

RECORDS: SELECTED FROM USEE105 WHERE ExcludeEquipBlank = TRUE AND RIN = '2502153' 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 QUALIFIERS:

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

DATA QUALIFIERS:

- | | | |
|--|--|---|
| F Low flow sampling method used. | G Possible grout contamination, pH > 9. | J Estimated value. |
| L Less than 3 bore volumes purged prior to sampling. | N Presumptive evidence that analyte is present. The analyte is "tentatively identified". | Q Qualitative <u>result</u> 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. February 2025 Site Wide Sampling Event Minimums and Maximums Report

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2502153

Comparison: All Historical Data

Report Date: 9/29/2025 12:54 PM

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count	
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
MOA01	0218	02/05/2025	Ammonia Total as N	0.045	J		2	U		0.057			33	29
MOA01	0412	02/04/2025	Selenium	0.006	U		0.1		F	0.0077	B		14	0
MOA01	0413	02/03/2025	Arsenic	0.0542			0.0443			0.00095	B	LQ	9	0
MOA01	0437	02/12/2025	Arsenic	0.0646			0.00532	B		0.0001	B	QJ	11	1
MOA01	0492	02/05/2025	Ammonia Total as N	301			300			0.1	U		50	1
MOA01	0492	02/05/2025	Ammonia Total as N	376			300			0.1	U		50	1
MOA01	AMM-3	02/04/2025	Ammonia Total as N	341			330			41			38	0
MOA01	CR2	02/05/2025	Ammonia Total as N	0.019	J		4.635			0.05	U		32	19
MOA01	CR3	02/05/2025	Arsenic	0.00884	B		0.005	U		0.0006	U		7	3
MOA01	SMI-MW01	02/12/2025	Uranium	1.58			17.6			2.3			30	0
MOA01	SMI-PZ3S	02/11/2025	Manganese	0.06			0.052			0.02			14	1
MOA01	SMI-PZ3S	02/11/2025	Selenium	0.0826			0.06			0.0195		F	18	0
MOA01	TP-01	02/03/2025	Selenium	0.0458			0.0283	B		0.0015	J		14	1
MOA01	TP-17	02/05/2025	Arsenic	0.0512	B		0.011	U		0.0034	B		6	3
MOA01	TP-17	02/05/2025	Selenium	0.388			0.11			0.00041	B		19	2
MOA01	UPD-17	02/11/2025	Selenium	0.326			0.166			0.081	J		7	0
MOA01	UPD-17	02/11/2025	Uranium	1.02			1.6			1.16			23	0
MOA01	UPD-18	02/11/2025	Arsenic	0.0114	B		0.02			0.016			7	0
MOA01	UPD-18	02/11/2025	Selenium	0.356			0.098			0.058			7	0
MOA01	UPD-20	02/11/2025	Ammonia Total as N	0.017	U		14	N		0.061			22	17
MOA01	UPD-20	02/11/2025	Selenium	0.162	B		0.0179	B		0.0014	J		6	1
MOA01	UPD-21	02/11/2025	Selenium	0.187	B		0.14			0.0871			7	0
MOA01	UPD-21	02/11/2025	Uranium	4.9			18			5			25	0
MOA01	UPD-22	02/04/2025	Selenium	0.116	B		0.0638			0.0168	B		6	0
MOA01	UPD-22	02/04/2025	Uranium	1.89			3.9			2.11			26	0
MOA01	UPD-23	02/11/2025	Ammonia Total as N	7.38			7.3			0.69			18	0
MOA01	UPD-24	02/11/2025	Arsenic	0.34			0.292			0.19			8	0

Appendix A. February 2025 Site Wide Sampling Event Minimums and Maximums Report

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2502153

Comparison: All Historical Data

Report Date: 9/29/2025 12:54 PM

MOA01	UPD-24	02/11/2025	Selenium	0.176	B	0.091	0.0265	J	8	0
MOA01	UPD-24	02/11/2025	Uranium	1.99		14	3.18		26	0

Note: all concentrations are in mg/L

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

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

Appendix A. February 2025 Site Wide Sampling Event Blanks Report

BLANKS REPORT

LAB: GEL Laboratories of Ohio LLC

RIN: 2502153

Report Date: 9/29/2025 1:01 PM

Parameter	Site	Location	Sample				Qualifiers		Detection	Uncertainty	Sample
	Code	Code	Date	ID	Units	Result	Lab	Data	Limit		Type
Ammonia Total as N	MOA01	0999	02/06/2025	0002	mg/L	0.017	U		0.017		E
Arsenic	MOA01	0999	02/06/2025	0002	mg/L	0.005	U		0.005		E
Copper	MOA01	0999	02/06/2025	0002	mg/L	0.003	U		0.003		E
Manganese	MOA01	0999	02/06/2025	0002	mg/L	0.002	U		0.002		E
Selenium	MOA01	0999	02/06/2025	0002	mg/L	0.006	U		0.006		E
Uranium	MOA01	0999	02/06/2025	0002	mg/L	6.7E-05	U		6.7E-05		E

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

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > 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.

Appendix A. February 2025 Site Wide Sampling Event Blanks Report

- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Y Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
- Z Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

DATA QUALIFIERS:

- | | | |
|--|--|--|
| F Low flow sampling method used. | G Possible grout contamination, pH > 9. | J Estimated value. |
| L Less than 3 bore volumes purged prior to sampling. | 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. February 2025 Site Wide Sampling Event Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE MOA01, Moab Site
REPORT DATE: 10/6/2025 12:10 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
			DATE	TIME			
0492		3967.56	02/05/2025		16.46	3951.10	
AMM-2	O	3964.09	02/04/2025		10.41	3953.68	
SMI-PZ3S	O	3975.03	02/11/2025		19.76	3955.27	
0201	D	-	02/05/2025			-	
0218	O	-	02/05/2025			-	
0226	O	-	02/05/2025			-	
AMM-3	O	3962.90	02/04/2025		9.08	3953.82	
0401		3967.36	02/03/2025		14.08	3953.28	
0403	O	3968.95	02/04/2025		16.18	3952.77	
0404	O	3968.30	02/03/2025		14.64	3953.66	
0406	O	3964.59	02/03/2025		10.95	3953.64	
0407	O	3969.09	02/04/2025		16.70	3952.39	
0410	O	3981.12	02/12/2025		25.80	3955.32	
0412	O	3962.48	02/04/2025		8.20	3954.28	
CR1	U	-	02/05/2025			-	
0413	O	3963.19	02/03/2025		8.68	3954.51	
0414	O	3959.20	02/03/2025		5.08	3954.12	
ATP-2-D	O	3962.17	02/04/2025		7.03	3955.14	
CR2	O	-	02/05/2025			-	
CR3	O	-	02/05/2025			-	

Appendix A. February 2025 Site Wide Sampling Event Water Level Data

CR5	D	-	02/05/2025	-	
MW-3	O	3965.96	02/04/2025	11.89	3954.09
TP-01	O	3967.71	02/03/2025	13.85	3953.86
0437	O	4048.25	02/12/2025	0.00	4048.25
0439	O	4055.27	02/11/2025	17.85	4037.42
0441		4008.64	02/11/2025	49.99	3958.65
0453		4031.29	02/12/2025	70.02	3961.27
0454		3966.53	02/04/2025	13.16	3953.37
TP-17	D	3963.69	02/05/2025	25.78	3937.91
TP-20	D	3967.55	02/04/2025	16.44	3951.11
TP-22		3966.51	02/03/2025	14.08	3952.43
TP-23		3962.60	02/04/2025	9.57	3953.03
UPD-17		3970.71	02/11/2025	13.46	3957.25
UPD-18		3968.74	02/11/2025	13.28	3955.46
UPD-20		3978.70	02/11/2025	22.85	3955.85
UPD-21		3981.47	02/11/2025	25.80	3955.67
UPD-22		3966.20	02/04/2025	11.27	3954.93
UPD-23		3982.38	02/11/2025	26.79	3955.59
SMI-MW01	O	3960.29	02/12/2025	6.37	3953.92
UPD-24		3977.10	02/11/2025	21.72	3955.38
RECORDS: SELECTED FROM USEE700 WHERE RIN = '2502153'					
FLOW CODES:					
D: DOWN GRADIENT					
O: ON-SITE					

Appendix A. February 2025 Site Wide Sampling Event Water Level Data

RECORDS: SELECTED FROM USEE700 WHERE RIN = '2401146'

FLOW CODES:

D : DOWN GRADIENT

O : ON-SITE

U : UPGRADIENT

WATER LEVEL FLAGS:

Appendix A. February 2025 Site Wide Sampling Event Trip Report



Date: March 20, 2025
To: Ken Pill
From: James Ritchey
Subject: February 2025 Site Wide Sampling Event

Site: Moab – Site Wide Sampling Event – February 2025

Date of Sampling Event February 3 – 12, 2025

Team Members: K. Pill and J. Ritchey

RIN Number Assigned: All samples were assigned to RIN 2502153.

Sample Shipment: Two coolers were shipped overnight to GEL Laboratory from Moab, Utah, on Feb 13 of 2025 (Tracking numbers: 1ZE243120195805109 and 1ZE243120196349495).

Number of Locations Sampled: The purpose of the Site Wide Sampling Event is to update contaminant plume maps. A total of 40 locations (seven surface samples and 33 monitoring wells) were sampled during this event. Including two duplicates and an equipment blank, a total of 43 samples were collected during the Feb 2025 Site Wide Sampling Event.

Locations Not Sampled/Reason: Well 411 was dry and was not sampled.

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	0492	Duplicate from 18 ft bgs	Ground Water
2001	0999	Equipment blank	DI Water
2002	0439	Duplicate from 118* ft bgs	Ground Water

Note: * = Sample depth approximated

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:

Appendix A. February 2025 Site Wide Sampling Event Trip Report

Location	Date	Sample Depth (ft bgs)	Depth to Water (ft btoc)	Comments
0201	02/05/25	NA	NA	10 ft out, depth unknown (3 ft?). No visible flow.
0218	02/05/25	NA	NA	
0226	02/05/25	NA	NA	
0401	02/03/25	18	14.08	
0403	02/04/25	18	16.18	
0404	02/03/25	18	14.64	
0406	02/03/25	18	10.95	Dark floaties.
0407	02/04/25	17	16.7	
0410	02/12/25	23.5	25.8	Well dewatered before first reading. Reasonable recharge. *Water level at bottom. Maybe not recharging as well as past sampling. Sample collected after letting well recharge. Filtered in lab.
0412	02/04/25	9.5	8.2	Dewatered at 0.5L. Slow Recharge. No water level w/ skinny dipper. Let recharge before sampling.
0413	02/03/25	10.5	8.68	
0414	02/03/25	7.5	5.08	
0437	02/12/25	97*	NA	*Could not get water level, indicator stopped at ~19 ft with bentonite/clay on end. Likely kinked from when well was hit. Turbid water. **Sampled at historical depth.
0439	02/13/25	118*	17.85	Duplicate 2002 - FEB 037 *Sampled at historical depth.
0441	02/11/25	53	49.99	
0453	02/12/25	80	70.02	* ~5ft cut from casing on 2/10 ** Sample depth +5 ft from previous depths.
0454	02/04/25	13	13.16	
0492	02/05/25	18	16.46	Duplicate 2000 - FEB 020
AMM-2	02/04/25	48	10.41	
AMM-3	02/04/25	48	9.08	
ATP-2-D	02/04/25	88	7.03	Grey color. No distinct smell.
CR1	02/05/25	NA	NA	2 ft deep, just off the end of the ramp.
CR2	02/05/25	NA	NA	3 ft off bank, 1 ft deep. Breezy. No noticeable flow.
CR3	02/05/25	NA	NA	~6ft off bank, low flow, 3" of water.
CR5	02/05/25	NA	NA	6 ft out from bank, silty, 1/2 ft deep.
MW-3	02/04/25	44	11.89	
SMI-MW01	02/12/25	16	6.37	Dropped tubing to normal sample depth after purging 1 L of water.
SMI-PZ3S	02/11/25	25	19.76	
TP-01	02/03/25	22	13.85	
TP-17	02/05/25	28	25.78	Sulfur smell. Black floaties. Dark water.
TP-20	02/04/25	32	16.44	Sulfur odor.
TP-22	02/04/25	17	14.08	Dewatered at ~2.0L. Left overnight to recharge. Sampled 2/4/25.
TP-23	02/04/25	25	9.57	

Appendix A. February 2025 Site Wide Sampling Event Trip Report

Location	Date	Sample Depth (ft bgs)	Depth to Water (ft btoc)	Comments
UPD-17	02/11/25	14.5	13.46	
UPD-18	02/11/25	13	13.28	
UPD-20	02/11/25	17	22.85	Trouble with tubing.
UPD-21	02/11/25	25	25.8	
UPD-22	02/04/25	9	11.27	
UPD-23	02/11/25	26	26.79	Could not pull more water. Left to sample after recharge. Sampled unfiltered in afternoon. Filtered in lab.
UPD-24	02/11/25	27	21.72	

Notes: ft bgs = feet below ground surface, * = sample depth approximated

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)
2/3/2025	Ice
2/4/2025	2,960
2/5/2025	3,020
2/6/2025	3,160
2/7/2025	3,000
2/8/2025	3,010
2/9/2025	3,000
2/10/2025	3,000
2/11/2025	2,840
2/12/2025	2,740

Corrective Action Required/Taken: None.

Appendix B.
March 2025 Sampling Event

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

Appendix B. March 2025 Sampling Event Water Sampling field Activities Verification

Sampling Event/RIN	March 2025 / RIN 2503154	Date(s) of Water Sampling	March 13 - 24, 2024
Date(s) of Verification	April 2025	Name of Verifier	J. Ritchey, K. Pill

	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 0493 (2000).

Appendix B. March 2025 Sampling Event Water Sampling field Activities Verification

Sampling Event/RIN	March 2025 / RIN 2503154	Date(s) of Water Sampling	March 13 - 24, 2024
Date(s) of Verification	April 2025	Name of Verifier	J. Ritchey, K. Pill

	Response (Yes, No, NA)	Comments
12. Were EBs taken at a frequency of one per 20 samples that were collected with non-dedicated equipment?	— <u>NA</u>	An equipment blank (2001) was collected on non-dedicated surface water sampling equipment.
13. Were trip blanks prepared and included with each shipment of volatile organic compound samples?	— <u>NA</u>	
14. Were quality-control samples assigned a fictitious site identification number?	— <u>Yes</u>	
Was the true identity of the samples recorded on the quality assurance sample log?	— <u>Yes</u>	
15. Were samples collected in the containers specified?	— <u>Yes</u>	
16. Were samples filtered and preserved as specified?	— <u>Yes</u>	
17. Were the number and types of samples collected as specified?	— <u>Yes</u>	
18. Were COC records completed, and was sample custody maintained?	— <u>Yes</u>	
19. Are field data sheets signed and dated by both team members?	— <u>Yes</u>	
20. Was all other pertinent information documented on the field data sheets?	— <u>NA</u>	
21. Was the presence or absence of ice in the cooler documented at every sample location?	— <u>Yes</u>	
22. Were water levels measured at the locations specified in the planning documents?	— <u>Yes</u>	

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0480 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	18.00	290		8.5	-
Arsenic	mg/L	03/13/2025	0001	18.00	0.00500	U	0.005	-
Copper	mg/L	03/13/2025	0001	18.00	0.00534	B	0.003	-
Manganese	mg/L	03/13/2025	0001	18.00	4.000		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	18.00	231		-	-
pH	S.U.	03/13/2025	N001	18.00	6.88		-	-
Selenium	mg/L	03/13/2025	0001	18.00	0.0334		0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	18.00	15522		-	-
Temperature	C	03/13/2025	N001	18.00	15.70		-	-
Turbidity	NTU	03/13/2025	N001	18.00	3.46		-	-
Uranium	mg/L	03/13/2025	0001	18.00	2.190		0.00134	-

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

LOCATION: 0481 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	28.00	319		8.5	-
Arsenic	mg/L	03/13/2025	0001	28.00	0.00500	U	0.005	-
Copper	mg/L	03/13/2025	0001	28.00	0.00498	B	0.003	-
Manganese	mg/L	03/13/2025	0001	28.00	2.730		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	28.00	238		-	-
pH	S.U.	03/13/2025	N001	28.00	6.88		-	-
Selenium	mg/L	03/13/2025	0001	28.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	28.00	17144		-	-
Temperature	C	03/13/2025	N001	28.00	15.90		-	-
Turbidity	NTU	03/13/2025	N001	28.00	1.98		-	-
Uranium	mg/L	03/13/2025	0001	28.00	2.060		0.00134	-

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0482 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	58.00	361		8.5	-
Arsenic	mg/L	03/13/2025	0001	58.00	0.00500	U	0.005	-
Copper	mg/L	03/13/2025	0001	58.00	0.0175	B	0.003	-
Manganese	mg/L	03/13/2025	0001	58.00	6.030		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	58.00	252		-	-
pH	S.U.	03/13/2025	N001	58.00	6.99		-	-
Selenium	mg/L	03/13/2025	0001	58.00	0.0144	B	0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	58.00	68279		-	-
Temperature	C	03/13/2025	N001	58.00	16.20		-	-
Turbidity	NTU	03/13/2025	N001	58.00	14.10		-	-
Uranium	mg/L	03/13/2025	0001	58.00	2.200		0.00134	-

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

LOCATION: 0483 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	18.00	264		8.5	-
Arsenic	mg/L	03/13/2025	0001	18.00	0.00500	U	0.005	-
Copper	mg/L	03/13/2025	0001	18.00	0.00477	B	0.003	-
Manganese	mg/L	03/13/2025	0001	18.00	4.400		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	18.00	154		-	-
pH	S.U.	03/13/2025	N001	18.00	6.88		-	-
Selenium	mg/L	03/13/2025	0001	18.00	0.0276	B	0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	18.00	14877		-	-
Temperature	C	03/13/2025	N001	18.00	15.90		-	-
Turbidity	NTU	03/13/2025	N001	18.00	4.03		-	-
Uranium	mg/L	03/13/2025	0001	18.00	2.030		0.00134	-

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0485 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	58.00	344		8.5	-
Arsenic	mg/L	03/13/2025	0001	58.00	0.00532	B	0.005	-
Copper	mg/L	03/13/2025	0001	58.00	0.0139	B	0.003	-
Manganese	mg/L	03/13/2025	0001	58.00	5.940		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	58.00	216		-	-
pH	S.U.	03/13/2025	N001	58.00	6.95		-	-
Selenium	mg/L	03/13/2025	0001	58.00	0.0316		0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	58.00	70989		-	-
Temperature	C	03/13/2025	N001	58.00	16.20		-	-
Turbidity	NTU	03/13/2025	N001	58.00	5.51		-	-
Uranium	mg/L	03/13/2025	0001	58.00	2.100		0.00134	-

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

LOCATION: 0488 <well> Baseline Area

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	39.00	361		8.5	-
Arsenic	mg/L	03/13/2025	0001	39.00	0.00782	B	0.005	-
Copper	mg/L	03/13/2025	0001	39.00	0.00458	B	0.003	-
Manganese	mg/L	03/13/2025	0001	39.00	0.0287		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	39.00	102		-	-
pH	S.U.	03/13/2025	N001	39.00	7.00		-	-
Selenium	mg/L	03/13/2025	0001	39.00	0.316		0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	39.00	14531		-	-
Temperature	C	03/13/2025	N001	39.00	15.30		-	-
Turbidity	NTU	03/13/2025	N001	39.00	8.41		-	-
Uranium	mg/L	03/13/2025	0001	39.00	1.740		0.00134	-

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0493 <well> Baseline Area

REPORT DATE: 9/29/2025 12:58 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	03/18/2025	0001	54.00	519		8.5	-
	mg/L	03/18/2025	0002	45.00 - 55.00	514		8.5	-
Arsenic	mg/L	03/18/2025	0001	54.00	0.00738	B	0.005	-
	mg/L	03/18/2025	0002	45.00 - 55.00	0.00500	U	0.005	-
Copper	mg/L	03/18/2025	0001	54.00	0.00364	B	0.003	-
	mg/L	03/18/2025	0002	45.00 - 55.00	0.00300	U	0.003	-
Manganese	mg/L	03/18/2025	0001	54.00	5.700		0.002	-
	mg/L	03/18/2025	0002	45.00 - 55.00	5.800		0.002	-
Oxidation Reduction Potential	mV	03/18/2025	N001	54.00	172		-	-
pH	S.U.	03/18/2025	N001	54.00	6.93		-	-
Selenium	mg/L	03/18/2025	0001	54.00	0.0212	B	0.006	-
	mg/L	03/18/2025	0002	45.00 - 55.00	0.0148	B	0.006	-
Specific Conductance	umhos/cm	03/18/2025	N001	54.00	27778		-	-
Temperature	C	03/18/2025	N001	54.00	14.90		-	-
Turbidity	NTU	03/18/2025	N001	54.00	320.00		-	-
Uranium	mg/L	03/18/2025	0001	54.00	2.280		0.00134	-
	mg/L	03/18/2025	0002	45.00 - 55.00	2.280		0.00134	-

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0557 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	40.00	322		8.5	-
Arsenic	mg/L	03/13/2025	0001	40.00	0.00500	U	0.005	-
Copper	mg/L	03/13/2025	0001	40.00	0.00666	B	0.003	-
Manganese	mg/L	03/13/2025	0001	40.00	2.770		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	40.00	240		-	-
pH	S.U.	03/13/2025	N001	40.00	6.91		-	-
Selenium	mg/L	03/13/2025	0001	40.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	40.00	17751		-	-
Temperature	C	03/13/2025	N001	40.00	16.00		-	-
Turbidity	NTU	03/13/2025	N001	40.00	3.96		-	-
Uranium	mg/L	03/13/2025	0001	40.00	2.300		0.00134	-

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

LOCATION: 0558 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	36.00	347		8.5	-
Arsenic	mg/L	03/13/2025	0001	36.00	0.00500	U	0.005	-
Copper	mg/L	03/13/2025	0001	36.00	0.00549	B	0.003	-
Manganese	mg/L	03/13/2025	0001	36.00	5.230		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	36.00	206		-	-
pH	S.U.	03/13/2025	N001	36.00	7.07		-	-
Selenium	mg/L	03/13/2025	0001	36.00	0.0101	B	0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	36.00	20209		-	-
Temperature	C	03/13/2025	N001	36.00	16.10		-	-
Turbidity	NTU	03/13/2025	N001	36.00	2.51		-	-
Uranium	mg/L	03/13/2025	0001	36.00	2.330		0.00134	-

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0559 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	52.00	163		8.5	-
Arsenic	mg/L	03/13/2025	0001	52.00	0.00500	U	0.005	-
Copper	mg/L	03/13/2025	0001	52.00	0.00333	B	0.003	-
Manganese	mg/L	03/13/2025	0001	52.00	4.070		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	52.00	151		-	-
pH	S.U.	03/13/2025	N001	52.00	6.91		-	-
Selenium	mg/L	03/13/2025	0001	52.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	52.00	12609		-	-
Temperature	C	03/13/2025	N001	52.00	14.70		-	-
Turbidity	NTU	03/13/2025	N001	52.00	1.63		-	-
Uranium	mg/L	03/13/2025	0001	52.00	1.560		0.00134	-

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

LOCATION: 0560 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	28.00	365		8.5	-
Arsenic	mg/L	03/13/2025	0001	28.00	0.00500	U	0.005	-
Copper	mg/L	03/13/2025	0001	28.00	0.00767	B	0.003	-
Manganese	mg/L	03/13/2025	0001	28.00	5.560		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	28.00	121		-	-
pH	S.U.	03/13/2025	N001	28.00	6.96		-	-
Selenium	mg/L	03/13/2025	0001	28.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	28.00	23241		-	-
Temperature	C	03/13/2025	N001	28.00	15.70		-	-
Turbidity	NTU	03/13/2025	N001	28.00	1.17		-	-
Uranium	mg/L	03/13/2025	0001	28.00	2.360		0.00134	-

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0561 <well> Configuration 1

REPORT DATE: 9/29/2025 12:58 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	03/13/2025	0001	50.00	480		8.5	-
Arsenic	mg/L	03/13/2025	0001	50.00	0.00500	U	0.005	-
Copper	mg/L	03/13/2025	0001	50.00	0.0141	B	0.003	-
Manganese	mg/L	03/13/2025	0001	50.00	5.960		0.002	-
Oxidation Reduction Potential	mV	03/13/2025	N001	50.00	188		-	-
pH	s.u.	03/13/2025	N001	50.00	6.94		-	-
Selenium	mg/L	03/13/2025	0001	50.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	03/13/2025	N001	50.00	67564		-	-
Temperature	C	03/13/2025	N001	50.00	15.50		-	-
Turbidity	NTU	03/13/2025	N001	50.00	1.71		-	-
Uranium	mg/L	03/13/2025	0001	50.00	2.010		0.00134	-

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

LOCATION: 0587 <well> Configuration 2

REPORT DATE: 9/29/2025 12:58 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	03/20/2025	0001	18.00	110		8.5	-
Arsenic	mg/L	03/20/2025	0001	18.00	0.00500	U	0.005	-
Copper	mg/L	03/20/2025	0001	18.00	0.00499	B	0.003	-
Manganese	mg/L	03/20/2025	0001	18.00	2.400		0.002	-
Oxidation Reduction Potential	mV	03/20/2025	N001	18.00	85		-	-
pH	s.u.	03/20/2025	N001	18.00	6.81		-	-
Selenium	mg/L	03/20/2025	0001	18.00	0.0733		0.006	-
Specific Conductance	umhos/cm	03/20/2025	N001	18.00	11450		-	-
Temperature	C	03/20/2025	N001	18.00	15.60		-	-
Turbidity	NTU	03/20/2025	N001	18.00	2.22		-	-
Uranium	mg/L	03/20/2025	0001	18.00	1.190		0.00134	-

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0588 <well> Configuration 2

REPORT DATE: 9/29/2025 12:58 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	03/20/2025	0001	34.00	363		8.5	-
Arsenic	mg/L	03/20/2025	0001	34.00	0.00500	U	0.005	-
Copper	mg/L	03/20/2025	0001	34.00	0.00692	B	0.003	-
Manganese	mg/L	03/20/2025	0001	34.00	1.810		0.002	-
Oxidation Reduction Potential	mV	03/20/2025	N001	34.00	230		-	-
pH	S.U.	03/20/2025	N001	34.00	6.93		-	-
Selenium	mg/L	03/20/2025	0001	34.00	0.0169	B	0.006	-
Specific Conductance	umhos/cm	03/20/2025	N001	34.00	23369		-	-
Temperature	C	03/20/2025	N001	34.00	16.40		-	-
Turbidity	NTU	03/20/2025	N001	34.00	5.69		-	-
Uranium	mg/L	03/20/2025	0001	34.00	2.000		0.00134	-

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

LOCATION: 0589 <well> Configuration 2

REPORT DATE: 9/29/2025 12:58 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	03/20/2025	0001	52.00	444		8.5	-
Arsenic	mg/L	03/20/2025	0001	52.00	0.00500	U	0.005	-
Copper	mg/L	03/20/2025	0001	52.00	0.0118	B	0.003	-
Manganese	mg/L	03/20/2025	0001	52.00	6.170		0.002	-
Oxidation Reduction Potential	mV	03/20/2025	N001	52.00	231		-	-
pH	S.U.	03/20/2025	N001	52.00	6.90		-	-
Selenium	mg/L	03/20/2025	0001	52.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	03/20/2025	N001	52.00	45019		-	-
Temperature	C	03/20/2025	N001	52.00	16.40		-	-
Turbidity	NTU	03/20/2025	N001	52.00	16.30		-	-
Uranium	mg/L	03/20/2025	0001	52.00	2.440		0.00134	-

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0687 <well> Configuration 3

REPORT DATE: 9/29/2025 12:58 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	03/18/2025	0001	27.00	227		8.5	-
Arsenic	mg/L	03/18/2025	0001	27.00	0.00500	U	0.005	-
Copper	mg/L	03/18/2025	0001	27.00	0.00300	U	0.003	-
Manganese	mg/L	03/18/2025	0001	27.00	0.0161		0.002	-
Oxidation Reduction Potential	mV	03/18/2025	N001	27.00	61		-	-
pH	S.U.	03/18/2025	N001	27.00	6.82		-	-
Selenium	mg/L	03/18/2025	0001	27.00	0.112		0.006	-
Specific Conductance	umhos/cm	03/18/2025	N001	27.00	12507		-	-
Temperature	C	03/18/2025	N001	27.00	15.60		-	-
Turbidity	NTU	03/18/2025	N001	27.00	11.90		-	-
Uranium	mg/L	03/18/2025	0001	27.00	1.760		0.00134	-

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

LOCATION: 0688 <well> Configuration 3

REPORT DATE: 9/29/2025 12:58 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	03/18/2025	0001	39.00	503		8.5	-
Arsenic	mg/L	03/18/2025	0001	39.00	0.00500	U	0.005	-
Copper	mg/L	03/18/2025	0001	39.00	0.00443	B	0.003	-
Manganese	mg/L	03/18/2025	0001	39.00	0.428		0.002	-
Oxidation Reduction Potential	mV	03/18/2025	N001	39.00	118		-	-
pH	S.U.	03/18/2025	N001	39.00	6.93		-	-
Selenium	mg/L	03/18/2025	0001	39.00	0.00600	U	0.006	-
Specific Conductance	umhos/cm	03/18/2025	N001	39.00	17132		-	-
Temperature	C	03/18/2025	N001	39.00	13.80		-	-
Turbidity	NTU	03/18/2025	N001	39.00	14.00		-	-
Uranium	mg/L	03/18/2025	0001	39.00	2.050		0.00134	-

Appendix B. March 2025 Sampling Event Water Quality Data

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

LOCATION: 0689 <well> Configuration 3

REPORT DATE: 9/29/2025 12:58 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	03/18/2025	0001	54.00	465		8.5	-
Arsenic	mg/L	03/18/2025	0001	54.00	0.00500	U	0.005	-
Copper	mg/L	03/18/2025	0001	54.00	0.00864	B	0.003	-
Manganese	mg/L	03/18/2025	0001	54.00	4.720		0.002	-
Oxidation Reduction Potential	mV	03/18/2025	N001	54.00	164		-	-
pH	S.U.	03/18/2025	N001	54.00	6.95		-	-
Selenium	mg/L	03/18/2025	0001	54.00	0.0232	B	0.006	-
Specific Conductance	umhos/cm	03/18/2025	N001	54.00	28473		-	-
Temperature	C	03/18/2025	N001	54.00	14.30		-	-
Turbidity	NTU	03/18/2025	N001	54.00	283.00		-	-
Uranium	mg/L	03/18/2025	0001	54.00	2.430		0.00134	-

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

LOCATION: SMI-PZ1S <well> Baseline Area

REPORT DATE: 9/29/2025 12:58 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	03/24/2025	0001	18.00	31.5		8.5	-
Arsenic	mg/L	03/24/2025	0001	18.00	0.00500	U	0.005	-
Copper	mg/L	03/24/2025	0001	18.00	0.00300	U	0.003	-
Manganese	mg/L	03/24/2025	0001	18.00	0.477		0.002	-
Oxidation Reduction Potential	mV	03/24/2025	N001	18.00	134		-	-
pH	S.U.	03/24/2025	N001	18.00	7.19		-	-
Selenium	mg/L	03/24/2025	0001	18.00	0.0424		0.006	-
Specific Conductance	umhos/cm	03/24/2025	N001	18.00	2778		-	-
Temperature	C	03/24/2025	N001	18.00	10.60		-	-
Turbidity	NTU	03/24/2025	N001	18.00	8.66		-	-
Uranium	mg/L	03/24/2025	0001	18.00	0.292		6.7E-05	-

Appendix B. March 2025 Sampling Event Water Quality Data

RECORDS: SELECTED FROM USEE105 WHERE ~~ExcludeEquipBlank = TRUE AND RIN = '2503154' 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 QUALIFIERS:

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

DATA QUALIFIERS:

- | | | |
|--|--|---|
| F Low flow sampling method used. | G Possible grout contamination, pH > 9. | J Estimated value. |
| L Less than 3 bore volumes purged prior to sampling. | N Presumptive evidence that analyte is present. The analyte is "tentatively identified". | Q Qualitative <u>result</u> 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 B. March 2025 Sampling Event Minimums and Maximums Report

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2503154

Comparison: All Historical Data

Report Date: 9/29/2025 12:56 PM

Site Code	Location Code	Sample Date	Analyte	Current			Historical Maximum			Historical Minimum			Count	
				Result	Lab	Data	Result	Lab	Data	Result	Lab	Data	N	N Below Detect
MOA01	0480	03/13/2025	Selenium	0.0334			0.0072		F	0.001	U	FJ	13	1
MOA01	0481	03/13/2025	Manganese	2.73			5.6		F	4.7			17	0
MOA01	0482	03/13/2025	Manganese	6.03			11			6.5			12	0
MOA01	0482	03/13/2025	Uranium	2.2			1			0.51		JF	29	0
MOA01	0483	03/13/2025	Selenium	0.0276	B		0.02	U	F	0.0011		F	18	2
MOA01	0485	03/13/2025	Ammonia Total as N	344			1300		J	420		F	26	0
MOA01	0485	03/13/2025	Copper	0.0139	B		0.035	U		0.017	U	F	5	5
MOA01	0485	03/13/2025	Manganese	5.94			9.6			6.6		F	10	0
MOA01	0485	03/13/2025	Selenium	0.0316			0.0059		F	0.0034			5	0
MOA01	0485	03/13/2025	Uranium	2.1			1.4			0.000202	B		26	0
MOA01	0488	03/13/2025	Ammonia Total as N	361			900		J	390		J	62	0
MOA01	0488	03/13/2025	Manganese	0.0287			7.59	N	F	3.3			37	0
MOA01	0488	03/13/2025	Selenium	0.316			0.1	U	F	0.0072			24	2
MOA01	0493	03/18/2025	Ammonia Total as N	514			1300		F	620			49	0
MOA01	0493	03/18/2025	Ammonia Total as N	519			1300		F	620			49	0
MOA01	0493	03/18/2025	Copper	0.00364	B		0.041	B	UF	0.0044	U		13	12
MOA01	0493	03/18/2025	Manganese	5.7			9.9			5.8			22	0
MOA01	0493	03/18/2025	Selenium	0.0212	B		0.019		F	0.0095			13	0
MOA01	0557	03/13/2025	Ammonia Total as N	322			2400		F	410			60	0
MOA01	0557	03/13/2025	Manganese	2.77			7.4			4.6			26	0
MOA01	0558	03/13/2025	Ammonia Total as N	347			2400		F	410			40	0
MOA01	0558	03/13/2025	Copper	0.00549	B		0.1	B		0.014	U	F	11	10
MOA01	0558	03/13/2025	Selenium	0.0101	B		0.0093		F	0.0019		J	11	0
MOA01	0560	03/13/2025	Copper	0.00767	B		0.043	B	UF	0.014	U	F	12	12
MOA01	0561	03/13/2025	Ammonia Total as N	480			1300			580		F	24	0
MOA01	0561	03/13/2025	Copper	0.0141	B		0.18	B	F	0.017	U	J	9	7
MOA01	0561	03/13/2025	Manganese	5.96			67		F	7.7			12	0

Appendix B. March 2025 Sampling Event Minimums and Maximums Report

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2503154

Comparison: All Historical Data

Report Date: 9/29/2025 12:56 PM

MOA01	0561	03/13/2025	Uranium	2.01		1.8		0.39	F	24	0
MOA01	0587	03/20/2025	Selenium	0.0733		0.012		0.0053		12	0
MOA01	0589	03/20/2025	Copper	0.0118	B	0.1	B	0.017	U	12	11
MOA01	0687	03/18/2025	Manganese	0.0161		7.4	N	1.6		22	0
MOA01	0687	03/18/2025	Selenium	0.112		0.1	U	0.0087	N	19	1
MOA01	0688	03/18/2025	Manganese	0.428		7.5	J	2.5		30	0
MOA01	0689	03/18/2025	Selenium	0.0232	B	0.015		0.0039	F	14	0
MOA01	SMI-PZ1S	03/24/2025	Manganese	0.477		5.9	F	0.56		15	0

Note: all concentrations are in mg/L

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

LAB QUALIFIERS:

- * Replicate analysis not within control limits.
- + Correlation coefficient for MSA < 0.995.
- > 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.

Appendix B. March 2025 Sampling Event Minimums and Maximums Report

Data Validation Minimums and Maximums Report - No Field Parameters

Laboratory: GEL Laboratories of Ohio LLC

RIN: 2503154

Comparison: All Historical Data

Report Date: 9/29/2025 12:56 PM

DATA QUALIFIERS:

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

Appendix B. March 2025 Sampling Event Blanks Report

BLANKS REPORT

LAB: GEL Laboratories of Ohio LLC

RIN: 2503154

Report Date: 9/29/2025 1:01 PM

Parameter	Site	Location	Sample				Qualifiers		Detection	Uncertainty	Sample
	Code	Code	Date	ID	Units	Result	Lab	Data	Limit		Type
Ammonia Total as N	MOA01	0999	03/24/2025	0002	mg/L	0.017	U		0.017		E
Arsenic	MOA01	0999	03/24/2025	0002	mg/L	0.005	U		0.005		E
Copper	MOA01	0999	03/24/2025	0002	mg/L	0.003	U		0.003		E
Manganese	MOA01	0999	03/24/2025	0002	mg/L	0.002	U		0.002		E
Selenium	MOA01	0999	03/24/2025	0002	mg/L	0.006	U		0.006		E
Uranium	MOA01	0999	03/24/2025	0002	mg/L	8.6E-05	B		6.7E-05		E

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

LAB QUALIFIERS:

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

DATA QUALIFIERS:

- F Low flow sampling method used.
- G Possible grout contamination, pH > 9.
- J Estimated value.

Appendix B. March 2025 Sampling Event Blanks Report

BLANKS REPORT

LAB: GEL Laboratories of Ohio LLC

RIN: 2503154

Report Date: 9/29/2025 1:01 PM

L Less than 3 bore volumes purged prior to sampling.

R Unusable result.

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

U Parameter analyzed for but was not detected.

Q Qualitative [result](#) due to sampling technique

X Location is undefined.

SAMPLE TYPES:

E EQUIPMENT BLANK

Appendix B. March 2025 Sampling Event Water Level Data

STATIC WATER LEVELS (USEE700) FOR SITE MOA01, Moab Site
REPORT DATE: 9/29/2025 12:57 PM

LOCATION CODE	FLOW CODE	TOP OF CASING ELEVATION (FT)	MEASUREMENT		DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
			DATE	TIME			
0480		3968.65	03/13/2025		15.93	3952.72	
0481		3968.83	03/13/2025		15.88	3952.95	
0482		3968.70	03/13/2025		16.43	3952.27	
0483		3968.90	03/13/2025		16.18	3952.72	
0485		3968.81	03/13/2025		16.55	3952.26	
0488		3966.31	03/13/2025		12.74	3953.57	
0493		3965.68	03/18/2025		11.95	3953.73	
0557		3966.68	03/13/2025		13.64	3953.04	
0558		3968.79	03/13/2025		15.88	3952.91	
0559		3969.92	03/13/2025		17.18	3952.74	
SMI-PZ1S	O	3964.13	03/24/2025		10.21	3953.92	
0560		3968.77	03/13/2025		15.85	3952.92	
0561		3968.56	03/13/2025		15.59	3952.97	
0587		3968.89	03/20/2025		15.69	3953.20	
0588		3968.82	03/20/2025		15.66	3953.16	
0589		3968.87	03/20/2025		15.50	3953.37	
0687		3969.09	03/18/2025		15.59	3953.50	
0688		3968.66	03/18/2025		15.20	3953.46	
0689		3968.66	03/18/2025		15.30	3953.36	

RECORDS: SELECTED FROM USEE700 WHERE RIN = '2404147'

FLOW CODES:

WATER LEVEL FLAGS:

Appendix B. March 2025 Sampling Event Trip Report



Date: April 23, 2025
To: Ken Pill
From: James Ritchey
Subject: March 2025 Deep Well Sampling Event

Site: Moab – Site Wide Sampling Event – March 2025

Date of Sampling Event: March 13 – 24, 2025

Team Members: K. Pill and J. Ritchey

RIN Number Assigned: All samples were assigned to RIN 2503154.

Sample Shipment: One cooler was shipped overnight to GEL Laboratory from Moab, Utah, on March 24 of 2025 (Tracking number: 1ZE243120196266208).

Number of Locations Sampled: The purpose of the Site Wide Sampling Event is to update contaminant plume maps. A total of 19 locations were sampled during this event. Including one duplicate and an equipment blank, a total of 21 samples were collected during the March 2025 Deep Well 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	0493	Duplicate from 54 ft bgs	Ground Water	2000
2001	0999	Equipment blank	DI Water	2001

Location Specific Information – Observation Wells: 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:

Appendix B. March 2025 Sampling Event Trip Report

Location	Date	Sample Depth (ft bgs)	Depth to Water (ft btoc)	Comments
0480	03/13/2025	18	15.93	
0481	03/13/2025	28	15.88	
0482	03/13/2025	58	16.43	
0483	03/13/2025	18	16.18	
0485	03/13/2025	58	16.55	
0488	03/13/2025	39	12.74	
0493	03/18/2025	54	11.95	Duplicate 2000 - MAR 013. Dark colored water.
0557	03/13/2025	40	13.64	
0558	03/13/2025	36	15.88	
0559	03/13/2025	52	17.18	
0560	03/13/2025	28	15.85	
0561	03/13/2025	50	15.59	
0587	03/20/2025	18	15.69	
0588	03/20/2025	34	15.66	
0589	03/20/2025	52	15.5	
0687	03/18/2025	27	15.59	
0688	03/18/2025	39	15.2	
0689	03/18/2025	54	15.3	
SMI-PZ1S	03/24/2025	18	10.21	

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)
3/13/2025	2730
3/14/2025	2730
3/15/2025	2880
3/16/2025	3040
3/17/2025	2970
3/18/2025	2850
3/19/2025	2910
3/20/2025	3030
3/21/2025	3230
3/22/2025	3220
3/23/2025	3250
3/24/2025	3320

Equipment Issues: None.

Corrective Action Required/Taken: None.