

5.0 Project Schedules and Milestones (FY 2025–FY 2027)

5.1 Establishing Project Schedules and Milestones

As stated in Section 1.1.2, the Site Management Plan (SMP) establishes the overall plan for Remedial Actions (RAs) at the Monticello Mill Tailings Site (MMTS) and milestones against which progress can be measured. The SMP also documents the overall plan for RAs at the Monticello Vicinity Properties site (MVP), which was deleted from the National Priorities List (NPL) on February 28, 2000. The MMTS and MVP are also referred to as the Monticello Projects. The SMP was first prepared in 1995 and was revised annually from 1998 through fiscal year (FY) 2003. Starting in FY 2004, only Section 5.0 of the SMP, “Project Schedules and Milestones,” is updated annually to reflect revised schedules agreed to by the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and the Utah Department of Environmental Quality (UDEQ). This update of Section 5.0 of the SMP contains project schedules and milestones for FY 2025–FY 2027. The stipulated penalty milestones listed in this section are enforceable milestones unless superseded by revised schedules agreed to by DOE, EPA, and UDEQ or by amendments to the Federal Facility Agreement (FFA) (DOE 1988b).

5.1.1 FFA Requirements

Section XXX of the FFA, “Enforceability,” states that “All terms and conditions of this Agreement which relate to interim or final remedial actions, including corresponding timetables, deadlines, or schedules ... shall be enforceable. ...” The FFA required DOE to submit a work plan establishing how DOE would complete the tasks required by the FFA and specific timetables and a schedule for completing RAs. The FFA Work Plan was completed in May 1989 and established the enforceable timetable for completing primary documents identified in the FFA and for completing RAs.

The scope of work, timetable, and schedule for RAs presented in the FFA Work Plan were superseded by the Remedial Design (RD) Work Plan, which was identified as a primary document and was submitted as a final document in January 1992. The RD Work Plan established a revised timetable with specific, stipulated penalty milestones. The stipulated penalty milestones were associated with the submittal of primary design documents that would be generated as part of the RD and notice of award to subcontractors for RA work.

The timetable in the RD Work Plan was superseded by the timetables established in the 1995 version of the SMP. DOE, EPA, and UDEQ concurrence on the SMP has been the basis for establishing new enforceable milestones and target dates for all activities extending through the completion of the Monticello Projects. The SMP is a primary document, and, in accordance with the FFA, the corresponding timetables, deadlines, and schedules are enforceable.

5.1.2 Enforceable Milestones and Nonenforceable Targets

DOE, with EPA and UDEQ concurrence, has developed a 3-year (fiscal year plus 2 years) rolling milestone approach for establishing a schedule for completing RAs at the Monticello NPL sites. Under this approach, schedule dates are designated as either “milestones” or “target dates.” Milestones and target dates are established in consideration of the Monticello Projects environmental budget allocation. Milestones are enforceable deadlines established for near-term

activities (fiscal year plus 2 years) for which greater fiscal and technical certainty exists. Target dates are nonenforceable deadlines, generally for longer-term activities (greater than fiscal year plus 2 years) and may be converted to milestones annually. Target dates may also be established in the fiscal year plus 2-year time frame and beyond for completing activities associated with a stipulated penalty milestone. Each year, after receipt of the Approved Funding Program that reflects the final congressional appropriation for the current fiscal year, existing milestones are reviewed and adjusted, if necessary. An additional year of milestones is also established, adjusting the previous target dates, if necessary.

Enforceable milestones for the Monticello Projects are described in Table 5-1 for those activities in FY 2025–FY 2027 for which stipulated penalties may be assessed against DOE. Each penalty date listed in Table 5-1 is defined as the date EPA and UDEQ must receive the respective document in the form identified in the table. Nonenforceable target dates for the Monticello Projects are described in Table 5-2. As work on the projects progresses, additional documents may be submitted. Additional documents will be identified in FFA quarterly reports if required.

Under DOE’s rolling milestone approach, DOE, EPA, and UDEQ consider a variety of factors during the annual review and establishment of milestones and target dates. These include funding availability; latest information on cost estimates; site priorities identified through consultations among DOE, EPA, UDEQ, and stakeholders; new or emerging technologies; and other relevant factors. DOE provides the regulatory agencies and other stakeholders with an opportunity to assist in developing priorities at the sites. Milestones can be renegotiated if there are insufficient congressional appropriations. Out-year nonenforceable target dates are established using realistic assumptions. DOE, EPA, and UDEQ recognize the uncertainties associated with long-term target dates that lay out DOE’s strategic vision of how it ultimately plans to accomplish projects.

Beginning in September 2004, DOE, EPA, and UDEQ concurrence on updates to Section 5.0 of the SMP became the basis for establishing new enforceable milestones and nonenforceable target dates. EPA and UDEQ agree to meet with DOE annually to renegotiate the milestones and target dates established in the SMP. The enforceable milestones described in Table 5-1 for activities in FY 2025–FY 2027 may be modified only as part of this renegotiation or through the existing procedures of the FFA. EPA and UDEQ reserve the right to initiate any action deemed necessary to enforce these milestones. DOE, EPA, and UDEQ agree to abide by the existing procedure for resolving disputes as described in FFA Section XIV, “Resolution of Disputes,” and will make all reasonable efforts to informally resolve any disputes involving insufficient funding before invoking formal dispute procedures.

Additionally, Section XII of the FFA (DOE 1988b) establishes procedures to be used by DOE, EPA, and UDEQ for review, comment, and response to comments on documents established as secondary or primary documents. Primary documents include those reports that are major, discrete portions of the Remedial Investigation/Feasibility Study (RI/FS) or RD/RA activities. Secondary documents include those reports that are discrete portions of the primary documents and are typically input or feeder documents. DOE is responsible for the preparation of primary and secondary documents according to established time schedules. DOE must simultaneously submit the documents to EPA and UDEQ. For both primary and secondary documents, EPA and UDEQ must provide comments within 60 calendar days unless otherwise agreed to by all parties. DOE has 60 calendar days to respond to the comments by simultaneously sending a copy of the responses to EPA and UDEQ unless otherwise agreed to by all parties. For a draft primary document, a draft-final primary document incorporating the comments is required, along with the

comment responses. The draft-final primary document will become a final primary document within 30 days unless dispute resolution is invoked. Historically, on Monticello Projects, additional comments have been received by DOE from EPA and UDEQ during the final review period and have been addressed by DOE in the submittal of a final primary document.

5.2 Site Status

RAs at the Monticello NPL sites have been implemented in accordance with the Record of Decision (ROD) for the corresponding site and operable unit (OU):

- ROD for MVP, all OUs: *Monticello Vicinity Properties Project, Declaration for the Record of Decision and Record of Decision Summary*, November 1989 (MVP ROD). RAs under this ROD are complete.
- ROD for MMTS, OUs I and II: *Monticello Mill Tailings Site, Declaration for the Record of Decision and Record of Decision Summary*, August 1990 (MMTS ROD). RAs under this ROD are complete.
- ROD for MMTS, OU III: *Record of Decision for the Monticello Mill Tailings (USDOE) Site Operable Unit III, Surface Water and Ground Water, Monticello, Utah*, May 2004. RAs under this ROD are ongoing.

The remedy selected in the MMTS OU III ROD was modified in March 2009 by a contingency remedy implemented in the *Explanation of Significant Difference for the Monticello Mill Tailings (USDOE) Site Operable Unit III, Surface Water and Ground Water, Monticello, Utah* (Explanation of Significant Difference [ESD]). As of January 2015, the contingency includes an expanded pump-and-treat remediation system in a focused area of the aquifer called the Area of Attainment (AOA) (see Section 5.3.4).

5.2.1 CERCLA Five-Year Reviews

The RAs at the MMTS and MVP do not allow for unlimited use and unrestricted exposure in all areas because (1) contaminated soil, sediment, and debris removed from the MMTS and MVP remain encapsulated in the onsite DOE repository; (2) contamination remains in soil at the MMTS and MVP where supplemental standards were applied; and (3) contamination remains in MMTS OU III groundwater and surface water. Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 121(c), these circumstances obligate DOE to conduct Five-Year Reviews (FYRs) of the sites to ensure that the ROD-specified remedies remain protective of human health and the environment.

The 2022 FYR for the MVP concluded that the remedy at OU H is protective of human health and the environment in the short term. For the OU H remedy to be protective in the long term, DOE will need to implement the three recommendations identified in the MVP FYR report. DOE received the letter of concurrence from EPA on the short-term protectiveness determination for the MVP on June 28, 2022; the statutory due date for the MVP FYR report was June 30, 2022.

The statutory due date for the MMTS FYR report was June 20, 2022. The initial protectiveness determination for OU I, OU II, and OU III was short-term protectiveness with the same three recommendations identified for the MMTS as for the MVP. Following subsequent review and discussion, EPA and UDEQ agreed with the short-term protectiveness determination for OU I

and OU II but deferred the protectiveness determination for OU III, stating that additional information was required. On June 17, 2022, EPA issued a letter of independent finding to DOE that identified a “protectiveness deferred” determination for OU III. The letter included three additional recommendations to be implemented by DOE that would provide the information necessary for EPA to make a protectiveness determination for the MMTS in an FYR addendum. DOE committed to issuing the final MMTS FYR report by July 29, 2022, and DOE committed to include as much additional information in the report as could be obtained by that deadline. Recommendations that take more time to implement were completed according to the schedule agreed to in the final MMTS FYR report.

Additional EPA comments on the MMTS FYR report were received on September 9, 2022. Comments included the need for additional discussion regarding a protective uranium benchmark for aquatic receptors in surface water. DOE, EPA, and UDEQ subsequently met on October 19, 2022, and agreed on a path forward for addressing outstanding issues to finalize the MMTS FYR report. The errata sheets were resolved and submitted on May 31, 2023, and included the following changes:

1. A revised Appendix G that includes DOE responses to EPA comments on the final FYR report, as well as additional comments received in September 2022
2. Revisions to Appendix F that address EPA comments received in September 2022

FYR recommendations that were recently finalized include the following:

- DOE updated the Uniform Federal Policy Quality Assurance Project Plan, also called the QAPP (LMS/PRO/S27252). The revised QAPP was submitted September 7, 2023.
- DOE updated the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites* (LMS/PRO/S04351), also called the SAP; Program Directive PD-2021-10-MNT, “Discharge Measurements in Montezuma Creek;” and the reporting requirements regarding the monitoring well network in the *Long-Term Surveillance and Maintenance Plan for the Monticello NPL Sites* (LMS/MNT/S00387), also called the LTS&M Plan (December 2022, Rev. 2).
- DOE completed a draft Feasibility Study (FS) for MMTS OU III that was submitted to EPA and UDEQ to evaluate remedial alternatives for achieving the water-quality restoration Remedial Action Objectives (RAOs).
- DOE completed an ecological risk evaluation for aquatic organisms in Montezuma Creek using current State of Utah water quality standards.
- DOE completed an evaluation to determine whether institutional controls (ICs) are required to prevent human consumption of Montezuma Creek surface water as a domestic drinking water source.
- DOE completed a human health risk evaluation using the EPA preliminary remediation goal (PRG) calculator.
- DOE sent informational letters to landowners with deed restrictions, clearly explaining groundwater and soil use restrictions on their property.
- DOE completed a climate change vulnerability and resilience assessment for the Monticello site and provided the assessment to EPA and UDEQ.

Upon completion of the above FYR recommendations, EPA drafted the *Addendum to Monticello Mill Tailings Sixth Five-Year Review Report* (June 2022) and the *Sixth Five-Year Review Report for Monticello Mill Tailings (USDOE) Site, San Juan County, Monticello, Utah* (July 2022) and provided them to the Office of Legacy Management (LM) for review on December 17, 2024. LM provided comments on February 5, 2025, for EPA's consideration.

EPA finalized the *Addendum to Monticello Mill Tailings Sixth Five-Year Review Report dated July 2, 2025*, and provided a copy to LM on July 7, 2025. The protectiveness statement determination was updated based on new information and actions taken since the FYR completion date. The protectiveness statement determination for OU III was revised as follows:

“Short-term Protective. The protectiveness statement determination for OU III is short-term protective. However, for the site to be protective in the long-term, there are institutional controls for surface water in OU III that will be implemented in future decision documents, based on the Draft Feasibility Study.”

5.3 Long-Term Surveillance and Maintenance

In addition to FYRs required under CERCLA, DOE conducts routine inspections and surveillances (weekly, monthly, and quarterly) and annual site inspections as an ongoing evaluation of remedy effectiveness. These activities are directed under the DOE LTS&M program initiated in October 2001. LM implements the LTS&M program. The LTS&M Plan for the Monticello NPL sites is designated as a “primary” document in the FFA. LTS&M activities at the Monticello NPL sites consist of periodic surveillance and inspection of supplemental standards properties, monitoring of earthwork in city streets and utility corridors for the presence of radioactive material, management of recovered radioactive material in the Temporary Storage Facility (TSF) at the onsite repository, operation and maintenance of the onsite repository, monitoring for compliance with ICs that restrict land and water use, monitoring groundwater and surface water, and pertinent documentation and reporting (see LTS&M Plan, December 2022, Rev. 2). DOE holds quarterly meetings with EPA and UDEQ to monitor the progress of all site activities.

5.3.1 Mill Site Remediation and Restoration

Soil contamination removal activities concluded at the former mill site in July 1999. DOE transferred ownership of the former mill site property and several adjacent properties (known as “peripheral properties”) to the City of Monticello in June 2000. Mill site restoration activities were completed in August 2001. The associated wetland areas (Wetlands 1–3) were fully restored by 2004. As a condition of the land transfer agreement, the city maintains the transferred properties for public recreation. DOE continues to monitor the properties for compliance with ICs that restrict land and water use and to ensure that the remedy remains protective. There are currently no violations of land or water use restrictions. The former mill site property, which is part of MMTS OU I, is partially underlain by contaminated groundwater (OU III) and so cannot be deleted from the NPL at this time.

5.3.2 Repository and Pond 4

Operation of the OU III Groundwater Remedy Optimization (GRO) system (described in Section 5.3.4) began in January 2015 with groundwater from the AOA pumped to Pond 4. This resulted in increased water collection in both the Pond 4 Leachate Collection and Removal System (LCRS) and the Pond 4 Leak Detection System (LDS). Action-level leakage rates for the LCRS and LDS, approved by EPA and UDEQ, were formally established in the *Repository and Pond 4 Groundwater Contingency Plan* (DOE 1998d, as referenced in the LTS&M Plan) and are also included in Section D5.0 of the LTS&M Plan.

The action-level leakage rate for the LCRS is 851 gallons per acre per day (gpac), equivalent to 2000 gallons per day (gpd), and for the LDS is 20 gpac, or 47 gpd. These rates are based on the floor area of Pond 4, which is 2.35 acres, and are evaluated over a 7-day period.

The LCRS leakage rate first exceeded its action level during the week of May 18, 2015, with notification sent to LM, EPA, and UDEQ on May 22, 2015. The LDS leakage rate also exceeded its action level that same week, and notification was likewise provided on May 22, 2015. LCRS leakage frequently exceeded the action level from the week of May 18, 2015, through the week of September 9, 2019, when the rate fell below the action threshold. Between September 9, 2019, and March 2025, the LCRS action level was exceeded three times: during the weeks of January 24, January 31, and February 7, 2022.

Most recently, between March 28 and April 7, 2025, the LCRS system extracted groundwater at an average rate of 3200 gpd. A notification of exceedance of the action-level leakage rate was sent to EPA and UDEQ on April 10, 2025.

For the LDS, action-level exceedances occurred during the weeks of June 1, 2015 (55 gpd); March 2, 2020 (41 gpd); and June 15, 2020 (13 gpd), with the 2020 exceedances attributed to equipment failure. Most recently, during the week of March 24, 2025, the LDS leakage rate (119 gpd) exceeded the action level again. This exceedance was attributed to a power outage that disrupted system operations. EPA and UDEQ were notified via an exceedance letter on March 26, 2025.

As documented in the LTS&M Plan, the approach to managing exceedances involves recirculating LCRS and LDS leakage back into Pond 4. Currently, both monitoring and pumping systems are operating as intended, and water is being successfully recirculated into Pond 4. Corrective actions included scheduling a subcontractor to conduct an evaluation, inspection, and necessary repairs of the pond liner, as well as liner sampling activities during the week of April 28, 2025. The GRO system has been temporarily shut down and will remain offline during liner repair and inspection activities. A final repair and inspection of the pond liner is tentatively scheduled for August 2025, when water is expected to evaporate to a level that will allow access to a currently submerged repair area.

5.3.3 Monticello Mill Tailings Site OU II—Peripheral Properties

Completion reports, RA reports, and closeout documentation have been completed for the remediation of contaminated soil and sediment on all OU II properties. Twenty-two of the original 34 OU II properties without contaminated surface water or groundwater were deleted from the NPL on October 14, 2003. Twelve of the OU II properties that are underlain by

contaminated groundwater or have contaminated surface water (Montezuma Creek), or both, have not been deleted from the NPL. DOE performs long-term surveillance of the OU II properties for compliance with ICs that restrict land and groundwater use and to ensure that the implemented remedies remain protective. There have been no violations of land or groundwater use restrictions. MMTS OU II properties that have been remediated for soil and sediment contamination but are underlain by contaminated groundwater or have contaminated surface water, or both, are not eligible for deletion from the NPL until water quality RAOs are achieved.

5.3.4 Monticello Mill Tailings Site OU III—Surface Water and Groundwater

The remedy for MMTS OU III was selected and documented in the MMTS OU III ROD, signed on June 2, 2004. The MMTS OU III ROD was prepared following the submittal of the *Monticello Mill Tailings Site Operable Unit III Remedial Investigation Addendum/Focused Feasibility Study* (January 2004) as a basis for OU III remedy selection. That document updated human health and ecological risk assessments and the groundwater model from the 1998 CERCLA RI. MMTS OU III has not been deleted from the NPL because water quality RAOs have not been achieved.

The selected remedy in the MMTS OU III ROD consists of monitored natural attenuation, ICs, and biomonitoring to evaluate the potential impacts of selenium concentrations on ecological receptors at specific locations. Biomonitoring was completed in 2012 in concurrence with EPA and UDEQ and as documented in the MMTS 2012 CERCLA FYR. The MMTS OU III ROD also includes a provision for a contingency remedy if needed.

Analysis of groundwater monitoring data indicates that water quality restoration is not achievable under the performance metrics established in the ROD. This was first reported in the 2006 annual groundwater report and later confirmed in *Monticello Mill Tailings Site Operable Unit III Analysis of Uranium Trends in Ground Water* (August 2007). Therefore, DOE, with concurrence from EPA and UDEQ, implemented a contingency remedy for OU III as a requirement of the ROD. The decision to implement a contingency remedy and the scope of the contingency remedy were documented in an ESD, which was provided for public review in December 2008 and became effective in March 2009.

In accordance with the March 2009 ESD, DOE committed to implement groundwater pump-and-treat remediation as a component of the contingency remedy until RAOs were met or another remedy was selected. The initial phase of the contingency remedy consisted of continued operation of an existing ex situ treatment system that was constructed in 2005 as a technology demonstration project. The State of Utah's protection standard of 30 picocuries per liter for uranium in domestic-use surface water, which did not exist when the MMTS OU III ROD was signed, was adopted after the March 2009 ESD was published.

To evaluate the effectiveness of the contingency remedy, DOE, in accordance with the March 2009 ESD, prepared the *Monticello Mill Tailings Site Operable Unit III Water Quality Compliance Strategy* (December 2009). That strategy describes the work elements, schedule, and data-use objectives of the contingency remedy tasks and presents a conceptual, phased approach to attain compliance goals. Results and discussion of the completed activities were documented in the *Monticello Mill Tailings Site Operable Unit III Annual Groundwater Report May 2011 Through April 2012*.

During July and August 2013, DOE decided to optimize the contingency remedy by implementing a more aggressive groundwater extraction and treatment approach, which resulted in construction of the GRO system. In FY 2014, DOE prepared an RD/RA Work Plan for the OU III contingency remedy optimization, which was finalized and approved by EPA and UDEQ in June 2014. As explained in the RD/RA Work Plan, the objective of the GRO system is to achieve the remediation goal for uranium in the AOA, which is the portion of the aquifer with the highest uranium. The GRO system consists of eight vertical extraction wells that pump groundwater from the AOA to a control and transfer building from where it is batch pumped to an engineered solar evaporation pond approximately 1 mile south on DOE property (Pond 4). Sixteen new monitoring wells were installed to monitor restoration progress in the AOA. An additional six new monitoring wells were installed on the north side of Montezuma Creek in June 2017.

Construction of the optimization system occurred from June 2014 through December 2014. Full system startup began in January 2015. The *Remedial Action Completion Report for OU III Groundwater Contingency Remedy Optimization System* was submitted to the regulatory agencies in May 2016 to document the as-built configuration and operating parameters of the system. The GRO system's consumptive use of the contaminated aquifer groundwater is allowable under an existing Utah Division of Water Rights Fixed-Time Water Appropriation (Water Right Number 09-2347). The Fixed-Time Water Appropriation, scheduled to terminate on March 31, 2025, was extended during FY 2025 for an additional 20 years until February 28, 2045.

As of April 2018, water quality monitoring to assess the performance of the OU III remedy is conducted in accordance with the SAP and the LTS&M Plan. These documents supersede the MMTS OU III ROD and the *Monticello Mill Tailings Site Operable Unit III Post-Record of Decision Monitoring Plan, Draft Final* (August 2004). The initial site-specific QAPP for MMTS OU III was formatted in the Uniform Federal Policy format and was submitted to EPA and UDEQ in September 2023.

Operation of the OU III groundwater contingency remedy will continue until the current RAOs are met or until it is determined that achieving the RAOs under the existing remedy is not feasible within a reasonable time frame.

Recent evaluations suggest that the contingency remedy may not meet the RAOs within the anticipated time frame. On August 8, 2024, LM submitted a draft FS to EPA and UDEQ that examines several alternative remedial approaches for OU III, including options ranging from reinstating monitored natural attenuation with ICs to a determination of technical impracticability. Implementing the recommended remedy from the FS will require either a ROD Amendment or an ESD.

Discontinuing the groundwater contingency remedy due to infeasibility will require approval from LM, EPA, and UDEQ. Transitioning to a new remedy will also necessitate concurrence on performance monitoring metrics, which will be incorporated into the QAPP and LTS&M Plan following issuance of a ROD Amendment or ESD.

5.3.5 MMTS Long-Term Decommissioning Activities

Components of the MMTS infrastructure that require eventual decommissioning are the (1) OU III groundwater remediation systems, including the permeable reactive barrier (PRB); (2) OU III monitoring wells; (3) Pond 4 (repository leachate evaporation pond); and (4) the water diversion flap of the lysimeter embedded in the repository. This section further describes decommissioning of these components.

Plans to decommission the PRB are not yet necessary because it is functioning as a groundwater containment device under the RD/RA Work Plan and the 2009 ESD. Upon a decision to remove or replace the PRB, a decommissioning plan will be documented in an RD/RA Work Plan that will be subject to EPA and UDEQ concurrence. The PRB is not currently in consideration for near-term (within 5 years) decommissioning, and an out-year (more than 5 years) date has not been determined.

The ex situ groundwater treatment system was taken out of service in December 2014. The decision on whether to remove the ex situ treatment system has not been made, but it is possible that this system could be decommissioned within the near-term (within 5 years). Upon a decision to remove the ex situ groundwater treatment system, a decommissioning plan will be documented in an RD/RA Work Plan that will be subject to EPA and UDEQ concurrence.

Groundwater monitoring for OU III will continue until RAOs are achieved or until DOE, EPA, and UDEQ agree that RAOs cannot be achieved in a reasonable time frame. Monitoring well decommissioning would likely not occur until DOE, EPA, and UDEQ agree on a path forward regarding the achievement of RAOs. Decommissioning of groundwater monitoring wells is not currently in consideration for the near-term (within 5 years), and an out-year (more than 5 years) date has not been determined.

Decommissioning Pond 4 is contingent on the rate of leachate production from the disposal cell and the duration of evaporative treatment of OU III contaminated groundwater obtained from the GRO system. Pond 4 is eligible for decommissioning only if the repository leachate is managed by other means and when evaporative treatment of OU III contaminated groundwater ceases. Pond 4 is not currently in consideration for near-term (within 5 years) decommissioning, and an out-year (more than 5 years) date has not been determined.

DOE continues to monitor the drainage lysimeter embedded in the 7.5-acre facet comprising the northeast corner of the repository cover. The repository is capped by a vegetated water balance cover that is underlain by a cell meeting the EPA minimum technology requirements for a Resource Conservation and Recovery Act Subtitle C cell. The lysimeter is monitored and maintained through the LM Applied Studies and Technology program. The two existing lysimeter instrumentation basins were removed, and two new upgraded basins were installed in May 2017.

5.3.6 Monticello Vicinity Properties

Remediation of the MVP was completed on September 30, 1999. The final rule to delete the MVP from the NPL became effective on February 28, 2000. DOE continues to perform LTS&M activities for certain vicinity properties through annual inspections, enforcement of ICs, and monitoring. The affected MVP properties are the city streets, utility corridors, and U.S. Highways 191 and 491 in Monticello and private property MS-00176, where contamination

was left in place and supplemental standards were applied. On April 21, 2025, a violation was identified at private property MS-00176, where an individual installed a culvert and displaced a portion of the existing hillside over the culvert to secure it in place. On April 22, 2025, the disturbed material was thoroughly scanned and no contamination of radiological concerns were identified. The responsible party and the nearest property owner were subsequently informed of the ICs applicable to private property MS-00176. No additional violations have been observed at this location since the incident.

As part of planned utility upgrades and unplanned repairs, radioactively contaminated soils that are removed from excavations are transported to the TSF at the Monticello repository, with the exception of material excavated by the Utah Department of Transportation, which has the option to return radioactively contaminated soils to its excavations on Highways 191 and 491 within the city limits. DOE provides the required monitoring and radiological controls during these activities. When sufficient volume has accumulated, radioactive material stored in the TSF is transported to DOE's Grand Junction, Colorado, Disposal Site for permanent disposal. As of June 2025, approximately 6.5 cubic yards of radiological soil is stored in the TSF.

5.4 Milestones and Targets

Enforceable milestones applicable to the MVP and MMTS for the current milestone period of FY 2025–FY 2027 are listed in Table 5-1. Table 5-2 lists pending activities and documents with associated target dates. Table 5-3 and Table 5-4 list current guiding documents in effect. DOE can prepare program directives (Table 5-4) to guide field and procedural activities that are beyond the routine work scope for OU III, as defined in the LTS&M Plan. Program directives periodically expire and are reissued as necessary. Two program directives expired in 2021: “Surface-Water Discharge Measurement Protocol” and MNT-2018-02, “Sampling of Permeable Reactive Barrier (PRB) Wells, LM Monticello, Utah, Disposal and Processing Sites.” The former was updated and reissued as PD-2021-10-MNT, “Discharge Measurements in Montezuma Creek;” the latter was discontinued because it was determined that PRB wells could be sampled adequately following protocols described in the SAP without the specialized procedures for low-yield, high-turbidity wells that were described in the program directive.

Table 5-1. Penalty Milestones in FY 2025–FY 2027

Milestones	Stipulated Penalty Dates^a
FY 2025 revision of Section 5.0 of Site Management Plan (draft) ^b	August 1, 2025
FY 2026 revision of Section 5.0 of Site Management Plan (draft) ^b	August 1, 2026
FY 2027 revision of Section 5.0 of Site Management Plan (draft) ^b	August 1, 2027
2025 Annual Site Inspection Report ^c	December 31, 2025
2026 Annual Site Inspection Report ^c	December 31, 2026
2027 Annual Site Inspection Report ^c	December 31, 2027

Notes:

^a The date EPA and UDEQ must receive the document for review and comment.

^b Report progression will be as follows:

- The draft report will be reviewed by EPA and UDEQ.
- Any comments from the draft will be addressed in a final report. If no comments are received on the draft, DOE will reissue the report as final.
- EPA and UDEQ will issue an acceptance letter of the final report.

^c This report is reviewed by EPA and UDEQ but is not part of the concurrence process. The dates shown are for completion of the final report.

Table 5-2. MMTS and MVP Target Dates

Activity/Document	Purpose	Target Date/Scope
Annual groundwater report ^a	Evaluate water quality restoration progress	October of each year
Draft Feasibility Study ^b	Evaluate remedial alternatives for achieving the water quality restoration RAOs for MMTS OU III	Draft Feasibility Study was submitted on August 8, 2024
Semiannual FFA meeting	Review project status, goals, and schedule	Spring and fall of each year
FFA quarterly reports ^a	Summarize project scope, status, and schedule	15th of February, May, August, and November of each year
QAPP ^b	Update the QAPP in accordance with federal requirements	Spring of each year
Performance Monitoring Metrics ^b	Develop actions for monitoring the MMTS OU III aquifer after major changes: GRO termination or PRB removal	Winter 2024 and 2025 (Actions were included in Draft Feasibility Study that was submitted on August 8, 2024)
Technical document to Terminate GRO Operations ^b	Develop the criteria required for turning off the GRO system	Summer 2024 (Submitted as Appendix A in Draft Feasibility Study on August 8, 2024)
2022 Five-Year-Review Activities^c		
Operable Unit	Activity	Milestone Date
These activities apply to MMTS OU I, OU II, OU III, and MVP OU H	DOE to confirm human health risk evaluation using EPA PRG calculator	July 31, 2022 (Submitted on July 29, 2022)
	DOE to create and send an informational letter to landowners with deed restrictions that clearly explains restrictions on their property	December 31, 2022 (Submitted on December 19, 2022)
	DOE to complete a climate change vulnerability and resilience assessment for the Monticello site by September 2022, provide the assessment to EPA and UDEQ, and schedule a meeting to discuss findings	December 31, 2025 (Completed on February 20, 2025)
These activities apply to MMTS OU III ^d	DOE to update the QAPP, SAP, Program Directive PD-2021-10-MNT, and the LTS&M Plan to be consistent regarding the monitoring well network	December 31, 2022 (Submitted on April 5, 2023)
	DOE to complete a draft FS to evaluate remedial alternatives for achieving the water quality restoration RAOs	May 31, 2023 (Draft Feasibility Study was submitted on August 8, 2024)
	DOE to evaluate risk to aquatic organisms using current State of Utah water quality standards for surface water	May 31, 2023 (Submitted on September 28, 2023) The confirmation information was included in the <i>Addendum to Monticello Mill Tailings Five-Year Review Report</i> , dated December 17, 2024, that was prepared by EPA. The conclusions in the ecological risk evaluation show there is not strong evidence of a potential for adverse effects to ecological receptors associated with exposure to uranium in Montezuma Creek surface water.

Table 5-2. MMTS and MVP Target Dates (continued)

2022 Five-Year-Review Activities ^c (continued)		
Operable Unit	Activity	Milestone Date
These activities apply to MMTS OU III ^d	DOE to evaluate risk to human health using current Utah water quality standards for surface water	May 31, 2023 (Evaluation incorporated into the ecological risk evaluation and IC evaluation as agreed to by the EPA remedial project manager on June 6, 2023. Evaluation of the Utah water quality standards [Montezuma Creek] were included in the ecological risk evaluation and IC evaluation. EPA, UDEQ, and DOE removed this issue/recommendation because the content was covered in the other submittals.)
	DOE to evaluate whether ICs are required to prevent human consumption of Montezuma Creek surface water as a domestic drinking water source	May 31, 2023 (Submitted proposed ICs in the Draft Feasibility Study on August 8, 2024)

Notes:

^a This report is reviewed by EPA and UDEQ but is not part of the concurrence process.

^b Report progression will be as follows:

- The draft report will be reviewed by EPA and UDEQ.
- Any comments from the draft will be addressed in a final report. If no comments are received on the draft, DOE will reissue the report as final.
- EPA and UDEQ will issue an acceptance letter of the final report.

^c Excerpts from the *Sixth Five-Year Review Report for Monticello Radioactively Contaminated Properties Superfund Site, San Juan County, Monticello, Utah* (June 2022) and the *Sixth Five-Year Review Report for Monticello Mill Tailings (USDOE) Site, San Juan County, Monticello, Utah* (July 2022).

^d DOE (U.S. Department of Energy), 2023. *Ecological Risk Evaluation for Uranium in Montezuma Creek Surface Water, Monticello Mill Tailings Site, Monticello, Utah*, LMS/MNT/43977, Office of Legacy Management, December.

Table 5-3. OU III Guiding Documents

Document	Completed
RI Addendum/Focused FS	
RI Addendum/Focused FS	January 2004
Surface Water/Groundwater Decision Documents	
MMTS OU III ROD	June 2, 2004
ESD ^a	March 2009
MMTS OU III Water Quality Compliance Strategy	December 2009
LTS&M and Monitoring	
MMTS OU III Analysis of Uranium Trends in Groundwater	August 16, 2007
<i>Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites</i>	Revised to include MMTS, January 2016
LTS&M Plan for the Monticello NPL Sites	Revision 2 issued December 2022
<i>Quality Assurance Project Plan, Monticello, Utah, Disposal and Processing Sites</i>	May 2023
CERCLA Reviews	
Sixth FYR Reports for MMTS and MVP	July 2022

Note:

^a *Explanation of Significant Difference for the Monticello Mill Tailings (USDOE) Site Operable Unit III, Surface Water and Ground Water, Monticello, Utah.*

Table 5-4. MMTS OU III Program Directives in Effect

Program Directive	Title
PD-2021-10-MNT	<i>"Discharge measurements in Montezuma Creek."</i>

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