



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-0648

8101

FEB 3 8 07 AM '00

FILE: 6446.5b

George V. Voinovich
Governor

January 31, 2000

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

Re: COMMENTS - DRAFT REVISED SILOS 1 & 2 FS/PP

Dear Mr. Reising:

The Ohio Environmental Protection Agency has reviewed your December 21, 1999 submittal, "Operable Unit 4 Draft Feasibility Study/Proposed Plan." Ohio EPA's comments on the document are attached.

If you have any questions, please contact me at (937) 285-6466.

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.
Jim Colleli, ODH

Q:\femplou4\ou4fs.wpd

1

REVISED FEASIBILITY STUDY SILOS 1 AND 2
and PROPOSED PLAN
December 1999

REVISED FEASIBILITY STUDY SILOS 1 AND 2

- 1. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2.1.1 Pg #: 3-59 Line #: 10 Code: C
Original Comment #:

Comment: OEPA has noted that during the 72-hour testing, the contractor was unsuccessful in operating the salt and metals drain. Since these systems are vital to the successful operation of the melter, how would DOE propose to receive assurances that the drains would operate properly if this technology was selected? This comment is also applicable to the operation of the dryer as described in Vitrification - Other and flush system in Chemical Stabilization - Cement-based.

- 2. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.2.4 Pg #: 3-73 Line #: 16 Code: C
Original Comment #:

Comment: Throughout discussions on the original OU4 FS and ROD, DOE maintained that the Silos would be scabbled prior to any on-site disposal. This assumption led many of us to conclude it would be more resource effective to ship the silo debris off-site for disposal. Recent AWR plans and the revised FS do not incorporate such a scabbling requirement. Ohio EPA maintains that the silo debris should be dispositioned off-site.

Upon review of the OU3 ROD and associated documents, Ohio EPA believes the silos themselves most closely associate with the process-related metals category of debris. This category of materials is determined to be disposed off-site in the OU3 ROD. The most similar on-site waste stream would be the Plant 1 Ore Silos. Upon demolition, these materials were disposed off-site as well. Therefore, Ohio EPA believes the OU3 ROD and DOE actions on the most similar waste form support our position that the silos debris should be disposed off-site.

- 3. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.3.4.2 Pg #: 3-112 Line #: 20 Code: C
Original Comment #:

Comment: Please provide a comparison in volume reduction between producing vitrified material as a frit as opposed to a monolith.

- 4. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.2.2.5 Pg #: 4-28 Line #: 22-25 Code: C
Original Comment #:

Mr. Johnny Reising
 January 31, 2000
 Page 2

Comment: The statement that "D&D costs are roughly the same for all alternatives" does not appear to take into consideration the complex piping schemes and building design associated with vitrification. The D&D cost associated with an interim storage pad would appear to be significantly less than for that of a complex, contaminated building. It would seem that costs associated with D&D and disposal of contaminated portions of the structures would be substantially higher than for non-contaminated areas such as storage pads. The document does not seem to differentiate these costs when evaluating D&D.

7. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Appendix A Pg #: General Comment Line #-: na Code: C
 Original Comment #:
 Comment: Draft 10 CFR 834 should be added to the ARAR/TBC tables.

REVISED PROPOSED PLAN FOR REMEDIAL ACTIONS AT SILOS 1 AND 2

1. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #:1.0 Pg #: 1-1 Line #: 14-15
 Original Comment #:
 Comment: The sentence "The EPA and Ohio EPA support the DOE." , should be included with the next sentence. Suggest deleting the above sentence and rewording the following sentence as "Together, the EPA, the Ohio EPA and DOE, actively promote...."
2. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #:1.0 Pg #: 1-1 Line #: General
 Original Comment #:
 Comment: The organization of the introduction should emphasize clearly the purpose of this document as part of the CERCLA decision-making process and less on site history. Site history is adequately addressed in Section 2.0 of this document.
3. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #:1.0 Pg #: 1-2 Line #: 18-22
 Original Comment #:
 Comment: This paragraph should be the first paragraph of the introduction because it clearly states the purpose of this document.
4. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #:2.1 Pg #: 2-5 Line #: 9

Q:\femp\lou4\lou4fs.wpd

Mr. Johnny Reising
January 31, 2000
Page 3

Original Comment #:
Comment: Add "(Th)" after "thorium".

5. Commenting Organization: Ohio EPA Commentor: OFFO
Section #:2.1.2 Pg #: 2-6 Line #: 22
Original Comment #:
Comment: What is "A₂/g" as referenced as a measure of average specific activity?
6. Commenting Organization: Ohio EPA Commentor: OFFO
Section #:2.1.2 Pg #: 2-6 Line #: General
Original Comment #:
Comment: The text continuously references silo content for application of DOT rules. Should the DOT rules apply to treated silo wastes or untreated silo wastes, and does this change any assumptions regarding transportation of the waste?
7. Commenting Organization: Ohio EPA Commentor: OFFO
Section #:2.2.3 Pg #: 2-11 Line #: 17-21
Original Comment #:
Comment: This bullet references a 1996 Work Plan within a ROD that was finalized in 1994.
8. Commenting Organization: Ohio EPA Commentor: OFFO
Section #:3.1 Pg #: 3-1 Line #: 19-20
Original Comment #:
Comment: Earlier in the document it is stated that nothing was added to Silo 1 & 2 materials and that was a reason it was considered 11(e)2 material. Here it is stated that tributyl phosphate was added. Correct inconsistencies in text.
9. Commenting Organization: Ohio EPA Commentor: OFFO
Section #:3.1 Pg #: 3-1 Line #: 27
Original Comment #:
Comment: What is "direct-penetrating radiation field"? This phrase is not commonly used to describe gamma radiation fields. Replace "direct-penetrating" with "direct" or "gamma" and footnote if the phrase is considered confusing.
10. Commenting Organization: Ohio EPA Commentor: OFFO
Section #:3.2 Pg #: 3-2 Line #: 15-24
Original Comment #:
Comment: How do the Sr and Tc-99 concentrations found in the decant sump system

Mr. Johnny Reising
 January 31, 2000
 Page 4

compare to environmental, i.e. background, concentrations? If they are some what elevated, these elements are also commonly found from processes related to reprocessing of spent fuels.

11. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #:3.2 Pg #: 3-2 Line #: 28
 Original Comment #:
 Comment: How elevated was the toluene?

12. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 3.5 Pg #: 3-5 Line #: 22-24
 Original Comment #:
 Comment: This sentence states that "These data do not necessarily suggest that the silos are the source of the observed concentration..." Add that these data does not rule out that the silos are also a source for the observed concentrations.

13. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.1 Pg #: 4-3 Line #: 7
 Original Comment #:
 Comment: The TTA and RCS have not been described as to this point in this document. A brief description earlier in the document may be warranted.

14. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 6.0 Pg #: 6-1 Line #: 12-20 Code: C
 Original Comment #:
 Comment: The bullets should be reformatted to emphasize two technologies rather than four alternatives, especially since these alternatives are not the bounding criteria, the two technologies are.

15. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #:6.1 Pg #: 6-6 Line #: General
 Original Comment #:
 Comment :Since transportation description is the same for both technologies; only the number of shipments changes, transportation may be more clear if it was broken off into a separate section. This would allow the reader to compare the technologies more easily.

16. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #:7.2 Pg #: 7-9 Line #: Figure 7.2-2

Q:\femplou4\lou4fs.wpd

Mr. Johnny Reising
January 31, 2000
Page 5

Original Comment #:

Comment: What are the sources of secondary wastes from the chemical stabilization alternatives?

17. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.2.2.2 Pg #: 7-10 Line #: 25-28
Original Comment #:
Comment: Have the cost associated with treatment/disposal of secondary wastes been considered, especially since vitrification technologies appear to require treatment before disposal?
18. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.2.2.3 Pg #: 7-13 Line #: 3-9
Original Comment #:
Comment: The relative "stacking" of radon gas during the vitrification process should be included here.
19. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.2.2.4.2 Pg #: 7-21 Line #: 8-9
Original Comment #:
Comment: Although permits are not required, text should be added to state that FEMP must still meet the substantive requirements for permitting.
20. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.2.2.4.3 Pg #: 7-21 Line #: 16-21
Original Comment #:
Comment: A sentence stating that the number of contractors available to bid chemical stabilization is far greater than the number of contractors to bid vitrification should be added.
21. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.2.2.5 Pg #: 7-25 Line #: 1
Original Comment #:
Comment: What is the basis for stating that "all four process options are cost effective"?
22. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 7.2.2.5 Pg #: 7-26 Line #: 10
Original Comment #:
Comment: It is stated that the D&D cost associated with chemical stabilization are

Mr. Johnny Reising
January 31, 2000
Page 6

higher due to the large interim storage facility. What type of facility is assumed for the interim storage facility? The D&D of the interim storage facility should be "clean" (decontamination not necessary) where as the D&D associated with vitrification technologies would be "dirty" (decontamination necessary). Additionally, the costs of disposal for "clean" vs. "dirty" debris should be evaluated.

23. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table A-3 Pg #: na Line #: na
Original Comment #:
Comment: The (proposed) 10CFR834 should be included in this table for fenceline radon concentrations not to exceed 0.5 pCi/L above background.