



State of Ohio Environmental Protection Agency

Southwest District Office

401 East Fifth Street
Dayton, Ohio 45402-2911
(513) 285-6357
FAX (513) 285-6249

FERNALD _____

LOG A-0087

OCT 18 9 18 AM '99

2559

FILE: _____
LIBRARY: _____

George V. Voinovich
Governor

October 15, 1999

Mr. Johnny Reising
U.S. Department of Energy, Fernald Area Office
P.O. Box 538705
Cincinnati, OH 45253-8705

Re: COMMENTS ADDENDA 2, 3, AND 4 OF THE IMPP FOR THE OSDF

Dear Mr. Reising:

This letter provides as an attachment Ohio Environmental Protection Agency comments on the draft final Addenda 2, 3, and 4 to the Impacted Material Placement Plan for the On-Site Disposal Facility.

If you have any questions, please contact Tom Ontko or me.

Sincerely,

Thomas A. Schneider
Fernald Project Manager
Office of Federal Facilities Oversight

cc: Jim Saric, U.S. EPA
Terry Hagen, FDF
Mark Shupe, HSI GeoTrans
Francie Hodge, Tetra Tech EM Inc.
Ruth Vandergrift, ODH

Q:\FEMP\IMPP234.WPD

**Ohio Environmental Protection Agency Comments on Addenda Nos. 2, 3, and 4
to the Impacted Material Placement Plan**

General Comments on all three Addenda

- 1) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Pg #: Line #: Code: general
 Comment: Throughout this Plan (as an example, see Note 1 Figure 4 of Addendum No. 2) mention is made that the intervening horizon of impacted material should be placed to a compacted thickness of minimum 2 feet or the thickness of an intervening horizon of Category 1 material, whichever is greater. This is in apparent references to recent DOE proposals to reduce the thickness of intervening layers from 4 feet thick to 2 feet thick. The text in this Plan should be simplified to read "...and covered with a 4 feet thick intervening layer of Category 1 material."
- 2) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Pg #: Line #: Code: general
 Comment: The Addenda give criteria for the selection of grids suitable for the various placement schemes. For example, a thorium grid should not be located within 100 feet of a Category 3 grid in the same horizon. The Plan does not specify restrictions on placement of materials subsequent to the thorium grid. A comprehensive list of placement restrictions should be developed. Because the thorium debris will receive only minimal compaction, thorium debris should have placement restrictions similar to Category 4 materials i.e., no two grids of Category 4 or thorium debris should be placed in the same vertical horizon.

Comments Specific to Addendum 2

- 3) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Initial and additional lifts... Pg #: 4 Line #: Code: c
 Comment: The text states that after placement of the thorium material an initial lift of Category 1 material would be placed and compacted using a minimum of four passes of a self-propelled double-drum roller compactor, a smooth-drum vibratory compactor or other equipment as approved. The double-drum compactor currently in use is equipped with feet and experience has shown that this machine achieves better compaction than the vibratory roller. Our concern is that the feet of the compactor are more likely to extend through the Category 1 material and bring the thorium-contaminated debris to surface. The text should be revised to indicate that a Cat 826 compactor is the preferred equipment and other equipment may be approved if the Cat 826 causes thorium contamination to rise to the top of the initial lift.

- 4) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Option 1 Method Pg #: 2 Line #: Code: c
Comment: Using the Option 1 method, each 100 foot square OSDF grid would hold roughly 400 cubic yards of thorium debris (each grid holds two units each 95'X40'x1.5'). At the January 27 meeting, DOE reported that roughly 6,000 cubic yards of thorium debris are ready for disposal. Approximately 15 grids are therefore needed to dispose of the available thorium debris under the Option 1 method. Considering the restrictions on the bottom of page 2 and continued on page 3, are there enough available grids in Cells 2 and 3 to place all the thorium debris? Please provide a sketch showing placement options that honor all the restrictions. The sketch should start with the current grid placement history and demonstrate that the thorium will in fact "fit" using the proposed scheme.
- 5) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Debris Placement Pg #: 4 Line #: Code:
Comment: The Plan calls for spreading the thorium debris in 18 inch plus or minus 3 inch loose lifts followed by tamping with a backhoe bucket. To prevent spreading of thorium contamination, no passes are scheduled with the Caterpillar compactor until after the initial lift of Category 1 cover has been placed. Past observations of the Caterpillar 816 compactor led to the conclusion that this equipment was only marginally satisfactory in compacting larger structural steel pieces. The heavier Cat 826 has been found to perform much more satisfactorily. We have to conclude that achieving satisfactory compaction of an 18 inch loose lift of structural steel with a backhoe bucket is going to be even more problematic. We suggest as an alternative that the debris be spread in loose lifts not to exceed 10 inches. Restrictions should also be placed that prohibit long lengths of steel from overlapping and causing "see-sawing" under the passes of the compaction equipment.
Add a requirement to proof-roll the final lift of Category 1 cover. This requirement should be similar to the existing requirement specified under the Compaction Procedures sections of the IMPP. These procedures require re-working soft spots or areas of visible deflection. Re-working should also be required in this Plan, but the possibility exists that recalcitrant soft spots or visible deflections would remain after repeated rework. In that situation it would defeat the purpose of this Plan to re-excavate and re-spread the thorium debris. If this situation occurs, we would expect the use of this method to be stopped until alternative procedures which perform satisfactorily can be developed.

Comments Specific to Addendum 3

- 6) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: 1 Line #: 2nd bullet Code: c
Comment: The second sentence of the second paragraph on this page starts "This alternative trenching method shall be used for non-routine placement of Category 2 impacted material when:" and then continues to the second bullet to finish, "Types of Category 2 material require special handling (such as large structural members that meet Category 2 materials size criteria). Of course, the description of Category 2 material in the IMPP states that Category 2 material can be handled *en masse*. It is unclear how material could both require special handling and be suitable for handling *en masse*. If the intent is to allow flexibility in placing small lots of material, we have no problem with this Addendum, but we can not think of any other reason why this method would be chosen over the standard Category 2 grid placement.
- 7) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Lift(s) of Category 1 Material Pg #: 3 Line #: Code: c
Comment: This section allows the initial compaction to be performed with "a self-propelled double drum roller compactor, a smooth-drum vibratory roller or other equipment as approved by the Construction Manager". Experience to date has shown that a Caterpillar 826 compactor is superior to a lighter compactor and greatly preferred over less-specialized equipment. The text in this and the preceding Section should be revised to permit only the Cat 826 to be used in compaction. Other Sections should also be revised so that the width of the trench will accommodate the compactor.

Specific Comments on Addendum 4

- 8) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Preparation of the Grid; Debris Placement; and Initial and Additional Lifts of Category 1 Material Pg #: 2 and 3 Line #: Code: c
Comment: The Addendum should list time limits to have all the asbestos debris covered (by end of day) and to have the entire grid covered and compacted (five working days).
- 9) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Pg #: Line #: Code:
Comment: The text states that after placement of the material an initial lift of Category 1 material would be placed and compacted using a minimum of four passes of a self-propelled double-drum roller compactor, a smooth-drum vibratory compactor or other equipment as approved. A Caterpillar 826 compactor currently in use is equipped with feet and experience has shown that this machine achieves better compaction than

the vibratory roller. Our concern is that the feet of the compactor are more likely to extend through the Category 1 material and bring the asbestos debris to surface. The text should be revised to indicate that a Cat 826 compactor is the preferred equipment and other equipment may be approved if the Cat 826 causes asbestos contaminated material to rise to the top of the initial lift.