

Monticello, Utah, National Priorities List Sites Federal Facility Agreement Quarterly Report: April 1–June 30, 2012

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 April through June 2012. The report also includes a summary of projected near-term activity and reporting requirements. 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 near-term schedule of activities and reporting requirements.

The MMTS and MVP were placed on the 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 comply with 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 and surface water of Operable Unit III (OU III) of the MMTS. OU III remedial actions are ongoing. As of December 2003, the MMTS and MVP are administered as the Monticello Disposal and Processing Site by the DOE Office of Legacy Management (LM).

2.0 MMTS Status

The fourth five-year review of the MMTS, completed in June 2012, concluded that the MMTS remedy was protective of human health and the environment.

2.1 Operable Unit I

OU I of the MMTS consists of the onsite waste disposal cell and supporting infrastructure (repository), and the property comprising the former Monticello uranium and vanadium-ore processing mill (mill site).

2.1.1 Monticello LM Repository (DOE-Owned)

The repository is the site of 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 in Monticello, Utah. The repository includes infrastructure that is maintained by onsite personnel 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 protection of human health and 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 (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 that required non-routine surveillance of affected properties (those designated as supplemental standards cleanup properties). No measurable precipitation was recorded for the quarter (see attached monthly climatological summary forms).
- 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 Leachate Collection and Recovery 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 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 (LDS) remains at zero (see attached graph).
 - 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 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 (TSF capacity is about 100 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).
 - The GJDS is scheduled for repairs (access road and decontamination facility) during July through September 2012. GJDS will not receive material for disposal during that time.

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 are:

- Routine surveillance of the former mill site (LTSM plan Section 4.2.2): no evidence of non-conformance with groundwater use restrictions or land use restrictions 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 are:

- Routine surveillance of 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.
- Routine surveillance of supplemental standards property MP-00176-VL (Section 4.2.6): No evidence of non-conformance with the land use restriction on building construction or evidence of excessive erosion was observed.
- The U.S. General Services Administration, in cooperation with DOE, disposed of property MP-01081-VL, located east of the repository site, to non-DOE ownership. The transaction was completed in August 2011. A very small segment of the property is within the Groundwater Management Area (see below).

2.3 Operable Unit III (Contaminated Groundwater and Surface Water)

2.3.1 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 Groundwater Restricted Area, as defined by the State of Utah Division of Water Rights. Surveillance findings for this quarter are:

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

2.3.2 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 discharged to Montezuma Creek or returned to the aquifer by way of an infiltration trench.

OU III remedy performance is evaluated and reported annually (LTSM plan Section 5.4). Groundwater treatment by this system began in June 2005. The following summarizes treatment system performance from April through June 2012.

- The system operated continuously during the quarter except for a brief shutdown on May 25, 2012, for a minor plumbing repair.
- Effluent discharge to Montezuma Creek did not exceed the allowed rate (10 gallons per minute [gpm]).
- Iron concentration and pH for the quarter are within discharge allowances (see Table 1).
- Approximately 1.0 million gallons of water were treated during the reporting period. The effective treatment rate was 8.2 gpm.
- Approximately 1.9 pounds of uranium were removed from the aquifer during the quarter as a result of groundwater treatment.
- The treatment rate was decreased from 9.8 gpm to 5.5 gpm on May 4, 2012. The treatment rate was then increased to 9.5 gpm on May 23, 2012. The flow rate adjustment was performed to calibrate the new outfall flow meter installed in March 2012.
- The reactive media was last exchanged during October 10 to 12, 2011. Each treatment cell treated approximately 2.1 million gallons since the previous exchange in October 2010.
- Approximately 2.8 million gallons of water (1.4 million gallons per cell) have been treated since the last media exchange. Treatment of approximately 2 million gallons of groundwater per cell at influent uranium concentrations of 300 to 350 micrograms per liter and flow of 10 gpm is an approximate target volume for future media exchange.
- No treated water was discharged to the infiltration trench during the period of review because of outfall meter calibration and possible flow restriction to the infiltration trench.

Table 1. Treatment System Compliance Summary

| Treatment System Effluent to Montezuma Creek | April 2012 | May 2012 | June 2012 |
|---|------------|----------|-----------|
| pH ^a | 7.38 | 7.39 | 7.05 |
| Iron (total, micrograms per liter) ^b | 17 | 21 | 14 |

^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 | April 2012 | May 2012 | June 2012 ^a |
|---|------------|------------|------------------------|
| Gallons treated | 409,418 | 301,696 | 319,769 |
| Average treatment rate, gpm | 9.2 | 6.8 | 7.2 |
| Uranium influent, micrograms per liter | 290 | 280 | 323 |
| Uranium outfall, micrograms per liter | 54 | 73 | 105 |
| Uranium mass removed, pounds | 0.80 | 0.52 | 0.58 |
| Cumulative uranium mass removed, pounds | 53.3 | 53.8 | 54.4 |
| Cumulative volume treated, gallons | 22,761,518 | 23,063,214 | 23,382,983 |

^a Cut-off date is June 26, 2012.

2.3.3 Biomonitoring

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

- The scope of biomonitoring for 2012 is presented in *Sampling and Analysis Plan for Biomonitoring at Monticello, Utah 2012 Field Season*, February 2012. The scope for 2012 was to collect samples of benthic macroinvertebrates from Wetland 3 for analysis of selenium and to conduct ecological surveys to assess foraging behavior of avian species associated with the wetland. The 2012 activities were implemented to confirm results from previous years of OU III biomonitoring.
- Field activities for 2012 biomonitoring were completed in June 2012.
- The fourth five-year review for MMTS (June 2012) concluded that OU III Record of Decision specified criteria for biomonitoring have been met.

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 the reporting period, with reference to the applicable section of the LTSM plan, include the following:

- Routine surveillance of city street and utility corridors and UDOT rights-of-way (supplemental standards properties; Section 4.2.3):
 - Onsite 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.
 - Upgrades to City, State, and private utility infrastructure resumed during the reporting period. No radiologically contaminated material was encountered at the excavations. Approximately 6 cubic yards of radiologically contaminated material remain in the TSF and is managed in accordance with Section 4.2.3.2 of the LTSM plan.
- Routine surveillance of supplemental standards property MS-00176-VL (Section 4.2.5) identified no violation of the land use restriction institutional control.

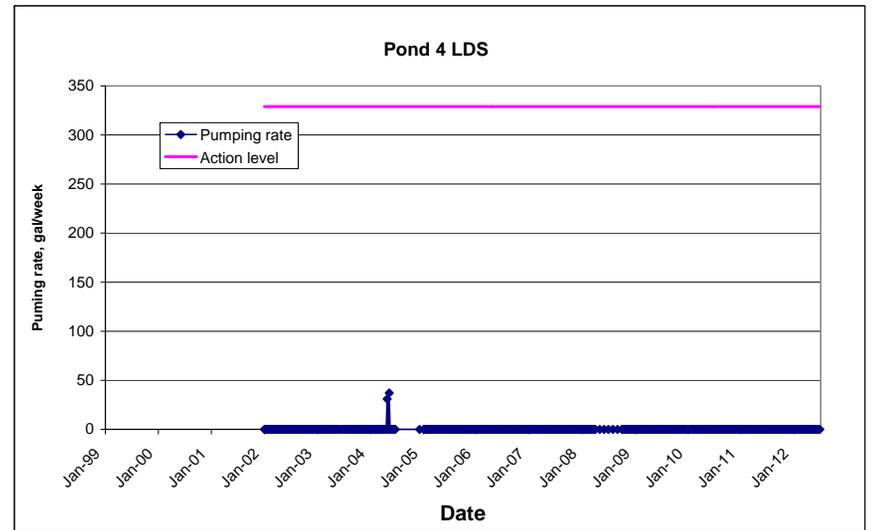
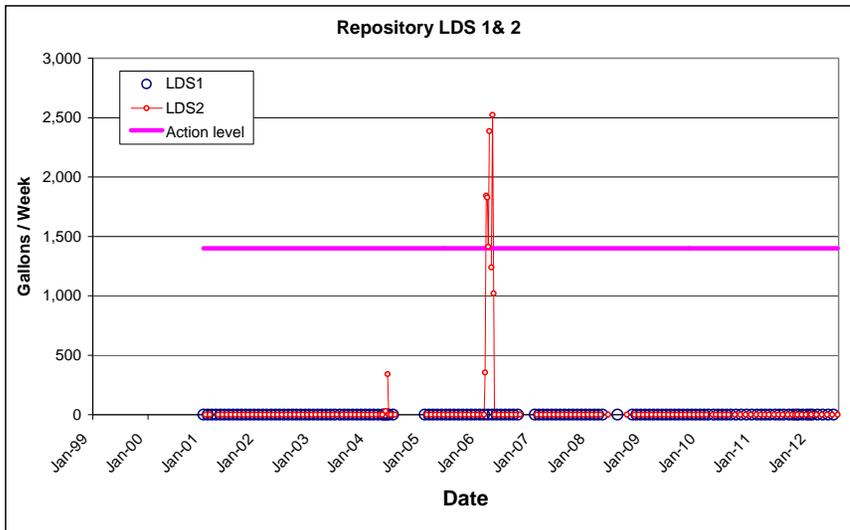
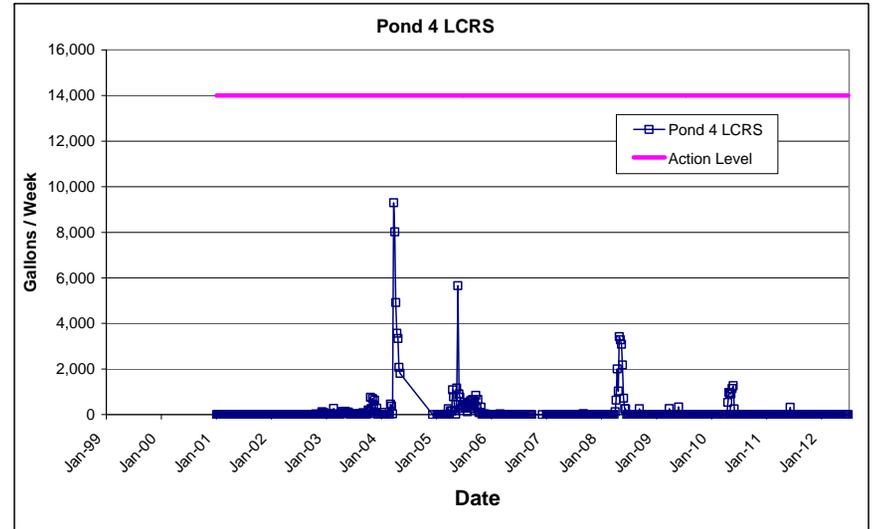
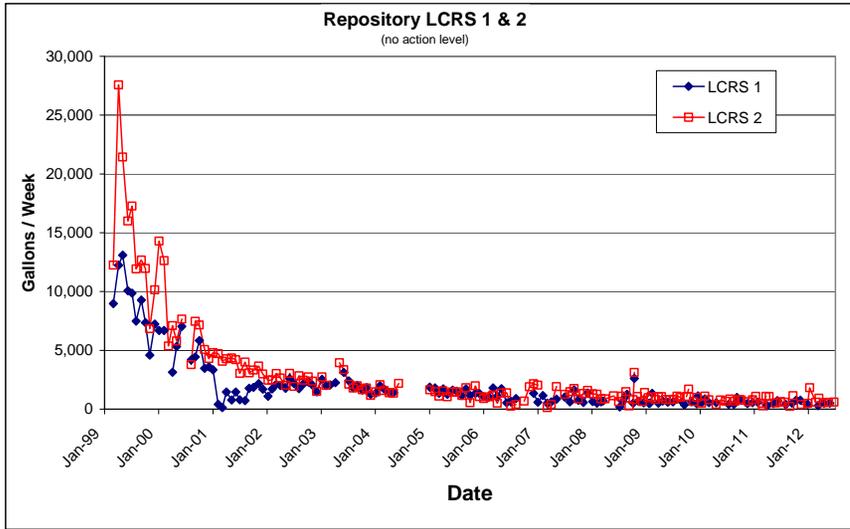
4.0 Schedule

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

Table 3. Schedule of Near-Term Deliverables and Activities

| Activity | Schedule |
|---|---|
| FFA quarterly report: July–September 2012. | Submit to EPA and UDEQ by October 10, 2012. |
| FFA semiannual meeting. | Fall 2012 FFA meeting to coincide with annual inspection in September. |
| OU III biomonitoring results. | Submit results to EPA and UDEQ in fall 2012/winter 2012. |
| OU III annual water quality report. | Submit report to EPA and UDEQ in September or October 2012. |
| Site Management Plan, Section 5 update (penalty milestone). | Draft submittal due to EPA and UDEQ for review by August 1 annually. |
| Annual site inspection report (penalty milestone). | Site inspection scheduled for week of September 24, 2012. Submit site inspection report to EPA and UDEQ by December 31, 2012. |
| Fourth CERCLA five-year reviews (MVP and MMTS). | Complete. Received EPA concurrence for MVP and MMTS on June 18, 2012. |

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



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MONTHLY CLIMATOLOGICAL SUMMARY for APR. 2012

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 | 48.5 | 60.4 | 2:30p | 37.3 | 12:00m | 16.5 | 0.0 | 0.00 | 13.7 | 42.0 | 2:30p | SSW |
| 2 | 33.2 | 37.3 | 12:30a | 26.7 | 8:30a | 31.8 | 0.0 | 0.00 | 23.6 | 48.0 | 2:00p | NNW |
| 3 | 41.3 | 52.2 | 4:00p | 32.5 | 6:00a | 23.7 | 0.0 | 0.00 | 13.5 | 38.0 | 7:30a | NNW |
| 4 | 46.9 | 60.3 | 4:00p | 31.9 | 5:30a | 18.1 | 0.0 | 0.00 | 8.6 | 30.0 | 3:00p | SSW |
| 5 | 50.1 | 59.3 | 3:30p | 39.1 | 7:30a | 14.9 | 0.0 | 0.00 | 12.7 | 37.0 | 6:30p | SSW |
| 6 | 42.9 | 50.0 | 4:00p | 31.9 | 12:00m | 22.1 | 0.0 | 0.00 | 13.6 | 37.0 | 9:00a | SSW |
| 7 | 42.4 | 58.9 | 5:30p | 26.8 | 6:00a | 22.6 | 0.0 | 0.00 | 6.0 | 19.0 | 1:00a | NNE |
| 8 | 50.7 | 65.8 | 4:30p | 34.7 | 6:00a | 14.3 | 0.0 | 0.00 | 6.2 | 23.0 | 1:00p | WSW |
| 9 | 56.5 | 69.0 | 5:30p | 42.7 | 7:30a | 9.0 | 0.5 | 0.00 | 7.5 | 22.0 | 2:00p | W |
| 10 | 56.4 | 69.4 | 3:30p | 42.3 | 5:00a | 9.2 | 0.5 | 0.00 | 7.5 | 28.0 | 3:00p | SSW |
| 11 | 53.7 | 68.6 | 3:00p | 37.2 | 12:00m | 11.5 | 0.2 | 0.00 | 12.9 | 48.0 | 5:00p | S |
| 12 | 39.5 | 49.6 | 4:30p | 32.7 | 8:00a | 25.5 | 0.0 | 0.04 | 8.3 | 33.0 | 4:00p | SSW |
| 13 | 38.9 | 46.8 | 2:00p | 28.4 | 6:30a | 26.1 | 0.0 | 0.00 | 9.8 | 33.0 | 10:30p | SSW |
| 14 | 33.4 | 39.8 | 12:30a | 27.6 | 9:00p | 31.6 | 0.0 | 0.01 | 9.8 | 33.0 | 1:00a | SSW |
| 15 | 35.3 | 49.1 | 3:00p | 23.7 | 3:30a | 29.7 | 0.0 | 0.01 | 6.9 | 30.0 | 8:30p | SSE |
| 16 | 41.9 | 54.7 | 5:00p | 30.0 | 1:00a | 23.1 | 0.0 | 0.00 | 6.2 | 23.0 | 1:30p | N |
| 17 | 47.8 | 59.9 | 3:30p | 33.5 | 4:00a | 17.2 | 0.0 | 0.00 | 7.6 | 26.0 | 1:00p | SSW |
| 18 | 52.9 | 66.5 | 5:00p | 39.7 | 3:00a | 12.2 | 0.0 | 0.00 | 7.5 | 38.0 | 7:00p | W |
| 19 | 51.2 | 60.4 | 3:30p | 42.7 | 7:30a | 13.8 | 0.0 | 0.00 | 11.1 | 30.0 | 7:00p | NNW |
| 20 | 52.1 | 64.7 | 5:30p | 38.8 | 4:00a | 12.9 | 0.0 | 0.00 | 9.0 | 25.0 | 1:00p | N |
| 21 | 58.6 | 72.1 | 5:30p | 42.7 | 6:30a | 7.9 | 1.5 | 0.00 | 5.6 | 21.0 | 2:00p | NW |
| 22 | 63.0 | 76.7 | 5:00p | 49.8 | 6:30a | 5.5 | 3.5 | 0.00 | 5.2 | 15.0 | 12:30p | NW |
| 23 | 64.0 | 76.4 | 2:30p | 48.0 | 6:30a | 4.2 | 3.1 | 0.00 | 6.9 | 24.0 | 6:30p | W |
| 24 | 64.6 | 75.9 | 4:00p | 47.9 | 6:00a | 3.8 | 3.3 | 0.00 | 7.2 | 29.0 | 12:30p | SSW |
| 25 | 59.5 | 65.0 | 1:00p | 51.9 | 11:30p | 5.5 | 0.0 | 0.00 | 5.9 | 27.0 | 2:00p | SSW |
| 26 | 51.0 | 67.1 | 2:30p | 39.3 | 12:00m | 14.0 | 0.0 | 0.14 | 9.1 | 41.0 | 3:30p | SSW |
| 27 | 48.3 | 57.9 | 4:00p | 39.1 | 12:30a | 16.7 | 0.0 | 0.00 | 9.6 | 27.0 | 3:30p | NNW |
| 28 | 46.8 | 56.6 | 5:00p | 39.7 | 5:30a | 18.2 | 0.0 | 0.00 | 13.2 | 30.0 | 3:00p | NNW |
| 29 | 49.2 | 59.9 | 5:30p | 38.6 | 6:30a | 15.8 | 0.0 | 0.00 | 9.6 | 27.0 | 6:30a | NNW |
| 30 | 55.7 | 67.2 | 3:30p | 38.7 | 4:30a | 9.5 | 0.2 | 0.00 | 8.2 | 31.0 | 2:30p | SSW |
| | 49.2 | 76.7 | 22 | 23.7 | 15 | 486.9 | 12.8 | 0.20 | 9.4 | 48.0 | 2 | SSW |

Max >= 90.0: 0
 Max <= 32.0: 0
 Min <= 32.0: 8
 Min <= 0.0: 0
 Max Rain: 0.14 ON 04/26/12
 Days of Rain: 2 (>.01 in) 1 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

MONTHLY CLIMATOLOGICAL SUMMARY for MAY, 2012

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 | 58.0 | 68.9 | 5:00p | 49.0 | 5:00a | 7.5 | 0.5 | 0.00 | 8.8 | 35.0 | 2:00p | SSW |
| 2 | 55.6 | 67.2 | 5:30p | 44.2 | 4:30a | 9.5 | 0.1 | 0.00 | 9.0 | 28.0 | 11:00a | SW |
| 3 | 58.2 | 69.5 | 6:30p | 40.1 | 6:30a | 7.4 | 0.7 | 0.00 | 10.1 | 35.0 | 11:30a | SSW |
| 4 | 59.3 | 72.3 | 5:00p | 43.9 | 6:30a | 7.0 | 1.3 | 0.00 | 10.0 | 30.0 | 2:00p | SSW |
| 5 | 57.0 | 69.1 | 4:00p | 43.1 | 5:30a | 8.7 | 0.7 | 0.00 | 8.4 | 29.0 | 1:30p | SSW |
| 6 | 53.3 | 64.7 | 4:00p | 41.9 | 7:00a | 11.7 | 0.0 | 0.00 | 8.6 | 28.0 | 2:30a | NNW |
| 7 | 52.6 | 63.7 | 2:30p | 43.1 | 6:30a | 12.4 | 0.0 | 0.00 | 8.5 | 29.0 | 1:00p | NNW |
| 8 | 51.8 | 63.1 | 2:00p | 39.4 | 4:00a | 13.2 | 0.0 | 0.00 | 4.9 | 19.0 | 4:00p | NW |
| 9 | 55.9 | 68.3 | 6:00p | 41.4 | 5:00a | 9.5 | 0.5 | 0.00 | 6.3 | 28.0 | 1:00p | S |
| 10 | 61.7 | 75.0 | 5:00p | 48.6 | 5:30a | 5.6 | 2.3 | 0.00 | 6.6 | 32.0 | 12:30p | WNW |
| 11 | 60.8 | 69.2 | 4:00p | 49.1 | 12:00m | 4.6 | 0.4 | 0.00 | 10.0 | 44.0 | 3:00p | NW |
| 12 | 58.5 | 70.5 | 4:00p | 44.1 | 5:00a | 7.4 | 0.9 | 0.00 | 7.5 | 28.0 | 5:00p | NNW |
| 13 | 57.7 | 66.2 | 6:00p | 46.8 | 11:00p | 7.4 | 0.0 | 0.00 | 6.5 | 35.0 | 8:00p | NW |
| 14 | 58.7 | 73.9 | 6:00p | 43.1 | 6:30a | 8.4 | 2.0 | 0.00 | 4.9 | 22.0 | 3:00p | WNW |
| 15 | 62.2 | 74.8 | 5:00p | 46.2 | 3:30a | 5.8 | 2.9 | 0.00 | 7.6 | 26.0 | 2:30p | SSE |
| 16 | 59.1 | 71.5 | 12:00p | 47.1 | 6:00a | 6.6 | 0.7 | 0.00 | 6.6 | 45.0 | 12:30p | SW |
| 17 | 63.7 | 76.9 | 3:00p | 48.8 | 12:30a | 4.6 | 3.3 | 0.00 | 6.4 | 40.0 | 2:00p | SW |
| 18 | 59.7 | 71.6 | 2:00p | 46.8 | 6:00a | 6.6 | 1.3 | 0.00 | 11.3 | 38.0 | 7:30p | SSW |
| 19 | 55.5 | 66.4 | 5:00p | 44.1 | 6:30a | 9.6 | 0.1 | 0.00 | 8.0 | 23.0 | 12:30a | NNW |
| 20 | 60.9 | 74.6 | 5:00p | 45.0 | 6:30a | 6.5 | 2.4 | 0.00 | 5.1 | 17.0 | 3:00p | NNW |
| 21 | 67.2 | 80.2 | 4:00p | 51.9 | 6:30a | 3.2 | 5.4 | 0.00 | 7.2 | 24.0 | 6:00p | NNW |
| 22 | 69.0 | 80.7 | 5:00p | 56.7 | 7:00a | 1.8 | 5.8 | 0.00 | 9.0 | 31.0 | 2:30p | W |
| 23 | 64.3 | 76.7 | 4:00p | 51.3 | 12:00m | 3.8 | 3.1 | 0.00 | 12.8 | 50.0 | 5:00p | WSW |
| 24 | 54.6 | 67.6 | 4:00p | 41.1 | 6:30a | 10.7 | 0.3 | 0.00 | 7.5 | 32.0 | 1:30a | ENE |
| 25 | 63.8 | 75.4 | 4:00p | 54.3 | 6:30a | 3.7 | 2.5 | 0.00 | 22.4 | 48.0 | 4:30p | SSW |
| 26 | 56.1 | 65.2 | 2:00p | 41.6 | 10:30p | 8.9 | 0.0 | 0.00 | 19.4 | 51.0 | 12:00p | SSW |
| 27 | 47.9 | 59.4 | 5:00p | 31.7 | 6:00a | 17.1 | 0.0 | 0.00 | 7.2 | 30.0 | 2:00p | W |
| 28 | 54.7 | 68.4 | 5:30p | 42.5 | 1:00a | 10.7 | 0.4 | 0.00 | 6.5 | 21.0 | 11:00a | NNW |
| 29 | 61.7 | 74.4 | 4:30p | 45.1 | 5:30a | 5.9 | 2.7 | 0.00 | 7.4 | 29.0 | 2:30p | NNW |
| 30 | 67.0 | 75.5 | 5:00p | 52.0 | 6:30a | 1.8 | 3.8 | 0.00 | 9.8 | 26.0 | 3:00a | N |
| 31 | 67.6 | 79.4 | 5:00p | 54.0 | 6:00a | 2.1 | 4.7 | 0.00 | 10.5 | 25.0 | 2:00a | NNW |
| ----- | | | | | | | | | | | | |
| | 59.2 | 80.7 | 22 | 31.7 | 27 | 229.7 | 48.8 | 0.00 | 8.9 | 51.0 | 26 | NNW |

Max >= 90.0: 0
 Max <= 32.0: 0
 Min <= 32.0: 1
 Min <= 0.0: 0
 Max Rain: 0.00 ON 05/01/12
 Days of Rain: 0 (>.01 in) 0 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

MONTHLY CLIMATOLOGICAL SUMMARY for JUN. 2012

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 | 70.9 | 83.3 | 4:30p | 57.5 | 6:00a | 0.8 | 6.7 | 0.00 | 9.7 | 27.0 | 4:00p | N |
| 2 | 68.9 | 79.7 | 6:00p | 60.8 | 7:00a | 0.6 | 4.5 | 0.00 | 7.3 | 42.0 | 4:00p | NW |
| 3 | 70.8 | 85.7 | 3:30p | 52.2 | 6:30a | 2.1 | 8.0 | 0.00 | 4.7 | 25.0 | 3:30p | SSW |
| 4 | 72.4 | 83.3 | 4:00p | 59.8 | 2:30a | 0.4 | 7.8 | 0.00 | 7.4 | 27.0 | 12:00p | SSW |
| 5 | 66.9 | 81.0 | 4:30p | 51.0 | 5:00a | 3.1 | 5.0 | 0.00 | 12.0 | 44.0 | 3:00p | SSW |
| 6 | 63.9 | 76.9 | 5:30p | 47.5 | 6:00a | 4.4 | 3.3 | 0.00 | 7.5 | 28.0 | 3:00p | N |
| 7 | 65.7 | 78.3 | 5:00p | 49.3 | 5:00a | 3.6 | 4.3 | 0.00 | 6.4 | 22.0 | 3:00p | N |
| 8 | 68.9 | 81.5 | 5:00p | 52.2 | 5:30a | 2.5 | 6.4 | 0.00 | 9.7 | 35.0 | 2:00p | SSW |
| 9 | 67.8 | 80.3 | 4:30p | 51.7 | 5:00a | 2.6 | 5.4 | 0.00 | 10.0 | 34.0 | 2:30p | SSW |
| 10 | 57.0 | 69.2 | 12:30a | 44.3 | 5:30a | 8.4 | 0.4 | 0.00 | 13.4 | 36.0 | 6:00a | N |
| 11 | 62.2 | 75.9 | 4:30p | 44.6 | 5:30a | 6.0 | 3.3 | 0.00 | 6.6 | 24.0 | 12:30p | N |
| 12 | 68.2 | 81.7 | 4:30p | 52.8 | 4:00a | 3.3 | 6.5 | 0.00 | 6.3 | 25.0 | 1:30p | NNW |
| 13 | 71.6 | 82.8 | 3:30p | 53.9 | 5:30a | 1.7 | 8.3 | 0.00 | 7.0 | 23.0 | 12:00p | WNW |
| 14 | 71.0 | 83.4 | 3:00p | 55.3 | 6:00a | 1.3 | 7.3 | 0.00 | 6.9 | 26.0 | 2:30p | S |
| 15 | 69.6 | 81.4 | 4:30p | 54.7 | 6:00a | 1.8 | 6.5 | 0.00 | 7.8 | 29.0 | 4:30p | SSW |
| 16 | 70.7 | 83.0 | 3:30p | 56.4 | 3:30a | 1.6 | 7.4 | 0.00 | 5.4 | 23.0 | 12:30p | NNW |
| 17 | 75.1 | 86.0 | 5:00p | 61.8 | 3:00a | 0.4 | 10.4 | 0.00 | 9.3 | 39.0 | 3:00p | WNW |
| 18 | 74.0 | 84.0 | 5:30p | 56.6 | 5:30a | 1.0 | 10.0 | 0.00 | 9.6 | 29.0 | 11:00a | WSW |
| 19 | 73.6 | 86.5 | 4:00p | 52.6 | 6:30a | 1.3 | 9.9 | 0.00 | 8.1 | 30.0 | 3:30p | S |
| 20 | 68.7 | 78.8 | 5:00p | 57.6 | 7:00a | 1.0 | 4.7 | 0.00 | 10.4 | 25.0 | 3:00p | NNW |
| 21 | 68.8 | 85.9 | 1:30p | 55.2 | 3:30a | 1.6 | 3.8 | 0.00 | 4.7 | 21.0 | 1:30p | WSW |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | |
| 26 | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| ----- | | | | | | | | | | | | |
| | 68.9 | 86.5 | 19 | 44.3 | 10 | 49.5 | 129.9 | 0.00 | 8.1 | 44.0 | 5 | SSW |

Max >= 90.0: 0
 Max <= 32.0: 0
 Min <= 32.0: 0
 Min <= 0.0: 0
 Max Rain: 0.00 ON 06/01/12
 Days of Rain: 0 (>.01 in) 0 (>.1 in) 0 (>1 in)
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

Monthly Pond 4 Surveillance Checklist

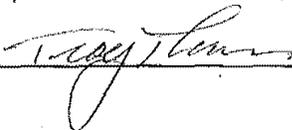
Level of Water in Pond 4 ~ 0 (small amount of water in NE corner)

| 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> | <u>see comment #1</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

#1: Some anchors have slid to the bottom of the pond due to breaks in the anchor rope. Need to consider replacing remaining anchor ropes with chains or cable.

#2: Rad Rope is beginning to deteriorate 3 is faded. Rope should be replaced this summer.

Monticello LM Representative  Date 5/16/2012

June 2012 monthly

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 NIL - small puddle in 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> | <u>wind blew ~6 anchors to the top of pond berm on North side. Place anchors back on slope.</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

South East corner on top of pond berm → small patch of Field bindweed & a few thistle. Thistle also present outside perimeter fence (SE corner) & (NE corner)
~~Rest of all materials inspected~~ TDT 6/5/12

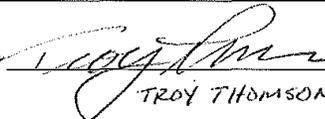
Monticello LM Representative  Date 6/5/12
 TROY THOMSON

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?

No 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 cubic
yds.
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: Section 3.4.4 states the fence shall be posted with signs containing the following information: "Controlled Area; Enter at Designated Access Only; Worker - GERT Required for Access; Visitor - Radiological Orientation or Escort Required for Access."
The TSF has just the Controlled Area; Enter at Designated Area Only sign, not the other two.

I could not pull the cover open to see how much material is currently in the bin.

Monitoring was not performed. We do not have a smear counter at this site.

TSF opened 5/23/12 ~4 cubic yds of material, Quarterly Survey completed.

J. Math / Anthony M...
Signature of Monticello LM Representative

5/17/12 / 5/23/12
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?

NO 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.)?

~40% 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.)?

NO Has radiological monitoring been conducted in accordance with Section 3.4.5?

yes Is the security fence in good condition?

Comments: Two signs per section 3.4.4 are not present. The
"Controlled area, enter at designated access only" is posted
not the other two. The yellow soils contamination sign is
legible but is deteriorating rapidly. No material
has been added since 5-23-12. The amount remains the
same. Monitoring was not performed. An RCT was
not in the area today.

Frank Smith
Signature of Monticello LM Representative

6-21-2012
Date of Inspection

Repository Area Surveillance Checklist

Monthly Surveillance Quarterly Surveillance (Feb., May, Aug., Nov.) MAY 16, 2012

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>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 - monthly</u> | _____ |
| Manholes ^b | <u>NA - monthly</u> | _____ |
| Sediment Ponds | <u>NA - monthly</u> | _____ |

| | | |
|------------------------|---------------------|-------|
| Evidence of: | | |
| Structural Instability | <u>NA - monthly</u> | _____ |

Additional Comments
NA

Signature Troy Thompson Date 5/16/2012

 Monticello LM Representative

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

Repository Area Surveillance Checklist

6/5/12 Monthly Surveillance Quarterly Surveillance (Feb., May, Aug., Nov.) ^{June to 6/5/12}

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>YES</u> | |
| Manholes ^b | <u>YES</u> | |
| Sediment Ponds | <u>YES</u> | |
| Evidence of: | | |
| Structural Instability | <u>YES</u> | |

Additional Comments

WALKED TRANSECTS A, B, C, D, E, 3F - Cover Okay in all areas
No obvious signs of noxious weeds. Settlement plates okay.
Exterior of all manholes inspected - All okay. Interior of manhole #13, #3 and
MH 1 & MH 2 inspected - all okay.

Signature [Signature] Date 6/5/12
 Monticello LM Representative

^aInspections required following a significant storm event

^bOpen to inspect quarterly

Figure 3-5. Example Repository Area Surveillance Checklist

11-30-11

Jody Waugh on site doing cover training.

Repaired tipping bucket on east side repository cover.

Flushed all systems. Appears to be working correctly again. JRM

01-24-12

Site tour by Todd Moon & John McCord of cover area. JRM

04-05-12

Site tour for Jerry Maloney & Pete Prendergast JGMS checked building, cover, Pond 4 area. JRM

4-09-12

FFA meeting held in Monticello this week. Regulators and staff toured former millsite, PERT wall, and Montezuma Creek Canyon to discuss PERT wall treatment system. JRM

4-16-12

Performed inspection per the LTS+M plan for the repository and pond 4 (monthly). jm.

6/5/12

Performed quarterly and monthly inspection for the repository and Pond 4 per the LTS+M checklist. jm