

**Monticello, Utah, National
Priorities List (NPL) Sites
Federal Facility Agreement
(FFA) Quarterly Report:
April 1–June 30, 2020**

August 2020



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

This page intentionally left blank

Contents

Abbreviations	ii
1.0 Introduction	1
1.1 Quarterly Site Status	1
2.0 Monticello Vicinity Properties	3
3.0 Monticello Mill Tailings Site	3
3.1 Operable Unit I	4
3.1.1 Repository	4
3.1.2 Temporary Storage Facility	5
3.1.3 Former Mill Site	5
3.2 Operable Unit II	6
3.3 Operable Unit III	6
3.3.1 Groundwater Restricted Area/Institutional Controls	7
3.3.2 OU III Groundwater Contingency Remedy Optimization System	7
3.3.2.1 GRO System Quarterly Performance Summary	7
3.3.3 OU III Closure Strategy	8
4.0 Schedule of Activities and Deliverables	9
5.0 References	10

Tables

Table 1. GRO System Treatment: Monthly Volumes and Rates for This Quarter and Cumulative Volumes Since January 2015	8
Table 2. Uranium Mass Removal from Groundwater in the AOA	8
Table 3. Monticello Sites Recent and Near-Term Activities and Deliverables	9

Appendixes

Appendix A	Monthly and Quarterly Surveillance Checklists
Appendix B	Graphs Showing Performance History for Disposal Cell and Pond 4 LCRS and LDS

Abbreviations

AOA	Area of Attainment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
FFA	Federal Facility Agreement
gpm	gallons per minute
GRO	Groundwater Remedy Optimization
IC	institutional control
LCRS	Leachate Collection and Removal System
LDS	Leak Detection System
LM	Office of Legacy Management
LMS	Legacy Management Support
LTS&M	long-term surveillance and maintenance
MMTS	Monticello Mill Tailings Site
MNA	monitored natural attenuation
MVP	Monticello Vicinity Properties
NPL	National Priorities List
OU	Operable Unit
PRB	permeable reactive barrier
QAPP	Quality Assurance Project Plan
TSF	Temporary Storage Facility
UDEQ	Utah Department of Environmental Quality
UDOT	Utah Department of Transportation
ZVI	zero-valent iron

1.0 Introduction

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) submits this quarterly report to inform the U.S. Environmental Protection Agency (EPA) and the Utah Department of Environmental Quality (UDEQ) of the status of the Monticello Vicinity Properties (MVP) and the Monticello Mill Tailings Site (MMTS) (the LM Monticello, Utah, Disposal and Processing Sites) for the period of April through June 2020. The MVP and MMTS are regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Quarterly reports are submitted to EPA and UDEQ in February (for October through December), May (January through March), August (April through June), and November (July through September).

LM assesses MVP and MMTS conditions and remedy protectiveness through (1) inspections (monthly, quarterly, and annually) of site infrastructure and operations as specified under the *Long-Term Surveillance and Maintenance Plan for the Monticello NPL Sites* (DOE 2018a) (referred to here as the Long-Term Surveillance and Maintenance [LTS&M] Plan), (2) semiannual monitoring of groundwater and surface water under the *Record of Decision for the Monticello Mill Tailings (USDOE) Site Operable Unit III, Surface Water and Ground Water, Monticello, Utah* (DOE 2004), and (3) CERCLA Five-Year Reviews.

The primary LTS&M activities at the MVP and MMTS are conducted to (1) provide radiological control at properties where residual soil contamination from mill tailings remains in place (supplemental standards properties), (2) operate and maintain the mill tailings repository, (3) ensure that institutional controls (ICs) restricting the use of land and water remain effective, (4) monitor water quality restoration progress, and (5) operate the Operable Unit (OU) III pump-and-treat groundwater contingency remedy optimization system. This system, implemented in January 2015, focuses on groundwater remediation within a specified region of the alluvial aquifer that is referred to as the Area of Attainment (AOA).

Annual groundwater reports present comprehensive data evaluation for the groundwater and surface water OU III remedy. LM has utilized the data presented in the most recent annual groundwater report to update the conceptual site model and develop a three-dimensional numerical fate and transport model to assess remedial time frames.

Project milestones and guiding documents are further described in the *Monticello Site Management Plan* (DOE 2003). Section 5.0 of that document is updated annually.

1.1 Quarterly Site Status

A summary of the activities and observations for this quarter is as follows:

- The Groundwater Remedy Optimization (GRO) system operated as planned during the current period and pumped approximately 0.25 million gallons of water from the AOA.
- The *Quality Assurance Project Plan, Monticello, Utah, Disposal and Processing Sites* (March 2020) (Monticello QAPP) was reviewed by EPA and UDEQ this quarter. LM and the Legacy Management Support (LMS) contractor have received comments from EPA and UDEQ, and their comments are currently being addressed.

- Information in the *Groundwater Flow and Fate and Transport Model Quality Assurance Project Plan, Monticello Mill Tailing Site Operable Unit III* (December 2019) (Modeling QAPP) that was submitted to EPA and UDEQ has been rewritten in the format of the Optimized Uniform Federal Policy for Quality Assurance Project Plan Worksheets. The Modeling QAPP has been submitted to LM.
- Weekly site inspections were performed by site personnel to verify the integrity of the site's systems and to monitor activities that might occur in supplemental standards areas (e.g., city streets and utility corridors). Site personnel traveled to the site at least two days per week from April 1 to May 18, 2020.
- Monticello site personnel began working under Phase 1 of our "Limited Operations" return to work procedures, which allowed one to two people at the site everyday except weekends and holidays, beginning on May 18, 2020.
- The semiannual groundwater sampling event that is normally scheduled in April was delayed due to the COVID-19 viral outbreak. The groundwater sampling event occurred the week of May 18, 2020. LMS personnel collected water levels, streamflow measurements, and groundwater samples from OU III.
- The 1 million gallons of water removed sampling per Section 1.5 of the *Remedial Action Completion Report for Operable Unit III Groundwater Contingency Remedy Optimization System, Monticello Mill Tailings Site, Monticello, Utah* (DOE 2016) occurred during the May 18, 2020, sampling event.
- Site personnel performed monthly and quarterly site inspections per the LTS&M Plan.
- The semiannual GRO system emergency shutdown drill occurred the week of June 1, 2020. The emergency shutdown systems performed per design.
- LMS personnel performed lysimeter maintenance and calibrations on June 1, 2020. The system is performing per design.
- Site personnel began working under Phase 2 of the "Limited Operations" return to work procedures, beginning the week of June 8, 2020.
- Routine surveillance noted no anomalous conditions for the MVP remedy.
- Routine surveillance noted no violations of MMTS ICs regarding land- and groundwater-use restrictions.
- Routine surveillance noted no anomalous conditions for the surface features of the disposal cell and Pond 4.
- The volume of water pumped from the Pond 4 Leachate Collection and Removal System (LCRS) did not exceed the action level this quarter.
- The GRO system was shut down due to inclement weather starting June 5, 2020, at 6:45 p.m. The system was brought back online on June 8, 2020, at 12:00 p.m. and the GRO system functioned per design.
- The inclement weather created an electrical issue at Pond 4 from June 5 to June 9, 2020. The Pond 4 instrumentation was receiving a false signal that kept the Leak Detection System (LDS) pump operating at a greater frequency than normal. This caused water volume pumped from the LDS to increase by approximately 100%, exceeding the action level identified in the LTS&M Plan. The units that malfunctioned were replaced, and water

pumped through the LDS returned to normal volume the week ending June 12, 2020. In accordance with the LTS&M Plan, LM previously notified EPA and UDEQ of the continued Pond 4 LCRS and LDS pumping of water from the sumps.

- Routine surveillance noted no operating deficiencies for the Temporary Storage Facility (TSF).
- Using a series of WebEx presentations spanning 3 days in consecutive weeks, LM, LMS, and Geosyntec (LMS subcontractor) presented fate and transport model forecasts to EPA and UDEQ. The WebEx platform worked well, and the presentations were well received.

2.0 Monticello Vicinity Properties

The LTS&M for the MVP consists of providing radiological control at excavations in City of Monticello roadway and utility corridors, in Utah Department of Transportation (UDOT) rights-of-way within the city limits, and at property MS-00176-VL (privately owned supplemental standards property). Surveillance results for this quarter are as follows:

- No anomalous conditions for the MVP remedy were noted.
- LM representatives continued to coordinate with City officials in planning meetings regarding construction and excavation activities by the City, UDOT, and utility companies in roadway and utility corridors. LM follows the normal LTS&M protocol to provide radiological control in the affected roadways.
- Five excavations occurred in the city streets/utility corridors this quarter. Site personnel radiologically surveyed the removed soils from the excavations, and no radiologically contaminated materials were found.

Neither excessive erosion nor unauthorized excavations were observed at the Highway 191 embankment at Montezuma Creek (supplemental standards property).

Surveillance of property MS-00176-VL identified no excessive erosion of supplemental standards material or violation of the land-use restriction.

- The land owner of property MS-00176-VL had city workers install a water meter on his property on June 23, 2020. They excavated a trench through the property to the street. The removed soils were radiologically surveyed, and no radiologically contaminated materials were found.

3.0 Monticello Mill Tailings Site

LTS&M activities for the MMTS consist of (1) maintaining the onsite repository and operating the associated LCRS and LDS for the disposal cell and Pond 4 (the engineered solar evaporation pond), (2) surveillance of properties affected by groundwater- and land-use ICs on the former mill site and peripheral properties, and (3) operation and maintenance of the OU III groundwater remediation system.

3.1 Operable Unit I

OU I consists of the property of the former Monticello mill (mill site) and the repository. Radioactively contaminated materials were removed from the MVP, the mill site, and peripheral properties (OU II) and encapsulated at the repository as a remedial action that was completed in 1999. LM owns and manages the repository; the City owns the former mill site and manages it as a public park.

3.1.1 Repository

Monthly, quarterly, and annual inspections of the repository ensure that remedy controls remain intact and that the waste remains isolated from the environment. Inspection observations and maintenance activities for the quarter are as follows:

- Site personnel continued to telework and visit the site two times per week until the week of May 18, 2020, when personnel returned to the office and began working under Phase 1 of the Limited Operations return to work procedures.
- Site personnel began working under Phase 2 of the Limited Operations return to work procedures, beginning the week of June 8, 2020.
- No area of the cover indicated settling, slumping, fracturing, seepage, ponding, or significant erosion.
- No anomalous surface feature conditions were observed at the disposal cell or Pond 4. Surveillance checklists for this quarter are attached as Appendix A. The minor burrowing on the disposal cell and the Pond 4 berm by voles and small ground squirrels was not observed this quarter.
- The disposal cell LCRS and LDS were operated in accordance with the requirements specified in the LTS&M Plan. Findings for the disposal cell LCRS and LDS this period include:
 - Leachate production from the disposal cell was approximately 520 gallons per week combined for sumps LCRS 1 and LCRS 2. There is no action level for the disposal cell LCRS. See Appendix B for a graphical depiction of leachate production history.
 - The disposal cell LDS continues to receive no water; therefore, the disposal cell LDS action level was not exceeded. See Appendix B for a graphical depiction of leachate production history.
- Operation of the OU III GRO system began in January 2015 with groundwater from the AOA pumped to Pond 4, which resulted in increased water collection in the Pond 4 LCRS. Water accumulation in the LCRS exceeded action limits during the week of May 18, 2015, with notification to LM, EPA, and UDEQ of the exceedance on May 22, 2015. Water was also detected in the Pond 4 LDS, and notification to LM, EPA, and UDEQ was also sent on May 22, 2015. Water continued to exceed the LCRS action limit from the week of May 18, 2015, to the week of December 21, 2015, when the water accumulation fell below the action limit. The LCRS action level exceedance has occurred throughout the operation of the groundwater remedy optimization system until the week of June 24, 2019, when the water accumulation fell below and has not exceeded the limit. Water accumulation in the Pond 4 LDS system exceeded the action limit during the weeks of June 1, 2015 (55 gallons), March 02, 2020 (41 gallons), and June 15, 2020 (13 gallons), which was caused by equipment failure. LCRS and LDS action levels, approved by EPA and UDEQ, were

formally developed in the *Repository and Pond 4 Groundwater Contingency Plan* (Reference DOE 1998d in the LTS&M Plan) and are also found in Section D5.0 of the LTS&M Plan. The leakage rate established for the Pond 4 LCRS is 851 gallons per acre per day (gpad) (2000 gallons per day) and for the LDS is 20 gpad (47 gallons per day), which is established over a 7-day period. These leakage rates are based on the area of the floor of Pond 4, which is 2.35 acres. Currently, the LCRS and LDS monitoring and pumping systems are functioning as designed to recirculate water back into Pond 4.

- Findings for the Pond 4 LCRS and LDS this period include:
 - Water collection at the Pond 4 LCRS continued but did not exceed the action levels this quarter (see Appendix B).
 - Water collection in the Pond 4 LDS remained below the action level (see Appendix B) until the week ending June 12, 2020, when the action limit was exceeded by 13 gallons.

3.1.2 Temporary Storage Facility

Routine surveillance of the TSF ensures that maintenance and radiological controls that govern access to and the placement, storage, and transfer of contaminated material in the TSF are current and effective. Surveillance results for this quarter (see surveillance checklists in Appendix A) are as follows:

- The TSF cover, fencing, radiological controls, and signs have been maintained in accordance with the LTS&M Plan, and the TSF has been inspected and verified as ready to receive contaminated materials.

LM is required to initiate the transfer of TSF materials for permanent disposal at the Grand Junction, Colorado, Disposal Site when the contents reach a volume of approximately 75 cubic yards. The following summarizes recent TSF activity:

- The volume of waste stored in the TSF controlled area is approximately 1.5 cubic yards. Currently, there are no soils or excavation products from city street projects or supplemental standards areas stored in the TSF. Present contents consist primarily of used personal protective equipment, one pump, and materials removed from onsite radiological areas during maintenance.

3.1.3 Former Mill Site

LM conducts surveillance of the former mill site (properties MP-00181-VL and MS-00893-VL) to ensure compliance with ICs that were implemented to preserve the OU I remedy for soil and groundwater. The ICs applicable to the former mill site include no installation of domestic-use wells in the alluvial aquifer, no construction of habitable structures, no camping, and preserving the properties as a public park for day-use recreation.

Surveillance results for this quarter are as follows:

- No nonconformance with water- and land-use restrictions was observed.
- On May 28, 2020, a 24-inch irrigation line burst on the north side of the old mill site, eroding a large gully and carrying soils downhill. Site personnel radiologically surveyed the area where the eroded soils were left, and no radiologically contaminated soils were found. City workers and contractors finished the repairs of the water line and hillside on June 18, 2020.

3.2 Operable Unit II

OU II consists of private and City-owned properties peripheral to the former mill site. LM conducts surveillance of OU II properties to verify compliance with ICs that were implemented to preserve the OU II remedy for soil and groundwater.

Surveillance results for this quarter are as follows:

- **Montezuma Creek Restrictive Easement Area (supplemental standards properties, both City-owned and privately owned):** No evidence of nonconformance with land-use restrictions (no soil removal or construction of habitable structures in supplemental standards areas) was observed.
- **Groundwater-use restrictions (i.e., no installation of domestic-use wells in the alluvial aquifer):** These were applied to several OU II properties under the 2004 covenant by which DOE transferred selected properties to the City. No evidence of nonconformance with this restriction was observed during the quarter.
- **Property MS-00211-VL (City-owned):** No evidence of nonconformance with the land-use restriction on building construction was observed.
- **Pinyon-juniper supplemental standards properties (City-owned):** No evidence of nonconformance with land- and groundwater-use restrictions was observed.
- **Excessive erosion:** No storm events exceeding 2.8 inches of precipitation in a 24-hour period occurred to require surveillance of supplemental standards cleanup properties for excessive erosion.

3.3 Operable Unit III

OU III consists of groundwater and surface water contamination resulting from operation of the former Monticello mill. Routine monitoring of OU III (water quality and water level) is normally performed semiannually in April and October; however, due to travel restrictions, caused by the COVID-19 epidemic, the April sampling event was rescheduled to May of this year. The sampling event began the week of May 18, 2020, and was successfully completed.

The contaminated groundwater is within the alluvial aquifer beneath the valley of Montezuma Creek; some sections of Montezuma Creek are contaminated by the discharge of contaminated groundwater. The alluvial aquifer has no record of past or present use; however, a portion of the aquifer is subject to ICs to restrict use. Montezuma Creek is used for limited irrigation and livestock watering. There are no ICs that restrict surface water use.

The current groundwater remedy includes (1) monitored natural attenuation with ICs and (2) pump-and-treat remediation by evaporation that was implemented as the GRO system in January 2015. Operation and performance of the groundwater remedy is reported annually. Previous remediation efforts have included (1) treatment by a zero-valent iron (ZVI) in situ permeable reactive barrier (PRB) and (2) pump-and-treat remediation that used ex situ ZVI treatment. The ex situ ZVI treatment system was deactivated in December 2014 and replaced by the GRO system, which is described in greater detail in Section 3.3.2. The PRB remains a component of the GRO system as a groundwater flow barrier.

3.3.1 Groundwater Restricted Area/Institutional Controls

During spring and fall, LM conducts surveillance of properties where groundwater contamination is present to ensure compliance with the groundwater-use restriction (i.e., no installation of domestic-use wells in the alluvial aquifer). The affected OU III properties constitute the Monticello Groundwater Restricted Area, as defined and administered by the Utah Department of Natural Resources, Division of Water Rights. Surveillance found:

- No evidence of nonconformance with the groundwater-use restriction since its implementation in May 1999.

3.3.2 OU III Groundwater Contingency Remedy Optimization System

The GRO system includes eight vertical extraction wells strategically placed in the AOA to extract contaminated groundwater and an associated monitoring system. The water from the extraction wells is transmitted in buried pipelines to an aboveground holding tank in the groundwater transfer building; from there it is pumped through a buried water transmission line for about 1 mile to Pond 4 for evaporation.

The associated monitoring system consists of 22 wells installed in the AOA. Sixteen of the 22 wells were installed south of Montezuma Creek in 2014, and six wells were installed north of Montezuma Creek in 2017. These 22 wells are currently sampled following the extraction of approximately 1 million gallons from the GRO system as stated in Section 1.5 of the *Remedial Action Completion Report for Operable Unit III Groundwater Contingency Remedy Optimization System, Monticello Mill Tailings Site, Monticello, Utah* (DOE 2016).

3.3.2.1 GRO System Quarterly Performance Summary

The following points summarize the performance of the GRO system:

- Groundwater extraction over the quarter was approximately 0.25 million gallons, equivalent to an average flow rate of 1.92 gallons per minute (gpm). Assuming the concentration of extracted water throughout the quarter was equal to the uranium concentration of the tank effluent on May 18, 2020 (the most recent sample collected), a total of 1.4 pounds of uranium was removed during this quarter.
- During the quarter, the volume of water stored in Pond 4 decreased by approximately 1.2 million gallons. The GRO system is operated by balancing the extraction rate and the Pond 4 evaporation rate while maintaining the Pond 4 storage volume at approximately 8 million gallons (the maximum storage volume of Pond 4 is approximately 15.6 million gallons).
- Water-level monitoring during the quarter consisted of:
 - Continuous water-level monitoring in AOA extraction and monitoring wells using pressure transducers and data loggers (programed to record at 5-minute intervals) connected to the LM System Operation and Analysis at Remote Sites (SOARS) system.
- Cumulatively, the system has removed 21.7 million gallons of contaminated groundwater from the aquifer since system startup in January 2015 (Table 1). Assuming a minimum AOA uranium plume pore volume of 2.4 million gallons and a maximum pore volume of

3.3 million gallons, the GRO system has removed between 6.6 and 9.0 pore volumes since system startup.

- From January 2015 through May 18, 2020, the GRO system removed approximately 115 pounds of uranium from the AOA aquifer (Table 2).

Table 1. GRO System Treatment: Monthly Volumes and Rates for This Quarter and Cumulative Volumes Since January 2015

Calendar Month	Approximate Volume Pumped (million gallons)	Effective Pumping Rate (gpm)	Approximate Cumulative Volume ^a (million gallons)
April 2020	0.07	1.6	21.5
May 2020	0.07	1.5	21.6
June 2020 ^b	0.12	2.7	21.7

Notes:

^a Cumulative volume is based on the volume of groundwater extracted by the GRO system since system startup in January 2015.

^b Reporting end date is June 30, 2020.

Table 2. Uranium Mass Removal from Groundwater in the AOA

Tank Effluent Sample Date ^a	Effluent Tank Uranium Concentration (µg/L)	Volume Removed Between Tank Samples (million gallons)	Uranium Removed (pounds) ^b	Cumulative Mass Uranium Removed ^c (pounds)
October 14, 2019	520	1.12	5.3	111
May 18, 2020	677	0.83	4.1	115

Notes:

^a Sampling occurs following the extraction of approximately 1 million gallons.

^b Uranium removed since last sampling event. Estimate is based on median concentration between sampling dates.

^c Since GRO system startup in January 2015. Cumulative mass removed estimates are updated every sampling event.

Abbreviation:

µg/L = micrograms per liter

Monitoring and reporting guidelines for the GRO system are described in the *Final Groundwater Contingency Remedy Optimization Remedial Design/Remedial Action Work Plan for the Monticello Mill Tailings Site Operable Unit III, Monticello, Utah* (DOE 2014). Evaluation of water quality trends and whether remediation goals are being met, in the AOA and sitewide, is beyond the scope of this Federal Facility Agreement (FFA) quarterly report but is provided in annual groundwater reports that are submitted to EPA and UDEQ.

3.3.3 OU III Closure Strategy

Several scenarios are being evaluated to develop a closure strategy for OU III and are detailed in the *OU III Closure Strategy for the Monticello Mill Tailings Site, Monticello, Utah* (DOE 2018b). These scenarios include (Scenario 1) monitored natural attenuation (MNA) and ICs, with remedy transition, decommissioning, and long-term monitoring; (Scenario 2) GRO

system termination based on asymptotic trends prior to transitioning to MNA and ICs; and (Scenario 3) evaluation of alternative technologies and technical impracticability waiver. Efforts to determine the best possible closure strategy include hydrogeologic and geochemical characterization along with three-dimensional numerical fate and transport modeling to forecast remedial time frames.

OU III closure strategy accomplishments this quarter are as follows:

- Presented fate and transport model forecasts to EPA and UDEQ
- Began drafting an MNA Demonstration Report
- Began drafting the geochemical modeling report
- Completed forecasts of fate and transport model and began drafting the model report

4.0 Schedule of Activities and Deliverables

Table 3 summarizes the completion of recently completed and near-term planned activities and deliverables for the Monticello National Priorities List (NPL) sites.

Table 3. Monticello Sites Recent and Near-Term Activities and Deliverables

Activity or Deliverable	Schedule
Recent	
<i>Monticello, Utah, National Priorities List Sites Federal Facility Agreement (FFA) Quarterly Report: January 1–March 31, 2020 (DOE 2020)</i>	Submitted to EPA and UDEQ May 14, 2020
<i>Quality Assurance Project Plan, Monticello, Utah, Disposal and Processing Sites (March 2020)</i>	Submitted to EPA and UDEQ May 5, 2020
Travel restrictions due to the COVID-19 epidemic result in the operation of the site being performed remotely with site visits twice per week. Limited Operations began March 18, 2020, with Phase 2 reduced restrictions starting June 8, 2020.	Phase I Limited Operations began May 18, 2020, and Phase 2 Limited Operations began June 8, 2020
A series of three teleconference meetings with LM, EPA, UDEQ, and LMS contractor to discuss fate and transport model and performance metrics.	April 22 and 29 and May 6, 2020
Near-Term	
Section 5.0 of the Site Management Plan	Submit to EPA and UDEQ by August 1, 2020. This is a Saturday and the document will be sent prior to this date.
<i>Monticello, Utah, National Priorities List Sites Federal Facility Agreement (FFA) Quarterly Report: April 1–June 30, 2020</i>	Submit to EPA and UDEQ by August 15, 2020. This is a Saturday and the report will be sent prior to this date.
Monticello QAPP	Scheduled for August 2020
Modeling QAPP	Scheduled for September 2020
Meeting with LM, EPA, UDEQ, and LMS contractor to discuss MNA Demonstration Report and performance metrics	Scheduled for the week of September 21, 2020
<i>Monticello Mill Tailings Site Operable Unit III Annual Groundwater Report, May 2019–May 2020 (October 2020).</i> NOTE: Extended 1 month from April to May due to the COVID-19 epidemic.	Submit to EPA and UDEQ October 31, 2020. This is a Saturday and the report will be sent prior to this date.
Fall Semiannual Sampling Event	Scheduled for October 2020

5.0 References

DOE (U.S. Department of Energy), 2003. *Monticello Site Management Plan*, GJO-2003-493-TAC, Section 5.0 (this section is continually updated), Office of Legacy Management, October.

DOE (U.S. Department of Energy), 2004. *Record of Decision for the Monticello Mill Tailings (USDOE) Site Operable Unit III, Surface Water and Ground Water, Monticello, Utah*, DOE-LM/GJ629-2004, May.

DOE (U.S. Department of Energy), 2014. *Final Groundwater Contingency Remedy Optimization Remedial Design/Remedial Action Work Plan for the Monticello Mill Tailings Site Operable Unit III, Monticello, Utah*, LMS/MNT/S10629, Office of Legacy Management, May.

DOE (U.S. Department of Energy), 2016. *Remedial Action Completion Report for Operable Unit III Groundwater Contingency Remedy Optimization System, Monticello Mill Tailings Site, Monticello, Utah*, LMS/MNT/S13373, Office of Legacy Management, May.

DOE (U.S. Department of Energy), 2018a. *Long-Term Surveillance and Maintenance Plan for the Monticello NPL Sites*, LMS/MNT/S00387, Office of Legacy Management, June.

DOE (U.S. Department of Energy), 2018b. *OU III Closure Strategy for the Monticello Mill Tailings Site, Monticello, Utah*, LMS/MNT/S18146, Office of Legacy Management, May.

DOE (U.S. Department of Energy), 2020. *Monticello, Utah, National Priorities List Sites Federal Facility Agreement (FFA) Quarterly Report: January 1–March 31, 2020*, LMS/MNT/S29501, Office of Legacy Management, April.

Appendix A

Monthly and Quarterly Surveillance Checklists

This page intentionally left blank



Contractor to the U.S. Department of Energy Office of Legacy Management

Monthly Pond 4 Surveillance Checklist

Level of water in Pond 4 8.627

Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
Condition of:			
Fences, gates, and locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Roads	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Signs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Visible piping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Visible liner and anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Rescue equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Boat remains at the pond.
Evidence of erosion of:			
Top of Pond 4 berm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pond 4 sideslopes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ditches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Surrounding area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Seepage from Pond 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Overtopping of Pond 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Evidence of:			
Vandalism	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Intrusion by wildlife	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Intrusion by humans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation of trash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Additional comments: Things appear to be in good condition.

Monticello LM Representative: Gary L. McKinnon

Digitally signed by Gary L. McKinnon
Date: 2020.04.30 11:29:50 -06'00'

Date: 4/30/2020



Contractor to the U.S. Department of Energy Office of Legacy Management

Repository Area Surveillance Checklist

Monthly surveillance Quarterly surveillance: February May August November
 Storm event triggered surveillance due to _____ inches of rainfall over the past 24 hours.

Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
Condition of:			
Fences, gates, and locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Roads ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Signs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Site monuments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Drainage ditches ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Manholes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Evidence of erosion of:			
Top of disposal cell ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Disposal cell sideslopes ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Ditches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Surrounding area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Evidence of:			
Vandalism	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Intrusion by livestock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Burrowing animal damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Intrusion by humans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Accumulation of trash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Additional Quarterly Surveillance Requirements

Note: All transects, shown in Figure 3-1, must be walked during this inspection.

Condition of:			
Settlement plate structures	<input type="checkbox"/>	<input type="checkbox"/>	_____
Manholes ^b	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sediment ponds	<input type="checkbox"/>	<input type="checkbox"/>	_____
Evidence of:	<input type="checkbox"/>	<input type="checkbox"/>	_____
Structural instability	<input type="checkbox"/>	<input type="checkbox"/>	_____

Additional comments: The repository and site roads appear to be in good condition.

Signature: Gary L. McKinnon

Digitally signed by Gary L. McKinnon
Date: 2020.04.30 11:31:08 -06'00'
Monticello LM Representative

Date: 4/30/2020

^aInspections required following a significant storm event

^bOpen to inspect quarterly

MONTHLY CLIMATOLOGICAL SUMMARY for APR. 2020

NAME: Monticello Office CITY: STATE:
 ELEV: 7069 ft LAT: 37° 54' 00" N LONG: 109° 18' 00" W

TEMPERATURE (°F), RAIN (in), WIND SPEED (mph)

DAY	MEAN TEMP	HIGH	TIME	LOW	TIME	HEAT DEG DAYS	COOL DEG DAYS	RAIN	AVG WIND SPEED	HIGH	TIME	DOM DIR
1	49.1	59.6	4:30p	38.4	7:00a	15.9	0.0	0.00	7.9	27.0	5:00p	S
2	41.6	51.6	3:00p	30.3	12:00m	23.4	0.0	0.00	10.3	27.0	3:30p	NW
3	37.3	50.3	4:30p	21.4	7:30a	27.7	0.0	0.00	6.9	25.0	3:00p	NW
4	45.0	55.8	5:30p	31.9	6:30a	20.0	0.0	0.00	6.2	27.0	2:00p	S
5	47.3	58.0	4:00p	35.2	6:30a	17.7	0.0	0.00	9.8	31.0	1:00p	SSE
6	47.7	61.2	5:30p	32.5	5:30a	17.3	0.0	0.00	8.5	34.0	2:30p	S
7	47.0	59.4	5:00p	32.7	7:00a	18.0	0.0	0.00	6.2	23.0	5:00p	SSE
8	50.3	63.0	4:00p	35.6	6:00a	14.7	0.0	0.00	4.8	20.0	1:00p	SW
9	47.7	58.1	4:30p	37.8	7:00a	17.3	0.0	0.00	6.8	28.0	12:30p	S
10	45.6	57.4	4:30p	33.4	7:00a	19.5	0.0	0.00	6.8	39.0	3:30p	WSW
11	48.3	58.9	6:00p	35.5	7:00a	16.7	0.0	0.00	5.7	33.0	2:00p	WSW
12	43.0	50.5	3:30p	31.5	12:00m	22.0	0.0	0.02	8.9	32.0	2:00p	NW
13	34.6	44.7	2:30p	25.1	5:30a	30.4	0.0	0.00	11.5	32.0	3:00p	NW
14	31.0	43.0	4:30p	20.4	5:30a	34.0	0.0	0.00	8.4	25.0	4:30p	NNW
15	41.9	55.4	5:00p	25.2	6:30a	23.1	0.0	0.00	5.5	24.0	5:00p	S
16	44.3	53.2	1:00p	35.5	3:30a	20.7	0.0	0.00	9.3	26.0	2:30p	NW
17	41.9	55.6	6:30p	29.4	4:00a	23.1	0.0	0.00	6.0	18.0	8:30a	NNW
18	44.7	52.8	3:30p	33.6	6:30a	20.3	0.0	0.00	6.5	24.0	11:30a	S
19	44.3	53.6	1:30p	34.1	4:30a	20.7	0.0	0.00	5.0	24.0	9:00p	W
20	43.0	51.7	4:00p	32.7	7:00a	22.0	0.0	0.08	3.2	13.0	1:30p	NNW
21	41.9	53.4	2:30p	34.6	11:30p	23.1	0.0	0.31	5.5	21.0	4:00a	WNW
22	48.5	58.1	3:30p	34.9	1:00a	16.5	0.0	0.01	11.2	31.0	1:30p	WNW
23	51.7	63.4	3:00p	39.5	3:00a	13.3	0.0	0.00	9.0	28.0	4:30p	WNW
24	48.3	58.8	4:00p	40.3	6:30a	16.7	0.0	0.01	10.2	26.0	5:00a	NW
25	51.3	63.8	5:00p	38.1	5:30a	13.7	0.0	0.00	7.5	25.0	10:00a	NW
26	57.9	70.8	4:00p	46.2	2:00a	7.8	0.7	0.00	7.4	25.0	5:30p	S
27	61.2	74.1	4:00p	49.0	6:30a	5.6	1.8	0.00	6.1	23.0	4:00p	WSW
28	59.1	68.4	4:00p	50.4	7:00a	6.4	0.5	0.00	11.5	33.0	1:30p	NW
29	62.0	77.3	4:30p	46.7	7:00a	6.1	3.0	0.00	5.5	19.0	5:30p	WNW
30	64.7	75.7	5:00p	51.8	2:30a	3.2	2.8	0.00	8.4	27.0	4:30p	S
	47.4	77.3	29	20.4	14	536.9	8.8	0.43	7.5	39.0	10	NW

Max >= 90.0: 0
 Max <= 32.0: 0
 Min <= 32.0: 8
 Min <= 0.0: 0

Max Rain: 0.31 ON 04/21/20

Days of Rain: 3 (>.01 in) 1 (>.1 in) 0 (>1 in)

Heat Base: 65.0 Cool Base: 65.0 Method: Integration



Repository Area Surveillance Checklist

Monthly surveillance Quarterly surveillance: February May August November
 Storm event triggered surveillance due to _____ inches of rainfall over the past 24 hours.

Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
Condition of:			
Fences, gates, and locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Roads ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Signs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Site monuments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Drainage ditches ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Manholes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Evidence of erosion of:			
Top of disposal cell ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Disposal cell sideslopes ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Ditches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Surrounding area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Evidence of:			
Vandalism	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Intrusion by livestock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Burrowing animal damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Intrusion by humans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Accumulation of trash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Additional Quarterly Surveillance Requirements
Note: All transects, shown in Figure 3-1, must be walked during this inspection.

Condition of:			
Settlement plate structures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Manholes ^b	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Sediment ponds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Evidence of:			
Structural instability	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____

Additional comments: The repository and site roads appear to be in good condition.

Signature: Gary L. McKinnon Digitally signed by Gary L. McKinnon Date: 2020.05.28 10:30:22 -06'00' Date: 05/28/2020
Monticello LM Representative

^aInspections required following a significant storm event
^bOpen to inspect quarterly



Monthly Pond 4 Surveillance Checklist

Level of water in Pond 4 8.11

Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
Condition of:			
Fences, gates, and locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Roads	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Signs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Visible piping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Visible liner and anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Rescue equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Boat remains at the pond.
Evidence of erosion of:			
Top of Pond 4 berm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pond 4 sideslopes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ditches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Surrounding area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Seepage from Pond 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Overtopping of Pond 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Evidence of:			
Vandalism	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Intrusion by wildlife	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Intrusion by humans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation of trash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Additional comments: Things appear to be in good condition.

Monticello LM Representative: Gary L. McKinnon Digitally signed by Gary L. McKinnon Date: 2020.05.28 14:00:07 -06'00' Date: 05/28/2020



Contractor to the U.S. Department of Energy Office of Legacy Management

Monticello Long-Term Surveillance and Maintenance Temporary Storage Facility (TSF) Record Book Inspection Report

Are these areas acceptable?

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Was the gate locked upon arrival?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are signs posted in accordance with 10 CFR 835.602[a]?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are all postings legible?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are enclosures on the concrete bin and stored drum containers tight?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are containers in good physical condition (no rust, no holes, no bulges, etc.)?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	How much radiologically-contaminated material is in the concrete bin? <i>Note: the material should be shipped when the volume in storage approaches 75 percent of the storage capacity.</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is the surface area of the TSF in good physical condition (no erosion, no flood damage, no excessive vegetation growth, etc.)?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Has radiological monitoring been conducted in accordance with 10 CFR 835.405[d]?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is the security fence in good condition?

Comments:

There is no radiologically contaminated material in the concrete bin.

William E. Cary

Digitally signed by William E. Cary
Date: 2020.05.27 09:45:56 -06'00'

Signature of Monticello LM Representative

5/27/2020

Date of Inspection

MONTHLY CLIMATOLOGICAL SUMMARY for MAY. 2020

NAME: Monticello Office CITY: STATE:
 ELEV: 7069 ft LAT: 37° 54' 00" N LONG: 109° 18' 00" W

TEMPERATURE (°F), RAIN (in), WIND SPEED (mph)

DAY	MEAN TEMP	HIGH	TIME	LOW	TIME	HEAT DEG DAYS	COOL DEG DAYS	RAIN	AVG WIND SPEED	HIGH	TIME	DOM DIR
1	65.5	76.9	4:00p	48.0	7:00a	3.1	3.6	0.00	8.2	29.0	3:30p	S
2	61.9	73.3	4:00p	47.2	7:00a	5.0	2.0	0.00	7.3	32.0	3:00p	S
3	61.2	72.5	4:00p	48.2	6:00a	5.3	1.5	0.00	8.1	37.0	1:00p	S
4	54.6	63.0	3:30p	44.6	5:30a	10.4	0.0	0.00	10.3	27.0	3:00p	NW
5	55.5	67.8	3:30p	41.7	6:30a	9.9	0.4	0.00	6.4	20.0	2:00a	NNW
6	61.0	74.8	5:30p	45.4	1:00a	6.4	2.4	0.00	7.5	25.0	3:00p	WSW
7	58.0	67.9	3:30p	45.6	10:00p	7.4	0.4	0.00	9.3	26.0	4:00p	NW
8	55.2	68.9	5:00p	41.4	7:00a	10.3	0.5	0.00	7.7	21.0	6:00p	NNW
9	57.2	68.6	4:00p	45.0	6:30a	8.4	0.7	0.00	9.0	26.0	1:00p	NNW
10	61.5	74.9	2:00p	46.0	4:00a	5.7	2.2	0.00	6.6	25.0	11:00p	SSW
11	56.8	66.8	3:00p	47.6	7:00a	8.3	0.1	0.17	10.3	36.0	5:00p	S
12	57.5	70.4	5:00p	44.2	5:30a	8.3	0.8	0.00	9.6	39.0	12:30p	S
13	56.9	67.7	4:00p	42.3	5:00a	8.3	0.3	0.00	7.8	27.0	2:30p	S
14	57.5	68.1	4:30p	41.7	6:00a	7.7	0.3	0.00	7.4	24.0	10:30a	S
15	58.9	69.3	3:00p	45.7	4:00a	6.8	0.7	0.00	5.9	26.0	3:30p	WNW
16	59.7	71.6	4:30p	47.6	6:00a	6.3	1.1	0.00	5.3	15.0	12:30a	NNW
17	64.3	77.1	5:30p	50.5	6:00a	4.2	3.6	0.00	7.4	29.0	1:00p	S
18	65.1	77.8	4:30p	51.9	2:30a	3.5	3.6	0.00	11.8	34.0	4:30p	S
19	62.7	74.6	4:00p	45.6	4:30a	4.8	2.5	0.00	16.7	48.0	3:30p	SSE
20	52.4	60.3	5:00p	42.7	12:00m	12.6	0.0	0.00	11.5	34.0	12:30a	S
21	51.9	65.7	5:30p	33.7	6:30a	13.1	0.0	0.00	5.5	18.0	6:30p	NNW
22	57.0	71.3	4:00p	38.5	4:30a	9.0	1.0	0.00	8.7	40.0	12:30p	S
23	56.0	67.9	5:00p	41.1	6:30a	9.2	0.2	0.00	8.7	29.0	12:30p	S
24	49.9	60.2	4:00p	39.1	6:30a	15.1	0.0	0.00	12.5	28.0	1:30p	NW
25	54.3	65.0	4:00p	41.9	3:00a	10.7	0.0	0.00	10.3	25.0	4:30p	NW
26	61.3	75.5	4:00p	45.6	6:30a	6.0	2.3	0.00	6.9	21.0	4:30p	NNW
27	67.6	80.7	3:30p	52.4	5:00a	3.1	5.7	0.00	6.6	27.0	8:30p	NW
28	69.7	83.0	4:30p	55.3	6:00a	2.2	6.9	0.00	6.2	23.0	3:00p	NW
29	71.0	83.2	6:30p	59.0	4:00a	0.6	6.6	0.00	6.6	28.0	3:00p	WSW
30	70.9	82.3	3:00p	60.5	12:00m	0.5	6.4	0.00	6.7	32.0	11:30p	S
31	65.9	80.0	3:00p	57.3	10:00p	2.2	3.0	0.07	7.9	34.0	4:30p	S

	60.0	83.2	29	33.7	21	214.4	58.8	0.24	8.4	48.0	19	S

Max >= 90.0: 0
 Max <= 32.0: 0
 Min <= 32.0: 0
 Min <= 0.0: 0
 Max Rain: 0.17 ON 05/11/20
 Days of Rain: 2 (>.01 in) 1 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration



Monthly Pond 4 Surveillance Checklist

Level of water in Pond 4 7.517

Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
Condition of:			
Fences, gates, and locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Roads	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Signs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Radiological signs were removed from Rad rope and re-attached to the pond tee-posts.
Visible piping	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Visible liner and anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Rescue equipment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Boat remains at the pond.
Evidence of erosion of:			
Top of Pond 4 berm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pond 4 sideslopes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ditches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Surrounding area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Seepage from Pond 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Overtopping of Pond 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Evidence of:			
Vandalism	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Intrusion by wildlife	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Intrusion by humans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation of trash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Additional comments: Radiological rope was replaced around the entire pond. Lots of new vegetation growing but everything else appears to be in good condition.

Monticello LM Representative: Gary L. McKinnon Digitally signed by Gary L. McKinnon Date: 2020.06.29 09:38:46 -06'00' Date: 6/29/2020



Repository Area Surveillance Checklist

- Monthly surveillance Quarterly surveillance: February May August November
- Storm event triggered surveillance due to _____ inches of rainfall over the past 24 hours.

Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
Condition of:			
Fences, gates, and locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	One strand of barb wire was repaired on the south perimeter fence line.
Roads ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Signs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Site monuments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Drainage ditches ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Manholes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Evidence of erosion of:			
Top of disposal cell ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Disposal cell sideslopes ^a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ditches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Surrounding area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Evidence of:			
Vandalism	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Intrusion by livestock	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Burrowing animal damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Intrusion by humans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Accumulation of trash	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Additional Quarterly Surveillance Requirements
 Note: All transects, shown in Figure 3-1, must be walked during this inspection.

Condition of:			
Settlement plate structures	<input type="checkbox"/>	<input type="checkbox"/>	
Manholes ^b	<input type="checkbox"/>	<input type="checkbox"/>	
Sediment ponds	<input type="checkbox"/>	<input type="checkbox"/>	
Evidence of:			
Structural instability	<input type="checkbox"/>	<input type="checkbox"/>	

Additional comments: There is lots of new vegetation growing on the repository and on the site roads. Everything else appears to be in good condition.

Signature: Gary L. McKinnon Digitally signed by Gary L. McKinnon Date: 2020.06.29 13:28:53 -06'00' Date: 6/29/2020
 Monticello LM Representative

^aInspections required following a significant storm event
^bOpen to inspect quarterly

MONTHLY CLIMATOLOGICAL SUMMARY for JUN. 2020

NAME: Monticello Office CITY: STATE:
 ELEV: 7069 ft LAT: 37° 54' 00" N LONG: 109° 18' 00" W

TEMPERATURE (°F), RAIN (in), WIND SPEED (mph)

DAY	MEAN TEMP	HIGH	TIME	LOW	TIME	HEAT DEG DAYS	COOL DEG DAYS	RAIN	AVG WIND SPEED	HIGH	TIME	DOM DIR
1	69.1	82.4	5:00p	57.1	6:00a	1.5	5.7	0.00	8.4	21.0	9:30a	S
2	70.9	83.8	4:00p	53.6	6:30a	1.6	7.5	0.00	5.8	22.0	3:30p	NNW
3	72.5	83.3	4:00p	58.4	6:00a	0.5	8.0	0.00	6.5	31.0	3:00p	WNW
4	73.4	85.4	4:00p	58.0	6:00a	0.6	9.1	0.00	7.1	24.0	7:30p	WSW
5	69.7	86.4	5:30p	55.3	12:00m	2.2	6.9	0.08	7.9	42.0	6:00p	SSE
6	60.0	69.9	6:00p	48.4	11:00a	5.9	0.8	0.56	10.0	51.0	12:00p	S
7	60.3	72.6	4:00p	45.8	6:30a	6.1	1.4	0.00	13.1	43.0	2:00p	S
8	47.0	60.3	12:30p	33.6	9:30p	18.0	0.0	0.00	12.0	41.0	3:30p	S
9	48.0	61.3	5:30p	34.2	5:30a	17.0	0.0	0.00	11.3	30.0	8:00a	NW
10	58.2	72.2	4:00p	42.2	6:00a	8.1	1.3	0.00	5.0	20.0	11:00a	NNW
11	66.9	80.6	4:00p	50.0	4:00a	4.0	5.9	0.00	5.8	25.0	2:00p	WSW
12	71.7	84.1	4:30p	53.0	5:30a	1.9	8.5	0.00	8.4	25.0	11:00a	SSE
13	69.2	79.7	2:00p	56.4	5:00a	0.9	5.1	0.02	13.6	44.0	10:00a	S
14	64.3	77.4	4:00p	41.5	5:30a	4.4	3.7	0.00	8.6	32.0	12:00p	S
15	67.5	81.0	5:00p	50.5	4:30a	3.1	5.5	0.00	8.4	29.0	5:00p	S
16	68.8	81.4	4:30p	54.3	6:00a	1.9	5.6	0.00	12.3	40.0	12:30p	S
17	65.7	78.0	4:00p	52.2	6:30a	3.4	4.1	0.00	9.6	28.0	1:00p	SSE
18	62.2	74.1	4:30p	47.7	6:00a	5.1	2.3	0.00	8.1	23.0	1:30a	NW
19	64.4	74.6	4:00p	54.0	12:00m	3.4	2.8	0.00	9.6	26.0	12:00p	WNW
20	67.6	80.9	5:30p	52.4	2:00a	3.3	5.9	0.00	5.6	21.0	2:30p	WSW
21	72.7	83.9	5:00p	60.6	4:30a	0.5	8.1	0.00	6.5	19.0	11:00a	WSW
22	73.9	85.0	4:00p	59.3	6:30a	0.6	9.5	0.00	8.1	26.0	2:30p	NW
23	73.9	85.2	3:30p	59.7	6:00a	0.5	9.4	0.00	8.5	29.0	2:30p	NW
24	74.5	86.8	2:00p	60.7	5:00a	0.3	9.9	0.00	6.7	37.0	6:00p	WSW
25	75.6	87.6	6:30p	62.9	6:30a	0.1	10.6	0.00	8.7	29.0	3:30p	S
26	71.2	85.0	1:30p	58.7	7:00a	0.9	7.1	0.24	6.4	32.0	6:30p	NW
27	70.5	83.1	5:30p	55.3	5:30a	2.0	7.4	0.00	5.2	23.0	2:00p	WSW
28	71.7	82.7	4:00p	58.6	7:00a	0.8	7.5	0.00	12.6	37.0	3:00p	S
29	64.9	75.1	3:00p	49.7	11:30p	2.7	2.6	0.02	14.2	39.0	1:00p	SSE
30	58.9	71.4	5:00p	39.5	6:30a	7.5	1.4	0.00	7.0	25.0	1:00p	SW

	66.8	87.6	25	33.6	8	108.8	163.6	0.92	8.7	51.0	6	S

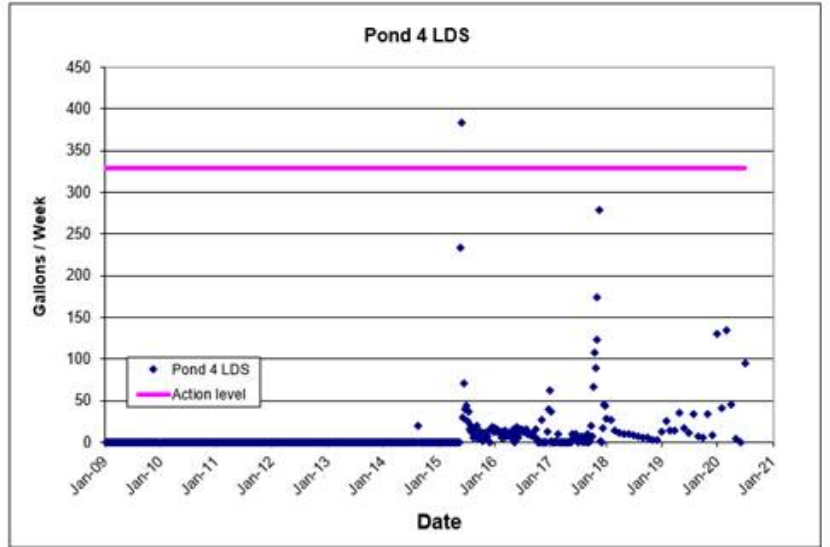
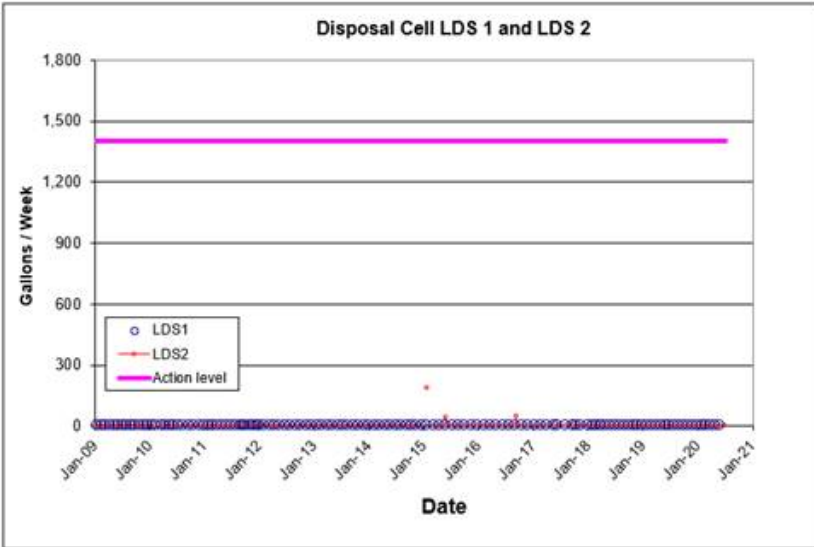
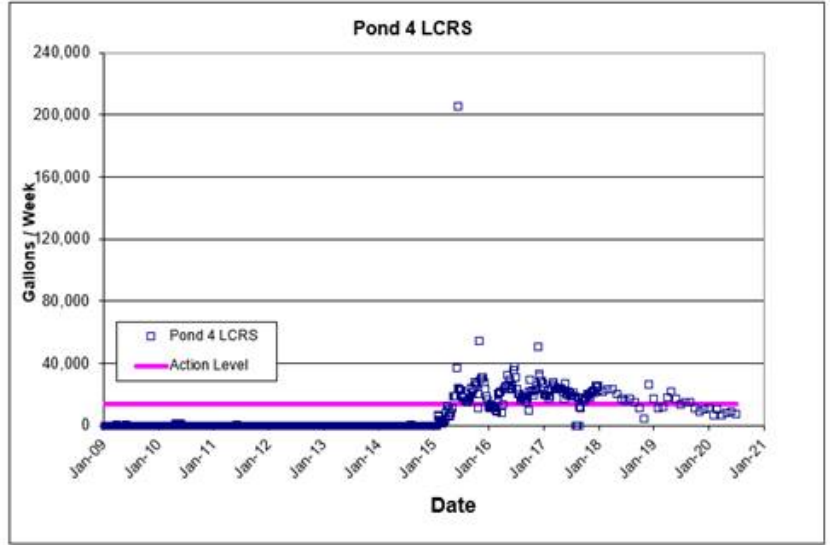
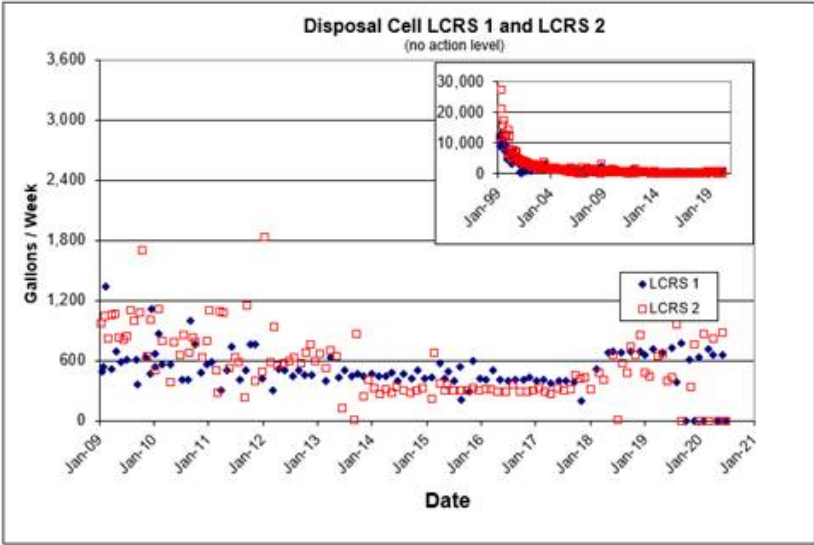
Max >= 90.0: 0
 Max <= 32.0: 0
 Min <= 32.0: 0
 Min <= 0.0: 0
 Max Rain: 0.56 ON 06/06/20
 Days of Rain: 5 (>.01 in) 2 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

Appendix B

Graphs Showing Performance History for Disposal Cell and Pond 4 LCRS and LDS

This page intentionally left blank

Graphs Showing Performance History for Disposal Cell and Pond 4 LCRS and LDS



This page intentionally left blank