

**RESPONSES TO UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AND OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE
DRAFT OPERABLE UNIT 3 PLANT 1 COMPLEX - PHASE I
IMPLEMENTATION PLAN FOR ABOVE-GRADE DECONTAMINATION AND
DISMANTLEMENT**

01/11/96

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RESPONSES

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OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS
ON THE
DRAFT OPERABLE UNIT 3 PLANT 1 COMPLEX - PHASE I IMPLEMENTATION PLAN
FOR ABOVE-GRADE DECONTAMINATION AND DISMANTLEMENT**

JANUARY 11, 1996

Part I. U.S. EPA Comments and Responses

General Comments

Commenting Organization: U. S. EPA *Commentor:* Saric
Section #: NA *Page #:* NA *Line #:* Not Applicable (NA)
Original General Comment #: 1

Comment: Throughout the decontamination and dismantlement (D&D) process at Operable Unit 3 (OU3), explicit detail is necessary to adequately estimate the space available for interim storage and the amount of remediation materials that requires or potentially requires interim storage. Detailed estimates will aid in the planning stages and for transporting remediation materials that requires interim storage. This same level of detail also applies to the final disposition of remediation materials. See Specific Comments 1, 2, 3, 4, 5, 9, and 10

Response to General Comment #1

It is agreed that it is necessary to adequately estimate the space available for interim storage as well as the quantities of materials that require or potentially require interim storage. The final work plan for Removal Action (RvA) 17 provides the framework and logic for each D&D project to identify specific interim storage plans in the respective D&D implementation plans. Section 4.4.3 of the RvA 17 work plan states that the Plant 1 Storage Pad (Component No. 74T), other existing storage pads, and/or foundations of dismantled buildings would provide the interim storage space for debris from the first four D&D projects. Detailed estimates were used to assess the capacity of those storage locations. Capacity assessments will continue to be revisited as necessary. Responses to Specific Comments Nos. 3, 5, and 10 address the revisions to the document as they apply to the Plant 1 Complex - Phase I D&D project.

Commenting Organization: U. S. EPA *Commentor:* Saric
Section #: NA *Page #:* NA *Line #:* (NA)
Original General Comment #: 2

Comment: The general approach to the D&D of the Plant 1 Complex - Phase I involves the following six remedial tasks:

- Task I - Preparatory Action - Inventory Removal
- Task II - Preparatory Action - Safe Shutdown
- Task III - Hazardous Waste Management Unit
- Task IV - Asbestos Removal
- Task V - Surface Decontamination
- Task VI - Above-Grade Dismantlement

Each of the eight buildings or components included in the Plant 1 complex - Phase I may require all or only some of the six remedial tasks. Although the six remedial tasks are listed in the order in which they are anticipated to be performed, the actual order of performing these activities may differ from the sequence presented. The order could change as a result of evaluation and selection of alternate methods by the remediation subcontractor as approved by the Department of Energy (DOE). Therefore, it is crucial that each component be properly analyzed for the appropriateness of the listed remedial tasks. See Specific Comment 11.

Response to General Comment #2

This comment has been addressed through the response and revisions detailed for Specific Comment # 11.

Specific Comments

Commenting Organization: U. S. EPA *Commentor:* Saric
Section #: 2.2, Table 2-1 *Page #: 7* *Line #: NA*
Original Specific Comment #: 1

Comment: *Table 2-1 summarizes radiological data by component for the Plant 1 Complex - Phase I. However, Table 2-3 presents 10 material categories of media used to characterize OU3. Therefore, Table 2-1 should be revised to represent the radiological data by material segregation categories in order to better characterize OU3.*

Response to Specific Comment # 1

This section is intended to portray an overview of characterization information detailed in the draft OU3 RI/FS Report. As stated in Section 2.3.1.1 of the draft OU3 RI/FS Report, the radiological survey data were used during the OU3 remedial investigation as a screening tool for the purpose of identifying intrusive "hot spot" sampling locations. The data were not intended to characterize OU3, nor should it be represented as such in the implementation plan. The data as presented are intended to illustrate general contamination levels that workers would be exposed to during the course of D&D activities in addition to other remedial design uses. Text has been added to Section 2.2 of the implementation plan that makes these points and refers the reader to the OU3 RI/FS Report for detailed characterization of OU3. Text has also been added to identify that the radiological survey data were obtained from surfaces of structural steel (Category A), and concrete, masonry, and asphalt (Category E) within the identified components. DOE believes that intrusive sampling results presented in the draft OU3 RI/FS Report should be the source of characterization detail, which represent conservative worst case conditions, for OU3 and the implementation plan should remain a remedial design planning document.

Commenting Organization: U. S. EPA *Commentor:* Saric
Section #: 2.2, Table 2-2 *Page #: 9* *Line #: NA*
Original Specific Comment #: 2

Comment: *Table 2-2 presents a summary of OU3 remedial investigation (RI) data for three media that is significant to the implementation of the decontamination, dismantlement, material management, and sampling aspects of this project. However, Table 2 - 3 presents 10 materials categories to describe the condition of OU3. The text does not explain why the seven material categories are excluded. Therefore, either the text should be revised to provide an explanation for excluding the seven material categories, or Table 2 -2 should be revised to include the seven material categories.*

Response to Specific Comment #2

The following background text has been added in Section 2.2 to describe the results presented in Table 2-2: "Section 2.3.2 of the draft OU3 RI/FS Report states that a single sample of each major medium, if present, was collected from each process area within a component designated for sampling based on field radiological and chemical screening and other criteria. As a result of this sampling strategy, the OU3 RI effort in Plant 1 Complex - Phase I components resulted in sampling only the three major media types that were identified in Table 2-2".

Additionally, the text supporting Table 2-2 has been revised to explain the relationship between the *media* types, shown in Table 2-2, and the *material categories*, shown in Table 2-3. In short, *media* was the term used by the OU3 RI program to broadly describe most OU3 materials located in situ based on certain physical qualities, and *material* is a term that was used during the OU3 FS for the purpose of treatment or disposal, or otherwise management of debris arising from the dismantlement of OU3 components. Although OU3 RI sampling was not done using material category designations, the use of *media* classifications for sampling was a streamlined approach that allowed for representative sampling of material categories. To identify sampling results from particular material types that fall within a certain *media* type, the extensive database provided with the draft OU3 RI/FS Report should be consulted.

Also, it should be noted that the purpose of Table 2-3 was not intended to describe the condition of OU3; rather, it was provided as a reference to identify the types of materials that fall within each of the material categories listed in Table 2-4. Text has been added to Section 2.3.3 as well to clarify the source and purpose of Table 2-3. Since acid brick (Material Category F) is a material that is not present in any of the components in the Plant 1 Complex - Phase I project, it was deleted from Tables 2-3 and 2-4.

Commenting Organization: U. S. EPA Commentor: Saric
Section #: 2.3.3, Table 2-4 Page #: 14 Line #: NA
Original Specific Comment #: 3
Comment: Table 2-4 presents estimates of material volume by segregation categories. Table 2-4 should be revised to also include these material volume estimates by building.

Response to Specific Comment #3

Table 2-4 has been revised to include the "bulked" volume estimates by component or building. It may be noted that the November draft contained "unbulked" volume estimates; however, bulked volume estimates are more appropriate and are shown in the revision. Since the revision to Table 2-4 did not allow for including weight estimates by material category and component, Table 2-5 was created to include that information.

Commenting Organization: U. S. EPA Commentor: Saric
Section #: 2.3.3, Table 2-4 Page #: 14 Line #: NA
Original Specific Comment #: 4
Comment: Table 2-4 presents the material volume estimates and disposition of the segregation categories. Neither the text nor Table 2-4 discusses the basis of the disposition of the segregation categories. The current OU3 feasibility study (FS) report is evaluating three remedial alternatives, each with a different means of disposition for the segregation categories. The text should be revised to state which remedial alternative was assumed to be implemented in the preparing of Table 2-4.

Response to Specific Comment #4

The text has been revised in Section 2.3.3, immediately following Tables 2-4 and 2-5, to identify that disposition of material listed in Table 2-4 is provided for under the OU3 Record of Decision for Interim Remedial Action (specifically, refer to Section 9 of that document) but is also consistent with the "Preferred Alternative" that is described in the draft OU3 Proposed Plan for the OU3 Final Remedial Action.

Commenting Organization: U. S. EPA
Section #: 2.3.4 Page #: 16
Original Specific Comment #: 5

Commentor: Saric
Line #: 4

Comment: The text states that the Plant 1 Storage Pad is the primary site for interim storage of materials. However, the Plant 1 Storage Pad cannot be located in Figure 1-1. The text or the figure should be revised to provide the location of the Plant 1 Storage Pad. Further, the text should clarify the type of materials that will be stored on the Plant 1 Storage Pad.

Response to Specific Comment # 5

Text has been added to Section 2.3.4 that refers to the areas occupied by Component 74T in Figure 1-1 as being that of the Plant 1 Storage Pad. The text in this sentence has also been revised to state that the Plant 1 Storage Pad, under the current interim storage strategy, is the preferred site for interim storage of all materials from the Plant 1 Complex - Phase I project that are targeted for on-site disposition.

Commenting Organization: U. S. EPA
Section #: 2.4 Page #: 17
Original Specific Comment #: 6

Commentor: Saric
Line #: 17 through 26

Comment: The text states that computer modeling of air emissions at the Plant 1 Complex area was performed in October 1995 using contaminant source terms identified in the draft OU3 remedial investigation/feasibility study (RI/FS) report. The text presents a brief discussion of the results. The text should be revised to include additional details concerning the modeling methodology, the input data, and the results of the computer modeling.

Response to Specific Comment #6

The following information has been added to Section 2.4 to provide additional clarification: The CAP88PC model is the personal computer version of the U.S. EPA model CAP88 which is used for predicting emissions of radionuclides under the National Emissions Standards for Hazardous Air Pollutants (NESHAPs) regulations. The modeling methodology used was prescribed by the U.S. EPA reference manual: U.S. EPA User's Guide for CAP88, Version 1.0, 402-B-92-001. CAP88 modeling of the Plant 1 Complex - Phase I project area was performed in October 1995 using contaminant source terms identified in the Draft OU3 RI/FS Report (Appendix B, Attachment B.I). The results of the computer modeling indicated that the maximally exposed individual would theoretically be located 1,000 meters north-northeast of the project area and would potentially received a maximum Effective Dose Equivalent of 2.5×10^{-4} mrem/year from the D&D activities. As noted above, the DOE off-site maximum is 1.0×10^{-1} mrem/year.

Commenting Organization: U. S. EPA
Section #: 2.4 Page #: 17
Original Specific Comment #: 7

Commentor: Saric
Line #: 22 through 26

Comment: The text states that for the D&D projects for Plants 7 and 4, the airborne uranium concentrations have been approximately 95 percent below the DOE maximum off-site guideline of 0.1 pCi/m³. However, the text does not state how the airborne uranium concentrations compare to the DOE off-site maximum of 1.0×10^{-1} millirem per year (mrem/yr). The text should be revised to provide this comparison.

Response to Specific Comment #9

Text in Section 2.5.2 was revised to state that hold-up material was removed from Buildings 1A and 66. The text was also revised to state that specific quantities of hold-up materials were identified in Sections 3.1 and 3.5, respectively under the subheadings for Safe Shutdown. Tables 3-2 and 3-6 in the November draft of this document listed estimated quantities of hold-up material before actual amounts were known. Since data have been compiled from the performance of that removal action, these tables were updated to list actual hold-up quantities. Text was also added following those updated tables to address the storage and disposal of listed materials.

Commenting Organization: U. S. EPA *Commentor:* Saric
Section #: 3.1 - 3.8 *Page #: 37 through 54* *Line #: NA*
Original Specific Comment #: 10

Comment: The text in Sections 3.1 through 3.8 presents the approximate volumes of material to be remediated at the Plant 1 Complex - Phase I. The text should be revised to also include the assumed interim storage location for the remediation materials, the assumed final disposition of the remediation materials, and the material categories as presented in Table 2-3 for the remediation materials.

Response to Specific Comment #10

Text has been added so that each material listed under the subheading of Above-Grade Dismantlement has a cross-reference to the appropriate material category. Since Table 2-4 was revised in response to Specific Comment # 3, which already addressed the other information requested in Specific Comment # 10, references have been added in the introductory text for the discussion on above-grade dismantlement which directs the reader back to that table for that information.

Commenting Organization: U. S. EPA *Commentor:* Saric
Section #: 3.1 *Page #: 37 through 54* *Line #: NA*
Original Specific Comment #: 11

Comment: The text states that above-grade decontamination and dismantlement of the Plant 1 Complex - Phase I will be accomplished by the following six remedial tasks:

- Task I - Preparatory Action - Inventory Removal
- Task II - Preparatory Action - Safe Shutdown
- Task III - Hazardous Waste Management Unit
- Task IV - Asbestos Removal
- Task V - Surface Decontamination
- Task VI - Above-Grade Dismantlement

The remediation of each of the eight components of the Plant 1 - Complex Phase I is discussed in sections 3.1 through 3.8; however, for each of the components, all six of the tasks are not discussed. Therefore, the text should be revised to state if a task is not applicable for a specific component and should provide an explanation for its exclusion.

Response to Specific Comment #11

Text has been added in each subsection of Section 3 to account for each task that does not have a separate subheading.

Commenting Organization: U. S. EPA
Section #: 4.0 Page #: 57
Original Specific Comment #: 12

Commentor: Saric
Line #: NA

Comment: *The text presents the Figure 4-2 Remediation Schedule. The figure indicates that the remedial action (RA) report will be submitted on March 4, 1998 when the Plant 1 Complex - Phase I is complete. The figure does not indicate that any interim reporting will be provided prior to the conclusion of remediation activities. The text should be revised to clarify and provide information regarding plans for interim reporting on the Plant 1 complex - Phase I remediation.*

Response to Specific Comment #12

Text has been added to Section 4 to identify the interim reporting that will be provided during the D&D of Plant 1 Complex - Phase I. It should be noted that although the approved OU3 RD/RA Work Plan for Interim Remedial Action does not state that interim reporting will be provided prior to the completion of each D&D project, Section 5 of that document states that DOE will keep the community informed of remedial action schedules and any new findings or significant developments within OU3. The vehicle that DOE has chosen for interim reporting is the *Fernald Report*. The *Fernald Report* is a monthly report that summarizes cleanup progress and remedial plans and activities to over 1,100 stakeholders, including U.S.EPA and Ohio EPA. Fernald envoys continue to keep in close contact with their respective community organizations to keep an open line of two-way communication flowing. Additionally, DOE and other site personnel regularly attend FRESH, Fernald Citizens Task Force, and local government meetings and provide verbal progress reports and answer questions on key site issues. DOE would prefer to handle any additional interim reporting on an as-needed basis with concurrence from U.S. EPA and Ohio EPA.

Part II. Ohio EPA Comments and Responses

Commenting Organization: Ohio EPA Commentor: OFFO
Section#: GENERAL Pg#: Line#: Code: M
Original Comment#: 1

Comment: *DOE needs to assure that dismantlement techniques used at the Plant I Complex will minimize damage and disfigurement to potentially recyclable materials. This should maximize the amount of materials that may be sent to the commercial recycler. Also, DOE will need to segregate potentially recyclable materials from other waste streams on the storage pad. pending final approval of the waste disposition method selected for OU3.*

Response to General Comment #1

Lessons-learned are being documented from the Plant 7 Dismantling project in order to ensure that future projects do not experience similar problems. Although it was the material size reduction technique of shearing that caused the disfigured condition of recyclable steel in the Plant 7 Dismantling project, rather than the dismantlement technique, it is agreed that any dismantlement or size reduction technique must be performed in a manner that is compatible with later material processing. Section 2.5.6 of the implementation plan, under the subheading of Structural Steel Dismantlement, was revised to specifically address this issue. As noted in the revision, it should be emphasized that recycling of materials will be evaluated on a project-specific basis and that material dismantlement and sizing requirements will be modified accordingly to ensure that materials are properly prepared for recycling, if that option

is selected. In the future, this evaluation will be performed during remedial design and any requirements would be incorporated into the performance specifications and subcontractor statement of work. If recycling is found to be an acceptable disposition option after design completion or during any D&D project implementation, the subcontract would be revised through appropriate field change documents to ensure that materials are properly handled to meet recycling requirements.

It is recognized that proper segregation will also be necessary to facilitate recycling of certain materials. To address this concern, Section 2.3.4 of the implementation plan has been revised to state the following: "If at any time leading up to or during the generation of dismantlement debris that recycling is determined to be an acceptable alternative, interim storage requirements for those materials will be modified to ensure that appropriate segregation occurs."

Commenting Organization: Ohio EPA *Commentor:* OFFO
Section#: GENERAL *Pg#:* *Line#:* *Code:* C
Original Comment#: 2

Comments: DOE should revise the document to incorporate any revision the document to incorporate any revisions to the OU3 RI/FS and the RA# 17 Work Plan particularly in regard to debris management and disposition.

Response to General Comment #2

The implementation plan was reviewed and revised as needed to ensure accuracy with debris management strategies identified by the draft OU3 RI/FS Report and the final version of the Removal Action No. 17 Work Plan.