

**Monticello, Utah, National  
Priorities List Sites  
Federal Facility Agreement  
(FFA) Quarterly Report:  
April 1–June 30, 2019**

**August 2019**



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

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## 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
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 2019. 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 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 long-term surveillance and maintenance (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 is utilizing the data presented in the most recent annual groundwater report to update the conceptual site model and to develop a three-dimensional numerical fate and transport model to assess remedial time frames to determine the best possible closure strategy for OU III.

Project milestones and guiding documents are further described in the *Monticello Site Management Plan* (DOE 2003). Section 5 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.
- The April semiannual sampling event occurred the week of April 22, 2019.
- Sampling of the GRO system extraction and monitoring wells was conducted on April 22, 2019, concurrent with the semiannual sampling event.

- Laboratory analytical results of the soil samples collected in November 2018 were evaluated to determine the distribution of solid-phase concentrations and identify borehole soils for column tests and wells to supply source water for column tests. Site groundwater was collected in April 2019 to use in the column work. Column work was started on April 2, 2019, and was completed on July 3, 2019. All 24 planned column tests were completed. Analytical data are being finalized and expected to be complete by July 31, 2019.
- A meeting was held at the Westminster, Colorado, LM offices on May 22, 2019, to update and discuss the proposed closure strategy with EPA and UDEQ personnel. LM led the meeting with support from Geosyntec Consultants and Navarro Research and Engineering, Inc., personnel. The updated groundwater flow model was presented and discussed at the meeting.
- At the end of the closure strategy meeting that was held on May 22, 2019, the spring Federal Facility Agreement (FFA) meeting was held. EPA and UDEQ personnel were updated on the site and site activities.
- 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) exceeded the action levels in April, May, and June. The Leak Detection System (LDS) did not exceed the action level for this quarter. LM previously notified EPA and UDEQ of the Pond 4 LCRS and LDS action level exceedance.
- Routine surveillance noted no operating deficiencies for the Temporary Storage Facility (TSF).
- The cool spring temperatures, precipitation, and higher than normal runoff have reduced the normal spring evaporation rates from Pond 4. The average water level in Pond 4 is slightly above 9.2 feet, and the AOA extraction pumps remain at a reduced flow rate so that the evaporation volume will catch up to the desired pond depth of approximately 8 feet. In late June, the Monticello-area temperature began to rise.
- Additional groundwater sampling was implemented in April to evaluate how uranium concentrations in groundwater respond to high groundwater levels that occur during seasonal runoff. This data is being collected to support the geochemical conceptual model and groundwater flow and transport modeling.

## 2.0 Monticello Vicinity Properties

The LTS&M for the MVP consists of providing radiological control at excavations in Monticello roadway and utility corridors, in Utah Department of Transportation (UDOT) right-of-ways 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 of Monticello (City) officials in planning meetings regarding construction and excavation activities by the City, UDOT, and utility companies in roadway and utility corridors. LM has followed and will continue to follow normal LTS&M protocol to provide radiological control in the affected roadways.
- There were no planned or unplanned excavations in city streets or utility corridors where radiologically contaminated material was encountered that required LM management.
- 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.

## **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:

- 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. Previously observed burrows were not deep and did not pose a concern.

- 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 960 gallons per week combined for LCRS 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 GRO system has resulted in increased water collection in the Pond 4 LCRS and LDS. However, the Pond 4 LCRS and LDS monitoring and pumping systems continue to function as designed, to circulate water back to the pond. Findings for the Pond 4 LCRS and LDS this period include:
  - Water collection at the Pond 4 LCRS continued and did exceed the action level in April, May, and June this quarter (see Appendix B). LM has previously notified EPA and UDEQ of any Pond 4 action level exceedance.
  - Water collection in the Pond 4 LDS remained below the action level (see Appendix B). LM has previously notified EPA and UDEQ of water collection and removal in the Pond 4 LDS.

### **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 and onsite materials.

### **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.

### 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 performed semiannually in April and October.

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, which began full operation in January 2015, 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 6 wells were installed north of Montezuma Creek in 2017. Beginning in 2017, sampling of the extraction and monitoring wells occurred on a monthly basis for approximately 1 year. Since October 2018, sampling is performed after the extraction of approximately 1 million gallons from the GRO system. Sampling of the extraction and monitoring wells for the extraction of 1 million gallons occurred once during this quarter on April 22, 2019, concurrent with the semiannual sampling event.

#### ***3.3.2.1 GRO System Quarterly Performance Summary***

Groundwater extraction over the quarter was approximately 0.44 million gallons, equivalent to an average flow rate of 3.3 gallons per minute (gpm).

- During the quarter, the volume of water stored in Pond 4 decreased by approximately 0.4 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).
- Cumulatively, the system has removed a total of approximately 19.9 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 6.0 and 8.3 pore volumes since system startup.

- 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 Site (SOARS) system.
  - Hand-measured water-level monitoring of sampled wells during the sampling events.

Samples were collected at April 22, 2019, following the extraction amount of approximately 1.14 million gallons (Table 2) 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). From January 2015 through April 22, 2019, the GRO system has removed approximately 105.5 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 <sup>a</sup> (million gallons)
April 2019	0.2	4.5	19.6
May 2019	0.12	2.6	19.7
June 2019 <sup>b</sup>	0.13	2.89	19.9

**Notes:**

<sup>a</sup> Cumulative volume is based on the volume of groundwater extracted by the GRO system since system startup in January 2015.

<sup>b</sup> Reporting end date is June 30, 2019

*Table 2. Uranium Mass Removal from Groundwater in the AOA*

Tank Effluent Sample Date <sup>a</sup>	Uranium Concentration (µg/L)	Volume Removed Between Tank Samples (million gallons)	Uranium Removed (pounds) <sup>b</sup>	Cumulative Mass Uranium Removed <sup>c</sup> (pounds)
October 18, 2018	330	0.34	0.86	101.04
April 22, 2019	610	1.14	4.5	105.50

**Notes:**

<sup>a</sup> Beginning October 2018, sampling occurs following the extraction of approximately 1 million gallons.

<sup>b</sup> Based on median concentration between sampling dates.

<sup>c</sup> Since GRO system startup in January 2015.

**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 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 the development of a three-dimensional numerical fate and transport model to forecast remedial time frames. OU III closure strategy accomplishments this quarter are as follows:

- The *Monticello Mill Tailings Site Operable Unit III Groundwater Flow Conceptual Site Model Update* (DOE 2019b) report was completed and sent to EPA and UDEQ in May 2019.
- Geochemical analytical results for the soils collected in November 2018 were evaluated this quarter. This solid-phase data was evaluated by the Legacy Management Support (LMS) contractor to identify appropriate soil samples for column tests. Based on solid-phase data from the cores collected in November 2018, 24 column tests were planned, with the following objectives:
  - Test mill site and downgradient core material for natural flushing (measure constituent concentrations and release rates in contaminated sediment with deionized water).
  - Test core material upgradient and downgradient of the PRB for constituent concentration changes if the PRB is removed (use various influent waters to test multiple scenarios).
  - Test downgradient cores with a series of different groundwaters (AOA, mill site, background) to test possible constituent concentration changes through time.
- Site groundwater was collected in April 2019 to use in the column work.
- Column work was started on April 2, 2019, and was completed on July 3, 2019. All 24 planned column tests were completed. Analytical data is being finalized and expected to be complete by July 31, 2019.
- A sampling program was initiated to evaluate how groundwater chemistry concentrations change with high groundwater levels that occur during seasonal runoff. Groundwater samples were collected at 14 wells every 2 weeks and tested for the same analyte list used for the column work. This sampling program was initiated on April 8, 2019, following the seasonal peak in groundwater levels. This information will be used to evaluate the geochemical conceptual model and groundwater flow model.
- A numerical groundwater flow model for the MMTS was developed and calibrated. Details regarding the flow model and its calibration were presented at the FFA quarterly meeting in May 2019. The flow model will be coupled with a contaminant fate and transport model to make predictions about uranium remediation and attenuation at the site. Ongoing evaluation of laboratory column data will provide input parameters for the fate and transport model.

## 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
<b>Recent</b>	
Column tests began this quarter on the soil samples collected during the November drilling project. The soils were analyzed by the contracted laboratory, evaluated by LMS geochemists, and utilized in the column tests.	Began.
<i>Monticello, Utah, National Priorities List Sites Federal Facility Agreement (FFA) Quarterly Report: January 1–March 31, 2019 (DOE 2019a)</i>	Submitted to EPA and UDEQ May 14, 2019.
<i>Monticello Mill Tailings Site Operable Unit III Groundwater Flow Conceptual Site Model Update (DOE 2019b) report</i>	Submitted to EPA and UDEQ May 9, 2019.
The Closure Strategy meeting and Spring FFA Meeting was held in Westminster, Colorado.	Held May 22, 2019.
<b>Near-Term</b>	
Annual Site Inspection	Tentatively scheduled for the week of September 23, 2019.
Fall Semiannual Sampling Event	Tentatively scheduled for the week of October 7, 2019.
Fall FFA Meeting	Tentatively scheduled during the week of October 21, 2019.
<i>Monticello, Utah, National Priorities List Sites Federal Facility Agreement (FFA) Quarterly Report: July 1–September 30, 2019</i>	Submit to EPA and UDEQ by November 15, 2019.

## 5.0 References

DOE (U.S. Department of Energy), 2003. *Monticello Site Management Plan*, GJO-2003-493-TAC, Section 5 (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), 2019a. *Monticello, Utah, National Priorities List Sites Federal Facility Agreement (FFA) Quarterly Report: January 1–March 31, 2019*, LMS/MNT/S25044, Office of Legacy Management, May.

DOE (U.S. Department of Energy), 2019b. *Monticello Mill Tailings Site Operable Unit III Groundwater Flow Conceptual Site Model Update*, LMS/MNT/S23332, Office of Legacy Management, April.

## **Appendix A**

### **Monthly and Quarterly Surveillance Checklists**

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## 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	
<b>Condition of:</b>			
Fences, gates, and locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Roads <sup>a</sup>	<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 <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Manholes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<b>Evidence of erosion of:</b>			
Top of disposal cell <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Disposal cell sideslopes <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Ditches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Surrounding area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<b>Evidence of:</b>			
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.

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

**Additional comments:** The site appears to be in good condition.

Signature: Day McK... Monticello LM Representative      Date: 4/30/2019

<sup>a</sup>Inspections required following a significant storm event  
<sup>b</sup>Open to inspect quarterly

## Monthly Pond 4 Surveillance Checklist

Level of water in Pond 4 9.56

Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
<b>Condition of:</b>			
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"/>	Sections of the Rad rope around the pond was replaced and (postings) signs were rehung to the new Rad rope.
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.
<b>Evidence of erosion of:</b>			
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"/>	
<b>Evidence of:</b>			
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:** Everything appears to be in good shape.

Monticello LM Representative: *Day MTK*

Date: 4/29/2019

MONTHLY CLIMATOLOGICAL SUMMARY for APR. 2019

NAME: UT Monticello CITY: STATE:  
 ELEV: 7069 ft LAT: 37° 06' 00" N LONG: 109° 06' 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	39.6	50.8	4:00p	27.2	7:30a	25.4	0.0	0.00	5.8	18.0	2:30p	SSE
2	44.5	51.8	4:30p	38.2	3:00a	20.5	0.0	0.00	7.4	25.0	10:30a	S
3	42.9	51.0	7:00p	36.9	7:30a	22.1	0.0	0.01	3.9	24.0	11:30a	SW
4	44.9	54.5	1:30p	33.8	4:30a	20.1	0.0	0.00	5.5	22.0	12:30p	SSE
5	46.1	56.7	2:30p	35.0	7:00a	18.9	0.0	0.00	6.1	21.0	1:30p	SSW
6	46.0	54.6	12:30p	39.7	12:30a	19.0	0.0	0.12	4.1	21.0	12:30p	SSE
7	49.6	62.1	5:30p	38.1	7:00a	15.4	0.0	0.00	5.1	18.0	3:30a	NNW
8	54.4	68.1	4:30p	39.7	5:30a	10.8	0.2	0.00	4.8	19.0	1:00p	WSW
9	54.6	66.1	5:00p	44.7	4:30a	10.4	0.0	0.00	10.3	36.0	6:30p	SSW
10	35.3	51.4	1:30a	30.1	8:30a	29.7	0.0	0.05	15.7	37.0	7:00p	NW
11	32.0	41.7	4:30p	26.7	6:00a	33.0	0.0	0.00	11.3	36.0	11:30a	NW
12	34.9	44.1	6:30p	25.3	6:30a	30.1	0.0	0.01	4.3	19.0	12:00m	WNW
13	38.7	47.1	5:00p	32.0	7:30a	26.3	0.0	0.00	11.1	25.0	4:30p	NW
14	46.1	60.5	4:30p	28.5	6:30a	18.9	0.0	0.00	9.1	29.0	12:30p	S
15	50.8	61.9	5:00p	39.7	6:00a	14.2	0.0	0.00	9.9	27.0	4:00p	SSW
16	47.2	56.3	3:00p	37.2	7:00a	17.8	0.0	0.01	8.3	31.0	12:00p	S
17	45.3	54.6	5:30p	37.5	6:00a	19.7	0.0	0.00	14.5	37.0	2:00p	NW
18	50.0	61.8	5:00p	39.6	6:30a	15.0	0.0	0.00	13.0	30.0	2:30a	NW
19	56.5	71.0	5:00p	43.3	6:00a	9.4	0.9	0.00	5.6	20.0	5:30p	W
20	55.4	66.5	5:00p	46.9	5:00a	9.6	0.1	0.00	6.9	26.0	11:30a	S
21	53.2	64.0	5:00p	42.8	6:30a	11.8	0.0	0.00	8.0	31.0	1:30a	S
22	51.7	64.2	5:00p	38.8	7:30a	13.3	0.0	0.00	5.8	25.0	11:30a	NW
23	50.8	61.2	5:30p	39.4	7:00a	14.2	0.0	0.00	4.8	35.0	5:30p	SSW
24	54.1	66.8	2:30p	38.1	4:30a	11.1	0.2	0.00	6.3	25.0	4:30p	NW
25	58.1	69.0	3:00p	48.1	3:30a	7.5	0.7	0.00	8.3	25.0	4:30p	NW
26	57.4	71.1	3:30p	45.1	6:00a	8.2	0.6	0.00	8.4	33.0	10:00p	WSW
27	57.7	70.2	4:00p	46.7	6:30a	7.7	0.3	0.03	7.1	49.0	9:30p	WNW
28	57.8	70.1	4:00p	46.9	6:00a	7.9	0.7	0.00	9.6	30.0	2:30p	SSW
29	49.1	59.3	3:00p	40.8	7:30p	15.9	0.0	0.62	6.2	30.0	5:00p	S
30	44.7	53.9	4:30p	38.4	6:00a	20.3	0.0	0.30	9.6	31.0	10:00p	S
	48.3	71.1	26	25.3	12	504.2	3.7	1.15	7.9	49.0	27	NW

Max >= 90.0: 0  
 Max <= 32.0: 0  
 Min <= 32.0: 6  
 Min <= 0.0: 0

Max Rain: 0.62 ON 04/29/19

Days of Rain: 5 (>.01 in) 3 (>.1 in) 0 (>1 in)

Heat Base: 65.0 Cool Base: 65.0 Method: Integration

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	
<b>Condition of:</b>			
Fences, gates, and locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Five sections (broken strands) of the perimeter fence were repaired.
Roads <sup>a</sup>	<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 <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Manholes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>Evidence of erosion of:</b>			
Top of disposal cell <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Disposal cell sideslopes <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Ditches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Surrounding area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>Evidence of:</b>			
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.

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

**Additional comments:** The site appears to be in good condition with lots of green vegetation growing. Fence repairs were due to the heavy snow fall this winter.

Signature: Day mlk Monticello LM Representative      Date: 5/30/2019

<sup>a</sup>Inspections required following a significant storm event  
<sup>b</sup>Open to inspect quarterly

## Monthly Pond 4 Surveillance Checklist

Level of water in Pond 4 9.466

Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
<b>Condition of:</b>			
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.
<b>Evidence of erosion of:</b>			
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"/>	
<b>Evidence of:</b>			
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 checked="" type="checkbox"/>	

**Additional comments:** Everything appears to be in good shape.

Monticello LM Representative: *Day McKinn*

Date: 5/30/2019



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

### Acceptable?

Yes No

- X  Was the gate locked upon arrival?
- X  Are signs posted in accordance with Section 3.4.4?
- X  Are all posting legible?
- X  Are enclosures on the concrete bin and stored drum containers tight?
- X  Are containers in good physical condition (no rust, no holes, no bulges, etc.)?
- X  How much radiologically contaminated material is in the concrete bin? Note: the material should be shipped when the volume in storage approaches 75 percent of the storage capacity.
- X  Is the surface area of the TSF in good physical condition (no erosion, no flood damage, no excessive vegetation growth, etc.)?
- X  Has radiological monitoring been conducted in accordance with Section 3.4.5?
- X  Is the security fence in good condition?

Comments: There is no radiologically contaminated material in the concrete bin.

Signature of Monticello LM Representative

5/30/19

Date of Inspection

MONTHLY CLIMATOLOGICAL SUMMARY for MAY, 2019

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	HIGH	TIME	LOW	TIME	HEAT	COOL	RAIN	AVG		TIME	DOM
	TEMP					DEG	DEG		WIND	SPEED		
1	39.1	49.5	6:00p	33.5	5:30a	25.9	0.0	0.07	5.6	27.0	4:30a	NNW
2	44.8	55.1	6:00p	34.6	1:00a	20.2	0.0	0.00	4.6	17.0	11:30a	WSW
3	49.1	61.3	4:00p	35.7	5:30a	15.9	0.0	0.00	6.0	21.0	2:30p	NNW
4	53.9	64.8	4:30p	42.5	7:00a	11.1	0.0	0.00	6.4	22.0	2:00p	W
5	56.8	67.9	5:30p	44.3	6:30a	8.4	0.2	0.00	6.0	40.0	1:30p	WNW
6	56.8	67.6	4:00p	43.9	6:30a	8.4	0.2	0.00	8.3	26.0	4:00p	SSE
7	52.5	62.9	4:00p	39.8	6:30a	12.5	0.0	0.00	9.4	28.0	7:30p	S
8	46.0	52.0	12:30p	39.4	7:00a	19.0	0.0	0.00	9.9	28.0	3:30p	WNW
9	40.7	47.0	10:00a	34.2	5:00a	24.3	0.0	0.11	6.8	20.0	4:30p	SSE
10	41.8	46.4	6:30p	38.6	3:00a	23.2	0.0	0.15	4.3	17.0	1:30p	SSE
11	49.1	59.9	5:30p	37.2	3:00a	15.9	0.0	0.00	7.0	21.0	5:30p	WNW
12	55.3	66.9	5:30p	42.3	4:30a	9.8	0.1	0.00	5.7	19.0	12:30p	NNW
13	59.5	72.9	4:30p	46.6	6:30a	7.3	1.8	0.00	5.5	26.0	7:00p	WSW
14	62.2	73.8	2:00p	46.9	6:00a	5.1	2.2	0.00	6.0	29.0	2:00p	WSW
15	62.1	72.3	5:30p	48.8	5:30a	4.6	1.7	0.00	7.6	28.0	2:30p	S
16	58.9	69.4	2:30p	45.7	6:30a	6.4	0.3	0.00	12.4	44.0	1:30p	SSE
17	47.6	56.2	3:30p	37.3	12:00m	17.4	0.0	0.00	9.3	36.0	1:00a	S
18	43.4	55.8	5:30p	32.2	6:30a	21.6	0.0	0.02	3.7	20.0	3:00a	WNW
19	45.1	54.6	12:00p	36.8	12:00m	19.9	0.0	0.11	11.1	42.0	12:30p	SSE
20	36.3	40.9	2:30p	33.2	1:00a	28.7	0.0	0.05	6.4	22.0	3:30p	SSE
21	38.3	50.1	3:00p	30.3	5:00a	26.7	0.0	0.20	6.5	36.0	4:00p	SE
22	39.0	46.8	4:00p	33.0	11:00a	26.0	0.0	0.26	9.9	28.0	5:30p	SE
23	37.7	45.2	3:30p	32.7	4:30a	27.3	0.0	0.41	8.8	37.0	3:30p	SE
24	43.4	54.3	6:00p	32.8	6:30a	21.6	0.0	0.00	5.9	19.0	10:00a	SSE
25	52.1	65.0	6:00p	38.8	7:00a	12.9	0.0	0.00	7.9	30.0	4:00p	SSE
26	56.0	66.7	3:00p	43.8	1:00a	9.0	0.1	0.00	10.2	37.0	3:00p	S
27	45.5	56.8	2:00p	34.9	12:00m	19.5	0.0	0.10	12.9	42.0	2:30p	S
28	41.0	50.1	3:00p	34.0	4:00a	24.0	0.0	0.11	5.6	19.0	5:30p	SSE
29	47.7	59.2	6:00p	37.7	5:30a	17.3	0.0	0.00	6.3	20.0	2:00p	WNW
30	53.3	66.5	4:30p	39.3	6:30a	11.7	0.0	0.00	4.5	17.0	1:30p	W
31	58.9	70.8	4:30p	46.2	1:30a	7.2	1.1	0.00	6.5	19.0	1:00p	SSE
	48.8	73.8	14	30.3	21	508.8	7.7	1.59	7.3	44.0	16	SSE

Max >= 90.0: 0  
 Max <= 32.0: 0  
 Min <= 32.0: 1  
 Min <= 0.0: 0

Max Rain: 0.41 ON 05/23/19

Days of Rain: 11 (>.01 in) 7 (>.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.

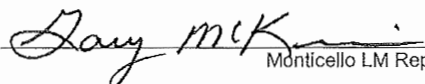
Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
<b>Condition of:</b>			
Fences, gates, and locks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Roads <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Signs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Site monuments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Drainage ditches <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Manholes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<b>Evidence of erosion of:</b>			
Top of disposal cell <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Disposal cell sideslopes <sup>a</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Ditches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Surrounding area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
<b>Evidence of:</b>			
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.*

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

**Additional comments:** Lots of vegetation but the site appears to be in good condition.

Signature:  Date: 6/27/2019  
 Monticello LM Representative

<sup>a</sup>Inspections required following a significant storm event  
<sup>b</sup>Open to inspect quarterly

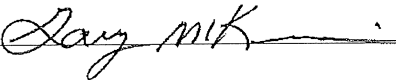


## Monthly Pond 4 Surveillance Checklist

Level of water in Pond 4 ~9.02

Inspection Item	Acceptable		Comments and Recommendation
	Yes	No	
<b>Condition of:</b>			
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"/>	Three Radcon postings were changed out on the pond rope.
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.
<b>Evidence of erosion of:</b>			
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"/>	
<b>Evidence of:</b>			
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 checked="" type="checkbox"/>	

**Additional comments:** Lots of vegetation but everything appears to be in good shape.

Monticello LM Representative: 

Date: 6/27/2019

MONTHLY CLIMATOLOGICAL SUMMARY for JUN. 2019

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	62.2	74.1	4:30p	45.5	6:00a	5.4	2.6	0.00	6.8	23.0	2:30p	WSW
2	63.0	74.2	6:00p	51.9	6:00a	4.3	2.3	0.00	6.5	24.0	3:30p	S
3	62.2	73.1	4:00p	50.8	4:30a	4.9	2.1	0.00	7.2	34.0	12:00p	S
4	63.0	74.3	3:00p	51.0	5:30a	4.4	2.4	0.00	5.6	20.0	1:30p	W
5	62.1	75.3	5:30p	47.4	6:30a	5.3	2.4	0.00	4.6	18.0	2:30a	SW
6	64.9	76.3	5:30p	51.0	6:30a	3.1	3.0	0.23	5.9	26.0	2:30p	S
7	65.5	74.4	3:00p	55.8	6:30a	2.5	3.0	0.00	8.0	31.0	2:00p	S
8	63.9	75.1	5:00p	50.1	6:30a	3.9	2.9	0.00	8.1	35.0	12:00m	SSW
9	54.4	65.5	4:00p	44.3	5:30a	10.6	0.0	0.00	15.6	40.0	2:30a	NW
10	60.2	75.2	6:30p	44.1	6:00a	7.0	2.2	0.00	7.6	26.0	1:00p	WNW
11	65.7	76.5	4:30p	54.0	3:00a	3.2	4.0	0.00	9.0	24.0	2:00p	NW
12	67.6	80.2	4:00p	54.0	6:00a	2.9	5.5	0.00	4.7	16.0	5:00p	W
13	69.5	81.8	5:00p	55.4	7:00a	1.8	6.3	0.00	6.2	25.0	5:30p	WSW
14	68.2	79.6	3:30p	53.9	6:30a	2.3	5.5	0.00	8.1	42.0	10:30p	S
15	65.5	76.7	3:30p	52.5	5:30a	3.2	3.7	0.00	6.7	25.0	2:00p	NW
16	64.2	77.3	4:00p	56.2	1:30a	3.1	2.3	0.00	6.3	32.0	4:30a	SSE
17	59.8	74.1	2:00p	49.1	12:00m	6.4	1.1	0.02	6.4	28.0	3:00p	S
18	55.6	64.6	10:30a	45.7	5:30a	9.4	0.0	0.47	4.2	31.0	8:30p	WSW
19	65.1	79.7	5:30p	49.1	5:00a	4.0	4.1	0.00	5.2	24.0	3:00p	SE
20	69.8	80.0	4:30p	55.8	12:00m	0.8	5.6	0.00	9.4	29.0	3:00p	SSW
21	58.9	68.7	11:00a	49.0	12:00m	6.3	0.2	0.00	8.2	28.0	10:30p	NNW
22	51.7	61.7	5:00p	41.0	12:00m	13.3	0.0	0.04	8.1	29.0	3:30p	NW
23	52.8	66.1	5:30p	37.7	3:30a	12.3	0.0	0.00	7.2	21.0	4:30p	NNW
24	61.4	74.3	4:30p	43.2	5:30a	6.2	2.6	0.00	6.8	22.0	5:30p	SSE
25	67.7	79.7	4:30p	54.4	5:30a	2.4	5.0	0.00	7.0	22.0	2:30p	S
26	66.7	79.5	5:00p	56.8	12:00m	2.6	4.3	0.00	7.8	29.0	2:30p	SSE
27	68.1	81.3	4:30p	53.7	6:00a	2.4	5.5	0.00	8.6	29.0	3:00p	S
28	69.0	84.6	5:30p	52.9	7:00a	3.0	6.9	0.00	7.3	31.0	8:00p	S
29	71.8	82.9	2:30p	59.4	5:30a	1.0	7.8	0.00	5.4	17.0	11:00a	S
30	70.6	82.9	1:30p	62.2	6:00a	0.3	5.9	0.00	6.4	28.0	4:00p	S
	63.7	84.6	28	37.7	23	138.3	99.2	0.76	7.2	42.0	14	S

Max >= 90.0: 0

Max <= 32.0: 0

Min <= 32.0: 0

Min <= 0.0: 0

Max Rain: 0.47 ON 06/18/19

Days of Rain: 4 (>.01 in) 2 (>.1 in) 0 (>1 in)

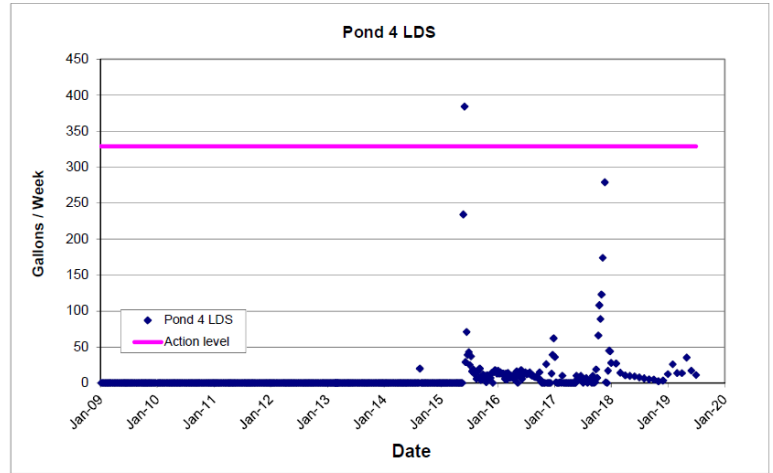
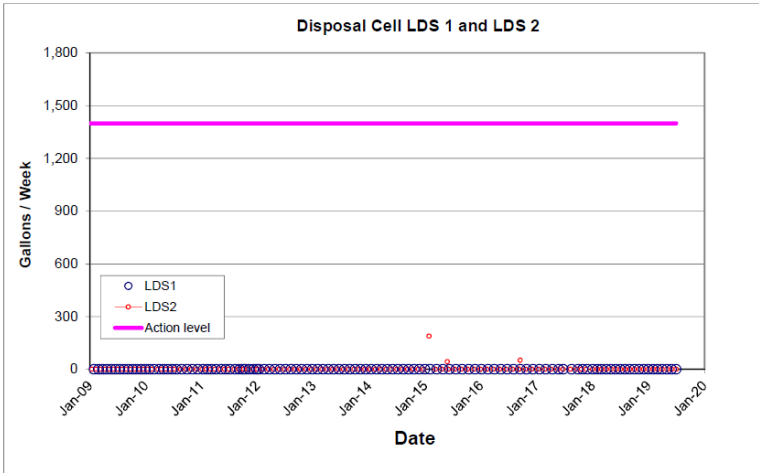
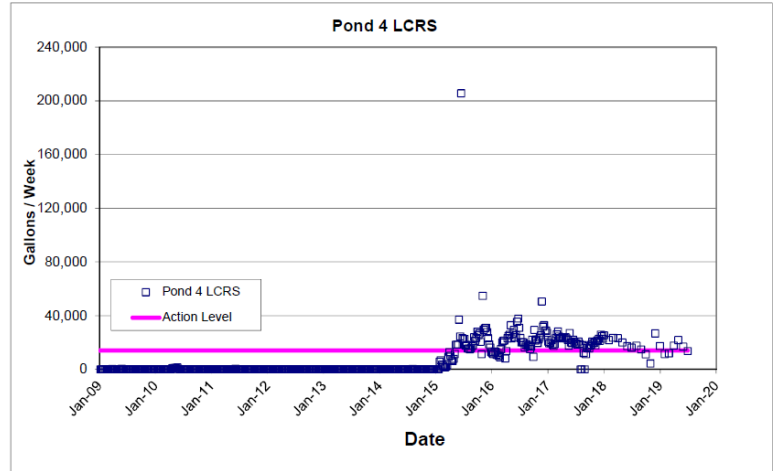
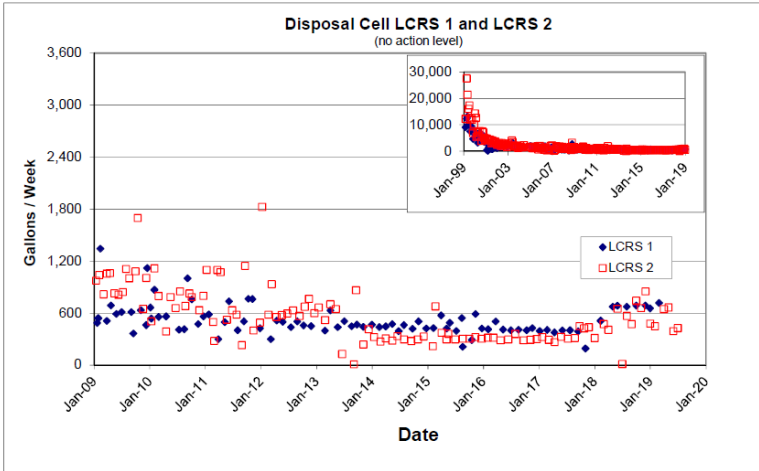
Heat Base: 65.0 Cool Base: 65.0 Method: Integration

## **Appendix B**

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

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



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## LM Admin Support

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**From:** LM Admin Support  
**Sent:** Wednesday, August 14, 2019 11:23 AM  
**To:** KING, RONALD; 'Jackson, Emily (emily.jackson@hq.doe.gov)'  
**Subject:** FW: Monticello, Utah FFA Quarterly Report: April 1 June 30, 2019 - sent on behalf of Jason Nguyen  
**Attachments:** 2019.08.13 MNT FFA Q2 Rpt Apr 1 - Jun 30 2019.pdf; S26148\_MNT\_FFA\_Apr\_Jun\_2019.pdf

For your records.

---

**From:** LM Admin Support  
**Sent:** Wednesday, August 14, 2019 11:21 AM  
**To:** Berube, Colton (CONTR) <colton.berube@lm.doe.gov>; Elmer, John (CONTR) <John.Elmer@lm.doe.gov>; Smith, Fred (CONTR) <fred.smith@lm.doe.gov>  
**Subject:** FW: Monticello, Utah FFA Quarterly Report: April 1 June 30, 2019 - sent on behalf of Jason Nguyen

For your records.

---

**From:** LM Admin Support  
**Sent:** Wednesday, August 14, 2019 11:17 AM  
**To:** 'Michael Storck' <[mstorck@utah.gov](mailto:mstorck@utah.gov)>; 'Vera Moritz' <[Moritz.vera@epa.gov](mailto:Moritz.vera@epa.gov)>  
**Subject:** Monticello, Utah FFA Quarterly Report: April 1 June 30, 2019 - sent on behalf of Jason Nguyen

Dear Mr. Storck and Ms. Moritz,

The attached letter is sent on behalf of Jason Nguyen. The hard copy will be sent via Fed Ex to you today.

Thank you,

Michele Schmidt  
Administrative Assistant  
LMATA Government Services Inc.  
Navarro LMS Team  
Contractor to the U.S. Department of Energy  
Office of Legacy Management  
Phone: 970-248-6002





**RECEIVED**

By Michele Schmidt at 1:30 pm, Aug 13, 2019

Navarro Research and Engineering, Inc.

August 13, 2019

Task Assignment 104  
Control Number 19-1620

U.S. Department of Energy  
Office of Legacy Management  
ATTN: Mr. Jason Nguyen  
Site Manager  
2597 Legacy Way  
Grand Junction, CO 81503

SUBJECT: Contract No. DE-LM0000421, Navarro Research and Engineering, Inc.  
(Navarro)  
Task Assignment 104, LTS&M - Nevada Off Sites and Monticello Site  
Transmittal of the *Monticello, Utah, National Priorities List Sites Federal  
Facility Agreement (FFA) Quarterly Report: April 1- June 30, 2019*

REFERENCE: Task Assignment 104, 1-104-1-06-502, Monticello, Utah, Site

Dear Mr. Nguyen:

Enclosed are four copies of the *Monticello, Utah, National Priorities List Sites, Federal Facility Agreement (FFA) Quarterly Report: April 1- June 30, 2019* for submittal to the regulatory agencies by August 15, 2019. A draft transmittal letter was previously provided for your use. Two copies of the report should be included with the transmittal to the U.S. Environmental Protection Agency, and one copy should be included with the transmittal to the Utah Department of Environmental Quality.

Legacy Management Support understands that the U.S. Department of Energy (DOE) Office of Legacy Management (LM) needs to complete and submit the FFA report on a quarterly basis to EPA and UDEQ. This report represents a cooperative effort between LM and Monticello personnel to fulfill the requirements of the FFA criteria and submittal dates defined in Section 5 of the Monticello Site Management Plan. This quarterly report summarizes the status of the Monticello Vicinity Properties and the Monticello Mill Tailings Site for the period of April 1 through June 30, 2019. It also includes a summary of projected near-term activities and deliverables.



Mr. Jason Nguyen  
Control Number 19-1620  
Page 2

Please contact Fred Smith at (970) 248-6182 if you have any questions.

Sincerely,

John Elmer  
LMS Task Assignment Manager

JE/ks

Enclosure

cc: (electronic)

Lisa Fontaine, DOE  
Jeanie Gueretta, DOE  
Paul Kerl, DOE  
Ken Kreie, DOE  
Colton Berube, Navarro  
Karen Brown, Navarro  
Stephen Browning, Navarro  
John Elmer, Navarro  
Anthony Farinacci, Navarro  
Deana Guzman, Navarro  
Sam Marutzky, Navarro  
Fred Smith, Navarro  
Document Determination  
LM Admin Support  
Records  
File: LM 0610.10  
MNT 0045.10