

Monticello National Priorities List Sites Federal Facilities Agreement (FFA) Quarterly Report: October 1–December 31, 2009

This report summarizes project status and activities implemented October through December 2009, and provides a schedule of near-term activities for the Monticello Mill Tailings Site (MMTS) and the Monticello Vicinity Properties (MVP) sites. This report also includes disposal cell and Pond 4 leachate collection data, quarterly site inspection reports, site meteorological data, and a performance summary for the ex situ groundwater treatment system.

1.0 MMTS Activities/Status

1.1 Repository Site Inspections

- Monthly and quarterly inspections of the repository site (waste disposal cell, Pond 4, and associated infrastructure) identified no abnormalities or unacceptable conditions (see attached inspection reports).
- Leachate Detection System [LDS]
 - Disposal cell and Pond 4 leachate collection in the lower sumps remains at zero (see attached graphs).
- Leachate Collection and Recovery System [LCRS]
 - Repository leachate collection in the upper sumps was normal for the quarter. Leachate production has decreased in quantity 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 LCRS2; see attached graph).
 - LCRS 1 requires replacement of the water level transducer since July 2009. The transducer activates the sump pump at a specified water level in the sump. Health and safety evaluations were not completed in time for replacing the transducer in fall 2009. Health and safety evaluations have since been completed; however, heavy snow cover now prevents replacing the transducer. The LCRS 1 pump is operated manually each month until the transducer is replaced. All remaining repository and Pond 4 telemetry components are functional.
 - Pond 4 LCRS operation was normal (no water collected during the quarter).

1.2 Former Millsite

- No land use or groundwater use compliance issues were observed or reported by LTSM on-site staff.

1.3 Peripheral Properties (Private and City-Owned)

- No land use or supplemental standards compliance issues were observed or reported by LTSM on-site staff.

- DOE continues with activities to excess DOE-owned property MP-01080-VL, east of the repository site. The property has been in use in recent years for agricultural purposes by a local landowner with DOE approval.

1.4 Temporary Storage Facility (TSF)

- Approximately 50 cubic yards of radiologically contaminated material are present in the TSF. DOE will initiate the process of transferring TSF materials to the Grand Junction, Colorado, Disposal Site for permanent disposal when TSF contents approach 75 cubic yards. No material was added to the TSF since the 2009 annual site inspection (September 9-10, 2009) and since construction activities by the City of Monticello, Utah Department of Transportation, and utility providers ceased late in the fall of 2009.

1.5 Operable Unit III (Surface Water and Groundwater)

- DOE collected two water samples from the irrigation pond on property MP-00990-CS on October 6, 2009 to determine if evaporation results in unacceptable concentrations of uranium in the pond. The pond (Adams Pond) receives some water that is diverted from Montezuma Creek by the landowner that is applied to alfalfa and pasture grass for livestock consumption. This land use change was first recognized in the 2008 annual site inspection. The pond samples collected in October 2009 each contained 85 µg/L of uranium. In contrast, the sample collected from the creek at the point of diversion at that time contained 390 µg/L of uranium. Evaporative concentration of uranium in Adams Pond suggests no significant exposure pathway to wildlife. The pond will be sampled again in mid-summer 2010 to confirm results. EPA concluded in a draft report received by DOE in November 2009 that use of the pond water to irrigate livestock fodder posed no risk to human health.
- The scope of biomonitoring in 2010 remains to be determined following the teleconference call with the Biological Technical Assistance Team on October 29, 2009. The biomonitoring scope became uncertain at that time upon receiving input from an EPA ecotoxicologist with expertise in selenium toxicity. DOE will prepare a brief summary to compare selenium concentrations in biotic and abiotic media for pre- and post-millsite-cleanup conditions. This information will be distributed to the BTAG and discussed in the current quarter to determine the future scope of biomonitoring.
- No other land use or groundwater use compliance issues to report.

1.6 Ex Situ Groundwater Treatment System

- The treatment system required a partial shutdown for the second and third weeks of October after a leak was detected in the inflow pipe to the east treatment cell (TC2). The leak saturated a small area of soil near the inflow port of TC2. The LM contractor environmental compliance staff was notified of the leak and an incident report was generated. No further response actions were determined necessary. The pipe was repaired on October 21, 2009, and normal flow was resumed.
- The treatment system operated for the quarter at an average rate of about 8.6 gallons per minute (gpm), including the down time at TC2. One to 2 gpm of treated water is diverted to the infiltration trench as of October 27, 2009. Instantaneous flow rates to the treatment system approached 10 gpm through much of the quarter.

- Approximately 1.1 million gallons of water was treated during the quarter and 3.2 pounds of uranium was removed from the aquifer a result of groundwater treatment.
- Adjustments are ongoing to calibrate the outfall flow meter in order to accurately measure the quantity of treated water diverted to the infiltration trench (note: the overall treatment rate is accurately metered at the inflow pipe in the control vault).
- Treatment system performance is summarized in Table 1. Flow information is from the LM Systems Operations and Analysis at Remote Sites (SOARS) telemetry system. Uranium concentrations are from inflow and outflow water samples collected monthly. Prior to June 2008, water samples were analyzed at the LM Environmental Sciences Laboratory (ESL) in Grand Junction. Since then, the samples have been analyzed at the LM contract laboratory Paragon Analytics in Ft. Collins, Colorado. DOE continues on occasion to analyze a split of selected samples at the ESL for diagnostic purposes.
- Monthly results of total iron and pH for the combined effluent of the two treatment cells are provided in Table 2. Iron concentration and pH for this quarter are within the discharge allowances as specified by the Utah Division of Water Quality.
- The latest change out of the treatment media occurred on March 18, 2009. Uranium removal from the influent groundwater remained highly effective through the quarter.

Table 1. Ex Situ Treatment System Performance

Treatment Parameter	September 2009	October 2009	November 2009	December 2009
Gallons treated	315,360	314,151	415,933	410,277
Average treatment rate, gpm	7.3	7.0	9.6	9.2
Uranium influent, µg/L	350	350	340	340
Uranium outfall, µg/L	3.3	2.9	5.3	6.8
Uranium mass removed, pounds	0.91	0.91	1.16	1.14
Cumulative uranium mass removed, pounds	28.2	29.1	30.3	31.4
Cumulative volume treated, gallons	11,801,669	12,115,820	12,531,753	12,942,030

Table 2. Ex Situ Treatment System Discharge Monitoring

Outfall to Creek	September 2009	October 2009	November 2009	December 2009
pH ^a	7.19	7.22	7.35	7.33
Iron (total, micrograms per liter) ^b	26	23	26	35

^aDischarge allowance range = 6.5 – 9 standard units

^bDischarge limit = 45.4 micrograms per liter at outfall to creek

2.0 MVP Activities/Status

2.1 City Streets and Utilities & Utah Department of Transportation (UDOT) Rights-of-Way

- On-site LTSM staff continue to coordinate with City, UDOT, and utility company officials regarding radiological control at highway, street, and utility excavations.
- On-site LTSM staff report that City construction activities will resume early in spring of 2010, at which time contaminated materials are expected to be encountered in association with storm sewer repairs.

3.0 Schedule and Deliverables

- A date for a BTAG teleconference call to discuss future scope of biomonitoring is yet to be determined. The discussion needs to occur in advance of the 2010 field season.
- A date for the spring 2010 FFA meeting is yet to be determined.
- Fall 2009 semi-annual water quality monitoring was completed the week of October 5, 2009.
- No deliverables are scheduled for the current quarter other than the next quarterly report, due April 19, 2010. Recently completed deliverables are listed in Table 3.

Table 3. Recent and Near-Term Deliverables

Deliverable	Status/Schedule
FFA quarterly report, July - September 2009	Submitted to EPA and UDEQ via e-mail on October 6, 2009.
FFA meeting minutes, September 2009 meeting	Submitted to EPA and UDEQ via e-mail on October 14, 2009, following EPA and UDEQ review and comment.
OU III annual water quality report	Submitted in hard copy to EPA and UDEQ on October 13, 2009. Correction letter submitted to EPA and UDEQ on December 1, 2009.
Groundwater compliance strategy	Submitted to EPA and UDEQ via e-mail on December 22, 2009, following EPA and UDEQ review and comment.
Annual site inspection report	Submitted in hard copy to EPA and UDEQ on December 30, 2009, following EPA and UDEQ review and comment.
Ex-situ groundwater treatment system operating plan (and associated program directive MNT-2010-01)	Final EPA and UDEQ review comments incorporated on December 17, 2009. Submittal to EPA and UDEQ will be in the current quarter.

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 0.9

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 Todd Mason Date 11-03-2009

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	<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>NO</u>	_____
Disposal cell sideslopes ^a	<u>NO</u>	_____
Ditches	<u>NO</u>	_____
Surrounding area	<u>NO</u>	_____
Evidence of:		
Vandalism	<u>NO</u>	_____
Intrusion by livestock	<u>NO</u>	_____
Burrowing animal damage	<u>NO</u>	_____
Intrusion by humans	<u>NO</u>	_____
Accumulation of trash	<u>NO</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>	_____
Sediment Ponds	<u>yes</u>	_____
Evidence of:		
Structural Instability	<u>yes</u>	_____

Additional Comments _____

Signature Jockl Moon
 Monticello LM Representative

Date 11-03-2009

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

MONTHLY CLIMATOLOGICAL SUMMARY for OCT. 2009

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	38.4	49.8	4:00p	25.4	7:30a	26.6	0.0	0.00	6.7	30.0	12:30a	NNE
2	44.1	58.3	5:00p	29.2	5:00a	20.9	0.0	0.00	4.0	16.0	3:30p	WSW
3	51.3	62.5	4:30p	36.9	7:00a	13.7	0.0	0.00	8.0	32.0	8:30p	SSW
4	52.2	59.2	1:00p	45.1	6:30a	12.8	0.0	0.11	17.8	53.0	12:30p	SSW
5	44.4	52.9	3:00p	33.7	10:00p	20.6	0.0	0.00	9.0	32.0	12:30p	SW
6	43.1	57.1	5:00p	31.9	7:00a	21.9	0.0	0.00	5.1	18.0	2:30a	NW
7	45.4	56.4	4:30p	37.2	4:00a	19.7	0.0	0.08	4.5	20.0	1:30p	NW
8	44.9	55.2	4:00p	35.5	4:30a	20.1	0.0	0.00	5.1	25.0	4:00p	NNW
9	47.9	59.5	4:30p	37.6	7:00a	17.1	0.0	0.00	8.3	34.0	1:00a	NNW
10	50.5	61.4	3:00p	34.3	7:30a	14.5	0.0	0.00	6.6	26.0	3:00p	SW
11	50.3	61.7	3:30p	39.3	7:30a	14.7	0.0	0.00	7.7	26.0	2:00p	SW
12	50.2	58.7	3:00p	39.7	7:00a	14.8	0.0	0.00	8.4	24.0	10:30a	SSW
13	50.2	57.1	4:00p	42.2	7:00a	14.8	0.0	0.00	9.0	30.0	2:00p	S
14	51.2	63.0	4:00p	44.7	12:00m	13.8	0.0	0.00	10.2	32.0	9:30a	S
15	51.6	61.6	3:30p	40.0	5:00a	13.4	0.0	0.00	6.6	21.0	11:30a	NW
16	53.8	64.2	3:30p	42.7	4:30a	11.2	0.0	0.00	7.8	25.0	3:00p	NW
17	55.2	68.3	3:30p	43.0	7:30a	10.2	0.4	0.00	5.0	18.0	1:30p	NW
18	59.4	70.5	2:00p	51.0	1:30a	6.6	1.0	0.00	7.8	24.0	10:00a	SW
19	57.2	68.8	2:30p	41.5	6:30a	8.3	0.4	0.00	7.9	32.0	4:00p	N
20	45.8	56.6	3:30p	39.9	6:30p	19.2	0.0	0.23	6.9	26.0	1:30p	N
21	43.2	50.0	3:30p	39.0	9:00a	21.8	0.0	0.00	18.0	40.0	12:00p	NNW
22	43.8	51.1	3:30p	38.6	4:00a	21.2	0.0	0.00	10.6	27.0	3:30p	NNW
23	45.1	55.9	4:00p	37.4	4:30a	19.9	0.0	0.00	6.2	19.0	2:00p	NNW
24	48.3	58.0	1:00p	39.0	1:00a	16.7	0.0	0.02	6.3	39.0	10:30p	NNW
25	41.1	48.1	2:30p	32.2	9:00p	23.9	0.0	0.00	10.7	31.0	1:00a	NNW
26	38.0	49.6	3:30p	28.1	7:30a	27.0	0.0	0.00	6.0	22.0	11:00p	NNE
27	36.1	47.6	2:00p	25.1	11:00p	28.9	0.0	0.00	12.6	36.0	10:30a	NNW
28	25.8	29.7	1:00p	22.6	6:30a	39.2	0.0	0.00	8.3	32.0	12:30a	NNW
29	23.9	28.4	3:00p	21.3	7:00a	41.1	0.0	0.00	16.6	36.0	3:00p	NNW
30	31.3	41.6	4:30p	20.9	2:30a	33.7	0.0	0.00	9.1	26.0	5:00a	NNW
31	38.3	48.5	3:00p	27.2	3:00a	26.7	0.0	0.00	6.6	18.0	7:30a	NNW

	45.2	70.5	18	20.9	30	615.0	1.8	0.44	8.5	53.0	4	NNW

Max >= 90.0: 0

Max <= 32.0: 2

Min <= 32.0: 9

Min <= 0.0: 0

Max Rain: 0.23 ON 10/20/09

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

Heat Base: 65.0 Cool Base: 65.0 Method: Integration

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	<input checked="" type="checkbox"/> Yes	_____
Roads ^a	<input checked="" type="checkbox"/> Yes	_____
Signs	<input checked="" type="checkbox"/> Yes	_____
Site monuments	<input checked="" type="checkbox"/> Yes	_____
Drainage ditches ^a	<input checked="" type="checkbox"/> Yes	_____
Manholes	<input checked="" type="checkbox"/> Yes	_____
Vegetation	<input checked="" type="checkbox"/> 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 12-03-2009

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

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 0.8

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 Judd Mann Date 12-03-2009

MONTHLY CLIMATOLOGICAL SUMMARY for NOV. 2009

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	43.8	58.4	3:00p	31.9	3:00a	21.2	0.0	0.00	3.3	12.0	10:30a	NW
2	47.5	60.8	3:00p	36.8	4:30a	17.5	0.0	0.00	4.8	18.0	3:00p	W
3	46.8	60.9	3:00p	35.3	6:30a	18.2	0.0	0.00	4.5	15.0	1:30p	S
4	49.3	62.3	3:00p	36.5	6:30a	15.7	0.0	0.00	5.2	20.0	1:30p	W
5	53.3	63.2	3:00p	44.7	7:30p	11.7	0.0	0.00	6.7	24.0	9:00a	SW
6	50.1	60.9	3:00p	41.6	5:00a	14.9	0.0	0.00	6.6	26.0	11:00a	S
7	50.6	60.4	2:30p	43.1	1:30a	14.4	0.0	0.00	8.6	32.0	3:00p	SW
8	47.0	57.3	3:30p	38.6	7:00a	18.0	0.0	0.00	4.3	16.0	9:00a	NW
9	45.4	56.6	1:30p	34.4	5:30a	19.6	0.0	0.00	5.2	19.0	2:00p	WNW
10	48.5	58.7	3:30p	39.8	1:00a	16.5	0.0	0.00	6.3	27.0	10:30a	SW
11	49.2	57.1	1:00p	43.3	12:30a	15.8	0.0	0.00	5.1	22.0	9:30a	SSW
12	48.5	55.3	2:00p	43.0	4:00a	16.5	0.0	0.00	13.3	36.0	2:30p	SSW
13	40.3	48.4	2:00p	32.7	12:00m	24.7	0.0	0.00	7.9	26.0	3:00a	SSW
14	31.3	36.5	10:30a	23.0	12:00m	33.7	0.0	0.08	7.0	24.0	12:00m	S
15	24.4	29.6	2:00p	20.1	11:30p	40.6	0.0	0.00	14.8	41.0	7:30a	NNW
16	27.3	38.1	4:00p	19.0	2:30a	37.7	0.0	0.00	4.3	16.0	1:00p	N
17	31.9	47.5	3:00p	20.4	7:00a	33.1	0.0	0.00	1.6	8.0	3:30a	NNE
18	34.3	47.3	2:30p	23.1	7:00a	30.7	0.0	0.00	4.8	18.0	11:00a	NW
19	36.6	47.3	2:00p	25.7	4:30a	28.4	0.0	0.00	6.5	18.0	11:30a	N
20	36.4	45.6	3:00p	27.0	7:30a	28.6	0.0	0.00	7.4	24.0	3:00p	SSW
21	37.9	48.1	2:30p	29.5	12:00m	27.1	0.0	0.00	6.9	20.0	3:30a	S
22	33.6	42.6	1:00p	23.6	6:00a	31.4	0.0	0.00	8.8	25.0	12:00p	SSW
23	27.9	34.7	1:00a	21.8	8:00a	37.1	0.0	0.00	11.6	37.0	2:00a	NNW
24	30.3	39.6	2:30p	19.0	5:00a	34.7	0.0	0.00	7.6	17.0	3:30p	NNW
25	39.2	46.9	1:00p	29.0	6:30a	25.8	0.0	0.00	8.6	24.0	1:30p	NNW
26	38.9	52.3	1:30p	28.8	7:00a	26.1	0.0	0.00	3.7	14.0	1:30p	WNW
27	39.0	49.4	1:30p	29.8	4:30a	26.0	0.0	0.00	6.7	21.0	10:00a	S
28	37.4	45.8	12:00p	32.2	6:30p	27.6	0.0	0.02	5.4	20.0	2:30p	SSW
29	35.1	41.8	2:30p	30.0	11:30p	29.9	0.0	0.01	7.4	18.0	7:00a	NNW
30	33.3	44.9	3:00p	25.4	5:00a	31.7	0.0	0.00	3.3	13.0	12:30p	NW

	39.8	63.2	5	19.0	16	754.9	0.0	0.11	6.6	41.0	15	SSW

Max >= 90.0: 0
 Max <= 32.0: 1
 Min <= 32.0: 17
 Min <= 0.0: 0
 Max Rain: 0.08 ON 11/14/09
 Days of Rain: 2 (>.01 in) 0 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

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	Buried in snow
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 1-4-2010

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

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>	<u>buried in snow</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 Judd Mason Date 01-04-2010

MONTHLY CLIMATOLOGICAL SUMMARY for DEC. 2009

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	34.7	46.7	1:30p	21.7	6:30a	30.3	0.0	0.00	7.2	25.0	10:00a	NNW
2	28.1	36.1	11:00a	16.5	9:30p	36.9	0.0	0.00	8.8	30.0	1:00p	NNW
3	17.4	22.8	12:30p	10.7	6:00a	47.6	0.0	0.00	10.7	28.0	3:00p	NNW
4	18.8	31.2	2:30p	9.3	5:30a	46.2	0.0	0.00	5.8	30.0	11:30p	NNW
5	23.5	28.3	10:30p	16.2	6:30a	41.5	0.0	0.00	13.0	38.0	2:30a	SSW
6	24.2	29.5	1:30p	15.3	7:30a	40.8	0.0	0.00	7.8	28.0	12:30p	SSW
7	27.5	29.9	5:30p	24.3	1:30a	37.5	0.0	0.00	13.1	36.0	6:00p	SSW
8	20.2	29.7	3:00a	2.0	12:00m	44.8	0.0	0.03	7.8	27.0	1:30p	NNW
9	7.2	19.0	2:30p	-4.0	4:30a	57.8	0.0	0.01	2.8	16.0	4:30p	W
10	10.9	19.6	12:30p	2.7	3:00a	54.1	0.0	0.00	3.9	16.0	11:30a	WSW
11	19.4	24.5	3:00p	8.3	12:30a	45.6	0.0	0.00	8.2	23.0	12:30p	SSW
12	25.4	29.5	12:00m	21.2	3:30a	39.6	0.0	0.00	10.8	26.0	12:00m	SSW
13	29.4	34.6	1:00p	19.3	12:00m	35.7	0.0	0.01	13.1	37.0	1:00p	SSW
14	22.3	33.2	3:00p	13.5	4:30a	42.7	0.0	0.04	3.4	13.0	8:00p	W
15	22.5	30.8	2:30p	15.9	6:00a	42.5	0.0	0.03	4.2	14.0	12:00m	W
16	26.8	37.5	1:30p	20.7	3:30a	38.2	0.0	0.03	2.1	15.0	4:00a	WSW
17	28.5	39.2	3:30p	18.8	4:30a	36.5	0.0	0.00	4.4	11.0	1:00p	NNE
18	28.5	36.6	12:00p	19.7	5:00a	36.5	0.0	0.00	7.9	25.0	6:00p	NNW
19	24.7	33.8	2:00p	18.2	4:30a	40.3	0.0	0.00	3.8	17.0	12:30a	NNE
20	24.9	33.9	12:00p	15.5	4:30a	40.1	0.0	0.00	3.3	20.0	10:00p	WNW
21	27.4	33.3	2:30p	16.5	7:30a	37.6	0.0	0.00	6.0	26.0	2:30a	SSW
22	28.8	31.5	12:30a	26.5	5:30a	36.2	0.0	0.00	7.3	23.0	3:00p	SSW
23	26.6	28.6	2:00a	22.1	12:00m	38.4	0.0	0.00	18.9	44.0	1:30p	NNW
24	17.6	22.5	12:30a	6.9	12:00m	47.4	0.0	0.00	12.4	32.0	4:30a	NNW
25	16.8	24.5	1:00p	6.5	12:30a	48.2	0.0	0.00	7.3	27.0	6:00a	NNW
26	15.8	21.7	2:00p	10.1	11:30p	49.2	0.0	0.00	11.3	27.0	7:30a	NNW
27	13.3	22.0	4:00p	5.8	6:30a	51.7	0.0	0.00	2.7	9.0	1:30p	WNW
28	17.5	28.8	1:30p	7.5	8:00a	47.5	0.0	0.00	1.7	10.0	12:00m	WSW
29	23.2	27.8	1:00a	15.1	10:00p	41.8	0.0	0.01	6.4	24.0	1:30p	SSW
30	21.2	24.9	8:30p	17.0	4:00a	43.8	0.0	0.01	7.8	42.0	12:00m	NW
31	19.2	31.2	4:30p	12.2	8:00p	45.8	0.0	0.01	7.2	36.0	12:30a	NNW
	22.3	46.7	1	-4.0	9	1322.8	0.0	0.18	7.5	44.0	23	NNW

Max >= 90.0: 0
 Max <= 32.0: 21
 Min <= 32.0: 31
 Min <= 0.0: 1
 Max Rain: 0.04 ON 12/14/09
 Days of Rain: 4 (>.01 in) 0 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

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

