

6512

U-003-505 .3

**OPERABLE UNIT 1 FINAL RECORD OF DECISION - (COMMENT  
RESPONSE DOCUMENT)**

01/25/95

DOE-0474-95  
DOE-FN        USEPA  
45  
ROD



Department of Energy  
Fernald Environmental Management Project  
P. O. Box 398705  
Cincinnati, Ohio 45239-8705  
(513) 648-3155

6512

JAN 25 1995

DOE-0474-95

Mr. James A. Saric, Remedial Project Director  
U.S. Environmental Protection Agency  
Region V - 5HRE-8J  
77 W. Jackson Boulevard  
Chicago, Illinois 60608-3590

Dear Mr. Saric:

**OPERABLE UNIT 1 FINAL RECORD OF DECISION**

Enclosed for signature is the Operable Unit 1 Final Record of Decision (ROD). Revisions which resulted from your review of the Draft ROD are documented in the enclosed response to comments document, which was transmitted to your attention on January 13, 1995.

In accordance with Section X.G of the Amended Consent Agreement, this ROD is being submitted for signature by the Regional Administrator of the United States Environmental Protection Agency, Region 5, as signed by Mr. J. Phil Hamric, Manager, United States Department of Energy, Ohio Field Office.

If you have any questions, please contact Dave Lojek at 513-648-3127.

Sincerely,

*for*

Jack R. Craig  
Fernald Remedial Action  
Project Manager

FN:LOJEK

Enclosures: As Stated

## cc w/encs:

B. Barwick, USEPA-V  
G. Jablonowski, USEPA-V, AT-18J  
J. Kwasniewski, OEPA-Columbus  
P. Harris, OEPA-Dayton  
M. Proffitt, OEPA-Dayton  
T. A. Schneider, OEPA-Dayton  
J. Michaels, PRC  
R. Cohan, GeoTrans  
F. Bell, ATSDR  
R. Owen, ODOH  
AR Coordinator, FERMCO

## cc w/o encs:

J. Fiori, EM-40/TREV  
K. H. Chaney, EM-423/QO  
S. Fauver, EM-423/QO  
D. Kozlowski, EM-423/QO  
G. Mitchell, OEPA-Dayton  
J. Hamric, DOE-OH  
J. Craig, DOE-FN  
J. Reising, DOE-FN  
T. Hagen, FERMCO  
J. Thiesing, FERMCO  
M. Yates, FERMCO/9

**OPERABLE UNIT 1 RECORD OF DECISION**

**COMMENT RESPONSE DOCUMENT**

**JANUARY 26, 1995**

**U.S. EPA COMMENTS**

**DATED**

**DECEMBER 27, 1994**

OPERABLE UNIT 1 PROPOSED DRAFT RECORD OF DECISION  
U.S. EPA COMMENTS  
FAXED ON DECEMBER 22, 1994  
RECEIVED ON DECEMBER 27, 1994

Commenting Organization: U.S. EPA Commentor: B. Barwick  
Section #: 10 Page #: 10-6, 10-7 Line #: Code:  
Original Comment #: 1 (1)

Comment: On pages 10-6 and 10-7, DOE states that on-site disposal of OU1 wastes is inappropriate. However, we know that on-site disposal of other wastes is being considered. DOE should discuss the special characteristics of OU1 waste which render it inappropriate for on-site disposal.

Response: Agree. Operable Unit 1 waste has special characteristics that render it unsuitable for on-site disposal. Any waste disposed on site would be required to meet the applicable Waste Acceptance Criteria, set by Operable Unit 2. As an illustration of this, an analysis of just one parameter, uranium-238, shows that average uranium-238 concentrations, on a pit-by-pit basis, are greater than allowable under the Proposed Waste Acceptance Criteria, as listed in the conditionally approved Operable Unit 2 Feasibility Study. In addition, the heterogeneity has high uncertainty with respect to treatment of Operable Unit 1 waste and as such would preclude on-site disposal.

Action: Additionally, on-site disposal would require application to the Environmental Protection Agency for a waiver from the State of Ohio applicable requirement that prevents siting hazardous waste facilities over sole-source aquifers. Through detailed and continuous interaction with the State of Ohio, it has become clear the State does not believe a waiver is appropriate for Operable Unit 1 wastes, and the State would not support such a waiver. Page 10-7, line 3. The following footnote number has been added at the end of the sentence: "1"

Page 10-7, last line. The following footnote has been added: "1 Since the Operable Unit 1 Feasibility Study/Proposed Plan have been approved by the U.S. EPA, there have been other efforts at the FEMP to site an on-site disposal cell. OEPA indicated that the maximum on-site disposal facility Waste Acceptance Criteria for U-238 should be a maximum of 360 picoCuries per gram (for Operable Unit 2 material), as presented in the Operable Unit 2 Feasibility Study and as discussed in the OEPA letter dated December 13, 1994. The average U-238 activity for all Operable Unit 1 waste pits exceeds this limit, in some cases by an order of magnitude or more. Thus, the higher concentrations of U-238 in Operable Unit 1 waste material render Operable Unit 1 waste unacceptable for disposal in an on-site disposal cell (as compared to on site contaminated soils and structural material). It is noted, however, that soils beneath the waste that meet the on-site Waste Acceptance Criteria may be disposed of on site. In addition, the heterogeneity has high uncertainty with respect to treatment of Operable Unit 1 waste and as such would preclude on-site disposal."

Commenting Organization: U.S. EPA Commentor: B. Barwick  
 Section #: Page #: Line #: Code:  
 Original Comment #: 2 (2)  
 Comment: Assuming Enviro-Care and NTS disposal sites are presently in compliance with the Off-Site Rule, what actions will DOE take should the facilities' compliance status change in the future?

Response: Comment Acknowledged.

Action: Page 8-12, line 16. The following paragraph has been added: "DOE will conduct an audit of the disposal facility prior to shipping Operable Unit 1 waste to confirm the facility's status and compliance history. The review will be conducted annually throughout the term of the remediation project. In the event the compliance status of the disposal facility would change, DOE would temporarily suspend waste shipments until the actions/requirements for regaining acceptability status under the policy were implemented and the facility becomes designated as acceptable."

Commenting Organization: U.S. EPA Commentor: B. Barwick  
 Section #: 3 Page #: Line #: Code:  
 Original Comment #: 3 (3)  
 Comment: If Technical Assistance Grant (TAG) money has been provided to the community (i.e., FRESH), DOE should mention that in the section entitled 3.0 Community Participation.

Response: Comment Acknowledged. U.S. EPA has not provided any Technical Assistance Grants to FRESH or any other stakeholders surrounding the Fernald site.

Action: No Action.

Commenting Organization: U.S. EPA Commentor: B. Barwick  
 Section #: 3 Page #: 3-3 Line #: Code:  
 Original Comment #: 4 (4)

Comment: Page 3.3, third paragraph of the ROD indicates that the public comment period for the proposed plan ran from August 10, 1994, to September 8, 1994; however, the NCP requires that the lead agency shall, "Provide a reasonable opportunity, not less than 30 calendar days, for submission of written and oral comments on the proposed plan..." (See 40 CFR 3 300.430(f)(3)(i)(C).) It appears that the public comment period was only 28 calendar days. Is this correct?

Response: Disagree. The public comment period for the Operable Unit 1 Proposed Plan did run from August 10 - September 8, 1994, as stated in the ROD. This timeframe actually spans 30 calendar days, so the dates are correct as printed.

Action: Page 3-3, line 18: Text now reads, "A 30-day public comment period was held from August 10, 1994, to September 8, 1994, inclusive."

Commenting Organization: U.S. EPA Commentor: B. Barwick  
Section #: 7.2.2, 7.2.3 Page #: Line #: Code:  
Original Comment #: 5 (5)

Comment: In the discussion in sections 7.2.2 and 7.2.3, the on-site disposal alternatives for this ROD state that the waste will be treated to minimum treatment standards that "resist contaminant leaching and meets or exceeds regulatory standards." DOE should expand this discussion.

Response: Agree.

Action: Page 7-4-a, line 1. The following sentence has been added: "Treatment to meet these minimum standards, in the context of waste solidification technologies, is discussed in detail in Section 2.4.6.2 of the Operable Unit 1 Feasibility Study."  
Page 7-5, line 28. The following sentence has been added: "Treatment to meet these minimum standards, in the context of waste solidification technologies, is discussed in detail in Section 2.4.6.2 of the Operable Unit 1 Feasibility Study."

Commenting Organization: U.S. EPA Commentor: B. Barwick  
Section #: Page #: Line #: Code:  
Original Comment #: 6 (6)

Comment: With respect to the removal actions conducted at the site of OU1, the administrative record for this OU should cross-reference the administrative record indices for the earlier removal actions.

Response: Comment Acknowledged. The Administrative Record for Operable Unit 1 includes documentation of all five Operable Unit 1 study area removal actions. Thus, no cross-referencing would be required.

Action: No Action.

Commenting Organization: U.S. EPA Commentor: B. Barwick  
 Section #: Page #: Line #: Code:  
 Original Comment #: 7 (7)

Comment: DOE should run a check for acronyms; a lot of acronyms are defined more than once in this document (e.g., EPA, DOE, NTS, FEMP, CERCLA, RCRA, NCP, ARAR, TBC).

Response: Comment Acknowledged. According to the FEMP RI/FS Style Guide, the first appearance of a name of an agency, title, legislative act, etc., in every numbered section is to be spelled out and followed by the acronym in parentheses. Thereafter, the acronym only is used. The document has been thoroughly checked and necessary changes have been made to ensure that the ROD follows appropriate style.

Action: **Page D-i, line 17.** The acronym, "DOE", has been replaced with "the Department of Energy (DOE)", and the acronym, "(NEPA)", has been added after, "National Environmental Policy Act".

**Page 5-7, line 1.** The acronym, "polychlorinated biphenyls (PCBs)", has been replaced with "PCBs".

**Page 5-7, line 6.** The acronym, "(PAH)" has been replaced with "polyaromatic hydrocarbons".

**Page 6-2, line 6.** The acronym, "(COPC)" has been deleted.

**Page 6-2, line 12.** The acronym, "Constituents of Concern (COC)", has been replaced with "COC".

**Page 7-6, lines 9 and 20.** The acronym, "Nevada Test Site (NTS)", has been replaced with "NTS".

Commenting Organization: U.S. EPA Commentor: B. Barwick  
 Section #: Page #: Line #: Code:  
 Original Comment #: 8 (8)

Comment: For this, and other final RODs, DOE should supplement the OU specific administrative record with a list of any guidance used in preparing the ROD. For example, the references listed on Page R-1 should be included in the Administrative Record. Since DOE uses guidance which is applicable to all of its RODs, it may be possible to assemble a lists of this guidance and routinely incorporate it into each administrative record.

Response: Comment Acknowledged. The references listed on page R-1 have already been incorporated into the Administrative Record for Operable Unit 1. This list includes the EPA Guidance on Preparing Superfund Decision Documents.

Action: No Action.

Commenting Organization: U.S. EPA Commentor: Saric  
Section #: Appendix A Summary Comment 1E Page #: A-2-10  
Line #: 3-5 Code:  
Original Comment #: 9 (1)

Comment: On Page A-2-13, Lines 3 through 5, one commentor suggests dividing Operable Unit 1 (OU1) into two parts: the high-level uranium waste of Pits 2, 4, and 6 and the lower-level uranium waste of Pits 1, 3, and 5. The commentor suggests that this division would reduce the need for material to be placed in an off-site disposal facility. The U.S. Department Of Energy (DOE) response to this suggestion on Page A-2-10, Lines 35 and 36, and Page A-2-11, Lines 1 through 3, does not directly address the commentor's description of high- and lower-level uranium wastes present in the contents of the various pits at OU1. U.S. DOE should clarify the fact that the lower-level uranium wastes still contain sufficient levels of uranium to require off-site disposal.

Response: DOE understands that the U.S. EPA issue concerning higher concentrations of U-238, in Operable Unit 1 waste materials as compared to soils, is an important consideration with respect to off-site disposal. Separation of Operable Unit 1 material is in actuality more complex than merely examining the concentration of a single contaminant.

Action: Page A-2-10, line 35 through page A-2-11, lines 1-7. The text has been changed to read as follows:

"The Operable Unit 2 Feasibility Study (which OEPA has conditionally approved), indicated that the maximum acceptable Waste Acceptance Criteria for uranium-238 would be 360 pCi/g (Letter from Thomas A. Schneider, Ohio EPA to Gary Stegner, DOE, dated December 13, 1994). As reported in the Operable Unit 1 Remedial Investigation Report, the average uranium-238 concentration in Waste Pit 1 is 3900 pCi/g; for Waste Pit 3, 978 pCi/g; and for Waste Pit 5, 809 pCi/g. Using the proposed uranium-238 Waste Acceptance Criterion as a guide, it is clear this number is less than the average uranium-238 concentrations found in the waste pits.

It is also important to consider that state acceptance of disposal of waste materials from the pits on site would require an exemption from OEPA or a waiver from U.S. EPA of the regulation that prohibits disposal facilities located above sole-source aquifers. As discussed in Comment #1b, Ohio has indicated that it would not support such a waiver for Operable Unit 1 waste pit material."

Commenting Organization: U.S. EPA Commentor: Saric  
Section #: Appendix A, Summary Comment 1G Page #: A-2-14  
Line #: 20-31 Code:  
Original Comment #: 10 (2)

Comment: On Page A-2-15, Lines 20 through 31, the commentor states that "technologies such as soil washing and vitrification offer significant volume reductions, durable waste forms, and significantly reduced containerization, transportation, and disposal costs (not to mention a reduced risk for exposure during an accident scenario). These savings have not been fairly evaluated or publicized." However, U.S. DOE's response does not address the suggestion of considering soil washing as a potential technology for remediation of OU1. U.S. DOE should address the possibility of using soil washing in a manner similar to its discussion of vitrification.

Response: Comment Acknowledged. Soil washing was screened out of consideration for Operable Unit 1, in Section 2 of the Operable Unit 1 Feasibility Study. Soil washing, as discussed under the subheading, Chemical Extraction of Section 2.4.6.4 Chemical Treatment Technologies, of the Operable Unit 1 Feasibility Study was not retained for detailed analysis because the process option has only been proved effective at removing individual contaminants from a soil matrix (i.e., organics, inorganics, or radionuclides); however no complex matrix mixture such as that in the waste pits has ever been tested to prove effectiveness. The unknown interferences that one waste material in the matrix can have on another, coupled with the easily dissolved solids will most likely cause large amounts of reagents to be consumed during processing. The heterogenous nature of the material in the waste pits causes decreases in process efficiency and difficulty in material handling system design.

Also, as discussed in Section 2.4.6.4 of the Feasibility Study, the majority of the uranium present in the waste pit material (particularly in Waste Pits 4 and 5) is in a depleted form which has been processed and repeatedly extracted under rigorous conditions to reach the economic discard limit of 0.2 to 0.42 percent. While it is possible to remove additional uranium from the waste pit material (NLCO 1978 looked only at Waste Pit 5 material), it is extremely difficult and requires many processing steps under extreme conditions. If the processing operation could be accomplished, the removal (or in the Operable Unit 1 case of recovery) is only estimated at 95 percent (NLCO 1978). This removal efficiency will not satisfy the Operable Unit 1 remedial objectives and would require proper disposal of large amounts of solid waste materials.

The soil washing or chemical extraction process option is moderately difficult to implement because of the large number of processing steps that would be required to remove the numerous types of waste present in the pit material. Large quantities of intermediate liquid streams would require storage and processing capacity.

The capital cost for the chemical extraction system would be high due to the costs of the material handling equipment, process equipment, chemical reagents, and labor. O&M costs would moderate. Overall, costs would be high.

DOE's response to comment #1g has been revised to direct the reader to the above information in Section 2.4.6.4 of the Operable Unit 1 Feasibility Study where soil washing is discussed.

Action: DOE's response to comment #1g has been revised to include this information.  
On Page A-2-15, line 19, insert the following statement:

"Soil washing was not retained for detailed analysis for Operable Unit 1. A discussion of soil washing is included in Subsection 2.4.6.4 of the Operable Unit 1 Feasibility Study, under the subheading, Chemical Treatment Technologies."

Commenting Organization: U.S. EPA Commentor: Saric  
Section #: Appendix A, Summary Comment 1G Page #: A-2-15  
Line #: 32-34 Code:  
Original Comment #: 11 (3)

Comment: On Page A-2-15, Lines 32 through 34, the commentor states the following: "Cost estimates used in the OU1 FS for vitrification do not appear to be anywhere near realistic. Were these estimates based on actual pilot scale vitrification runs? If not, what type of data were used to develop these estimates, and how old was the data?" In discussing vitrification as a potential technology for remediation of OU1, U.S. DOE does not directly address the cost estimate issue raised by the commentor. Specifically in its response to the commentor, U.S. DOE should specify the type and age of the data used to develop the cost estimates as requested by the commentor.

Response: Comment Acknowledged. First, the estimates in the Operable Unit 1 Feasibility Study for vitrification were not based on full-scale pilot scale vitrification runs; none has been performed for the Operable Unit 1 waste. Second, the data used to support the estimate was obtained from a 1992 Conceptual Design Report for the Remediation of Waste Pit Area, Removal, Treatment, and On-site Disposal prepared for FERMCO by Ralph M. Parsons, Corporation. Sources for the data included catalog data, verbal vendor quotations, current contract and FERMCO labor rates, conventional cost estimating guides, and generic unit costs.

Action: Page A-2-14, line 12. The following text has been added. "A detailed cost analysis of all elements in each alternative is presented in Appendix E of the Operable Unit 1 Feasibility Study. The estimates in the Operable Unit 1 Feasibility Study for Vitrification were not based on pilot-scale vitrification runs; none has been performed for the Operable Unit 1 waste. In addition, the data used to support the estimate were obtained from a 1992 Conceptual Design Report for the Remediation of Waste Pit Area, Removal, Treatment, and On-site Disposal prepared for FERMCO by Ralph M. Parsons, Corporation, as well as from catalog data, verbal vendor quotations, current contract and FERMCO labor rates, conventional cost estimating guides, and generic unit costs."

**OHIO EPA COMMENTS**

**DATED**

**DECEMBER 9, 1994**

**OPERABLE UNIT 1 PROPOSED DRAFT RECORD OF DECISION  
OHIO EPA COMMENTS  
DECEMBER 9, 1994**

Commenting Organization: Ohio EPA    Commentor: OFFO  
Section #: General Comment    Page #:    Line #:    Code: M  
Original Comment #: 1

Comment: DOE should revise the ROD and Responsiveness Summary to reflect the fact that a waiver of DOE Order 5820.2A has been granted for disposal of the OU1 material at the Envirocare facility.

Response: Comment Acknowledged. Appropriate changes should be made in the text reflecting that the requirements of DOE Order 5820.2A, which restricts the disposal of low-level radioactive material at a commercial facility, have been waived by DOE Headquarters for Operable Unit 1 material to be sent to a permitted commercial waste disposal facility.

Action: **Page 8-12, lines 16-24.** The text now reads: "For Alternative 5B, which proposes off-site disposal at a permitted commercial waste disposal facility, it is noted that DOE Order 5820.2A currently prohibits use of commercial disposal facilities for disposal of low-level radioactive wastes of the type present in Operable Unit 1; but the order does have an exemption provision. An exemption request to DOE Order 5820.2A has been approved by DOE Headquarters, Office of Waste Management, so that Operable Unit 1 pit wastes can be disposed at a permitted commercial waste disposal facility (DOE 1994d)."

**Page R-1, Line 27.** The following reference has been added: "U.S. Department of Energy, 1994d, Memorandum from Jill E. Lytle, Deputy Assistant Secretary for Waste Management, to John E. Baublitz, Acting Deputy Assistant Secretary for Environmental Restoration, Subject: Approval for disposal of Fernald low-level radioactive waste from Operable Unit 1 at a commercial disposal facility, dated November 8, 1994."

**Page A-2-9, lines 23-27.** Lines 24, 25, 26, and 27 have been deleted. The response now reads: "An exemption request to DOE Order 5820.2A has been approved by DOE Headquarters, Office of Waste Management, so that Operable Unit 1 pit wastes can be disposed at a permitted commercial waste disposal facility."

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: General Comment Page #: Line #: Code: M  
 Original Comment #: 2

Comment: The Ohio EPA makes no evaluation of DOE's applicability and compliance with NEPA. The Ohio EPA does recognize DOE's goal to integrate cleanup actions with the requirements of CERCLA and NEPA, however, it is Ohio EPA's position that CERCLA requirements take precedence, and for the most part, replace NEPA.

Response: The DOE acknowledges this comment for the Administrative Record.  
 Action: No Action.

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: General Comment Page #: Line #: Code: M  
 Original Comment #: 3

Comment: Since the remediation levels defined within the ROD are only protective of the expanded trespasser and off-property farmer, DOE must incorporate stronger language committing to perpetual ownership and maintenance of the property. DOE must include a commitment to long-term monitoring of contaminated soils left in place as well as any on-property disposal facilities which may be employed under OU3 or OU5. DOE must preclude development, which would allow exposures exceeding those defined by the expanded trespasser, from occurring within the OU1 area.

Response: Comment Acknowledged. As described in the ROD, all Operable Unit 1 waste will be removed. If found to be necessary, the Operable Unit 5 Record of Decision will modify the Operable Unit 1 remediation levels downward to further ensure protectiveness of human health and the environment. The Operable Unit 5 Record of Decision will be finalized prior to waste pit excavation at Operable Unit 1. Because Operable Unit 1 waste will be removed and because Operable Unit 5 will manage the remaining soil, any long-term monitoring requirements and long-term administrative controls associated with the remaining soils will be set in the Operable Unit 5 Record of Decision.

Action: No Action.

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 2.3 Page #: 2-8 Line #: 9 Code: C  
 Original Comment #: 4

Comment: This section might more appropriately be titled "Response Actions".

Response: Agree. The suggested change should be made.

Action: Page 2-8, line 9. The section now reads, "2.3 OPERABLE UNIT 1 RESPONSE ACTIONS."

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 3.0 Page #: 3-2, 3-3 Line #: Code: C  
 Original Comment #: 5  
 Comment: This section should reference the Ohio EPA's availability session concerning the OU1 Proposed Plan held during August.

Response: Agree.

Action: **Page 3-3, line 6.** The following paragraph has been added: "In addition to the public workshops sponsored by the DOE, Ohio EPA held a local availability session on August 17, 1994. Members of the Fernald Citizens Task Force and representatives from the local citizens group, Fernald Residents for Environmental Safety and Health (FRESH) were invited to attend this session to ask questions about the proposed plan for the cleanup of Operable Unit 1. Representatives from EPA and Ohio EPA were available to answer questions and address concerns from approximately 12 people who attended the session. Announcements about this availability session were made at the prior public workshops sponsored by the DOE, the monthly FRESH meeting, and the monthly Fernald Citizens Task Force meeting."

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 8.2.6.2 Page #: 8-11 Line #: 19-24 Code: C  
 Original Comment #: 6  
 Comment: Update this section concerning the current status of the waiver.

Response: It is assumed the commentor is referring to page 8-12, rather than 8-11; based on this assumption we agree with the comment. This section should be revised.

Action: **Page 8-12, lines 16-24.** The text now reads: "For Alternative 5B, which proposes off-site disposal at a permitted commercial waste disposal facility, it is noted that DOE Order 5820.2A currently prohibits use of commercial disposal facilities for disposal of low-level radioactive wastes of the type present in Operable Unit 1; but the order does have an exemption provision. An exemption request to DOE Order 5820.2A has been approved by DOE Headquarters, Office of Waste Management, so that Operable Unit 1 pit wastes can be disposed at a permitted commercial waste disposal facility (DOE 1994d)."

**Page R-1, Line 27.** The following reference has been added: "U.S. Department of Energy, 1994d, Memorandum from Jill E. Lytle, Deputy Assistant Secretary for Waste Management, to John E. Baublitz, Deputy Assistant Secretary for Environmental Restoration, Subject: Approval for disposal of Fernald low-level radioactive waste from Operable Unit 1 at a commercial disposal facility, dated November 8, 1994."

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: Table 9-2 Page #: 9-5 Line #: Code: C  
 Original Comment #: 7  
 Comment: Footnote "d" is used within the table but no footnote exists. The table should be revised to incorporate the footnote.

Response: Agree. Footnote clarification is needed.  
 Action: Footnote "d" has been changed to footnote "c," with the appropriate textual description which has been added as follows: "0.5 times the PRG, to protect against multiple chemicals."

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: 10.6 Page #: 10-8 to 10-9 Line #: all Code: C  
 Original Comment #: 8  
 Comment: This section is totally unacceptable. The way the text is written, by concurring with the OU1 ROD the State of Ohio would essentially be waiving any NRD claims against the DOE. Please remove this section in its entirety.

Response: Comment Acknowledged. As previously addressed in comments associated with the Operable Unit 4 Record of Decision, it is DOE's position that the inclusion of this section is necessary and appropriate as it summarizes information presented in the OU1 FS/PP and is required to be analyzed as a potential impact under the NEPA statute. It is DOE's understanding that Ohio EPA's concern lies within the first paragraph text, which refers to securing the exclusion discussed in CERCLA Section 107 (f)(1).

DOE is committed to proactively soliciting input from all appropriate stakeholders (e.g., Natural Resource Trustees) to ensure that actions at the FEMP will be conducted in a manner protective of human health and the environment; and will avoid or mitigate natural resource impacts to the extent practicable.  
 Action: Page 10-8, line 17. Section 10.6 will remain as part of the OU1 Record of Decision, however, reference to securing the CERCLA Section 107 (f)(1) exclusion will be deleted. The first paragraph has been revised to read, "Natural resources and associated services would be permanently committed as a result of implementing the selected remedy. These commitments not only include the resources and land, but also the services they provide as well."

Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: A.2 Page #: A-2-9 Line #: 23-27 Code: C  
Original Comment #: 9  
Comment: Update the response to Summary Comment 1d with regard to the current status of the waiver.

Response: Agree.  
Action: Page A-2-9, lines 23-27. Lines 24, 25, 26, and 27 have been deleted. The response now reads: "An exemption request to DOE Order 5820.2A has been approved by DOE Headquarters, Office of Waste Management, so that Operable Unit 1 pit wastes can be disposed at a permitted commercial waste disposal facility."

Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: A.2 Page #: A-2-16 Line #: 22-25 Code: C  
Original Comment #: 10  
Comment: The requirement for a new public comment period only occurs when a ROD Amendment is conducted. The section should be revised to delete discussion of the Explanation of Significant Difference, since an ESD would not be appropriate under this scenario.

Response: Agree.  
Action: Page A-2-16, line 24. The following text has been deleted: "or Explanation of Significant Differences". The rest of the sentence remains intact.

Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: A.2 Page #: A-2-17 Line #: 2-5 Code: C  
Original Comment #: 11  
Comment: The ROD should not discuss expectations with regard to another OU's remedy. The text should be revised to state what is factual (e.g., "the preferred alternative in the OU2 Proposed Plan...").

Response: Agree.  
Action: Page A-2-17, line 2. The sentence has been changed to, "The preferred alternative in the Operable Unit 2 Proposed Plan includes designing and locating an on-site disposal facility that will be used for disposal of Operable Unit 2 materials that will remain at the FEMP."

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: A.2 Page #: A-2-36 Line #: Code: C  
 Original Comment #: 12

Comment: It would seem DOE's response to comment #3e could be more committal. Ohio EPA believes it would be appropriate for DOE to at least commit to not storing loaded cars at Shandon yard. This would show a good faith effort on DOE's part to incorporate substantial public comments into the ROD.

Response: Comment Acknowledged. DOE acknowledges public concern with regard to storing loaded rail cars at the Shandon Switchyard. In response to that concern, the DOE completed a comparative analysis of track requirements to manage railroad car logistics in support of remediation activities in Operable Unit 1 (OU1). This analysis looked at options ranging from: full unrestricted use of the Shandon Switchyard; thru, no use of the Shandon Switchyard with necessary support trackage totally located on current site property within the boundary of the security perimeter fence, to receive and store rail cars.

This analysis clearly identified that the on-site option is technically implementable, and more favorable from a cost standpoint and has less unforeseen complications than the using of Shandon Switchyard.

As such, the DOE will pursue operation of a FEMP rail system using existing, upgraded and new track, totally located on current site property within the boundary of the security perimeter fence, to receive and store rail cars. To accomplish this, useful lengths of existing tracks plus adjacent space to construct essential additional new lines will be identified and reserved, the availability of sufficient on-site rail trackage and existing loading pads to support site remediation needs will be prioritized, and this action will be implemented consistent with OU1 planning and integrated with overall site remedial project planning.

Action: Change the DOE response to Summary Comment #3e to read:

"DOE acknowledges public concern with regard to storing loaded rail cars at the Shandon Switchyard. In response to that concern, the DOE completed a comparative analysis of track requirements to manage railroad car logistics in support of remediation activities in OU1. This analysis looked at options ranging from: full unrestricted use of the Shandon Switchyard; thru, no use of the Shandon Switchyard with necessary support trackage totally located on current site property within the boundary of the security perimeter fence, to receive and store rail cars.

This analysis clearly identified that the on-site option is technically implementable, and more favorable from a cost standpoint and has less unforeseen complications than the using of Shandon Switchyard. As such, the DOE will pursue operation of a FEMP rail system using existing, upgraded and new track, totally located on current site property within the boundary of the security perimeter fence, to receive and store rail cars."

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: Appendix B Page #: Line #: Code: M  
 Original Comment #: 13

Comment: DOE has failed to incorporate sufficient RCRA ARARs. The section should be revised to include RCRA ARARs and TBCs for hazardous waste treatment and HWMU closures. At a minimum hazardous waste will be generated from Waste Pit 4, which must undergo HWMU closure.

Response: Agree. Additional relevant and appropriate requirements include (1) HWMU post-closure requirements mandated by 40 CFR 264 Subpart G (40 CFR 264.117, OAC 3745-55-17, 40 CFR 264.119, and OAC 3475-55-19); (2) SWMU corrective action requirements mandated by 40 CFR Subpart S (40 CFR 264.552 and 40 CFR 264.553) and (3) HWMU closure requirements mandated by 40 CFR 264 Subpart G (OAC 3745-55-11 to OAC 3475-55-16).

Action: Appropriate citations have been added to Appendix B.

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: App-B, Table B-2 Page #: B-10 Line #: Code: C  
 Original Comment #: 14

Comment: The requirements under OAC 3745-17-07 are incorrectly cited. Discharges may not exceed 60% opacity for greater than 6 minutes.

Response: Agree. Visible particulate emissions from any stack may exceed 20 per cent opacity, as a six-minute average, for not more than six consecutive minutes in any 60 minutes, but shall not exceed 60 per cent opacity, as a six-minute average, at any time.

Action: The citation has been modified to reflect the statement made above.

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: App-B, Table B-2 Page #: B-10 Line #: Code: C  
 Original Comment #: 15

Comment: The citation for 40 CFR 61.92 should be revised to include 60.90 through 60.97. The additional sections define monitoring requirements.

Response: Comment Acknowledged. DOE cited 40 CFR Part 61, Subpart H - National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities in its entirety in Table 3. This citation includes all monitoring requirements mandated in 40 CFR 61.90 to 61.97.

Action: Table B-3, page B-25. The citation, "40 CFR 61.90 to 61.97" has been added to the table.

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: App-B, Table B-3 Page #: Line #: Code: C  
 Original Comment #: 16  
 Comment: An additional action specific ARAR should be 40 CFR 60.670 Subpart OOO. This ARAR addresses standards for the use of a crusher.  
 Response: Agree. 40 CFR 60.670 Subpart OOO should be considered as a relevant and appropriate requirement relating to the construction and operation of the crusher/dryer system.  
 Action: Text has been added to Table B-3.

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: App-B, Table B-3 Page #: Line #: Code: C  
 Original Comment #: 17  
 Comment: An additional action specific ARAR should be OAC 3745.31-05(A)(3) which requires all new source employ Best Available Technology (BAT) for minimizing air emissions.  
 Response: Agree. BAT requirements mandated under OAC 3745-31-05(A)(3) are applicable.  
 Action: The citation for OAC 3745-31-05(A)(3) has been changed to reflect that it is an applicable requirement.

Commenting Organization: Ohio EPA Commentor: OFFO  
 Section #: App-B, Table B-3 Page #: B-26 Line #: Code: C  
 Original Comment #: 18  
 Comment: The standards referenced for OAC 3745-17-11 are only for sources existing prior to 1/1/74. For all new sources BAT applies and standards are developed upon BAT ability. Thus it is likely that emission standards may be substantially lower than those listed. DOE will be required to prove that scrubbers and condensers are BAT. It is possible DOE may be required to use fabric filters and an oxidizer to achieve BAT.  
 Response: Comment Acknowledged. New air contaminant sources are required to install BAT in accordance with OAC 3745-31-05(A)(3) and therefore, emissions from these sources will be substantially less than those cited. Based upon DOE's initial evaluation, we have determined BAT for both radiological and inorganic particulate emissions will consist of HEPA filtration with a designed control efficiency of 99.97 percent at 3 microns. The need for additional control equipment will be evaluated during the Remedial Design phase of the project. Additional information on how the substantive BAT requirements for the project will be met will be supplied with the RD and RA Workplans for OU1.  
 Action: Reference to OAC 3745-17-11 has been deleted.

Commenting Organization: Ohio EPA Commentor: OFFO  
Section #: App-B, Table B-3 Page #: B-26 Line #: Code: C  
Original Comment #: 19

Comment: With regard to OAC 3745-21-07(G)(2), it is current Ohio EPA policy to consider all VOCs to be photochemical reactive materials.

Response: Comment Acknowledged. DOE is aware it is current OEPA policy to consider all VOCs to be photochemical reactive materials. VOC emissions from the dryer system will be controlled in accordance with the requirements of the standard.

Action: Citations pertaining to OAC 3745-21-07(G)(2) have been changed to reflect that all VOCs are considered to be photochemical reactive materials. [Specific citations to be provided.]

**OHIO EPA COMMENTS**

**DATED**

**JANUARY 20, 1995**

OPERABLE UNIT 1 PROPOSED DRAFT RECORD OF DECISION  
OHIO EPA COMMENTS  
JANUARY 20, 1995

Commenting Organization: Ohio EPA      Commentor: M. Metcalf  
Section #:                      Page #:                      Line #:                      Code:  
Original Comment #: 1 (20)  
Comment: Provide rationale for omitting OAC rules 3745-55-18 & 20.

Response: OAC rules 3745-55-18 and 3745-55-20 address requirements for post-closure plans, amendments, and certification. These requirements are administrative requirements; while DOE will comply with the substantive requirements for post-closure, as those requirements are identified in the ARARs tables, the administrative requirements need not be implemented. (The CERCLA Compliance with Other Laws guidance states, CERCLA Section 121(e) codifies EPAs policy that on-site response actions may proceed without obtaining permits, this permit exemption applies to all administrative requirements, whether or not they are actually styled as permits.)

The OU1 Record of Decision (ROD) will establish the scope of the remedial action including cleanup levels. Certification of meeting all remedial action objectives will be documented in the final remedial action report; the need for ongoing monitoring will be assessed as part of the CERCLA 5-year review process.

Action: None.

Commenting Organization: Ohio EPA      Commentor: M. Metcalf  
Section #:                      Page #:                      Line #:                      Code:  
Original Comment #: 2 (21)  
Comment: Provide rationale for not characterizing wastes as they are generated during excavation as required by OAC rule 3745-52-11.

Response: The project will comply with OAC 3745-52-11 as documented in the OU1 ROD ARAR tables. The application of this requirement is relevant to determination of proper treatment and disposal. The treatment process will be designed in full compliance with the appropriate requirements for RCRA hazardous waste treatment units, such as air emission standards for process vents, as documented in the OU1 ROD ARAR tables. A conservative determination has already been made that these requirements should apply to the treatment unit design. Relative to waste disposal, the waste will be fully tested for RCRA characteristics prior to off-site shipment. To satisfy off-site disposal facility waste acceptance criteria, this testing must be completed after waste processing.

Action: None.

Commenting Organization: Ohio EPA      Commentor: M. Metcalf  
Section #:                      Page #:                      Line #:                      Code:  
Original Comment #: 3 (22)

Comment: Provide rationale for not addressing management standards for waste piles as contained in OAC rules 3745-56-50 to 60. This comment is made due to the excavation and stockpiling of soil prior to thermal treatment.

Response: The requirements for hazardous waste piles may be applicable to waste excavated. The design packages for the entire OU1 waste processing facilities will address design requirements for the feed piles as a component of the process, and monitoring and inspection during remedial activities. Closure of the facilities will be addressed in the site restoration plan, administrative closure requirements are not required.

Action: The following "Relative and Appropriate Requirement" has been added to Table A-3:

"OAC 3745-56-51, 54 and 58: Waste Piles

Design and Operating requirements, monitoring and inspection, closure and post-closure care."

The following "Attainment" has been added to Table A-3:

"The requirements for hazardous waste piles would be applicable to waste excavated. The design packages for the entire OU1 waste processing facilities will address design requirements for the feed piles as a component of the process, and monitoring and inspection during remedial activities. Closure of the facilities will be addressed in the site restoration plan, administrative closure requirements are not required."

Commenting Organization: Ohio EPA      Commentor: M. Metcalf  
 Section #:                      Page #:                      Line #:                      Code:  
 Original Comment #: 4 (23)

Comment: Provide rationale for not addressing management standards for incinerators as contained in OAC rules 3745-57-40 to 51. This comment is made due to the use of a thermal dryer in the treatment of contaminated soil.

Should a demonstration be made that the thermal dryer is not an incinerator then the standards for miscellaneous units as contained in OAC rules 3745-57-91 to 93 must be addressed.

Response: The dryer to be utilized in the OU1 remedial action will be designed to remove excess water at a relatively low operating temperature. It will not be designed to destroy or treat hazardous wastes or other material through high temperature combustion. It is probable that some volatile organics will be removed from the waste during drying by low temperature thermal desorption rather than incineration. DOE will comply with the requirements for air emissions standards for process vents relative to the off-gas from the drying system.

OAC 3745-45-91 and 92 will be addressed by the remedial action and will be identified as ARARs in the OU1 ROD. OAC 3745-57-93 will be addressed as indicated above in comment number one.

Action: The following "Relative and Appropriate Requirement" has been added to Table A-3:

"OAC 3745-57-91 and 92, Miscellaneous Methods of Waste Treatment  
 Parts 91 and 92 include requirements for miscellaneous units environmental performance standards and monitoring, analysis, inspection, response, reporting, and corrective action."

The following "Attainment" has been added to Table A-3:

"All operating facilities within Operable Unit 1 will be located, designed, constructed, operated, maintained, and closed in a manner that ensures protection of human health and the environment by preventing releases that could have adverse effects due to migration of waste constituents through ground water, surface water, wetlands, or the air. Monitoring requirements identified as ARAR's will insure compliance with these requirements."