

**Monticello, Utah, National
Priorities List Sites
Federal Facility Agreement (FFA)
Quarterly Report:
October 1–December 31, 2012**

January 2013



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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**Monticello, Utah, National Priorities List Sites
Federal Facility Agreement (FFA) Quarterly Report:
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Abbreviations

DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
FFA	Federal Facilities Agreement
gpm	gallons per minute
LCRS	Leachate Collection and Removal System
LDS	Leak Detection System
LM	Office of Legacy Management
LMS	Legacy Management Support
LTSM Plan	<i>Long-Term Surveillance and Maintenance Plan for the Monticello NPL Sites</i>
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 report summarizes the status of the Monticello Vicinity Properties (MVP) and the Monticello Mill Tailings Site (MMTS) located in and near Monticello, Utah, for the period of October through December 2012. The U.S. Department of Energy (DOE) Office of Legacy Management (LM) assesses the status of the sites primarily through routine monthly and quarterly inspections performed by onsite Legacy Management Support (LMS) contractor staff. The inspections are performed in accordance with the *Long-Term Surveillance and Maintenance Plan for the Monticello NPL Sites* (LTSM Plan). Findings for the current reporting period indicate no anomalous site conditions.

The report includes a summary of recently completed and projected near-term activities and reporting requirements. The Federal Facilities Agreement (FFA) quarterly reports are submitted to the U.S. Environmental Protection Agency (EPA) and the Utah Department of Environmental Quality (UDEQ) to apprise project managers of project status and the near-term schedule of activities and reporting requirements.

The MVP and MMTS were placed on the EPA National Priorities List (NPL) in 1986 and 1989, respectively. DOE implemented remedial actions at the MVP in 1986 and at the MMTS in 1989 to comply with the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act.

MVP and MMTS remedial actions were completed by September 1999, except for the remediation of contaminated groundwater and surface water of Operable Unit (OU) III of the MMTS. OU III remedial actions are ongoing. As of December 2003, LM administers the MVP and MMTS as the Monticello Disposal and Processing Site.

In addition to monthly and quarterly inspections, the status of the MVP and MMTS is evaluated in annual site inspections. The most recent annual inspection was conducted on September 25–26, 2012. The 2012 Annual Inspection Report was submitted to EPA and UDEQ on December 13, 2012. The status of the MVP and MMTS was also addressed in the most recent FFA meeting, held in Monticello September 27, 2012.

2.0 MMTS Status

2.1 Operable Unit I

OU I of the MMTS consists of the onsite waste disposal cell and supporting infrastructure (collectively referred to as the repository) and the property comprising the former Monticello uranium- and vanadium-ore processing mill (mill site). Supporting infrastructure comprising the repository include the disposal cell and disposal cell leachate management system, the LM field office, and a facility for interim storage of radiologically contaminated material encountered in city street and utility excavations. The disposal cell contains radioactively contaminated soil, sediment, and debris removed from the former mill site and surrounding private and municipal properties in Monticello.

2.1.1 Monticello LM Repository (DOE-Owned)

The repository is monitored and maintained by onsite LMS staff. As directed by Section 3.2 of the LTSM Plan, monthly and quarterly inspections of the repository are conducted to ensure that the waste remains isolated from the environment.

Inspection findings for the reporting period, with reference to the applicable section of the LTSM Plan, include the following:

- Condition of disposal site facilities (Section 3.2.2): Monthly and quarterly inspections identified no anomalous conditions at the repository site. The Repository Area Surveillance Checklists for this quarter are included in Appendix A. The integrity of the repository remains uncompromised.
- Meteorological monitoring and storm events (Sections 3.2.2.2, 3.2.2.3, and 4.3.1): Significant storm events initiate radiological monitoring to ensure that contaminated soil has not been transported from supplemental standards areas. There were no storm events that required nonroutine surveillance of affected properties (those designated as supplemental standards cleanup properties) during this quarter. The onsite meteorological station was out of service during October and part of November but has been restored to service. Climatological summaries are included in Appendix B.
- Pond 4 surveillance (Section 3.2.3): Monthly inspections identified no anomalous conditions at Pond 4, which receives leachate from the disposal cell for subsequent treatment by evaporation. The Monthly Pond 4 Surveillance Checklists for this quarter are included in Appendix A.
- Disposal cell and Pond 4 Leachate Collection and Removal System (LCRS) and Leak Detection System (LDS) operation (Section 3.3):
 - Disposal cell leachate collection in the upper sumps (i.e., the LCRS) was normal for the quarter. 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 sumps, LCRS 1 and LCRS 2. A graph showing the performance history for the repository LCRS is included in Appendix C.
 - Operation of the LCRS at the leachate collection pond (Pond 4) was normal (i.e., no water was collected during the quarter). A graph showing the performance history for the Pond 4 LCRS is included in Appendix C.
 - Disposal cell and Pond 4 leachate collection in the lower sumps (LDS) remains at 0 gallons per week. Graphs showing the performance history for the repository and Pond 4 are included in Appendix C.
 - All disposal cell and Pond 4 leachate management equipment (pumps, pump controls, monitoring devices, and data transmission devices) are functional.
 - Action levels in Appendix C graphs and associated response actions are described in Section 3.3 of the LTSM Plan.

- Temporary Storage Facility (TSF) operation and maintenance (Section 3.4):
 - The inventory of contaminated material in the TSF is approximately 4 cubic yards. The TSF Record Book Inspection Reports for this quarter are included in Appendix A. In accordance with Section 3.4 of the LTSM Plan, DOE will transfer material from the TSF to the LM Grand Junction, Colorado, Disposal Site when contents of the TSF approach 75 cubic yards (TSF capacity is about 100 cubic yards). The most recent transfer of material from the TSF to the disposal site occurred in June 2010 and was documented in the FFA quarterly report for July 1 through September 30, 2010.

2.1.2 Former Mill Site (City-Owned)

Surveillance of the former mill site is conducted to ensure compliance with institutional controls implemented to preserve the OU I remedy for soil and groundwater. Findings for this quarter, with reference to the applicable section of the LTSM Plan, are:

- Routine surveillance of the former mill site (Section 4.2.2): No evidence of nonconformance with groundwater-use restrictions (no installation of domestic-use wells in the alluvial aquifer) or land-use restrictions (no construction of habitable structures, no camping, and land-use preservation as a public park) was observed.

2.2 Operable Unit II (Peripheral Properties, Private and City-Owned)

Surveillance of the Peripheral Properties is conducted to ensure compliance with institutional controls implemented to preserve the OU II remedy for soil and groundwater. Findings for this quarter, with reference to the applicable section of the LTSM Plan, are:

- Routine surveillance of the Montezuma Creek Restrictive Easement Area (privately owned; Section 4.2.6): No evidence of nonconformance with land-use restrictions (no soil removal or construction of habitable structures in supplemental standards areas) or groundwater-use restrictions (no installation of domestic-use wells in the alluvial aquifer) was observed.
- Routine surveillance of supplemental standards property MS-00211-VL (City-owned; Section 4.2.5): No evidence of nonconformance with the land use-restriction on building construction was observed.
- No evidence of nonconformance with land- and groundwater-use restrictions was noted on City-owned peripheral properties with supplemental standards areas (Section 4.1).

2.3 Operable Unit III (Contaminated Groundwater and Surface Water)

2.3.1 Groundwater Restricted Area

Surveillance of properties where residual groundwater contamination is present is conducted to ensure compliance with groundwater-use restrictions (i.e., institutional controls to prevent exposure to contaminated groundwater). The affected properties constitute the Monticello Groundwater Restricted Area, as defined by the State of Utah Division of Water Rights. Surveillance findings for this quarter, with reference to the applicable section of the LTSM Plan, are:

- Routine surveillance of the Monticello Groundwater Restricted Area (Section 4.2.7 and Appendix I): No evidence of nonconformance with groundwater-use restrictions was observed (i.e., no installation of domestic-use wells in the alluvial aquifer).

2.3.2 Groundwater Remediation

In accordance with the contingency remedy implemented for OU III under the January 2009 Explanation of Significant Difference, contaminated alluvial groundwater is extracted and treated on private property at a location 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.

OU III remedy performance (monitored natural attenuation with pump-and-treat enhancement) is evaluated and reported annually (LTSM Plan Section 5.4). The following summary describes the performance of the pump-and-treat system from October through December 2012. The annual groundwater report provides a comprehensive evaluation of remedy performance.

- The system operated continuously during the quarter except for a brief shutdown from October 31 through November 6, 2012, while the pumps were shut off to allow drainage prior to the zero-valent iron media exchange on November 5 and 6, 2012. The system was not operated at full capacity in October because treatment effectiveness had decreased significantly and because iron accumulation in the outfall piping had reduced flow capacity. The system was operated at reduced capacity in November to allow for an assessment of the system operation following the media exchange.
- The spent zero-valent iron media was transported to the LM Grand Junction, Colorado, Disposal Site on November 6, 2012 and stockpiled in the cell for placement.
- Maintenance was conducted in November and December to improve outfall flow capacity and outfall metering.
- No treated water was transferred to the infiltration trench during this quarter because outfall metering was not operational.
- Inflow metering confirmed that effluent discharge to Montezuma Creek did not exceed the allowed rate of 10 gallons per minute (gpm).
- Monthly monitoring of the treatment effluent verified that iron concentrations and pH for the quarter were within discharge allowances. Monthly effluent monitoring results are shown in Table 1.
- Approximately 737,300 gallons of water were treated during the quarter. The effective average treatment rate was 5.6 gpm. This information is shown in Table 2.
- Approximately 1.7 pounds of uranium were removed from the aquifer during the quarter as a result of groundwater extraction and treatment. The monthly mass of uranium removed from the groundwater is shown in Table 2.
- DOE exchanges the reactive media when effluent concentrations of uranium exceed 150 micrograms/liter (or about one-half of the influent concentration) and the flow rate has been reduced, to increase residence time in the treatment vessels, by 40 percent of the discharge allowance to Montezuma Creek (10 gpm). The reactive media was last exchanged on November 5 and 6, 2012. The previous exchange occurred in October 2011. Each treatment cell treated approximately 2.3 million gallons between these media exchanges. This treatment capacity is consistent with that of previous media exchanges, suggesting that media exchange will occur once per year under current operating conditions.

Table 1. Treatment System Compliance Summary

Treatment System Effluent to Montezuma Creek	October 2012	November 2012	December 2012
pH ^a	7.09	7.14	6.79
Iron (total, milligrams per liter) ^b	12	42	24

^a Discharge allowance range = 6.5–9.0 standard units

^b Discharge limit = 45.4 milligrams per liter at outfall to Montezuma Creek

Table 2. Treatment System Performance Summary

Treatment Parameter	October 2012	November 2012	December 2012 ^a
Gallons treated	227,100	168,000	342,200
Average treatment rate, gpm	5.1	3.9	7.7
Uranium influent, micrograms per liter	320	330	350
Uranium effluent, micrograms per liter	170	5.1	10.6
Uranium mass removed, pounds	0.28	0.45	0.97
Cumulative uranium mass removed, pounds	56.45	56.91	57.87
Cumulative volume treated, gallons	24,653,400	24,821,400	25,163,600

^a Data collection cut-off date is December 23, 2012.

3.0 MVP Status

3.1 City Streets and Utilities, Utah Department of Transportation (UDOT) Rights-of-Way, and Property MS-00176-VL

Surveillance findings for this quarter, with reference to the applicable section of the LTSM Plan, include the following:

- Routine radiological surveillance of city street and utility corridors and UDOT rights-of-way (supplemental standards properties; Section 4.2.3):
 - Onsite LMS staff continued to coordinate with the City of Monticello (daily briefings), UDOT, and utility company officials regarding radiological control at roadway and utility excavations.
- Upgrades to city and state subsurface utility infrastructure occurred during the reporting period. No radiologically contaminated material was encountered at the excavations during this quarter. No erosion or unauthorized excavations occurred on the Highway 191 embankment at Montezuma Creek. Routine surveillance of supplemental standards property MS-00176-VL (Section 4.2.4) identified no excessive erosion or violation of the land-use restriction institutional control.

4.0 Schedule

Table 3 summarizes the schedule of recently completed and pending near-term activities and DOE reporting requirements for the Monticello NPL sites.

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

Activity/DOE Deliverable	Schedule
Recently Completed:	
FFA semiannual meeting.	Fall 2012 meeting conducted in Monticello on September 27, 2012.
Fall 2012 OU III water quality and hydrologic monitoring.	Completed week of October 15, 2012.
Ex situ groundwater treatment system media exchange.	Completed November 5 and 6, 2012.
Submit 2012 Annual Site Inspection Report (penalty milestone).	DOE submitted report to EPA and UDEQ on December 13, 2012, ahead of milestone deadline of December 31, 2102.
Submit OU III annual water quality report.	DOE submitted 2012 report to EPA and UDEQ on December 27, 2012.
Monthly monitoring of ex situ groundwater treatment system.	Completed for October, November, December 2012.
Near-Term:	
Submit FFA quarterly report: October–December 2012.	DOE to submit to EPA and UDEQ by January 10, 2013.
Follow-up FFA meeting to discuss the next steps for OU III.	Tentatively scheduled in Grand Junction, Colorado, January/February 2013.
FFA semiannual meeting.	Spring 2013 FFA meeting tentatively scheduled in Monticello for the week of April 8, 2013.
Submit FFA quarterly report: January–March 2013.	DOE to submit to EPA and UDEQ by April 10, 2013.
Spring 2012 OU III water quality and hydrologic monitoring.	Scheduled for April 2013.
Monthly monitoring of ex situ groundwater treatment system.	Scheduled for January, February, March 2013.

Appendix A

Monthly and Quarterly Surveillance Checklists

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Repository Area Surveillance Checklist

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

NA Storm Event Triggered Surveillance due to NA 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>	_____
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>	_____
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>NA</u>	_____
Manholes ^b	<u>NA</u>	_____
Sediment Ponds	<u>NA</u>	_____
Evidence of:		
Structural Instability	<u>NA</u>	_____

Additional Comments

CONCERNS PREVIOUSLY NOTED STILL IN EVIDENCE

Signature David Jelle Date 10/9/12
 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 X 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>	<u>Two minor repairs are required.</u>
Roads ^a	<u>yes</u>	<u>Appears damaged due to deer.</u>
Signs	<u>yes</u>	
Site monuments	<u>yes</u>	
Drainage ditches ^a	<u>yes</u>	
Manholes	<u>yes</u>	<u>Manhole 3 has water in the bottom.</u>
Vegetation	<u>yes</u>	<u>will require pumping in the future.</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>minor animal burrows. already</u>
Intrusion by humans	<u>yes</u>	<u>noted and accepted by previous</u>
Accumulation of trash	<u>yes</u>	<u>inspections.</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>see notes above.</u>
Sediment Ponds	<u>yes</u>	
Evidence of:		
Structural Instability	<u>yes</u>	

Additional Comments

The site looks good. we will have to remove some
tumble weed build-up on the fence between
John Johnson and the site.

Signature [Signature] Date 11-16-12
 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 NA Quarterly Surveillance (Feb., May, Aug., Nov.)

NA Storm Event Triggered Surveillance due to NA inches of rainfall over the past 24 hours.

Inspection Item	Acceptable (Yes/No)	Comments and Recommendations
Condition of:		
Fences and gates	YES	_____
Roads ^a	YES	_____
Signs	YES	_____
Site monuments	YES	_____
Drainage ditches ^a	YES	_____
Manholes	YES	_____
Vegetation	YES	_____
Evidence of erosion of:		
Top of disposal cell ^a	YES	_____
Disposal cell sideslopes ^a	YES	_____
Ditches	YES	_____
Surrounding area ^a	YES	_____
Evidence of:		
Vandalism	YES	_____
Intrusion by livestock	YES	_____
Burrowing animal damage	YES	_____
Intrusion by humans	YES	_____
Accumulation of trash	YES	_____

Additional Quarterly Surveillance Requirements

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

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

Additional Comments

NO ISSUES OBSERVED

Signature David DeLo Date 12/11/12
 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 3-4" SW SIDE & NE

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>	_____
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

CONCERNS PREVIOUSLY NOTED STILL IN EVIDENCE.

Monticello LM Representative David Deth Date 10/9/12

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

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 2 3-4 inches S.W. side and 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>	_____
Visible liner and anchors	<u>yes</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>yes</u>	_____
Intrusion by humans	<u>yes</u>	_____
Accumulation of trash	<u>yes</u>	_____

Additional Comments

San Juan Pest Management toured site on 11-15-12 with Fred Smith. The employee noticed a noxious weed inside Pond #4 fence line. Fred pulled the weed and placed it in a plastic Bag for disposal.

Monticello LM Representative *Fred Smith* Date 11-15-12

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

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 3'-6" S.W & N.E. CORNERS

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>	_____
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 ICE IN SOUTHWEST AND NORTHEAST CORNERS

Monticello LM Representative David Dille Date 12/11/12

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.)?
- Yes (4 yd³) 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: RADIOLOGIC SURVEY CONDUCTED BY JERRY MATTSON
TODAY 10/16/12

David Pille 10/16/12
Signature of Monticello LM Representative Date of Inspection

Figure 3-8. TSF Record Book Inspection Report

**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.)?

(4 yd³) 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: ALL HOUSE KEEPING APPEARS TO BE SATISFACTORY.

A RADIOLOGICAL SURVEY WAS CONDUCTED AT TIME OF INSPECTION.

SEE RESULTS ON SURVEY MAP.

Scott Ficklin / Scott Ficklin
Signature of Monticello LM Representative

12-11-2012
Date of Inspection

Figure 3-8. TSF Record Book Inspection Report

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Appendix B
Climatological Summaries

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MONTHLY CLIMATOLOGICAL SUMMARY for NOV. 2012

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												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14	38.0	47.1	2:30p	29.7	11:00p	13.5	0.0	0.00	6.3	20.0	12:30p	S
15	38.8	53.2	3:00p	28.8	4:30a	26.2	0.0	0.00	3.3	13.0	3:00p	WNW
16	43.7	52.1	3:00p	33.1	12:30a	21.3	0.0	0.00	6.2	27.0	1:00p	SSW
17	43.4	52.1	2:00p	37.6	3:00a	21.6	0.0	0.03	5.8	24.0	2:00p	SSW
18	40.2	48.9	3:30p	30.5	6:30a	24.8	0.0	0.00	5.2	21.0	3:00p	SSW
19	40.3	50.4	2:00p	31.7	5:30a	24.7	0.0	0.00	6.1	22.0	2:00p	S
20	40.7	52.8	2:00p	31.1	2:30a	24.3	0.0	0.00	5.3	24.0	4:00p	S
21	44.6	53.3	3:00p	35.1	1:30a	20.4	0.0	0.00	9.9	25.0	12:00p	SW
22	42.7	54.5	2:00p	30.9	7:30a	22.3	0.0	0.00	6.9	23.0	3:00p	NNW
23	42.4	55.5	1:30p	33.2	11:00p	22.6	0.0	0.00	4.2	14.0	1:00a	NNW
24	38.7	53.2	3:00p	29.1	7:00a	26.3	0.0	0.00	3.6	18.0	12:30p	W
25	39.8	53.7	2:30p	27.8	5:00a	25.2	0.0	0.00	6.5	24.0	12:30p	SSE
26	40.2	51.8	3:00p	28.7	9:00p	24.8	0.0	0.00	4.8	16.0	12:30p	NNE
27	37.1	50.1	1:30p	26.1	5:30a	27.9	0.0	0.00	5.7	24.0	1:30p	W
28	41.2	52.0	2:30p	31.7	12:30a	23.8	0.0	0.00	5.7	22.0	2:00p	SSE
29	42.0	50.1	1:30p	34.1	3:00a	23.0	0.0	0.00	8.7	23.0	1:00p	SSW
30	40.5	45.6	1:30p	34.3	3:30a	24.5	0.0	0.00	7.9	24.0	10:00a	SSW
	40.8	55.5	23	26.1	27	397.2	0.0	0.03	6.0	27.0	16	SSW

Max >= 90.0: 0
 Max <= 32.0: 0
 Min <= 32.0: 11
 Min <= 0.0: 0
 Max Rain: 0.03 ON 11/17/12
 Days of Rain: 1 (>.01 in) 0 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

MONTHLY CLIMATOLOGICAL SUMMARY for DEC. 2012

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	41.4	49.6	2:30p	30.5	7:30a	23.6	0.0	0.00	8.2	27.0	1:30p	SSW
2	42.4	48.2	2:00p	36.5	7:30a	22.6	0.0	0.00	9.5	29.0	2:30p	SSW
3	39.2	46.3	12:30p	29.2	11:00p	25.8	0.0	0.00	7.4	32.0	1:30a	N
4	37.8	49.4	2:30p	27.3	3:00a	27.2	0.0	0.00	4.1	19.0	1:00p	NW
5	40.4	50.1	2:00p	30.7	5:30a	24.7	0.0	0.00	6.9	28.0	11:00a	S
6	38.4	44.9	4:00p	31.1	10:30p	26.6	0.0	0.04	4.0	19.0	6:30a	NNE
7	37.0	45.4	2:00p	30.5	8:00p	28.0	0.0	0.00	6.4	20.0	12:00p	NW
8	34.2	43.6	1:30p	24.7	5:30a	30.9	0.0	0.00	7.2	24.0	2:00p	S
9	20.1	31.4	12:30a	9.5	11:30p	44.9	0.0	0.00	11.3	32.0	6:00a	N
10	22.4	35.7	2:30p	8.7	7:30a	42.6	0.0	0.00	7.9	29.0	2:30p	NNW
11	27.5	37.2	1:30p	18.6	6:00a	37.5	0.0	0.00	5.7	22.0	10:00p	N
12	30.6	35.9	3:30p	23.1	12:30a	34.4	0.0	0.00	11.9	33.0	9:00a	SSW
13	34.7	42.4	1:30p	23.6	5:00a	30.3	0.0	0.00	7.5	27.0	12:30p	SSW
14	31.8	38.2	3:30a	28.1	11:30p	33.2	0.0	0.01	8.4	22.0	3:30a	SSW
15	25.4	28.3	3:30p	18.8	10:00p	39.6	0.0	0.00	4.6	20.0	1:30a	S
16	22.1	24.4	2:00p	15.9	2:00a	42.9	0.0	0.01	4.8	16.0	10:00p	S
17	24.0	27.9	10:30p	21.1	5:30a	41.0	0.0	0.00	11.6	25.0	1:30p	S
18	27.8	30.8	12:00m	25.4	1:00a	37.2	0.0	0.00	10.0	26.0	2:00p	SSW
19	17.3	30.7	12:30a	9.4	12:00m	47.7	0.0	0.00	15.1	44.0	10:00a	NNW
20	13.6	24.9	3:30p	5.8	4:30a	51.4	0.0	0.07	2.7	11.0	1:30a	SSE
21	27.3	34.6	4:00p	15.1	12:30a	37.7	0.0	0.01	8.5	28.0	12:00p	SSW
22	29.0	33.4	2:00p	23.5	5:00a	36.0	0.0	0.00	9.7	25.0	11:00a	S
23	29.0	33.8	1:30p	23.8	3:00a	36.0	0.0	0.00	7.4	32.0	8:00a	SSE
24	25.8	29.3	2:00a	20.1	12:00m	39.2	0.0	0.01	12.5	38.0	8:30p	NNW
25	19.9	26.8	2:30p	12.3	10:00p	45.1	0.0	0.00	10.7	36.0	12:30a	NNW
26	21.6	24.8	12:30p	15.1	11:30p	43.4	0.0	0.00	11.5	32.0	11:00a	SSW
27	18.0	24.7	12:00p	9.8	3:30a	47.0	0.0	0.00	5.4	23.0	9:30p	NNW
28	16.8	21.2	12:30p	12.2	8:00a	25.1	0.0	0.00	10.0	23.0	12:30a	NNW
29												
30												
31												
	28.4	50.1	5	5.8	20	1001.6	0.0	0.15	8.2	44.0	19	SSW

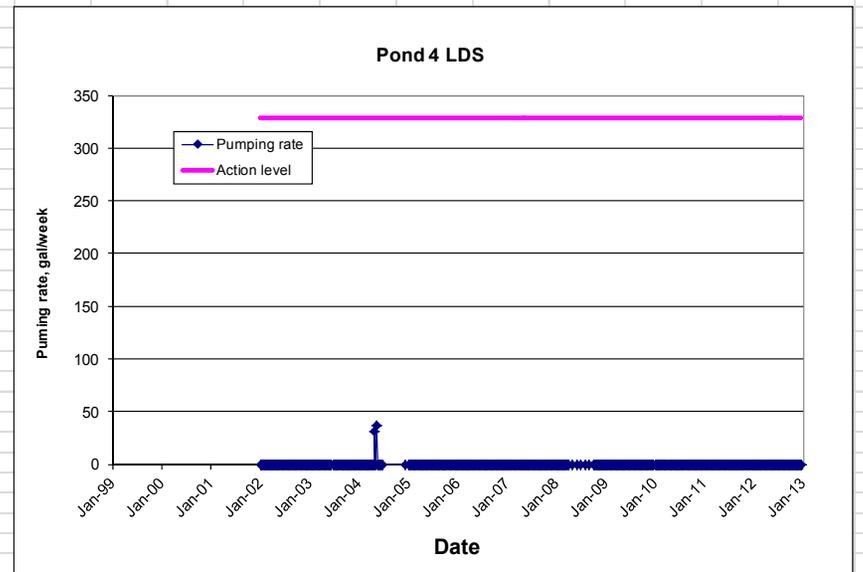
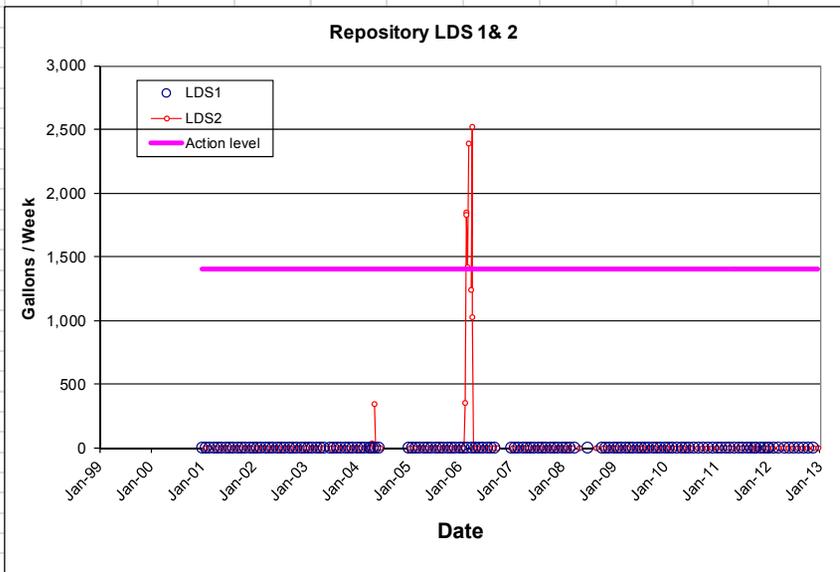
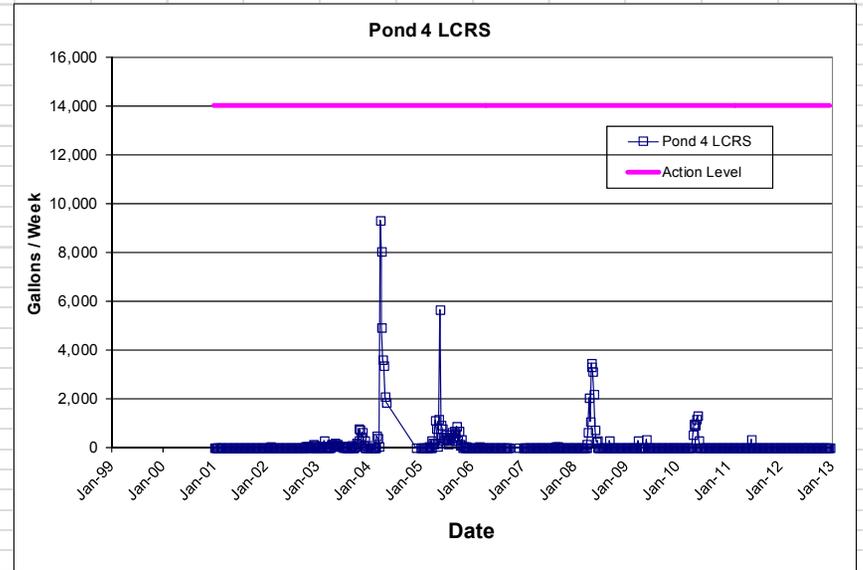
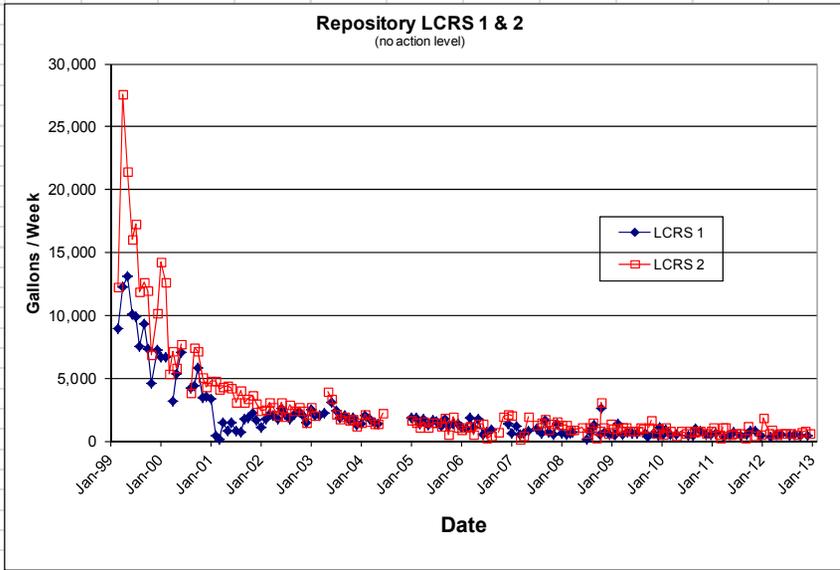
Max >= 90.0: 0
 Max <= 32.0: 12
 Min <= 32.0: 27
 Min <= 0.0: 0
 Max Rain: 0.07 ON 12/20/12
 Days of Rain: 2 (>.01 in) 0 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

Appendix C

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

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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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