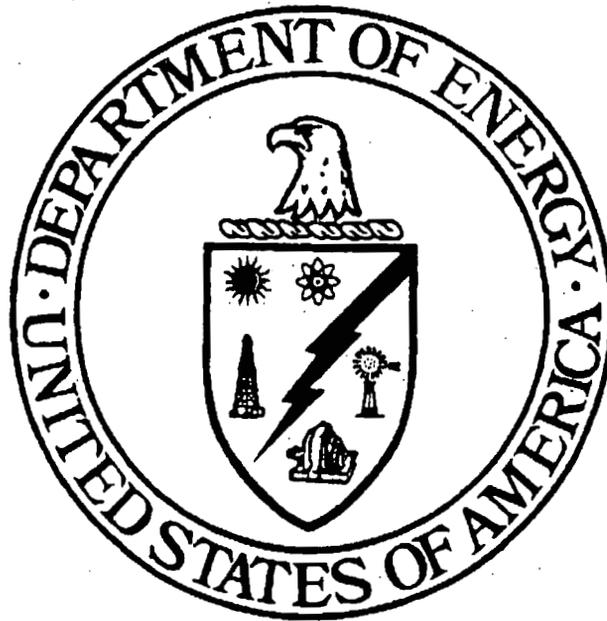


# OPERABLE UNIT 3

## MISCELLANEOUS SMALL STRUCTURES PHASE II IMPLEMENTATION PLAN FOR ABOVE-GRADE DECONTAMINATION AND DISMANTLEMENT



OCTOBER 2004

FERNALD CLOSURE PROJECT  
FERNALD, OHIO

U. S. DEPARTMENT OF ENERGY  
FERNALD AREA OFFICE

FINAL

DOCUMENT CONTROL NO. 1751-PL-0004 (REV. 0) PCN1

RECORD OF ISSUE/REVISION

<u>DATE</u>	<u>REVISION NO.</u>	<u>DESCRIPTION AND AUTHORITY</u>
9/26/02	Rev. 0	Issued Final Implementation Plan
2/03	Rev. 0, PCN1	Issued revised Figure 4-1, MSS Phase II D&D Project Remediation Schedule. The revised schedule has been modified to support Fernald site closure (as defined in the Fernald Closure Contract) by December 31, 2006.
8/5/03	N/A	Amendment 1 added nineteen (19) additional buildings/components to the MSS Phase II Complex D&D Implementation Plan
9/3/03	N/A	Transferred Buildings 20E, 20F and Component 18J from the Multi-Complex Implementation Plan to the MSS Phase II Implementation Plan per letter #DOE-0501-03 dated September 3, 2003.
1/27/04	N/A	Amendment 2 added Component 35A (Silo 4) to the MSS Phase II Complex D&D Implementation Plan.
10/04	N/A	Amendment 1 (PCN 1) issued in response to Regulatory Agencies comments regarding Amendment 1. Note: Due to changes in personnel during the August 2003 timeframe, Amendment 1 was not issued to the regulatory agencies until 8/04 (approximately one year later).

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## 2.0 General Project Remediation Approach

The general project remediation approach is described in Section 2 of the MSS Phase II D&D Implementation Plan. However, Section 2 of this document provides debris/waste volume estimates and above grade dismantlement activities for the nineteen (19) components.

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Most of the components that make up the additional nineteen (19) components house support operations. Newer structures installed or constructed after 1989 in the administration area of the site are not anticipated to be radiologically contaminated. These structures include 16L, 23B, 26D, 26E, 26F, TS-09, TS-12, TS-13 and TS-14. Currently, the remaining structures are in use and not available for a representative survey. Representative surveys will be performed prior to demolition of each respective remaining structure. Upon availability the radiological characterization information will be issued with a submittal letter to the regulatory agencies.

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Estimates of material volumes have been summarized in Tables 2-1, 2-2 and 2-3. Tables 2-1 and 2-2 list quantities of materials in units of bulked and unbulked cubic feet respectively. Table 2-3 lists the estimated weight of material in tons.

**TABLE 2-1 MSS D&D PROJECT BULKED MATERIAL VOLUME ESTIMATES (CU YDS)**

Component Number	Cat. A	Cat. B	Cat. D	D- Lead	Cat. E	Cat. G	Cat. H	Cat. I-2	Cat. I-4	TOTALS
16K	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
16L	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24
18J	12.0	88.0	0.0	0.0	22.5	0.0	0.0	0.0	0.0	122.5
18P	20.0	92.0	32.0	0.0	0.0	0.0	0.0	0.0	0.0	144
18Q	32.0	68.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	140
18R	8.0	16.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	36
18U	0.0	84.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84
18Z	0.0	64.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64
19B	80.0	152.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	232
23B	0.0	44.0	0.0	0.0	51.0	0.0	0.0	0.0	0.0	95
26D	0.0	36.0	0.0	0.0	13.5	0.0	0.0	0.0	0.0	49.5
26E	0.0	200.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	200
26F	0.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
TS-09	16.0	4.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0	34
TS-10	16.0	4.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0	34
TS-11	16.0	4.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0	34
TS-12	16.0	4.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0	34
TS-13	16.0	4.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0	34
TS-14	2.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	4
<b>TOTALS</b>	<b>234.0</b>	<b>921.0</b>	<b>84.0</b>	<b>0.0</b>	<b>87.0</b>	<b>0.0</b>	<b>0.0</b>	<b>71.0</b>	<b>0.0</b>	<b>1,397</b>
Container/Qty.	ROB/8	ROB/31	ROB/3		ROB/4			ROB/3		
Interim Storage	OSDF Trans	OSDF Trans	OSDF Trans		OSDF Trans			OSDF Trans		
Disposition	OSDF	OSDF	OSDF		OSDF			OSDF		

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General Notes:  
OU3 Debris Categories: Cat. A - Accessible Metals; Cat. B - Inaccessible Metals; Cat. C - Process Related Metals; Cat. D - Painted Light Gage Metals; Cat. E - Concrete; Cat. F - Brick; Cat. G - Non-Regulated ACM; Cat. H - Regulated ACM; Cat. I - Miscellaneous Materials

ROB: Roll-Off Box holds 30 cubic yards (810 cubic feet) and/or 16.95 tons of material; ISO: End-Loading Container/Sea Land boxes, holds up to 36 cubic yards (971 cubic feet) and/or 42,000 lbs. of material. WMB: White Metal Box holds 80 cubic feet with a weight restriction of 8000 lbs.

OSDF Trans: On-site Disposal Facility Transfer area. Refers to direct disposal in the OSDF; however, the ability to deliver debris directly to the OSDF Transfer area is dependent on whether the OSDF is accepting and/or availability of containers (ROBs) for transport. If necessary, Category A, B, D and E debris may be temporarily stockpiled on available building pads or at the On-site Material Transfer Area at project completion. Off-site Com: Off-site Commercial Facility.

**TABLE 2-4 Above Grade Dismantlement Activities for Components**

Component Designation	Inventory Removal	Facilities Shutdown	Asbestos Abatement	Surface Decon	Equip./Sys. Dismantlement	Transite Removal	Structural Steel or Steel Frame Dismantlement	Concrete or Masonry Removal
16K	-	X	-	X	X	-	X	-
16L	-	X	-	-	X	-	X	-
18J	-	X	-	X	-	-	X	-
18P	-	X	-	X	X	-	X	-
18Q	-	X	-	X	X	-	X	-
18R	-	X	-	X	-	-	X	-
18U	-	X	-	X	X	-	X	-
18Z	-	X	-	X	X	-	X	-
19B	-	X	-	X	X	-	X	-
23B	-	X	-	-	X	-	-	X
26D	-	X	-	-	X	-	X	X
26E	-	X	-	-	-	-	X	-
26F	-	X	-	-	X	-	-	X
TS-09	-	X	-	-	-	-	X	-
TS-10	-	X	-	-	-	-	X	-
TS-11	-	X	-	X	-	-	X	-
TS-12	-	X	-	X	-	-	X	-
TS-13	-	X	-	-	-	-	X	-
TS-14	-	X	-	-	-	-	X	-

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### 3.0 Component-Specific Description

This section presents component-specific descriptions for the nineteen (19) components. Background information provided in this section was obtained primarily from the Facility Owners and facility drawings.

#### 3.1 Component 16K – Dissolved Oxygen Facility Station

Background – Component 16K (Dissolved Oxygen Facility Station) is grouping of three smaller size structures each measuring approximately 10 x 6 and 8 feet high. The structures rest on a poured concrete pad. Along with Components 18P and 18R, Component 16K is located at the southeastern most part of the site, south of the former Sewage Treatment Plant area.

Process Area Description – The Dissolved Oxygen Facility Station was the electrical system used to provide power for operation of Component 18P, Dissolved Oxygen Building.

#### 3.2 Component 16L – Northwest 34.5 KV Feeder System

Background – Component 16L (Northwest 34.5 KV Feeder System) is an electrical feeder that measures approximately 10 x 8 and 6 feet high. The structure rests on a poured concrete pad. Component 16L is located along the northwest boundary of the site near Silos 1 and 2.

Process Area Description – The Northwest 34.5 KV Feeder System was the electrical substation used to provide power for operation of Silo 3 and miscellaneous trailers.

### 3.3 Component 18J – Sludge Mix Tank

Background – Component 18J (Sludge Mix Tank) is a 54,000 gallon vertical steel tank measuring 18 feet tall and 24 feet in diameter. The tank rests on a poured concrete pad. Component 18J is located near the southeast corner of the Bionitrification Surge Lagoon.

Process Area Description – The Sludge Mix Tank was used as a collection point for sludge from the east and west Storm Water Retention Basins. The sludge would then be transported to the AWWT for processing.

### 3.4 Component 18P – Dissolved Oxygen Building

Background – Component 18P (Dissolved Oxygen Building) is a metal frame structure measuring approximately 30 x 30 and 16 feet high. The structure rests on a poured concrete pad. Along with Components 16K and 18R, Component 18P is located at the southeastern most part of the site, south of the former Sewage Treatment Plant area.

Process Area Description – The Dissolved Oxygen Building houses the equipment that was used to aerate water from the AWWT system and IAWWT system for discharge to the Great Miami River.

### 3.5 Component 18Q – South Plume Interim Treatment Building

Background – Component 18Q (South Plume Interim Treatment Building) is a combination of two metal frame buildings (IAWWT Building, and S.P.I.T. Building) and two trailers (SWRB Valve House) constructed between 1992 and 1999. The two metal frame buildings are located side by side in an "L" configuration of approximately 2,050ft<sup>2</sup> and measure approximately 12 feet high. The two trailers measure 10 x 50 and 8 feet tall. The buildings rest on poured concrete pads. Along with Component 18Z, Component 18Q is located north-center of the Stormwater Retention Basins.

Process Area Description – The South Plume Interim Treatment Building was used to remove uranium from the ground water, surface water and the south plume area.

### 3.6 Component 18R – Outfall Line Pit

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Background – Component 18R (Outfall Line Pit) is a metal frame structure measuring approximately 10 x 12 and 12 feet high. The structure rests on a poured concrete pad. Along with Components 16K and 18P, Component 18R is located at the southeastern most part of the site, south of the former Sewage Treatment Plant area.

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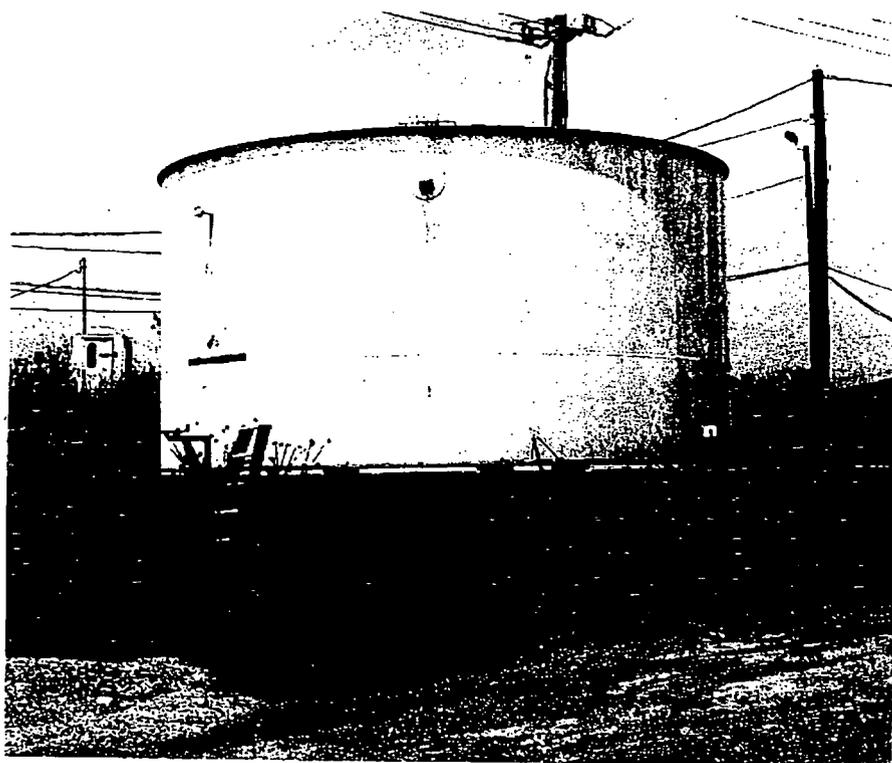
Process Area Description – The Outfall Line Pit was used for discharge of treated water from the AWWT system and IAWWT system to the Great Miami River.

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# SLUDGE MIX TANK - 18J

# DISSOLVED OXYGEN BUILDING - 18P

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