LMS/GJO/51021

2025 Annual Inspection and Monitoring Report for the Grand Junction, Colorado, Site

July 2025

U.S. DEPARTMENT OF ENERGY | Legacy Management

This document is designed for online viewing.

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Abbreviations

CASI	Condition Assessment Survey Inspection
CCR	*Code of Colorado Regulations*
DOE	U.S. Department of Energy
IC	institutional control
LM	Office of Legacy Management
LMS	Legacy Management Support
LTS&M Plan	Long-Term Surveillance and Maintenance Plan
PL	photograph location
RTC	Riverview Technology Corporation

Executive Summary

Physical and institutional controls enacted at the Grand Junction, Colorado, Site continue to be effective in preventing exposure to contamination remaining on the property. One feature continues to be monitored for potential repair; however, no follow-up inspection is required.

Annual groundwater and surface water sampling was conducted in 2025 as required in the *Long-Term Surveillance and Maintenance Plan for the Grand Junction, Colorado, Site*. Sampling results are summarized in this report and displayed in Appendixes A through D.

1.0 Introduction

The *Long-Term Surveillance and Maintenance Plan for the Grand Junction, Colorado, Site* (DOE 2025a), also called the Long-Term Surveillance and Maintenance Plan (LTS&M Plan), requires a report to document the results of the annual site inspection and to address monitoring results from annual groundwater and surface water monitoring. This report documents the results of the annual inspection conducted on February 12, 2025, and presents the results of the annual groundwater and surface water sampling event conducted on February 19, 2025.

2.0 Site History

The Grand Junction, Colorado, Site was contaminated during uranium milling and uranium oxide procurement activities conducted by the federal government between 1943 and 1974. The U.S. Department of Energy (DOE) remediated the property between 1986 and 2014. Removal of uranium mill tailings and contaminated soil began in late 1989, and most of the contaminated soil was removed by 1994. Additional small deposits of contaminated soil and material were removed during remedial action conducted from 1998 through 2014. Remediation involved decontaminating or demolishing contaminated buildings and removing contaminated soil. Contaminated materials were disposed of at the Uranium Mill Tailings Radiation Control Act Title I Grand Junction, Colorado, Disposal Site south of Grand Junction.

In 2001, DOE transferred approximately 8 acres of the site, including Building 7, to the U.S. Department of the Army (occupied by an engineering unit of the U.S. Army Reserve). The remainder of the facility was transferred to the nonprofit Riverview Technology Corporation (RTC) in 2001 following approval of the covenant for deferred remediation. RTC leases several buildings to DOE so that the agency can conduct ongoing operations. In 2018, the U.S. Army Reserve transferred ownership of Building 7 back to the DOE Office of Legacy Management (LM) via the U.S. General Services Administration.

LM remains responsible for ensuring that contamination left on its former property is controlled to prevent exposure to the public and the environment. Two types of contamination remain:

- In groundwater and surface water within the site perimeter.
- As radium foil sealed belowground in a decommissioned calibration well.

The site transfer agreement between DOE and RTC stipulated that contamination beneath Building 12A (the former computer and storage facility) and Building 20 (the former analytical chemistry laboratory) would be remediated when DOE vacated and demolished those buildings. DOE concluded operations in the laboratory in December 2003, and demolition of the building and remediation of underlying contaminated materials occurred in 2006. Demolition of Building 12A and associated remediation of the concrete slab and soil beneath the building were completed in 2014. These areas of the site are no longer part of the annual inspection requirements. Groundwater and surface water are being remediated by natural flushing of the alluvial aquifer. LM will provide stewardship oversight of the decommissioned calibration well in perpetuity.

3.0 Site Inspection

3.1 Inspection Requirements

Requirements for the long-term surveillance and maintenance of the site are specified in the site-specific LTS&M Plan (DOE 2025a).

3.2 Institutional Controls

Institutional controls (ICs) at the site consist of warning signs around the surface water locations (North Pond, South Pond, and Wetland Area) to prevent use, an information and warning plaque over the decommissioned well that contains radium foil, locks on groundwater monitoring wells, and deed restrictions that prohibit unauthorized excavations that could expose contaminated groundwater under the facility. Verification of these ICs is part of the annual inspection, and the results are included in this report.

3.3 Inspection Results

This report presents the results of the annual LM inspection of the Grand Junction site. H. Petrie of the Legacy Management Support (LMS) contractor conducted the inspection. S. Woods of LM, A. Lawrence and L. Manchester of the Colorado Department of Public Health and Environment, and S. Campbell, L. Friesen, and K. Lund of the LMS contractor attended the inspection.

The purposes of the annual inspection are to confirm the integrity of visible features at the site, identify changes in conditions that might affect site protectiveness, and determine the need, if any, for maintenance, additional inspections, or monitoring. Additionally, a Condition Assessment Survey Inspection (CASI) of Facilities Information Management System assets occurs every 5 years. A portion of the CASI occurred in fiscal year 2021; the next CASI will occur in fiscal year 2026.

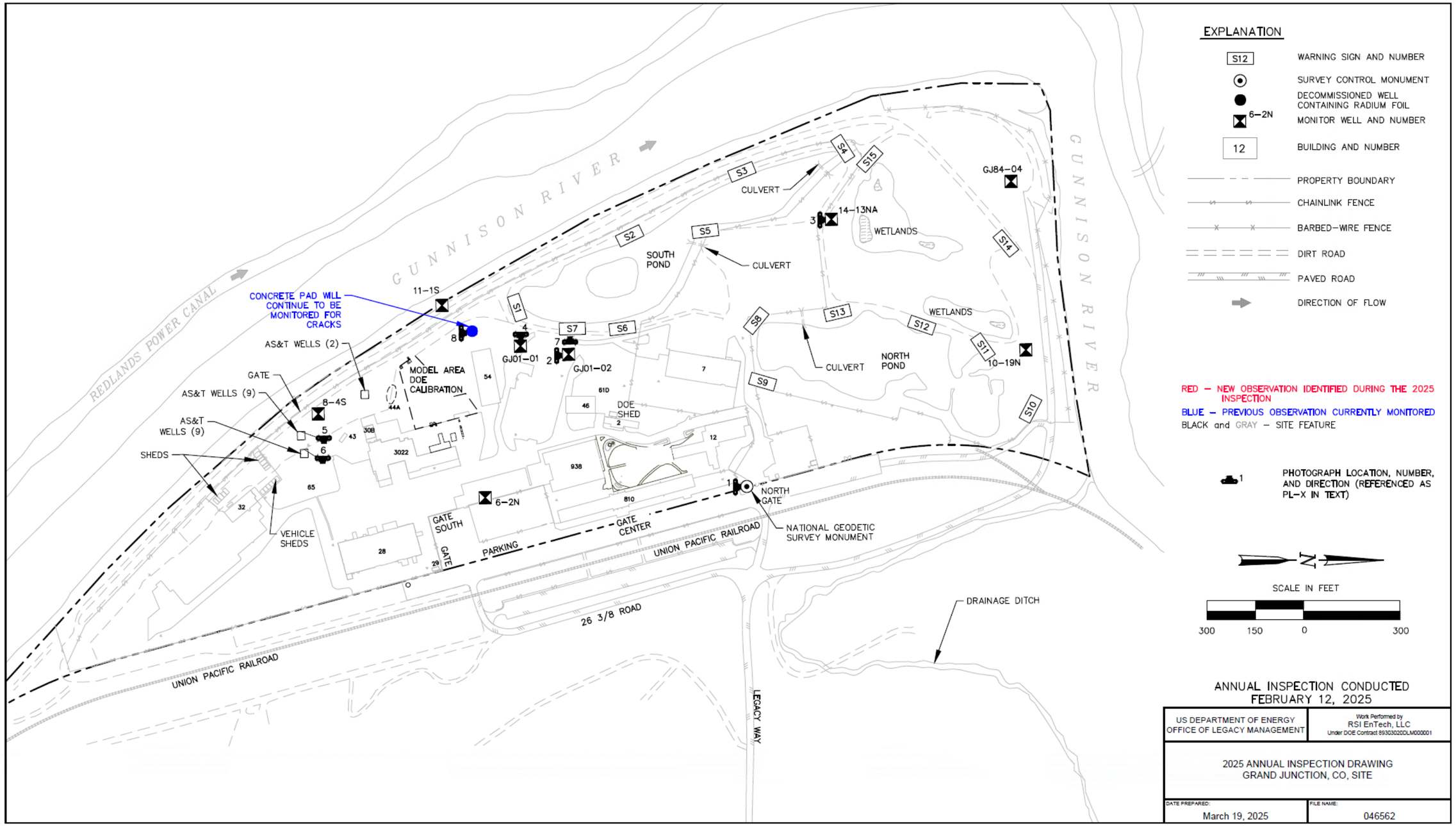
The annual inspection addresses only those portions of the site with remaining contaminated media that must be monitored and maintained to ensure continued protection of human health and the environment. Features discussed in this report are shown in Figure 1. Photographs to support specific observations are identified in the text and in Figure 1 by photograph location (PL) numbers.

3.3.1 Site Surveillance Features

Figure 1 shows the locations of site surveillance features. Inspection results and assessment of potential maintenance activities associated with the site surveillance features are included in the following subsections.

3.3.1.1 Monument

A National Geodetic Survey monument near the former north gate establishes elevation control for the site (PL-1). No maintenance needs were identified.



Abbreviation: AS&T = Applied Studies and Technology

Figure 1. 2025 Annual Inspection Drawing for the Grand Junction, Colorado, Site

3.3.1.2 Monitoring Wells

DOE owns eight monitoring wells on the property that have been used in the long-term monitoring program; seven of these wells are currently used to monitor the progress of natural flushing of contaminants from the alluvial aquifer. Wells 10-19N, 11-1S, 14-13NA, GJ01-02 (PL-2, not currently monitored), and GJ84-04 (PL-3) are flush mounted and protected with standard metal monitoring well covers or manhole covers; well GJ84-04 is also protected by steel bollards. Wells 6-2N, 8-4S, and GJ01-01 (PL-4) have aboveground steel protective casings; steel bollards are in place as further protection for wells 6-2N and 8-4S. Twenty additional monitoring wells (PL-5 and PL-6) installed as part of a tracer project in association with the Applied Studies and Technology group were inspected. No maintenance needs were identified.

New security locks with controlled keys have been installed on all wells requiring locks.

3.3.1.3 Warning Signs

Fifteen warning signs installed on steel posts are positioned around the surface water areas to ensure that the signs are visible to a person approaching from any direction of reasonable access. All warning signs were undamaged, legible, and in good condition (PL-7). No maintenance needs were identified.

3.3.1.4 Radium Foil Well

In the 1980s, DOE installed a 300-foot-deep cased well to calibrate depth measurement systems on borehole geophysical logging trucks. Two strips of radium-226 foil were placed around the casing at depths of 81 feet (29 picocuries of activity) and 181 feet (3 picocuries of activity). During calibration, the instruments in the trucks detected the gamma radiation signal from the radium foil.

The well was decommissioned in place in 2000. DOE perforated the casing above and below each strip of foil and pressure-grouted the annulus with Portland cement to seal the foil in place. The well was filled with grout, and a metal plaque was mounted in concrete at ground level over the well. During the 2020 inspection, inspectors observed that the corner of the concrete pad was chipped off; it was repaired immediately following the inspection. The corner of the concrete pad that was repaired in 2020 was showing cracks in 2021; however, there was no structural damage to the concrete pad. During the 2022 inspection, the inspectors observed that the northwest corner of the concrete pad was chipped; however, no repairs were made as there was no structural damage to the rest of the concrete pad that would affect the integrity of the well. No further cracking or chipping has been observed during annual inspections since 2022. The concrete pad will continue to be assessed during future inspections to determine if repairs are needed. The metal plaque includes the well information and an engraved warning (PL-8).

3.3.2 Inspection Areas

To ensure a thorough and efficient inspection, the site is divided into two areas referred to as transects: (1) the interior portion of the site and area within the former DOE property boundary that is addressed in the LTS&M Plan and (2) the outlying area.

Specific site surveillance features, such as survey markers, warning signs, and monitoring wells, were observed within each transect. Each transect was inspected for evidence of erosion, excavation, vandalism, or other phenomena that might indicate a loss of IC protectiveness or otherwise diminished protectiveness.

3.3.2.1 Interior Portions of the Site

This transect includes the surface water areas and other site surveillance features within the former DOE property boundary.

Most of the site surveillance features and surface water features are in areas not easily accessible to the public due to fencing. There were no signs of activity, development, or land use change (e.g., well installations or excavations that could expose groundwater) on the site that might degrade protectiveness.

3.3.2.2 Outlying Area

There were no signs of activity, development, or land use change in areas adjacent to the site that might expose contaminated groundwater or impact the natural flushing of the aquifer.

3.4 Follow-Up or Contingency Inspections

DOE will conduct follow-up inspections if (1) the annual inspection or other site visit reveals a condition that requires a return to the site to further evaluate the condition or (2) a citizen or outside agency notifies DOE that conditions at or near the site have substantially changed.

No need for a follow-up inspection was identified.

3.5 Maintenance and Repairs

Inspection of the concrete pad around the 300-foot-deep decommissioned well revealed that the northwest corner was still chipped, there were no further changes to the concrete pad, and that there was no structural damage that would affect the integrity of the well. The concrete pad will continue to be observed to determine if repairs are necessary following future inspections.

3.6 Corrective Action

No corrective action was required in 2025.

3.7 Photographs

Photograph Location Number	Azimuth	Photograph Description
PL-1	—	National Geodetic Survey Monument
PL-2	—	Monitoring Well GJ01-02
PL-3	—	Monitoring Well 14-13NA
PL-4	90	Monitoring Well GJ01-01
PL-5	90	Applied Studies and Technology Monitoring Well Gallery (9 wells)
PL-6	90	Applied Studies and Technology Monitoring Well Gallery (9 wells)
PL-7	270	Warning Sign S7
PL-8	—	Decommissioned Well Containing Radium Foil

Note:
— = Photograph taken vertically from above.

PL-1. National Geodetic Survey Monument

PL-2. Monitoring Well GJ01-02

PL-3. Monitoring Well 14-13NA

PL-4. Monitoring Well GJ01-01

PL-5. Applied Studies and Technology Monitoring Well Gallery (9 wells)

PL-6. Applied Studies and Technology Monitoring Well Gallery (9 wells)

PL-7. Warning Sign S7

PL-8. Decommissioned Well Containing Radium Foil

4.0 Environmental Monitoring

In accordance with the site-specific *Grand Junction Projects Office Remedial Action Project, Declaration for the Record of Decision and Record of Decision Summary* (DOE 1989), the compliance strategy for groundwater remediation at the Grand Junction site is natural flushing of the alluvial aquifer. Groundwater modeling predicted that groundwater remediation is expected to be completed 50–80 years after the remediation of contaminated soils.

4.1 2025 Monitoring Results

The LTS&M Plan requires annual groundwater and surface water monitoring. Sampling was conducted on February 19, 2025. In accordance with the LTS&M Plan, the 2025 monitoring network at the Grand Junction site consisted of seven monitoring wells and six surface water locations, as shown in Figure 2. The Wetland Area surface water location was not sampled in 2025 because no surface water was present. Samples were collected according to procedures specified in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites* (DOE 2025b) and were analyzed for manganese (groundwater only), molybdenum, selenium, sulfate, and uranium; field measurements were taken of total alkalinity, pH, specific conductance, temperature, and turbidity. In addition, groundwater levels were measured at each monitoring well.

Groundwater and surface monitoring results are summarized in Table 1. Time versus concentration graphs for each analyte for all monitoring wells and surface water locations in the long-term monitoring network are displayed in Appendix A. A complete set of 2025 groundwater, surface water, and static water level data are displayed in Appendixes B, C, and D, respectively.

All water quality data for the Grand Junction site are archived in the environmental database at the LM Field Support Center at Grand Junction, Colorado. Water quality data are also available for viewing with dynamic mapping via the Geospatial Environmental Mapping System (GEMS) website at https://gems.lm.doe.gov/#&site=GJO.

Figure 2. 2025 Sampling Locations at the Grand Junction Site

Table 1. Summary of Historical and 2025 Results[a]

Location	Analyte									
	Manganese		Molybdenum		Selenium		Sulfate		Uranium	
	Historical Maximum	2025 Result	Historical Maximum	2025 Result	Historical Maximum	2025 Result	Historical Maximum	2025 Result	Historical Maximum	2025 Result
Groundwater[b]										
10-19N	10	0.0927	0.541	0.015	0.03	0.00855	5710	1610	1.43	0.226
11-1S	2.4	0.11	0.552	0.0115	0.0504	<0.0015	2800	224	2.2	0.0283
14-13NA	6.24	4.32	0.57	0.0973	0.0572	<0.0015	2270	1520	1.7	0.164
6-2N	1.9	0.737	0.15	0.0524	0.14	0.0364	1480	570	1.1	0.176
8-4S	3.28	2.28	2.65	0.0605	0.685	<0.0015	2200	374	4.8	0.181
GJ01-01	0.71	0.497	0.162	0.105	0.0634	0.00758	762	536	0.507	0.284
GJ84-04	4.8	3.63	0.413	0.0474	0.015	<0.0015	3100	1120	1.5	0.164
Surface Water[c]										
North Pond			0.134	0.022	0.015	0.0033	7300	2130	0.993	0.418
South Pond			1.39	0.0488	0.064	<0.0015	5060	1220	0.56	0.2
Wetland Area			8.9	—	0.0231	—	45,200	—	47	—
Upper Gunnison			0.09	0.00229	0.015	0.00286	513	234	0.012	0.00556
Upper Mid Gunnison			0.031	0.00234	0.016	0.00276	511	232	0.013	0.00561
Lower Gunnison			0.05	0.00332	0.017	0.00308	541	269	0.034	0.011

Notes:

[a] Historical maximums are from 1984 to 2025. All units are in milligrams per liter (mg/L). A < indicates that the analyte was below the detection limit.

[b] Results in red font exceed standards from "The Basic Standards for Groundwater" in Volume 5 *Code of Colorado Regulations* Section 1002-41 (5 CCR 1002-41) or background concentrations (for manganese and sulfate). Standards are molybdenum, 0.21 mg/L; selenium, 0.05 mg/L; and uranium, 0.03 mg/L. Background concentrations of manganese (0.72 mg/L) and sulfate (1150 mg/L) are the maximum concentration observed in upgradient monitoring wells GJ84-09 and GJ84-10.

[c] For the pond locations (North Pond, South Pond, and Wetland Area), the results in red exceed the groundwater benchmarks listed above. For Gunnison River locations, the results in red exceed the standards from 5 CCR 1002-35 "Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins. Standards are molybdenum, 0.16 mg/L; selenium, 0.0046 mg/L; and uranium, 0.03 mg/L.

5.0 References

5 CCR 1002-35. "Classifications and Numeric Standards for Gunnison and Lower Dolores River Basins," *Code of Colorado Regulations*, https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8117&fileName=5%20CCR%201002-35.

5 CCR 1002-41. "The Basic Standards for Groundwater," *Code of Colorado Regulations*, https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8819&fileName=5%20CCR%201002-41.

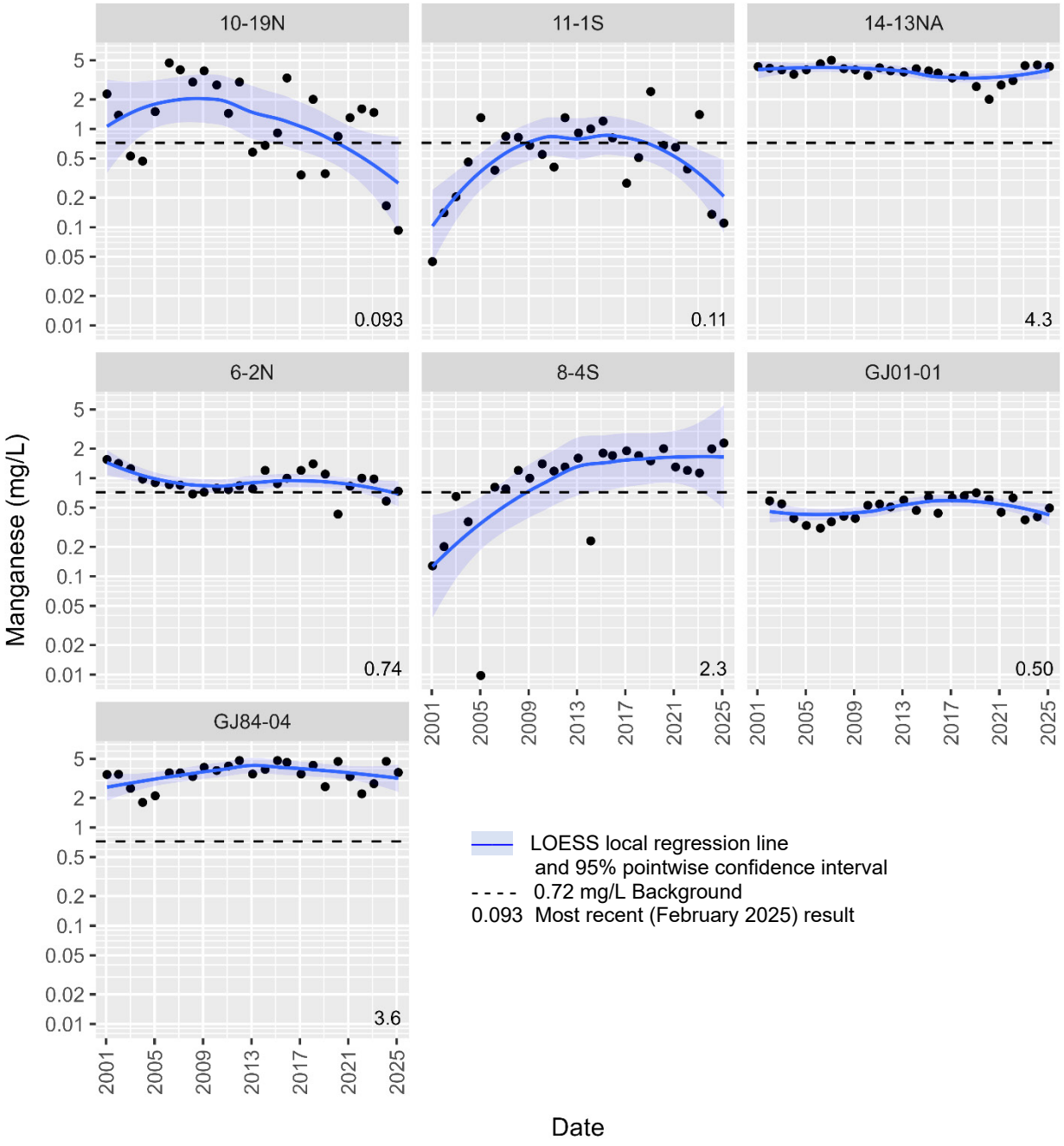
DOE (U.S. Department of Energy), 1989. *Grand Junction Projects Office Remedial Action Project, Declaration for the Record of Decision and Record of Decision Summary*, Grand Junction Projects Office, Grand Junction, Colorado, April.

DOE (U.S. Department of Energy), 2025a. *Long-Term Surveillance and Maintenance Plan for the Grand Junction, Colorado, Site*, LMS/GJO/S02013-2.0, April.

DOE (U.S. Department of Energy), 2025b. *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites*, LMS/PRO/S04351-16.9, Office of Legacy Management, May.

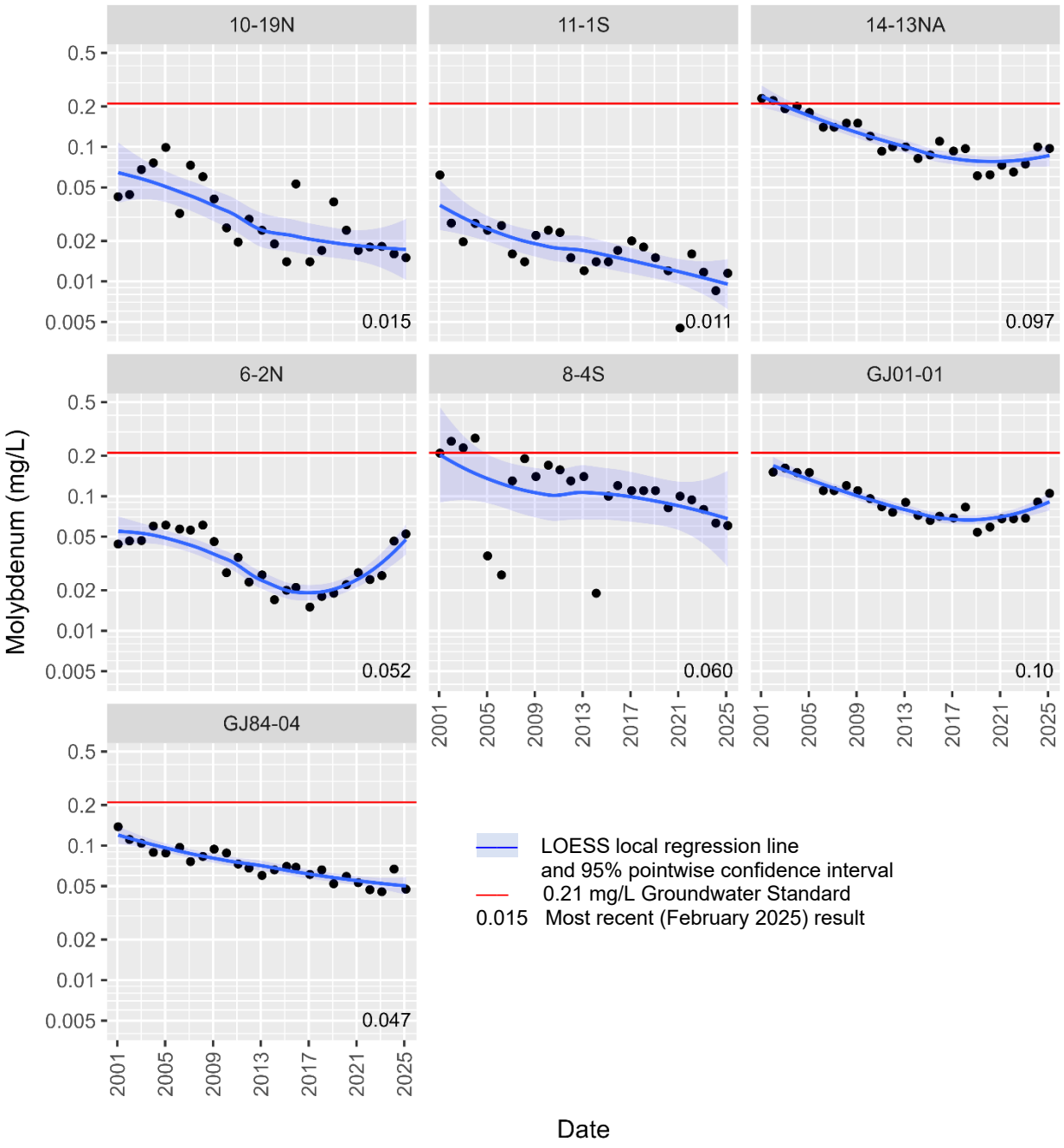
Appendix A

Time Versus Concentration Graphs



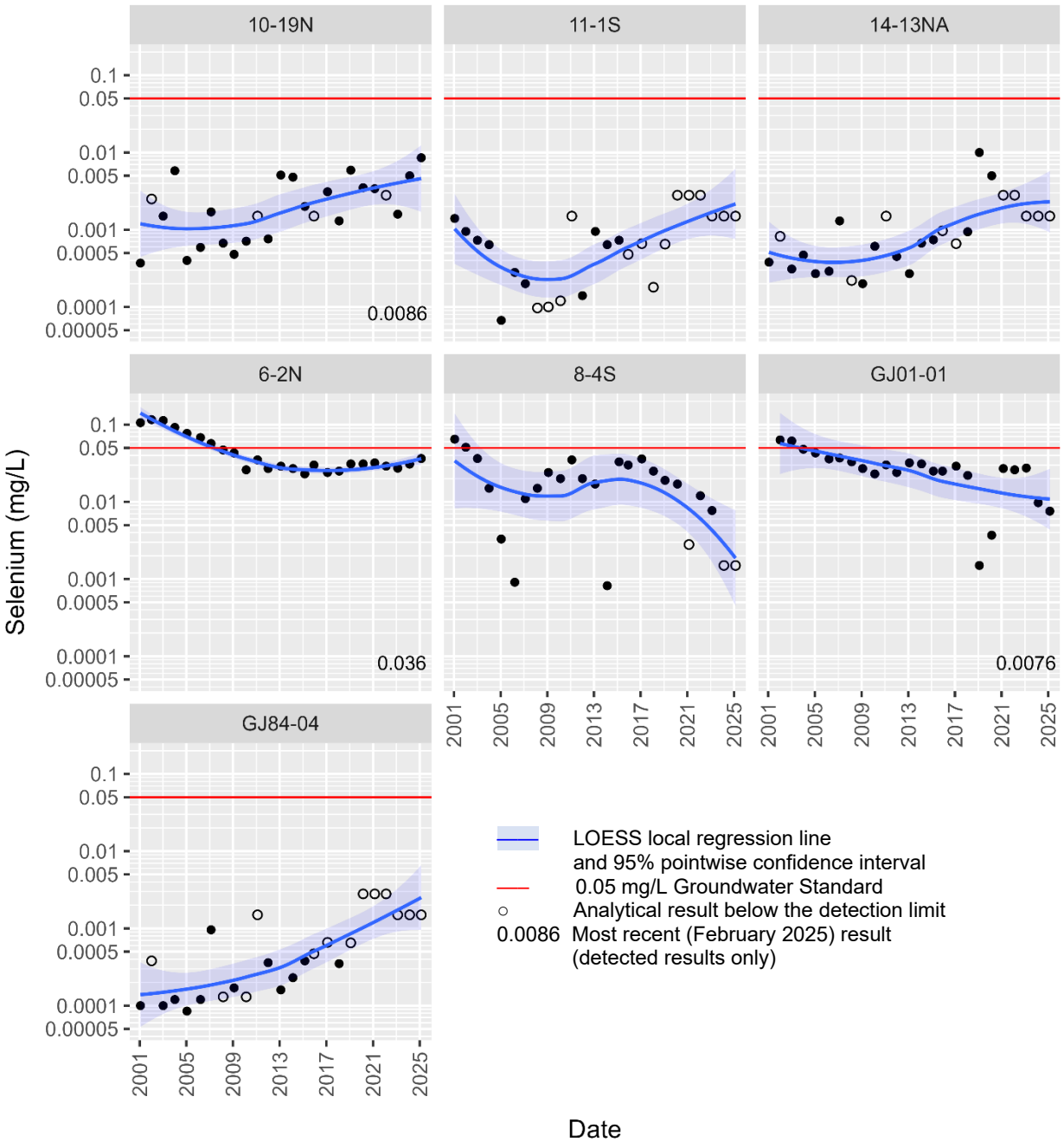
Abbreviation:
LOESS = locally estimated scatterplot smoothing (LOESS)

Figure A-1. Manganese Concentrations in Onsite Monitoring Wells



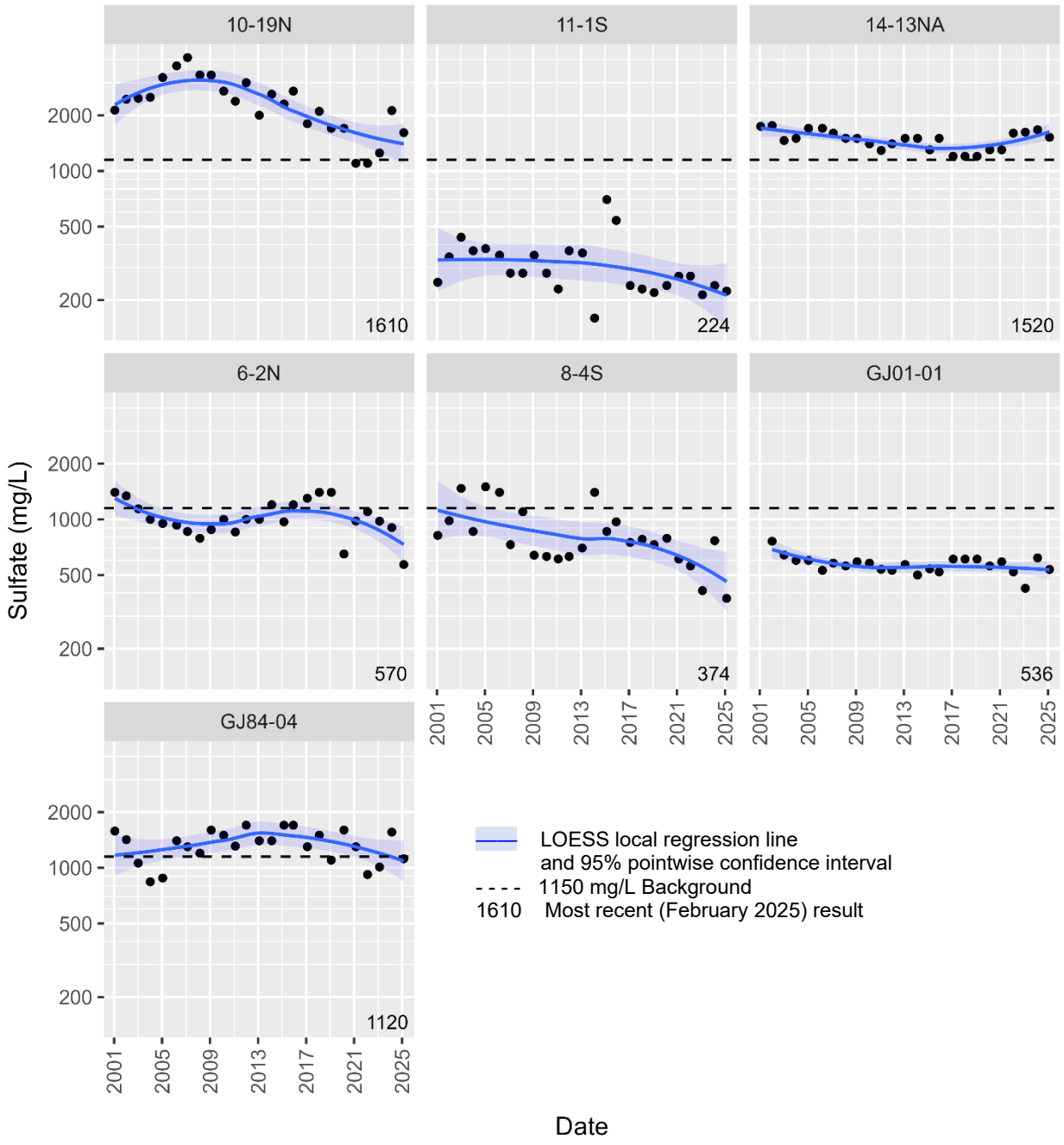
Abbreviation:
LOESS = locally estimated scatterplot smoothing (LOESS)

Figure A-2. Molybdenum Concentrations in Onsite Monitoring Wells



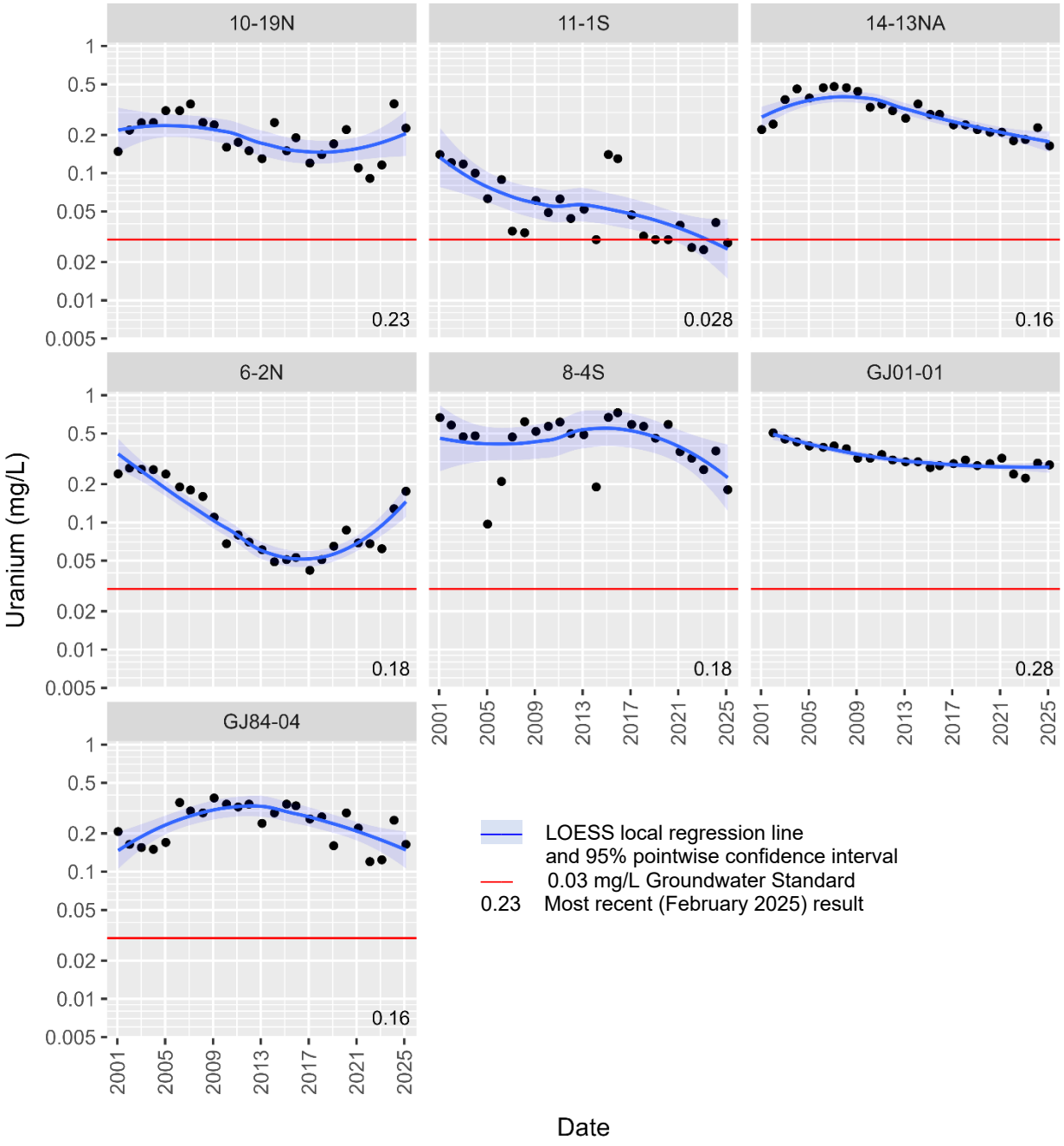
Abbreviation:
LOESS = locally estimated scatterplot smoothing (LOESS)

Figure A-3. Selenium Concentrations in Onsite Monitoring Wells



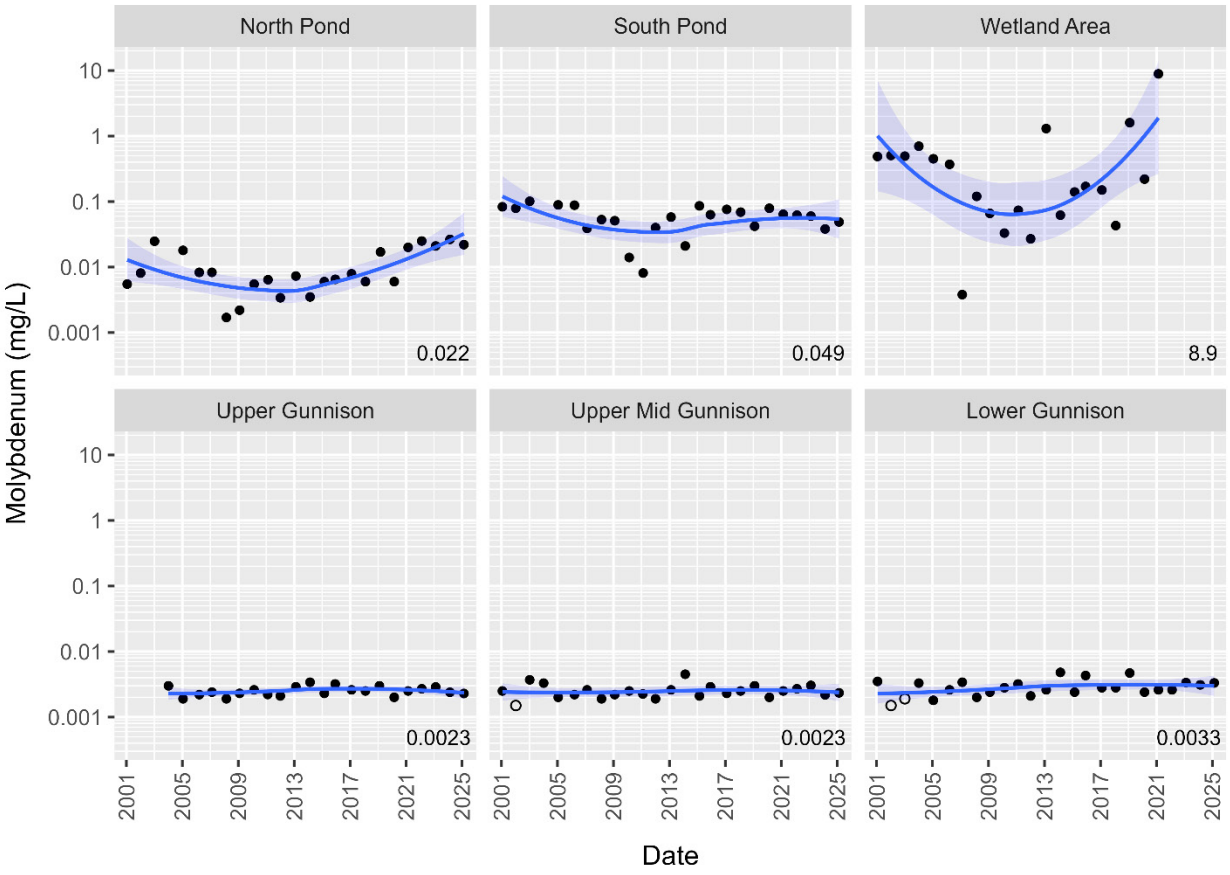
Abbreviation:
LOESS = locally estimated scatterplot smoothing (LOESS)

Figure A-4. Sulfate Concentrations in Onsite Monitoring Wells



Abbreviation:
LOESS = locally estimated scatterplot smoothing (LOESS)

Figure A-5. Uranium Concentrations in Onsite Monitoring Wells



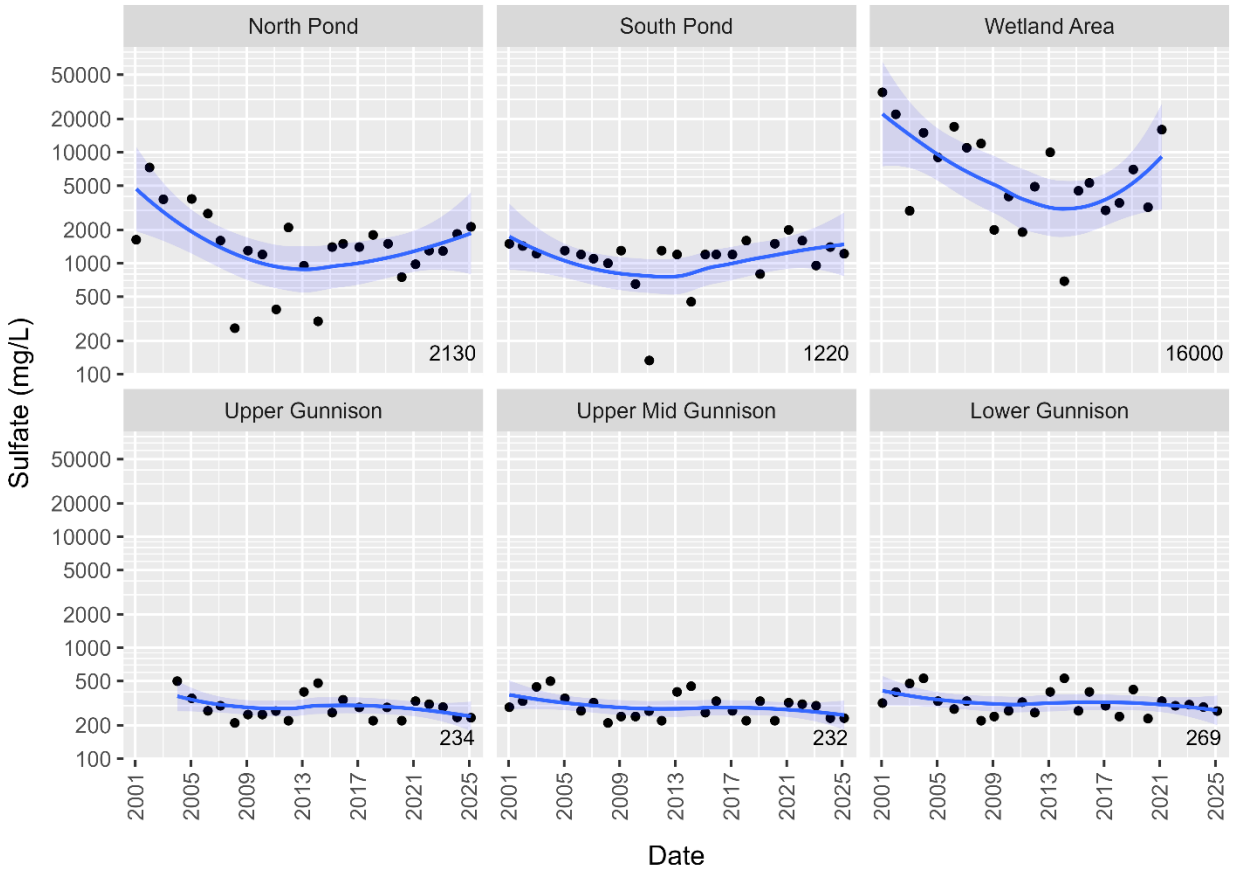
LOESS local regression line and 95% pointwise confidence interval

○ Analytical result below the detection limit

0.022 Most recent (February 2025) result

Abbreviation:
LOESS = locally estimated scatterplot smoothing (LOESS)

Figure A-6. Molybdenum Concentrations in Surface Water

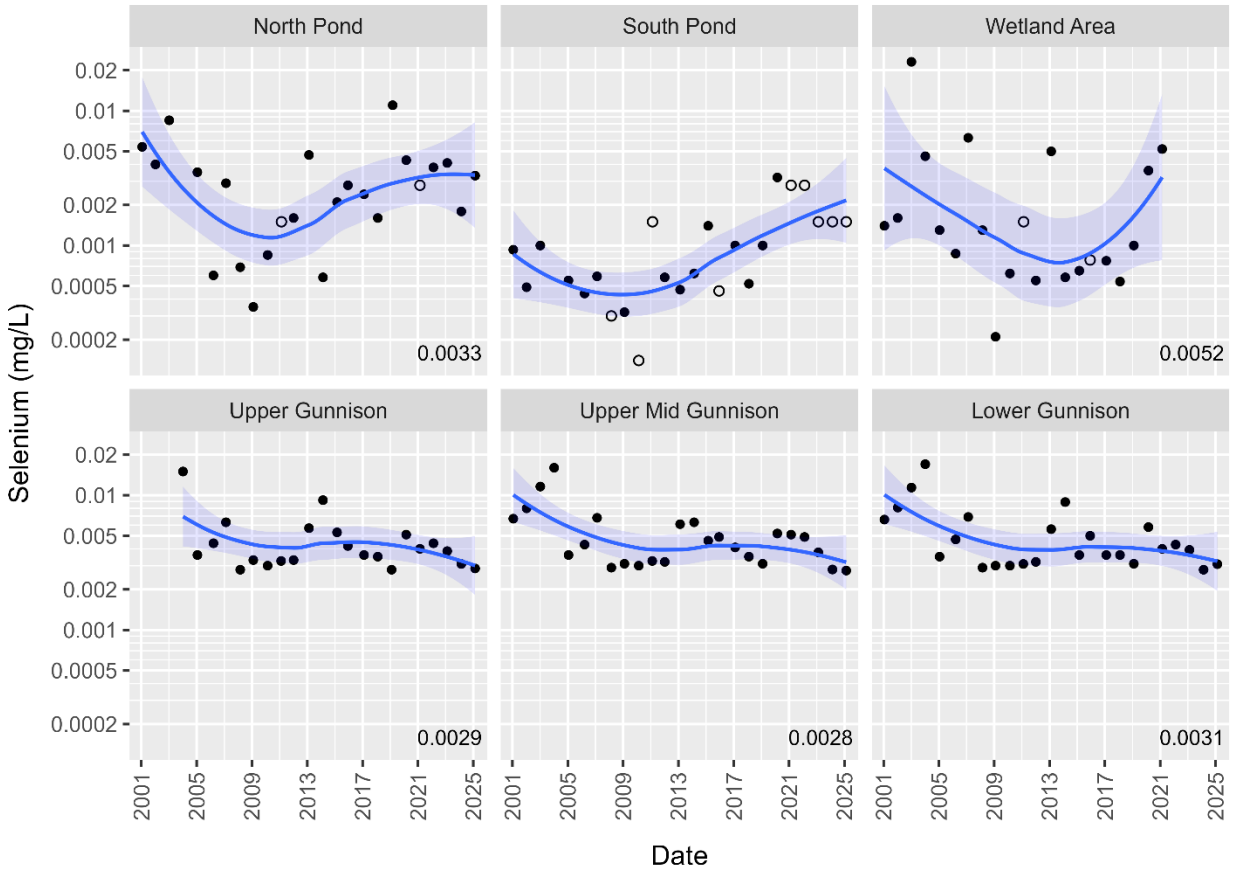


LOESS local regression line and 95% pointwise confidence interval

2130 Most recent (February 2025) result

Abbreviation:
LOESS = locally estimated scatterplot smoothing (LOESS)

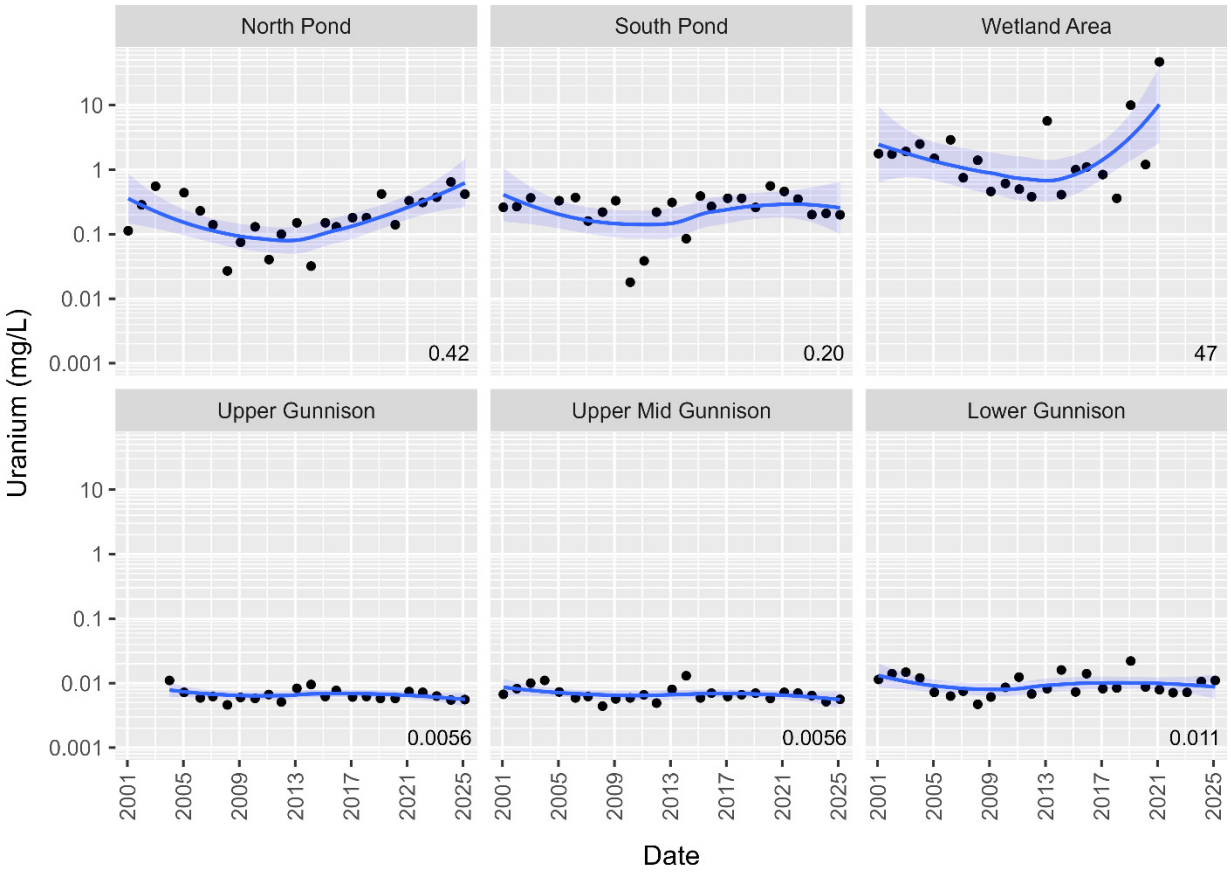
Figure A-7. Sulfate Concentrations in Surface Water



LOESS local regression line and 95% pointwise confidence interval
○ Analytical result below the detection limit
0.0033 Most recent (February 2025) result (nondetects are not labelled)

Abbreviation:
LOESS = locally estimated scatterplot smoothing (LOESS)

Figure A-8. Selenium Concentrations in Surface Water



LOESS local regression line and 95% pointwise confidence interval

0.42 Most recent (February 2025) result

Abbreviation:
LOESS = locally estimated scatterplot smoothing (LOESS)

Figure A-9. Uranium Concentrations in Surface Water

Appendix B

Groundwater Data

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE GJO01, Grand Junction Site

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PARAMETER	LOCATION CODE/TYPE		SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	UNITS	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Alkalinity, Total (As CaCO3)													
Alkalinity, Total (As CaCO3)	10-19N	WL	2/19/2025	(N)F	AL-JU	O	379	mg/L		F	#	-	-
Alkalinity, Total (As CaCO3)	11-1S	WL	2/19/2025	(N)F	AL-JU	O	174	mg/L		F	#	-	-
Alkalinity, Total (As CaCO3)	14-13NA	WL	2/19/2025	(N)F	AL-JU	O	310	mg/L		F	#	-	-
Alkalinity, Total (As CaCO3)	6-2N	WL	2/19/2025	(N)F	AL-JU	O	248	mg/L		F	#	-	-
Alkalinity, Total (As CaCO3)	8-4S	WL	2/19/2025	(N)F	AL	O	147	mg/L		F	#	-	-
Alkalinity, Total (As CaCO3)	GJ01-01	WL	2/19/2025	(N)F	AL		262	mg/L		F	#	-	-
Alkalinity, Total (As CaCO3)	GJ84-04	WL	2/19/2025	(N)F	AL	D	279	mg/L		F	#	-	-
Manganese													
Manganese	10-19N	WL	2/19/2025	(T)F	AL-JU	O	0.0927	mg/L		F	#	0.001	-
Manganese	11-1S	WL	2/19/2025	(T)F	AL-JU	O	0.11	mg/L		F	#	0.001	-
Manganese	14-13NA	WL	2/19/2025	(T)F	AL-JU	O	4.32	mg/L		F	#	0.01	-
Manganese	6-2N	WL	2/19/2025	(T)F	AL-JU	O	0.737	mg/L		F	#	0.001	-
Manganese	8-4S	WL	2/19/2025	(T)D	AL	O	1.84	mg/L		FJ	#	0.01	-
Manganese	8-4S	WL	2/19/2025	(T)F	AL	O	2.28	mg/L		FJ	#	0.01	-
Manganese	GJ01-01	WL	2/19/2025	(T)F	AL		0.497	mg/L		F	#	0.001	-
Manganese	GJ84-04	WL	2/19/2025	(T)F	AL	D	3.63	mg/L		F	#	0.01	-
Molybdenum													
Molybdenum	10-19N	WL	2/19/2025	(T)F	AL-JU	O	0.015	mg/L		F	#	0.0002	-
Molybdenum	11-1S	WL	2/19/2025	(T)F	AL-JU	O	0.0115	mg/L		F	#	0.0002	-
Molybdenum	14-13NA	WL	2/19/2025	(T)F	AL-JU	O	0.0973	mg/L		F	#	0.0002	-
Molybdenum	6-2N	WL	2/19/2025	(T)F	AL-JU	O	0.0524	mg/L		F	#	0.0002	-
Molybdenum	8-4S	WL	2/19/2025	(T)D	AL	O	0.0386	mg/L		FJ	#	0.0002	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE GJO01, Grand Junction Site

REPORT DATE: 5/2/2025 2:23:52 PM

PARAMETER	LOCATION CODE/TYPE		SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	UNITS	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Molybdenum	8-4S	WL	2/19/2025	(T)F	AL	O	0.0605	mg/L		FJ	#	0.0002	-
Molybdenum	GJ01-01	WL	2/19/2025	(T)F	AL		0.105	mg/L		F	#	0.0002	-
Molybdenum	GJ84-04	WL	2/19/2025	(T)F	AL	D	0.0474	mg/L		F	#	0.0002	-
pH													
pH	10-19N	WL	2/19/2025	(N)F	AL-JU	O	7.32	s.u.		F	#	-	-
pH	11-1S	WL	2/19/2025	(N)F	AL-JU	O	7.34	s.u.		F	#	-	-
pH	14-13NA	WL	2/19/2025	(N)F	AL-JU	O	7.27	s.u.		F	#	-	-
pH	6-2N	WL	2/19/2025	(N)F	AL-JU	O	7.74	s.u.		F	#	-	-
pH	8-4S	WL	2/19/2025	(N)F	AL	O	7.43	s.u.		F	#	-	-
pH	GJ01-01	WL	2/19/2025	(N)F	AL		7.39	s.u.		F	#	-	-
pH	GJ84-04	WL	2/19/2025	(N)F	AL	D	7.29	s.u.		F	#	-	-
Selenium													
Selenium	10-19N	WL	2/19/2025	(T)F	AL-JU	O	0.00855	mg/L		F	#	0.0015	-
Selenium	11-1S	WL	2/19/2025	(T)F	AL-JU	O	0.0015	mg/L	U	F	#	0.0015	-
Selenium	14-13NA	WL	2/19/2025	(T)F	AL-JU	O	0.0015	mg/L	U	F	#	0.0015	-
Selenium	6-2N	WL	2/19/2025	(T)F	AL-JU	O	0.0364	mg/L		F	#	0.0015	-
Selenium	8-4S	WL	2/19/2025	(T)D	AL	O	0.0015	mg/L	U	F	#	0.0015	-
Selenium	8-4S	WL	2/19/2025	(T)F	AL	O	0.0015	mg/L	U	F	#	0.0015	-
Selenium	GJ01-01	WL	2/19/2025	(T)F	AL		0.00758	mg/L		F	#	0.0015	-
Selenium	GJ84-04	WL	2/19/2025	(T)F	AL	D	0.0015	mg/L	U	F	#	0.0015	-
Specific Conductance													
Specific Conductance	10-19N	WL	2/19/2025	(N)F	AL-JU	O	3984	umhos/cm		F	#	-	-
Specific Conductance	11-1S	WL	2/19/2025	(N)F	AL-JU	O	822	umhos/cm		F	#	-	-
Specific Conductance	14-13NA	WL	2/19/2025	(N)F	AL-JU	O	3396	umhos/cm		F	#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE GJO01, Grand Junction Site

REPORT DATE: 5/2/2025 2:23:52 PM

PARAMETER	LOCATION CODE/TYPE		SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	UNITS	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Specific Conductance	6-2N	WL	2/19/2025	(N)F	AL-JU	O	1768	umhos/cm		F	#	-	-
Specific Conductance	8-4S	WL	2/19/2025	(N)F	AL	O	1147	umhos/cm		F	#	-	-
Specific Conductance	GJ01-01	WL	2/19/2025	(N)F	AL		1603	umhos/cm		F	#	-	-
Specific Conductance	GJ84-04	WL	2/19/2025	(N)F	AL	D	2687	umhos/cm		F	#	-	-
Sulfate													
Sulfate	10-19N	WL	2/19/2025	(N)F	AL-JU	O	1610	mg/L		F	#	13.3	-
Sulfate	11-1S	WL	2/19/2025	(N)F	AL-JU	O	224	mg/L		F	#	13.3	-
Sulfate	14-13NA	WL	2/19/2025	(N)F	AL-JU	O	1520	mg/L		F	#	13.3	-
Sulfate	6-2N	WL	2/19/2025	(N)F	AL-JU	O	570	mg/L		F	#	13.3	-
Sulfate	8-4S	WL	2/19/2025	(N)D	AL	O	372	mg/L		F	#	13.3	-
Sulfate	8-4S	WL	2/19/2025	(N)F	AL	O	374	mg/L		F	#	13.3	-
Sulfate	GJ01-01	WL	2/19/2025	(N)F	AL		536	mg/L		F	#	13.3	-
Sulfate	GJ84-04	WL	2/19/2025	(N)F	AL	D	1120	mg/L		F	#	13.3	-
Temperature													
Temperature	10-19N	WL	2/19/2025	(N)F	AL-JU	O	12.05	C		F	#	-	-
Temperature	11-1S	WL	2/19/2025	(N)F	AL-JU	O	12.28	C		F	#	-	-
Temperature	14-13NA	WL	2/19/2025	(N)F	AL-JU	O	14.01	C		F	#	-	-
Temperature	6-2N	WL	2/19/2025	(N)F	AL-JU	O	18.96	C		F	#	-	-
Temperature	8-4S	WL	2/19/2025	(N)F	AL	O	12.68	C		F	#	-	-
Temperature	GJ01-01	WL	2/19/2025	(N)F	AL		15.35	C		F	#	-	-
Temperature	GJ84-04	WL	2/19/2025	(N)F	AL	D	12.35	C		F	#	-	-
Turbidity													
Turbidity	10-19N	WL	2/19/2025	(N)F	AL-JU	O	3.7	NTU		F	#	-	-
Turbidity	11-1S	WL	2/19/2025	(N)F	AL-JU	O	0.77	NTU		F	#	-	-

GROUNDWATER QUALITY DATA BY PARAMETER WITH ZONE (EQuIS201) FOR SITE GJO01, Grand Junction Site

REPORT DATE: 5/2/2025 2:23:52 PM

PARAMETER	LOCATION CODE/TYPE		SAMPLE DATE	SAMPLE TYPE	ZONE COMPLETION	FLOW REL.	RESULT	UNITS	QUALIFIERS LAB/DATA		QA	DETECTION LIMIT	UNCERTAINTY
Turbidity	14-13NA	WL	2/19/2025	(N)F	AL-JU	O	1.54	NTU		F	#	-	-
Turbidity	6-2N	WL	2/19/2025	(N)F	AL-JU	O	0.84	NTU		F	#	-	-
Turbidity	8-4S	WL	2/19/2025	(N)F	AL	O	6.06	NTU		F	#	-	-
Turbidity	GJ01-01	WL	2/19/2025	(N)F	AL		8.47	NTU		F	#	-	-
Turbidity	GJ84-04	WL	2/19/2025	(N)F	AL	D	4.31	NTU		F	#	-	-
Uranium													
Uranium	10-19N	WL	2/19/2025	(T)F	AL-JU	O	0.226	mg/L		F	#	0.000067	-
Uranium	11-1S	WL	2/19/2025	(T)F	AL-JU	O	0.0283	mg/L		F	#	0.000067	-
Uranium	14-13NA	WL	2/19/2025	(T)F	AL-JU	O	0.164	mg/L		F	#	0.000067	-
Uranium	6-2N	WL	2/19/2025	(T)F	AL-JU	O	0.176	mg/L		F	#	0.000067	-
Uranium	8-4S	WL	2/19/2025	(T)D	AL	O	0.175	mg/L		F	#	0.000067	-
Uranium	8-4S	WL	2/19/2025	(T)F	AL	O	0.181	mg/L		F	#	0.000067	-
Uranium	GJ01-01	WL	2/19/2025	(T)F	AL		0.284	mg/L		F	#	0.000067	-
Uranium	GJ84-04	WL	2/19/2025	(T)F	AL	D	0.164	mg/L		F	#	0.000067	-

ZONES OF COMPLETION:

AL	ALLUVIUM
JU	JURASSIC MORRISON FORMATION

LOCATION TYPE:

WL	WELL

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	Tentatively identified compound (TIC).
Q	Qualitative result due to sampling technique

R	Unusable result.
U	Parameter analyzed for but was not detected.
X	Location is undefined.

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 Value.
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 Aroclor concentrations between 2 columns.
S	Result determined by method of standard addition (MSA).
U	Parameter analyzed for but was not detected.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X	Laboratory defined qualifier, see case narrative.
Y	Laboratory defined qualifier, see case narrative.
Z	Laboratory defined qualifier, see case narrative.

SAMPLE TYPES:

Fraction:
(T) Total (for metal concentrations)
(D) Dissolved (for dissolved or filtered metal concentrations)
(N) Organic (or other) constituents for which neither total nor dissolved is applicable

Type Codes:
F-Field Sample R-Replicate FR-Field Sample with Replicates
D-Duplicate N-Not Known S-Split Sample

FLOW CODES:

B BACKGROUND C CROSS GRADIENT D DOWN GRADIENT

F	OFF-SITE	N	UNKNOWN	O	ON-SITE
U	UPGRADIENT				

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

Appendix C

Surface Water Data

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE GJO01, Grand Junction Site

REPORT DATE: 5/2/2025 2:16:17 PM

PARAMETER	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	UNITS	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Alkalinity, Total (As CaCO3)										
Alkalinity, Total (As CaCO3)	Lower Gunnison	2/19/2025	(N)F	138	mg/L			#	-	-
Alkalinity, Total (As CaCO3)	North Pond	2/19/2025	(N)F	257	mg/L			#	-	-
Alkalinity, Total (As CaCO3)	South Pond	2/19/2025	(N)F	142	mg/L			#	-	-
Alkalinity, Total (As CaCO3)	Upper Gunnison	2/19/2025	(N)F	138	mg/L			#	-	-
Alkalinity, Total (As CaCO3)	Upper Mid Gunnison	2/19/2025	(N)F	121	mg/L			#	-	-
Molybdenum										
Molybdenum	Lower Gunnison	2/19/2025	(T)F	0.00332	mg/L			#	0.0002	-
Molybdenum	North Pond	2/19/2025	(T)F	0.022	mg/L			#	0.0002	-
Molybdenum	South Pond	2/19/2025	(T)F	0.0488	mg/L			#	0.0002	-
Molybdenum	Upper Gunnison	2/19/2025	(T)F	0.00229	mg/L	B		#	0.0002	-
Molybdenum	Upper Mid Gunnison	2/19/2025	(T)F	0.00234	mg/L	B		#	0.0002	-
pH										
pH	Lower Gunnison	2/19/2025	(N)F	8.5	s.u.			#	-	-
pH	North Pond	2/19/2025	(N)F	8.12	s.u.			#	-	-
pH	South Pond	2/19/2025	(N)F	8.62	s.u.			#	-	-
pH	Upper Gunnison	2/19/2025	(N)F	8.63	s.u.			#	-	-
pH	Upper Mid Gunnison	2/19/2025	(N)F	8.42	s.u.			#	-	-
Selenium										
Selenium	Lower Gunnison	2/19/2025	(T)F	0.00308	mg/L	B		#	0.0015	-
Selenium	North Pond	2/19/2025	(T)F	0.0033	mg/L	B		#	0.0015	-
Selenium	South Pond	2/19/2025	(T)F	0.0015	mg/L	U		#	0.0015	-
Selenium	Upper Gunnison	2/19/2025	(T)F	0.00286	mg/L	B		#	0.0015	-
Selenium	Upper Mid Gunnison	2/19/2025	(T)F	0.00276	mg/L	B		#	0.0015	-
Specific Conductance										
Specific Conductance	Lower Gunnison	2/19/2025	(N)F	945	umhos/cm			#	-	-
Specific Conductance	North Pond	2/19/2025	(N)F	4724	umhos/cm			#	-	-
Specific Conductance	South Pond	2/19/2025	(N)F	2753	umhos/cm			#	-	-
Specific Conductance	Upper Gunnison	2/19/2025	(N)F	921	umhos/cm			#	-	-
Specific Conductance	Upper Mid Gunnison	2/19/2025	(N)F	786	umhos/cm			#	-	-

SURFACE WATER QUALITY DATA BY PARAMETER (EQuIS800) FOR SITE GJO01, Grand Junction Site

REPORT DATE: 5/2/2025 2:16:18 PM

PARAMETER	LOCATION CODE	SAMPLE DATE	SAMPLE TYPE	RESULT	UNITS	QUALIFIERS LAB/DATA		QA	DETECT. LIMIT	UNCERTAINTY
Sulfate										
Sulfate	Lower Gunnison	2/19/2025	(N)F	269	mg/L			#	13.3	-
Sulfate	North Pond	2/19/2025	(N)F	2130	mg/L			#	33.3	-
Sulfate	South Pond	2/19/2025	(N)F	1220	mg/L			#	13.3	-
Sulfate	Upper Gunnison	2/19/2025	(N)F	234	mg/L			#	13.3	-
Sulfate	Upper Mid Gunnison	2/19/2025	(N)F	232	mg/L			#	13.3	-
Temperature										
Temperature	Lower Gunnison	2/19/2025	(N)F	4.7	C			#	-	-
Temperature	North Pond	2/19/2025	(N)F	8.16	C			#	-	-
Temperature	South Pond	2/19/2025	(N)F	8.43	C			#	-	-
Temperature	Upper Gunnison	2/19/2025	(N)F	5.04	C			#	-	-
Temperature	Upper Mid Gunnison	2/19/2025	(N)F	4.83	C			#	-	-
Turbidity										
Turbidity	Lower Gunnison	2/19/2025	(N)F	6.13	NTU			#	-	-
Turbidity	North Pond	2/19/2025	(N)F	4.42	NTU			#	-	-
Turbidity	South Pond	2/19/2025	(N)F	6.06	NTU			#	-	-
Turbidity	Upper Gunnison	2/19/2025	(N)F	8.82	NTU			#	-	-
Turbidity	Upper Mid Gunnison	2/19/2025	(N)F	8.07	NTU			#	-	-
Uranium										
Uranium	Lower Gunnison	2/19/2025	(T)F	0.011	mg/L			#	0.000067	-
Uranium	North Pond	2/19/2025	(T)F	0.418	mg/L			#	0.000067	-
Uranium	South Pond	2/19/2025	(T)F	0.2	mg/L			#	0.000067	-
Uranium	Upper Gunnison	2/19/2025	(T)F	0.00556	mg/L			#	0.000067	-
Uranium	Upper Mid Gunnison	2/19/2025	(T)F	0.00561	mg/L			#	0.000067	-

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 Tentatively identified compound (TIC).
- Q Qualitative result due to sampling technique
- R Unusable result.
- U Parameter analyzed for but was not detected.
- X Location is undefined.

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 Value.
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 Aroclor concentrations between 2 columns.
S	Result determined by method of standard addition (MSA).
U	Parameter analyzed for but was not detected.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X	Laboratory defined qualifier, see case narrative.
Y	Laboratory defined qualifier, see case narrative.
Z	Laboratory defined qualifier, see case narrative.

SAMPLE TYPES:
(T) Total (for metal concentrations)
(D) Dissolved (for dissolved or filtered metal concentrations)
(N) Organic (or other) constituents for which neither total nor dissolved is applicable

Type Codes: F-Field Sample R-Replicate FR-Field Sample with Replicates
D-Duplicate N-Not Known S-Split Sample

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

Appendix D

Static Water Level Data

STATIC WATER LEVELS (EQuIS700) FOR SITE GJO01, Grand Junction Site

REPORT DATE: 5/2/2025 1:55:48 PM

LOCATION CODE	MEASUREMENT DATE/TIME	TOP OF CASING ELEVATION (FT)	DEPTH FROM TOP OF CASING (FT)	WATER ELEVATION (FT)	WATER LEVEL FLAG
10-19N	02/19/2025 09:48	4569.95	14.48	4555.47	
11-1S	02/19/2025 08:50	4576.08	17.24	4558.84	
14-13NA	02/19/2025 10:27	4563.95	7.20	4556.75	
6-2N	02/19/2025 12:16	4574.14	15.11	4559.03	
8-4S	02/19/2025 08:04	4571.99	12.64	4559.35	
GJ01-01	02/19/2025 11:10	4574.49	16.21	4558.28	
GJ84-04	02/19/2025 09:28	4566.54	10.71	4555.83	
Wetland Area	02/19/2025 13:35				D

FLOW CODES:

B	BACKGROUND	C	CROSS GRADIENT	D	DOWN GRADIENT
F	OFF-SITE	N	UNKNOWN	O	ON-SITE
U	UPGRADIENT				

WATER LEVEL FLAGS:

B	Water level is below the top of the pump	D	Dry
E	Water elevation may not be comparable to other water elevations at this site	F	Flowing
I	Inaccessible		