

Monticello, Utah, National Priorities List Sites Federal Facility Agreement (FFA) Quarterly Report: July 1–September 30, 2011

1.0 Introduction

This report summarizes the status of the Monticello Vicinity Properties (MVP) and the Monticello Mill Tailings Site (MMTS). Both of these sites are located in and near Monticello, Utah. The reporting period is from July through September 2011. The report includes a summary of projected near-term activity and reporting requirements.

The MMTS and MVP were placed on the U.S. Environmental Protection Agency (EPA) National Priorities List (NPL) in 1989 and 1986, respectively. The U.S. Department of Energy (DOE) implemented remedial actions at the MVP in 1986 and at the MMTS in 1989, to conform to requirements of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendments and Reauthorization Act.

MMTS and MVP remedial actions were completed by September 1999, except for the remediation of contaminated groundwater (Operable Unit III [OU III] of the MMTS), which is an ongoing process. The MMTS and MVP are administered as the Monticello Disposal and Processing Site by the DOE Office of Legacy Management (LM).

2.0 MMTS

2.1 Monticello LM Repository (DOE-Owned)

The Monticello LM repository is a waste disposal cell that contains radioactively contaminated soil, sediment, and debris removed from the former uranium and vanadium ore processing mill and surrounding private and municipal properties. The repository includes support infrastructure that is maintained to ensure that the wastes remain isolated from the environment.

As directed by Section 3.2 of the LM *Long-Term Surveillance and Maintenance Plan for the Monticello NPL Sites* (LTSM plan), monthly and quarterly inspections of the repository are conducted to assess conditions that may affect the integrity of the repository in protecting human health and the environment.

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

- Condition of disposal site facilities (Section 3.2.2): Monthly and quarterly inspections identified no anomalous conditions at the repository site (see attached Repository Area Surveillance Checklists).
- Meteorological monitoring and storm events (Sections 3.2.2.2, 3.2.2.3, and 4.3.1): No significant storm events occurred during this quarter (see attached meteorological summaries).

- Pond 4 surveillance (Section 3.2.3): Monthly inspections identified no anomalous conditions at Pond 4 (see attached Monthly Pond 4 Surveillance Checklists).
- Disposal Cell and Pond 4 LCRS and LDS Operation (Section 3.3):
 - Disposal cell leachate collection in the upper sumps (i.e., the Leachate Collection and Recovery System [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 2; see attached graph).
 - Operation of the LCRS at the leachate collection pond (Pond 4) was normal (i.e., no water was collected during the quarter; see attached graph).
 - Disposal cell and Pond 4 leachate collection in the lower sumps (Leak Detection System [LDS]) remains at zero (see attached graphs).
 - All disposal cell and Pond 4 leachate management equipment (pumps, pump controls, monitoring devices, and data transmission devices) are functional.
- Temporary Storage Facility Operation and Maintenance (Section 3.4)
 - The inventory of contaminated material in the Temporary Storage Facility (TSF) is approximately 6.5 cubic yards (see attached TSF Record Book Inspection Reports). In accordance with Section 3.4 of the LTSM plan, DOE initiates transfer of material from the TSF to the LM Grand Junction Disposal Site (GJDS) in Grand Junction, Colorado, when contents of the TSF approach 75 cubic yards. The most recent transfer of material from the TSF to GJDS occurred in June 2010 (documented in the July 1–September 31, 2010, quarterly report).

2.2 Operable Unit I (Former Mill Site, City-Owned)

Surveillance of the former mill site and City-owned Property MP-00211-VL is conducted to ensure compliance with institutional controls implemented to preserve the OU I remedy for soil and groundwater. Findings for this quarter are:

- Routine surveillance of City-Owned Properties (Sections 4.2.2 and 4.2.5): No evidence of non-conformance with groundwater use restrictions, land use restrictions, or other institutional controls was observed.

2.3 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 are:

- Routine surveillance of Property MS-00176-VL (Section 4.2.5) and the Montezuma Creek Restrictive Easement Area (Section 4.2.6): No evidence of non-conformance with land use restrictions, groundwater use restrictions, or other institutional controls was observed.
- The U.S. General Services Administration, in cooperation with DOE, continues in the process to dispose parcel MP-01081-VL, located east of the repository site, to non-DOE

ownership. A purchase offer was accepted by the General Services Administration however the property transaction is not final.

2.4 Operable Unit III (Contaminated Groundwater and Surface Water)

2.4.1 Groundwater Management Area

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

- Routine surveillance of the Monticello Ground-Water Restricted Area (Section 4.2.7): No evidence of non-conformance with groundwater use restrictions was observed.

2.4.2 Groundwater Remediation

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 then discharged to Montezuma Creek or returned to the aquifer by way of an infiltration trench. OU III remedy performance is evaluated and reported annually according to Section 5.4 of the LTSM Plan. The following summarizes treatment system performance from July to September, 2011.

- Iron concentration and pH for the quarter are within the discharge allowances (see Table 1).
- Effluent discharge to Montezuma Creek did not exceed the allowed rate (10 gallons per minute [gpm]).
- Approximately 0.83 million gallons of water were treated and approximately 1.9 pounds of uranium were removed from the aquifer during the quarter as a result of groundwater treatment.
- The system operated continuously during July 2011. One of the treatment cells (TC1) was shut down during the last week in August in response to a suspected wall effect creating a preferential flow path that compromised treatment effectiveness. TC1 was not restarted as it was determined that the flow condition could not be resolved until a complete media exchange.
- A sampling bias was cause to suspend flow to treatment cell 2 (TC2) two weeks in mid-September. The cause of the bias (high iron) was confirmed and flow to TC2 was resumed at 5 gpm.
- Discharge to the infiltration trench diminished from about 1 gpm during July and August to zero in September. Iron-oxide fouling of the discharge pipe is a possible cause of reduced flow to the trench and will be investigated.
- Each treatment cell treated between about 3 and 3.5 million gallons of contaminated groundwater prior to the two media exchanges performed to date (March 2009 and October 2010). Treatment of about 3 million gallons of groundwater per cell at similar

concentrations of influent uranium provides an approximate target volume for future media exchange.

- The next media exchange will occur in October of 2011. Each treatment cell will have treated approximately 2.1 million gallons since the previous exchange in October 2010. Bypass flow causing TC1 to be shut down and the approaching winter season are the primary reasons for exchanging the media at this time.

Table 1. Treatment System Compliance Summary

Treatment System Effluent to Montezuma Creek	June 2011	July 2011	August 2011	September 2011
pH ^a	7.12	7.01	7.25	7.11
Iron (total, micrograms per liter) ^b	12	23	19	24

^a Discharge allowance range = 6.5–9.0 standard units

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

Table 2. Treatment System Performance Summary

Treatment Parameter	June 2011	July 2011	August 2011	September 2011
Gallons treated	413,742	406,209	325,313	98,836
Average treatment rate, gpm	9.6	9.2	7.3	2.2
Uranium influent, micrograms per liter	320	340	320	338
Uranium outfall, micrograms per liter	15	15	110	50
Uranium mass removed, pounds	1.05	1.1	0.6	0.2
Cumulative uranium mass removed, pounds	46.4	47.5	48.1	48.3
Cumulative volume treated, gallons	19,221,037	19,627,246	19,952,559	20,051,395

2.4.3 Biomonitoring

Biomonitoring has been conducted since 2004 to evaluate the potential risk to ecological receptors from exposure to selenium in OU III (Section 5.5 of the LTSM Plan).

- No biomonitoring-related activities have occurred during this quarter.

3.0 MVP

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

Surveillance findings for this quarter are:

- Routine surveillance of Public Roads and Utility Corridors (per Section 4.2.3 of the LTSM Plan):
 - On-site LM personnel continued to coordinate with the City of Monticello, UDOT, and utility company officials regarding radiological control at roadway and utility excavations.

- No erosion or unauthorized excavations occurred on the Highway 191 embankment at Montezuma Creek.
- Significant upgrades to City and State utility infrastructure continued during the reporting period. The small quantity of radiologically contaminated material (approximately 5 cubic yards) encountered in excavations was managed in accordance with Section 4.2.3.2 of the LTSM plan.

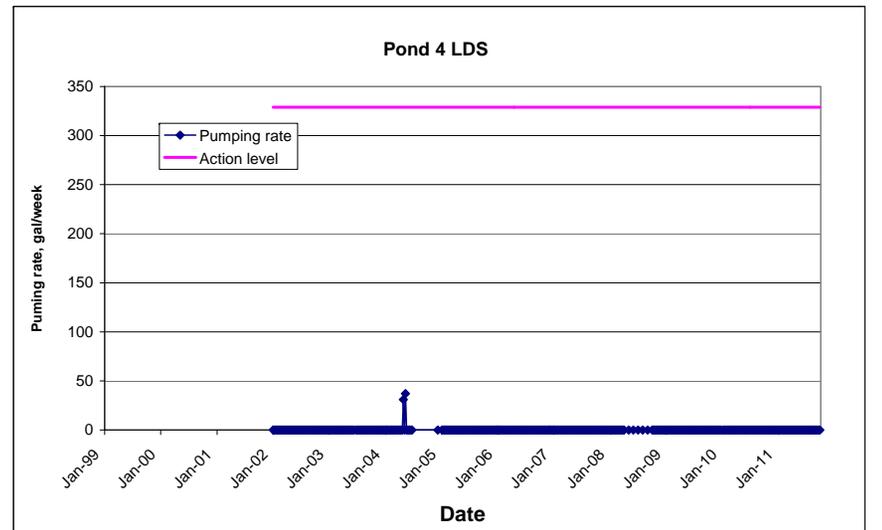
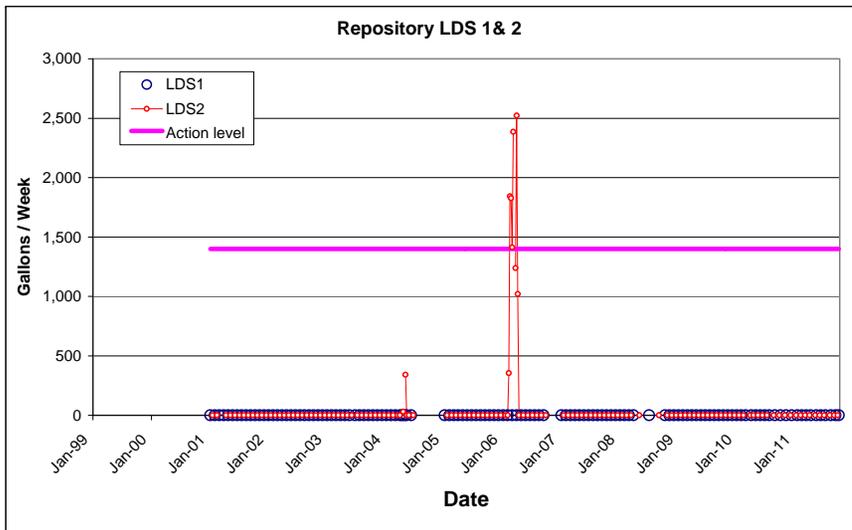
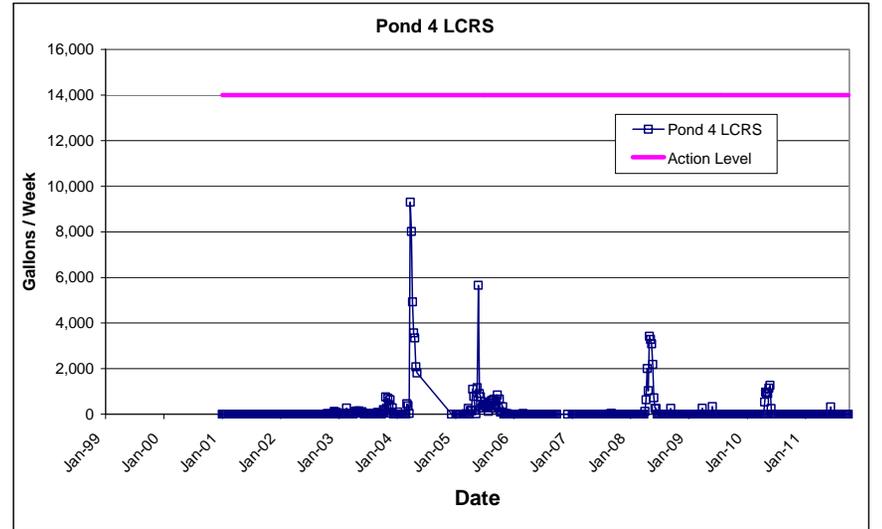
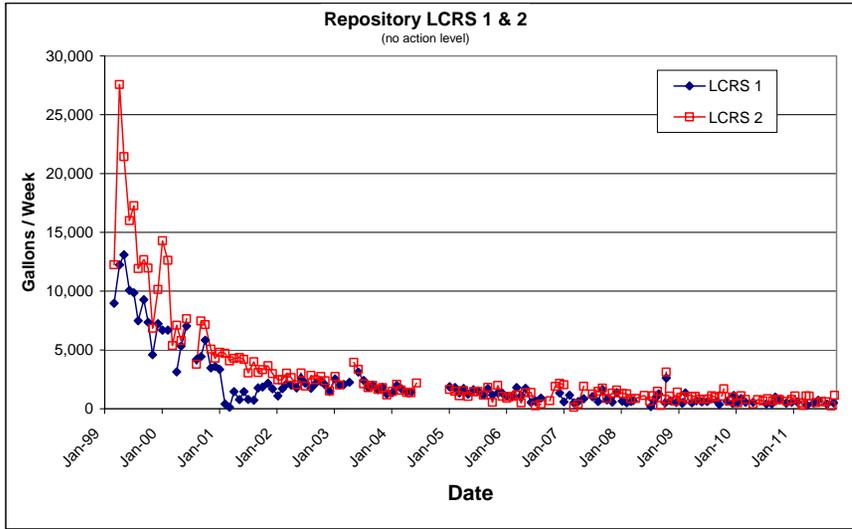
4.0 Schedule

Table 3 summarizes the schedule of recent and near-term activities for the Monticello NPL Sites and DOE reporting obligations.

Table 3. Activity and Near-Term Schedule

Activity	Schedule
FFA quarterly report: October–December 2011.	Submit to EPA and Utah Department of Environmental Quality (UDEQ) by January 10, 2011.
FFA semiannual meeting, fall 2011.	Schedule and agenda has not been determined.
OU III biomonitoring.	DOE status report submitted to biological technical assistance group on March 24, 2011. DOE presented the report findings to the biological technical assistance group on June 27, 2011. DOE has not received EPA and UDEQ review comments on report to date. Future scope of biomonitoring is not defined at present.
Annual OU III water quality report.	Submitted to EPA and UDEQ in hard copy on September 28, 2011.
Site Management Plan (Section 5 update-draft).	Submitted to EPA and UDEQ via e-mail July 25, 2011. Review comments not received to date.
Annual site inspection.	Completed September 27-28, 2011. Site inspection report (draft to EPA and UDEQ by December 31, 2011).
CERCLA 5-year review.	Draft to EPA and UDEQ winter 2012 for final by June 2012.

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



Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 2.8

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>NO</u>	_____
Pond 4 sideslopes	<u>NO</u>	_____
Ditches	<u>NO</u>	_____
Surrounding area	<u>NO</u>	_____
Seepage from Pond 4	<u>NO</u>	_____
Overtopping of Pond 4	<u>NO</u>	_____
 Evidence of:		
Vandalism	<u>NO</u>	_____
Intrusion by wildlife	<u>NO</u>	_____
Intrusion by humans	<u>NO</u>	_____
Accumulation of trash	<u>NO</u>	_____

Additional Comments _____

Monticello LM Representative Jodel Moon Date 07-06-11

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 2.2

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>NO</u>	_____
Pond 4 sideslopes	<u>NO</u>	_____
Ditches	<u>NO</u>	_____
Surrounding area	<u>NO</u>	_____
Seepage from Pond 4	<u>NO</u>	_____
Overtopping of Pond 4	<u>NO</u>	_____
Evidence of:		
Vandalism	<u>NO</u>	_____
Intrusion by wildlife	<u>NO</u>	_____
Intrusion by humans	<u>NO</u>	_____
Accumulation of trash	<u>NO</u>	_____

Additional Comments _____

Monticello LM Representative Fred Moon Date 08-03-11

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 1.3

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>NO</u>	_____
Pond 4 sideslopes	<u>NO</u>	_____
Ditches	<u>NO</u>	_____
Surrounding area	<u>NO</u>	_____
Seepage from Pond 4	<u>NO</u>	_____
Overtopping of Pond 4	<u>NO</u>	_____
Evidence of:		
Vandalism	<u>NO</u>	_____
Intrusion by wildlife	<u>NO</u>	_____
Intrusion by humans	<u>NO</u>	_____
Accumulation of trash	<u>NO</u>	_____

Additional Comments _____

Monticello LM Representative Jedel Mann Date 09-12-11

Repository Area Surveillance Checklist

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

_____ Storm Event Triggered Surveillance due to _____ 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	no	_____
Disposal cell sideslopes ^a	no	_____
Ditches	no	_____
Surrounding area	no	_____
Evidence of:		
Vandalism	no	_____
Intrusion by livestock	no	_____
Burrowing animal damage	no	_____
Intrusion by humans	no	_____
Accumulation of trash	no	_____

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 _____

Signature Jodd Moon
 Monticello LM Representative

Date 07-06-11

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

Repository Area Surveillance Checklist

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

____ Storm Event Triggered Surveillance due to ____ 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	NO	_____
Disposal cell sideslopes ^a	NO	_____
Ditches	NO	_____
Surrounding area	NO	_____
Evidence of:		
Vandalism	NO	_____
Intrusion by livestock	NO	_____
Burrowing animal damage	NO	_____
Intrusion by humans	NO	_____
Accumulation of trash	NO	_____

Additional Quarterly Surveillance Requirements

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

Condition of:		
Settlement plate structures	NO	_____
Manholes ^b	NO	_____
Sediment Ponds	NO	_____
Evidence of:		
Structural Instability	NO	_____

Additional Comments _____

Signature Joel Moon
 Monticello LM Representative

Date 08-03-11

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

Repository Area Surveillance Checklist

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

_____ Storm Event Triggered Surveillance due to _____ 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	NO	_____
Disposal cell sideslopes ^a	NO	_____
Ditches	NO	_____
Surrounding area	NO	_____
Evidence of:		
Vandalism	NO	_____
Intrusion by livestock	NO	_____
Burrowing animal damage	NO	_____
Intrusion by humans	NO	_____
Accumulation of trash	NO	_____

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 _____

Signature Judd Moon
 Monticello LM Representative

Date 09-12-11

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

**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.)?
- 1.5 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: _____

Judd Moran
Signature of Monticello LM Representative

7-6-11
Date of Inspection

**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 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: _____

Judd Moran
Signature of Monticello LM Representative

8-3-11
Date of Inspection

**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.)?
- 5 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: _____

 Todd Mann
Signature of Monticello LM Representative

 9-7-11
Date of Inspection

MONTHLY CLIMATOLOGICAL SUMMARY for JUL. 2011

NAME: Monticello CITY: STATE:
 ELEV: 7000 ft LAT: 37° 36' 00" N LONG: 122° 06' 00" W

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

DAY	MEAN		TIME	LOW	TIME	HEAT	COOL	RAIN	AVG		TIME	DOM
	TEMP	HIGH				DEG	DEG		WIND	SPEED		
1	68.6	83.6	6:30p	51.2	1:00a	3.3	6.9	0.00	4.8	16.0	11:00a	NNW
2	75.0	89.0	3:30p	59.0	3:00a	1.1	11.0	0.00	6.4	32.0	4:30p	NNW
3	75.8	88.3	5:00p	61.6	5:00a	0.2	11.0	0.03	8.6	42.0	8:00p	SW
4	74.7	88.8	5:00p	57.7	6:30a	0.8	10.5	0.00	5.7	20.0	11:00a	S
5	72.9	81.9	4:30p	60.4	6:00a	0.2	8.1	0.00	8.8	32.0	2:30p	NW
6	74.1	84.3	6:30p	63.9	4:00a	0.0	9.1	0.00	4.9	18.0	3:00p	NW
7	73.3	83.6	6:00p	60.6	5:30a	0.3	8.7	0.01	5.8	28.0	2:30p	WNW
8	69.5	83.5	3:30p	56.4	11:30p	1.4	5.9	0.20	8.7	32.0	6:00p	SSW
9	67.8	81.6	6:00p	56.8	12:30a	2.4	5.2	0.01	5.3	33.0	5:00p	SSW
10	66.0	77.4	1:00p	56.0	4:00a	2.9	3.8	0.00	4.9	28.0	4:30p	SW
11	67.1	77.3	12:00p	57.7	12:00m	1.8	3.8	0.18	6.8	25.0	11:00p	NNE
12	62.7	75.3	3:00p	53.0	5:00a	4.3	2.0	0.01	5.8	22.0	3:30p	S
13	66.0	79.3	4:00p	52.1	6:00a	3.5	4.5	0.00	5.3	22.0	1:00p	S
14	67.4	79.7	3:30p	50.1	7:00a	2.9	5.2	0.00	7.0	30.0	4:30p	SW
15	68.5	80.7	6:00p	52.3	7:00a	2.5	6.0	0.00	8.0	31.0	1:00p	SSW
16	70.4	81.6	6:00p	57.5	5:00a	1.3	6.7	0.01	6.5	27.0	10:00p	WSW
17	73.6	87.4	3:00p	64.7	12:00m	0.0	8.6	0.00	7.1	34.0	5:00p	S
18	73.7	86.0	4:30p	60.7	12:00m	0.4	9.1	0.06	6.1	21.0	5:00p	NW
19	68.7	79.1	1:30p	56.7	6:00a	1.7	5.4	0.08	6.4	26.0	2:00p	NNW
20	69.6	82.1	5:30p	57.4	5:30a	1.3	5.8	0.45	4.3	29.0	1:00p	NNW
21	72.6	85.5	4:00p	56.7	7:00a	0.8	8.4	0.00	6.5	23.0	3:30p	WSW
22	73.6	86.0	4:30p	56.3	7:00a	0.5	9.2	0.00	7.7	27.0	2:30p	W
23	75.0	88.4	5:30p	59.5	4:30a	0.4	10.4	0.00	6.5	21.0	2:30p	W
24	77.2	90.4	5:00p	62.7	6:30a	0.1	12.2	0.00	5.5	18.0	5:30p	WNW
25	72.2	86.8	5:00p	57.9	12:00m	0.9	8.1	0.35	8.0	43.0	2:00p	SSW
26	61.6	70.5	5:00p	57.1	10:00p	4.1	0.7	0.16	5.3	19.0	9:30a	S
27	63.8	77.0	6:00p	55.2	7:00a	3.4	2.2	0.02	4.7	36.0	6:30p	NW
28	69.6	80.9	4:00p	55.3	5:30a	2.0	6.5	0.00	7.3	21.0	4:00p	NNW
29	74.2	84.3	4:30p	63.3	5:30a	0.1	9.3	0.00	5.8	24.0	4:30p	N
30	70.5	84.8	4:30p	61.7	6:30a	0.7	6.2	0.09	6.7	28.0	7:30p	SSW
31	69.8	81.8	5:00p	60.2	6:00a	1.0	5.8	0.00	7.1	23.0	12:00p	SSW

	70.5	90.4	24	50.1	14	46.3	216.3	1.66	6.4	43.0	25	SSW

Max >= 90.0: 1
 Max <= 32.0: 0
 Min <= 32.0: 0
 Min <= 0.0: 0
 Max Rain: 0.45 ON 07/20/11
 Days of Rain: 10 (>.01 in) 5 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

MONTHLY CLIMATOLOGICAL SUMMARY for AUG. 2011

NAME: Monticello CITY: STATE:
 ELEV: 7000 ft LAT: 37° 36' 00" N LONG: 122° 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	67.5	78.5	5:30p	59.5	7:00a	1.6	4.0	0.03	6.2	31.0	7:30p	SSW
2	69.5	81.7	4:30p	57.4	6:00a	1.6	6.1	0.00	4.1	21.0	2:00p	S
3	69.3	83.8	2:00p	59.2	11:00p	1.1	5.4	0.01	8.2	35.0	6:00p	S
4	64.8	79.1	4:00p	53.7	5:00a	3.3	3.1	0.03	5.5	30.0	7:30p	WSW
5	70.1	83.9	4:30p	53.4	5:00a	2.4	7.4	0.00	7.0	32.0	1:30p	NW
6	72.8	84.9	4:30p	59.8	6:30a	0.3	8.1	0.00	7.1	24.0	1:00p	W
7	73.5	85.0	5:30p	61.5	4:00a	0.3	8.8	0.00	7.5	33.0	2:30p	W
8	74.5	85.6	5:00p	60.8	6:30a	0.1	9.6	0.00	5.4	20.0	12:30a	WSW
9	73.0	86.8	4:00p	55.2	7:00a	0.8	8.7	0.00	8.2	31.0	6:00p	W
10	70.9	84.4	5:00p	51.7	6:00a	1.9	7.8	0.00	5.3	22.0	4:30p	W
11	72.1	83.7	5:30p	61.4	6:00a	0.3	7.4	0.00	8.1	23.0	11:00a	S
12	73.4	85.8	5:00p	58.2	6:00a	0.7	9.0	0.00	3.2	14.0	2:30p	NNW
13	75.5	88.7	4:30p	62.2	5:00a	0.2	10.6	0.00	7.4	27.0	10:30p	WNW
14	67.0	78.9	4:00p	58.5	12:00m	1.1	3.1	0.00	8.7	30.0	5:30p	SSW
15	65.8	80.7	4:00p	53.0	6:00a	2.9	3.8	0.52	3.8	20.0	5:00p	N
16	73.2	85.6	5:00p	60.9	3:30a	0.4	8.6	0.00	5.2	20.0	6:30p	WNW
17	75.1	87.8	4:00p	59.8	7:00a	0.3	10.4	0.00	6.3	25.0	11:30a	WNW
18	73.2	85.9	2:30p	64.3	7:30a	0.0	8.3	0.00	9.7	30.0	6:30p	SSW
19	69.7	79.9	3:30p	60.9	7:30a	0.4	5.2	0.04	3.9	26.0	2:30a	WSW
20	70.1	81.8	1:30p	59.9	5:30a	0.8	5.9	0.00	5.3	22.0	1:30p	NW
21	67.4	80.3	2:30p	57.1	5:00a	1.8	4.2	0.04	6.8	31.0	3:00p	SSW
22	68.4	80.8	12:30p	59.9	3:00a	1.0	4.4	0.07	6.0	30.0	2:30p	NW
23	73.9	85.3	5:30p	62.1	7:00a	0.2	9.1	0.00	5.0	18.0	4:30p	WNW
24	75.5	88.8	1:30p	63.6	6:30a	0.1	10.5	0.00	5.2	27.0	11:00p	NW
25	73.0	83.9	5:00p	63.3	4:00a	0.1	8.1	0.02	6.9	23.0	3:30p	SSW
26	69.4	82.5	5:00p	59.3	2:30a	1.7	6.1	0.21	4.1	20.0	1:30p	WSW
27	72.5	84.7	4:00p	59.4	7:30a	0.5	8.0	0.00	5.1	18.0	2:00p	SW
28	71.3	81.7	2:00p	63.2	3:00p	0.0	6.4	0.06	7.8	25.0	9:00a	NW
29	67.4	80.0	1:00p	58.9	11:00p	1.2	3.6	0.40	5.6	31.0	1:30p	SSW
30	66.8	81.6	1:30p	56.1	6:30a	2.4	4.2	0.07	4.1	20.0	2:00p	WSW
31	68.0	79.0	12:30p	58.2	7:00a	1.4	4.5	0.00	7.6	27.0	11:30a	NW

	70.8	88.8	24	51.7	10	30.9	210.4	1.50	6.1	35.0	3	SSW

Max >= 90.0: 0
 Max <= 32.0: 0
 Min <= 32.0: 0
 Min <= 0.0: 0
 Max Rain: 0.52 ON 08/15/11
 Days of Rain: 11 (>.01 in) 3 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

MONTHLY CLIMATOLOGICAL SUMMARY for SEP. 2011

NAME: Monticello CITY: STATE:
 ELEV: 7000 ft LAT: 37° 36' 00" N LONG: 122° 06' 00" W

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

DAY	MEAN		TIME	LOW	TIME	HEAT	COOL	RAIN	AVG		TIME	DOM
	TEMP	HIGH				DEG	DEG		WIND	HIGH		DIR
1	68.4	80.9	3:30p	54.4	8:00a	2.0	5.4	0.00	7.4	28.0	10:00a	SSW
2	69.7	81.2	3:00p	60.6	7:30a	0.8	5.5	0.00	9.3	25.0	3:00p	W
3	69.9	80.3	5:00p	60.8	2:00a	0.6	5.5	0.00	7.2	19.0	1:00p	NW
4	68.4	80.1	3:00p	58.3	7:30a	1.0	4.4	0.00	6.1	20.0	9:30a	NW
5	67.2	80.7	4:00p	58.6	12:00m	2.0	4.1	0.02	8.5	24.0	2:00p	SSW
6	59.2	66.8	5:00p	53.5	9:30p	5.9	0.1	0.33	3.8	30.0	9:00p	N
7	60.4	69.3	4:00p	52.1	3:30a	5.5	0.9	0.00	10.3	26.0	9:00a	NNW
8	62.3	73.1	3:30p	50.2	7:00a	4.9	2.2	0.00	5.0	22.0	2:00p	NW
9	57.4	62.7	2:30p	50.4	12:00m	7.6	0.0	0.00	6.4	21.0	11:00a	S
10	55.8	64.8	3:30p	49.6	6:00a	9.2	0.0	0.03	6.4	23.0	10:00a	SSW
11	58.6	70.0	3:30p	50.6	4:00a	7.0	0.6	0.15	6.7	21.0	3:00p	N
12	57.5	67.4	12:30p	50.4	5:30a	7.6	0.1	0.02	4.1	25.0	12:30p	ESE
13	55.1	67.8	2:00p	45.7	6:00a	10.0	0.1	0.09	4.0	24.0	4:00p	SW
14	53.3	56.2	5:30a	49.8	1:30a	6.3	0.0	0.00	7.7	19.0	6:00a	SSW
15												
16												
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30												

	61.7	81.2	2	45.7	13	70.4	28.9	0.64	6.6	30.0	6	SSW

Max >= 90.0: 0
 Max <= 32.0: 0
 Min <= 32.0: 0
 Min <= 0.0: 0
 Max Rain: 0.33 ON 09/06/11
 Days of Rain: 6 (>.01 in) 2 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration