Department of Energy
Washington, DC 20585

September 26, 2013

Mr. Timothy Fischer
U.S. Environmental Protection Agency
Region V-SRF-6J
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Mr. Thomas A. Schneider
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402

Dear Mr. Fischer and Mr. Schneider:

SUBJECT: **Transmittal of the September 2013 Fernald Preserve On-Site Disposal Facility Inspection Forms**

The purpose of this letter is to transmit the completed forms for the September 2013 inspection of the On-Site Disposal Facility (OSDF). The inspection was conducted on September 10, 2013. Photographs of the OSDF and the surrounding area were taken to accompany the inspection and are included with this report. The inspection was conducted by Stoller and the Ohio Environmental Protection Agency (Ohio EPA).

The *Fernald Preserve Comprehensive Legacy Management and Institutional Controls Plan* (LMICP) describes the inspection process. The September 2013 inspection included a walk of the toe, drainages, and fence line.

Individuals recorded their findings on the Fernald Preserve OSDF Walkdown Inspection form and indicated the locations of those findings on a map of the OSDF. A consolidated form and map is included with this report. Most findings were related to the presence of woody and invasive vegetation. No major changes were observed in the status of erosion along the toe of the slope or the fence line. These findings have been noted during previous inspections and maintenance at these locations is ongoing.

Inspectors continued to observe restricted flow in several locations along the west inner drainage. Repair efforts in February 2013 were successful in restoring flow at one location near Valve House 6. Small-size angular stone and fines (from the adjacent gravel road) were constricting flow. The stone and sediment was removed with a skid steer and flow was improved. This same approach was attempted at a second location in June 2013, but more sediment was encountered than anticipated. In addition, it appeared that the concrete outfall structure was not draining as designed. Water was draining into the structure, but from a concrete seam rather than the inlet.

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Upon discovery of this, it was determined to discontinue maintenance activities and evaluate the need for further action. A "follow-up" inspection of the issues associated with the west inner drainage will be provided separately, pursuant to Section 7.2 of the Post Closure Care and west inner drainage will be provided separately, pursuant to Section 7.2 of the *Post Closure Care and Inspection Plan.*

Other items that require maintenance are entered on and tracked using the enclosed Fernald Preserve Maintenance and Repair Action Items form. Items on the list are shaded once they have been completed. Previously reported items are removed from the list. Resolution of older findings can be found on previous quarterly inspection reports.

Pursuant to Volume II of the LMICP, herbaceous cover data was collected for Cell Caps 7 and 8. For each cell cap, 12 one-meter square quadrats were randomly located using a three by four grid. The enclosed figure shows the grid and quadrat locations for each cell cap. Field surveys were conducted on August 23 and August 27. Total cover and species richness data were collected for each quadrat. From this information, total cover, native species composition and relative frequency of native species were calculated. The table below summarizes the findings. The enclosed data tables present cap-specific species lists.

Cell Cap	Total Cover	Native Species Composition	Relative Frequency of Native Species
7	73%	79%	81%
8	56%	61%	58%

The LMICP goals for the OSDF cap include 90% total cover and 50% native species composition. The data collected on Cells 7 and 8 demonstrate that native vegetation is being maintained across both cells. Native species composition is above 50% for both caps. Total cover is close to 90% for Cell Cap 7, but less than expected for Cell Cap 8. It is suspected that yellow sweet clover (*Melilotus officinalis*) contributed to reducing total cover on Cell 8. A large number of plants were observed in bloom earlier in the year. By the time the field data was collected in August, the plants had died off. These plants may have shaded out other species that did not re-establish later in the season, resulting in less total cover in August. Nevertheless, the integrity of the cap appeared intact, as no erosion was observed on either cap.

The next OSDF cell cap inspection is scheduled for December 2013 and will include a walk-down of the entire cell cap, toe, drainages, fence line, and any items of special interest or concern.

If you have any questions or require additional information, please call me at (513) 648-3148. Please send any correspondence to:

U.S. Department of Energy
Office of Legacy Management
10995 Hamilton-Cleves Hwy.
Harrison, OH 45030

Sincerely,

Jane Powell

Jane Powell
Fernald Preserve Site Manager
DOE-LM-20.2

Enclosure

cc w/enclosure:
M. Murphy, USEPA-V, A-18J
T. Schneider, OEPA (three copies of enclosure)
Project Record File FER 115.02.05(A) (thru W. Sumner)
Administrative Records (thru W. Sumner)

cc w/o enclosure:
(electronic)
G. Hooten, DOE
K. Reed, DOE
B. Hertel, Stoller
J. Homer, Stoller
L. McHenry, Stoller

On-Site Disposal Facility Inspection Report

September 2013

U.S. DEPARTMENT OF ENERGY

Legacy Management

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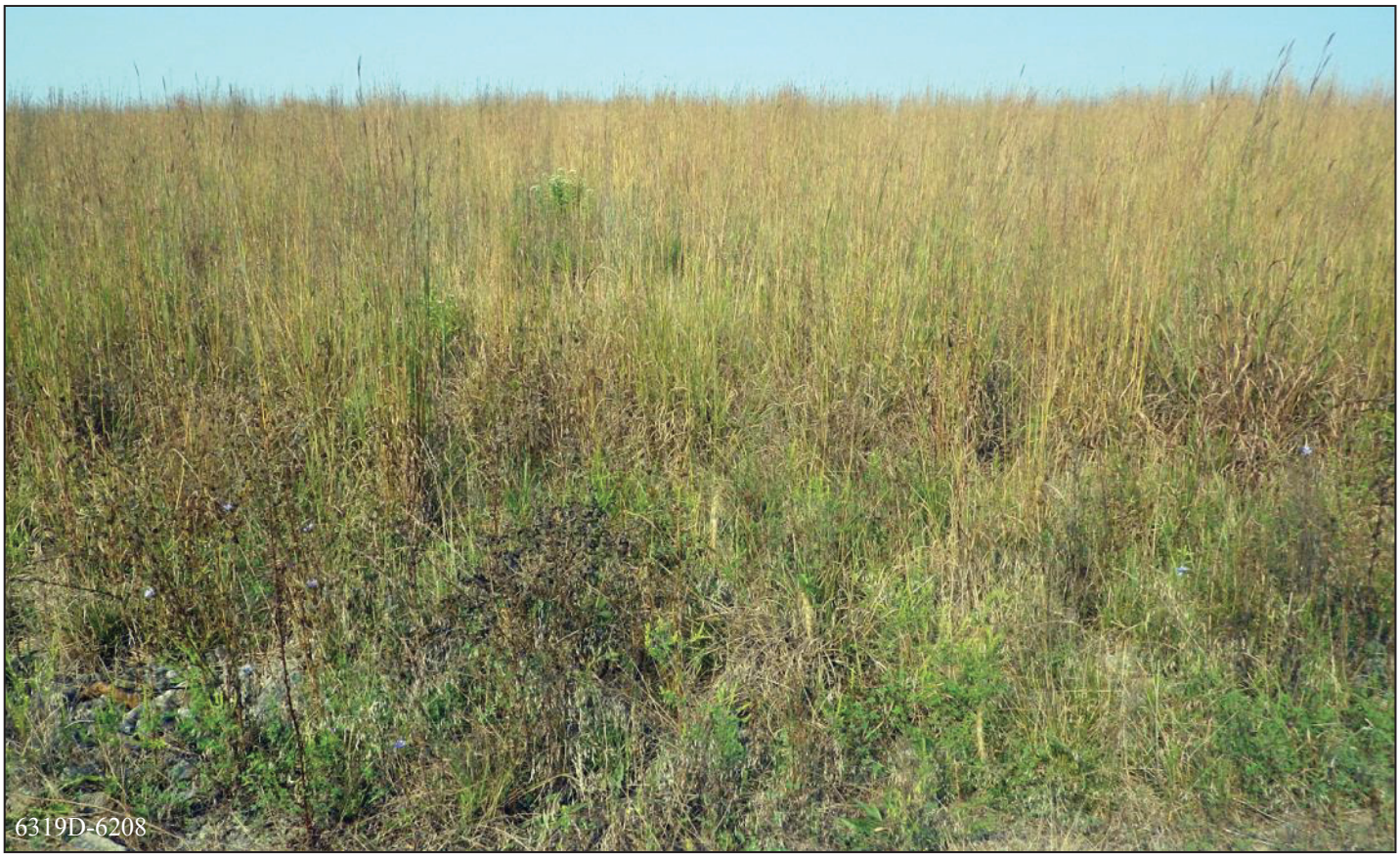
09/13



East Face Cell 1

West Face Cell 1

North Face Cell 1

North Drainage (looking west)

East Face Cell 2

West Face Cell 2

East Face Cell 3

West Face Cell 3

East Face Cell 4

West Face Cell 4

East Face Cell 5

West Face Cell 5

East Face Cell 6

West Face Cell 6

East Face Cell 7

West Face Cell 7

East Face Cell 8

West Face Cell 8

South Face Cell 8

South Drainage (looking west)

East Drainage Cell 7 (looking south)

East Drainage Cell 4 (looking south)

East Drainage Cell 1 (looking south)

West Inner Drainage Cell 7 (looking south)

West Inner Drainage Cell 4 (looking south)

West Inner Drainage Cell 1 (looking south)

West Outer Drainage Cell 1 (looking south)

West Outer Drainage Cell 8 (looking south)

West Outer Drainage Cell 8 (looking north)

U.S. Department of Energy Office of Legacy Management

Fernald Preserve OSDF Walkdown Inspection

Date 9 – 10 - 2013 Inspector SM Stoller, Ohio EPA Cell Cap/Area toe, drainage, fence line

			Type of Finding								Follow Up		
No.	Location (Use Map Whenever Possible)	GPS?	Erosion	Settlement	Vegetation	Biointrusion	Drainage	Other	Description	Photo? (File No.)	Corrected	Maintenance Req'd	Cont. Observation
JH1	West inner drain at VH4				X				Woody vegetation			X	
JH2	HTW next to VH8				X				Woody vegetation			X	
JH3	East edge Cell 8							X	Debris			X	
JH4	East drain at Cell 7				X				Willow, woody vegetation			X	
JH5	East road							X	Felt showing at road		X		
JH6	East drain at Cell 3				X				Woody vegetation (pear, ash)			X	
JH7	Cell 2, east 6:1							X	Rock/concrete			X	
HS1	NW corner				X				Honeysuckle			X	
HS2	NW corner				X				Ash and cottonwood			X	
HS3	NW corner				X				Mulberry and other trees			X	
HS4	North drainage				X				Cedar and other trees			X	
HS5	NE corner				X				Callery pear and others			X	
HS6	NE corner				X				Callery pear and others			X	
HS7	East drain at Cell 2/3				X				Callery pear and others			X	
HS8	East drain at Cell 3/4				X				Canada thistle in rocks			X	
HS9	East drain at Cell 4/5				X				Honeysuckle and others			X	
HS10	East drain at Cell 6				X				Honeysuckle and others			X	
HS11	East drains at Cell 6/7							X	Concrete			X	
HS12	East drain at Cell 7/8				X				Honeysuckle and others			X	
HS13	South drain				X				Canada thistle			X	
HS14	South laydown area				X				Phragmites and Sycamore			X	
HS15	South laydown area				X				Honeysuckle			X	
HS16	Drain at south gate				X				Canada thistle			X	
HS17	SW corner				X				Woody vegetation			X	
HS18	SW corner				X				Bull thistle			X	
HS19	West fence at Cell 7/8							X	Debris			X	
HS20	West of VH 7				X				Honeysuckle			X	
HS21	West fence behind VH 6				X				Honeysuckle and other trees			X	
HS22	West at Cell 5/6				X				Honeysuckle			X	
HS23	West fence behind VH 3				X				Honeysuckle			X	
HS24	Between VH 3 and VH 4				X				Honeysuckle			X	

Additional Notes

EP = East perimeter; SP = South perimeter; SWP = Southwest perimeter; WP = West perimeter; NP = North perimeter; NEP = Northeast perimeter; VH = Valve house

Fernald Preserve OSDF Walkdown Inspection (continued)

Date 6 – 12 - 2013 Inspector SM Stoller, Ohio EPA Cell Cap/Area toe, drainage, fence line

Legend

Building

OSDF Final Cover Outline

200 100 0 200 400 Feet

FERNALD PRESERVE MAINTENANCE AND REPAIR ACTION ITEMS
SEPTEMBER 2013 UPDATE

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
856	Duke Energy substation	No	Honeysuckle all along bank east of Duke Energy substation	12/14/2009	December 2009 quarterly field walkdown	11			
862	Field at Rainbow bridge	No	Honeysuckle	12/14/2009	December 2009 quarterly field walkdown	17			
943	East bank of drainage	No	Thistle	3/11/2010	March 2010 quarterly field walkdown	25	Herbicide applied	May-13	
973	South field drainage	No	Bog stem bullrush	6/2/2010	June 2010 quarterly field walkdown	6	None observed	09/05/13	
974	South of Sycamore trail south of the Shingle Oak	No	Downed tree cage	6/2/2010	June 2010 quarterly field walkdown	7	Cages removed	09/05/13	
976	North of south pines deer fence near access road	No	Thistle	6/2/2010	June 2010 quarterly field walkdown	9	Herbicide applied	July-13	
992	Paddys Run – silos riprap	No	Reed canary grass	6/2/2010	June 2010 quarterly field walkdown	24	Herbicide applied	09/23/13	
994	SWU floodplain	No	Old cage needs removed	6/2/2010	June 2010 quarterly field walkdown	26	Cages removed	09/05/13	
996	SWRB southwest corner	No	Thistle patch	6/2/2010	June 2010 quarterly field walkdown	28	Herbicide applied	August-13	
1002	South of Visitors Center parking lot in woods	No	Honeysuckle	6/2/2010	June 2010 quarterly field walkdown	34			
1004	Southeast of arsenic hot spot	No	Multiflora rose	6/2/2010	June 2010 quarterly field walkdown	36			
1006	South pines north of Sycamore trail	No	Honeysuckle all over	6/2/2010	June 2010 quarterly field walkdown	38			
1010	South pines along access road	No	Honeysuckle	6/2/2010	June 2010 quarterly field walkdown	42	Mechanically removed	August-13	
1011	East of south pines, south of access road	No	Thistle	6/2/2010	June 2010 quarterly field walkdown	43	Herbicide applied	September-12	
1012	East edge of south pines deer fence	No	Thistle	6/2/2010	June 2010 quarterly field walkdown	44	Herbicide applied	September-12	
1013	South side of south pines deer fence	No	Honeysuckle	6/2/2010	June 2010 quarterly field walkdown	45			
1020	Southeast of dance hall	No	Honeysuckle	6/2/2010	June 2010 quarterly field walkdown	52			
1022	Drainage west of northern most well in south field	No	Honeysuckle	6/2/2010	June 2010 quarterly field walkdown	54			
1091	Lodge pond basin – center	No	Invasive Schoeneplectus	9/8/2010	September 2010 quarterly field walkdown	2			
1100	Lodge pond basin – northeast	No	Bare area	9/8/2010	September 2010 quarterly field walkdown	11			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1101	Lodge pond basin – northeast	No	Erosion	9/8/2010	September 2010 quarterly field walkdown	12	No action necessary	September-13	Area stable and vegetation present
1105	NE of lodge pond basin near property line	No	Bare area	9/8/2010	September 2010 quarterly field walkdown	16			
1106	Near well across from OSDF mowed path	No	Thistle	9/8/2010	September 2010 quarterly field walkdown	17	Herbicide applied	August-13	
1116	Basin across from triangle	No	Honeysuckle, pear, crown vetch	9/8/2010	September 2010 quarterly field walkdown	28			
1117	Basin across from triangle	No	Honeysuckle, pear, crown vetch	9/8/2010	September 2010 quarterly field walkdown	29			
1118	Basin across from triangle	No	Pear, Honeysuckle	9/8/2010	September 2010 quarterly field walkdown	30			
1135	Pines near access road	No	Honeysuckle	9/8/2010	September 2010 quarterly field walkdown	48			
1136	North pines	No	Multiflora rose	9/8/2010	September 2010 quarterly field walkdown	49			
1139	North pines along access rd.	No	Honeysuckle	9/8/2010	September 2010 quarterly field walkdown	53			
1211	Cell 5/6, east toe	No	Broken survey marker	3/8/2011	March 2011 OSDF Inspection	JC1			
1232	West of SSOD	No	Teasel	6/1/2011	June 2011 quarterly field walkdown	22	Herbicide applied	September-12	
1233	West of SSOD	No	Teasel	6/1/2011	June 2011 quarterly field walkdown	23	Herbicide applied	September-12	
1282	West of VH 7	No	Old leachate line unreadable	6/14/2011	June 2011 OSDF Inspection	DN13			
1285	East fence, east field	No	Honeysuckle along fence	9/7/2011	September 2011 Site Inspection	1			
1289	Lodge pond basin	No	Thistle	9/7/2011	September 2011 Site Inspection	5	Herbicide applied	May-13	
1291	North pines	No	Honeysuckle along woodline	9/7/2011	September 2011 Site Inspection	10			
1292	Lodge pond - west	No	Olive species	9/7/2011	September 2011 Site Inspection	11			
1293	East perimeter	No	Scattered pear	9/7/2011	September 2011 Site Inspection	14			
1294	Lodge pond basin	No	Callery pear	9/7/2011	September 2011 Site Inspection	15			
1296	OSDF fencing	No	Erosion at post bases, gaps and burrows at various locations	9/8/2011	September 2011 point-specific IC inspection	na			
1304	East Cell 2, 6:1	No	Johnson grass	9/13/2011	September 2011 OSDF Inspection	BL1	Herbicide applied	June-13	
1305	East Cell 6, 6:1	No	12' x 4' bare area	9/13/2011	September 2011 OSDF Inspection	BL2			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1306	East Cell 7, 6:1	No	12' x 4' bare area	9/13/2011	September 2011 OSDF Inspection	BL3			
1315	Toe, east Cell 2	No	Erosion	9/13/2011	September 2011 OSDF Inspection	JH3			
1330	North of VH7	No	Faded signage (Buried Leachate)	9/13/2011	September 2011 OSDF Inspection	BG11	No action necessary	September-13	Address via previous inspection finding
1351	Interior Authorized Vehicle Access VU	No	Broken spring, rope on ground	9/8/2011	September 2011 point-specific IC inspection	na	Rope re-hung and serviceable	June-13	
1353	Restoration storage shed	No	Bottom of corner trim lost bolt.	9/8/2011	September 2011 point-specific IC inspection	na			
1355	Cell 1 (west)	No	Bare spot	12/13/2011	December 2011 OSDF Inspection	LH1			
1356	Cell 1/2	No	Bare spot	12/13/2011	December 2011 OSDF Inspection	LH5			
1375	Waste Pits, east slope of pond	No	Erosion	3/6/2012	March 2012 Site Inspection	2			
1383	Waste Pits, north Pit 3	No	Erosion	3/6/2012	March 2012 Site Inspection	12			
1387	Waste Pits	No	Erosion	3/6/2012	March 2012 Site Inspection	16			
1388	Waste Pits, east end Pit 5	No	Erosion	3/6/2012	March 2012 Site Inspection	17			
1390	Waste Pits, north Pit 5	No	Erosion	3/6/2012	March 2012 Site Inspection	19			
1402	Center waste pit 3	No	Erosion between ponds	3/6/2012	March 2012 Site Inspection	35			
1403	East side of pond waste pit 3	No	Erosion between ponds	3/6/2012	March 2012 Site Inspection	36			
1409	East of Community Pond	No	Erosion rill	3/6/2012	March 2012 Site Inspection	42			
1411	Land between lakes	No	Erosion rills	3/6/2012	March 2012 Site Inspection	44			
1443	East fence line	No	Black pipe	3/13/2012	March 2012 OSDF Inspection	HS10			
1451	West fence line	No	Erosion	3/13/2012	March 2012 OSDF Inspection	HS18			
1457	At well house	No	Exposed wires (from removal?)	6/5/2012	June 2012 Site Inspection	4			
1460	Ditch line on edge of road	No	Sink holes	6/5/2012	June 2012 Site Inspection	8			
1463	Paddys Run – east bank west of silos ponds	No	10' x 20' exposed fabric, rocks gone	6/5/2012	June 2012 Site Inspection	14	No action necessary	September-13	Allowing for re-establishment of Paddys Run floodplain
1466	Shingle Oak trail	No	Teasel	6/5/2012	June 2012 Site Inspection	24			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1468	Drainage area	No	Garlic mustard	6/5/2012	June 2012 Site Inspection	26			
1472	Dance hall road	No	Erosion rill	6/5/2012	June 2012 Site Inspection	31			
1477	Perimeter sign S41	No	Sign not visible due to vegetation	6/6/2012	June 2012 point-specific IC inspection	na			
1482	North toe	No	Sycamore and willow	6/12/2012	June 2012 OSDF Inspection	LH1			
1485	Drainage west cell 8	No	Willow	6/12/2012	June 2012 OSDF Inspection	LH7			
1490	West toe at VH6	No	Standing water (follow up to LH3 from March 2012)	6/12/2012	June 2012 OSDF Inspection	JH4	Drainage repaired	February-13	
1491	West toe cell 6	No	Wetland vegetation	6/12/2012	June 2012 OSDF Inspection	JH5			
1492	West toe south of VH4	No	Standing water	6/12/2012	June 2012 OSDF Inspection	JH6			
1522	East perimeter	No	Callery pear	9/5/2012	September 2012 Site Inspection	1			
1523	East field	No	Callery pear	9/5/2012	September 2012 Site Inspection	2	Field mowed	May-13	
1524	WM1, Basin 3	No	Rubber pipe and charred log	9/5/2012	September 2012 Site Inspection	3	Field mowed	May-13	
1525	North of Restoration shed	No	Gravel/asphalt patch	9/5/2012	September 2012 Site Inspection	5			
1526	WM1, W4 and 3	No	Honeysuckle/pear	9/5/2012	September 2012 Site Inspection	6			
1527	WM1, W5 and 1	No	Honeysuckle	9/5/2012	September 2012 Site Inspection	7			
1528	WM1, W7	No	Honeysuckle	9/5/2012	September 2012 Site Inspection	9			
1529	WM1, W7	No	T-post in hole	9/5/2012	September 2012 Site Inspection	10			
1530	WM1, W3	No	Bare spot	9/5/2012	September 2012 Site Inspection	11			
1531	WM1, W3 and 2	No	Bare spot	9/5/2012	September 2012 Site Inspection	12			
1532	WM1, W2 – fenceline	No	A bat house coming down	9/5/2012	September 2012 Site Inspection	13			
1533	WM1, fenceline	No	Large honeysuckle	9/5/2012	September 2012 Site Inspection	14			
1534	WM1	No	Multiflora rose	9/5/2012	September 2012 Site Inspection	15			
1535	WM1	No	Soil erosion	9/5/2012	September 2012 Site Inspection	16			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1538	Cell 5, west toe inner drain	No	Standing water – follow up	9/11/2011	September 2012 OSDF Inspection	JH1			
1539	Gravity inlet at VH#6	No	Erosion from gravel road	9/11/2011	September 2012 OSDF Inspection	JH3			
1540	Cell 7, west inner drain	No	Standing water	9/11/2011	September 2012 OSDF Inspection	JH4			
1545	North and south of VH#7	No	Buried leachate signs faded	9/11/2011	September 2012 OSDF Inspection	SB7	No action necessary	September-13	Address via previous inspection finding
1550	Cell 6, east	No	Teasel rosette patch	12/5/2012	December 2012 OSDF Inspection	SB3	Herbicide applied	September-13	
1555	Cell 4, west riprap	No	Ponding and vegetation in riprap	12/5/2012	December 2012 OSDF Inspection	LH2			
1557	Cell 1, top	No	Burrows from moles	12/5/2012	December 2012 OSDF Inspection	TM1			
1562	Cell 8, east near toe	No	Teasel	12/5/2012	December 2012 OSDF Inspection	AD3	Herbicide applied	September-13	
1563	Cell 8, southeast	No	Teasel	12/5/2012	December 2012 OSDF Inspection	AD4	Herbicide applied	September-13	
1565	Cell 7/8, west	No	Large thistle patch	12/5/2012	December 2012 OSDF Inspection	BL2	Herbicide applied	September-13	
1569	Cell 4, west toe	No	Canada thistle	12/5/2012	December 2012 OSDF Inspection	HS3	Herbicide applied	September-13	
1571	Cell 5, top	No	Canada thistle	12/5/2012	December 2012 OSDF Inspection	HS5	Herbicide applied	September-13	
1574	Cell 2, east	No	Thistle	12/5/2012	December 2012 OSDF Inspection	HB1	Herbicide applied	September-13	
1576	Cell 3, west	No	Thistle	12/5/2012	December 2012 OSDF Inspection	HB3	Herbicide applied	September-13	
1578	Cell 2, east top	No	Thistle	12/5/2012	December 2012 OSDF Inspection	LM1	Herbicide applied	September-13	
1579	Cell 6, east top	No	Thistle	12/5/2012	December 2012 OSDF Inspection	LM2	Herbicide applied	September-13	
1580	Cell 6/7, east	No	Thistle	12/5/2012	December 2012 OSDF Inspection	LM3	Herbicide applied	September-13	
1585	CAWWT	No	North gate bent and signs are down	3/6/2013	March 2013 point-specific IC inspection	na			
1586	60-Inch Culvert	No	Debris against north drain guard	3/12/2013	March 2013 Site Inspection	na	Continue to monitor	September-13	Beaver dam has been established in front of culvert. Clear dam if culvert becomes completely blocked
1598	FPA ARA South of S drainage	No	Erosion	3/12/2013	March 2013 Site Inspection	12			
1599	Former WP PR1	No	Erosion	3/12/2013	March 2013 Site Inspection	13			
1609	East of burn pit WPA PR1	No	Erosion	3/12/2013	March 2013 Site Inspection	23			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1612	South of FPA	No	Erosion at outfall	3/12/2013	March 2013 Site Inspection	26			
1625	PR1 north face	No	Erosion	3/12/2013	March 2013 Site Inspection	39			
1626	A3A 75 ft from OSDF fence	No	Erosion	3/12/2013	March 2013 Site Inspection	40			
1638	A6B	No	Large areas of teasel	3/12/2013	March 2013 Site Inspection	52	Herbicide applied	August-13	
1639	Cell 8, south toe	No	Rock	3/12/2013	March 2013 OSDF Inspection	MS2			
1646	Cell 7, west toe	No	Erosion	3/12/2013	March 2013 OSDF Inspection	RE5			
1651	West inner drain between VH5 and VH6	No	Poor drainage	3/12/2013	March 2013 OSDF Inspection	JH5			
1656	Cell 3/4, west toe	No	Standing water	3/12/2013	March 2013 OSDF Inspection	BL2			
1668	Cell 7, east toe	No	Wash area	3/12/2013	March 2013 OSDF Inspection	HS7			
1671	Behind VH8	No	Culvert pipe	3/12/2013	March 2013 OSDF Inspection	HS13			
1672	Drain behind VH8	No	Woody vegetation	3/12/2013	March 2013 OSDF Inspection	HS14			
1673	Leachate signs	No	Faded and unreadable	3/12/2013	March 2013 OSDF Inspection	HS15			
1679	Next to fence and drainage	No	Rosa	3/12/2013	March 2013 OSDF Inspection	HS23			
1682	Cell 1/2, east fence	No	Woody vegetation	3/12/2013	March 2013 OSDF Inspection	HS26			
1683	Northeast comer fence	No	Woody vegetation	3/12/2013	March 2013 OSDF Inspection	HS27			
1684	Cell 1, north drain	No	Woody vegetation	3/12/2013	March 2013 OSDF Inspection	HS28			
1685	Cell 1, north drain	No	Erosion from roadway	3/12/2013	March 2013 OSDF Inspection	HS29			
1688	Cell 2, east drain	No	Cedar x 2	3/12/2013	March 2013 OSDF Inspection	LM3			
1689	South pines deer fence	No	Hole in fence	6/12/2013	June 2013 Site Inspection	1			
1690	South pines deer fence	No	Hole in fence	6/12/2013	June 2013 Site Inspection	2			
1692	South field – west	No	Deer fence gate missing	6/12/2013	June 2013 Site Inspection	4			
1693	Well 22108 well pad	No	Exposed wires	6/12/2013	June 2013 Site Inspection	5			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1694	Well 33253	No	Miscellaneous debris on pad	6/12/2013	June 2013 Site Inspection	6			
1695	South field deer fence – west	No	Fence down	6/12/2013	June 2013 Site Inspection	7			
1696	South field deer fence – east	No	Fence overgrown – remove	6/12/2013	June 2013 Site Inspection	8			
1703	Outfall from drain under Willey Road	No	Vegetation kill, concrete, bricks	6/12/2013	June 2013 Site Inspection	15			
1705	North end of deer fence	No	Fence down on pole	6/12/2013	June 2013 Site Inspection	17			
1707	West end of deer fence	No	Empty cages	6/12/2013	June 2013 Site Inspection	19			
1708	East side of road	No	Canada thistle	6/12/2013	June 2013 Site Inspection	20			
1710	East bank of silo ponds	No	Crown vetch	6/6/2013	June 2013 Site Inspection	22	Herbicide applied	9/23/2013	
1712	Shingle Oak trail overlook	No	Vegetation overgrown at sign	6/6/2013	June 2013 Site Inspection	24	Vegetation cleared	June-13	
1717	East of deer fence	No	Bare area	6/12/2013	June 2013 Site Inspection	29			
1720	Deer fence south of 'dance hall' and north	No	Deer fence gate open	6/12/2013	June 2013 Site Inspection	32			
1721	South field prairie	No	Canada thistle	6/12/2013	June 2013 Site Inspection	33			
1722	North edge of VC parking lot	No	Pear and honeysuckle	6/6/2013	June 2013 Site Inspection	34			
1723	North of silo ponds	No	Crown vetch	6/6/2013	June 2013 Site Inspection	35	Herbicide applied	9/23/2013	
1724	North of silo ponds	No	Downed cages	6/6/2013	June 2013 Site Inspection	36			
1725	North of silo ponds	No	Bare spot	6/6/2013	June 2013 Site Inspection	37			
1726	East bank PR, NW of silo ponds	No	Thistle	6/6/2013	June 2013 Site Inspection	38	Herbicide applied	9/23/2013	
1727	Downhill from well 3046	No	Debris	6/12/2013	June 2013 Site Inspection	39			
1728	Northwest corner of deer fence	No	Post down on deer fence	6/12/2013	June 2013 Site Inspection	40			
1730	On the trail near fence post	No	Asphalt	6/12/2013	June 2013 Site Inspection	42			
1731	Inside trail loop, south	No	Cages down	6/12/2013	June 2013 Site Inspection	43			
1732	Inside trail loop, north	No	Cages down	6/12/2013	June 2013 Site Inspection	44			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1733	Along trail loop, east	No	Cages down	6/12/2013	June 2013 Site Inspection	45			
1734	Inside trail loop, east	No	Cages down	6/12/2013	June 2013 Site Inspection	46			
1735	Prairie north of parking lot	No	Pear and crown vetch	6/6/2013	June 2013 Site Inspection	48			
1736	Prairie along Bio-wetland trail	No	Felt matting	6/6/2013	June 2013 Site Inspection	49			
1737	North of silo ponds	No	Debris	6/6/2013	June 2013 Site Inspection	50			
1738	East bank Paddys Run	No	Thistle, pear, olive	6/6/2013	June 2013 Site Inspection	51	Herbicide applied	9/23/2013	
1739	East bank Paddys Run	No	Multiflora rose	6/6/2013	June 2013 Site Inspection	52			
1740	Woods along Shingle Oak	No	Multiflora rose	6/6/2013	June 2013 Site Inspection	53			
1741	Overlook on Shingle Oak at pond	No	Pear	6/6/2013	June 2013 Site Inspection	54			
1742	South edge of parking lot	No	Debris (rebar)	6/6/2013	June 2013 Site Inspection	55			
1744	Cell 1, east 6:1	No	Crown vetch	6/12/2013	June 2013 OSDF Inspection	JH1	Herbicide applied	September-13	
1745	NE corner	No	Musk thistle	6/12/2013	June 2013 OSDF Inspection	JH2			
1746	Cell 2, drainage	No	Woody vegetation, various	6/12/2013	June 2013 OSDF Inspection	JH3			
1747	Cell 3, drainage	No	Woody vegetation	6/12/2013	June 2013 OSDF Inspection	JH5			
1748	Cell 4, east 6:1	No	Bull/musk thistle (no flag)	6/12/2013	June 2013 OSDF Inspection	JH7	Herbicide applied	September-13	
1749	Cell 8, east, 6:1	No	Crown vetch (no flag)	6/12/2013	June 2013 OSDF Inspection	JH8	Herbicide applied	September-13	
1750	SW drainage and inner drain	No	Canada, musk, bull thistles (no flag)	6/12/2013	June 2013 OSDF Inspection	JH10			
1751	Cell 8, west toe	No	Crown vetch	6/12/2013	June 2013 OSDF Inspection	JH11	Herbicide applied	September-13	
1752	Cell 5/6, west 6:1	No	Thistle (no flag)	6/12/2013	June 2013 OSDF Inspection	JH12	Herbicide applied	September-13	
1753	Cell 6, west inner drain	No	Woody vegetation	6/12/2013	June 2013 OSDF Inspection	JH13	Herbicide applied	September-13	
1754	Cell 4, west 6:1	No	Thistle (no flag)	6/12/2013	June 2013 OSDF Inspection	JH14	Herbicide applied	September-13	
1755	NW corner of fence	No	Honeysuckle	6/12/2013	June 2013 OSDF Inspection	HS1			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1756	North fence line	No	Mulberry	6/12/2013	June 2013 OSDF Inspection	HS2			
1757	North fence at old gate	No	Small patch both sides of fence	6/12/2013	June 2013 OSDF Inspection	HS4			
1758	North fence at north triangle	No	Hornbeam	6/12/2013	June 2013 OSDF Inspection	HS5			
1759	North fence at north triangle	No	Honeysuckle	6/12/2013	June 2013 OSDF Inspection	HS6			
1760	NE corner	No	Callery pear and honeysuckle	6/12/2013	June 2013 OSDF Inspection	HS7			
1761	Cell 2, east drain	No	Ash and willow trees	6/12/2013	June 2013 OSDF Inspection	HS8			
1762	Cell 2, east drain	No	Callery pear and musk thistle	6/12/2013	June 2013 OSDF Inspection	HS9			
1763	East Cell 2/3 boundary	No	Callery pear and musk thistle	6/12/2013	June 2013 OSDF Inspection	HS10			
1764	Cell 3, east drain	No	Callery pear and honeysuckle	6/12/2013	June 2013 OSDF Inspection	HS12			
1765	East Cell 3-4 boundary	No	Thistle, honeysuckle, pear, mulberry	6/12/2013	June 2013 OSDF Inspection	HS13			
1766	Cell 4, east	No	Honeysuckle	6/12/2013	June 2013 OSDF Inspection	HS14			
1767	East Cell 4/5 boundary	No	Musk and bull thistle	6/12/2013	June 2013 OSDF Inspection	HS15			
1768	Cell 5, east drain	No	Honeysuckle and willow	6/12/2013	June 2013 OSDF Inspection	HS16			
1769	SW comer drain	No	Woody trees and shrubs	6/12/2013	June 2013 OSDF Inspection	HS17			
1770	Cell 8, west outer drain	No	Bull thistle	6/12/2013	June 2013 OSDF Inspection	HS18			
1771	West of VH8	No	Bull thistle	6/12/2013	June 2013 OSDF Inspection	HS19			
1772	West of VH7	No	Bull thistle and honeysuckle	6/12/2013	June 2013 OSDF Inspection	HS20			
1773	East of Restoration shed	No	Vines growing up deer fence	9/4/2013	September 2013 Site Inspection	2			
1774	Hill along SR 126	No	Teasel and honeysuckle	9/4/2013	September 2013 Site Inspection	3			
1775	East fence WM1	No	Callery pear	9/4/2013	September 2013 Site Inspection	4			
1776	East fence WM1	No	Honeysuckle	9/4/2013	September 2013 Site Inspection	5			
1777	East fence WM1	No	Teasel	9/4/2013	September 2013 Site Inspection	6			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1778	East fence WM1	No	Teasel	9/4/2013	September 2013 Site Inspection	7			
1779	East fence WM1	No	Callery pear	9/4/2013	September 2013 Site Inspection	8			
1780	East fence and south	No	Callery pear	9/4/2013	September 2013 Site Inspection	9			
1781	Hill along SR 126	No	Honeysuckle	9/4/2013	September 2013 Site Inspection	10			
1782	WM1 W6	No	Teasel	9/4/2013	September 2013 Site Inspection	11			
1783	WM1 W6 berm	No	Callery pear	9/4/2013	September 2013 Site Inspection	12			
1784	WM1 W1 berm	No	Dead/dying ash tree	9/4/2013	September 2013 Site Inspection	13			
1785	Berm between WM1 W1 and WM1 W5	No	Dead ash tree	9/4/2013	September 2013 Site Inspection	14			
1786	WM1 W2 south berm	No	Dead/dying ash tree	9/4/2013	September 2013 Site Inspection	15			
1787	WM1 W3 south berm	No	Dying ash tree	9/4/2013	September 2013 Site Inspection	16			
1788	WM1 W4 between pond and swale	No	Honeysuckle	9/4/2013	September 2013 Site Inspection	17			
1789	WM1 W4 SE edge	No	Dying ash	9/4/2013	September 2013 Site Inspection	18			
1790	By well south of WM1	No	Callery pear	9/4/2013	September 2013 Site Inspection	19			
1791	By road pull off	No	Bare area	9/4/2013	September 2013 Site Inspection	20			
1792	CAWWT fencing	No	Woody vegetation growing quickly around north portion	9/4/2013	September 2013 point-specific IC inspection	na			
1793	West inner drain at VH4	No	Woody vegetation	9/10/2013	September 2013 OSDF Inspection	JH1			
1794	HTW next to VH8	No	Woody vegetation	9/10/2013	September 2013 OSDF Inspection	JH2			
1795	East edge Cell 8	No	Debris	9/10/2013	September 2013 OSDF Inspection	JH3			
1796	East drain at Cell 7	No	Willow, woody vegetation	9/10/2013	September 2013 OSDF Inspection	JH4			
1797	East drain at Cell 3	No	Woody vegetation (pear, ash)	9/10/2013	September 2013 OSDF Inspection	JH6			
1798	Cell 2, east 6:1	No	Rock/concrete	9/10/2013	September 2013 OSDF Inspection	JH7			
1799	NW corner	No	Honeysuckle	9/10/2013	September 2013 OSDF Inspection	HS1			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1800	NW corner	No	Ash and cottonwood	9/10/2013	September 2013 OSDF Inspection	HS2			
1801	NW corner	No	Mulberry and other trees	9/10/2013	September 2013 OSDF Inspection	HS3			
1802	North drainage	No	Cedar and other trees	9/10/2013	September 2013 OSDF Inspection	HS4			
1803	NE corner	No	Callery pear and others	9/10/2013	September 2013 OSDF Inspection	HS5			
1804	NE corner	No	Callery pear and others	9/10/2013	September 2013 OSDF Inspection	HS6			
1805	East drain at Cell 2/3	No	Callery pear and others	9/10/2013	September 2013 OSDF Inspection	HS7			
1806	East drain at Cell 3/4	No	Canada thistle in rocks	9/10/2013	September 2013 OSDF Inspection	HS8			
1807	East drain at Cell 4/5	No	Honeysuckle and others	9/10/2013	September 2013 OSDF Inspection	HS9			
1808	East drain at Cell 6	No	Honeysuckle and others	9/10/2013	September 2013 OSDF Inspection	HS10			
1809	East drains at Cell 6/7	No	Concrete	9/10/2013	September 2013 OSDF Inspection	HS11			
1810	East drain at Cell 7/8	No	Honeysuckle and others	9/10/2013	September 2013 OSDF Inspection	HS12			
1811	South drain	No	Canada thistle	9/10/2013	September 2013 OSDF Inspection	HS13			
1812	South laydown area	No	Phragmites and Sycamore	9/10/2013	September 2013 OSDF Inspection	HS14			
1813	South laydown area	No	Honeysuckle	9/10/2013	September 2013 OSDF Inspection	HS15			
1814	Drain at south gate	No	Canada thistle	9/10/2013	September 2013 OSDF Inspection	HS16			
1815	SW comer	No	Woody vegetation	9/10/2013	September 2013 OSDF Inspection	HS17			
1816	SW comer	No	Bull thistle	9/10/2013	September 2013 OSDF Inspection	HS18			
1817	West fence at Cell 7/8	No	Debris	9/10/2013	September 2013 OSDF Inspection	HS19			
1818	West of VH 7	No	Honeysuckle	9/10/2013	September 2013 OSDF Inspection	HS20			
1819	West fence behind VH 6	No	Honeysuckle and other trees	9/10/2013	September 2013 OSDF Inspection	HS21			
1820	West at Cell 5/6	No	Honeysuckle	9/10/2013	September 2013 OSDF Inspection	HS22			
1821	West fence behind VH 3	No	Honeysuckle	9/10/2013	September 2013 OSDF Inspection	HS23			

No.	Location	GPS?	Maintenance item identified	Date identified	Origin of Finding	Inspection Finding No.	Resolution	Date of resolution	Comments
1822	Between VH 3 and VH 4	No	Honeysuckle	9/10/2013	September 2013 OSDF Inspection	HS24			

2013 Herbaceous Cover Data Summary
On-site Disposal Facility Cell 7

Total Spp.:	14	**Mean CC[b]:**	3.29
Native Spp.:	11	**Average Cover:**	73%
Non-Native Spp.:	3	**FQAI[c]:**	12.29
Percent Native:	79%		

Species[a]	Common Name	Type	CC[b]	Frequency (species/quadrat)	Relative Frequency
Andropogon gerardii	BIG BLUESTEM	grass	5	0.33	9%
Aster pilosus	AWL ASTER	forb	1	0.42	11%
Bouteloua curtipendula	SIDE-OATS GRAMA GRASS	grass	8	0.17	4%
Chamaecrista fasciculata	PARTRIDGE-PEA	forb	3	0.08	2%
Elymus canadensis	CANADA WILD RYE	grass	6	0.83	21%
Panicum virgatum	SWITCH GRASS	grass	4	0.50	13%
Ratibida pinnata	GRAY-HEADED CONEFLOWER	forb	5	0.17	4%
Schizachyrium scoparium	LITTLE BLUESTEM	grass	5	0.08	2%
Solidago canadensis	CANADA GOLDENROD	forb	1	0.25	6%
Sorghastrum nutans	INDIAN GRASS	grass	5	0.25	6%
Vitis sp.	ND[d]	vine	3	0.08	2%
Agrostis gigantea	**REDTOP**	grass	0	0.25	6%
Bromus japonicus	**JAPANESE BROME**	grass	0	0.42	11%
Festuca sp.	**ND**	grass	0	0.08	2%
			Native Species:	3.17	81%
			Non-Native Species:	0.75	19%

[a]Species in bold are non-native
[b]CC= Coefficient of Conservatism
[c]FQAI= Floristic Quality Assessment Index
[d]ND= No Determination

2013 Herbaceous Cover Data Summary
On-site Disposal Facility-Cell 8

Total Spp.:	18	**Mean CC[b]:**	2.44
Native Spp.:	11	**Average Cover:**	56%
Non-Native Spp.:	7	**FQAI[c]:**	10.37
Percent Native:	61%		

Species[a]	Common Name	Type	CC[b]	Frequency (species/quadrat)	Relative Frequency
Andropogon gerardii	BIG BLUESTEM	grass	5	0.33	9%
Aster pilosus	AWL ASTER	forb	1	0.50	14%
Bouteloua curtipendula	SIDE-OATS GRAMA	grass	8	0.17	5%
Elymus canadensis	CANADA WILD RYE	grass	6	0.33	9%
Heliopsis helianthoides	SMOOTH OXEYE	forb	5	0.08	2%
Lactuca biennis	TALL BLUE LETTUCE	forb	1	0.08	2%
Monarda fistulosa	WILD BERGAMOT	forb	3	0.08	2%
Panicum virgatum	SWITCH GRASS	grass	4	0.17	5%
Ratibida pinnata	GRAY-HEADED	forb	5	0.17	5%
Solidago canadensis	CANADA GOLDENROD	forb	1	0.08	2%
Sorghastrum nutans	INDIAN GRASS	grass	5	0.08	2%
Agrostis gigantea	**REDTOP**	grass	0	0.67	19%
Bromus japonicus	**JAPANESE BROME**	grass	0	0.33	9%
Coronilla varia	**CROWN-VETCH**	forb	0	0.08	2%
Daucus carota	**QUEEN-ANNE'S-LACE**	forb	0	0.08	2%
Lonicera maackii	**AMUR HONEYSUCKLE**	shrub	0	0.08	2%
Solanum carolinense	**HORSE NETTLE**	forb	0	0.08	2%
Trifolium pratense	**RED CLOVER**	forb	0	0.17	5%
			Native Species:	2.08	58%
			Non-Native Species:	1.50	42%

[a]Species in bold are non-native
[b]CC= Coefficient of Conservatism
[c]FQAI= Floristic Quality Assessment Index
[d]ND= No Determination

Sample Location

Sample Grid

N

100 50 0 100 Feet

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AM01-07LM00060

Fernald Preserve
OSDF Implementation
Monitoring

DATE PREPARED:
September 11, 2013

FILENAME:
OSDF_implementation_monitoring

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