

# Monticello, Utah, National Priorities List Sites Federal Facilities Agreement (FFA) Quarterly Report: October 1–December 31, 2010

This report summarizes project status and activities implemented October through December 2010 and provides a schedule for near-term activities at the Monticello Vicinity Properties (MVP) Site and the Monticello Mill Tailings Site (MMTS) located in and near Monticello, Utah. The MMTS and MVP were placed on the United States Environmental Protection Agency (EPA) National Priorities List in 1989 and 1986, respectively.

The United States Department of Energy (DOE) implemented remedial actions at the MVP in 1986 and at the MMTS in 1989, to conform 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 (Operable Unit 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).

## 1.0 MMTS Activities and Status

### 1.1 Repository Site

- The repository site consists of the waste disposal cell and associated leachate management system, the temporary waste storage facility [TSF], and support infrastructure (drainage controls, fencing, signage, roads, etc.). As directed by the LM *Long-Term Surveillance and Maintenance Plan for the Monticello NPL Sites*, monthly and quarterly inspections of the repository site are conducted by on site LM contractor personnel to document site conditions that may affect the integrity of the site in protecting human health and the environment.
- Monthly and quarterly inspections identified no abnormalities or unacceptable conditions (see attached inspection reports).
- The inventory of contaminated material in the TSF is about 1.5 cubic yards (see attached TSF inspection logs). In accordance with the LTSM plan (Section 3.4), DOE initiates transfer of material from the TSF to the LM Grand Junction Disposal Site (GJDS), Grand Junction, Colorado, when contents of the TSF approach 75 cubic yards. The latest transfer of material from the TSF to GJDS occurred June 22 and 23, 2010, involving approximately 55 cubic yards of radiologically contaminated soil and debris recovered from excavations by the city and the Utah Department of Transportation beneath streets and in utility corridors.
- Disposal cell leachate collection in the upper sumps (Leachate Collection and Recovery System [LCRS]) 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 LCRS 2; see attached graph).

- Operation of the LCRS at the leachate collection pond (Pond 4) was normal (no water collected during the quarter).
- All disposal cell and Pond 4 leachate management equipment (pumps, pump controls, monitoring devices, and data transmission devices) are functional.
- Disposal cell and Pond 4 leachate collection in the lower sumps (Leachate Detection System) remains at zero (see attached graphs).

## **1.2 Operable Unit I (Former Millsite [City-Owned])**

- Periodic surveillance of the former mill site is conducted to ensure compliance with land and groundwater use restrictions (institutional controls to preserve the selected remedies for soil and water contamination).
- No land use or groundwater use compliance issues were observed or reported by on site LM contractor personnel.

## **1.3 Operable Unit II (Peripheral Properties [Private and City-Owned])**

- Periodic surveillance of the properties surrounding the former mill site is conducted to ensure compliance with land and groundwater use restrictions (institutional controls associated with residual soil and groundwater contamination).
- No land use or groundwater use compliance issues were observed or reported by on site LM contractor personnel.
- The U.S. Department of Energy (DOE) continues in the process to excess DOE-owned property MP-01081-VL, east of the repository site.

## **1.4 Operable Unit III (Contaminated Groundwater and Surface Water)**

### **1.4.1 Groundwater Management Area**

- Periodic 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).
- No groundwater use compliance issues were observed or reported by on site LM contractor personnel.

### **1.4.2 Ex Situ Groundwater Treatment System**

- Discharge allowances to Montezuma Creek were negotiated between DOE, EPA, UDEQ, and Utah Department of Water Quality (DWQ) in May 2008. These allowances are based on the Utah standard for acute iron toxicity to aquatic wildlife (1 mg/L) and the in-stream standard for pH for all water-use categories (greater than 6.5 and less than 9.0 standard units). The default perennial flow rate for the receiving surface water (Montezuma Creek) is 2 cubic feet per second as established by DWQ. The maximum allowed discharge rate of

treated water to Montezuma Creek from the OU III treatment system is 10 gpm. The corresponding discharge allowance for iron (total) is 45.4 mg/L.

- Water samples were collected monthly during the quarter at influent and effluent locations to monitor performance of the treatment system in removing uranium from groundwater and to monitor compliance with the water quality (pH and iron) discharge allowances.
- Table 1 provides monthly results of total iron and pH for the combined effluent of the two treatment cells. Iron concentration and pH for the quarter are within the discharge allowances.
- Table 2 summarizes treatment system performance. Flow information is from the DOE Office of Legacy Management (LM) Systems Operations and Analysis at Remote Sites telemetry system. Uranium concentrations are from inflow and outflow water samples collected monthly.
- Effluent discharge to Montezuma Creek did not exceed the allowed rate.
- Approximately 0.79 million gallons of water were treated and approximately 2.1 pounds of uranium were removed from the aquifer during the quarter as a result of groundwater treatment.
- The reactive media in each treatment cell was replaced with fresh media on October 11 and 12, 2010. The previous media exchange was March 18, 2009, at which time the cumulative treatment volume was approximately 9.7 million gallons. Each treatment cell treated approximately 3.5 million gallons of contaminated groundwater between the two most recent media exchanges. The cells treated a similar volume prior to the March 2009 media exchange. Treatment of about 3 million gallons of groundwater at similar concentrations of influent uranium is an approximate target volume for future media exchange.
- The system was attended for maintenance and modification on several occasions during the quarter to affix a tipping bucket outfall measuring device, and to maintain electrical components. Inflow was reduced during September 2010 and until the media exchange in attempt to calibrate outflow meters and the tipping bucket at varying flow rates. The calibration will enable measurement of water that is diverted to the infiltration trench.
- Discharge of treated water to the infiltration trench was negotiated with the UDEQ Underground Injection Control Program in June 2005 (specific water quality criteria were not negotiated). No water was discharged to the infiltration trench during the quarter.

*Table 1. Treatment System Compliance Summary*

<b>Treatment System Effluent to Montezuma Creek</b>	<b>September 2010</b>	<b>October 2010</b>	<b>November 2010</b>	<b>December 2010</b>
pH <sup>a</sup>	6.91	6.68 and 7.49 <sup>c</sup>	7.37	7.34
Iron (total, micrograms per liter) <sup>b</sup>	11	44 and 32 <sup>c</sup>	34	33

<sup>a</sup>Discharge allowance range = 6.5–9 standard units

<sup>b</sup>Discharge limit = 45.4 milligrams per liter at outfall to creek

<sup>c</sup>Effluent sample results for October 14 and October 20, respectively.

Table 2. Treatment System Performance Summary

Treatment Parameter	September 2010	October 2010	November 2010	December 2010
Gallons treated	300,106	260,207	381,900	408,578
Average treatment rate, gpm	6.9	5.8	8.8	9.2
Uranium influent, micrograms per liter	300	350 and 340	320	340
Uranium outfall, micrograms per liter	62	9.0 and 17.0	7.5	8.5
Uranium mass removed, pounds	0.59	0.72	0.99	1.13
Cumulative uranium mass removed, pounds	38.2	38.9	39.9	41.0
Cumulative volume treated, gallons	15,826,000	16,086,051	16,467,951	16,876,529

## 2.0 MVP Activities and Status

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

- On site LM contractor personnel continued to coordinate with City, UDOT, and utility company officials regarding radiological control at highway, street, and utility excavations.
- Storm water and natural gas utility construction activities continued through November 2010. On site LM contractor personnel report that construction activities will resume in spring 2011 at a similar level of effort of that for 2010.

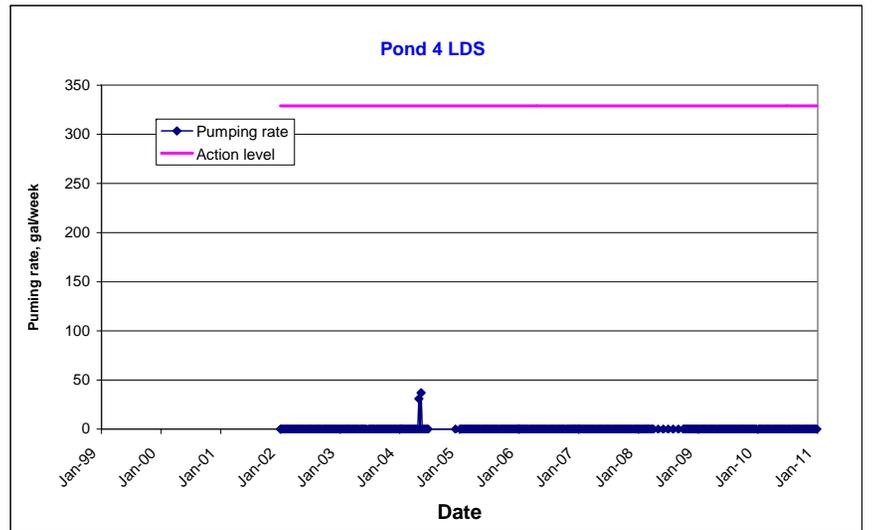
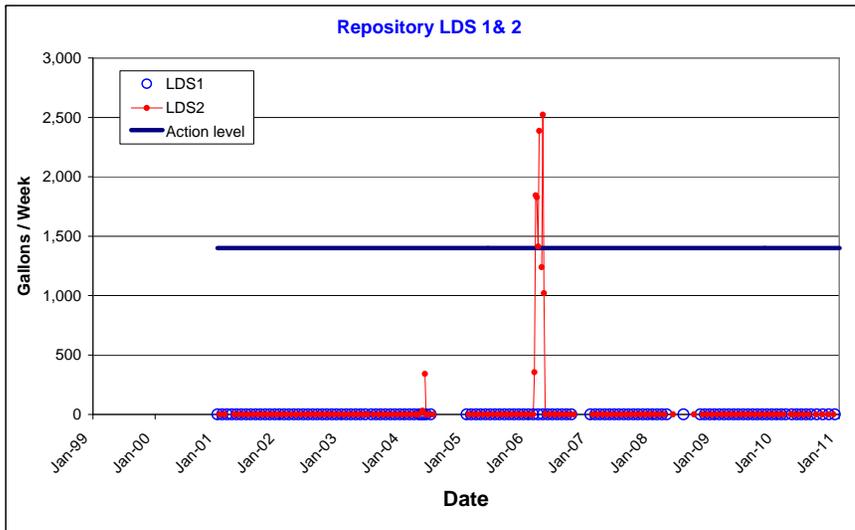
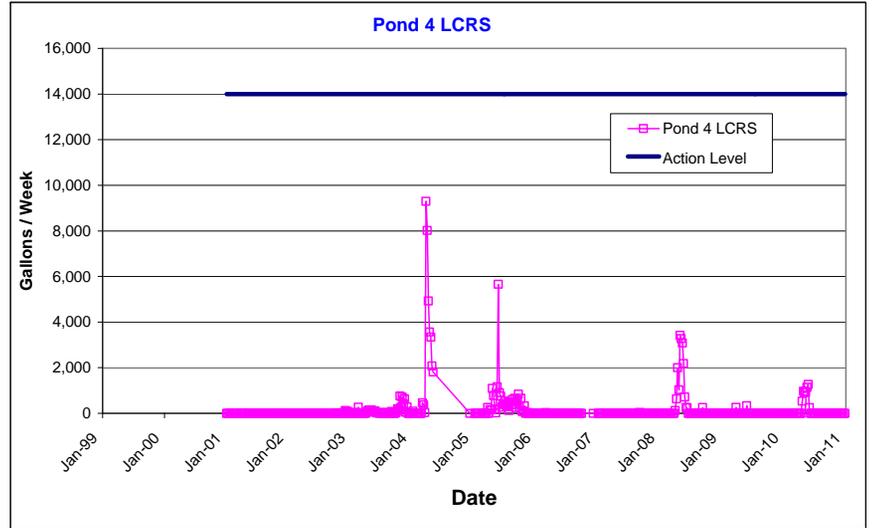
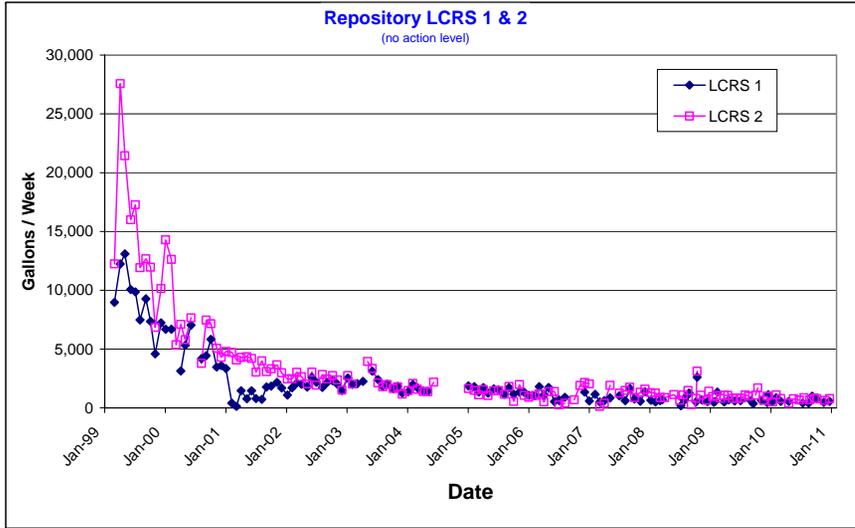
## 3.0 Schedule and Deliverables

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

Table 3. Completed and Near-Term Activity and Deliverables Schedule

Near Term Activity/Deliverable	Status/Schedule
FFA quarterly report for July 2010–September 2010.	Submitted by e-mail to EPA and UDEQ on October 7, 2010.
Site Management Plan, Section 5.0, 2010 annual update.	Final submitted in hard copy by mail to EPA and UDEQ on December 28, 2010. EPA and UDEQ comments on the draft submittal (July 19, 2010) were incorporated in the final submittal.
Remedial Design/Remedial Action Work Plan for Groundwater Remediation Expansion.	Draft submitted by email to EPA and UDEQ for review and comment on July 28, 2010. EPA and UDEQ comments received by email on September 13, 2010. Comment resolution is complete as indicated in email correspondence by DOE on January 6, 2011.
DOE analysis of cumulative biomonitoring results for comparison to OU III trend criteria and to background conditions.	Data analysis in progress for submittal to Biological Technical Assistance Group in winter 2010/spring 2011.
BTAG meeting/conference call regarding future scope.	Schedule to be determined pending availability of BTAG members and review of DOE analysis of cumulative biomonitoring results.
Annual Site Inspection Report.	Final submitted in hard copy by mail to EPA and UDEQ on December 21, 2010.

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



**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
<b>Condition of:</b>		
Fences and gates	yes	
Roads <sup>a</sup>	yes	
Signs	yes	
Site monuments	yes	
Drainage ditches <sup>a</sup>	yes	
Manholes	yes	
Vegetation	yes	
<b>Evidence of erosion of:</b>		
Top of disposal cell <sup>a</sup>	NO	
Disposal cell sideslopes <sup>a</sup>	NO	
Ditches	NO	
Surrounding area	NO	
<b>Evidence of:</b>		
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.

<b>Condition of:</b>		
Settlement plate structures <sup>c</sup>		
Manholes <sup>b</sup>		
Sediment Ponds		
<b>Evidence of:</b>		
Structural Instability		

**Additional Comments**

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Signature Judd Moon Date 10-1-10  
 Monticello LM Representative

<sup>a</sup>Inspections required following a significant storm event  
<sup>b</sup>Open 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
<b>Condition of:</b>		
Fences and gates	Yes	
Roads <sup>a</sup>	Yes	
Signs	Yes	
Site monuments	Yes	
Drainage ditches <sup>a</sup>	Yes	
Manholes	Yes	
Vegetation	Yes	
<b>Evidence of erosion of:</b>		
Top of disposal cell <sup>a</sup>	NO	
Disposal cell sideslopes <sup>a</sup>	NO	
Ditches	NO	
Surrounding area	NO	
<b>Evidence of:</b>		
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.

<b>Condition of:</b>		
Settlement plate structures	_____	_____
Manholes <sup>b</sup>	_____	_____
Sediment Ponds	_____	_____
<b>Evidence of:</b>		
Structural Instability	_____	_____

**Additional Comments** \_\_\_\_\_  
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Signature Judd Mason  
 Monticello LM Representative

Date 12-6-10

<sup>a</sup>Inspections required following a significant storm event  
<sup>b</sup>Open 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?

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Jodd Meon  
Signature of Monticello LM Representative

10-1-10  
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.)?

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: \_\_\_\_\_  
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Judd Moon  
Signature of Monticello LM Representative

11-16-10  
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.)?
- 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:** \_\_\_\_\_  
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Judd Moon  
Signature of Monticello LM Representative

12-6-10  
Date of Inspection

### Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 4.2

Inspection Item	Acceptable (Yes/No)	Comments & Recommendation
<b>Condition of:</b>		
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>	_____
<b>Evidence of erosion of:</b>		
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>	_____
<b>Evidence of:</b>		
Vandalism	<u>NO</u>	_____
Intrusion by wildlife	<u>NO</u>	_____
Intrusion by humans	<u>NO</u>	_____
Accumulation of trash	<u>NO</u>	_____

**Additional Comments** \_\_\_\_\_  
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Monticello LM Representative Jodd Moon Date 10-1-10

### Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 3.8

Inspection Item	Acceptable (Yes/No)	Comments & Recommendation
<b>Condition of:</b>		
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>	_____
 <b>Evidence of erosion of:</b>		
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>	_____
 <b>Evidence of:</b>		
Vandalism	<u>NO</u>	_____
Intrusion by wildlife	<u>NO</u>	_____
Intrusion by humans	<u>NO</u>	_____
Accumulation of trash	<u>NO</u>	_____

**Additional Comments** \_\_\_\_\_  
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Monticello LM Representative Jed Moon Date 11-16-10

Monthly Pond 4 Surveillance Checklist

Level of Water in Pond 4 3.3

Inspection Item	Acceptable (Yes/No)	Comments & Recommendation
<b>Condition of:</b>		
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>	

<b>Evidence of erosion of:</b>		
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>	

<b>Evidence of:</b>		
Vandalism	<u>NO</u>	
Intrusion by wildlife	<u>NO</u>	
Intrusion by humans	<u>NO</u>	
Accumulation of trash	<u>NO</u>	

**Additional Comments**  
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Monticello LM Representative Fred Moon Date 12-6-10

MONTHLY CLIMATOLOGICAL SUMMARY for OCT. 2010

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	67.3	80.3	3:00p	55.3	7:00a	2.6	4.9	0.00	4.8	17.0	11:00a	W
2	65.9	78.9	4:30p	56.4	7:30a	3.2	4.1	0.00	4.6	18.0	12:00p	W
3	60.4	72.6	3:30p	49.0	3:30a	6.1	1.5	0.07	7.7	27.0	9:30p	SSW
4	54.6	68.1	3:30p	46.0	10:00p	10.5	0.1	0.02	5.9	31.0	4:00p	SW
5	53.3	63.0	2:30p	44.3	7:00a	11.7	0.0	0.07	5.4	26.0	12:00p	SSW
6	50.9	64.2	2:00p	45.6	11:30p	14.1	0.0	0.37	5.5	37.0	3:30p	NNE
7	56.2	67.2	4:30p	45.4	1:00a	8.9	0.1	0.01	10.1	38.0	4:00p	N
8	48.4	57.9	3:30p	38.4	7:30a	16.6	0.0	0.00	4.2	16.0	1:00p	NNW
9	47.5	56.2	3:30p	39.0	7:00a	17.5	0.0	0.00	9.4	25.0	12:30p	NNW
10	50.6	59.3	3:30p	43.7	7:00a	14.4	0.0	0.00	11.3	29.0	5:00p	NNW
11	54.0	63.1	3:00p	45.6	6:30a	11.0	0.0	0.00	9.9	21.0	4:00p	NNW
12	55.3	64.6	2:00p	46.7	7:30a	9.7	0.0	0.00	8.6	21.0	4:30a	NNW
13	54.1	66.0	4:00p	44.1	6:30a	11.0	0.1	0.00	4.1	18.0	3:00p	WNW
14	54.9	68.3	4:30p	41.5	7:30a	10.4	0.3	0.00	4.8	17.0	12:00p	WNW
15	56.4	67.7	3:00p	46.8	5:00a	9.0	0.3	0.00	4.4	19.0	3:00p	W
16	56.3	68.3	3:30p	43.8	7:00a	9.1	0.4	0.00	5.1	24.0	3:00p	NNW
17	54.5	65.4	12:30p	44.6	2:30a	10.5	0.0	0.01	4.9	25.0	3:30p	WNW
18	49.3	54.8	2:00p	43.3	5:30a	15.7	0.0	0.02	5.0	17.0	2:00a	N
19	49.2	61.2	4:00p	39.5	5:00a	15.8	0.0	0.00	4.5	13.0	9:30p	NW
20	52.1	66.5	2:00p	41.5	5:30a	13.1	0.2	0.12	6.5	27.0	8:30p	NW
21	47.6	56.3	1:00p	39.8	8:00a	17.4	0.0	0.00	2.1	14.0	11:00a	SW
22	43.2	47.5	4:00p	39.7	7:00a	21.8	0.0	0.23	6.1	21.0	5:00p	S
23	42.9	49.4	2:00p	38.6	8:30a	22.1	0.0	0.01	4.4	16.0	6:00p	SSE
24	44.4	51.3	2:00p	36.2	5:00a	20.6	0.0	0.01	8.1	27.0	1:00p	S
25	38.9	48.2	1:00a	27.8	12:00m	26.1	0.0	0.11	17.7	45.0	1:30p	NNW
26	34.2	43.1	3:00p	25.2	7:00a	30.8	0.0	0.00	6.5	26.0	7:00p	NNW
27	32.6	40.4	3:30p	26.9	8:00a	32.4	0.0	0.00	8.0	27.0	10:00a	N
28	41.0	50.6	3:00p	26.1	3:30a	24.0	0.0	0.00	7.4	26.0	12:00p	S
29	49.5	59.0	3:30p	43.4	6:30a	15.5	0.0	0.00	6.9	19.0	9:00a	SW
30	50.0	61.6	4:00p	39.9	7:00a	15.0	0.0	0.00	8.9	46.0	6:30p	SSW
31	41.8	53.8	4:00p	30.1	7:30a	23.2	0.0	0.00	4.0	16.0	12:00m	WNW
	50.2	80.3	1	25.2	26	469.8	12.0	1.05	6.7	46.0	30	NNW

Max >= 90.0: 0  
 Max <= 32.0: 0  
 Min <= 32.0: 5  
 Min <= 0.0: 0  
 Max Rain: 0.37 ON 10/06/10  
 Days of Rain: 8 (>.01 in) 4 (>.1 in) 0 (>1 in)  
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

MONTHLY CLIMATOLOGICAL SUMMARY for NOV. 2010

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	51.2	4:00p	36.7	8:30a	21.2	0.0	0.00	11.5	29.0	3:00p	NNW
2	51.2	61.2	3:30p	37.9	6:30a	13.8	0.0	0.00	10.0	24.0	9:30p	NNW
3	53.9	63.2	3:00p	45.3	12:00m	11.1	0.0	0.00	7.8	21.0	9:30a	NNW
4	50.2	63.2	4:00p	37.2	8:00a	14.8	0.0	0.00	4.3	13.0	2:00p	NW
5	50.0	62.5	3:30p	38.3	7:30a	15.0	0.0	0.00	4.2	17.0	1:30p	NW
6	49.5	61.9	2:30p	36.5	8:00a	15.5	0.0	0.00	5.3	23.0	1:00p	W
7	46.9	55.0	2:30p	36.8	7:00a	18.1	0.0	0.00	6.7	25.0	12:00p	SSW
8	43.7	49.5	4:00p	34.3	12:00m	21.3	0.0	0.02	10.8	31.0	9:00a	SSW
9	31.3	38.1	1:30p	22.4	12:00m	33.7	0.0	0.03	7.9	22.0	8:30a	NW
10	28.3	37.7	12:30p	20.2	5:00a	36.7	0.0	0.00	6.3	27.0	12:30p	N
11	28.9	34.5	12:30p	25.2	10:00p	36.1	0.0	0.00	10.3	30.0	1:00p	NNW
12	29.1	37.5	3:00p	22.2	11:30p	35.9	0.0	0.00	9.0	24.0	9:00a	NNW
13	31.1	40.0	1:00p	21.6	12:30a	33.9	0.0	0.00	8.9	22.0	1:00p	NNW
14	31.8	38.3	2:30p	25.2	5:30a	33.2	0.0	0.00	9.4	29.0	3:00p	NNW
15	33.8	40.2	12:00p	28.1	2:00a	31.2	0.0	0.01	10.0	37.0	12:00p	NNW
16	36.1	52.0	3:00p	24.9	4:00a	28.9	0.0	0.00	12.4	44.0	8:00p	NW
17	34.0	46.5	4:00p	26.9	6:00a	31.0	0.0	0.00	5.0	22.0	12:30a	NNW
18	38.3	47.4	2:00p	26.6	2:00a	26.7	0.0	0.00	10.3	27.0	11:00a	S
19	40.3	46.0	3:00p	32.6	4:00a	24.7	0.0	0.00	8.9	25.0	11:00a	SSW
20	42.2	48.7	1:30p	33.2	5:00a	22.8	0.0	0.00	12.2	35.0	12:00p	SSW
21	33.0	39.8	12:30a	23.1	12:00m	32.0	0.0	0.24	15.7	46.0	7:30p	SSW
22	25.2	31.8	3:00p	15.4	5:00a	39.8	0.0	0.00	7.7	23.0	7:30a	SW
23	28.0	33.6	2:30p	21.2	1:00a	37.0	0.0	0.00	14.6	37.0	2:30p	SSW
24	18.1	30.3	12:30a	3.3	9:30p	46.9	0.0	0.00	8.5	29.0	2:30p	N
25	12.4	21.2	2:00p	3.9	3:00a	52.6	0.0	0.00	6.2	22.0	6:00a	NNE
26	21.9	37.0	2:30p	10.5	2:00a	43.1	0.0	0.00	2.4	10.0	4:00a	NNE
27	30.2	38.4	2:30p	16.1	1:30a	34.8	0.0	0.00	10.1	26.0	10:00a	SSW
28	25.9	31.9	12:30a	19.7	9:30p	39.1	0.0	0.00	8.0	26.0	1:00p	SSW
29	20.3	25.6	2:30p	13.9	12:00m	44.7	0.0	0.00	14.5	39.0	12:00p	NNW
30	21.8	34.1	2:00p	12.0	7:30a	43.2	0.0	0.00	3.8	19.0	1:30a	ENE
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	34.4	63.2	3	3.3	24	918.8	0.0	0.30	8.8	46.0	21	NNW

Max >= 90.0: 0  
 Max <= 32.0: 5  
 Min <= 32.0: 20  
 Min <= 0.0: 0  
 Max Rain: 0.24 ON 11/21/10  
 Days of Rain: 3 (>.01 in) 1 (>.1 in) 0 (>1 in)  
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

MONTHLY CLIMATOLOGICAL SUMMARY for DEC. 2010

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	27.7	38.3	2:30p	18.9	2:30a	37.3	0.0	0.00	3.4	15.0	12:30p	SSW
2	35.2	44.7	2:30p	23.9	4:30a	29.8	0.0	0.00	7.2	25.0	2:30p	SSW
3	38.8	43.8	4:00p	33.5	9:00p	26.2	0.0	0.00	8.5	26.0	1:00p	SSE
4	41.4	47.9	12:30p	31.5	7:30a	23.6	0.0	0.00	4.5	19.0	12:30p	SW
5	39.8	49.1	1:00p	32.8	4:00a	25.2	0.0	0.00	3.7	15.0	12:30p	S
6	38.3	47.5	12:00p	31.2	9:30p	26.7	0.0	0.00	5.6	21.0	10:30a	S
7	33.6	41.2	2:30p	25.6	12:00m	31.4	0.0	0.00	8.3	24.0	9:00a	N
8	32.7	41.8	2:30p	24.5	7:30a	32.3	0.0	0.00	4.6	19.0	7:30p	NW
9	36.5	47.0	3:00p	26.6	7:00a	28.5	0.0	0.00	2.0	12.0	11:00p	S
10	36.8	49.1	3:00p	27.4	5:30a	28.2	0.0	0.00	4.4	32.0	3:00p	S
11	34.2	41.6	2:00p	26.8	7:30a	30.8	0.0	0.00	5.7	23.0	11:30a	NNW
12	36.9	48.2	4:30p	26.8	7:30a	28.1	0.0	0.00	5.9	29.0	1:00p	NNW
13	38.4	49.4	1:30p	30.5	5:00a	26.6	0.0	0.00	5.1	20.0	11:30p	W
14	40.8	46.1	1:00p	36.2	4:30a	24.2	0.0	0.00	14.4	34.0	12:00p	SE
15	37.7	47.5	12:30p	28.9	11:00p	27.3	0.0	0.00	8.6	27.0	2:00a	NNW
16	30.8	35.4	1:00p	27.3	12:00m	34.2	0.0	0.00	5.8	17.0	10:00p	N
17	25.4	30.0	9:30a	19.5	7:30a	15.7	0.0	0.00	1.5	9.0	12:30a	NW
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
-----												
	35.6	49.4	13	18.9	1	476.1	0.0	0.00	5.8	34.0	14	S

Max >= 90.0: 0  
 Max <= 32.0: 1  
 Min <= 32.0: 14  
 Min <= 0.0: 0  
 Max Rain: 0.00 ON 12/01/10  
 Days of Rain: 0 (>.01 in) 0 (>.1 in) 0 (>1 in)  
 Heat Base: 65.0 Cool Base: 65.0 Method: Integration

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