4265

OPERABLE UNIT 3

PROJECT COMPLETION REPORT

PLANT 5 COMPLEX
DECONTAMINATION AND DISMANTLEMENT

APRIL 2002

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

FERNALD, OHIO

U. S. DEPARTMENT OF ENERGY

FERNALD AREA OFFICE

DOCUMENT CONTROL NO. 1752-PL-0003 (REV. 0) PCN1

RECORD OF ISSUE/REVISION

DATE	REVISION NO.	DESCRIPTION AND AUTHORITY
7/13/01	Rev. 0	Issued Project Completion Report
4/18/02	Rev. 0, PCN1	Pages 8 and 9 have been updated with the final waste debris quantities information for offsite shipment. Inserted Page 7 (new) to the SWIFTS Information (Attachment 1). This completes the Plant 5 Complex D&D Material Management issue. Additionally, Page 2 of the Integrated Information Management System Report (Attachment 2) was omitted from the original Project Completion Report and is included within this page change.

Photos
Photos 11 and 12 of Attachment 3 show the following activities for the D&D of Building E:

12 – Long range shearing of Building 5E.
13 – Building 5E shear demolition.

2.2.7 Building 5G – Plant 5 Ingot Storage Shelter

Background
Building 5G was a single story building located in the east area of the Plant 5 Complex. The rectangular building measured approximately 30 x 62 x 12 feet high. Building 5G covered the storage pad east of the Plant 5 Complex and consisted of a structural steel frame with no sides and a metal roof on a reinforced concrete base. Building 5G provided temporary storage of the Plant 5 metal products, feed stock and excess materials.

Remedial Tasks
An initial wash down of Building 5G was performed prior to the start of dismantlement. A hydraulic shear was used to dismantle and size reduce the Building 5G structure. Materials generated during the dismantlement of Building 5G included structural and miscellaneous steel.

Photos

Photo 14 of Attachment 3 shows the following activity for the D&D of Building 5G:

14 – Long range shearing of Building 5G.

2.2.8 Building 55A – Slag Recycling Building

Background
Building 55A was a multi-level facility that measured 32 feet x 62 feet x 42 feet high, and contained the slag milling process area. It was a steel-framed building with transite siding and roofing on a poured concrete base. Building 55A contained bucket elevators, storage bins, a ball mill , a Rotex vibrating screen and conveyors (vibrating, flight and pneumatic).

Remedial Tasks
An initial wash down of the building interior was performed prior to the start of dismantlement. Interior equipment, and the Building 55A structure were dismantled using a hydraulic shear. Materials generated during the dismantlement of Building 55A included conduit; equipment; structural and miscellaneous steel; doors and windows; interior transite paneling; batting insulation and exterior transite siding & roofing.

Photos
Photos 15 and 16 of Attachment 3 show the following activities for the D&D of Building 55A:

14 – Exterior transite removal from Building 55A.

15 – High reach shearing of Building 55A.

2.2.9 Building 55B – Slag Recycling Pit/Elevator

Background
Building 55B was a mulit-level facility that measured 12 feet x 12 feet x 38 feet high and contained the slag processing area. It was a steel-framed building with transite siding and roofing on a poured concrete base. Building 55B contained bucket elevators, storage bins, and conveyors.

Remedial Tasks
An initial wash down of the building interior was performed prior to the start of dismantlement. Interior equipment, and the Building 55B structure were dismantled using a hydraulic shear. Materials generated during the dismantlement of Building 55B included conduit; equipment; structural and miscellaneous steel; doors and windows; interior transite paneling; batting insulation and exterior transite siding & roofing.

3.0 MATERIAL MANAGEMENT

Generated Debris
Debris generated from the D&D of the Plant 5 Complex Components was reduced in size, segregated, and containerized in accordance with the requirements identified in the Material Segregation and Containerization Criteria (MSCC) form.

The containerized materials requiring disposal at an off-site facility are presented in Table 3-1. This information is identified in the Sitewide Waste Information Forecasting and Tracking System (SWIFTS) database report, shown as Attachment 1. SWIFTS provides reports that track contaminated materials which will be disposed of at an off-site facility. For the Plant 5 Complex, process and characterization of the debris generated for offsite disposition was completed in April 2002. Table 3-1 reflects the complete SWIFTS Report. PCN1

Containerized materials that either have, or will be, disposed of in the FEMP On Site Disposal Facility (OSDF) are presented in Table 3-2. This information is identified in the Integrated Information Management System (IIMS) report, shown as Attachment 2. IIMS reports represent activities associated with materials generated by the project that either have been or are destined for disposition in the OSDF. In addition to the containerized materials shown in Table 3-2, transite panels from the Plant 5 D&D Project were stockpiled as discussed below.

Stockpiling
The transite panels generated from Building 5A, 55A and 55B were stockpiled in the northwest portion of the Plant 9 pad or just south of Building 5F, Plant 5 Covered Storage Pad. All other building pads associated with the Plant 5 D&D Project are clear of debris and any other waste materials.

Wastewater
The collection and disposition of wastewater is detailed in Section 4.1.

TABLE 3-1 Drums And White Metal Boxes For Offsite Shipment

Material Description	Material Description Code	Number of Containers	
55 Gallon Drums:			
Offsite Trash	003	102	
Contaminated Rocks, Sand and Bricks	011	11	
Contaminated Water	012	43	
Contaminated Solvent	013	1	
Contaminated Oil	015	5	
Contaminated Filter Elements	026	1	
Contaminated Rags, Paper and Plastic	027	1	
Contaminated Asbestos Materials	028	8	
MgF2	034	32	
Oily Sludges	039	1	
Sludges	042	7	
Lead	049	1	
Batteries	051	2	
Bird Nests, Carcasses and Droppings	093	6	
Packaged Uranium Residues	094	1	
Floor Sweepings with Scrap U3O8	101	4	
Unpunctured Aerosol Cans	620	2	
TOTAL		254	
Roll-Off Boxes (ROB):			
Sludge	042	23	
TOTAL		23	
White Metal Boxes (WMB):			
HEPA Filters	003	10	PCN1
Metal that failed to meet the visual inspection requirements of the OSDF WAC	003	4	PCN1
Contaminated Graphite	017	1	PCN1
MgF2 and metal contaminated with MgF2	038	1	PCN1
Lead	049	5	PCN1
Sludges	042	1	
TOTAL		22	PCN1

TABLE 3-2 Waste Containers For Placement In The OSDF:

Container Type	Debris Category	Category Description	OSDF Code	Volume (cu. yds.)	Number of Containers
ROB:	A,B,D&E	Metal – Commingled	2	14,113	477
	I	Misc. Debris – Non-Compactable	2	285	11
	I	Misc. Debris – Compactable	4	298	11
	E	Concrete/Asphalt	2	2,174	130
*	G	Non Regulated ACM	2	628	
ROB Total				17,498	629
ISO:	H	Regulated ACM	5	474	14
ISO Total					14

* Transite is encapsulated, banded, placed on pallets and stockpiled.

5

4.0 ENVIRONMENTAL MONITORING

Project-specific environmental monitoring for the Plant 5 Complex D&D Project included wastewater monitoring, radiological air monitoring, and area monitoring for asbestos.

4.1 Wastewater Monitoring

Accumulation of Decontamination Water
There were four collection tanks that were used for accumulated decontamination water, two 6,500-gallon tanks and two 2,500-gallon tanks. Additionally, a 5,000 gallon tanker truck was implemented at the end of the project to facilitate the transportation of decontamination water to the Advanced Waste Water Treatment facility (AWWT).

Collection of Rinseate from Hydro-Cleaning
The gross wash down was accomplished by hydro cleaning the contaminated surfaces in Building 5A. Rinseate water filtered down into the main sumps and also accumulated in the elevator shafts. Rinseate from the sumps and elevator shafts was filtered to 5 microns and then pumped into one of the four available collection tanks or the tanker truck.

Sampling
The initial tanks of D&D water were sampled for U, percent U 235, pH, heavy metals and oil & grease. Beginning May 9, 2000, sampling was discontinued as enough data had been accumulated to characterize future tanks of decontamination water. These data indicated that the decontamination water had uranium and heavy metals concentration at levels requiring treatment at AWWT-Slurry Dewatering Facility (SDF).

After completion of building wash down and subsequent demolition, sampling was resumed in March 2001 for waters remaining in the sumps and elevator shafts for the same parameters as before to determine if treatment at AWWT-SDF was still warranted. These data indicated lower levels of heavy metal contamination such that specific treatment at AWWT-SDF was not required. From March 12 through the completion of the project decontamination water from these sumps and elevator shafts were directed to AWWT Phase 2.

There were two tanks where data indicated the decontamination water exceeded toxicity thresholds under RCRA. In December 1999, 6,500 gallons of decontamination water exceeded these thresholds for lead and cadmium. However, it was determined that this water could be effectively treated to meet both NPDES and RCRA requirements. In February 2001, 2,500 gallons of decontamination water exceeded the TC level for lead under RCRA. However, due to the heavy oil content, this decontamination water could not be discharged to AWWT and was therefore packaged and managed as hazardous waste.

Transfer to AWWT Facility
There were a total of 43 discharges of decontamination water to the AWWT Facility. Thirty-one of these discharges were made to the AWWT-Slurry Dewatering Facility while

INV#	SER #	CONT	PONO	SOU	C	MAT	SEQ	ITEM #	STATUS	GROSS	TARE	NET	LOC	AREA	ROW	E	ST	LE	LOT ASSIGN DATE	PROJECT #	MEF#
W179118	483748	340	W050	500	P	003	A482	000005	ACTIVE	2562.00	850.00	1712.00	0001	I	4		4	1	2/13/02 11:47:56	499	
W178774	483455	340	W050	500	P	003	A482	000008	ACTIVE	5142.00	850.00	4292.00	0001	I	4		4	2	2/13/02 11:50:20	499	
W179164	483762	340	W050	500	P	003	A482	000006	ACTIVE	1498.00	850.00	648.00	0001	I	4		4	3	2/13/02 11:49:01	499	
W217065	483206	340	W050	500	P	003	A482	000011	ACTIVE	1034.00	850.00	184.00	0001	I	4		5	1	2/14/02 3:40:15	499	
W179030	483715	340	W050	500	P	003	A482	000001	ACTIVE	1212.00	850.00	362.00	0001	I	4		5	2	2/13/02 11:42:10	499	
W179061	483645	340	W050	500	P	038	A482	000001	ACTIVE	6620.00	850.00	5770.00	0001	I	4		5	3	2/13/02 11:53:51	499	
W178797	483502	340	W050	500	P	003	A482	000004	ACTIVE	1162.00	850.00	312.00	0001	I	4		6	1	2/13/02 11:43:55	499	
W178836	483595	340	W050	500	P	003	A482	000009	ACTIVE	4372.00	850.00	3522.00	0001	I	4		6	2	2/13/02 11:50:37	499	
W178840	483583	340	W050	500	P	003	A482	000002	ACTIVE	4232.00	850.00	3382.00	0001	I	4		6	3	2/13/02 11:42:49	499	
W178965	483459	340	W050	500	P	003	A482	000010	ACTIVE	1294.00	850.00	444.00	0001	I	4		7	1	2/13/02 11:51:18	499	
W179060	483684	340	W050	500	P	017	A482	000001	ACTIVE	3976.00	850.00	3126.00	0001	I	4		7	2	2/13/02 11:53:24	499	
W178964	483547	340	W050	500	P	003	A482	000003	ACTIVE	1226.00	850.00	376.00	0001	I	4		7	3	2/13/02 11:43:21	499	
W178788	483493	340	W050	500	P	003	A481	000007	ACTIVE	1522.00	950.00	572.00	0001	K	1		4	1	4/15/02 11:51:02	499	
W171292	420108	330	W050	500	P	049	A481	000001	ACTIVE	950.00	650.00	300.00	0001	K	1		4	2	4/15/02 11:52:00	499	1585
W178962	483560	340	W050	500	P	003	A481	000001	ACTIVE	1360.00	950.00	410.00	0001	K	2		2	1	4/15/02 11:52:12	499	3783
W178794	483514	340	W050	500	P	003	A481	000003	ACTIVE	1372.00	950.00	422.00	0001	K	2		2	2	4/15/02 11:52:21	499	3783
W179116	483773	340	W050	500	P	003	A481	000002	ACTIVE	1384.00	950.00	434.00	0001	K	2		3	3	4/15/02 11:52:32	499	3783
W179115	483746	340	W070	500	P	042	A461	000001	ACTIVE	6414.00	950.00	5464.00	0001	T-93, NORT					5/17/00 7:45:40	499	3778
W200442	483240	340	R050	500	P	003	A482	000007	ACTIVE	2646.00	850.00	1796.00	0001	TS6	19		5	2	3/19/02 2:03:03	499	874
W200441	482976	340	R050	500	P	049	A482	000001	ACTIVE	3850.00	850.00	3000.00	0001	TS6	19		5	3	3/19/02 2:02:15	499	874
W200440	482929	340	R050	500	P	049	A482	000002	ACTIVE	4046.00	850.00	3196.00	0001	TS6	19		6	1	3/19/02 2:02:15	499	874
W171291	420100	330	R050	500	P	049	A473	000001	ACTIVE	1568.00	690.00	878.00	0001	TS6	20		13	3	11/28/01 12:59:26	499	874

22

Page 7 PCN1 Prepared April 16, 2002.

Note: This page contains information relating to all 22 white metal boxes for offsite shipment, including the two boxes identified in the July 01 SWIFTS Report. So, Box Serial Number 483746 listed above also appears on Page 2 of Attachment 1 and Box Serial Number 420100 listed above also appears on Page 4 of Attachment 1.

THIS PAGE INTENTIONALLY LEFT BLANK

Form No	Project	Profile No	Profile Description	Location From: MTL Name	Typ	Location To: MTL Name	Typ	Volume	Trans Date
10904	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W135896	C	OSDF		28	11/09/1999
10909	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W136368	C	30	11/11/1999
10909	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W136368	C	OSDF		30	11/11/1999
10908	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W178462	C	30	11/17/1999
10908	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W178462	C	OSDF		30	11/17/1999
10910	499	943101	CATEGORY "I" MISC. DEBRIS, OSDF CODE 4	PT5-001	F	W136683	C	25	11/17/1999
10910	499	943101	CATEGORY "I" MISC. DEBRIS, OSDF CODE 4	W136683	C	OSDF		25	11/17/1999
10915	499	922007	CATEGORY "E" CONCRETE, ASPHALT, OSDF CODE 2	PT5-001	F	W134968	C	28	11/18/1999
10915	499	922007	CATEGORY "E" CONCRETE, ASPHALT, OSDF CODE 2	W134968	C	OSDF		28	11/18/1999
10918	499	922007	CATEGORY "E" CONCRETE, ASPHALT, OSDF CODE 2	PT5-001	F	W156963	C	25	11/18/1999
10918	499	922007	CATEGORY "E" CONCRETE, ASPHALT, OSDF CODE 2	W156963	C	OSDF		25	11/18/1999
10914	499	943101	CATEGORY "I" MISC. DEBRIS, OSDF CODE 4	PT5-001	F	W135897	C	30	11/29/1999
10914	499	943101	CATEGORY "I" MISC. DEBRIS, OSDF CODE 4	W135897	C	OSDF		30	11/29/1999
11309	499	943101	CATEGORY "I" MISC. DEBRIS, OSDF CODE 4	PT5-001	F	W134925	C	30	12/15/1999
11309	499	943101	CATEGORY "I" MISC. DEBRIS, OSDF CODE 4	W134925	C	OSDF		30	12/15/1999
11313	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W134974	C	26	12/20/1999
11313	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W134974	C	OSDF		26	12/20/1999
11314	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W173132	C	22	12/21/1999
11314	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W173132	C	OSDF		22	12/21/1999
10921	499	95006	PACM FROM D&D AND MAINTENANCE PROJECTS	PT5-001	F	W182978	C	35	12/29/1999
11317	499	95006	PACM FROM D&D AND MAINTENANCE PROJECTS	PT5-001	F	W188429	C	38	01/26/2000
11315	499	95006	PACM FROM D&D AND MAINTENANCE PROJECTS	PT5-001	F	W186654	C	36	01/24/2000
11316	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W135447	C	30	01/26/2000
11316	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W135447	C	OSDF		30	01/26/2000
11318	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W151998	C	28	01/31/2000
11318	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W151998	C	OSDF		28	01/31/2000
11319	499	943101	CATEGORY "I" MISC. DEBRIS, OSDF CODE 4	PT5-001	F	W153199	C	27	02/01/2000
11319	499	943101	CATEGORY "I" MISC. DEBRIS, OSDF CODE 4	W153199	C	OSDF		27	02/01/2000
11320	499	95006	PACM FROM D&D AND MAINTENANCE PROJECTS	PT5-001	F	W186655	C	39	02/09/2000
10924	499	95006	PACM FROM D&D AND MAINTENANCE PROJECTS	PT5-001	F	W186656	C	37	02/17/2000
10926	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W171126	C	26	02/21/2000
10926	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W171126	C	OSDF		26	02/21/2000
10925	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W151655	C	27	02/17/2000
10925	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W151655	C	OSDF		27	02/17/2000
10927	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W136553	C	28	03/01/2000
10927	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W136553	C	OSDF		28	03/01/2000
10928	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W171122	C	29	03/02/2000
10928	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	W171122	C	OSDF		29	03/02/2000
10919	499	92101	COMINGLED CATEGORY "A", "B", "D" AND INCIDENTAL "E" DEBRIS (OSDF CAT. 2)	PT5-001	F	W151269	C	27	03/06/2000

4265

THIS PAGE INTENTIONALLY LEFT BLANK