

## 7.0 Green River, Utah, Disposal Site

### 7.1 Compliance Summary

The Green River, Utah, Uranium Mill Tailings Radiation Control Act (UMTRCA) Title I Disposal Site was inspected on April 30, 2024. No changes were observed on the disposal cell or in the associated drainage features. Inspectors identified several minor maintenance issues at the site but did not identify concerns that required a follow-up or contingency inspection.

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) conducts annual groundwater monitoring of four point of compliance (POC) wells to track disposal cell performance in accordance with the site-specific Long-Term Surveillance Plan (DOE 1998) (LTSP). Groundwater analytical results presented in this chapter are evaluated with respect to requirements and concentration limits specified in the LTSP. Groundwater monitoring was conducted on June 10, 2024. Consistent with previous observations, concentrations of routinely monitored analytes exceeded corresponding concentration limits in several POC wells: nitrate in wells 0171 and 0173; sulfate in wells 0171, 0173, and 0181; and uranium in well 0171.

### 7.2 Compliance Requirements

Requirements for the long-term surveillance and maintenance of the site are specified in the site-specific LTSP (DOE 1998) in accordance with procedures established to comply with the requirements of the U.S. Nuclear Regulatory Commission (NRC) general license at Title 10 *Code of Federal Regulations* Section 40.27 (10 CFR 40.27). Table 7-1 lists these requirements.

Table 7-1. License Requirements for the Green River, Utah, Disposal Site

Requirement	LTSP	This Report	10 CFR 40.27
Annual Inspection and Report	Section 6.0	Section 7.4	(b)(3)
Follow-Up or Contingency Inspections	Section 7.0	Section 7.5	(b)(4)
Maintenance and Repairs	Section 8.0	Section 7.6	(b)(5)
Groundwater Monitoring	Section 5.2	Section 7.7	(b)(2)
Corrective Action	Section 9.0	Section 7.8	—

### 7.3 Institutional Controls

The 25-acre site, identified by the property boundary shown in Figure 7-1, is owned by the United States and was accepted under the NRC general license in 1998. DOE is the licensee and, in accordance with the requirements for UMTRCA Title I sites, LM is responsible for the custody and long-term care of the site. Institutional controls (ICs) at the site include federal ownership of the property, administrative controls, and the following physical ICs that are inspected annually: the disposal cell and associated drainage features; entrance gate and sign; security fence around the disposal cell; perimeter signs; uncrewed aircraft system signs; site markers; survey, boundary, and aerial survey quality control monuments; and wellhead protectors.

## 7.4 Inspection Results

The site, 1 mile southeast of Green River, Utah, was inspected on April 30, 2024. The inspection was conducted by D. Atkinson, J. Carman, and T. Santonastaso of the Legacy Management Support (LMS) contractor. M. Young (LM site manager), W. Frazier (LM), H. Mickelson (State of Utah representative), and S. Mantanona (guest of DOE) also attended the inspection. The purposes of the inspection were to confirm the integrity of visible features at the site, identify changes in conditions that might affect conformance with the LTSP, and evaluate whether maintenance or follow-up inspection and monitoring are needed.

### 7.4.1 Site Surveillance Features

Figure 7-1 shows the locations of site features, including site surveillance features and inspection areas, in black and gray font. Some site features that are present but not required to be inspected are shown in italic font. Observations from previous inspections that are currently monitored are shown in blue, and new observations identified during the 2024 annual inspection are shown in red. Inspection results and recommended maintenance activities associated with site surveillance features are described in the following subsections. Photographs to support specific observations are noted in the text and in Figure 7-1 by photograph location (PL) numbers. The photographs and photograph log are presented in Section 7.10.

#### 7.4.1.1 Access Road, Entrance Gate, and Entrance Sign

Access to the site is either from U.S. Highway 6 and 50 heading east from the Town of Green River or from U.S. Interstate 70 via S 1600 E Street. The paved access road crosses property owned by the state and the U.S. Army. Access was granted to LM through right-of-way agreements with both entities. Entrance to the site is through an open gate in the paved road right-of-way fence; LM does not own the gate or the right-of-way fence and access via the gate is not controlled. Past this gate, a dirt road leads across state land to the site. The access road divides near the entrance to the disposal cell, with one branch leading to a locked gate in the security fence that encloses the disposal cell and the other providing access around the outside of the security fence. The entrance sign is next to the access road where it enters the site. The sign is heavily faded and will be replaced before the next annual inspection (PL-1). The lock on the steel site access gate in the right-of-way was in place and working as intended. No other maintenance needs were identified.

#### 7.4.1.2 Security Fence, Perimeter Signs, and Warning Signs

A chainlink security fence encloses the portion of the site that contains the disposal cell. Vehicle gates are at the south and east corners of the security fence, and a personnel gate is at the north corner of the security fence. The security fence was intact, but inspectors observed vegetation growth along the fence line and a buildup of tumbleweeds that will need to be removed. The vegetation will be treated, and the tumbleweeds will be removed before the next annual inspection to ensure that no damage to the fence occurs. A minor erosional rill that was observed under the fence near perimeter sign P16 during the previous inspection seems to be stable. This rill poses little risk at this time because it remains small and is not adjacent to a fence post. Inspectors will continue to monitor this area. The gates were operable and locked at the time of the inspection.

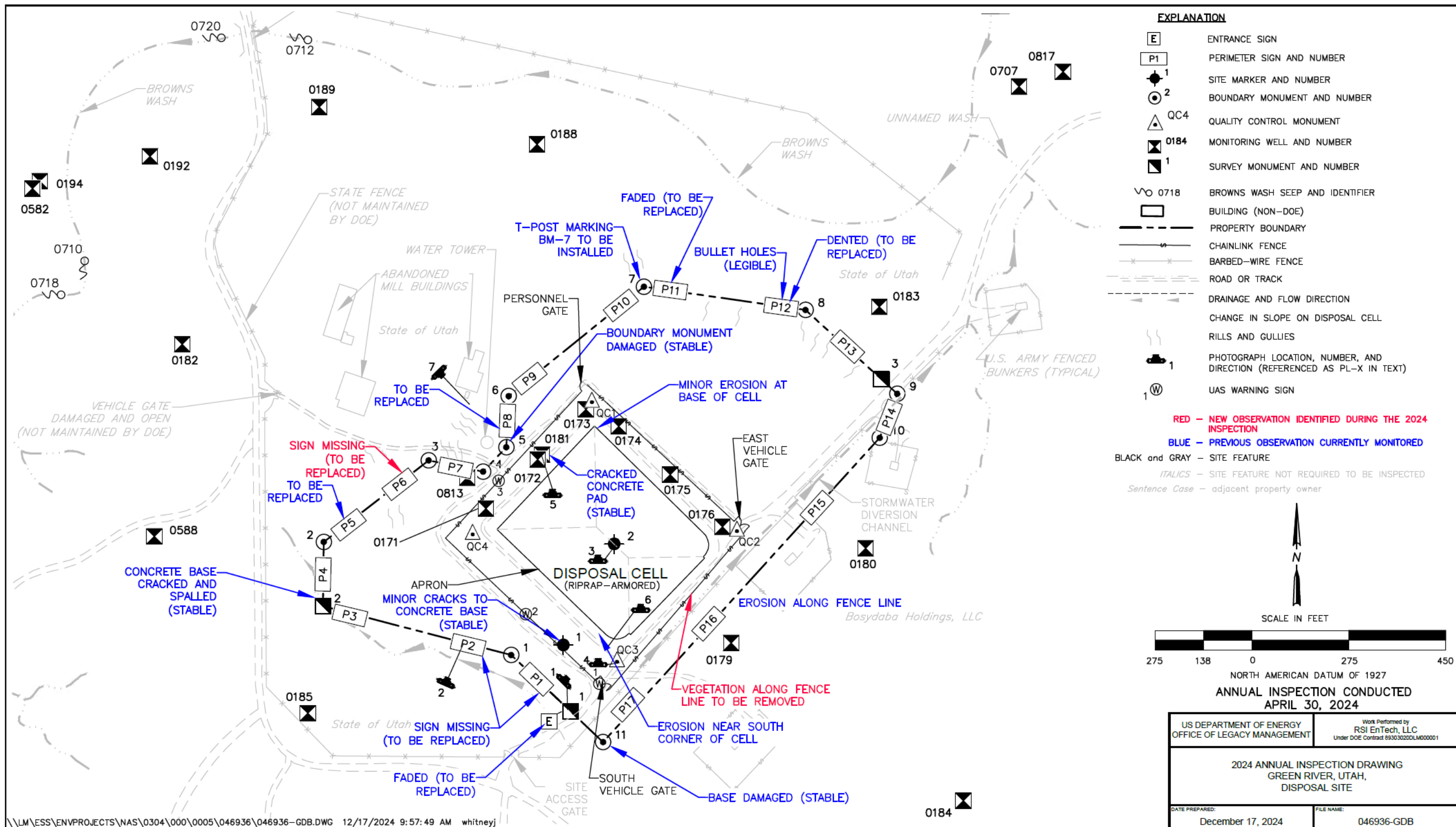


Figure 7-1. 2024 Annual Inspection Drawing for the Green River, Utah, Disposal Site

Seventeen perimeter signs, attached to steel posts set in concrete, are positioned along the unfenced property boundary. Perimeter signs P1, P2 (PL-2), P5, and P6 were missing and will be replaced before the next annual inspection. Perimeter signs P8 and P11 were faded and will be replaced before the next annual inspection. Perimeter sign P12 was dented and will be replaced before the next annual inspection. All other perimeter signs were present with several that were dented, had bullet holes, or sun damage (faded or illegible). Perimeter signs P1, P2, P5, P6, P8, P11, and P12 will be replaced before the next annual inspection along with any other perimeter signs exhibiting damage. Two new signs for prohibited activities and emergency instructions were installed along the security fence at the entrance gate during the 2024 inspection. No other maintenance needs were identified.

#### **7.4.1.3 Site Markers**

The site has two granite markers. Site marker SMK-1 is inside the security fence near the southwest corner of the site, and site marker SMK-2 (PL-3) is on the top of the disposal cell. The concrete base of site marker SMK-1 has several minor cracks, but they do not compromise the integrity of the base, and repairs are not necessary at this time. No maintenance needs were identified.

#### **7.4.1.4 Survey and Boundary Monuments**

Eleven boundary monuments and three survey monuments delineate the property boundary. As reported in 2021, boundary monument BM-5 is bent from being hit by a vehicle, and the concrete base around survey monument SM-2 is cracked and spalled. Both boundary monument BM-5 and survey monument SM-2 are fully functional, and repairs of these monuments are not needed at this time but will be continually monitored. The base of boundary monument BM-11 is damaged but stable, and no repairs are needed at this time. Boundary monument BM-7 is difficult to find and will be marked with a T-post before the next annual inspection.

#### **7.4.1.5 Aerial Survey Quality Control Monuments**

Four aerial survey quality control monuments (PL-4) were inspected. No maintenance needs were identified.

#### **7.4.1.6 Monitoring Wells**

Twenty-two monitoring wells are on or near the site. The LTSP establishes four POC wells at the site for postclosure groundwater monitoring. All wellhead protectors observed during the inspection were undamaged. Monitoring well 0181 has a cracked concrete pad (PL-5). Some of the concrete monitoring well pads were cracked, but the wellhead protectors at those wells are stable, and repairs are not necessary at this time. No other maintenance needs were identified.

### **7.4.2 Inspection Areas**

In accordance with the LTSP, the site is divided into three inspection areas to ensure a thorough and efficient inspection. The inspection areas are (1) the disposal cell and adjacent area inside the security fence, (2) the site perimeter between the security fence and the site boundary, and (3) the outlying area. Inspectors examined specific site surveillance features within each area and

looked for evidence of settlement, erosion, or other modifying processes that might affect the site's conformance with LTSP requirements.

#### ***7.4.2.1 Disposal Cell and Adjacent Area Inside the Security Fence***

The disposal cell, completed in 1989, occupies 6 acres. The slopes of the disposal cell cover are armored with riprap, consisting primarily of competent basalt with a small fraction of sedimentary rocks, to control erosion. A small percentage of the rock, mainly sedimentary rock, has degraded, but the riprap cover is functioning as designed. Inspectors found no evidence of settling, slumping, erosion, or other modifying processes that might affect the integrity of the disposal cell.

A boulder-filled trench, known as an apron, surrounds the disposal cell. The apron was intact and stable. Inspectors noted small (less than 8 square feet) instances of erosion and possible soil piping features along the base of the side slopes that have been observed during previous inspections. The rills and piping features are formed from stormwater runoff along the perimeter road draining into the disposal cell apron. This occurrence is not a concern because the erosion is minor and the sediment has not filled the apron or become visible in the apron, indicating that the apron's performance is not adversely affected. Inspectors will continue to monitor these features. Possible erosion or an animal burrow was found on the south corner of the drainage channel (PL-6). Inspectors will continue to monitor the area in the future. No additional maintenance is needed.

The area between the disposal cell and the security fence contains the perimeter dirt road, several monitoring wells, and sparsely vegetated open space. The road was passable, and there was no indication of trespassing in the open space. Vegetation has grown along the fence and debris has collected on the fence. Maintenance will be performed before the next inspection to clear the vegetation and the debris. No other maintenance needs were identified.

#### ***7.4.2.2 Perimeter Area Between the Security Fence and the Site Boundary***

The area between the security fence and the site boundary is primarily open space but includes access roads, a stormwater diversion channel, and monitoring wells. The site property boundary is not fenced, and trespassing occurs on the site from several access points through state- and privately owned land. Unauthorized access to the site is primarily from the west through a former mill access gate that has been broken off its hinges; LM is not responsible for the gate or associated fence. The site is also accessible through remote, unfenced, open-access points to the north and east. The site will continue to be monitored for adverse public use typically indicated by trash, tire ruts, fire rings, and vandalism. Inspectors did not find new trash dumps or indications of vandalism (except for missing perimeter sign P2) during the inspection.

Signs of erosion noted during previous inspections appear in multiple areas in the site perimeter. Erosional rills are present on the west side of the site near perimeter sign P7 and the water tower (PL-7) but are currently not affecting site surveillance features. Rills and gullies are also present along the escarpment northeast of the disposal cell between boundary monument BM-7 and survey monument SM-3 (approximately 400 feet [ft] from the base of the disposal cell). The maximum gully depth in this area is approximately 3 ft, but the erosion appears to be stabilizing as larger rocks drop to the bottom of the gullies and provide armoring. A portion of the

stormwater diversion channel along the southeast side of the site continues to erode slowly. These erosional features could eventually damage site surveillance features (i.e., perimeter signs, boundary monuments, and the security fence). The closest erosional features are approximately 300 ft from the disposal cell and do not pose a risk to its integrity at this time. Inspectors will continue to monitor these features. No immediate maintenance needs were identified.

### **7.4.2.3 Outlying Area**

The 0.25-mile area beyond the site boundary was visually observed for erosion, changes in land use, or other phenomena that might affect the long-term integrity of the site. Drilling activities were observed northwest of the site in early 2024. LM and the LMS contractor are in communication with the drilling and mining company to ensure that the drilling activities do not affect the integrity of the disposal site. Abandoned buildings and a water tower associated with the former milling activities are on state land northwest of the site. The buildings are not maintained and are in disrepair, and debris tends to blow onto the site from surrounding buildings (e.g., shingles, siding, plastic). The accumulation of windblown debris is minor and will continue to be monitored. The trash will also be removed.

Areas of erosion noted during previous inspections include the natural drainage near the southwest side of the site and rills and gullies northwest of the water tower. Evidence of continued erosion in these areas was apparent but does not threaten the integrity of the disposal cell or site surveillance features. Inspectors will continue to monitor these erosional features. No maintenance needs were identified.

## **7.5 Follow-Up or Contingency Inspections**

LM will conduct follow-up or contingency inspections if (1) a condition is identified during the annual inspection or other site visit that requires a return to the site to evaluate the condition or (2) LM is notified by a citizen or outside agency that conditions at the site are substantially changed. No need for a follow-up or contingency inspection was identified.

## **7.6 Maintenance and Repairs**

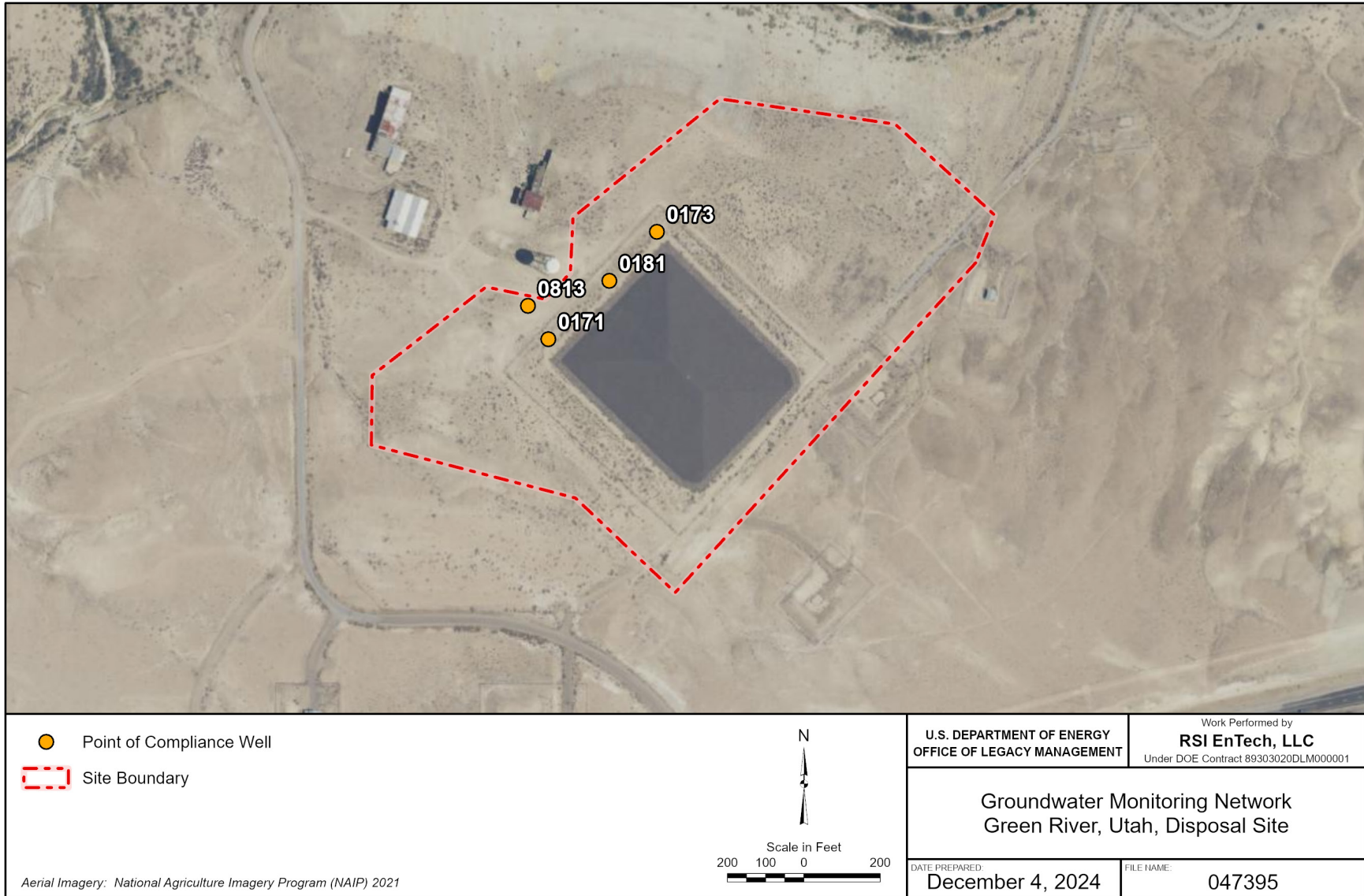
The following maintenance and repairs will be performed before the next annual inspection:

- Replacement of the entrance sign
- Replacement of perimeter signs P1, P2, P5, P6, P8, P11, and P12
- Installation of a T-post as a marker near boundary monument BM-7
- Treatment of vegetation and debris along the security fence

No other maintenance needs were identified.

## **7.7 Groundwater Monitoring**

In accordance with the LTSP, annual groundwater monitoring is conducted at four POC wells to evaluate the performance of the disposal cell (DOE 1998). The most recent sampling event occurred on June 10, 2024. The locations of the four POC wells are shown in Figure 7-2. Table 7-2 lists the wells included in the current site groundwater monitoring network.



**Note:** Well 0181 was installed in June 2002 to replace former POC well 0172 (refer to discussion in text).

*Figure 7-2. POC Groundwater Monitoring Network at the Green River, Utah, Disposal Site*

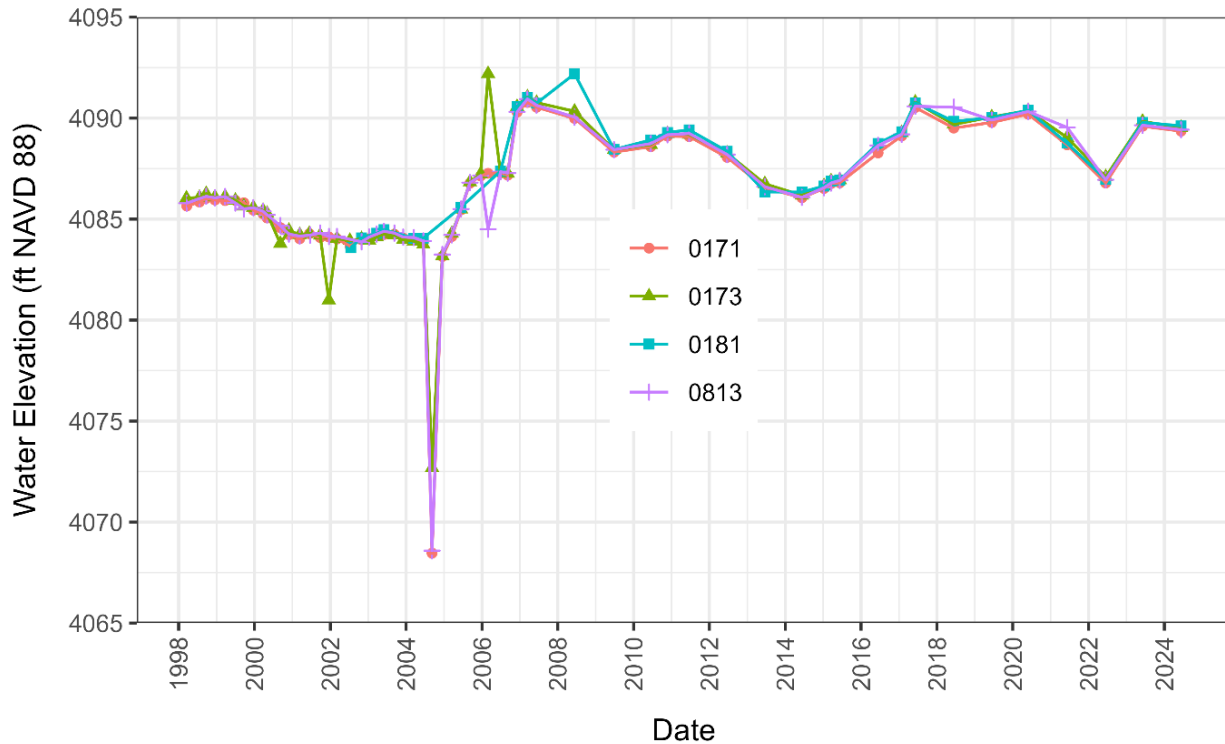
Table 7-2. POC Groundwater Monitoring Network for the Green River, Utah, Disposal Site

Groundwater Monitoring Purpose	Monitoring Wells
POC well	0171, 0173, 0181, and 0813

The LTSP included monitoring well 0172, but its construction integrity was suspect, and the well was replaced with monitoring well 0181 in June 2002. Well 0181 has been monitored as the replacement POC well since July 2002. POC wells are sampled for nitrate (nitrate + nitrite as nitrogen [N]), sulfate, and uranium. Groundwater monitoring results are reported and published on the LM Geospatial Environmental Mapping System (GEMS) website at <https://gems.lm.doe.gov>.

### 7.7.1 Water Level Monitoring

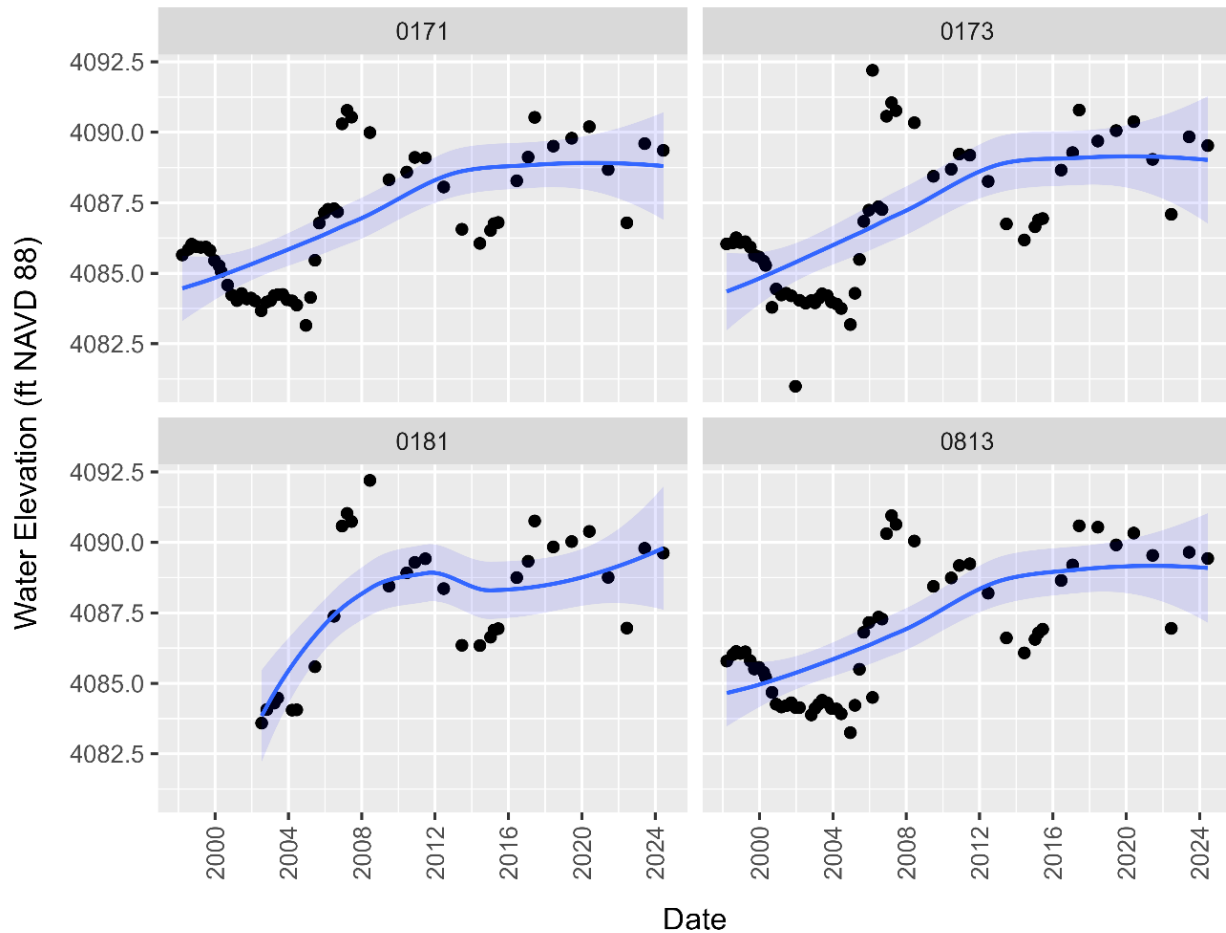
In accordance with the LTSP, water levels in the POC wells are measured routinely. As shown in Figure 7-3, groundwater elevations measured from 1998 to 2024 typically have been consistent across the four POC wells, generally ranging from 4085 to 4090 ft. Water level data plotted in this figure are referenced to the North American Vertical Datum of 1988 (NAVD 88).



**Note:** The 11–15 ft drop in water levels in wells 0171, 0173, and 0813 recorded in September 2004 may have been due to instrument error or human error in recording the original field record. However, there is no conclusive evidence of error and the data as shown are consistent with available documentation.

Figure 7-3. Groundwater Elevations at the Green River, Utah, Disposal Site, 1998–2024

To provide greater resolution on the historical groundwater elevation data, Figure 7-4 plots the same results as those shown in Figure 7-3 but excludes the three 2004 outliers. In contrast with the initial line plot, Figure 7-4 was developed using a faceting approach, whereby data are partitioned into a matrix of panels, with each panel plotting data for a single well. In each facet plot, a nonparametric smoothing method—locally estimated scatterplot smoothing (LOESS)—is used. The surrounding shaded area represents the 95% pointwise confidence interval.



**Note:** This figure excludes the following three low outlier water level measurements recorded on September 7, 2004 (<4075 ft, shown in Figure 7-3).

*Figure 7-4. 1998–2024 Groundwater Elevations at Green River, Utah, Disposal Site, POC Wells Excluding September 2004 Outlier Measurements*

Groundwater elevations in all four POC wells increased about 5 ft between 2004 and 2008 and have fluctuated since then (Figure 7-4). For the 1998–2024 time frame, Mann-Kendall trend analysis indicates statistically significant increasing trends in all four wells. Because of the periodic wide fluctuations in water levels since 2004, no significant trend is indicated if the dataset is limited to 2010–2024.

## 7.7.2 Disposal Cell Performance Monitoring

Table 7-3 lists the concentration limits in milligrams per liter (mg/L) for POC wells established in the LTSP. The concentration limits determined for uranium and nitrate were the higher value from either the U.S. Environmental Protection Agency maximum concentration limits (MCLs) (40 CFR 192 Table 1 Subpart A) or the background concentration levels present before construction of the disposal cell (DOE 1998). The background water quality in the Cedar Mountain Formation is characterized by high total dissolved solids and concentrations of sulfate that exceed national primary and secondary drinking water standards (DOE 1998). In accordance with the LTSP, sulfate results are compared to well-specific background concentration limits (Table 7-3). Table 7-4 lists the most recent (June 2024) analytical results for the four POC wells.

*Table 7-3. LTSP Concentration Limits for POC Wells at the Green River, Utah, Disposal Site*

Monitoring Well	Nitrate <sup>a</sup> (mg/L)	Sulfate (mg/L)	Uranium (mg/L)
0171	10 <sup>b</sup>	3334	0.044 <sup>b</sup>
0173	10 <sup>b</sup>	4000	0.044 <sup>b</sup>
0181 <sup>c</sup>	102	4985	0.067
0813	10 <sup>b</sup>	4440	0.069

**Notes:**

<sup>a</sup> Nitrate = nitrate + nitrite as N.

<sup>b</sup> MCL (40 CFR 192 Table 1 Subpart A).

<sup>c</sup> Concentration limits for well 0181 correspond to those derived initially for well 0172 (Table 5.1 of DOE 1998).

*Table 7-4. 2024 Analytical Results for POC Wells at the Green River, Utah, Disposal Site*

Monitoring Well	Nitrate <sup>a</sup> (mg/L)	Sulfate (mg/L)	Uranium (mg/L)
0171	<i>38.8</i>	<i>3780</i>	<i>0.086</i>
0173	<i>83.1</i>	<i>5830</i>	<i>0.014</i>
0181	52.0	6690	0.022
0813	<0.017	3500	0.068

**Notes:**

Results in italic denote concentrations equal to or exceeding the LTSP-driven concentration limit.

<sup>a</sup> Nitrate = nitrate + nitrite as N.

Figure 7-5 shows the time-concentration plots for nitrate in the four POC wells along with corresponding concentration limits. In this and subsequent figures, the most recent (2024) results are labeled in the lower right corner of each plot. For wells with statistically significant trends ( $p < 0.05$ ) (Table 7-5), the direction of the trend is also indicated.

Nitrate concentrations continue to exceed the 10 mg/L MCL in wells 0171, 0173, and 0181 (Figure 7-5). Nitrate concentrations have been stable in well 0171, averaging about 43 mg/L, but highly variable in well 0173 (with a mean and standard deviation of  $181 \pm 118$  mg/L). Nitrate concentrations in well 0181 (52.0 mg/L in 2024) have been below the concentration limit (background value of 102 mg/L) since 2009 but typically above the 10 mg/L MCL. Nitrate concentrations in well 0813 have been well below the 10 mg/L MCL; most results have been below detection limits.

For the 1998–2024 time frame, a significant decreasing trend in nitrate concentrations was found for well 0181 (no significant trend in the remaining wells). For the 2008–2024 dataset (after 2008, wells were consistently sampled annually), significant decreasing trends were found for all wells except well 0813 (Table 7-5).

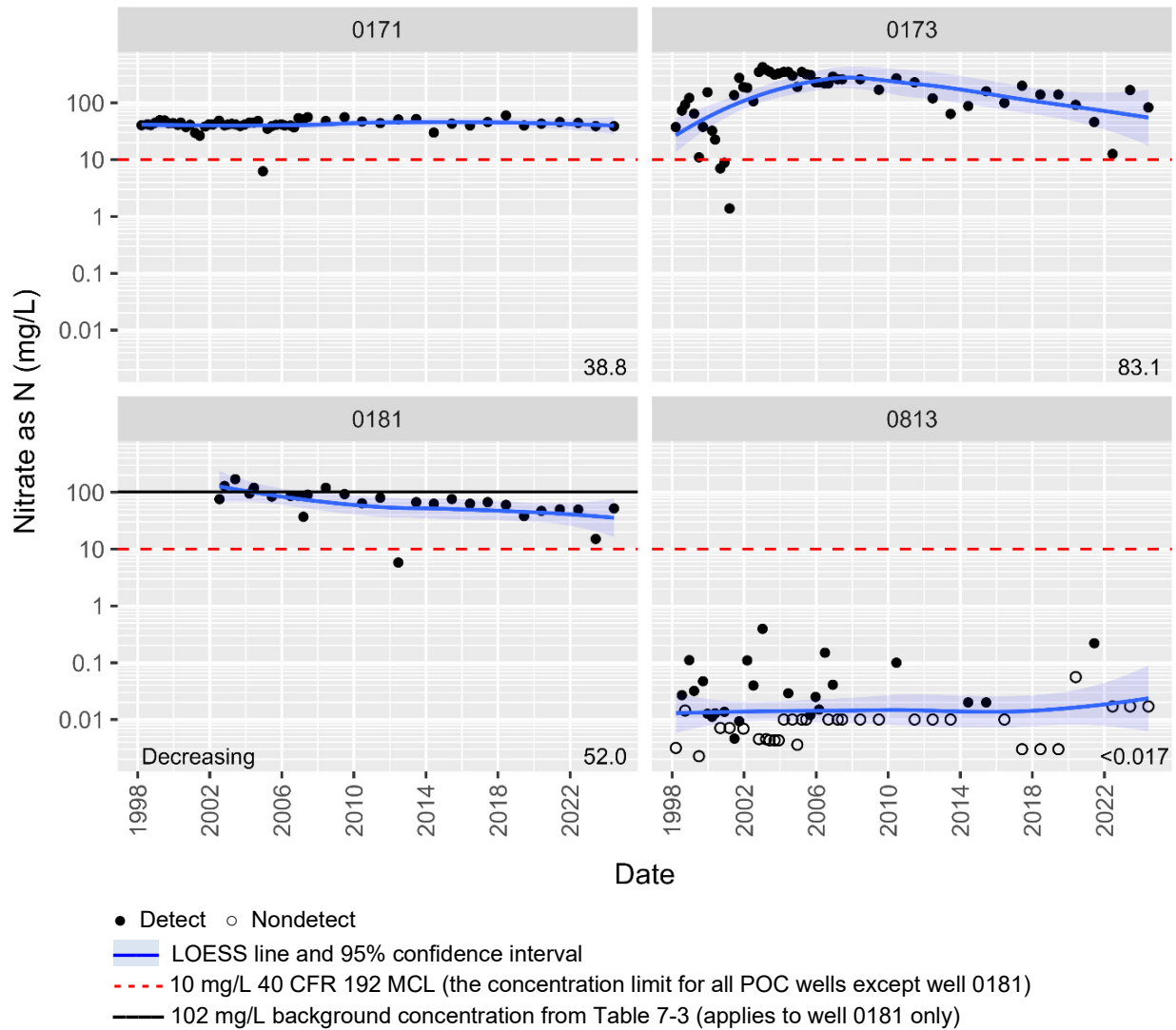


Figure 7-5. Nitrate Concentrations at POC Wells at the Green River, Utah, Disposal Site

Table 7-5. Mann-Kendall Trend Analysis Results for Nitrate, Sulfate, and Uranium in Green River, Utah, Disposal Site POC Wells, 1998–2024

POC Well	Initial Trend Analysis Date <sup>a</sup>	No. of Samples <sup>b</sup> (No. of Nondetects)	Kendall's tau <sup>c</sup>	p-value <sup>c</sup>	Trend <sup>c</sup>	Trend Since 2008 <sup>d</sup>
<b>Nitrate<sup>e</sup></b>						
0171	3/20/1998	55	0.09	0.34	No Trend	Decreasing
0173	3/17/1998	55	0.01	0.96	No Trend	Decreasing
0181	7/17/2002	27	-0.57	<0.001	Decreasing	Decreasing
0813	3/20/1998	55 (32)	-0.11	0.24	No Trend	No Trend
<b>Sulfate</b>						
0171	3/20/1998	49	-0.14	0.17	No Trend	No Trend
0173	3/17/1998	49	0.28	0.005	Increasing <sup>e</sup>	No Trend
0181	7/17/2002	22	0.38	0.015	Increasing	No Trend
0813	3/20/1998	49	-0.13	0.18	No Trend	No Trend
<b>Uranium</b>						
0171	3/20/1998	55	0.63	<0.001	Increasing	No Trend
0173	3/17/1998	55	0.70	<0.001	Increasing	No Trend
0181	7/17/2002	27	0.07	0.63	No Trend	Increasing
0813	3/20/1998	55	0.75	<0.001	Increasing	Increasing

**Notes:**

- <sup>a</sup> Initial trend analysis dates vary as indicated above. For all well-parameter combinations, the final trend analysis date is June 10, 2024.
- <sup>b</sup> POC wells were sampled more frequently between 1998 and 2008 (about four times per year). Starting in 2008, samples were collected on an annual basis, usually in June.
- <sup>c</sup> Trend tests were conducted using the “NADA: Nondetects and Data Analysis for Environmental Data” package, version 1.6-1.1 (Lee 2020) in R, version 4.3.3 (R Core Team 2024). The NADA trend test is similar to the traditional Mann-Kendall trend test, except that it accounts for the presence of nondetects at multiple detection limits. Trend analyses were conducted at the 0.05 significance level using a two-sided test. The test statistic, Kendall's tau, is a measure of the strength of the association between two variables, with values always falling between -1 and +1.
- <sup>d</sup> Because of the inconsistent sampling frequencies in early years noted above, and also to account for more recent trends, trend tests were also run for the 2008–2024 time frame. Only trend directions are listed above; corresponding tau and p-values are not shown.
- <sup>e</sup> Nitrate is expressed as nitrate + nitrite as N. Results before 2004 were converted from nitrate as NO<sub>3</sub>.

Figure 7-6 shows the time-concentration plots for sulfate in POC wells relative to the corresponding well-specific background concentration limits listed in Table 7-3. Sulfate concentrations typically exceed the LTSP background concentrations in all wells except 0813 (Figure 7-6). Sulfate concentrations in well 0171 have been stable (averaging about 4000 mg/L), while those in well 0173 have been the highest and most variable, particularly since 2010. Consistent with most historical measurements, sulfate concentrations in well 0181 exceeded the corresponding concentration limit (4985 mg/L). Sulfate concentrations in well 0813 remain below the corresponding concentration limit of 4440 mg/L (Figure 7-6).

Using the full (1998–2024) dataset, significant increasing trends in sulfate concentrations were found for wells 0173 and 0181 (Table 7-5). For well 0173, this finding stems largely from the approximate doubling of sulfate concentrations between 1998 and 2006. Using the 2008–2024 time frame, no significant trend in sulfate concentrations were found for any POC well.

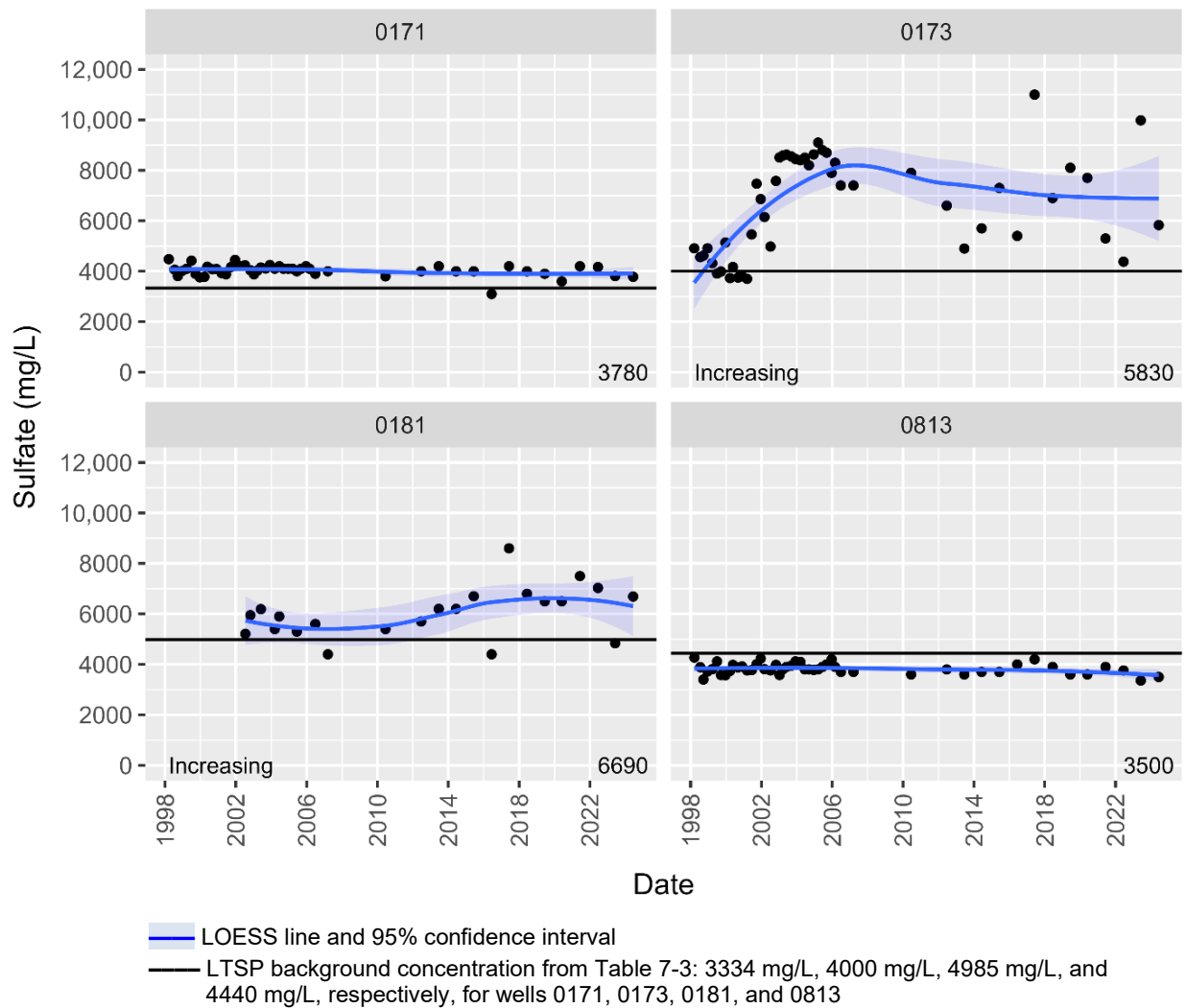


Figure 7-6. Sulfate Concentrations at POC Wells at the Green River, Utah, Disposal Site

Figure 7-7 shows the time-concentration plots for uranium in POC wells relative to the LTSP concentration limits listed in Table 7-3. In 2024, uranium concentrations exceeded the corresponding LTSP concentration limit only in well 0171 (Table 7-4), where results have exceeded the 0.044 mg/L MCL since late 2002 (with one exception). As observed for nitrate and sulfate, uranium concentrations in well 0173 have been highly variable since 2010 and appear to be somewhat correlated with fluctuating water levels in this well (Figure 7-4).

Based on the full (1998–2024) dataset, a significant increasing trend in uranium concentrations was found for all but one well (0181). For the 2008–2024 time frame, the trend is still increasing for wells 0173 and 0813 (Table 7-5). This increasing trend is particularly apparent in well 0813, where the most recent result (0.068 mg/L)—the highest on record for this well since the LTSP was issued—is nearly equal to the corresponding 0.069 mg/L concentration limit.

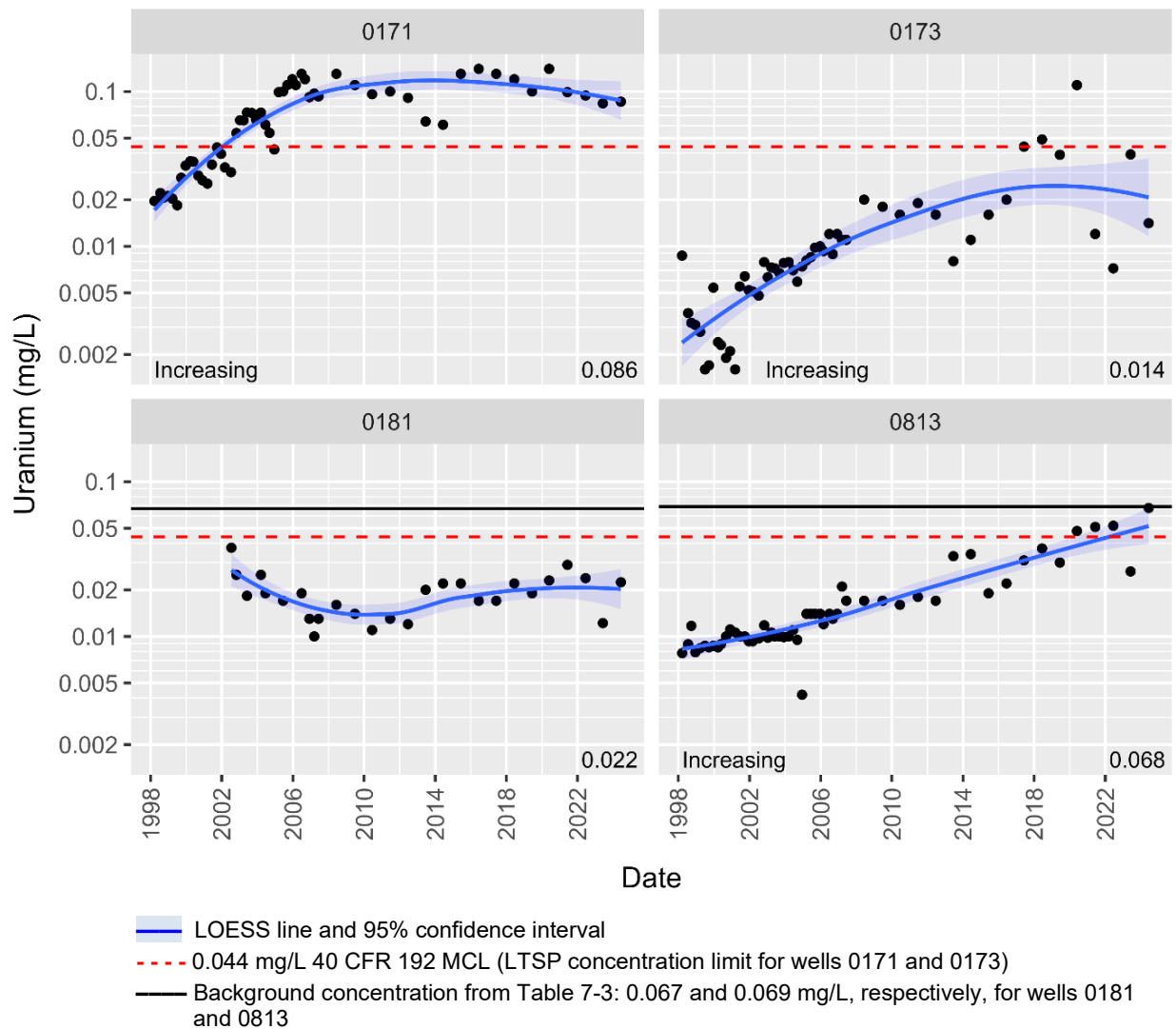


Figure 7-7. Uranium Concentrations at POC Wells at the Green River, Utah, Disposal Site

In summary, in 2024, concentrations of the routinely monitored analytes exceeded corresponding concentration limits in several POC wells: nitrate in wells 0171 and 0173; sulfate in all wells except well 0813; and uranium in well 0171. Based on data collected since 1998, Mann-Kendall trend analysis indicates statistically significant increasing trends for several well-parameter combinations: sulfate in wells 0173 and 0181 and uranium in wells 0171, 1073, and 0813. When the trend analysis was limited to data since 2008, significant increasing trends were found only for uranium in wells 0181 and 0813.

## 7.8 Corrective Action

Corrective action is taken to correct out-of-compliance or hazardous conditions that create a potential health and safety problem or that may affect the integrity of the disposal cell or compliance with 40 CFR 192. No need for corrective action was identified.

## 7.9 References



Site-related documents are available on the LM public webpages at <https://lmpublicsearch.lm.doe.gov/SitePages>.

10 CFR 40.27. U.S. Nuclear Regulatory Commission, “General License for Custody and Long-Term Care of Residual Radioactive Material Disposal Sites,” *Code of Federal Regulations*.

40 CFR 192. U.S. Environmental Protection Agency, “Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings,” *Code of Federal Regulations*.

40 CFR 192 Table 1 Subpart A. U.S. Environmental Protection Agency, “Maximum Concentration of Constituents for Groundwater Protection,” *Code of Federal Regulations*.

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Lee, L., 2020. “NADA: Nondetects and Data Analysis for Environmental Data,” R package, version 1.6-1.1, <https://CRAN.R-project.org/package=NADA>, accessed November 7, 2024.

R Core Team, 2024. “R: A Language and Environment for Statistical Computing,” The R Foundation for Statistical Computing, version 4.3.3, <https://www.r-project.org>, accessed November 7, 2024.

## 7.10 Photographs

Photograph Location Number	Azimuth	Photograph Description
PL-1	45	Entrance Sign
PL-2	135	Perimeter Sign P2
PL-3	0	Site Marker SMK-2
PL-4	—	Quality Control Monument QC-3
PL-5	0	Monitoring Well 0181
PL-6	—	Erosion at South Corner of Disposal Cell
PL-7	135	Erosion near Perimeter Sign P7 and the Water Tower

**Note:**

— = Photograph taken vertically from above.



*PL-1. Entrance Sign*



*PL-2. Perimeter Sign P2*



*PL-3. Site Marker SMK-2*



*PL-4. Quality Control Monument QC-3*



*PL-5. Monitoring Well 0181*



*PL-6. Erosion at South Corner of Disposal Cell*



*PL-7. Erosion near Perimeter Sign P7 and the Water Tower*