

**Monticello, Utah, National
Priorities List Sites
Federal Facility Agreement (FFA)
Quarterly Report:
October 1–December 31, 2013**

January 2014



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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**Monticello, Utah, National Priorities List Sites
Federal Facility Agreement (FFA) Quarterly Report:
October 1–December 31, 2013**

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Abbreviations

DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
FFA	Federal Facility Agreement
gpm	gallons per minute
ICs	institutional controls
LCRS	Leachate Collection and Removal System
LDS	Leak Detection System
LM	Office of Legacy Management
LTS&M Plan	<i>Long-Term Surveillance and Maintenance Plan for the Monticello NPL Sites</i>
mg/L	milligrams per liter
MMTS	Monticello Mill Tailings Site
MVP	Monticello Vicinity Properties
NPL	National Priorities List
OU	Operable Unit
TSF	Temporary Storage Facility
UDEQ	Utah Department of Environmental Quality
UDOT	Utah Department of Transportation

1.0 Introduction

This quarterly report appraises the U.S. Environmental Protection Agency (EPA) and the Utah Department of Environmental Quality (UDEQ) of near-term status, schedule, and reporting requirements and activities for the Monticello Vicinity Properties (MVP) and the Monticello Mill Tailings Site (MMTS) for the period of October through December 2013. Quarterly reports are submitted to EPA and UDEQ in January (for the October through December quarter), April (for the January through March quarter), July (for the April through June quarter), and October (for the July through September quarter).

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) assesses the status of the MVP and MMTS remedies through (1) routine inspections (monthly, quarterly, and annually) of site infrastructure and operations that are conducted in accordance with the *Long-Term Surveillance and Maintenance Plan for the Monticello NPL Sites* (LTS&M Plan), (2) through routine (semiannual) monitoring of groundwater and surface water quality and hydrologic conditions that is conducted in accordance with the *Record of Decision for the Monticello Mill Tailings (USDOE) Site Operable Unit III, Surface and Ground Water, Monticello, Utah, June 2004*, and (3) monthly water quality monitoring associated with operation of the Operable Unit (OU) III ex situ groundwater treatment system.

The schedule and reporting requirements are determined in consultation with EPA and UDEQ and are also documented in the *Monticello Site Management Plan* (updated annually). Comprehensive data evaluation for the OU III remedy is presented in annual groundwater reports.

1.1 Quarterly Site Status

- Operating conditions remain normal for the MVP and the MMTS.
- Operation of the repository leachate collection system required routine maintenance.
- Operation of the ex situ treatment system required routine maintenance.
- Routine reporting/documentation requirements were met.
- A work plan to optimize the OU III remedy is in preparation and scheduled for completion in spring 2014.

2.0 Monticello Vicinity Properties

Long-term surveillance and maintenance for the MVP consists of providing radiological control at municipal and commercial excavations in Monticello street and utility corridors, in Utah Department of Transportation (UDOT) rights-of-way, and at property MS-00176-VL (privately owned supplemental standards property). Surveillance observations for this quarter are:

- LM representatives continued to coordinate with City of Monticello officials regarding planned and ongoing construction and excavation activities, including those by the city, UDOT, and utility companies, at roadway and utility corridors through daily briefings and planning meetings.
- There were no planned or unplanned excavations in City of Monticello street or utility corridors that required radiological control by LM.
- Neither excessive erosion nor unauthorized excavations were observed at the Highway 191 embankment at Montezuma Creek (supplemental standards property).
- Surveillance of supplemental standards property MS-00176-VL identified no excessive erosion or violation of the land-use restriction. A small scraped area of gravel was noted on the property by LM onsite representatives; however, the area is not within the known area of supplemental standards material and radiological scanning proved the affected area is not contaminated.

3.0 Monticello Mill Tailings Site

Long-term surveillance and maintenance for the MMTS consists of (1) operating the onsite disposal cell, (2) maintaining groundwater and land-use institutional controls (ICs) on the former mill site and peripheral properties, and (3) operating and monitoring the groundwater and surface water remedy.

3.1 Operable Unit I

OU I consists of the property of the former Monticello mill (mill site) and the waste disposal facility (repository). Solid wastes were removed from 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 of Monticello owns and manages the former mill site as a public park.

3.1.1 Repository

Monthly and quarterly 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 reporting period are:

- No anomalous conditions were observed at the repository with respect to the surveillance items included in the LTS&M repository area surveillance checklists (attached for this quarter as Appendix A).
- Water accumulation in Pond 4 remains minimal: a maximum of approximately 1 foot of water is currently present in the northeast and southwest quadrants of Pond 4.

- Leachate production from the repository to Pond 4 was normal. Leachate production has decreased from approximately 30,000 gallons per week following final waste encapsulation in 1999 to current values of about 1,000 gallons per week or less for each of the two repository Leachate Collection and Removal System (LCRS) sumps, LCRS 1 and LCRS 2 (see Appendix B for graphical depiction of leachate production history).
- The Pond 4 LCRS received no leachate during the quarter. This is the normal condition. The performance history for the Pond 4 LCRS is summarized as a graph in Appendix B.
- The lower sumps (leak detection system [LDS]) for the repository and Pond 4 received no leachate during the quarter. This is the normal condition. Graphs showing the performance history for the repository LDS and the Pond 4 LDS are included in Appendix B.
- Leachate collection and leak detection systems remained functional during the quarter, except that the pump control at LCRS required minor servicing.

3.1.2 Temporary Storage Facility

Routine surveillance of the Temporary Storage Facility (TSF) ensures that maintenance and radiological controls that govern access to, and placement, storage, and transfer of, contaminated material in the TSF are current and effective. No anomalous conditions were observed for the TSF with respect to the surveillance items included in the LTS&M TSF area surveillance checklist (attached for this quarter as Appendix A).

No material was placed in the TSF during the quarter. The inventory of contaminated material in the TSF remains at approximately 25 cubic yards. Approximately 4 cubic yards of the contaminated material derives from street and utility excavations from previous quarters. Radiologically contaminated material from supplemental standards properties has not been placed in the TSF since 2011. Approximately 21 cubic yards of the material in the TSF were derived from maintenance and repairs to Pond 4 in August 2013.

LM initiates the transfer of TSF materials for permanent disposition at the LM Grand Junction, Colorado, Disposal Site when the contents reach 75 cubic yards. The most recent transfer of TSF materials to the Grand Junction disposal site occurred in June 2010.

3.1.3 Former Mill Site

Surveillance of the former mill site is conducted to ensure compliance with ICs that were implemented to preserve the OU I remedy for soil and groundwater. The ICs applicable to OU I restrict groundwater use (no installation of domestic-use wells in the alluvial aquifer) and restrict land use (construction of habitable structures, camping, and damage to wetlands is prohibited, and the land is preserved as a public park). Observations for this quarter are:

- 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. Surveillance of OU II properties is conducted to ensure compliance with ICs that were implemented to preserve the OU II remedy for soil and groundwater. Observations for this quarter are:

- 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 (no installation of domestic-use wells in the alluvial aquifer) were applied to several OU II properties under the 2004 covenant by which DOE transferred selected properties to the City of Monticello. No instance 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.
- No storm events (in excess of 2.8 inches of rain in a 24-hour period) required nonroutine surveillance of supplemental standards cleanup properties. Climatological data are included in Appendix C.

3.3 Operable Unit III

OU III consists of groundwater and surface water that was contaminated as a result of operation of the former Monticello mill. The contaminated groundwater lies within the shallow alluvial aquifer beneath the valley of Montezuma Creek; contaminated surface water is present within Montezuma Creek.

3.3.1 Groundwater Restricted Area

Surveillance of properties where residual groundwater contamination is present is conducted to ensure compliance with groundwater-use restrictions that prevent exposure to contaminated groundwater. The affected OU III properties constitute the Monticello Groundwater Restricted Area, as defined and administered by the State of Utah Division of Water Rights. Surveillance observations for this quarter are:

- No evidence of nonconformance with groundwater-use restrictions was observed (no installation of domestic-use wells in the alluvial aquifer).

3.3.2 Groundwater Remediation

In accordance with the OU III contingency remedy implemented under the January 2009 Explanation of Significant Difference, contaminated alluvial groundwater is extracted and treated on private property approximately 600 feet east of the former mill site. The contaminated groundwater is treated using zero-valent iron in two ex situ treatment vessels. The effluent is discharged to Montezuma Creek. There is also an infiltration trench available for the discharge of limited volumes (2–3 gallons per minute [gpm]) of treated water; however, the trench and plumbed connections are susceptible to flow restriction, possibly due to iron accumulation from the treatment system effluent.

Performance of the treatment system, cumulatively and from October through December 2013, is summarized as follows:

- As a correction to the quarterly report for July through September 2013, the extraction well (EW-1) for the ex situ treatment system was not redeveloped during that quarter as was erroneously reported.
- The treatment system was inoperable between September 23 and October 28, 2013, because of extraction well pump failure. Reduced pumping rates reported in the previous quarter were erroneously ascribed to limited water availability during drought; it is more likely that the reduced pumping rates were attributable to pump operation deterioration.
- A new pump was placed in EW-1 on October 28, 2013, and the system resumed operation at approximately 9.5 gpm.
- The reactive media is exchanged when the effluent concentration of uranium exceeds about 150 micrograms per liter (or about one-half of the influent concentration) or if flow through the treatment vessels is reduced to approximately 5 gpm or less. Media exchange occurs about once per year under current operating conditions.
- The reactive media was last exchanged during the week of September 16, 2013. Flow rates and uranium treatment efficiency for the quarter indicate effective treatment capacity and no imminent need to exchange the treatment media.
- Monthly monitoring of the treatment effluent verified that iron concentrations and pH for the quarter were within discharge allowances. Monthly effluent monitoring results for the quarter and the discharge allowances are shown in Table 1.
- Metered inflow to the treatment system confirmed that effluent discharge to Montezuma Creek did not exceed the allowed rate of 10 gpm.
- Approximately 859,121 gallons of groundwater were treated during the quarter. The net monthly treatment rates, including the periods of system downtime, are shown in Table 2.
- Approximately 1.82 pounds of uranium were removed from the aquifer during the quarter as a result of groundwater extraction and treatment. Table 2 shows the mass of uranium removed from groundwater for each month of the quarter.
- No treated water was transferred to the infiltration trench during this quarter. Outfall metering to the infiltration trench remained nonfunctional. Use of the infiltration trench and the need for separate metering of discharge to the trench has been suspended indefinitely.

Table 1. Treatment System Compliance Summary

Treatment System Effluent to Montezuma Creek	October 2013 ^{c,d}	November 2013	December 2013
pH ^a	No data	7.1	7.3
Iron (total, milligrams per liter) ^b	No data	18	18

^a pH discharge allowance range = 6.5–9.0 standard units

^b Iron discharge limit = 45.4 milligrams per liter (mg/L) at outfall to Montezuma Creek

^c Water quality parameters not collected October 2013 due to temporary suspension of field activities in response to federal government budget constraints. September 4, 2013, water quality results were pH = 7.3 standard units and total iron = 18 mg/L. Reactive media was exchanged September 18, 2013.

^d The system was inoperable between September 23 and October 28, 2013, because of pump failure. Maintenance was delayed because of federal government budget concerns.

Table 2. Treatment System Performance Summary

Treatment Parameter	October 2013	November 2013	December 2013 ^a
Gallons treated	45,762	408,358	405,001
Average treatment rate, gpm	1.0	9.5	9.4
Uranium influent, micrograms per liter	240 (assumed) ^b	240	278
Uranium effluent, micrograms per liter	4.5 ^b	4.5	2.5
Uranium mass removed, pounds	0.09	0.80	0.93
Cumulative uranium mass removed, pounds	64.6	65.4	66.3
Cumulative volume treated (million gallons)	28,112,242	28,520,600	28,925,601

^a Through December 30, 2013.

^b No water quality data for October 2013. Field activities suspended because of federal government budget concerns. Assumed value for October is equal to the November 2013 result.

4.0 Schedule of Activities and Deliverables

Table 3 summarizes the completion of recent activities and deliverables and the pending near-term activities and reporting requirements for the Monticello National Priorities List (NPL) sites.

Table 3. Schedule of Recently Completed and Near-Term Activities and DOE Deliverables

Activity/DOE Deliverable	Schedule
Recently Completed:	
Monthly monitoring of ex situ groundwater treatment system.	Completed for November and December 2013. Results are summarized in Tables 1 and 2 and Section 3.3.2.
MMTS monthly technical meetings for OU III remedy optimization.	Convened October 15 and November 11, 2013. A December meeting was not held in mutual agreement among DOE, EPA, and UDEQ.
Annual Site Inspection Report.	Submitted to EPA and UDEQ December 20, 2013.
Semiannual OU III water quality and hydrologic monitoring.	Completed week of October 21, 2013. Results to be presented in 2014 annual groundwater report (fall 2014).
Near-Term:	
FFA quarterly report: January–March 2014.	DOE to submit by April 10, 2014.
Monthly technical meeting.	Dates for next quarter (January, February, and March 2014) meetings with EPA and UDEQ to be determined.
Monthly monitoring of ex situ groundwater treatment system.	Next scheduled monitoring is for weeks of January 6 and February 6, 2014. March 2014 schedule to be determined.
Remedial design/remedial action (RD/RA) work plan for OU III groundwater remedy optimization.	Draft to EPA and UDEQ early 2014 (January, February, or March 2014).
OU III contingency remedy optimization construction start.	No later than 1 year after the RD/RA work plan becomes final (this assumes that private property access agreement is established when the RD/RA work plan becomes final).

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Appendix A

Monthly and Quarterly Surveillance Checklists

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Repository Area Surveillance Checklist

Monthly Surveillance _____ Quarterly Surveillance (Feb., May, Aug., Nov.)

N/A Storm Event Triggered Surveillance due to N/A inches of rainfall over the past 24 hours.

Inspection Item	Acceptable (Yes/No)	Comments and Recommendations
Condition of:		
Fences and gates	<u>yes</u>	
Roads ^a	<u>yes</u>	<u>Disposal Rd. Great South and East</u>
Signs	<u>yes</u>	
Site monuments	<u>yes</u>	<u>Roads will require water grading</u>
Drainage ditches ^a	<u>yes</u>	<u>in the spring or summer.</u>
Manholes	<u>yes</u>	
Vegetation	<u>yes</u>	
Evidence of erosion of:		
Top of disposal cell ^a	<u>yes</u>	
Disposal cell sideslopes ^a	<u>yes</u>	
Ditches	<u>yes</u>	
Surrounding area	<u>yes</u>	
Evidence of:		
Vandalism	<u>yes</u>	
Intrusion by livestock	<u>yes</u>	
Burrowing animal damage	<u>yes</u>	<u>Prairie Dogs are the same ex. top.</u>
Intrusion by humans	<u>yes</u>	
Accumulation of trash	<u>yes</u>	

Additional Quarterly Surveillance Requirements

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

Condition of:		
Settlement plate structures	_____	_____
Manholes ^b	_____	_____
Sediment Ponds	_____	_____
Evidence of:		
Structural Instability	_____	_____

Additional Comments

The site looks good. The vegetation is beginning to die
due to the coming of winter.

Signature [Signature]
Monticello LM Representative

Date 10-24-13

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

Figure 3-5. Example Repository Area Surveillance Checklist

Repository Area Surveillance Checklist

Monthly Surveillance Quarterly Surveillance (Feb., May, Aug., Nov.)

N/A Storm Event Triggered Surveillance due to N/A inches of rainfall over the past 24 hours.

Inspection Item	Acceptable (Yes/No)	Comments and Recommendations
Condition of:		
Fences and gates	<u>yes</u>	
Roads ^a	<u>yes</u>	<u>South and east road will require</u>
Signs	<u>yes</u>	<u>water grading in the spring.</u>
Site monuments	<u>yes</u>	
Drainage ditches ^a	<u>yes</u>	
Manholes	<u>yes</u>	<u>Added the word R-ADON to the airborne</u>
Vegetation	<u>yes</u>	<u>sign per RCT Direction.</u>
Evidence of erosion of:		
Top of disposal cell ^a	<u>YES</u>	
Disposal cell sideslopes ^a	<u>YES</u>	
Ditches	<u>yes</u>	
Surrounding area	<u>yes</u>	
Evidence of:		
Vandalism	<u>yes</u>	
Intrusion by livestock	<u>yes</u>	
Burrowing animal damage	<u>YES</u>	<u>NO RECENT PRAIRIE DOG ACTIVITY VISIBLE</u>
Intrusion by humans	<u>YES</u>	
Accumulation of trash	<u>yes</u>	

Additional Quarterly Surveillance Requirements

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

Condition of:		
Settlement plate structures	<u>YES</u>	
Manholes ^b	<u>YES</u>	<u>Water accumulation in MH 3</u>
Sediment Ponds	<u>YES</u>	
Evidence of:		
Structural Instability	<u>Yes</u>	

Additional Comments

Signature David Dille Date 11/25/13
 Monticello LM Representative

^aInspections required following a significant storm event

^bOpen to inspect quarterly

Figure 3-5. Example Repository Area Surveillance Checklist

Repository Area Surveillance Checklist

X Monthly Surveillance N/A Quarterly Surveillance (Feb., May, Aug., Nov.)

N/A Storm Event Triggered Surveillance due to N/A inches of rainfall over the past 24 hours.

Inspection Item	Acceptable (Yes/No)	Comments and Recommendations
Condition of:		
Fences and gates	<u>yes</u>	
Roads ^a	<u>yes</u>	
Signs	<u>yes</u>	<u>The controlled area signs at vaults 1 & 3 are peeling. We pessed them back down and will correct in the spring.</u>
Site monuments	<u>yes</u>	
Drainage ditches ^a	<u>yes</u>	
Manholes	<u>yes</u>	
Vegetation	<u>yes</u>	
Evidence of erosion of:		
Top of disposal cell ^a	<u>yes</u>	
Disposal cell sideslopes ^a	<u>yes</u>	
Ditches	<u>yes</u>	
Surrounding area	<u>yes</u>	
Evidence of:		
Vandalism	<u>yes</u>	
Intrusion by livestock	<u>yes</u>	
Burrowing animal damage	<u>yes</u>	<u>NO sign of Prairie Dogs.</u>
Intrusion by humans	<u>yes</u>	
Accumulation of trash	<u>yes</u>	

Additional Quarterly Surveillance Requirements

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

Condition of:

Settlement plate structures	_____	_____
Manholes ^b	_____	_____
Sediment Ponds	_____	_____

Evidence of:

Structural Instability	_____	_____
------------------------	-------	-------

Additional Comments

Road is passable. Apr. 1' of snow.

Signature [Signature] Date 12-17-13
 Monticello LM Representative

^aInspections required following a significant storm event

^bOpen to inspect quarterly

Figure 3-5. Example Repository Area Surveillance Checklist

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 330" at N.E. corner.

Inspection Item	Acceptable (Yes/No)	Comments & Recommendation
Condition of:		
Fences, gates, and locks	<u>yes</u>	
Roads	<u>yes</u>	
Signs	<u>yes</u>	
Visible piping	<u>yes</u>	<u>Ballast Tubes have been removed</u>
Visible liner and anchors	<u>yes</u>	<u>per design. liner looks good.</u>
Rescue equipment	<u>yes</u>	<u>anchors have been removed.</u>
Evidence of erosion of:		
Top of Pond 4 berm	<u>yes</u>	<u>Removed larger rocks has resulted</u>
Pond 4 sideslopes	<u>yes</u>	<u>in storm water rilling the edge.</u>
Ditches	<u>yes</u>	<u>No problem at this time.</u>
Surrounding area	<u>yes</u>	
Seepage from Pond 4	<u>yes</u>	
Overtopping of Pond 4	<u>yes</u>	
Evidence of:		
Vandalism	<u>yes</u>	
Intrusion by wildlife	<u>yes</u>	<u>No new burrowing noticed.</u>
Intrusion by humans	<u>yes</u>	
Accumulation of trash	<u>yes</u>	
Additional Comments		
<u>Pond 4 looks a lot better now than when we</u>		
<u>were still cleaning it up.</u>		

Monticello LM Representative Frank Smith Date 10-24-13

Figure 3-6. Example Checklist for Monthly Pond 4 Surveillance

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 12-13" at NE corner

Inspection Item	Acceptable (Yes/No)	Comments & Recommendation
Condition of:		
Fences, gates, and locks	<u>YES</u>	
Roads	<u>YES</u>	
Signs	<u>YES</u>	
Visible piping	<u>YES</u>	
Visible liner and anchors	<u>YES</u>	
Rescue equipment	<u>YES</u>	<u>ALL PRESENT IN CABINETS</u>
Evidence of erosion of:		
Top of Pond 4 berm	<u>YES</u>	
Pond 4 sideslopes	<u>YES</u>	
Ditches	<u>YES</u>	
Surrounding area	<u>YES</u>	
Seepage from Pond 4	<u>YES</u>	
Overtopping of Pond 4	<u>YES</u>	
Evidence of:		
Vandalism	<u>YES</u>	
Intrusion by wildlife	<u>YES</u>	
Intrusion by humans	<u>YES</u>	
Accumulation of trash	<u>YES</u>	
Additional Comments		

Monticello LM Representative David Dille Date 11/20/13

Figure 3-6. Example Checklist for Monthly Pond 4 Surveillance

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 2 18"

Inspection Item	Acceptable (Yes/No)	Comments & Recommendation
Condition of:		
Fences, gates, and locks	<u>yes</u>	_____
Roads	<u>yes</u>	_____
Signs	<u>yes</u>	_____
Visible piping	<u>yes</u>	_____
Visible liner and anchors	<u>yes</u>	<u>anchor tubes were removed.</u>
Rescue equipment	<u>yes</u>	_____
Evidence of erosion of:		
Top of Pond 4 berm	<u>yes</u>	_____
Pond 4 sideslopes	<u>yes</u>	_____
Ditches	<u>yes</u>	_____
Surrounding area	<u>yes</u>	_____
Seepage from Pond 4	<u>yes</u>	_____
Overtopping of Pond 4	<u>yes</u>	_____
Evidence of:		
Vandalism	<u>yes</u>	_____
Intrusion by wildlife	<u>NO</u>	<u>Rabbit inside the fence.</u>
Intrusion by humans	<u>yes</u>	_____
Accumulation of trash	<u>yes</u>	_____
Additional Comments		
<u>The rabbit is at the bottom of the berm and</u>		
<u>not causing a problem.</u>		
<u>The pond bottom is covered in ice and snow.</u>		

Monticello LM Representative *[Signature]* Date 12-17-13

Figure 3-6. Example Checklist for Monthly Pond 4 Surveillance

**Monticello Long-Term Surveillance and Maintenance
Temporary Storage Facility Record Book
Inspection Report**

Acceptable?

Yes / No

yes Was the gate locked upon arrival?

yes Are signs posted in accordance with Section 3.4.4?

yes Are all postings legible?

yes Are enclosures on the concrete bin and stored drum containers tight?

yes Are containers in good physical condition (no rust, no holes, no bulges, etc.)?

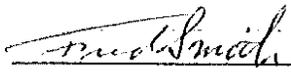
75% cap. How much radiologically contaminated material is in the concrete bin? Note: the material should be shipped when the volume in storage approaches 75 percent of the storage capacity.

yes Is the surface area of the TSF in good physical condition (no erosion, no flood damage, no excessive vegetation growth, etc.)?

yes Has radiological monitoring been conducted in accordance with Section 3.4.5?

yes Is the security fence in good condition?

Comments: Snow covers the TSF yard now. If access to the TSF is required we will contact our local subcontractor to remove the snow so we can access the TSF. This would not take very long.


Signature of Monticello LM Representative

11-20-13
Date of Inspection

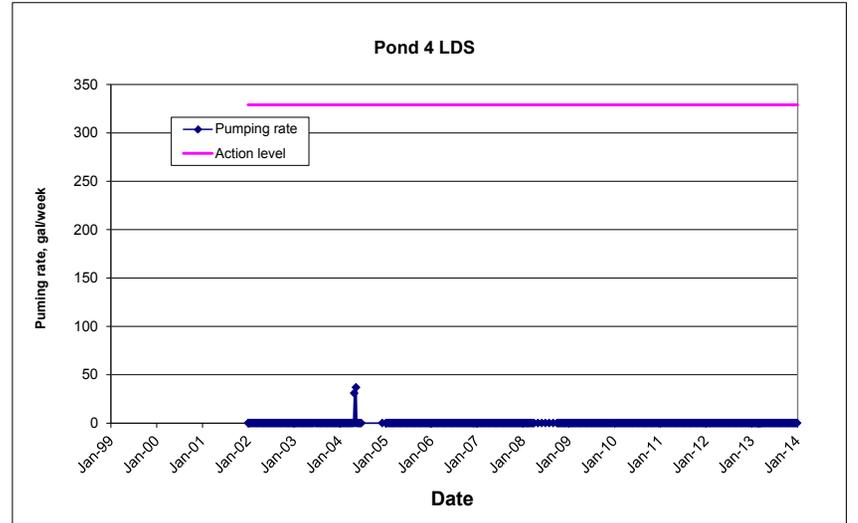
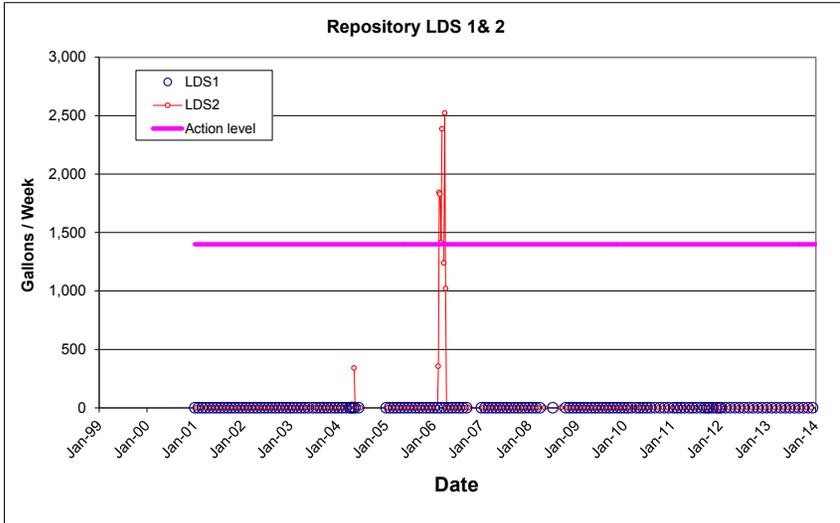
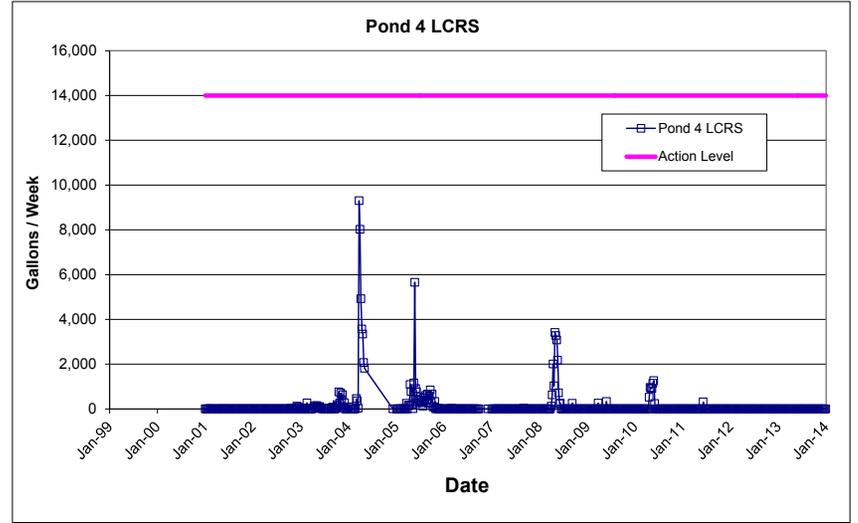
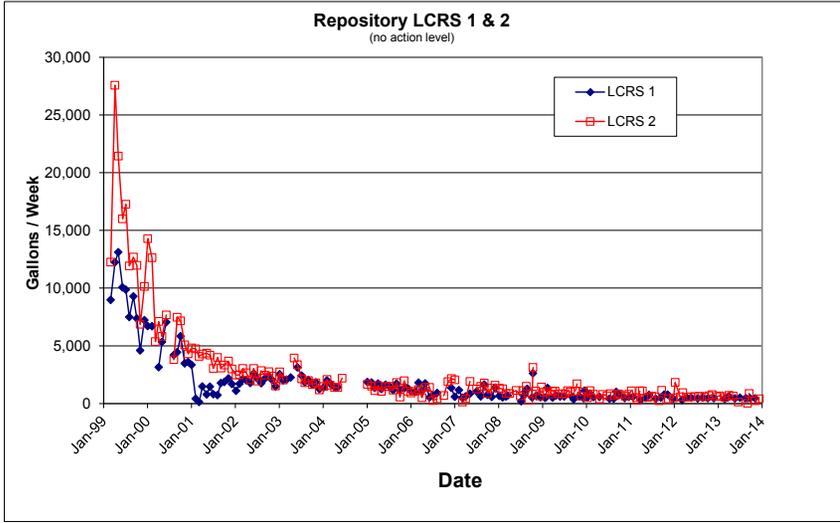
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Appendix B

Graphs Showing Performance History for Repository and Pond 4 Leachate Collection and Recovery Systems and Leak Detection Systems

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Graphs Showing Performance History for Repository and Pond 4 Leachate Collection and Recovery System (LCRS) and Leak Detection System (LDS)



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Appendix C

Climatological Summaries

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MONTHLY CLIMATOLOGICAL SUMMARY for OCT. 2013

NAME: Monticello Office CITY: STATE:
 ELEV: 0 ft LAT: LONG:

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	56.7	69.8	4:00p	43.6	7:30a	9.0	0.7	0.00	6.2	26.0	12:30p	WSW
2	56.1	65.8	5:00p	41.9	7:30a	9.0	0.0	0.00	7.0	25.0	5:00p	SSW
3	50.0	64.9	3:00p	32.0	12:00m	15.0	0.0	0.00	12.7	42.0	8:00p	S
4	34.3	41.4	3:30p	28.3	4:00a	30.7	0.0	0.00	11.1	29.0	1:30p	N
5	38.1	48.6	4:30p	26.9	7:30a	26.9	0.0	0.00	10.7	26.0	8:30a	NNW
6	48.5	60.4	4:30p	37.5	3:00a	16.5	0.0	0.00	7.5	20.0	3:00p	NNW
7	51.9	64.1	3:00p	37.7	6:30a	13.1	0.0	0.00	6.1	24.0	1:00p	S
8	54.4	64.4	4:00p	44.4	7:00a	10.6	0.0	0.00	8.3	30.0	1:00p	SSW
9	52.5	60.4	3:00p	43.3	1:00a	12.5	0.0	0.00	10.5	34.0	8:00p	S
10	40.0	52.5	1:30a	34.3	10:00a	25.0	0.0	0.98	9.7	33.0	4:00a	SSW
11	39.5	47.2	4:00p	33.8	7:30a	25.5	0.0	0.00	6.5	26.0	12:30a	S
12	43.9	52.4	4:00p	35.3	2:00a	21.1	0.0	0.00	5.4	22.0	3:30p	SW
13	48.7	59.1	5:00p	38.4	3:30a	16.3	0.0	0.00	8.7	33.0	12:00p	S
14	42.0	49.2	4:30p	34.6	8:00a	23.0	0.0	0.00	6.2	26.0	3:30p	NNW
15	37.8	42.7	11:30a	32.5	12:00m	27.2	0.0	0.00	7.5	23.0	1:00p	NNW
16	36.7	46.7	4:00p	30.5	7:30a	28.3	0.0	0.00	8.2	23.0	2:30a	NNW
17	41.5	52.8	5:00p	29.7	12:30a	23.5	0.0	0.00	3.5	15.0	1:00p	WNW
18	39.8	47.3	4:00p	32.5	8:00a	25.2	0.0	0.00	9.0	31.0	1:00p	NNW
19	42.9	56.2	4:30p	29.0	8:00a	22.1	0.0	0.00	3.9	21.0	1:00p	NW
20	45.6	57.6	2:00p	34.0	5:30a	19.4	0.0	0.00	5.8	26.0	1:00p	WNW
21	45.8	54.9	3:00p	38.0	8:00a	19.2	0.0	0.00	6.8	19.0	10:30a	NW
22	48.4	61.1	3:00p	38.7	6:00a	16.6	0.0	0.00	3.6	13.0	5:30p	NW
23	49.1	64.4	5:00p	36.0	8:00a	15.9	0.0	0.00	3.3	14.0	12:30p	W
24	50.7	64.2	3:00p	41.8	8:30a	14.3	0.0	0.00	4.6	22.0	3:30p	WNW
25	48.1	56.5	12:00p	40.2	8:30a	16.9	0.0	0.05	4.1	17.0	3:00p	SW
26	48.4	61.2	3:00p	37.4	7:00a	16.6	0.0	0.00	2.3	13.0	4:30p	N
27	47.3	57.3	3:30p	39.4	5:30a	17.7	0.0	0.00	5.6	23.0	11:30a	S
28	48.9	57.2	4:00p	40.3	12:30a	16.1	0.0	0.00	15.2	46.0	12:30p	SSW
29	39.5	47.2	12:30a	32.0	12:00m	25.5	0.0	0.28	10.7	31.0	7:00a	S
30	32.0	35.8	4:30p	30.1	6:00a	33.0	0.0	0.17	3.4	20.0	5:00p	SSW
31	34.6	42.4	3:00p	28.4	8:30a	30.4	0.0	0.02	4.7	21.0	3:30p	NW
	45.0	69.8	1	26.9	5	622.1	0.7	1.50	7.1	46.0	28	S

Max >= 90.0: 0

Max <= 32.0: 0

Min <= 32.0: 9

Min <= 0.0: 0

Max Rain: 0.98 ON 10/10/13

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

Heat Base: 65.0 Cool Base: 65.0 Method: Integration

MONTHLY CLIMATOLOGICAL SUMMARY for NOV. 2013

NAME: Monticello Office CITY: STATE:
 ELEV: 0 ft LAT: LONG:

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	38.1	48.0	4:00p	29.0	7:00a	26.9	0.0	0.00	5.7	24.0	10:30a	N
2	41.3	51.4	4:00p	29.8	7:00a	23.7	0.0	0.00	7.8	27.0	11:00a	SSW
3	41.9	52.4	1:30p	29.3	11:30p	23.1	0.0	0.00	11.0	28.0	12:30p	S
4	32.4	42.1	2:00p	23.7	6:00a	32.6	0.0	0.00	6.7	31.0	12:00m	N
5	27.7	33.4	3:30p	22.9	9:30p	37.3	0.0	0.00	12.7	34.0	12:30p	NNW
6	32.4	45.4	2:00p	20.9	5:30a	32.6	0.0	0.00	3.5	19.0	2:30p	NW
7	39.5	51.2	3:00p	28.9	1:00a	25.5	0.0	0.00	5.1	20.0	9:30p	NW
8	41.9	53.0	2:30p	31.1	7:00a	23.1	0.0	0.00	8.7	32.0	10:00a	S
9	43.1	56.8	3:00p	32.2	6:30a	21.9	0.0	0.00	2.8	14.0	12:00p	SW
10	44.7	57.5	3:30p	34.4	6:30a	20.3	0.0	0.00	3.7	17.0	12:30p	NW
11	47.3	60.1	1:30p	36.2	7:30a	17.7	0.0	0.00	4.2	19.0	2:00p	NW
12	47.7	60.1	1:30p	38.7	7:30a	17.3	0.0	0.00	3.5	15.0	12:30p	NW
13	43.7	50.8	3:00p	37.1	12:00m	21.3	0.0	0.00	5.2	20.0	11:30a	S
14	43.1	54.9	4:00p	33.1	10:00p	21.9	0.0	0.00	5.1	21.0	5:00a	NNW
15	36.8	45.3	12:30p	29.6	6:30a	28.2	0.0	0.06	7.1	26.0	8:30a	SSW
16	36.5	41.7	8:30p	32.1	12:30a	28.5	0.0	0.03	9.9	32.0	1:00p	SSW
17	37.5	46.3	3:00p	30.4	12:00m	27.5	0.0	0.00	7.0	21.0	12:00p	SSE
18	37.7	50.2	1:30p	26.7	7:00a	27.3	0.0	0.00	3.6	18.0	11:30a	SSE
19	39.0	43.5	11:30a	32.7	2:00a	26.0	0.0	0.00	6.4	25.0	10:30a	SSW
20	37.6	44.4	12:00p	32.1	4:30a	27.4	0.0	0.00	5.0	19.0	11:00p	SSW
21	37.0	41.1	3:00p	33.0	12:00m	28.0	0.0	0.24	5.1	17.0	12:30a	S
22	32.4	33.4	11:30a	31.4	9:30p	32.6	0.0	0.15	2.1	14.0	12:30p	NNW
23	32.5	35.0	4:00p	27.9	11:00p	32.5	0.0	0.32	5.4	23.0	9:00p	SSW
24	27.8	33.0	12:00m	24.6	9:00p	37.2	0.0	0.09	4.8	31.0	12:00m	SSW
25	33.5	38.7	11:30a	27.6	5:30a	31.5	0.0	0.09	15.8	36.0	4:30a	NNW
26	32.2	42.0	4:30p	20.9	12:00m	32.8	0.0	0.08	5.0	18.0	3:30a	NNW
27	28.1	37.8	4:30p	18.5	3:00a	36.9	0.0	0.01	2.2	12.0	12:00p	SSE
28	30.6	39.6	3:00p	21.1	7:30a	34.4	0.0	0.01	2.4	14.0	1:30p	WSW
29	27.8	37.4	2:30p	20.7	11:30p	37.2	0.0	0.00	3.1	14.0	9:00a	SE
30	24.3	30.5	12:30p	17.9	4:30a	40.7	0.0	0.01	2.5	12.0	11:00p	N
	36.5	60.1	11	17.9	30	853.9	0.0	1.09	5.8	36.0	25	SSW

Max >= 90.0: 0
 Max <= 32.0: 1
 Min <= 32.0: 20
 Min <= 0.0: 0

Max Rain: 0.32 ON 11/23/13

Days of Rain: 8 (>.01 in) 3 (>.1 in) 0 (>1 in)

Heat Base: 65.0 Cool Base: 65.0 Method: Integration

MONTHLY CLIMATOLOGICAL SUMMARY for DEC. 2013

NAME: Monticello Office CITY: STATE:
 ELEV: 0 ft LAT: LONG:

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	24.7	29.6	1:00p	19.8	8:00a	40.3	0.0	0.00	1.3	12.0	9:00p	S
2	26.4	28.4	2:30p	24.3	8:30a	38.6	0.0	0.00	6.1	18.0	10:00p	S
3	34.0	39.7	3:30p	26.9	3:00a	31.0	0.0	0.01	13.3	34.0	2:00p	SSW
4	19.1	36.5	2:00a	5.1	11:30p	45.9	0.0	0.00	12.6	32.0	5:00a	NNW
5	7.8	18.2	2:00p	0.4	4:00a	57.2	0.0	0.00	3.4	12.0	3:30p	NNE
6	10.3	17.7	12:00m	-2.2	7:30a	54.7	0.0	0.00	8.0	25.0	11:30a	WNW
7	18.8	22.2	11:00p	14.7	4:00a	46.2	0.0	0.00	12.9	36.0	2:00p	SSW
8	12.8	20.7	1:30a	1.4	11:00p	52.2	0.0	0.00	7.8	38.0	1:00a	NW
9	6.8	11.8	3:00p	0.1	7:30p	58.2	0.0	0.00	8.6	31.0	8:30a	NNW
10	9.7	18.4	3:30p	0.6	4:00a	55.3	0.0	0.00	3.3	15.0	1:00p	WNW
11	18.7	33.8	4:30p	7.4	7:00a	46.3	0.0	0.00	2.7	8.0	7:00a	NNW
12	24.9	39.1	2:00p	12.5	7:00a	40.1	0.0	0.00	1.3	11.0	3:00p	WNW
13	25.2	33.9	2:30p	14.7	5:30a	39.8	0.0	0.00	7.8	32.0	6:00p	NNW
14	25.5	31.5	2:30p	20.9	10:30p	39.5	0.0	0.00	10.4	25.0	1:30a	NNW
15	29.8	39.2	1:00p	19.4	2:30a	35.2	0.0	0.00	4.5	21.0	4:00p	NNE
16	32.3	44.0	1:30p	21.9	3:30a	32.7	0.0	0.00	2.5	13.0	8:30p	NNE
17	34.5	48.8	3:00p	23.9	7:00a	30.5	0.0	0.00	1.6	9.0	2:00a	NNW
18	31.7	38.4	1:30p	23.7	8:30a	33.3	0.0	0.00	6.7	20.0	11:00a	SSE
19	34.4	39.8	2:30p	28.3	11:30p	30.6	0.0	0.00	6.6	23.0	5:00a	S
20	27.4	31.4	11:30a	20.8	10:30p	37.6	0.0	0.04	3.5	19.0	4:30p	WNW
21	23.4	29.4	1:00p	15.4	3:30a	41.6	0.0	0.00	9.0	31.0	12:30p	NNW
22	24.0	30.7	2:00p	15.8	7:30a	41.0	0.0	0.01	5.9	24.0	2:30a	NNW
23	26.0	36.1	2:30p	17.2	3:00a	39.0	0.0	0.01	3.6	20.0	10:30a	NNE
24	26.9	38.4	2:30p	19.4	4:30a	38.1	0.0	0.01	7.2	34.0	3:00p	NNW
25	28.5	34.8	2:30p	19.8	4:00a	36.5	0.0	0.00	8.7	17.0	8:30a	NNW
26	30.8	41.3	2:00p	14.6	8:00a	34.2	0.0	0.00	5.6	15.0	12:00p	NW
27	33.6	43.1	2:00p	24.9	10:00p	31.4	0.0	0.00	2.9	13.0	4:00a	NW
28	29.3	37.7	5:30p	21.8	4:30a	35.7	0.0	0.00	4.1	31.0	11:00p	SW
29	25.7	31.0	2:30p	17.5	10:00p	39.3	0.0	0.00	12.5	33.0	1:00a	NNW
30	23.2	27.8	4:30a	15.4	7:30a	13.1	0.0	0.00	3.8	15.0	4:00a	SE
31												

	24.2	48.8	17	-2.2	6	1195.1	0.0	0.08	6.3	38.0	8	NNW

Max >= 90.0: 0
 Max <= 32.0: 14
 Min <= 32.0: 30
 Min <= 0.0: 1
 Max Rain: 0.04 ON 12/20/13
 Days of Rain: 1 (>.01 in) 0 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

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