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**OHIO EPA'S COMMENTS ON THE OPERABLE UNIT 1 FEASIBILITY STUDY
AND PROPOSED PLAN**

05/24/94

OEPA DOE-FN
15
COMMENTS



State of Ohio Environmental Protection Agency

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H-4060

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May 25 10 15 AM '94

George V. Voinovich
Governor

May 24, 1994

Re: DOE FEMP
MSL #531-0297
OU1 FS/PP -
COMMENTS

Mr. Jack Craig
Project Manager
U.S. DOE FEMP
P.O. Box 398705
Cincinnati, OH 45329-8705

Dear Mr. Craig:

This letter provides Ohio EPA's comments on DOE's OU1 Feasibility Study and Proposed Plan submitted to Ohio EPA on March 4, 1994.

If you should have any questions, please contact me (513 285-6055).

Sincerely,

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

cc: Jenifer Kwasniewski, DERR
Mike Proffitt, DDAGW
Jim Saric, U.S. EPA
Ken Alkema, FERMCO
Lisa August, GeoTrans
Jean Michaels, PRC
Robert Owen, ODH

(LOJEK/D)
PARTIAL
ACTION RESPONSE
TO R-1041
(7611)

OHIO EPA COMMENTS
ON
OPERABLE UNIT 1 FEASIBILITY STUDY/PROPOSED PLAN

- 1) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: General Comment Pg #: Line #: Code: c
Original Comment #:
Comment: The document would be more user friendly if figures and tables were included within the text. DOE should revise the document to incorporate these into the text.
Response:
Action:
2. Commenting Organization: OEPA Commentator: GeoTrans
Section #: ES Page #: ES-4 Line #: 10 Code: C
Comment: This paragraph should indicate that the FS also presents information on remedial alternative costs and schedules.
Response:
Action:
- 3) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: ES Pg #: ES-5 Line #: 1-6 Code: c
Original Comment #:
Comment: It is likely that soil in contact with and close proximity to the waste will be contaminated to a level more representative of waste than soil. These soils should be managed with the pit wastes rather than as soils under Operable Unit 5. It is unclear from the text whether the treatability studies under OU5 will address the range of contaminants found within the waste pits and associated soils.
Response:
Action:
- 4) Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 1.2.1 Pg #: 1-16 Line #: 19-26 Code: c
Original Comment #:
Comment: This paragraph does not directly identify the glacial till as an aquifer. It should emphasize that although there are zones of higher permeability within the till, the till itself is a saturated aquifer system.
Response:
Action:
- 5) Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 1.2.3.3 Pg #: 1-39 Line #: 13 Code: e
Original Comment #:
Comment: Change "elements" to radionuclides.
Response:
Action:

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6. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 1.2.3.4 Page #: 1-36 Line #: 8 Code: C
 Comment: Note that 2-butanone is also listed as a common lab contaminant by USEPA in their functional guidance document on laboratory data validation.
 Response:
 Action:

7. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: Page #: 1-40 Line #: 4 Code: E
 Comment: Change "uranium" to "Uranium".
 Response:
 Action:

8. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 1.2.4 Page #: 1-42 Line #: 27 Code: G
 Comment: Was the groundwater modeling conservative as noted? The significance of recent revisions to the conceptual model of radionuclide transport through the glacial overburden should be addressed in this report.
 Response:
 Action:

9) Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: 1.2.5.2 Pg #: 1-52 Line #: 9- Code: c
 Original Comment #:
 Comment: This section should be revised to be consistent with revisions to the OU1 Remedial Investigation Report.
 Response:
 Action:

10) Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: 2.2.2.4 Pg #: 2-13 Line #: 21 Code: c
 Original Comment #:
 Comment: Tables 2-5, 2-6, & 2-7 will need to be revised consistent with revisions to the OU1 RI Report.
 Response:
 Action:

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- 11) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.2.2.4 Pg #: 2-14 Line #: 7-13 Code: c
Original Comment #:
Comment: The intent of this paragraph is unclear, especially with regard to the last sentence. The paragraph should be rewritten. If the ARAR was selected and it exceeded both background and the 10^{-6} risk-based PRG, then an incremental risk would exist for the difference between background and the ARAR. If multiple contaminants exist the ARAR should only be selected when it is more protective than the risk based concentration.
Response:
Action:
- 12) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.2.2.5 Pg #: 2-16 Line #: 14-15 Code: c
Original Comment #:
Comment: Risk-based values aren't derived for noncarcinogens. Revise the sentence to delete reference to risk-based values.
Response:
Action:
- 13) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.2.2.6 Pg #: 2-18 Line #: 12-17 Code: c
Original Comment #:
Comment: DOE must revise the soil and leachate PRGs to be protective of groundwater at the waste management unit boundary for both residual soil and disposal facility design. The remedial action must protect groundwater at the waste unit boundary for an on-property farmer.
Response:
Action:
- 14) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.2.3.1 Pg #: 2-20 Line #: 12-13 Code: c
Original Comment #:
Comment: Risk-based values aren't derived for noncarcinogens. Revise the sentence to delete reference to risk-based values.
Response:
Action:
- 15) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 2.2.4 Pg #: 2-22 & -23 Line #: 30- Code: c
Original Comment #:
Comment: DOE must revise the soil and leachate PRLs to be protective of groundwater at the waste management unit boundary for both residual soil and disposal facility design. The remedial

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action must protect groundwater at the waste unit boundary for a resident farmer. It is unacceptable for DOE to select a remedy costing in excess of a quarter million dollars which is not protective of groundwater.

Response:

Action:

16. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 2.3 Page #: 2-24 Line #: 30-31 Code: C
 Comment: The statement should be revised to indicate that the existing multi-media monitoring system and access controls would remain in place if the no-action alternative is selected.

Response:

Action:

17) Commenting Organization: Ohio EPA Commentator: DDAGW
 Section #: 2.4.4.1 Pg #: 2-29 Line #: 5 Code: c
 Original Comment #:
 Comment: Since waste removal activities may increase contaminant loading to the GMA, pumping wells should not be limited to perched ground water.

Response:

Action:

18. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 2 Page #: 2-31 Line #: 21 Code: C
 Comment: One of the main functions of the vegetative cover is to promote evapotranspiration. This advantage should be noted.

Response:

Action:

19. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 2 Page #: 2-34 Line #: 5 Code: M
 Comment: Surcharge is normally used as a slow process to consolidate underlying materials by reducing void pockets. A disadvantage of this process option is that it would force contaminated water to flow horizontally and downward. Thus, it would increase the potential for contaminating new areas and/or increase the level of contamination in the underlying aquifer. This process option should only be considered in conjunction with another technology, such as hydraulic containment, to intercept and remove contaminated water before it reaches new areas.

Response:

Action:

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25. Commenting Organization: OEPA Commentator: GeoTrans
Section #: 2.5.7.1 Page #: 2-61 Line #: 25 Code: C
Comment: The capital cost for constructing a truck road should be moderate, since the existing onsite roadway network can be upgraded and/or expanded to accommodate trucking traffic. The offsite highway network, to transport contaminated materials, should be fairly adequate to handle anticipated truck loads.
Response:
Action:
- 26) Commenting Organization: Ohio EPA Commentator: OFFO
Section #: Table 2-13 Pg #: 2-86 Line #: Code: c
Original Comment #:
Comment: All contaminants listed on Table 2-6 are not included within this table (e.g., Ra-226, Th-228, dioxins). DOE should revise Table 2-13 to include contaminants from Table 2-6.
Response:
Action:
- 27) Commenting Organization: Ohio EPA Commentator: OFFO
Section #: Table 2-17 Pg #: 2-96 Line #: Code: e
Original Comment #:
Comment: Hydraulic Mining Pump should have an asterisk associated with it.
Response:
Action:
- 28) Commenting Organization: Ohio EPA Commentator: OFFO
Section #: Table 2-19 Pg #: 2-99 Line #: Code: e
Original Comment #:
Comment: Above Grade Concrete should have an asterisk associated with it.
Response:
Action:
- 29) Commenting Organization: Ohio EPA Commentator: OFFO
Section #: Figure 2-2 Pg #: 2-102 Line #: Code: e
Original Comment #:
Comment: The figure should be revised to reflect all screened technologies. A number of screened technologies are not so designated in the figure.
Response:
Action:

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30. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 2 Page #: 2-99 Line #: Table 2-19 Code: C
 Comment: It was stated earlier in this document that offsite disposal of contaminated materials at the Nevada Test Site (NTS) is readily implementable as a result of existing similar practice. This fact should be reflected in the table.

Response:

Action:

31. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 2 Page #: 2-100 Line #: Fig. 2-1 Code: E
 Comment: Figure 2-1 should be moved to become a part of Section 1.

Response:

Action:

32. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 3.1 Page #: 3-2 Line #: Code: E
 Comment: Two additional bullets should be added to the identified items. These are (1) Health & Safety and (2) Cost.

Response:

Action:

33) Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: 3.2.3.3 Pg #: 3-10 Line #: 1-13 Code: c
 Original Comment #:
 Comment: As stated previously, DOE should dispose of grossly contaminated soils with the pit wastes. Additionally, the text should discuss the ability of OU5 to treat the types of contaminants found within OU1 soils (e.g., dioxins, PAHs).

Response:

Action:

34. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 3.3 Page #: 3-11 Line #: 3 Code: C
 Comment: Only seven of the nine evaluation criteria should be discussed in this phase of the FS. The other two modifying criteria should be addressed following the initiation of the Proposed Plan (PP) and receiving the state comments and community concerns.

Response:

Action:

35. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 3.3.1 Page #: 3-12 Line #: 22 Code: E
 Comment: The existing monitoring system should be retained as part of the no-action alternative.

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41. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 4.1.2.4 Page #: 4-6 Line #: Code:
 Comment: In addition to expected reduction in TMV and irreversibility of treatment, this evaluation criterion should address the type and quantity of residuals expected to result from the application of each of the remedial alternatives.

Response:

Action:

42) Commenting Organization: Ohio EPA Commentator: OFFO
 Section #: 4.1.2.4 Pg #: 4-6 Line #: 15-20 Code: c
 Original Comment #:
 Comment: The document fails to discuss the ability of drying to "effectively and irreversibly" treat the waste. Drying neither permanently or significantly reduces the volume, toxicity or mobility of hazardous substances. DOE should discuss the fact that drying is reversible and the only irreversible "treatment" would be size reduction.

Response:

Action:

43. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 4.1.2.5 Page #: 4-7 Line #: Code:
 Comment: One sub-criterion, "the time required until RAOs are achieved" is missing.

Response:

Action:

44. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 4 Page #: 4-12 Line #: 21 Code:
 Comment: The reason for setting the moisture content of the dryer output at 15% should be clarified.

Response:

Action:

45. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 4.3.1 Page #: 4-12 Line #: Code: C
 Comment: The FS should set, conceptually, the horizontal and vertical extent of excavation beyond that of the original pit limit.

Response:

Action:

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- 46) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.3.1 Pg #: 4-13 Line #: 24-26 Code: c
Original Comment #:
Comment: Additional discussion of the criteria for sending rubble to Operable Unit 3 should be included in the section. Rubble removed from the pits will likely contain significant contamination and be more representative of pit waste than of OU3 material, as such it should be disposed with the pit waste. The OU4 FS discussed decontamination of rubble prior to transfer to OU3 this would be necessary at a minimum.
Response:
Action:
- 47) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.3.1 Pg #: 4-14 Line #: 22-23 Code: c
Original Comment #:
Comment: DOE should provide additional justification for the creation of paved ramps into the pits. Paving of the ramps will generate additional waste to be disposed/treated. If DOE finds it necessary to create paved ramps, then a paving material that allows for easiest decontamination should be used.
Response:
Action:
- 48) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.3.1 Pg #: 4-14 & 15 Line #: 28- Code: c
Original Comment #:
Comment: It seems unlikely that DOE will be able to maintain a clean side of the excavation and pit and backfill as excavation occurs. How will confirmation sampling be coordinated with this? DOE should provide more discussion on the excavation.
Response:
Action:
- 49) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.3.1 Pg #: 4-20 Line #: 18-20 Code: c
Original Comment #:
Comment: How does the previous discussion of waste removal with concurrent backfilling relate to the first sentence of the paragraph suggesting liners will not be removed until all of the waste pit area has been excavated? DOE should clarify the excavation and restoration activities.
Response:
Action:

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- 50) Commenting Organization: Ohio EPA Commentor: DDAGW
 Section #: 4.3.2.2 Pg #: 4-25 Line #: 10-12 Code: c
 Original Comment #:
 Comment: Why is the point of compliance set as the limit of the FEMP site boundary? The proposed waste disposal units at the FEMP site are located above the Great Miami River Aquifer system, an aquifer which has received sole source aquifer classification by USEPA. The Ohio EPA has only entertained the construction of these units because they serve to improve the overall condition of the FEMP site, not based upon site suitability. As such, extra measures must be taken by DOE to protect the quality of the GMA. It is expected by Ohio EPA that if any waste disposal unit at the site should be breached, DOE will remediate ground water at the unit itself, not at the property boundary.
 Response:
 Action:
- 51) Commenting Organization: Ohio EPA Commentor: DDAGW
 Section #: 4.3.2.2 Pg #: 4-25 Line #: 16-18 Code: c
 Original Comment #:
 Comment: This paragraph is misleading. It portrays the glacial overburden as an unsaturated unit which only contains ground water in special "zones of saturation." This is untrue; the glacial overburden at the FEMP site has consistently proven to be saturated, thus acting as an aquifer system. This aquifer system does indeed have a low permeability but it is an aquifer system.
 Response:
 Action:
- 52) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: 4.3.2.2 Pg #: 4-25 Line #: 22-24 Code: c
 Original Comment #:
 Comment: The point of compliance is not defined within this section and should be. DOE should be using the edge of the waste management unit boundary as the point of compliance for groundwater protection.
 Response:
 Action:
- 53) Commenting Organization: Ohio EPA Commentor: DDAGW
 Section #: 4.3.2.2 Pg #: 4-27 Line #: 17-22 Code: c
 Original Comment #:
 Comment: The three bullets indicate that the exemption will be granted based upon the suitability of the siting location. This is not founded. The locations was based upon the MOST suitable location available at the site. The DOE has committed to making up for the lack of a suitable siting location by "over engineering" the disposal facilities. By doing this, DOE will be as protective of the GMA as technically possible.

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- 58) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Table 4-4 Pg #: 4-110 Line #: Code: c
 Original Comment #:
 Comment: The table should include cost for Borrow Pit Restoration as shown in Table 4-2. Additionally, the table should clarify the difference between "Off-site Disposal" and "Shipping and Disposal (NTS)".
 Response:
 Action:
59. Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: Table 4-5 Pg #: 4-111 Line #: Code: c
 Original Comment #:
 Comment: The table should include cost for Borrow Pit Restoration as shown in Table 4-2. Additionally, the table should clarify the difference between "D&D Off-site Disposal" and "Shipping and Disposal (Commercial)".
 Response:
 Action:
60. Commenting Organization: OEPA Commentator: GeoTrans
 Section #: 4 Page #: fig. 4-2 Line #: Code: C
 Comment: A structure geotextile layer should be placed on top of the waste.
 Response:
 Action:

PROPOSED PLAN COMMENTS

- 61) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: PP Pg #: P-1-3 Line #: 2 Code: e
 Original Comment #:
 Comment: Reverse the order of the second and third bullets to reflect the order in which they are presented at the end of the Proposed Plan.
 Response:
 Action:
- 62) Commenting Organization: Ohio EPA Commentor: OFFO
 Section #: PP Pg #: P-1-3 Line #: 4 Code: c
 Original Comment #:
 Comment: Where in the text of the Proposed Plan does the cross-reference matrix appear? Maybe my copy is defective, but I was unable to locate the referenced information.
 Response:
 Action:

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- 63) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: PP Pg #: P-4-2 Line #: 20 Code: c
Original Comment #:
Comment: Is it true that uranium contaminations in perched groundwater are concentrated in the vicinity of Waste Pits 1 and 4? Most of the text suggests that most contamination is near Waste Pit 4 and the Burn Pit.
Response:
Action:
- 64) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: PP Pg #: P-5-2 Line #: 17 Code: c
Original Comment #:
Comment: The Proposed Plan states that OUS will "document the method of management for these soils." Does 'management' include temporary storage of these soils as they await final management under the RD/RA plan? If not include discussion of temporary storage in this section of the text.
Response:
Action:
- 65) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: PP Pg #: P-6-7 Line #: 21 Code: c
Original Comment #:
Comment: This line touches on an important point. Please expand on this in the text.
Response:
Action:
- 66) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 6.3 Pg #: P-6-12 Line #: Code: c
Original Comment #:
Comment: It would be interesting to read a paragraph in this section that addresses specifically why the preferred disposal site is a commercial facility rather than the NTS. Please add this discussion to the text.
Response:
Action:
- 67) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: PP Pg #: P-7-1 Line #: 10 Code: c
Original Comment #:
Comment: Change to "Mr. Gary Stegner".
Response:
Action: