2.0 Burrell, Pennsylvania, Disposal Site

2.1 Compliance Summary

The Burrell, Pennsylvania, Uranium Mill Tailings Radiation Control Act (UMTRCA) Title I Disposal Site was inspected on October 29, 2024. No changes were observed on the disposal cell or in the associated drainage features. Inspectors identified minor maintenance needs but found no cause for a follow-up inspection.

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) conducts groundwater monitoring every 5 years as a best management practice to aid in the evaluation of the disposal cell's performance. Eight monitoring wells and two seep locations are routinely sampled. The most recent groundwater sampling event occurred in October 2023. Monitoring wells 0422 and 0423 could not be sampled because of insufficient recharge. Consistent with most historical observations, seeps 0611 and 0612 were dry during this sampling event. However, seep 0611 was moist during the 2024 inspection. For the remaining six monitoring wells, sampling results in 2023 for the four target analytes (lead, molybdenum, selenium, and uranium) were consistent with historical results and below corresponding maximum concentration limits (MCLs) established under UMTRCA.

2.2 Compliance Requirements

Requirements for the long-term surveillance and maintenance of the site are specified in the site-specific Long-Term Surveillance Plan (DOE 2000) (LTSP) 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 2-1 lists these requirements.

Table 2-1. License Requirements for the Burrell, Pennsylvania, Disposal Site

Requirement	LTSP	This Report	10 CFR 40.27
Annual Inspection and Report	Sections 3.3 and 3.4	Section 2.4	(b)(3)
Follow-Up Inspections	Section 3.5	Section 2.5	(b)(4)
Maintenance	Section 3.6	Section 2.6	(b)(5)
Emergency Measures	Section 3.6	Section 2.7	(b)(5)
Environmental Monitoring	Section 3.7	Section 2.8	(b)(2)

2.3 Institutional Controls

The 72-acre site, identified by the property boundary shown in Figure 2-1, is owned by the United States and was accepted under the NRC general license in 1994. 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.

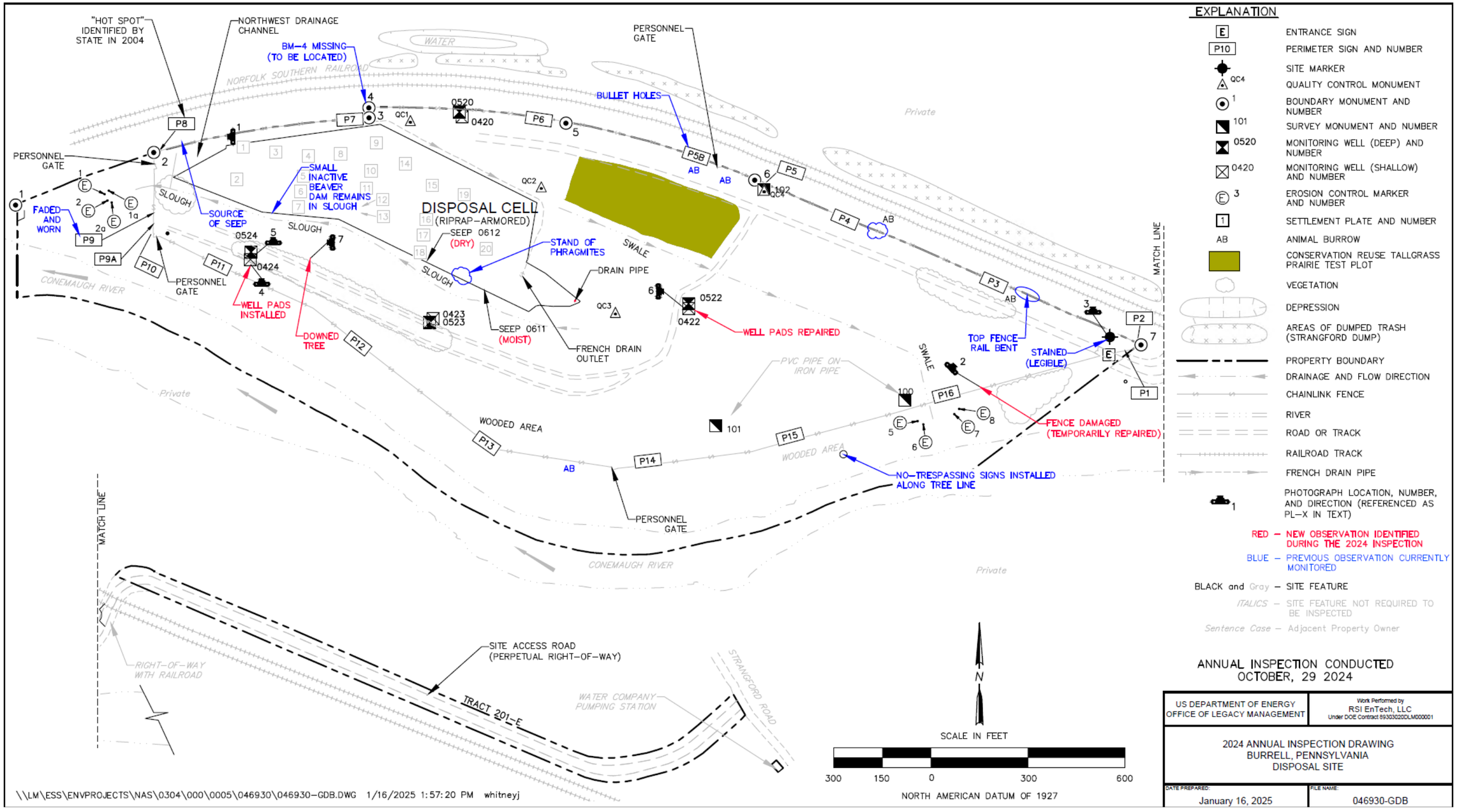


Figure 2-1. 2024 Annual Inspection Drawing for the Burrell, Pennsylvania, Disposal Site

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, perimeter signs, site marker, survey and boundary monuments, erosion control markers, quality control monuments, and wellhead protectors.

2.4 Inspection Results

The site, 1 mile east of Blairsville, Pennsylvania, was inspected on October 29, 2024. The inspection was conducted by K. Broberg and L. McHenry of the Legacy Management Support contractor. T. Drake and A. Farinacci (LM) and T. Biller (Lawn RX, the site herbicide subcontractor) 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.

2.4.1 Site Surveillance Features

Figure 2-1 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 2-1 by photograph location (PL) numbers. The photographs and photograph log are presented in Section 2.10.

2.4.1.1 Access Road, Entrance Gate, and Entrance Sign

Access to the site is from a road leading from Strangford Road, along a DOE right-of-way through a parcel of private property (Tract 201-E), and across DOE's leased crossing over Norfolk Southern Railroad tracks. Entrance to the site is through a locked gate on the east end of the security fence. Residents have historically used the area along the DOE right-of-way for unpermitted dumping, hunting, target shooting, and all-terrain vehicle use. Personnel associated with commercial interests use the road for access to the railroad tracks and several nearby natural gas wells. Because the DOE right-of-way cannot be controlled, NRC concurred that the entrance gate in the site security fence is the IC for site access rather than the gate across the access road. The entrance gate was locked and functional. Entrance signage on the main vehicle entrance gate was updated with new phone numbers. The railroad crossing was improved in 2022 with the installation of an asphalt crossing. No maintenance needs were identified.

2.4.1.2 Security Fence and Perimeter Signs

A chainlink security fence encloses the disposal cell and drainage features. The site herbicide subcontractor keeps the fence line clear of vegetation, which should prolong the life of the security fence (PL-1). In 2023, trees felled by strong winds damaged the fence, compromising its integrity. Repairs were completed following the 2023 inspection. The upper rail of the fence along the southern boundary is bent in a few areas, but the fence remains serviceable, and repairs

are not required at this time. A large tree fell on the fence in 2024. Temporary repairs were made to the fence (PL-2). DOE plans to wait until summer 2025 to make permanent repairs. This decision was based on the observed adequacy of the temporary repairs and the late time of year. If winter and spring storms further damage the fence, repairs can be made all at once.

There are 17 perimeter signs attached to the outside of the security fence. All perimeter signs are present. Perimeter sign P9 has been faded and worn since 2019. It is difficult to replace because it is in a wet slough area. A companion sign was installed during the 2023 inspection a few feet south of perimeter sign P9 (identified in Figure 2-1 as perimeter sign P9A). Some of the perimeter signs have expired phone numbers that need to be replaced. This can be done easily by placing stickers with the new telephone number over the old telephone number. Inspectors did not have enough stickers to replace the number on all perimeter signs. The signs near the entrance gates are current. The rest of the signs will be updated in 2025. No maintenance needs were identified.

2.4.1.3 Site Marker

The site has one granite site marker just inside the main entrance gate. The concrete pad is cracked but remains functional. The surface of the site marker is stained but remains legible (PL-3). No maintenance needs were identified.

2.4.1.4 Survey and Boundary Monuments

The site has three survey monuments and seven boundary monuments. Survey monument SM-102 was noted as missing in the 2017 and 2018 inspections. Quality control monument QC-4 was installed in 2019 as a replacement for survey monument SM-102.

Except for boundary monument BM-4, the remaining six boundary monuments were located during the inspection. Efforts will be made in 2025 to locate BM-4, which is most likely covered by grass. No other maintenance needs were identified.

2.4.1.5 Aerial Survey Quality Control Monuments

Four aerial survey quality control monuments were inspected during the 2024 annual inspection. No maintenance needs were identified.

2.4.1.6 Erosion Control Markers

The site has eight erosion control markers, which were inspected during this visit. No maintenance needs were identified.

2.4.1.7 Monitoring Wells

The site has eight monitoring wells that are sampled as a best management practice every 5 years. During the most recent (October 2023) sampling event, two of the monitoring wells (0422 and 0423) could not be sampled because of insufficient recharge.

In 2024, concrete well pads were installed at the two remaining wells that lacked them (wells 0424 and 0524) (PL-4 and PL-5). Also in 2024, repairs were made to cracked well pads 0422 and 0522 (PL-6). All well pads are now in good condition. All wellhead protectors that were observed during the annual inspection were locked and undamaged. New locks were installed at all of the monitoring wells in 2023.

During the 2022 site inspection, NRC measured a gamma radiation level of 30–40 microrem per hour around the base of the well pad at monitoring well 0420. Background gamma radiation is approximately 10 microrem per hour. The gamma radiation level was assessed by the Pennsylvania Department of Environmental Protection (DEP) in spring 2023 and was unchanged. No NRC or DEP staff participated in the 2024 inspection. The level measured was not considered a risk to human health or the environment. No other maintenance needs were identified.

2.4.2 Inspection Areas

In accordance with the LTSP, the site is divided into four inspection areas (referred to as "transects" in the LTSP) to ensure a thorough and efficient inspection. The inspection areas are (1) the disposal cell, (2) the area adjacent to the disposal cell, (3) the site perimeter, and (4) the outlying area, including the access road that leads to the site. Inspectors examined specific site surveillance features within each area and looked for evidence of erosion, settling, slumping, or other modifying processes that might affect the site's conformance with LTSP requirements.

2.4.2.1 Disposal Cell

The 5-acre disposal cell, completed in 1987, is armored with riprap to control erosion and deter animal intrusion. There was no evidence of erosion, settling, slumping, or any other modifying processes that might affect the integrity of the disposal cell.

Control of vegetation (including woody vegetation) on the disposal cell is not required by the LTSP. A screening-level risk assessment conducted by DOE from 1996 to 1997 concluded that plant succession on the disposal cell does not present significant or credible risk to human health or the environment and, due to reduced hydraulic flux through the cover from evapotranspiration, may improve the long-term performance of the disposal cell. The LTSP was revised in 2000 to reflect these findings; at that time, NRC suggested that LM reevaluate the effects of vegetation on cover performance in 10 or 20 years (i.e., between 2010 and 2020) to confirm performance parameters and predictions. The NRC-suggested assessment would revisit the issue of vegetation growth on the disposal cell cover to evaluate whether it remains protective of human health and the environment or interferes with the ability of inspectors to assess disposal cell cover stability. LM planned to conduct this follow-up assessment in fiscal year 2019, but it was delayed by LM to further consult with NRC on the scope of the study. NRC and LM are jointly analyzing disposal cell cover performance and pedogenesis at other UMTRCA sites to either support development of the scope for a Burrell site study or determine that the additional Burrell site assessment is not required.

Although vegetation is allowed to grow on the disposal cell and site, noxious weeds and invasive plants are controlled through spraying and mowing. In 2008, a site Vegetation Management Plan (DOE 2008) was issued that included the control of noxious and invasive vegetation on the

disposal cell cover to facilitate inspection activities. Vegetation management effectively limits the spread of noxious weeds. Other woody species continue to establish on the disposal cell cover.

Woody vegetation on the disposal cell cover that has been growing since 2000 has progressed to the point that trees are becoming tall enough to create concern that one could fall (e.g., die or be blown down). A fallen tree could create a large root ball and perhaps impact or expose the underlying clay layer of the cell cover. A windstorm in 2024 downed several large trees that were not located on the disposal cell. The size of the root balls on these downed trees illustrates the disposal cell cover concern (PL-7). DOE will work with NRC to develop a path forward to address the trees on the disposal cell cover, considering the potential root ball concern.

2.4.2.2 Area Adjacent to the Disposal Cell

A French drain was installed parallel to the north slope of the disposal cell in 1998 to prevent the ponding of water next to the cell. The outlet for the French drain, on the south slope of the disposal cell, was not flowing during the inspection, and no outflow has been observed during past inspections. Water was not ponded anywhere along the French drain, and no wetland vegetation was observed, which indicates that the drain is operating properly. Inspectors will continue to monitor this area to verify that it continues to operate as designed.

A large tree fell in the slough south of the disposal cell in 2019. As of the 2024 inspection, the downed tree is not interfering with drainage in the slough.

A small, inactive beaver dam remains in the slough south of the disposal cell. The site herbicide contractor indicated that the dam was inactive in 2022, and no new evidence of recent activity has been observed around the dam (e.g., animal tracks, new tree cuts). In its current state, the beaver dam does not interfere with the flow of water enough to warrant action. No maintenance needs were identified.

A hole on the east side of the Conservation Reuse Tallgrass Prairie Test Plot was safely filled in with clay-based topsoil in 2022. Because the Burrell site was once a railroad landfill, the hole is believed to be settlement around some buried railroad landfill debris.

2.4.2.3 Site Perimeter

A seep that has been active in the past is near the north security fence, about 60 feet (ft) east of perimeter sign P8 and west of the disposal cell. Access to the seep requires walking down a steep slope of riprap that is difficult to walk on. During the inspection, the seep was not flowing, but the area around the seep was moist. The water for the seep along the fence line appears to be coming from the bluffs north of the railroad tracks. Conceivably, the seep could destabilize the nearby railroad embankment. The seep does not pose a threat to the integrity of the disposal cell, and inspectors will continue to monitor this area. No maintenance needs were identified.

2.4.2.4 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. No activities that could affect the long-term integrity of the site were observed.

North of the site, a dirt road parallels the railroad tracks and provides access to a long, narrow wooded area that has been used as an illegal dump. No new piles of trash were observed during the inspection. Inspectors will continue to note any dumping activity. The south side of the site is bordered by the Conemaugh River.

In 2004, a representative from Pennsylvania DEP showed inspectors a "hot spot" (an area with gamma radiation levels of 5 millirem per hour or 5000 microrem per hour) in the rock ballast adjacent to the railroad tracks northeast of perimeter sign P8. A review of LM records confirmed that the area in question was addressed in a property completion report for the Uranium Mill Tailings Remedial Action Project. Supplemental standards have been applied to contamination beneath the tracks because the benefit of removal does not justify the cost. LM communicated the results of a records search to the Commonwealth of Pennsylvania in late 2004. The hot spot was the subject of a follow-up discussion with Pennsylvania representatives in 2006. In October 2018, NRC personnel revisited the hot spot area and measured a gamma radiation level of 200 microrem per hour, which is considerably lower than the 2004 measurement. During the 2022 inspection, NRC personnel measured a gamma radiation level of 120 microrem per hour. The area is marked on the site inspection map for future reference. The area is not on DOE property; the Commonwealth of Pennsylvania is the responsible authority. No maintenance needs were identified.

During the 2022 inspection, a temporary hunting blind was discovered on the south side of the site outside of the site security fence. In 2023, the blind was removed, and several no-trespassing signs were installed along the tree line. A removable chain was also installed south of the main entrance gate to further delineate the no-trespassing area. No visible signs of trespass were noted during the 2024 inspection.

2.5 Follow-Up Inspections

LM will conduct follow-up 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 inspection was identified.

2.6 Maintenance

The following maintenance items were completed before the 2024 inspection:

- Well pads were installed at wells 0424 and 0524
- Cracks were repaired in existing well pads for monitoring wells 0422 and 0522

The following maintenance items were identified during the 2024 inspection:

- Boundary monument BM-4 was not located. It is believed to be covered by grass. Efforts will be made during the 2025 annual inspection to locate boundary monument BM-4.
- Telephone numbers on some site perimeter signs were outdated. Stickers with updated phone numbers were placed on the perimeter signs near the entrance gates. The rest of the perimeter signs will be updated in 2025.
- Damaged fence from downed tree was temporarily repaired, and further repairs are planned for 2025.

2.7 Emergency Measures

Emergency measures are actions LM will take in response to unusual damage or disruption that threatens or compromises site safety, security, or integrity in compliance with 10 CFR 40 Appendix A. No need for emergency measures was identified.

2.8 Environmental Monitoring

2.8.1 Groundwater Monitoring

In accordance with the LTSP, LM conducts routine groundwater monitoring every 5 years as a best management practice to evaluate the disposal cell's performance. The groundwater monitoring network consists of four sets of monitoring wells (eight monitoring wells total) and two seeps (Table 2-2 and Figure 2-2). Each set of wells consists of a shallow well completed in unconsolidated fill and alluvium (400-series wells) and a deeper well completed in the bedrock of the Casselman Formation (500-series wells). Groundwater is sampled for standard water quality indicators (e.g., pH, major ions, total dissolved solids) and four target analytes: lead, molybdenum, selenium, and uranium. The MCLs for these four analytes in groundwater (as described in 40 CFR 192 Subpart A Table 1) are listed in Table 2-3.

Table 2-2. Groundwater Monitoring Network for the Burrell, Pennsylvania, Disposal Site

Monitoring Well or Seep	Hydrologic Relationship
0420 and 0520	Upgradient or background monitoring well
0422 and 0522	Cross-gradient monitoring well
0423 and 0523	Downgradient monitoring well
0424 and 0524	Downgradient monitoring well
0611 and 0612	Seep

Table 2-3. MCLs for Target Analytes in Groundwater at the Burrell, Pennsylvania, Disposal Site

Constituent	MCL[a] (mg/L)
Lead	0.05
Molybdenum	0.1
Selenium	0.01
Uranium	0.044

Note:
[a] MCLs as listed in 40 CFR 192 Subpart A Table 1.

Abbreviation:
mg/L = milligrams per liter

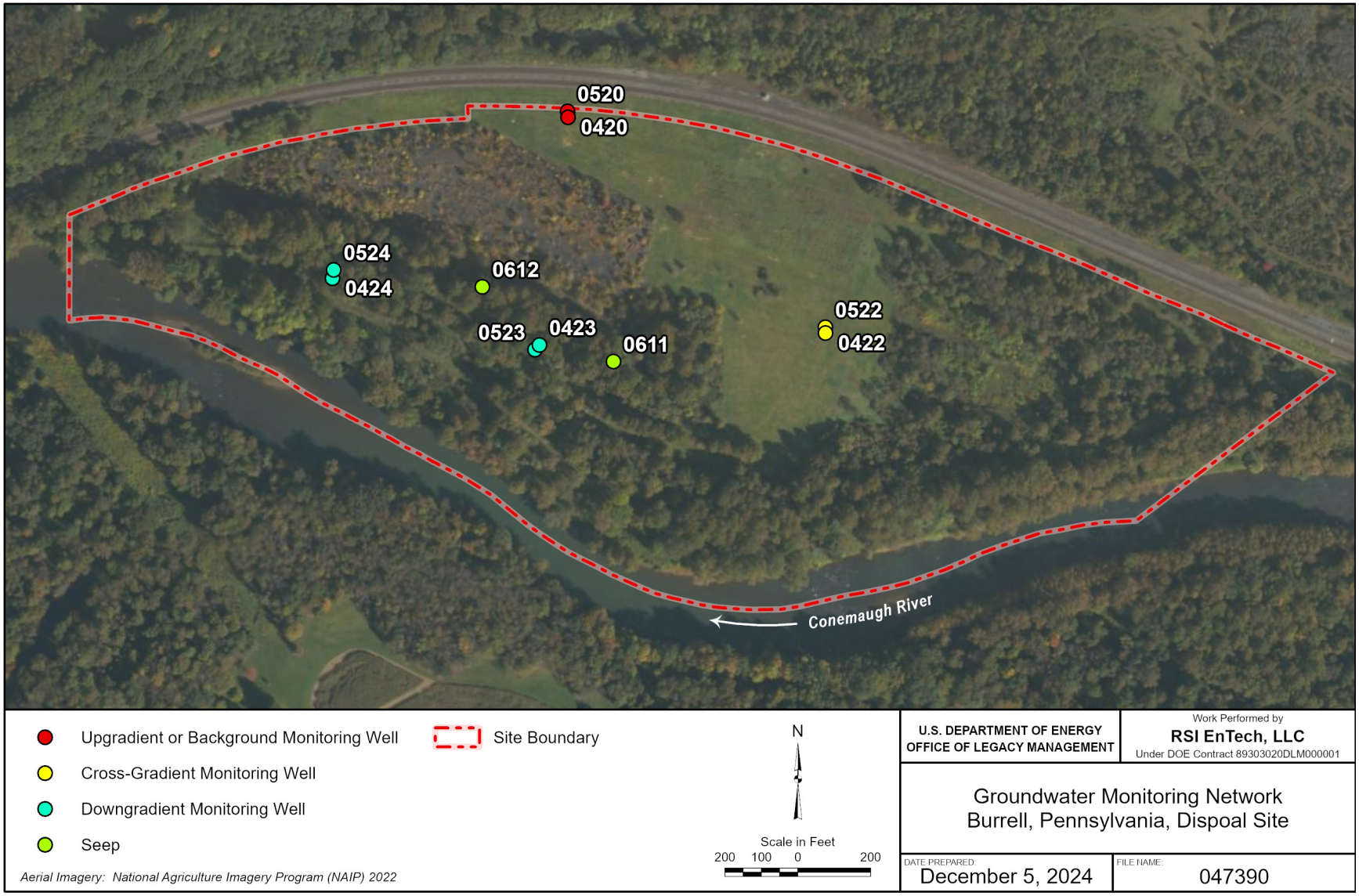


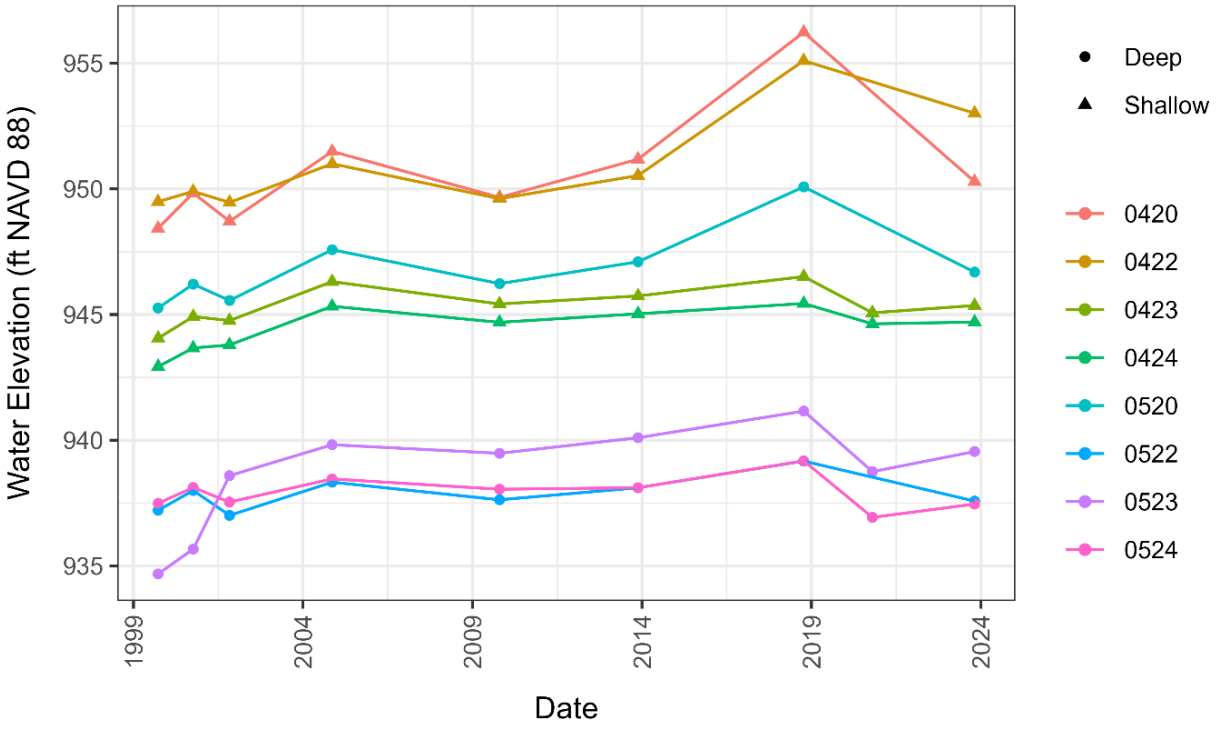
Figure 2-2. Groundwater Monitoring Network for the Burrell, Pennsylvania, Disposal Site

Although the LTSP states that groundwater will be monitored routinely in the fall at 5-year intervals beginning in 1999 (DOE 2000), additional nonroutine events have been conducted when deemed appropriate. Therefore, depending on the location, as many as three additional sampling events have been conducted since 1999 relative to the routine 5-year schedule. For example, LM resampled the four downgradient wells for all analytes in October 2020. This sampling was 3 years ahead of the required 5-year sampling frequency to determine if the increase in molybdenum noted previously (DOE 2019) was continuing. Data from these nonroutine sampling results are reported in previous annual reports (e.g., DOE 2022) and can be accessed via LM's Geospatial Environmental Mapping System (GEMS) website (https://gems.lm.doe.gov).

The most recent sampling event occurred in October 2023. Two of the shallow monitoring wells (wells 0422 and 0423) had insufficient recharge to sample. Consistent with most historical observations, seeps 0611 and 0612 were also dry at that time. However, seep 0611 was moist during the 2024 inspection.

Initial (1987–1999) groundwater elevation measurements at the site indicated seasonal variations of up to 3–4 ft (DOE 2000). Routine measurements since 1999 (most taken in the fall) indicate that water elevations have been relatively stable in most wells as shown in Figure 2-3.

Mann-Kendall trend analysis indicates no statistically significant trends in water levels except for deep well 0523, where water levels have increased approximately 5 ft since 1999.



Abbreviation: NAVD 88 = North American Vertical Datum of 1988

Figure 2-3. Hydrographs for Monitoring Wells at the Burrell, Pennsylvania, Disposal Site, 1999–2023

Time-series plots for each target analyte (i.e., molybdenum, uranium, lead, and selenium) are presented in Figure 2-4 through Figure 2-7 and are based on water quality data from 1996–2023. The time-series plots in this year's report have a new look. Details of how the plots were constructed can be found in the footnote of Figure 2-4. MCL concentrations are shown on each plot as a red line. As shown in the plots, concentrations of the target analytes in monitoring wells have been consistently below the respective MCLs.

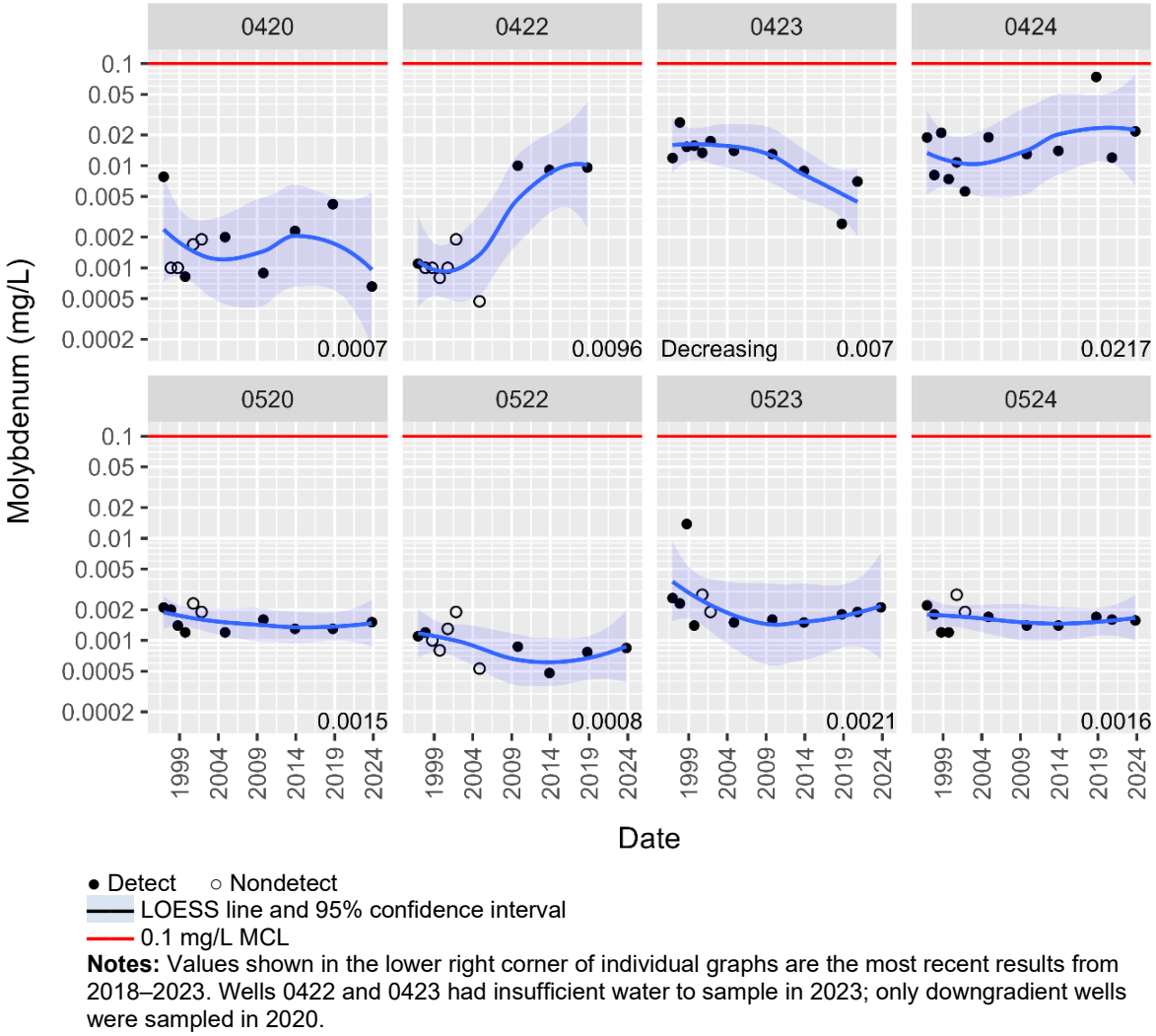
The following figures were developed using a faceting approach, whereby data are partitioned into a matrix of panels, with each panel plotting data for a single well. In each facet plot, a nonparametric smoothing method—locally estimated scatterplot smoothing (LOESS)—is applied. The surrounding shaded area represents the 95% pointwise confidence interval. Because of the wide range in analyte concentrations across the well network, a semilogarithmic scale is used.

A statistical trend analysis was performed for each target analyte to determine if concentrations are increasing, decreasing, or remaining stable. Statistically significant decreasing and increasing trends are labeled in the figures. With the exception of two target analytes, no statistically significant trends were detected. The two exceptions are as follows:

- Molybdenum (well 0423): statistically significant decreasing trend.
- Lead (well 0423): statistically increasing trend.

It should be noted that because insufficient recharge precluded collection of a water sample in well 0423 in 2023, the trend results for well 0423 are based on data through October 2020.

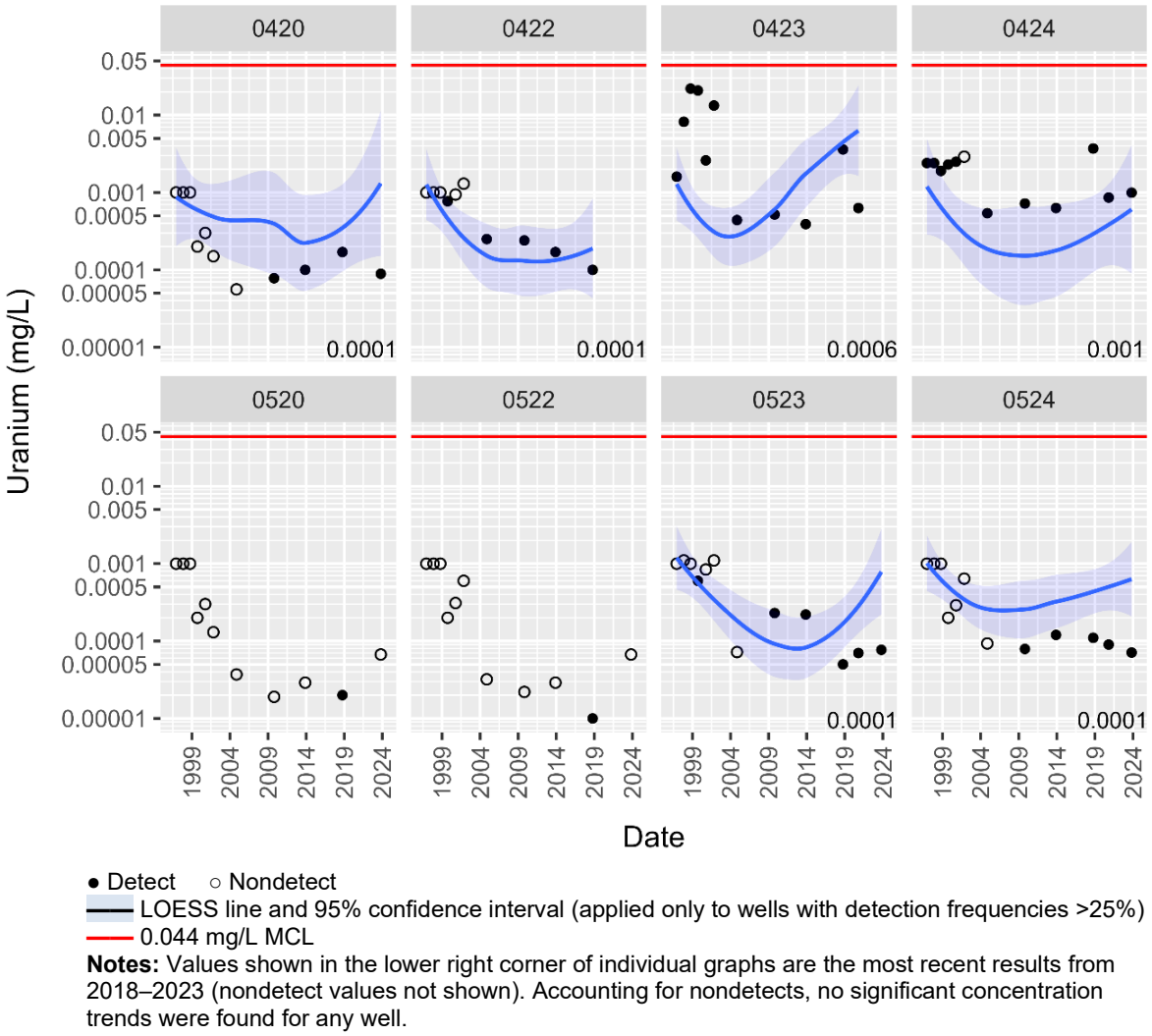
Molybdenum concentrations in all wells remain below the 0.1 milligram per liter (mg/L) MCL, with all trends now stable or decreasing (Figure 2-4). The 0.074 mg/L result for well 0424 in 2018 prompted the 2020 nonroutine sampling event given concerns that the MCL could soon be exceeded. However, the two most recent molybdenum results for this well (0.012 and 0.022 mg/L in 2020 and 2023, respectively) are consistent with pre-2018 results.



Notes: Values shown in the lower right corner of individual graphs are the most recent results from 2018–2023. Wells 0422 and 0423 had insufficient water to sample in 2023; only downgradient wells were sampled in 2020.

Figure 2-4. Molybdenum Concentrations in Groundwater at the Burrell, Pennsylvania, Disposal Site

Based on the most recent (2018–2023) results, uranium concentrations in all wells are ≤0.001 mg/L, which is well below the 0.044 mg/L MCL (Figure 2-5). Most results for deeper wells (shown in the bottom row of figure) have been below the laboratory detection limit. Despite the apparent decreasing uranium concentration trend in deep wells, none of these trends are statistically significant because of the high proportion of nondetects.



Notes: Values shown in the lower right corner of individual graphs are the most recent results from 2018–2023 (nondetect values not shown). Accounting for nondetects, no significant concentration trends were found for any well.

Figure 2-5. Uranium Concentrations in Groundwater at the Burrell, Pennsylvania, Disposal Site

Figure 2-6 and Figure 2-7 plot temporal data for lead and selenium, showing the high proportion of nondetects (about 86%) for both analytes across the monitoring well network. Lead concentrations have been consistently below the MCL and, with few exceptions, below detectable levels in deep wells (Figure 2-6). The statistically significant increasing trend found for well 0423 reflects the increase from 0.0007 mg/L (2009) to 0.012 mg/L in 2018. The most recent (2020) result, 0.003 mg/L, is more than 1 order of magnitude below the 0.05 mg/L MCL. Similar observations apply to selenium; the most recent results (2018–2023) were all below the detection limit as shown in Figure 2-7.

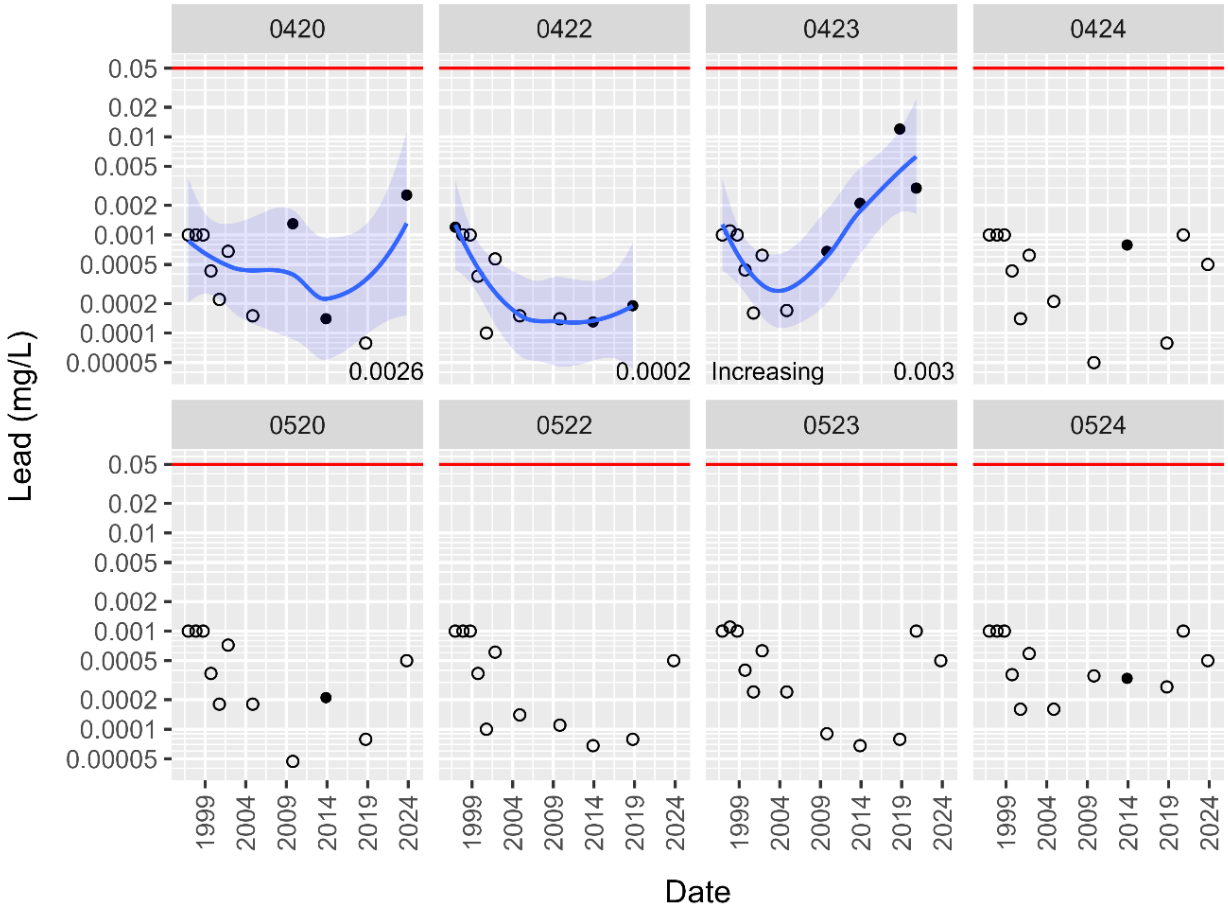


Figure 2-6. Lead Concentrations in Groundwater at the Burrell, Pennsylvania, Disposal Site

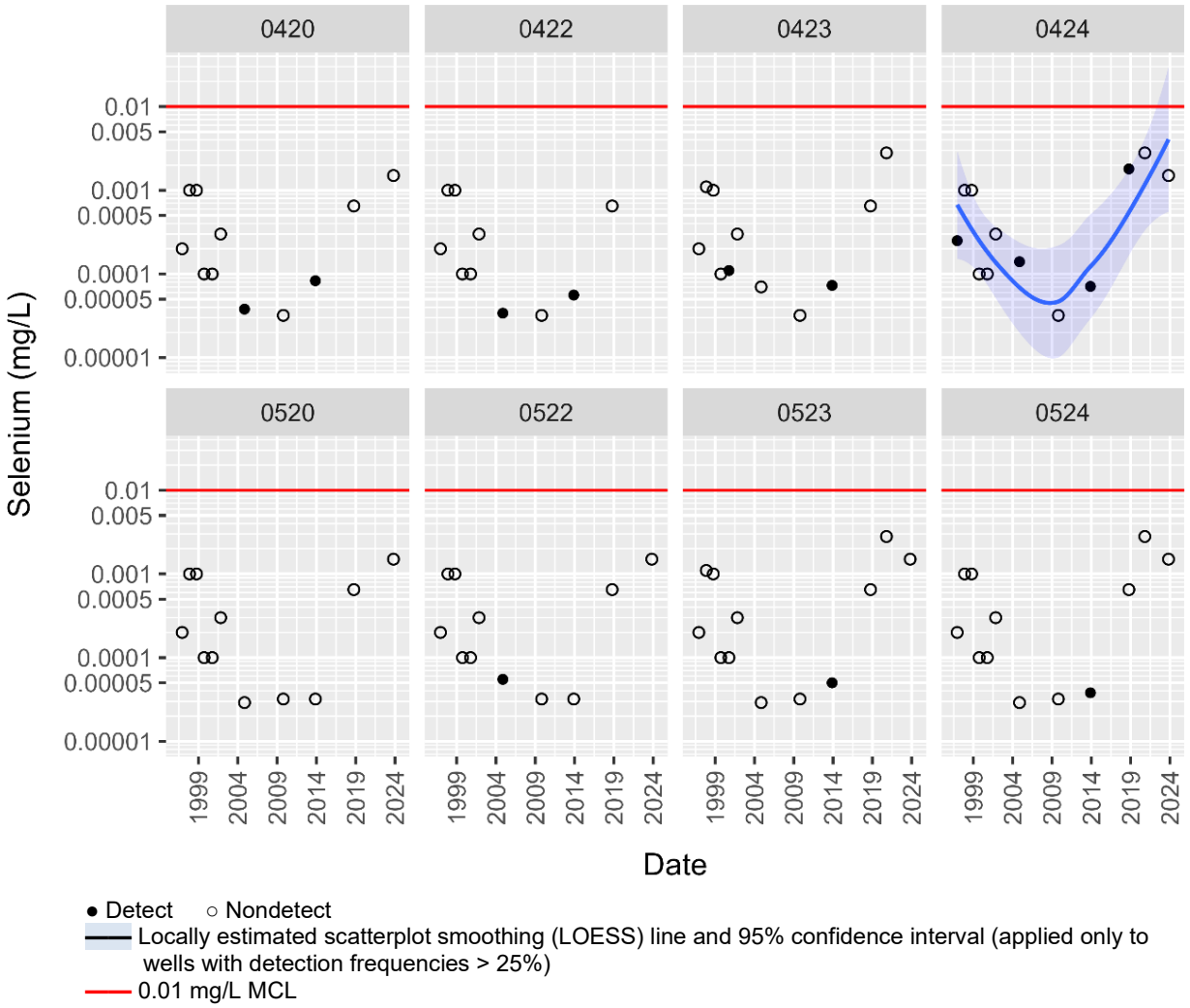


Figure 2-7. Selenium Concentrations in Groundwater at the Burrell, Pennsylvania, Disposal Site

Seeps 0611 and 0612 have typically been dry. As shown in Figure 2-8, when it has been possible to collect samples at these locations, concentrations of target analytes have been consistently below the corresponding MCLs and often below detection limits.

Based on the monitoring results to date, there is no indication of degradation of groundwater quality at the Burrell site. The next disposal cell groundwater monitoring event is scheduled for 2028. Given the inability to sample shallow wells 0422 and 0423 in 2023, LM may consider an interim event to sample those wells, as well as rescheduling the sampling event from the fall to the spring. Seasonal water levels should be at their highest level in the spring.

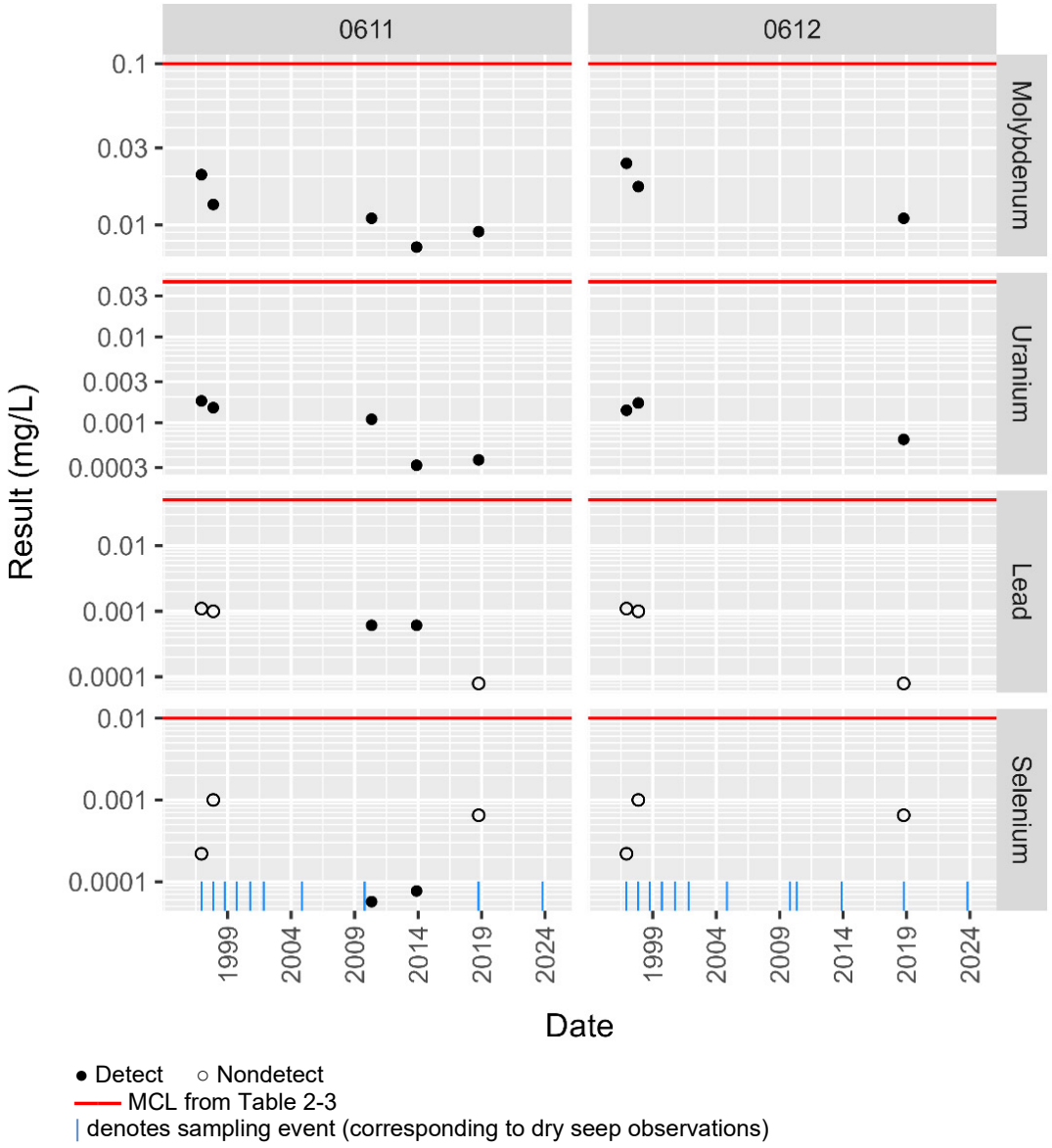


Figure 2-8. Historical Results for Seep Locations, Burrell, Pennsylvania, Disposal Site

2.8.2 Vegetation Management

In accordance with the Vegetation Management Plan, mowing and spot herbicide application continues. Vegetation management activities include ensuring that the fence line and access paths remain clear of the invasive species Japanese knotweed (*Reynoutria japonica*), applying herbicides where needed, and regularly mowing open areas of the site. These activities have been successful in controlling Pennsylvania-listed noxious weeds onsite. Pennsylvania-listed noxious weeds purple loosestrife (*Lythrum salicaria*), poison hemlock (*Conium maculatum*), and multiflora rose (*Rosa multiflora*) were not observed in 2024, except for sporadic resprouts following mowing. Several other invasive plants, including Japanese knotweed and common reed (*Phragmites australis*), persist. A stand of common reed that was identified during previous inspections remains at the west end of the disposal cell and has spread along the southern edge of the disposal cell. This stand is very difficult to access because of standing water and its location

adjacent to the perimeter fence. Wooded areas remained heavily vegetated with Japanese knotweed. Privet (*Ligustrum sp.*) is an invasive shrub that was observed in several areas. Oriental bittersweet (*Celastrus orbiculatus*) is an invasive vine listed as a noxious weed in Pennsylvania. It was observed in several wooded areas and growing on the disposal cell cover. Pursuant to the Vegetation Management Plan, access paths to monitoring wells and the fence line have been effectively maintained.

A conservation reuse initiative is being pursued at the site that involves the establishment of a tallgrass prairie. In 2017, a 2-acre plot in the mowed field east of the disposal cell was staked out as a test plot. In October 2018, that area was prepped and seeded. Maintenance through 2019 included mowing that helped prevent the establishment of unwanted vegetation. Following the 2019 inspection, field personnel broadcast Indiangrass (*Sorghastrum nutans*) to augment the 2018 seeding effort. The prairie was mowed in 2023 to help keep woody vegetation from becoming established. It was not mowed in 2024.

The test prairie appears to be progressing, though a diverse flowering community is not expected for several years. It is recommended that the prairie continue to be mowed at least every 2 years while flowers are on the cool-season grasses and clovers and before they set seed. Mowing the last 2 weeks of May or the first week of June should prevent the cool-season grasses from seeding out and will open the canopy for the native species when they are beginning to leaf out.

Maintaining a tallgrass prairie at an unoccupied site is challenging, especially when the prairie is in an area of the country that wants to revert to forest. For now, DOE intends to continue with the current maintenance effort of mowing approximately every 2 years as described above. Rather than continuing with a tall prairie grass pollinator plot, it may be more advantageous to plant some flowering shrubs and small trees for the same pollinator reuse objective. Such an approach would be more in line with the surrounding area and require less long-term maintenance, making it more cost-effective.

2.9 References

Note

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

10 CFR 40 Appendix A. U.S. Nuclear Regulatory Commission, "Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material from Ores Processed Primarily for Their Source Material Content," *Code of Federal Regulations*.

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 Subpart A Table 1. U.S. Environmental Protection Agency, "Maximum Concentration of Constituents for Groundwater Protection," *Code of Federal Regulations*.

DOE (U.S. Department of Energy), 2000. *Long-Term Surveillance Plan for the U.S. Department of Energy Burrell Vicinity Property, Blairsville, Pennsylvania*, GJO-2002-331-TAR, April.

DOE (U.S. Department of Energy), 2008. *Burrell, Pennsylvania, Site Vegetation Management Plan*, DOE-LM/1566-2008, Office of Legacy Management, January.

DOE (U.S. Department of Energy), 2019. *2018 Annual Site Inspection and Monitoring Report for Uranium Mill Tailings Radiation Control Act Title I Disposal Sites,* LMS/S22053, Office of Legacy Management, March.

DOE (U.S. Department of Energy), 2022. *2021 Annual Site Inspection and Monitoring Report for Uranium Mill Tailings and Radiation Control Act Title I Disposal Sites*, LMS/S33843, Office of Legacy Management, March.

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 22, 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 22, 2024.

2.10 Photographs

Photograph Location Number	Azimuth	Photograph Description
PL-1	270	Fence Line
PL-2	45	Temporary Fence Repair
PL-3	0	Site Marker
PL-4	—	New Well Pad at Well 0424
PL-5	—	New Well Pad at Well 0524
PL-6	90	Crack Repaired at Well Pad of Monitoring Well 0422
PL-7	270	Large Root Ball on Downed Tree

Note:
— = Photograph taken vertically from above.

PL-1. Fence Line

PL-2. Temporary Fence Repair

PL-3. Site Marker

PL-4. New Well Pad at Well 0424

PL-5. New Well Pad at Well 0524

PL-6. Crack Repaired at Well Pad of Monitoring Well 0422

PL-7. Large Root Ball on Downed Tree