



**Department of Energy**

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MAY 17 2000

Mr. Paul Pardi, RCRA Group Leader  
and FFCA Project Manager  
Ohio Environmental Protection Agency  
Division of Hazardous Waste Management  
401 East 5<sup>th</sup> Street  
Dayton, Ohio 45402-2911

DOE-0678-00

Dear Mr. Pardi:

**SUBMITTAL OF CROSS-REFERENCE INDEX PURSUANT TO THE DIRECTOR'S FINAL FINDINGS AND ORDERS FILED JUNE 6, 1996**

Reference: Letter and Director's Final Findings and Orders (DF&O), T. E. Crepeau, OEPA to P. Hamric, DOE and J. Bradburne, FERMCO, dated June 6, 1996

In accordance with Section V, Order #2 of the referenced Director's Final Findings and Orders (DF&O), enclosed is a cross-reference index of Hazardous Waste Management Unit (HWMU) closure components and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) documents for those HWMUs identified in Attachment A of the DF&O. The index links specific components of Ohio Environmental Protection Agency's (OEPA) Closure Plan Review Guidance for Resource Conservation Recovery Act (RCRA) Facilities related to substantive closure requirements with the appropriate CERCLA document, which addresses those components. The list is cumulative and provides page numbers and sections for those CERCLA documents that have already been submitted.

The submittal of this cross-reference index meets the requirement in Section V to provide this document following the submittal of a CERCLA document identified in the cross-reference index. The Draft Certification Report for Area 1, Phase II (A1PII) was submitted to the OEPA and U.S. Environmental Protection Agency (U.S. EPA) on May 8, 2000. The specific references to this document in the cross-reference table have been highlighted.

MAY 17 2000

Mr. Paul Pardi

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If you have any questions regarding this matter, please contact Shannon Kaster at (513) 648-3157.

Sincerely,



Johnny W. Reising  
Fernald Remedial Action  
Project Manager

FEMP:Kaster

Enclosure

cc w/enclosure:

S. Kaster, OH/FEMP

J. Satter, OH/FEMP

R. V. Holmes, Fluor Fernald, Inc./3

M. A. Jewett, Fluor Fernald, Inc./52-2

T. A. Poff, Fluor Fernald, Inc./65-2

AR Coordinator, Fluor Fernald, Inc./78

ECDC, Fluor Fernald, Inc./52-7

cc w/o enclosure:

A. Tanner, OH/FEMP

**CROSS-REFERENCE INDEX FOR FEMP HWMU CLOSURE PLAN COMPONENTS UNDER CERCLA**

CLOSURE PLAN COMPONENT <sup>1</sup>	CERCLA DOCUMENT	CROSS REFERENCE INDEX
<p>1. Description/Detailed Drawing of Waste Management Unit(s) to be Closed (Closure Guidance Item 3.2 and 3.4)</p>	<p>OU1 FINAL Remedial Investigation Report, August 1994</p>	<p>Waste Pit 4 (27): Description, pp. 1-23 to 1-24; History, pp. 1-35 to 1-36; Drawings, pp. 1-83, 1-88                      Waste Pit 5 (42): Description, p. 1-24 to 1-27; History, pp. 1-36 to 1-37; Drawings, pp. 1-83, 1-89</p>
	<p>OU3 FINAL Integrated Remedial Design/Remedial Action Work Plan, May 1997</p>	<p>HWMU Component Number and Associated D&amp;D complex:                      Table 3-10, p. 3-71                      D&amp;D Complex Locations:                      Figure 2-2, p. 2-17</p>
	<p>OU3 Implementation Plans for Above-Grade Decontamination and Dismantlement</p> <p>FINAL Plant 1 Complex - Phase I Implementation Plan, March 1996</p> <p>FINAL Thorium/Plant 9 Complex Implementation Plan, August 1997</p> <p>FINAL Misc. Small Structures Implementation Plan, October 1998</p> <p>FINAL Implementation Document for HWMUs #28 and #50, December 1998</p> <p>FINAL Plant 6/East Warehouse Complex Implementation Plan, July 1999</p>	<p>Drawing of HWMU:                      To be submitted for Each D&amp;D Complex.</p> <p>Plant 1 Storage Bldg. - Bldg. 67 (25):                      Figure D-11</p> <p>Plant 9 Warehouse - Bldg. 81 (35):                      Figure D-10, D-11</p> <p>Waste Oil Decant Shelter (component of Trane Incinerator) (28):                      No drawing available for this unit</p> <p>KC-2 Warehouse - Bldg. 63 (34):                      Figure D-22, D-23</p> <p>UNH Tanks - NFS Storage Area (46):                      Figure D-1</p> <p>Trane Incinerator (28):                      Attachment 1</p> <p>UNH Tanks - Raffinate Bldg. (50):                      Attachment 2</p> <p>Plant 6 Warehouse - Bldg. 79 (37):                      Appendix D</p>
	<p>OU5 FINAL Remedial Investigation Report, March 1995</p>	<p>General Location Map of HWMUs to be Closed Under CERCLA: Figure 4-112                      Size and Dimensions of HWMUs: Table 1-12                      FEMP Topographic Map: Figure 3-1                      General HWMU Information and Locations Within OU5 Areas, Appendix D:                      Plant 1 Storage Pad (20):                      Plant 1 Area, Section D.2.1, p. D.2-2                      UNH Tanks (46-50), NAR System (10), Trane Incinerator (28):                      Plant 2/3 Area, Section D.2.2, p. D.2-19</p>

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**CROSS-REFERENCE INDEX FOR FEMP HWMU CLOSURE PLAN COMPONENTS UNDER CERCLA**

CLOSURE PLAN COMPONENT	CERCLA DOCUMENT	CROSS REFERENCE INDEX
<p>1. Description/Detailed Drawing of Waste Management Unit(s) to be Closed (Closure Guidance Item 3.2 and 3.4) - Continued</p>	<p>OU5 FINAL Remedial Investigation Report, March 1995 - Continued</p>	<p>Storage Pad N of Plant 6 (36):                      Plant 6 Area, Section D.2.4, p. D.2-28                      Plant 8 East and West Drum Storage Pads (17, 18), Box Furnace (14), Oxidation Furnace #1 (15):                      Plant 8 Area, Section D.2.5, p. D.2-33                      Sludge Drying Beds (41):                      Sewage Treatment Plant Area, Section D.2.7, p. D.2-41                      Abandoned Sump West of Pilot Plant (22), Tank T-2 (54):                      Pilot Plant Area Section D.2.8, p. D.2-45                      Drum Storage Area Near Lab Loading Dock (4), Drum Storage Area S of W-26 (5):                      Laboratory Area, Section D.2.9, p. D.2-51                      Tank Farm Sump (11):                      Tank Farm and Boiler House Area, Section D.2.13, p. D.2-69                      Fire Training Facility (1):                      Fire Training Area, Section D.2.18, p. D.2-86</p>
<p>2. List of Hazardous Waste(s) Managed in Unit(s) (Closure Guidance Item 3.5)</p>	<p>OU1 FINAL Remedial Investigation Report, August 1994</p>	<p>Waste Managed in Unit:                      Waste Pit 4 (27): pp. 4-60 to 4-70, pp. 1-35 to 1-36                      Waste Pit 5 (42): pp. 4-70 to 4-77, pp. 1-36 to 1-37</p>
	<p>OU3 FINAL Remedial Investigation/Feasibility Study Report</p>	<p>Waste Managed in HWMU:                      Table K-1</p>
	<p>OU3 Implementation Plans for Above-Grade Decontamination and Dismantlement</p> <p>FINAL Plant 1 Complex - Phase I Implementation Plan, March 1996</p> <p>FINAL Thorium/Plant 9 Complex Implementation Plan, August 1997</p> <p>FINAL Misc. Small Structures Implementation Plan, October 1998</p>	<p>Waste Managed in HWMU:                      To be Submitted for Each D&amp;D Complex</p> <p>Plant 1 Storage Bldg. - Bldg. 67 (25):                      Section 3.7, p. 42</p> <p>Plant 9 Warehouse - Bldg. 81 (35)                      Section 3.13, pp. 39 to 40</p> <p>Waste Oil Decant Shelter (component of Trane Incinerator) (28):                      Section 3.17, p. 36</p> <p>KC-2 Warehouse - Bldg. 63 (34)                      Section 3.23, pp. 41 to 43</p> <p>UNH Tanks - NFS Storage Area (46):                      Section 3.1, p. 23</p>

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CLOSURE PLAN COMPONENT <sup>1</sup>	CERCLA DOCUMENT	CROSS REFERENCE INDEX
<p>2. List of Hazardous Waste(s) Managed in Unit(s) (Closure Guidance Item 3.5) - Continued</p>	<p>FINAL Implementation Document for HWMUs #28 and #50, December 1998</p> <p>FINAL Plant 6/East Warehouse Complex Implementation Plan, July 1999</p>	<p>Trane Incinerator (28): HWMU Decontamination</p> <p>UNH Tanks – Raffinate Bldg. (50): HWMU Decontamination</p> <p>Plant 6 Warehouse – Bldg. 79 (37): Section 3.9, p 37</p>
	<p>OU5 FINAL Integrated Remedial Investigation Report, March 1995</p>	<p>HWMUs with Potential Soil Contamination: Tables 4-68 and 4-69</p>
	<p>OU5 FINAL Feasibility Study Report, June 1995</p>	<p>HWMU Constituents of Concern (COCs) for Soil: Tables 4-4, 4-5 and 4-6</p>
	<p>OU5 FINAL Sitewide Excavation Plan, July 1998</p>	<p>HWMU COCs: Table 2-1</p>
	<p>OU5 Integrated Remedial Design Packages for Individual Remediation Areas</p> <p>Area 1, Phase II Supplemental Characterization Package, April 1999</p> <p>DRAFT Implementation Plan for Area 3A/4A, March 2000</p>	<p>HWMU COCs: To be Submitted</p> <p>Sludge Drying Beds (41): Section 3.0, Disposition of Sludge Cake and Associated Debris, p. 3-1</p> <p>Storage Pad North of Plant 6 (36): Section 2.3.2.3, Location of HWMUs and USTs, p. 2-11</p>
<p>3. Removal of Waste and Contaminated Media (Closure Guidance Item 3.6)</p>	<p>OU1 FINAL Remedial Design Documents Package, August 1998</p>	<p>Removal of Waste – Waste Pit 4 (27), Waste Pit 5 (42): Volume 2, Excavation Plan</p>
	<p>OU3 FINAL Integrated Remedial Design/Remedial Action Work Plan May 1997</p>	<p>General Methods for Removing and Storing Waste: HWMU Decontamination, Section 3.2.3, p. 3-13; Materials Management, Section 3.3, pp. 3-30 to 3-63; HWMU Remediation (use of Safe Shutdown, D&amp;D of complexes), Section 3.5.3, pp. 3-69 to 3-73</p>
	<p>OU3 Implementation Plans for Above-Grade Decontamination and Dismantlement</p>	<p>Removing Waste from HWMU Storage, Treatment, and Disposition of Waste: To be Submitted for Each D&amp;D Complex</p>
	<p>FINAL Plant 1 Complex – Phase I Implementation Plan, March 1996</p>	<p>Plant 1 Storage Bldg. – Bldg. 67 (25): Section 3.7, p. 42</p>

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CLOSURE PLAN COMPONENT <sup>1</sup>	CERCLA DOCUMENT	CROSS REFERENCE INDEX
<p>3. Removal of Waste and Contaminated Media (Closure Guidance Item 3.6) - Continued</p>	<p>FINAL Thorium/Plant 9 Complex Implementation Plan, August 1997</p> <p>FINAL Misc. Small Structures Implementation Plan, October 1998</p> <p>FINAL Implementation Document for HWMUs #28 and #50, December 1998</p> <p>FINAL Plant 6/East Warehouse Complex Implementation Plan, July 1999</p>	<p>Plant 9 Warehouse – Bldg. 81 (35): Section 3.13, pp. 39 to 40</p> <p>Waste Oil Decant Shelter (component of Trane Incinerator) (28): Section 3.17, pp. 36 to 37</p> <p>KC-2 Warehouse – Bldg. 63 (34) Section 3.23, p. 42</p> <p>UNH Tanks – NFS Storage Area (46): Section 3.1, pp. 23 to 24</p> <p>Trane Incinerator (28): Remedial Tasks</p> <p>UNH Tanks – Raffinate Bldg. (50): Remedial Tasks, HWMU Decontamination</p> <p>Plant 6 Warehouse – Bldg. 79 (37): Section 3.9, p. 37</p>
	<p>OU5 FINAL Sitewide Excavation Plan, July 1998</p>	<p>Excavation, Loading, Staging, Storage, Treatment and/or Disposition of Impacted Material: Section 2.0, Remediation Issues and General Strategies; Section 3.0, General Implementation Approach; Section 4.0, Location Specific Excavation Approaches; Appendix B, Sitewide Sequencing Plan; Appendix F.3 to F.5, Implementation of Construction; Appendix I, Sitewide Excavation of Contamination by Constituent</p>
	<p>OU5 Integrated Remedial Design Packages for Individual Remediation Areas</p> <p>Area 1, Phase II Supplemental Characterization Package, April 1999</p> <p>DRAFT Implementation Plan for Area 3A/4A, March 2000</p>	<p>Area/Phase-Specific Excavation, Loading, Staging, Storage, Treatment and/or Disposition of Impacted Material: To be Submitted</p> <p>Sludge Drying Beds (41): Removal of Sludge: Section 3.3, Material Disposition Sampling Plan, pp. 3-3 to 3-4; Excavation of Soil: Section 5.0, Excavation, pp. 5-1 to 5-4</p> <p>Storage Pad North of Plant 6 (36): Section 3.3.2, Concrete, Asphalt Pads, Roadways and Floors, p. 3-9; Section 3.4.2, HWMUs and USTs, p. 3-15; Section 3.4.3, General Excavation, pp. 3-15 to 3-17</p>
<p>4. Schedule for Closure (Closure Guidance Item 3.7)</p>	<p>OU1 FINAL Remedial Action Work Plan, January 1997</p>	<p>Schedule Summary for Remedial Design/Remedial Action Packages; Closure of Waste Pit 4 (27), Waste Pit 5 (42): Table 2-1, p. 2-16</p>

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CLOSURE PLAN COMPONENT	CERCLA DOCUMENT	CROSS REFERENCE INDEX	
<p>4. Schedule for Closure (Closure Guidance Item 3.7) - Continued</p>	<p>OU3 FINAL Integrated Remedial Design/Remedial Action Work Plan, May 1997</p> <p>OU3 Implementation Plans for Above-Grade Decontamination and Dismantlement</p> <p>FINAL Plant 1 Complex – Phase I Implementation Plan, March 1996</p> <p>FINAL Thorium/Plant 9 Complex Implementation Plan, August 1997</p> <p>FINAL Misc. Small Structures Implementation Plan, October 1998</p> <p>FINAL Implementation Document for HWMUs #28 and #50, December 1998</p> <p>FINAL Plant 6/East Warehouse Complex Implementation Plan, July 1999</p>	<p>Accelerated Schedule for Conducting Safe Shutdown Activities at D&amp;D Complexes: Figure 6-1, p. 6-3</p> <p>Schedule for Submitting D&amp;D Packages: Table 6-1, p. 6-7</p> <p>Schedule for Removing &amp; Decontaminating Above-Grade Unit Structures and Equipment: To be Submitted for Each D&amp;D Complex</p> <p>Plant 1 Storage Bldg. – Bldg. 67 (25) Figure 4-1, p. 48</p> <p>Plant 9 Warehouse – Bldg. 81 (35) Figure 4-1, p. 43</p> <p>Waste Oil Decant Shelter (component of Trane Incinerator) (28); KC-2 Warehouse – Bldg. 63 (34); UNH Tanks – NFS Storage Area (46): Section 4.0, pp. 45 to 46</p> <p>Trane Incinerator (28); UNH Tanks – Raffinate Bldg. (50): Letter, J Reising to G. Jablonowski and T. Schneider, "Transmittal of RCRA/CERCLA Integrated Closure Implementation Document for the Trane Incinerator (HWMU No. 28) and UNH Tanks, Hot Raffinate Building (HWMU No. 50)," dated December 22, 1998</p> <p>Plant 6 Warehouse – Bldg. 79 (37): Figure 4-1, p. 42</p>	
	<p>OU5 FINAL Remedial Design Work Plan, August 1996</p>	<p>Schedule for Submitting Remedial Design Documents for Soil: Table 4-1, p. 4-6</p>	
	<p>OU5 FINAL Sitewide Excavation Plan, July 1998</p>	<p>Schedule for Submitting Remedial Design Documents: Table 1-5</p>	
	<p>OU5 Integrated Remedial Design Packages for Individual Remediation Areas</p> <p>Area 1, Phase II Supplemental Characterization Package, April 1999</p> <p>DRAFT Implementation Plan for Area 3A/4A, March 2000</p>	<p>Area/Project-Specific Schedules: To be Submitted</p> <p>Sludge Drying Beds (41) – Sector 3D: Table 7-3</p> <p>Storage Pad North of Plant 6 (36) – Area 4A: Table G-3</p>	
	<p>5. Health and Safety Issues (Closure Guidance Item 3.9)</p>	<p>OU1 FINAL Remedial Action Documents Package, April 1999</p>	<p>Health and Safety Plan</p>
		<p>OU3 FINAL Integrated Remedial Design/Remedial Action Work Plan, May 1997</p>	<p>Health and Safety Plan: Appendix E</p>
		<p>OU5 FINAL Sitewide Excavation Plan, July 1998</p>	<p>Health and Safety Plan: Section 6.0, Project Health and Safety; Table 6-1, Occupational Monitoring and Action Levels</p>

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**CROSS-REFERENCE INDEX FOR FEMP HWMU CLOSURE PLAN COMPONENTS UNDER CERCLA**

CLOSURE PLAN COMPONENT	CERCLA DOCUMENT	CROSS REFERENCE INDEX
5. Health and Safety Issues (Closure Guidance Item 3.9) - Continued	<p>OU5 Integrated Remedial Design Packages for Individual Remediation Areas</p> <p>Area 1, Phase II Integrated Remedial Design Package, September 1998</p> <p>DRAFT Implementation Plan for Area 3A/4A, March 2000</p>	<p>Area/Phase-Specific Health and Safety Requirements: To be Submitted</p> <p>Sludge Drying Beds (41): Section 5.0, Project Specific Health and Safety</p> <p>Storage Pad North of Plant 6 (36): Section 5.0, Project Specific Health and Safety</p>
6. Decontamination Efforts (Closure Guidance Item 3.10)	OU1 OU1 Complex D&D Implementation Plan	Decontamination of Equipment To be Submitted
	OU3 FINAL Integrated Remedial Design/Remedial Action Work Plan, May 1997	<p>HWMU Decontamination: Section 3.2.3, p. 3-13</p> <p>HWMU Remediation: Section 3.5.3, pp. 3-69 to 3-73 (use of Safe Shutdown, D&amp;D of Complexes)</p>
	<p>OU3 Implementation Plans for Above-Grade Decontamination and Dismantlement</p> <p>FINAL Plant 1 Complex – Phase I Implementation Plan, March 1996</p> <p>FINAL Thorium/Plant 9 Complex Implementation Plan, August 1997</p> <p>FINAL Misc. Small Structure Implementation Plan, October 1998</p> <p>FINAL Implementation Document for HWMUs #28 and #50, December 1998</p> <p>FINAL Plant 6/East Warehouse Complex Implementation Plan, July 1999</p>	<p>Decontamination of Above-Grade Unit Structures and Equipment; To be Submitted for Each D&amp;D Complex</p> <p>Plant 1 Storage Bldg. – Bldg. 67 (25): HWMU Decontamination: Section 3.7, pp. 42 to 45 Materials Management: Table 2-1, p. 12</p> <p>Plant 9 Warehouse – Bldg. 81 (35): HWMU Decontamination: Section 3.13, pp. 39 to 40 Materials Management: Table 2-4, p. 12</p> <p>Waste Oil Decant Shelter (component of Trane Incinerator) (28): Section 3.17, pp. 36 to 37</p> <p>KC-2 Warehouse – Bldg. 63 (34) Section 3.23, pp. 42 to 43</p> <p>UNH Tanks – NFS Storage Area (46): Section 3.1, pp. 23 to 24</p> <p>Trane Incinerator (28): HWMU Decontamination</p> <p>UNH Tanks – Raffinate Bldg. (50): HWMU Decontamination</p> <p>Plant 6 Warehouse – Bldg. 79 (37): Section 3.9, p. 37</p>
	OU5 FINAL Sitewide Excavation Plan, July 1998	Decontamination of Excavation Equipment: Section F.2.3, Installation of Decontamination and Wash Facilities

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CLOSURE PLAN COMPONENT <sup>1</sup>	CERCLA DOCUMENT	CROSS-REFERENCE INDEX
6. Decontamination Efforts (Closure Guidance Item 3.10) - Continued	<p>OU5 Integrated Remedial Design Packages for Individual Remediation Areas</p> <p>Area 1, Phase II Supplemental Characterization Package, April 1999</p> <p>Area 1, Phase II Integrated Remedial Design Package, September 1998</p> <p>DRAFT Implementation Plan for Area 3A/4A, March 2000</p>	<p>Area/Phase-Specific Requirements for Decontamination of Excavation Equipment: To be Submitted</p> <p>Sludge Drying Beds (41): Equipment Decontamination: Section 5.2, Loading and Hauling, pp. 5-2 to 5-3</p> <p>Sludge Drying Beds (41): Remediation-Generated Water Management: Section 3.4.4, Remediation-Generated Wastewater Management, pp. 3-33 to 3-35</p> <p>Storage Pad North of Plant 6 (36): Appendix A, Section 5.6, Equipment and Personnel Monitoring Decontamination, p.14</p>
7. Remediation Standards for Soils and Groundwater <sup>2</sup> (Closure Guidance Items 3.11, 3.11.1, 3.11.2, and 3.13)	OU1 FINAL Record of Decision, January 1995	Waste Pit (27, 42) Area: pp. 9-1 to 9-11 Tables B-5 to B-16
	OU1 OU1 Remedial Design Pre-Final Design Package II, March 1996	Waste Pit (27, 42) Area: pp. A-3 to A-7
	OU5 FINAL Record of Decision, January 1996	Final Remediation Levels (FRLs) for Soil and Groundwater: Table 9-3, p. 9-23 Table 9-4, p. 9-26
	OU5 FINAL Sitewide Excavation Plan, July 1998	Summary of Contaminant Levels Pertinent to Soil Remediation at the FEMP: Table 1-4; Final Remediation Levels: Section 2.1.3, p. 2-10 Constituents of Ecological Concern: Section 2.1.4, p. 2-13 Preliminary Identification of Primary, Secondary COCs and Ecological COCs Assigned to Remediation Areas: Table 2-7
	<p>OU5 Integrated Remedial Design Packages for Individual Remediation Areas</p> <p>Area 1, Phase II Supplemental Characterization Package, April 1999</p> <p>DRAFT Implementation Plan for Area 3A/4A, March 2000</p>	<p>Area/Phase-Specific FRLs: To be Submitted</p> <p>Sludge Drying Beds (41): Section 3.3, Material Disposition Sampling Plan, pp. 3-3 to 3-4; Section 5.1, Excavation and Monitoring, pp. 5-1 to 5-2</p> <p>Storage Pad North of Plant 6 (36): Section 2.3.2.3, Location of HWMUs and USTs, p. 2-11</p>
8. Sampling Plan and Analytical Procedures (Closure Guidance Item 3.14) – Includes Sampling to Define the Extent of Contamination and Sampling to Verify the Unit is Clean	OU1 FINAL Remedial Investigation Report, August 1994	Procedures for Determining Nature and Extent of Contamination at Waste Pit Area: Waste Pit 4 (27), Waste Pit 5 (42): Chapter 2, pp. 2-1 to 2-161
	OU1 FINAL Remedial Action Documents Package, April 1999	Procedures for Sampling and Analysis of Waste Pit Area; Certification of Waste Pit Area Cleanup: Sampling and Analysis Plan
	OU5 FINAL Remedial Investigation Report, March 1995	Procedures for Determining Nature and Extent of Soil Contamination: Chapter 2, pp. 2-1 to 2-83
	OU5 FINAL Sitewide Excavation Plan, July 1998	Procedures for Certifying Attainment of Soil Cleanup: Section 2.2.2, p. 2-18 to 2-19; Section 2.2.5, p. 2-22 to 2-23; Section 3.4, p.3-22 to 3-23; Appendix G, Certification Design Rationale
	OU5 Integrated Remedial Design Packages (IRDPs) for Individual Remediation Areas	Area/Phase-Specific Procedures for Certifying FRL Attainment: To be Submitted

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CLOSURE PLAN COMPONENT	CERCLA DOCUMENT	CROSS REFERENCE INDEX
<p>8. Sampling Plan and Analytical Procedures (Closure Guidance Item 3.14) – Includes Sampling to Define the Extent of Contamination and Sampling to Verify the Unit is Clean – Continued</p>	<p>Area 1, Phase II Supplemental Characterization Package, August 1998</p> <p>DRAFT Implementation Plan for Area 3A/4A, March 2000</p>	<p>Sludge Drying Beds (41): Section 3.3, Material Disposition Sampling Plan, p. 3-3; Section 5.0, Excavation Monitoring, pp. 5-1 to 5-2</p> <p>Storage Pad North of Plant 6 (36): Section 2.3.2.3, Location of HWMUs and USTs, p. 2-11; Section 3.4.2, HWMUs and USTs, p. 3-15; Section 3.4.3, General Excavation, pp. 3-15 to 3-17</p>
	<p>OU5 Certification Design Letters for Individual Remediation Areas</p> <p>FINAL Certification Design Letter for Area 1, Phase II, October 1999</p>	<p>Area/Phase-Specific Procedures for Certifying FRL Attainment: To be Submitted</p> <p>Sludge Drying Beds (41): Section 4.1, Certification Design, pp. 4-1 to 4-5; Section 4.3, Sampling, pp. 4-6 to 4-7</p>
<p>9. Description of Removal Efforts and Treatment Processes (Closure Guidance Item 3.15)</p>	<p>OU1 FINAL Remedial Design Documents Package, August 1998</p>	<p>Removal and Handling of Waste Pit Waste – Waste Pit 4 (27), Waste Pit 5 (42): Volume 2, Excavation Plan</p>
	<p>OU1 FINAL Remedial Action Documents Package, April 1999</p>	<p>Processing of Waste Pit Waste – Waste Pit 4 (27), Waste Pit 5 (42): Operations and Maintenance (O &amp; M) Plan for Remediation Facilities</p>
	<p>OU3 Implementation Plans for Above-Grade Decontamination and Dismantlement</p>	<p>Removal and Treatment of Waste in HWMU: To be Submitted for Each D&amp;D Complex (where applicable)</p>
	<p>OU5 FINAL Feasibility Study Report, June 1995</p>	<p>Evaluation of Technologies and Process Options: Section 3.3, p. 3-5</p>
	<p>OU5 FINAL Sitewide Excavation Plan, July 1998</p>	<p>Excavation, Loading, Staging, Storage, Treatment, and/or Disposition of Impacted Material: Section 2.0, Remediation Issues and General Strategies; Section 3.0, General Implementation Approach; Section 4.0, Location Specific Excavation Approaches; Appendix B, Sitewide Sequencing Plan; Appendix F, Implementation of Construction; Appendix I, Sitewide Extent of Contamination by Constituent</p>
	<p>OU5 Integrated Remedial Design Packages (IRDPs) for Individual Remediation Areas</p> <p>Area 1, Phase II Supplemental Characterization Package, April 1999</p> <p>DRAFT Implementation Plan for Area 3A/4A, March 2000</p>	<p>Area/Phase-Specific Excavation, Loading, Staging, Storage, Treatment, and/or Disposition of Impacted Material: To be Submitted</p> <p>Sludge Drying Beds (41): Management of Sludge: Section 3.3, Material Disposition Sampling Plan, p. 3-3; Management of Soil: Section 5.0, Excavation, pp. 5-1 to 5-4</p> <p>Storage Pad North of Plant 6 (36): Section 3.3.2, Concrete, Asphalt Pads, Roadways and Floors, p. 3-9; Section 3.4.2, HWMUs and USTs, p. 3-15; Section 3.4.3, General Excavation, pp. 3-15 to 3-17</p>
<p>10. Landfill Closure Requirements – (if applicable)<sup>3</sup> - (Closure Guidance Item 3.16)</p>	<p>OU1 FINAL Record of Decision, January 1995</p>	<p>ARARs: Relevant and Appropriate as some remedial alternatives may require closure to these standards Tables B-28 and B-29</p>
	<p>OU1 FINAL Remedial Design Work Plan, June 1995</p>	<p>Revised ARARs: Tables A-24 and A-25</p>
	<p>OU5 FINAL Record of Decision, January 1996</p>	<p>Not Applicable, if Remediation Levels for Soil and Groundwater are Sufficient for a Clean Hazardous Waste Management Unit Closure<sup>1</sup>: ARARs: Table B-3, p. B.3-10</p>

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**CROSS-REFERENCE INDEX FOR FEMP HWMU CLOSURE PLAN COMPONENTS UNDER CERCLA**

CLOSURE PLAN COMPONENT	CERCLA DOCUMENT	CROSS-REFERENCE INDEX
<p>10. Landfill Closure Requirements – (if applicable)<sup>3</sup> - (Closure Guidance Item 3.16) - Continued</p>	<p>OU5 Integrated Remedial Design Packages for Individual Remediation Areas</p> <p>Area 1, Phase II Integrated Remedial Design Package, September 1998</p> <p>DRAFT Implementation Plan for Area 3A/4A, March 2000</p>	<p>Area/Phase-Specific Landfill Closure Requirements: To be submitted (if applicable)</p> <p>Sludge Drying Beds (41): Included within Appendix A, Design Criteria Package, Table A-2, p. A-32, but not anticipated to be applicable since HWMU to be clean (risk-based) closed by removal.</p> <p>Storage Pad North of Plant 6 (36): Included within Appendix A, Design Criteria Package, Table A-2, pp. A-69 to A-74, but not anticipated to be applicable since HWMU to be clean (risk-based) closed by removal.</p>
<p>11. Certification (Closure Guidance Item 3.18)</p>	<p>OU1 Remedial Action Report</p> <p>OU3 Project Completion Reports</p> <p>FINAL Plant 1 Complex – Phase 1 Project Completion Report, December 1997</p> <p>FINAL Thorium/Plant 9 Complex Project Completion Report, April 1999</p> <p>FINAL Project Completion Report for the Decontamination of HWMU No. 50 – UNH Tanks, Hot Raffinate Building and HWMU No. 28 – Trane Incinerator, May 1999</p> <p>FINAL Miscellaneous Small Structures Decontamination and Dismantlement Project, Task Order #432 Completion Report, October 1999</p>	<p>Certification Sampling Results: To be Submitted</p> <p>Summary of HWMU Remediation Activities/Statement of Conformance with Requirements and Performance Standards: To be Submitted for Each D&amp;D Complex</p> <p>Plant 1 Storage Bldg. – Bldg. 67 (25): Section 2.1.3, pp. 7 to 8</p> <p>Plant 9 Warehouse – Bldg. 81 (35): Section 2.2.11, pp. 12 to 14</p> <p>Trane Incinerator (28); UNH Tanks – Raffinate Bldg. (50)</p> <p>Waste Oil Decant Shelter (component of Trane Incinerator) (28): Section 2.3, pp. 3 to 5</p> <p>KC-2 Warehouse – Bldg. 63 (34) Section 2.4, pp. 5 to 6</p>
	<p>OU5 Certification Reports for Individual Remediation Areas:</p> <p><u>DRAFT Certification Report for Area 1, Phase II, May 2000</u></p>	<p>Area/Phase-Specific Certification Reports: To be Submitted</p> <p><u>Sludge Drying Beds (41):</u> <u>Section 2.1.5.3, Sector 3 Certification Units, pp. 2-8 to 2-10; Section 2.3, Statistical Analysis, p. 2-12 to 2-13; Section 3.1, Excavation Activities, pp. 3-1 to 3-2; Section 3.2, Changes to Scope of Work, pp. 3-3 to 3-4; Section 5.2, Sludge Drying Bed HWMU Closure, p. 5-3</u></p>
	<p>OU5 Remedial Action Report</p>	<p>Summary of Remedial Activities and Statement of Conformance with Requirements and Standards: To be Submitted</p>

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**CROSS-REFERENCE INDEX FOR FEMP HWMU CLOSURE PLAN COMPONENTS UNDER CERCLA**

CLOSURE PLAN COMPONENT	CERCLA DOCUMENT	CROSS REFERENCE INDEX
12. Status of Facility (or Unit) After Closure (Closure Guidance Item 3.19)	OU1 FINAL Record of Decision, January 1995	Status of Waste Pits After OU1 Remedial Action: pp. 10-1 to 10-9
	OU3 FINAL Record of Decision for Interim Remedial Action, June 1994	Status of Production Area HWMUs After OU3 Remedial Action: Section 5.4, p. 11
	OU3 Final Record of Decision for Final Remedial Action, September 1996	Integration of the Interim and Final Remedial Actions, Section 2.1, p. 9
	OU5 FINAL Record of Decision, January 1996	Status of FEMP After Soil and Groundwater Remediation: Section 4.0, p. 4-1
	OU5 FINAL Sitewide Excavation Plan, July 1998	Certification Reports: Section 7.4, pp. 7-10 to 7-14
	OU5 Certification Reports for Individual Remediation Areas	Status of those HWMUs That Had Soil Contamination After Soil Remedial Action: To be Submitted

<sup>1</sup> Closure Guidance Items are from the Closure Plan Review Guidance for RCRA Facilities, Ohio EPA, March 1999.

<sup>2</sup> The perched water contamination has many sources, only some of which are the HWMUs. Because of this, it is difficult or impossible to identify the degree to which a HWMU may have contributed to perched water contamination. Therefore, the nature and extent of contamination in the perched water, and the most appropriate remedial action method and objectives, are best achieved under the CERCLA process alone.

<sup>3</sup> Ohio EPA has two options for clean closure where there are no more RCRA requirements (i.e., no post-closure requirements) for the existing HWMUs: (1) complete removal of waste and impacted environmental media, and (2) complete removal of waste and impacted environmental media to health-based standards (known at the FEMP as Final Remediation Levels, FRLs). Post closure requirements will, however, be applicable to the CERCLA on-property disposal cell as it will take some soil and debris contaminated with RCRA-hazardous waste [see Post Closure Care and Inspection Plan, On-Site Disposal Facility (20100-PL-010, Rev. 1, July 1997)].

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