



Department of Energy

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DEC 2 1997

DOE-0185-98

**Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V-SRF-5J
77 W. Jackson Boulevard
Chicago, IL 60604-3590**

**Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, OH 45402-2911**

Dear Mr. Saric and Mr. Schneider:

**EXTENSION REQUEST FOR THE SUBMITTAL OF THE DRAFT FINAL WASTE ACCEPTANCE
CRITERIA ATTAINMENT PLAN AND SITEWIDE EXCAVATION**

**Reference: Letter, J. Reising to J. Saric and T. Schneider, "Draft Responses to the U.S.
Environmental Protection Agency Comments on the Waste Acceptance
Criteria Attainment Plan for the On-Site Disposal Facility", dated November 3,
1997.**

**As you know, the Department of Energy, Fernald Environmental Management Project
(DOE-FEMP) has been working with your respective agencies to finalize a Waste
Acceptance Criteria (WAC) Attainment Plan for placement of impacted materials in the
On-site Disposal Facility (OSDF). The DOE-FEMP submitted a Comment Response
Document for the U.S. Environmental Protection Agency (U.S. EPA) comments to the
referenced draft plan on November 3, 1997, and has been working to develop a similar
document for the Ohio Environmental Protection Agency (OEPA) comments.**

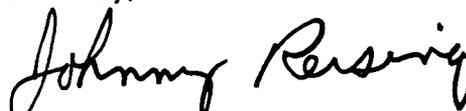
**The objectives of the WAC Attainment Plan included development of field implementable
strategies and protocols designed to achieve compliance with OSDF WAC requirements
established in the various Records of Decision (ROD). In many instances, based on what
was deemed to be implementable in the field to promote conservatism, the draft WAC
Attainment Plan presented strategies that went beyond a minimum threshold of regulatory
compliance.**

As DOE-FEMP has begun site preparation activities for Area 2 Phase I soil excavation, several field conditions have been encountered that have been significantly different than those assumed when the compliance strategies in the draft WAC Attainment Plan were developed. Most notably, the volume and configuration of debris, especially bricks, have been different than expected. These differences have been significant enough to call into question the DOE's ability to cost effectively implement the draft compliance strategy for acid brick. As such, DOE proposes to delay finalization of the WAC Attainment Plan to allow further discussions between our respective agencies on this issue. Specifically, DOE proposes to submit a revised draft Final WAC Attainment Plan no later than January 30, 1998, that incorporates resolution to all outstanding issues. The DOE believes this will allow a sufficient time frame to resolve the identified issue without a delay in the implementation of the remediation plans currently being developed for the Southern Waste Units (Area 2, Phase I). This time frame will also allow the near completion of the Area 2 Phase I site preparation activities with any relevant field observations factored into the issue resolution process. To facilitate timely resolution of all outstanding WAC attainment issues, DOE is forwarding with this letter responses to all OEPA comments to the draft plan, except for the two comments (12 and 20) affected by the different-than-expected conditions in the South Field. Finally, by this letter DOE is also confirming our understanding that the FEMP is in receipt of all required regulatory approvals to allow East Impacted Stockpile Material to be placed into the OSDF. Specifically, with approval by your respective agencies of the East Impacted Stockpile WAC Attainment Report and the Impacted Material Placement Plan, DOE plans to place the referenced materials upon completion of liner construction activities.

By this letter, DOE is also requesting formal approval to submit the Comment Response Document for the Sitewide Excavation Plan (SEP) concurrently with the submittal of the draft final WAC Attainment Plan (i.e., January 30, 1998). These two documents are directly linked in their presentation of WAC compliance strategies. In addition, the WAC attainment strategies fundamentally drive excavation methods presented in the SEP. The revised SEP will be submitted according to a mutually agreed upon schedule that will be expedited dependent upon your initial review of the associated comment response document. In addition, DOE recognizes that a number of activities must be completed prior to initiation of Area 2, Phase I excavation activities. Further, DOE recognizes its obligation to schedule completion of these activities in a manner that allows adequate review time for your agencies. As such, DOE proposes to enter into discussions with the U.S. EPA and OEPA to identify all activities required to start Area 2 Phase I work by June 1, 1998, and develop acceptable schedules for completion of these activities.

If you have any questions, or should wish to discuss this proposal further, please contact me at (513) 648-3139 or Robert Janke at (513) 648-3124.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:R.J. Janke

Enclosure: As Stated

cc w/enc:

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**RESPONSES TO OEPA COMMENTS
ON THE AUGUST, 1997 DRAFT
WASTE ACCEPTANCE CRITERIA ATTAINMENT PLAN
FOR THE ON-SITE DISPOSAL FACILITY**

**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO**

DECEMBER, 1997

**U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE**

RESPONSES TO OEPA COMMENTS
ON THE AUGUST 1997 DRAFT
WASTE ACCEPTANCE CRITERIA ATTAINMENT PLAN
FOR THE ON-SITE DISPOSAL FACILITY

GENERAL COMMENTS

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

Comment: During the meeting held on September 17, 1997 methods of incorporating several real-time gamma spectroscopy methods into this Plan were discussed. One alternative was to add the gamma methods as an appendix to the final document. A major reason for pursuing this strategy was to save time and effort. The Ohio EPA would like to suggest that the entire Plan be re-written to incorporate the use of real-time into the body of the Plan rather than as an appendix. By doing this we want to achieve a greater likelihood that the real time gamma methods will actually be implemented in a more consistent fashion.

The regulators as part of the real-time working group have asked to review the procedures for both the RTRAK and HPGe detectors. These procedures could be incorporated into the Appendices of either this Plan or the Site-Wide Excavation Plan as appropriate.

Response: Comment acknowledged. DOE agrees that use of real-time monitoring can considerably enhance the methodology for complying with Operable Unit 2 and 5 Records of Decision requirements related to attainment of OSDF WAC. As such, DOE will incorporate into the revised document the use of the high-purity germanium (HPGe) detector and the radiation tracking system (RTRAK) to provide a more complete screening of soils to be placed in the OSDF.

As you know, the HPGe Comparability Study Report and RTRAK Applicability Study Report described the two real-time systems currently in use. These reports described, in detail, the instrument detector systems, identified key data quality parameters, evaluated the usefulness and quality of data that each instrument produces, and also proposed how best to utilize these instruments in soil remediation. However, what is lacking in these reports is the implementation guidelines and procedures. Further, DOE recognizes that for the RTRAK and HPGe systems to be used routinely to support soils remediation (WAC attainment in particular), each system must meet EPA and DOE requirements for Quality Assurance. A Quality Assurance and Quality Control (QA/QC) program must be established, including necessary procedures, to implement the real-time program. The elements of the QA/QC program are described in the response to Comment No. 22.

Separate from the QA/QC program which is being developed, the FEMP is also working on developing documentation which will detail the objectives, limitations and intended use strategies (e.g., WAC attainment, Hot Spot removal, pre-certification) associated with HPGe and RTRAK systems. This document, entitled "Real-Time Radiological Characterization: Objectives and Limitations," will be a stand-alone document detailing the specific objectives, limitations, and procedures governing the application of real-time technologies relative to the specific measurements, such as in WAC attainment, hot spot removal and pre-certification. Instead of attaching or incorporating the real-time procedures into the WAC Attainment Plan, DOE

recommends that real-time procedures be coordinated through the Site-Wide CERCLA Quality Assurance Project Plan (SCQ). After the establishment of the QA/QC program (described in the response to Comment No. 22) and the completion of the draft real-time objectives and limitations report, the FEMP will submit an Addendum to the SCQ, for EPA and Ohio EPA review and approval, that incorporates real-time procedures into the SCQ.

Action: The revisions to the WAC Attainment Plan will consist of the following: The second paragraph of Section 4.1 will be deleted. The approach to using real-time monitoring in WAC attainment will be discussed in detail in Section 4.1 of the WAC Attainment Plan and references to real-time monitoring will be added to Sections 4.2, 4.2.1.3, 4.2.2, 4.2.2.1, 4.2.2.3.1, 4.2.2.3.2, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, and 4.3.6. The actual procedures for real-time characterization will be provided to EPA and Ohio EPA as a formal Addendum to the FEMP's SCQ.

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

Comment: The WAC Attainment Plan relies solely on soil concentration data to assess potential WAC exceedance areas. The plan should be revised to state that additional data such as groundwater and surface water results as well as process knowledge and real-time monitoring will be used to expand upon the current RI/FS data base and guide supplemental sampling.

Response: Agreed. The additional data sources noted by the Commentor, and their role in supporting the RI/FS database to guide additional sampling as part of the WAC attainment demonstration strategy, will be added to the revised plan. These items were presented to EPA and OEPA in a number of the working sessions on soil excavation/WAC attainment held over the last month, and it is important that they be highlighted in the document where the individual excavation approaches are discussed.

Action: Incorporate requested items noted by this general comment into the appropriate subsections of Section 4.0 (at locations where additional sampling strategies are discussed) and describe their role in the WAC attainment demonstration process.

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

Comment: The Ohio EPA has continually insisted that the WAC Attainment Plan should be a stand-alone document that will govern all aspects of OSDF disposal. It is not acceptable to defer this Plan to other documents. Please remove the sentence that resolves inconsistencies between the WAC Plan and other documents in favor of the supporting document.

Response: Agreed. The requested sentence will be removed. A better explanation of the role of the WAC Attainment Plan as a general "umbrella" document within the FEMP's document hierarchy will also be provided, along with a document road map to alert readers as to where they can find additional area-specific implementation information that is consistent with the general umbrella plan. Both EPA and Ohio EPA raised a concern that the WAC plan needs to remain current as a general plan that provides the foundation from which the area-specific detailed design packages can be built. As an example, Ohio EPA requested in Comment Nos. 25-30 that DOE remove the approval process for selecting the area-specific WAC COCs for soil from the WAC Attainment Plan, and move this approval and supporting documentation to the detailed design documents (IRDPs and supporting PSPs) that follow the WAC Attainment Plan. (The overall concept of the use of area-specific WAC COCs will be described in the WAC

Attainment Plan, but the actual approval of the short lists, and their support, will be furnished via follow up design documents).

Action: Remove requested sentence on line 21, page 1-3, and provide clarifications concerning the role of the WAC Attainment Plan as a first-tier, "umbrella" document as indicated above.

4. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: General Comments Pg #: Line #: Code: M
 Original Comment #: 4

Comment: The document should include or reference a document which will define the mechanism for tracking waste volume data and make comparisons to estimated volumes being disposed of on-site and off-site. Ohio EPA believes this data evaluation is important for considering how actual volumes relate to WAC modeling, OSDF design, excavation design, etc.

Response: Agreed. As a natural course of the remediation, the FEMP plans to track the quantities and origins of placed impacted material volumes that are disposed of on-site and off-site. However, because of differences in bulking factors for various materials and the varying compaction requirements for the variety of materials disposed of at the OSDF, it will be possible to draw only approximate correlations back to the estimated volumes produced during the FEMP's RI/FS process. The actual placed volumes will still be useful for OSDF capacity planning (i.e. did the placed volumes for the OU2 Southern Waste Units closely match the capacities in the OSDF set aside for these materials; will the OSDF reach its projected size and configuration, etc.) and other planning estimates needed to track the progress of the remediation. As part of the volume tracking effort, the FEMP will maintain a waste-category-specific tracking system to account for the post-placement volumes in the OSDF, and the general volumes (or weights) sent off site for disposal. Current-in-time summaries of the ongoing placed-volume tracking efforts (e.g., that are current with each major implementation step for the FEMP's soil remediation and D&D actions) will be available for review on an "as requested" basis during cleanup. Project-closeout-related placed volume summaries will also be prepared to formally document the placed volumes following the completion of each major remedial action component of the site-wide remedy (i.e., as part of the FEMP's D&D complex closeout reports; and as part of the area-specific certification reports that follow completion of soil excavation activities within an individual soil remediation area). A final master site-wide summary of placed and shipped materials would also be expected to be produced as part of the FEMP's site-wide final closeout documentation. As Ohio EPA indicated at the November 5, 1997 comment meeting, the agency is looking for the OSDF-placed-volume soil tracking activity to be no more complex than the FEMP's system used to track the excavation subcontractor's progress and pay items.

Action: Provide a description of the placed and shipped volume tracking efforts to be performed for each media category discussed in the plan (Soil, Debris and Ancillary Waste) and identify the reporting measures that are planned to be implemented. Add the discussions as new subsections in Sections 4.0, 5.0 and 6.0, respectively.

SPECIFIC COMMENTS

5. Commenting Organization: OEPA Commentor: OFFO
 Section #: 1.1 Pg #: 1-1 Line #: 13-15 Code: C
 Original Comment #: 5

Comment: Ohio EPA disagrees with DOE's assertion that it was not until March 5, 1997 that need for a WAC Attainment Plan was established. In December of 1996 Ohio EPA included the need for a WAC plan in a list of concerns provided to DOE. The need for a WAC plan was discussed for several months prior to December. Both Ohio EPA and USEPA

Response: have expressed the need for a WAC Attainment Plan, as well as our concern with DOE's delay in submitting one, numerous times over the past year. Comment acknowledged. In the sentence noted in the comment, DOE was looking to for a way to link the IMP Plan (which is primarily engineering based) with the WAC Attainment Plan. DOE used the March 5, 1997 IMP Plan review meeting to make this convenient link. Additional language will be added to reflect the earlier history regarding requests made for the plan, as raised by Ohio EPA.

Action: On page 1-1 at line 15, provide additional clarification concerning the evolutionary history of the WAC Attainment Plan prior to March 5, 1997, as requested. Note that the commitment for the plan was the result of needs identified by EPA and OEPA prior to this date, that culminated in the definition of the plan scope at the meeting.

6. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 1.2 Pg #: 1-2 Line #: 31 Code: C
 Original Comment #: 6

Comment: Please elaborate on the specific WAC requirements for the materials mentioned in this paragraph. For example, since water treatment plant residuals (understood to be sludges, filter cakes, etc.) are soil-like materials, can we assume that the Operable Unit 5 WAC for soils will be the governing WAC? In the case of PPE, these items could also be spread and compacted in lifts in the OSDF. Will the soil WAC be applied here, also? An argument could be made that PPE used in D&D activities should be treated as debris. The criteria that no PPE with visible traces of colored uranium salts would be permitted in the OSDF would logically follow from the debris interpretation. Another unmentioned possibility is the case of lab returns. If these have been treated with acid as a preservative, will the lab returns be neutralized to remove the characteristic of corrosivity prior to disposal? Please anticipate additional concerns along these lines of reasoning and address them when responding to this comment.

Response: Section 1.2 is meant to be a general introduction to the OSDF WAC Attainment Plan and the topics covered. Each of the issues raised in the comment are discussed in detail in Section 3.5 "WAC for Allowable Ancillary Remediation Waste" and Section 6.0 "WAC Attainment Plan for Ancillary Waste." In general, soil WAC will apply to the AWWT treatment residuals, debris WAC will apply to PPE generated during remediation, and soil WAC will apply to the specific lab returns that are currently anticipated. Sections 3.5 and 6.0 provide additional detail and discussion on the application and attainment of OSDF WAC for ancillary waste.

Action: No action.

7. Commenting Organization: OEPA Commentor: OFFO
 Section #: 1.2 Pg #: 1-2 Line #: 35-37 Code: C
 Original Comment #: 7

Comment: Soils classified as RCRA hazardous waste from the OU2 firing range area were also excluded from disposal in the OSDF. These soils were specifically excluded from on-site disposal by the OU2 Record of Decision. These soils should be referenced here in the WAC Plan and removed from other portions of the document addressing possible treatment and on-site disposal.

Response: Agreed. The Operable Unit 2 ROD states that soil containing bullets will be assumed to be mixed waste (due to the presence of the lead bullets) and will be sent off-site for disposal. Excavated soil from the firing range that does not contain bullets will undergo TCLP analysis to determine if it is hazardous. If the soil is not hazardous, it will be managed with the other South Field material. The determination of the volume of excavated soil that will be sent off-site for disposal is based upon the results from the TCLP analysis. Details of the TCLP sampling and analysis methods for the South Field Firing Range will be provided in a PSP prior to sampling. Section 1.2 will be revised

Action: and all subsequent references to this material being disposed on site will be deleted. The second-to-last sentence in the last paragraph of Section 1.2 will be revised to read, "For reference, the primary categorically-excluded materials include the waste pit contents, covers, and liners (Operable Unit 1); material from the South Field Firing Range that is found to be RCRA hazardous waste (part of Operable Unit 2); nuclear material products, residues, and other special materials (part of Operable Unit 3); and waste materials contained in Silos 1, 2, and 3 (Operable Unit 4)." The first sentence of Section 2.5.1 will be revised to read, "Soil and soil-like material consists of the excavated surface and subsurface soil from within Operable Unit 5; the material excavated from the Operable Unit 2 waste units (fly ash from the Active and Inactive Fly Ash Piles, soil from the South Field, and the soil and sludge from the Lime Sludge Ponds and Solid Waste Landfill), with the exception of material that is found to be RCRA characteristic waste from the South Field Firing Range;..." The first bullet on page 2-15 (Section 2.6.5) will be deleted. The paragraph on lines 4-15 of page 2-16 (Section 2.6.5) will be deleted. The footnote on page 3-2 will be deleted. The first bullet in Section 3.2 will be revised to read, "RCRA toxicity characteristic soils from the six areas designated in the Operable Unit 5 ROD, unless it will be treated." The sentence beginning on line 25 of page 4-2 (Section 4.1) will be revised to read, "In those six designated geographic areas where a potential exists for the presence of soil that qualifies as RCRA characteristic..." A footnote will be added to the South Field Firing Range entry in Table 4-3 that states, "This material will be sent off-site for disposal in accordance with the Operable Unit 2 ROD." The sentence beginning on line 18 of page 4-18 (Section 4.2.1.2.1) will be revised to read, "As presented later in this section, characteristically hazardous soil from the South Field Firing Range will be disposed off-site in accordance with the Operable Unit 2 ROD while characteristically hazardous soil from the other six geographic areas will be disposed of in either an off-site facility or the OSDF, after appropriate treatment." The sentence beginning on line 22 of page 4-18 (Section 4.2.1.2.1) will be revised to read, "The characteristically hazardous soil from the six geographic areas that will be dispositioned to the OSDF..." The sentence on line 13 of page 4-26 will be revised to read, "If the soil being excavated is from one of the six areas containing RCRA characteristic waste..." The sentence on line 22 of page 4-26 will be revised to read, "...if the area being excavated in one of the six areas containing RCRA characteristic waste..." The first sentence of Section 4.2.2.2.1 will be revised to state, "As discussed in Section 4.2.1.2.1, six FEMP areas..." The following sentence will be added to the end of the first paragraph of Section 4.2.2.2.1, "Material from the seventh area, the South Field Firing Range, that does not pass the TCLP testing will be sent off-site for disposal in accordance with the Operable Unit 2 ROD."

8. Organization: OEPA Pg. #: 1-3 Line # 21-22 Commentor: OFFO Code: C
 Section #: 1.3
 Original Comment #: 8
 Comment: Ohio EPA disagrees with the suggestion that support plans should prevail over the WAC Plan. The WAC Plan should be the basis for development of all future support plans and should be the over-riding document for decisions regarding WAC attainment. If changes to the process for WAC attainment are needed in the future the revisions to the WAC Attainment Plan should be submitted to the EPAs for review and approval. Following that approval, revisions to support plans could be developed including the process change.
 Response: Agreed. Additional language will be added to further clarify that the WAC Attainment Plan is intended to function as the general, "first tier" document concerning WAC attainment, and further documents produced as part of the hierarchy will be subordinate to this plan, serving to provide progressive implementation details on an area-specific basis.

It is further agreed that if high-level changes in the WAC attainment strategies occur at a later date, revisions of the WAC Attainment Plan will be prepared and furnished to the EPAs for review and approval. Note that if the changes are not high level (concept or strategy) changes but rather are implementation detail based, the revisions will be handled through the revision of subordinate area-specific documents as necessary.

Action: On line 21-22, page 1-3, remove the sentence concerning the suggestion that the support plans prevail over the WAC Attainment Plan. Provide additional clarifying language concerning the role of the WAC Attainment Plan as the first-tier "umbrella" plan, and note the EPA's review and approval role for future revisions. See also Comment No. 3.

9. Commenting Organization: OEPA Commentor: OFFO
 Section #: 1.4 Pg. #: 1-4 Line #: 9-12 Code: C
 Original Comment #: 9
 Comment: The text should be revised to include a statement that all revisions or modifications to the process for WAC attainment outlined in the WAC Attainment Plan will be submitted as revisions to the document for review and approval by Ohio EPA and USEPA.
 Response: Agreed. Text will be added for requested change.
 Action: On page 1-4, lines 9-12, provide additional language concerning review and approval of changes to the document by the EPAs. See also response to Comment No. 8.

10. Commenting Organization: OEPA Commentor: OFFO
 Section #: 2.5.1 Pg. #: 2-6 Line #: 2-13 Code: M
 Original Comment #: 10
 Comment: Soils classified as RCRA hazardous waste from the OU2 firing range area were also excluded from disposal in the OSDF. These soils were specifically excluded from on-site disposal by the OU2 Record of Decision. These soils should be referenced here in the WAC Plan and removed from other portions of the document addressing possible treatment and on-site disposal.
 Response: See response for Comment No. 7.
 Action: See action for Comment No. 7.

11. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 2.5.2 Pg. #: 2-8 Line #: 14 Code: C
 Original Comment #: 11
 Comment: The phrase "highly elevated direct radiation fields" is imprecise. Please offer any clarifications that can be made now and a reference to future submittals that will establish these parameters more precisely.
 Response: Section 9.1.6 of the Operable Unit 4 Record of Decision (ROD) provides that the demolition debris from Operable Unit 4 will be dispositioned consistent with the final remedy for Operable Unit 3. Section 9.1.4 of the ROD states that "contaminated concrete from Silos 1 and 2, which exhibit highly elevated direct radiation fields, will be separated from the other Operable Unit 4 concrete and construction debris and prepared for processing in the vitrification facility."

The intent of these ROD provisions was to segregate the highly contaminated concrete from Silos 1 and 2 for potential vitrification and off-site disposal. This material was proposed to be segregated to minimize the opportunity for human exposure to the elevated direct radiation fields associated with any K-65 residues that may have impregnated the concrete in the silo structures. It was envisioned that handling this concrete material utilizing the same processes and controls as those employed for the residues themselves would serve to minimize these potential exposures.

DOE concurs that the term "highly elevated radiation fields" is imprecise. However, recognizing the current status and path forward for Silos 1 and 2, DOE does not consider it to be the appropriate time to establish more definitive or quantitative thresholds. DOE views that the defining of such limits should occur only after careful consideration of the implementation strategy for the selected technology for Silos 1 and 2. With this in mind, DOE proposes to define a path forward for resolving this issue as part of the remedial design process for Silos 1 and 2 of Operable Unit 4.

Action: Text will be added to page 2-8 of the plan to clarify that a more quantitative delineation of "highly elevated direct radiation fields" will be provided during the remedial design process for Operable Unit 4.

12. Commenting Organization: OEPA Commentor: OFFO
Section # : 2.6.2 Pg. #: 2-11 Line # 12-18 Code: C

Original Comment #: 12

Comment: It is Ohio EPA's understanding that debris generated through OU2, OU4 and OU5 remediation were not included in the OU3 WAC modeling for debris. Considering the lack of information concerning debris volume, waste concentrations and its leachability from these debris streams, DOE must provide additional information supporting the inclusion of these other debris streams under the OU3 debris WAC.

Response: [Response pending outcome and resolution of South Field excavation/segregation issues. A response will be included in the final version of the comment response document.]

Action: [Pending, as noted above.]

13. Commenting Organization: OEPA Commentor: OFFO
Section # : 2.6.4 Pg. #: 2-13; 2-14 Line # 20-22; 7-14 Code: C

Original Comment #: 13

Comment: Though Ohio EPA concurs that the OU5 WAC are conservative, we do not agree with the discussion in this section nor the implied acceptability of disposal of soils exceeding the WAC in the OSDF. The WAC is a limit which is not to be exceeded. Regardless of volume, soil exceeding the WAC is prohibited from disposal in the OSDF. Ohio EPA regards disposal of soils exceeding the WAC in the OSDF as a violation of the Records of Decision, the approved OSDF design, and the waiver of Ohio Solid Waste Siting Criteria. The section must be revised to delete the referenced sections and to state the fact the WAC is a limit which is not to be exceeded.

Response: Comment acknowledged. This comment requests that the referenced text addressing the conservatism incorporated into the development of the contaminant-based Waste Acceptance Criteria (WAC) be deleted from the document. The subject text indicated that (1) even if the soil volume determined through the RI/FS studies to be contaminated above the 1030 ppm uranium WAC limit (conservatively estimated at 25,000 cubic yards or less) was accidentally or inadvertently placed in the OSDF along with the other soil, the average uranium concentration would still remain at approximately 100 ppm and (2) based on the known actual distributions of uranium and the other WAC constituents of concern in the FEMP environment, there would be no expected cumulative impact to the Great Miami Aquifer at the downgradient edge of the OSDF even if all of the above-WAC soil volume for all of the WAC constituents of concern was accidentally or inadvertently placed in the facility. As was indicated at the November 5, 1997 meeting, DOE would like to keep intact the essential elements of the discussion in this section regarding the conservatism in the WAC development process, to provide perspective and educate the expanding level of FEMP personnel who are now involved in the various facets of the waste characterization, dispositioning and tracking process. Many of these individuals were not part of the RI/FS process. In other words, this plan will be used by a fairly broad audience at the FEMP, and many members of this audience were not closely tied to the original WAC development process. The

Response: Based on this comment and a similar comment from U.S. EPA, the text will be revised to more accurately reflect the events leading up to the CAMU designation and the FEMP's site-specific plans/commitments for dealing with the treatment and on-site disposal of RCRA characteristic waste. The text will be modified on page 2-14 to indicate that local residents also expressed a desire to restrict the disposal of RCRA characteristic waste in the OSDF. Also, text will be added indicating that the restriction of RCRA characteristic waste was also a requirement for obtaining Ohio EPA's support for the waiver of Ohio's Solid Waste Siting Criteria.

Action: Lines 17-25 of page 2-14 (Section 2.6.5) will be revised to read, "The local public (primarily FRESH members) and the Ohio EPA commented on the Operable Unit 2, 5, and 3 RODs regarding the need to restrict the on-site disposal of RCRA characteristic waste in the OSDF (beyond numerical WAC limits). This restriction was also a condition of Ohio EPA support of a necessary waiver from the Ohio Solid Waste Disposal Regulations to allow the OSDF to be sited at the FEMP. To address the comment during the ROD development process, it was agreed that the Corrective Action Management Unit (CAMU) Rule governed the health-protective disposal of RCRA-regulated materials in the OSDF, and that it was acceptable for both listed and characteristic contaminated materials to be disposed of in the OSDF under the CAMU Rule provided health-based numerical WAC limits are met. Ohio EPA's desire for a further restriction on the on-site disposal of characteristic waste resulted in an additional decision to provide treatment of identified RCRA characteristic waste streams, as a means to further satisfy the RCRA and CERCLA preferences for treatment as a principal component of the remedy. It was agreed in the Operable Unit 5 and 3 RODs that site-specific waste areas or streams would be identified (and denoted in the RODs) where sufficient quantities of materials might potentially be present that could promote additional cost-effective levels of treatment. It was also agreed that the FEMP's soil and debris streams that are destined for on-site disposal that may potentially be contaminated with listed RCRA contaminants could be disposed without further treatment, provided numerical WAC limits were met."

15. **Commenting Organization:** OEPA **Commentor:** OFFO
Section # : 2.6.5 **Pg. #:** 2-15 **Line #** 17-20 **Code:** C
Original Comment #: 15
Comment: Delete this paragraph as off-site disposal of these soils is required by the OU2 ROD.
Response: See response for Comment No. 7.
Action: See action for Comment No. 7.
16. **Commenting Organization:** OEPA **Commentor:** OFFO
Section # : 2.6.5 **Pg. #:** 2-16 **Line #** 4-15 **Code:** C
Original Comment #: 16
Comment: Delete this paragraph as off-site disposal of these soils is required by the OU2 ROD.
Response: See response for Comment No. 7.
Action: See action for Comment No. 7.
17. **Commenting Organization:** Ohio EPA **Commentor:** OFFO
Section #: 3.1 **Pg #:** 3-2 **Line #:** 19-21 **Code:** C
Original Comment #: 17
Comment: The text states that if a material that arrives at the OSDF for disposal is "too wet" for proper placement and compaction, the material will be mechanically processed before its placement. It is not clear how DOE will determine whether material is "too wet." Use of Method 905A (Paint Filter Liquids Test) or Method 9096 (Liquid Release Test Procedure) in SW-846 with a suitable endpoint for acceptance would be appropriate. The text should be revised to identify the criteria that DOE will use to determine

whether material is "too wet."
Response: For clarification, it needs to be noted that the moisture content being referred to here is water content from a soils engineering perspective, and was not meant in any way to imply the disposal of "liquid waste" as that term is defined in the regulations. Soil and soil-like materials must be within 3 percent of optimum moisture content for engineering purposes based on Proctor test results before compaction. If soil or soil-like material is received at the OSDF that does not meet this requirement, it will be mixed with drier material or allowed to air dry before compaction. Sludge material must be dry enough to support a one-foot thick lift of soil compacted to 85 percent standard Proctor dry density. If the moisture content of the sludge is such that it prevents the adequate compaction of the soil, it will be further dried or blended with soil until the compaction requirement can be achieved. The CQC Consultant will be responsible for testing and approving the placement and compaction of this material. The WAC Attainment Plan will be clarified. OSDF technical staff have considered the need for material drying and/or blending and have concluded there is adequate working space at the OSDF for such purposes as spreading the material in thin temporary lifts or for disking the soil to adjust moisture content where needed.
Action: The sentence on lines 19-21 of page 3-2 will be revised to read, "If a material that arrives at the OSDF for disposal is too wet to meet the moisture content or compaction requirements, the material will be air dried or blended with a drier material at the OSDF."

18. **Commenting Organization:** OEPA **Commentor:** OFFO
Section # : 3.4 **Pg. #:** 3-5 **Line #** lasts paragraph **Code:** C
Original Comment #: 18

Comment: On-site disposal of materials exceeding the physical WAC is not acceptable. Ohio EPA has disapproved the IMP due to the inclusion of these materials. The paragraph and all references to on-site disposal of oversized debris should be removed from the document.

Response: DOE agrees to remove the current reference in the IMP Plan related to placement of oversized materials in the OSDF. This is based on DOE's understanding that EPA and Ohio EPA do not, at this time, support any revision to the physical waste acceptance criteria for debris to be placed in the OSDF. DOE will specifically evaluate the referenced materials relative to the technical and economic feasibility of recycle/reuse options. It will be DOE's stated goal to reuse or recycle these materials if shown to be technically and economically feasible. If this goal is not feasible, DOE believes it would be appropriate to revisit the issue of material-specific revisions to the OSDF physical WAC.

Action: The paragraph at the bottom of page 3-5 will be deleted. The listing for oversize debris under Category A on Table 5-1 will be deleted. The second paragraph of Section 5.1.2.3 will be deleted. The note to Table 5-2 will be deleted.

19. **Commenting Organization:** Ohio EPA **Commentor:** OFFO
Section #: 3.5.1 **Pg #:** 3-6 **Line #:** **Code:**
Original Comment #: 19

Comment: The last paragraph in this Section states that all PPE will be handled as debris for purposes of physical WAC. Chemical WACs are not addressed. It is worth noting that all PPE will certainly meet the physical WAC requirement.

Response: The PPE will be handled as debris, and therefore the radiological WAC for debris are applicable. It is expected that all PPE will meet the size requirements. It should be noted that there are no chemical WAC for debris (only physical and radiological WAC). The radiological WAC consist of a visual inspection requirement for process-related materials and a commitment to scabble select concrete materials to remove technetium-99 contamination, as identified in the Operable Unit 3 ROD.

In general, the FEMP's radiological control procedures for worker health and safety protection would not permit any PPE-wearing individuals to come in contact with process-related materials in such quantities that the PPE itself would have levels of contamination analogous to the process-related materials that are administratively excluded from on-site disposal by the Operable Unit 3 ROD. This level of worker protection is monitored through a rigorous on-site Radiological Control (RADCON) procedure that tracks the levels of surface contamination of PPE in the work environment as an indicator of procedure success and compliance. As a result of these rigorous controls, all PPE would be suitable for disposal in the OSDF following use. Adding an additional layer of inspection and tracking of the PPE for WAC compliance beyond the RADCON monitoring is unnecessary. All PPE produced from the FEMP's cleanup effort will thus be categorically deemed acceptable for on-site disposal via process knowledge. See also Comment No. 57, which discusses PPE quantities and categorization of PPE based on Operable Unit 3 requirements. As noted in that comment, PPE that is associated with asbestos removal operations will be segregated prior to disposal to meet asbestos placement obligations (i.e. double bagging).

Action: None necessary.

20. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.5.1 Pg #: 3-6 Line #: Code: C

Original Comment #: 20
Comment: As these waste forms were not specifically addressed in any of the ROD WAC determination, information regarding waste volume estimates, contaminant concentrations, leachability, etc. should be provided to support WAC decisions.

Response: See Comment No. 12.

Action: See Comment No. 12.

21. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.5.2 Pg #: 3-6 Line #: Code: C

Original Comment #: 21
Comment: Ohio EPA disagrees with the proposed process for addressing future ancillary waste streams. Future ancillary waste streams should be addressed through addendum to the WAC Attainment Plan, which will be reviewed and approved by the EPAs.

Response: Agreed. The intent of the discussions on future ancillary waste streams was not to limit EPA or Ohio EPA approval of WAC application and attainment to new ancillary waste streams, but rather was to provide assurances that unknown waste streams had been considered and an advance strategy had been developed for applying WAC and determining WAC attainment. The text will be clarified.

Action: The following sentence will be added to the end of the first paragraph of Section 3.5.2 and the end of the first paragraph of Section 6.4, "If additional ancillary waste streams are identified, addenda to this plan will be prepared and submitted to EPA and Ohio EPA for review and approval. These addenda will present the applicable WAC and the WAC attainment strategy for the new ancillary waste streams."

22. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.0 Pg #: 4-0 Line #: Code: C

Original Comment #: 22
Comment: As discussed in a previous comment, Ohio EPA believes it is necessary to incorporate a discussion of the use of real time radiological measurements into this section of the Plan. The text should discuss objectives, limitations and procedures for use of these instruments. Ohio EPA believes the use of real time monitoring is necessary to achieve an acceptable approach for WAC attainment during soil excavation.

Response: Agreed. The major subsections comprising Section 4.0 will be revised to describe the

role that real-time radiological instrumentation will play in enabling the preferential identification and removal of contaminated soils and soil-like materials which exceed the waste acceptance criteria for total uranium.

As discussed earlier (Comment No. 1), the HPGe Comparability Study Report and RTRAK Applicability Study Report described the two real-time systems currently in use. These reports described, in detail, the instrument detector systems, identified key data quality parameters, evaluated the usefulness and quality of data that each instrument produces, but lacked the details concerning implementation and limitations associated with each instrument. DOE recognizes that for the RTRAK and HPGe systems to be used routinely to support soil remediation (WAC attainment), additional detail is required as to how the systems will be implemented, their limitations, as well as the implementing procedures. DOE believes that the full discussion of the objectives, limitations, and procedures of the real-time instrumentation is broader than WAC Attainment and, therefore, is best served through an addendum to the SCQ, as discussed in response to Comment No. 1. The paragraphs below provide some discussion (for information purposes) of the objectives, procedures, and limitations of the real-time instrumentation, and the highlights of further development activities.

Objectives:

One of the primary objectives for using real-time radiological characterization equipment is to assist in the identification of soil and materials which contain uranium at concentrations above-WAC limits (1030 ppm). Real-time radiological measurements will be utilized in the initial pre-design phase of excavation planning to help identify (1) previously unknown above-WAC hot spots and (2) the areal extent of above-WAC contaminant concentrations which had been identified during the RI process. Real-time instrumentation will also be used during the pre-design phase to help determine the depth of above-WAC contamination. Through the use of a Geoprobe, continuous (up to 4 ft. although typically 36 to 42 inch) 1.5 inch diameter soil core samples are collected in areas suspected of containing above-WAC concentrations at depth, such as around building foundations or within the Southern Waste Units. Real-time radiological instrumentation will be used to preferentially discriminate the appropriate sections of the continuous soil cores collected by the Geoprobe for laboratory gamma spectrometry analysis. Real-time instrumentation will also be used during excavation activities to both help delineate the limits of RI-identified above-WAC areas and to identify otherwise unanticipated above-WAC areas which are encountered during the course of the excavation.

Procedures:

DOE recognizes that along with the development of procedures there must also be a Quality Assurance Program established to ensure that procedures are developed and implemented properly. A Quality Assurance and Quality Control (QA/QC) program that contains or addresses a number of minimum requirements will be implemented. The elements of the QA/QC program, as identified below, are scheduled to be in-place by March 27, 1998.

1. Quality Assurance (RTRAK and HPGe): The FEMP is currently developing a QA Program Plan for in-situ gamma spectrometry in accordance with RM-0012, which details the FEMP's quality assurance program (as directed by the SCQ).
2. Quality Control Plan: The FEMP is currently developing a QC Plan or

procedure which will address the implementation QC elements that were detailed in Section 5.0 of the HPGe Comparability Study (July, 1997).

3. QC Procedure for Control Charts: The FEMP is currently developing a procedure which will address the generation, use, and maintenance of control charts for HPGe in-situ gamma spectrometry.
4. Quality Control Standards Measurement Data Base: The FEMP has established a data base to record and track measurement data collected from the Field Control Station and detector calibrations for both RTRAK and HPGe.
5. Preventative Maintenance Procedure: The FEMP is developing a preventative maintenance procedure for HPGe and RTRAK in-situ gamma spectrometry systems.
6. Develop and issue the following procedures: "Operation of the Radiation Scanning System," EQT-34 and "Operation of the Global Positioning System," EQT-GP.
7. Training: Develop, perform, and document the following training for all individuals needed to perform in-situ gamma spectrometry:
 - Training on the objectives and limitations, as detailed in the "Real-Time Radiological Characterization: Objectives and Limitations" document (which is currently under development).
 - Training on QA/QC plans and procedures and training on all operating procedures for in-situ gamma spectrometry.
 - Training on the use and maintenance of gamma spectroscopy software.

Limitations:

The "Real-Time Radiological Characterization: Objectives and Limitations" report, as identified in the response to Comment No.1, will be a stand-alone document detailing not only the specific objectives and procedures, but also the limitations associated with the application of real-time technologies to the identification and removal of above-WAC soils. Further, DOE recognizes that the need to obtain EPA approval of this document prior to the start of excavation in the South Field (currently scheduled for Spring, 1998) is needed. Therefore, a draft copy of the "Real-Time Radiological Characterization: Objectives and Limitations" report will submitted to EPA and Ohio EPA by March 31, 1998. Additional details concerning the implementation of real-time procedures, such as providing the area-specific strategy for the integration of the real-time technologies with the excavation plans and specifications, will be handled in individual IRDP's.

The principal limitation associated with using the real-time radiological instrumentation is the viewing depth in soils. HPGe and NaI detectors can provide accurate measurements to a depth of approximately, on average, 10 centimeters (4 inches) in soil. The scanning depth of either detector in soil varies with the horizontal distance from the detector, with the deepest view being from directly under the detector.

Action:

First, DOE is committed to developing the Real-Time Radiological Characterization: Objectives and Limitations report and obtaining EPA's approval on this report prior to

locations (beneath buildings) with the highest concentrations of these contaminants have not been sampled these constituents must be retained. Finally the contaminants can be added to the sampling regime with little additional cost or effort as they are reported as part of a typical VOC sampling effort.

Response: As discussed with EPA and Ohio EPA, DOE will remove the language in the document that requests approval of the proposed area-specific WAC COC lists as part of the plan. The general concept of the use of area-specific WAC COCs in the WAC attainment process will remain in the document, but the actual data review and selection of the individual COCs will be deferred to the subordinate detailed design documents (e.g., the PSPs and/or IRDPs as appropriate) for each area. DOE recognizes that the PSPs are not being approved by the agencies, and the IRDP is the binding document. DOE is therefore at risk at the PSP stage in proposing area-specific WAC COCs. As discussed at the November 5, 1997 meeting, DOE will work to alleviate this risk by sharing with the agencies as early as possible in the process the database used to develop the proposed area-specific WAC COCs, so that all parties are familiar with the information used to derive the lists. This commitment will generally result in the need for a meeting during the PSP development step to share the database with the agencies. If possible, tentative agreement can be reached at this step that the database is adequate and complete for deriving the lists, and known flaws can be identified early. This step would help alleviate deferring the identification of key database flaws to the IRDP step. The IRDP stage can then be used to finalize the initial agreements officially via a formal approval process.

Action: As requested, in Section 4.2.1.2, remove WAC COC selection language, support tables, and figures. Replace with a conceptual discussion of the process of area-specific COC selection and approval. Identify where in the process the actual WAC COCs will be proposed for consideration (i.e. as part of the preparation of the PSPs, wherever possible) based on a thorough review and presentation of existing data. Identify the process for final approval of the WAC COCs at the IRDP step.

26. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: #: Table 4-1 Pg #: 4-12 Line #: Code: M
 Original Comment #: 26

Comment: The database used to create this table does not appear to be sufficiently inclusive of data from site activities. In a brief review of available data Ohio EPA noted that the maximum detect for 1,2-dichloroethene was 1.2 mg/kg from a sample collected at location 1411 at 10-10.5' as reported in the Pilot Plant Sump Removal Action WP in Table 4-8. Ohio EPA does not concur with the elimination of any WAC COCs until such time as a comprehensive review of site data is conducted and evaluated.

Additionally, a review of the data provided in the Removal Action WP shows that the detection limit for 4-nitroaniline exceeded the WAC in nearly every sample collected. The table should be revised to reflect the number of non-detects that exceed the WAC for all contaminants.

Response: See response to Comment No. 25. The process for selecting and approving the lists of area-specific COCs will take place in follow-up design documents (PSPs and/or IRDPs), and will not be part of the WAC Attainment Plan. The tables, figures, and text that resulted in Ohio EPA's comments will be removed.

Action: See action to Comment No. 25.

27. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.2.1.2 & Figure 4-6 Pg #: 4-13 Line #: 1-21 Code: M
 Original Comment #: 27

Comment: As stated in the previous comment, Ohio EPA has significant concerns regarding the

database used to develop these tables and figures upon which conclusions regard WAC COCs are drawn. Ohio EPA does not concur with the limitation of area specific COCs and believes that a review of available data, including non-detects exceeding the WAC is necessary to properly determine appropriate area specific WACs.

Response: See response to Comment No. 25.
 Action: See action to Comment No. 25.

28. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Figure 4-6 Pg #: Line #: Code: M
 Original Comment #: 28

Comment: The figure fails to detail areas of known total uranium WAC exceedances in the Southern Waste Units and the Solid Waste Landfill. The lack of accuracy regarding total uranium WAC exceedances leaves little confidence that other COCs have been accurately portrayed. Revise the Figure to make the symbols distinguishable from each other. The caption should also be revised.

Response: See Response to Comment No. 25. The figure resulting in the comment will be removed, since the actual area-specific COC lists are not now being proposed for approval as part of this plan. The selection process and supporting documentation will now be furnished as part of the followup design documents (PSPs and/or IRDPs) as requested by Ohio EPA.

Action: See action to Comment No. 25.

29. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Table 4-3 Pg #: 4-17 Line #: Code: M
 Original Comment #: 29

Comment: A review of the Pilot Plant Sump Final Report shows that soil samples analyzed for TCLP failed for PCE. Based upon the failure to include this data in the table, DOE should conduct an additional data review for all the areas presented in this table and revise as appropriate.

Response: The FEMP will conduct a further review to make sure the constituents listed in the table are accurate. The areas shown in the table are those stated in the Operable Unit 5 ROD. The constituents shown in the table will be expanded to include TCE. Recognizing that the eventual remediation design efforts for the pilot plant sump will involve actual TCLP sampling and analysis to delineate in-the-field bounds of the six designated areas. As noted in Comment No. 7, the South Field Firing Range will be deleted from the table because of EPA and Ohio EPA's stated positions concerning the commitments in the Operable Unit 2 ROD to transport this material off-site.

Action: Revise Table 4-3 as stated.

30. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.2.1.2.1 Pg #: 4-18 Line #: 9-16 Code: M
 Original Comment #: 30

Comment: This paragraph again suggests credibility problems with the data set used to make these determinations. Additional specific details regarding changes to the data base and how those changes relate to WAC evaluation needs to be included.

Response: See response to Comment No. 25.

Action: See action to Comment No. 25.

31. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.2.1.2.2 Pg #: 4-20 Line #: Code: M
 Original Comment #: 31

Comment: This section appears to contradict the OU5 ROD commitment to apply VOC screening during all excavation activities. The ROD states, "A best management approach will

also be applied during all excavation activities to identify, segregate (and treat as necessary) soil containing concentrations of organic compounds...(emphasis added)." In order to be consistent with the OU5 ROD VOC screening should be incorporated into all excavation activities.

Response: The Operable Unit 5 ROD committed DOE to a best management approach that would identify, segregate, and treat (as necessary) soil containing concentrations of organic compounds at levels that potentially could jeopardize the integrity of the earthen liners of the OSDF. The OU5 ROD did not specify the levels of organic compounds that would be of potential concern. Consultation with OSDF project personnel indicate that a significant volume of soil essentially saturated with volatile organics would be required to introduce a potential threat to the OSDF liners. DOE plans to conduct organic vapor screening at all of the FEMP's soil remediation sites for worker health and safety purposes throughout the excavation process. This vapor screening activity is expected to be adequate for the qualitative "presence/absence" determinations needed to segregate significant quantities of excavated soils that may essentially be saturated with organic solvents. As this screening of the remediation sites for organic vapors for health and safety purposes will be performed at all locations of excavation, the ROD commitment for continuous organic vapor screening during all excavation activities can be fulfilled. The WAC Attainment Plan will be revised to delete all reference to the restriction that the organic vapor screening will only be performed at the locations of the HWMU excavations. Additional detail will be provided in the SEP to discuss the specifics of the soil segregation and treatment process, should significant quantities of solvent-saturated soils be encountered. An action plan containing the affected-materials field delineation and handling steps (including follow-up characterization activities, as necessary) if organic vapors are encountered at an excavation site will be provided in the SEP. It should be noted that significant quantities of solvent-saturated soils should only rarely be encountered at the FEMP, if at all.

Action: Lines 17-19 on page 4-4 (Section 4.1) will be revised to read, "Also, the screening of the excavation sites for organic vapors for health and safety purposes will be performed at all locations of excavation. This screening will be used to identify and segregate additional soil for treatment, thus fulfilling the ROD commitment for continuous organic vapor screening during all excavation activities." The following sentence will be added to line 5 on page 4-20, "The health and safety screening for organic vapors that will be performed at all excavation locations will provide the information to implement this best management approach." The first sentence of the second paragraph of Section 4.2.1.2.2 will be revised to read, "Although screening for organic vapors will be performed during all excavations, Table 4-4 lists the areas with the greatest potential for containing small quantities of soil with potentially elevated concentrations of organic solvents or related substances." The last paragraph of Section 4.2.1.2.2 will be deleted. A global discussion will also be added that conveys the information to be provided in the SEP on the details of the soil delineation, segregation, and treatment process should significant solvent-saturated soils be indicated through the organic vapor monitoring.

32. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.2.1.2.2 Pg #: 4-20 Line #: Code: C
Original Comment #: 32

Comment: This section presents an argument apparently the opposite of that used by DOE in negotiations with Ohio regarding listed waste constituents within the production area. At the time of those negotiations DOE argued that VOC contamination in the production area was ubiquitous in the groundwater and that contamination from individual HWMUs could not be distinguished from contaminants released from areas other than HWMUs. Ohio EPA finds this change in position by DOE concerning with regard to its

implications to RCRA compliance. Additional discussion of this topic is warranted.
Response: As discussed in Comment No. 31, the organic vapor screening activity will no longer be limited to just the HWMU area footprints, as originally proposed in the plan. DOE will now be performing the organic vapor surveys at all locations of soil excavation, as described in Comment No. 31.
Action: See action to Comment No. 31.

33. **Commenting Organization:** Ohio EPA **Commentor:** OFFO
Section #: 4.2.1.3 **Pg #:** 4-22 **Line #:** 15 **Code:** C
Original Comment #: 33

Comment: This is a risky strategy on the part of DOE. It is worth re-iterating that Ohio EPA reserves the right to 'second guess' the strategies used in developing a PSP and requesting that additional data be collected before approving an IRDP.

Response: Comment acknowledged. As discussed in recent meetings, the DOE intends to informally submit draft PSPs 30 days in advance of initiating sampling activities.

Action: Affirm DOE's intention to submit the draft PSPs 30 days in advance of initiating sampling activities.

34. **Commenting Organization:** Ohio EPA **Commentor:** OFFO
Section #: 4.2.1.3 **Pg #:** 4-23 **Line #:** 32 **Code:** C
Original Comment #: 34

Comment: If the reference to "(for characteristic beta radiation)" is meant to suggest Tc-99 sampling will be conducted by screening for total beta radiation, Ohio EPA does not find this to be an acceptable method for delineating Tc-99 contamination. Delineation of Tc-99 contamination should only be completed through specific analysis for this radionuclide.

Response: Agreed. The text is actually referring to the analytical procedure which will be followed in the laboratory. The analytical procedure calls for initially performing a chemical separation of technetium-99 and concentration step, which is followed by either alpha/beta proportional counter analysis or characteristic beta analysis through liquid scintillation spectrometry.

Action: Clarify text on page 4-23 to eliminate confusing wording noted by the Commentor.

35. **Commenting Organization:** Ohio EPA **Commentor:** OFFO
Section #: 4.2.1.4 **Pg #:** 4-24 **Line #:** 27-31 **Code:** C
Original Comment #: 35

Comment: If previous experiences are relevant, it is likely that a response to comment document will not be sufficient for Ohio EPA to approve the initiation of field work. Therefore, Ohio EPA recommends DOE incorporate a re-submittal of the revised IRDP for approval prior initiation of field work. This scheduling will reduce the likelihood of DOE continuing its current practice of initiating work at risk and without agency approval.

Response: Comment acknowledged. As a general practice, DOE does not intend to initiate IRDP-based field work unless either conditional or final EPA and Ohio EPA approval is obtained. The submittal of draft IRDPs are generally scheduled such that enough time will be available to submit a revised document for review and approval prior to the need to initiate excavation activities. It needs to be recognized, however, that DOE may, depending on select circumstances, request a conditional approval from the EPA for an IRDP based on EPA review of detailed comment responses and/or change pages/revised drawings.

Action: Revise text on page 4-24 to better describe DOE's intentions for document approval, and the circumstances leading to a need for conditional approvals ahead of full approval of the IRDP.

36. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.2.2.2.3 Pg #: 4-27 & 28 Line #: Code: C
 Original Comment #: 36

Comment: Ohio EPA disagrees with DOE's assertion that process waste encountered during remediation of waste disposal areas could be considered nuclear materials requiring solicitation for sale. All materials removed from waste disposal areas during remediation are a waste and should be dispositioned as such. By disposal of these process residues in a waste disposal area, DOE has declared them a waste and thus they must be managed and disposed of as a waste not a nuclear material. The document should be revised to state the process residues will be managed and disposed of as waste.

Response: Agreed. The paragraph will be revised to read, "Uranium metal in various forms (e.g., ingots, end crops, cuttings) may be encountered during excavation activities. These metals will be segregated and managed in accordance with the FEMP Waste Disposition Program." All references to the sale of nuclear materials will be deleted.

Action: The text will be revised as stated in the response.

37. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.2.2.3.1 Pg #: 4-28 Line #: Code: C
 Original Comment #: 37

Comment: The text should state when unanticipated debris is removed the soils surrounding the debris will be re-evaluated for WAC attainment. This is necessary since if the debris was unanticipated then the characterization of the area failed to anticipate it and any associated contamination.

Response: Upon excavation of either anticipated or unanticipated debris, the items will be scanned using real-time analytical techniques and hand-held organic vapor detectors to assess health and safety concerns prior to handling or removal. After the items have been removed, associated soils will be scanned with real-time radiological techniques and hand-held organic vapor detectors for OSDF WAC determination. The debris that does not meet WAC will be sent off-site, and will be stored separately in a dedicated, managed area adjacent to the above-WAC soil pile until such time that it is sent off-site for disposal. Readers should also see Comment No. 12, which discusses issues concerning the application of OU3 WAC to debris from the other operable units. (Note, however, that Comment No. 12 is currently undergoing revision, in response to debris segregation issues raised for the South Field area of the site.)

Action: Section 4.2.2.3.1 will be revised to read, "In the event that unanticipated debris, USTs, pipes, and other non-soil-like items are encountered during excavation, the material encountered will be scanned using real-time radiological techniques and hand-held vapor detectors to assess health and safety concerns prior to handling or removal. After the items have been removed and segregated, associated soils will be scanned using real-time radiological techniques and hand-held organic vapor detectors for OSDF WAC determination. Excessive soil will be removed from the debris and the materials will be inspected and segregated for disposal consistent with the WAC, segregation, and disposal criteria for debris as presented in Sections 3.4 and 5.2.2, respectively."

38. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.2.2.3.2 Pg #: 4-28 Line #: Code: C
 Original Comment #: 38

Comment: The text should state when unanticipated process residue is removed the soils surrounding the residue will be re-evaluated for WAC attainment. This is necessary since if the residue was unanticipated then the characterization of the area failed to anticipate it and any associated contamination.

Response: Agreed. Similar to the procedures for handling unanticipated debris, as process residue is encountered, whether anticipated or unanticipated, real-time instrumentation will be

used to preferentially excavate and segregate the materials in question from materials destined for OSDF disposal. Readers should also see Comment No. 12, which discusses issues concerning the application of OU3 WAC to debris (and process residue) from the other operable units.

Action: The following sentence will be added to line 33 on page 4-28 (Section 4.2.2.3.2), "Real-time technology will then be utilized to fully screen the excavated area for the presence of above-WAC materials."

39. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.2.3.1.1 Pg #: 4-32 Line #: Code: C
Original Comment #: 39

Comment: This document should designate the location for the above WAC storage pile or reference a specific document which will provide a location and design for the pile. Obviously strict controls will be needed for such a pile. Additionally, any RCRA characteristic wastes must be stored in compliance with RCRA storage requirements. The document should specify this requirement.

Response: Agreed. This comment is related to Comment No. 40 concerning overall pile management. Please see response to Comment No.40. A statement will be added that the RCRA characteristic soils that are delineated within the six designated areas will be stored in compliance with RCRA storage requirements. Current plans call for containerizing these soils at the time they are excavated and ultimately delivering them for treatment, based on anticipated volumes. The IRDPs will delineate the actual approach(es) for RCRA-compliant storage in a given area (including storage in piles, where necessary) based on the actual volumes determined through the planned pre-excavation characterization step.

Action: See Comment No. 40, and add statement identified in the response above to Section 4.2.3.1.1.

40. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.2.3.2 Pg #: 4-33 Line #: Code:
Original Comment #: 40

Comment: The tracking of soils into and out of stockpiles has been a major concern of Ohio EPA. Poor documentation of the movement and analytical status of soils into the West Impacted Stockpile has already had serious and potentially expensive implications for the use of this pile as winter cover for the end of this construction season. (As recently as last Thursday Ohio EPA observed soils with no analytical data being placed if not on then adjacent to and physically touching this stockpile.) There are similar problems with maintaining the various Removal Action 17 stockpiles. Ohio EPA expects the revised document to include detailed method for delineating stockpiles as above WAC, below WAC, below FRL, or uncharacterized. The method currently employed by DOE does not work in application. The revised document should clarify a responsible group for managing piles and ensuring pile integrity is maintained. In addition, the document should define how the WAO will oversee the stockpile program. Ohio EPA recommends DOE immediately develop and implement a strict, easily understood and managed procedure which includes accountability for pile managers and any contractor working near the pile.

Response: For the past year, the SCEP project has been developing a comprehensive material inventory and tracking system for bulk materials. While organizational adjustments related to the development and eventual execution of the WAC Attainment, Sitewide Excavation, and Impacted Materials Placement Plans have necessitated an ongoing revision to this system, we believe the basic administrative process it portrays for inventoring and tracking waste material is a sound one. The basic elements of the material inventory and tracking system are as follows:

All remediation, construction, and maintenance projects are required to generate a project waste identification document (PWID) as part of their projects initiation. PWID development includes a review of the Sitewide Environmental Database and a determination of the character or profile of the waste materials to be encountered. The information gathered into the PWID is then used by SCEP personnel to identify an appropriate stockpile location for any excess soils generated by the project. These stockpiles (every "source" and "destination") are assigned unique Material Tracking Location (MTL) numbers. PWIDs are reviewed and approved by the SCEP Project Manager.

The actual movement of waste material is preceded by the preparation of a Field Tracking Log (FTL) which identifies the source and destination MTL as well as the volume of material moved. These FTL are completed by SCEP field representatives who monitor ongoing work activities.

Data from the PWID, the MTL locations, and the FTL are all recorded into an electronic database (the Integrated Information Management System, or IIMS) which ties the SED data to the stockpile placement via the PWID, MTL, and FTL. IIMS reports can list the volume in each stockpile, the source of the material in a stockpile, and the SED data associated with the material in the stockpile. Other reports can also track where excavated soils were staged during project activities.

While we are confident that the material inventory and tracking process is effective, we do acknowledge weaknesses in its application. One significant weakness has been administrative controls to ensure routine application of the PWID to projects not directly associated with soils remediation projects. This weakness will be addressed by linking generation of a PWID to the issuance of the FEMP's well-recognized internal penetration permit. This will extend control to the occasional maintenance-type actions that occur outside of the soil remediation project. At a site of this complexity and size, the FEMP recognizes that often the most effective control is to extend an existing program into the new area desired, rather than creating something new that is not easily publicized.

A second weakness has been inconsistent application of engineering controls (such as colored placards, security fencing, gates). This will be addressed in several ways. Procedures being developed, and the corresponding organizational interfaces being established, will recognize a distinction between a designated stockpile for the temporary storage or staging of materials intended for transfer to a designated final placement facility (such as the OSDF, or an off-site facility) and the working stockpiles necessary for a project to execute work activities. Stockpiles for off-site transportation, or OSDF placement, will be controlled by the installation of perimeter fencing and controlled ingress and egress. Project working stockpiles which have had a formal dispositioning pathway (i.e., OSDF; off site; or clean backfill) assigned to them will be fenced (construction fencing) and posted if they will remain in place for more than one month. Controlled stockpiles will be demarcated by postings, which will identify the responsible project manager. Seeding will also be used for all piles with a life extending beyond 45 days. The decision to apply fencing (remaining in place for more than 30 days) and seeding (remaining in place for more than 45 days) will be triggered as soon as project personnel have determined the need for these time frames; it should not be construed that these time frames have to elapse before the decision is made.

The waste generator projects will have responsibility for waste material identification, segregation, handling, and inventory control and management. WAO will perform full-

time oversight of project activities to monitor the integrity and accountability of these functions. Necessary for WAO acceptance of any waste material for placement in the OSDF will be the demonstration of traceability to the materials' point of site origin.
Action: Revise Section 4.2.3.2 to address items noted in the response.

41. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.3.1 Pg #: 4-39 Line #: 3-4 Code: C
Original Comment #: 41

Comment: Ohio EPA does not believe the current method of PSP development and implementation is acceptable. This document should include a commitment to provide PSPs to the EPA 30 days prior to the initiation of any field work. Without such a commitment, Ohio EPA expects that IRDPs will be disapproved due to a lack of Agreement on the appropriate amount and type of data needed for WAC delineation.

Response: Agreed. Similar to the discussion provided in Comment No. 33, the DOE intends to informally submit draft PSPs 30 days in advance of initiating sampling activities in order to give EPA, hopefully, sufficient time to review the draft PSP and offer comments or concerns relative to the area-specific characterization effort to design the most appropriate excavation strategy.

Action: See Comment No. 35.

42. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.3.2 Pg #: 4-42 Line #: Code: C
Original Comment #: 42

Comment: Ohio EPA does not believe that sufficient information currently exists to delineate all above WAC areas on this or subsequent figures. We expect that each IRDP will present the proposed WAC delineation and appropriate data justification.

Response: DOE will clearly note on the figures and in the accompanying text where they are referenced that these figures represent the anticipated areas of excavation and are included for information purposes only. The text will further note that each IRDP will present the proposed WAC excavation delineations and appropriate justification.

Action: Revise figures noted by the Commentor in Section 4.3.2 as requested, and add language in the text at each appropriate figure citation that identifies the IRDPs as the documents that will formally propose estimated excavation extents along with appropriate data justification. The figures will clearly be denoted as "for information purposes only."

43. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.3.4 Pg #: 4-44 Line #: Code: C
Original Comment #: 43

Comment: The section discusses soils currently in piles but fails to address soils containerized under RA17. Will these soils be managed as legacy waste and disposed off-site? If not, a sampling approach for each container must be developed and presented in this plan.

Response: DOE agrees that containerized soils must be properly characterized prior to disposition to the OSDF. Containerized soils originate from two sources. The first of these is Investigation Derived Waste (IDW), comprising approximately 3,100 containers. The characterization method for IDW soil required first that the original source location be identified. This was accomplished through data queries of the SED. 150 containers found to have originated from potentially RCRA characteristic areas were segregated and sampled for area-specific TCLP constituents using SW-846 percentile sampling methods. Another 150 containers of unknown origin will be sampled under the same protocol for the full WAC COC list. Subject to acceptable analytical results, the sampled drums will be emptied into SP-1. The remainder of the IDW containers (approximately 2,800) have been emptied in stockpile SP-1 pursuant to the requirements

45. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.3.3 Pg #: 4-45 Line #: 19-20 Code: C
 Original Comment #: 45
 Comment: Ohio EPA has significant concerns with the characterization of the western stockpile. Above WAC materials are known to have been placed in and later removed from the pile. Currently materials are being added to the pile from uncharacterized areas in A1P2. Ohio EPA expects a PSP to be developed for appropriate characterization of the pile then for the agencies to review and approve that PSP. PSP review and approval for the pile is necessary as no IRDP will be developed for removal of the pile.
 Response: Agreed. A revision to the WAC Attainment PSP for the western stockpile is currently under development in order to also include sampling to characterize the more recently disturbed areas of the pile which potentially may have had uncharacterized soil introduced in addition to the rest of the pile. Once the PSP-driven characterization activity is complete, the FEMP will submit the second-step implementation document that was described in Comment No. 44.
 Action: The PSP for sampling the Area 1 Phase I West Impacted Soil Stockpile will be submitted for agency review, and following completion of the characterization effort a second-step implementation document will be submitted as described in Comment No. 44.

46. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Figure 4-12 Pg #: 4-46 Line #: Code: C
 Original Comment #: 46
 Comment: The figure presents an additional argument for implement a strict control policy for pile generation. An additional pile not included in the figure has been generated in the east field near the STP as a result of installation of the new north access road. This pile was generated with uncharacterized soils. The figure also fails to include the numerous smaller piles of soil within the production area. These piles should be included in a revision of the figure. The figure should designate the names for each pile.
 Response: The FEMP apologizes for any confusion created by the inclusion of Figure 4-12 in the WAC Attainment Plan concerning the presence of stockpiles. This figure was included so as to provide a visual representation of the areas to which Excavation Approach C was to be applied. It was not included to be viewed as a controlled representation of current designated storage/staging or intra-project working stockpiles, and was intentionally stamped "DRAFT" to denote this status.

Relative to the future controlled depiction of site designated stockpiles, the above-WAC and below-WAC material transfer stations will be clearly and accurately portrayed on controlled site drawings (the former is currently designated on controlled drawings as SP-6). In addition, temporary storage areas for materials requiring treatment, and the treatment-related areas (sizing, special materials processing, material segregating) will be delineated.

Intra-project working stockpiles will be controlled with the same administrative controls applied to the designated stockpiles. However these piles, because of their transient nature (transient because they move as a project's immediate work area moves) will not be depicted on controlled drawings. Rather, the project will maintain working drawings of the approximate locations and the actual areas will be clearly demarcated through field markings (flags) and placards.

Action: Revise Figure 4-12 to more clearly denote that it is for information purposes only. See also Comment No. 42.

47. Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 4.4 Pg #: Line #: Code: M

Original Comment #: 47

Comment: Ohio EPA does not understand the basis for inclusion of this section in the document as no other deliverable has included such a section. Ohio EPA disagrees with any assertion the section may be making regarding limitations of Ohio EPA's oversight role. Ohio EPA will continue to exercise it's oversight in the manner it deems necessary to ensure compliance with ARARs and approved deliverables. In no way will Ohio EPA approval of this document include approval of this section. Ohio EPA will specifically exclude approval from this section. Ohio EPA maintains it may be necessary and appropriate to collect independent samples for WAC attainment at any point in the delineation, excavation, or disposal process.

Response: Agreed. The intent of this section was to facilitate planning and coordination of EPA and Ohio EPA's field oversight at the various phases of the project. It was not intended in any way to limit agency oversight. DOE recognizes EPA and Ohio EPA's right to implement oversight as appropriate, including the possibility that samples will be collected during or post excavation. Because the collection of samples by agency personnel will affect the flow of contractor operations, DOE believes it is important to work with the regulators to achieve agreement as to how such activities will be routinely implemented. The next version of the WAC Attainment Plan will include a discussion of how the FEMP will plan for the different basic scenarios that could result should EPA or Ohio EPA decide to collect independent samples for WAC attainment verification. Follow-up discussions with the agencies are probably necessary to make sure all parties understand the protocols and resulting actions needed should any agency sampling results conflict with the WAC attainment determinations made via the FEMP's real-time and/or physical sampling and analysis results.

As discussed with Ohio EPA and incorporated into other comments, DOE will be utilizing real-time analytical techniques as a major element of the WAC attainment demonstration process. Through the use of real-time analytical techniques during field excavation for the WAC attainment process, the text in this subsection that denotes the pre-excavation characterization step as the sole driving mechanism for determining WAC exceedance areas will be revised.

Action: Add additional language to Section 4.4. to reflect above modifications. Add a new subsection to discuss the scenarios and expected actions to address the results of independent agency sampling during the WAC attainment demonstration process.

48. Commenting Organization: Ohio EPA Commentor: OFFO

Section #: 4.4.2.2 Pg #: 4-61 Line #: 22-24 Code: M

Original Comment #: 48

Comment: Obviously, Ohio EPA does not concur with the suggestion that samples can not be collected after excavation has been initiated. Indeed, it is likely that Ohio EPA will collect samples at this or latter points in the process. In addition, it is probable that DOE and/or the WAO will need to collect samples after initiation of excavation in order to confirm WAC attainment, to investigate possible hot spots, etc.. Ohio EPA believes it is short sighted of DOE to rule out sampling after the initiation of excavation and will not concur with such an approach.

Response: Agreed. EPA is obviously free to take samples anytime during the soil excavation process to confirm WAC attainment. DOE's concern is not with sampling but with (1) how physical samples can be efficiently collected and coordinated with the subcontractor's efforts to excavate soils and (2) how the results from any WAC attainment sampling (pre or post-excavation) are to be handled.

Also, as discussed with Ohio EPA and incorporated into other comments, DOE will be

utilizing real-time analytical techniques as a major element of the WAC attainment demonstration process. Again, through the use of real-time analytical techniques during field excavation for WAC attainment, the text in this subsection that denotes the pre-excavation characterization step as the sole driving mechanism for determining WAC exceedance areas will be revised.

Action: Add additional language to Section 4.4.2.2 to reflect above modifications. See also response to Comment No. 47.

49. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.4.3.2 Pg #: 4-62 Line #: 26-28 Code: M
Original Comment #: 49

Comment: Obviously, Ohio EPA does not concur with the suggestion that samples can not be collected after excavation has been completed. Indeed, it is likely that Ohio EPA will collect samples at this or later points in the process. In addition, it is probable that DOE and/or the WAO will need to collect samples after initiation of excavation in order to confirm WAC attainment, to investigate possible hot spots, assess contractor compliance, evaluate transport success, etc.. Ohio EPA believes it is short sighted of DOE to rule out sampling after the completion of excavation and will not concur with such an approach.

Response: See response to Comment No. 48, which raises similar concerns.

Action: See action to Comment No. 48.

50. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.0 Pg #: Line #: Code: C
Original Comment #: 50

Comment: The section should include a reference to the prohibition against disposal of tires in the OSDF.

Response: Agreed. A reference to the prohibition against the disposal of tires in the OSDF will be added to Section 5.1.2.1. Please note that the prohibition was provided in Section 3.1, where the OSDF's excluded items list is summarized.

Action: The following sentence has been added after item #4 in Section 5.1.2.1, "In addition, items containing free liquids, whole or shredded scrap tires, and used oils are prohibited from disposal."

51. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 5-1 Pg #: Line #: Code: C
Original Comment #: 51

Comment: Delete reference to oversized debris under Category A as discussed in previous comments.

Response: See response to Comment No. 18.

Action: See action to Comment No. 18.

52. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.1.2.3 Pg #: 5-8 Line #: 8-11 Code: C
Original Comment #: 52

Comment: Delete reference to oversized debris as discussed in previous comments.

Response: See response to Comment No. 18.

Action: See action to Comment No. 18.

53. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 5-2 Pg #: Line #: Code: C
Original Comment #: 53

Comment: As discussed in previous comments, delete reference to oversized debris in the footnote.

Response: See response to Comment No. 18.
 Action: See action to Comment No. 18.

54. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 6.1.1 Pg #: 6-2 Line #: Code: C
 Original Comment #: 54

- Comment:
- a) This section fails to include in its analysis an evaluation of constituents to be sent to the AWWT as a result of treatment operations in other OUs. If current sludges regularly fail the WAC, then it is likely that future sludges will be even more likely to fail with increased waste handling and processing. The section should be revised to include a discussion and estimates regarding increased contaminant loading to the AWWT from the various remedial projects on the site.
 - b) The section uses calculations performed for one volatile organic to draw conclusions regarding all organics. A discussion of relative vapor pressure for various WAC COCs and the impact of those on the calculations previously completed needs to be included. In addition, it is unclear how this calculation is relevant to semi-volatile organics.
 - c) The section needs to provide a discussion of the volume of each container, fill rate of the container, and the basis for collecting a single sample to represent the entire volume.
 - d) Have the sludges been sampled for TCLP? If so, such data should be presented. If not, additional data regarding this is required.
 - e) As new waste streams will continually be added to the AWWT by remediation in various areas it will not be acceptable to base future performance on historical data (e.g., Tc-99 sampling can not be ended simply because a period of time has passed with no detections).

Response: As discussed at the November 5, 1997 meeting, the WAC attainment compliance process for the AWWT residuals will be provided at a later date once additional definitive process knowledge and a characterization data base is obtained. It was agreed that the knowledge base is not sufficient at this point to allow for definitive constituent short-listing. A specific proposal for WAC attainment demonstration for the AWWT residuals will be provided for agency review and approval before the residuals are dispositioned to the OSDF. (The timing of the proposal will be set once the future necessary date for dispositioning AWWT residuals at the OSDF is firmly established.) As agreed at the meeting, the FEMP will allow sufficient lead time for agency review ahead of the target dispositioning date. In the meantime, all current residuals are planned to be sent off-site for disposal. The earliest likely date for needing on-site disposal capacity for the residuals is probably FY 1999.

Action: Revise Section 6.1.1 to describe the path forward noted in the response.

55. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 6.1.2 Pg #: 6-3 Line #: Code: C
 Original Comment #: 55

- Comment:
- a) Since these resins retain and concentrate contaminants, TCLP data for these materials will be necessary to ensure they are not characteristic hazardous wastes.
 - b) Additional data should be provided to support the suggestion that concentrations within the resin or carbon will be homogenous. The information provided is insufficient to support the conclusion that a single sample is sufficient for each batch.
- Response: At the time of the signing of the RODs for Operable Units 5 and 3, a thorough review was conducted to identify those FEMP soil and debris streams that contained RCRA

characteristic constituents that also offered a reasonable opportunity to apply a cost-effective level of treatment to further satisfy the preference for remedies that employ treatment as a principal element. The AWWT resins were included in this review, and it was concluded these materials were not of sufficient volume to offer a reasonable treatment opportunity. Thus they were not included in the list of agreed-to characteristic waste streams that require further treatment prior to placement in the OSDF. The resins will require evaluation for WAC attainment, but TCLP tests are not necessary for on-site disposal in accordance with the RODS. As noted under Comment No. 54, additional requested information and clarification will be provided on the process for demonstrating WAC attainment for the AWWT residuals, including the resins, and the deferral of the selection of individual WAC COCs to follow-up documents.

Action: See Comment No. 54.

56. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 6.2 Pg #: 6-3 & 4 Line #: Code: C
 Original Comment #: 56
 Comment: This section as written provides sufficient WAC attainment strategy for geotechnical samples returns alone. Any other type of sample returns will require a revision or addendum to the WAC Attainment Plan and undergo review and approval by the EPAs.
 Response: Agreed. The text will be clarified. (See also response to Comment No. 21.)
 Action: The last sentence of Section 6.2 has been revised to read, "If at some time in the future the laboratory contract policy is changed and additional analytical sample residues are being returned to the FEMP, these sample returns would be considered an additional ancillary waste stream and a WAC attainment strategy would be developed at that time and documented in an addendum to this plan." (See also Comment No. 21).

57. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 6.3 Pg #: Line #: Code: C
 Original Comment #: 57
 Comment: As PPE was not specifically addressed by the OU3 FS/ROD, it would be useful to provide an estimated volume of PPE to be generated over the course of the remediation.
 Response: As shown on Table 4-2 of the OU3 Record of Decision for Final Remedial Action (Final, August 1996), PPE is categorized under Miscellaneous Materials (OU3 Category I), unless the PPE was associated with the removal of asbestos, in which case it is categorized as Regulated ACM (OU3 Category H). Table 3-2 of the OU3 Remedial Investigation and Feasibility Study Report (Final, February 1996) lists the estimated quantities of PPE to be generated during the decontamination and dismantlement of site structures; these estimates are 6,860 unbulked cubic feet (10.4 tons) of Category H PPE and 36,000 unbulked cubic feet (54.5 tons) of Category I PPE. These estimates were included in the OU3 source term for use in risk calculations, cost estimates, and other facets of the OU3 FS and ROD.

As discussed in Section 6.3 of the OSDF WAC Attainment Plan, PPE generated by non-OU3 remediation projects at the FEMP will be dispositioned in the OSDF in a manner consistent with debris handling and disposition strategies discussed in Section 5 of the OSDF WAC Attainment Plan. Based on remedial design planning performed to date, the following table lists estimated quantities for each major remediation project or functional activity:

Section #: 7.2 Pg #: 7-2 Line #: 27 Code: M
 Original Comment #: 60
 Comment: The Plan states that the WAO project team reports directly to the Vice President for Soil and Water Projects. This is not what the Ohio EPA intended when we proposed that an independent organization be developed to avoid potential conflicts of interest between an organization whose performance is measured by volumes of soil excavated and an organization whose performance is measured by adherence to a rather esoteric WAC protocol.
 Response: Following the discussions on this topic held at the November 5, 1997 meeting, it was agreed that the WAO organization will remain as a reporting organization to the Vice President for Soil and Water Projects. The FEMP remains committed to building an effective WAO organization that will enhance the overall attainment demonstration process. As Ohio EPA pointed out at the meeting, the agency is less concerned about where the organization lines up but rather that its work scope is executed effectively.
 Action: None necessary.

61. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 8.1 Pg #: 8-1 Line #: 14 Code: C
 Original Comment #: 61
 Comment: The plan refers to a WAC compliance assurance program. What provisions are being made for Regulator review and approval of this program?
 Response: The text referenced by the comment relates to development of internal implementing procedures for the WAO organization. These procedures will guide WAO in implementing its responsibilities as defined in the WAC Attainment Plan. The WAC Attainment Plan is the governing document that defines enforceable regulatory requirements. The referenced procedures are for internal control and clarification purposes only and do not affect the umbrella regulatory requirements. They are analogous to a large number of existing FEMP procedures not subject to agency review and approval, that simply define internal operating parameters consistent with regulatory obligations. As such, DOE does not believe a review of these internal procedures by the agencies is necessary.
 Action: Section 8.0 will be revised to better detail the specific roles and responsibilities of the WAO organization.

62. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 8.2, 8.3, 8.4 Pg #: 8-1 thru 8-3 Line #: Code: C
 Original Comment #: 62
 Comment: These sections describe design phase reviews, execution phase reviews and staging and transport reviews. What provisions are being made for Regulator participation in these reviews?
 Response: During implementation of the project, DOE will maintain close contact with the regulatory agencies concerning status and identification of key emerging technical issues that require resolution. As previously discussed, the IRDPs and the WAC Attainment Plan are being submitted for regulatory approval. To facilitate field execution, DOE requests that EPA and Ohio EPA identify the key elements of the approved design which will require agency review and/or approval prior to the field implementation of the changes. DOE will continue to proactively involve the agencies in emerging field implementation issues. Any lower tier documents or review processes must be consistent and compliant with these documents, and are only to guide internal operations planning. As such, these items are not expected to activate new issues requiring regulatory agency review and approval.
 Action: Section 8.0 of the WAC Attainment Plan will more clearly define the roles and responsibilities of the WAO organization.

63. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.2 Pg #: 8-2 Line #: 13-16 Code: C

Original Comment #: 63

Comment: The section fails to describe what type of changes will require WAO approval. Additional detail and examples should be provided to differentiate between changes requiring and not requiring WAO approval.

Response: The IRDP, when approved by EPA and Ohio EPA, establishes the approved design basis for execution of project activities. The WAC Attainment Plan establishes WAO as a primary peer reviewer of the IRDP, and requires WAO concurrence on the IRDP prior to submittal to the agencies. Accordingly, any subsequent design changes which impact the approved design basis require WAO review and concurrence (and would also therefore require concurrence from the agencies on the design change document or revision and resubmittal of the entire IRDP).

Action: Revise Section 8-2, pg. 8-2, lines 13-16 to read:

"Design changes which impact the design basis or alter the designed tolerances established in the IRDP will require review and approval by EPA and Ohio EPA, after WAO has completed a review and concurred with already reviewed and concurred on submitted design changes. Changes to the design resulting from unanticipated field conditions which do not impact the design basis or alter the designed tolerances will not require agency review and approval. All design changes will be performed in accordance with FEMP design change procedures. All design changes will be evaluated by the responsible projects engineering group for impact to the design basis established in the approved IRDP."

64. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 8.6 Pg #: 8-4 Line #: Code: M

Original Comment #: 64

Comment: This section addresses the procedures for resolving non-conformances with the WAC Attainment Plan. What provisions are being made for Regulator participation in these reviews?

Response: Section 8.0 of the WAC Attainment Plan is being rewritten to better clarify and delineate the roles and responsibilities of the WAO project in the overall WAC attainment strategy. The purpose and scope of the WAO Project will remain as portrayed in Revision B of the WAC Attainment Plan, however Sections 8.1 through 8.6 will be enhanced so as to provide the necessary level of process detail to enable regulatory review and approval of the WAO program without reference to internal implementing procedures.

Section 8.6 in particular will be re-written to more accurately address the required actions for materials found to be noncompliant with the WAC Attainment Plan. The current wording of Section 8.6 implies that non-compliant material could be dispositioned as compliant through a corrective action disposition process. This is not correct. Materials found to be non-compliant with the WAC Attainment Plan are by default, "Above WAC," and will be processed into the appropriate off-site disposition stream.

Action: Chapter 8.0 will be revised to better detail the specific roles and responsibilities of the WAO project.