6013 U-004-407 .16

OU2 FS - COMMENTS (AUGUST 24, 1994 SUBMITTAL)

09/30/94

OEPA DOE-FN
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COMMENTS

OhioEPA
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6013

George V. Voinovich
Governor

September 30, 1994

RE: DOE FEMP
MSL #531-0297
OU2 FS - 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 comments on the Operable Unit 2 Feasibility Study/Proposed Plan submitted to Ohio EPA on August 24, 1994. DOE will need to appropriately address these comments prior to receiving Ohio EPA approval.

If you should have any questions, please contact Tim Hull or me.

Sincerely,

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

Attachment

cc: Jim Saric U.S. EPA
Ken Alkema, FERMCO
Robert Owen, ODH
Jean Michaels, PRC
Manager TPSS, DERR
Lisa August, GeoTrans

Winner(R)
Partial
Action Response
to R-2301
(8368)

000001

OHIO EPA COMMENTS
ON
OU2 FS/PP

1) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Figure 1-17 Pg #: 1-53 Line #: Code: C
Original Comment #: 10
Comment: Figure 1-15 has not been corrected. Please include the sand and gravel layer in the legend.
Response:
Action:

2) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3 Pg #: General Comment Line #: Code: C
Original Comment #:
Comment: It would be easier to understand the information presented in Section Three if the descriptions and evaluations of the treatment alternatives were together instead of given in two separate sections. This revision would allow for an easier review of the document and keep the reader from flipping back and forth through the text.
Response:
Action:

3) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.2.5.4 Pg #: 4-9 Line #: 32-33 Code: c
Original Comment #:
Comment: Although DOE has chosen stabilization/solidification as the assumed technology, DOE should be aware that Ohio EPA believes that vitrification is by far the more effective treatment alternative. Ohio EPA believes that any waste requiring treatment on-site should consider vitrification as the preferred method.
Response:
Action:

4) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Tables 5-4, 5-8 and 5-11 Pg #: Line #: Code: C
Original Comment #: 3
Comment: These tables are not labeled as showing the maximum expected cross-media uranium concentrations.
Response:
Action:

5) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 5-2 Pg #: 5-3 Line #: Code: e
Original Comment #:
Comment: The shading on the copy reviewed was indistinguishable from the rest of the table. The table should be revised.
Response:
Action:

6) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.3.1.2.2 Pg #: 5-24 Line #: 8-10 Code: c
Original Comment #:
Comment: The last sentence of this paragraph should be deleted. DOE should specify within the FS/PP the disposition of wastes within OU2. On-site disposal for this material should only be considered as a contingency in the event off-site disposal is not possible. Unless DOE intends to provide a detailed evaluation of on-site disposal and treatment for mixed waste within the FS, the sentence should be deleted.
Response:
Action:

7) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 5-5 Pg #: 5-37 Line #: Code: c
Original Comment #:
Comment: The PRLs provided in this table differ significantly from those provided in Table 5-3. The presentation of these two sets of PRLs is confusing and not clarified by the text. DOE should provide additional discussion within the text explaining the differences in these tables.
Response:
Action:

8. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 5-7 Pg #: 5-53 Line #: Code: c
Original Comment #:
Comment: a) The table should be footnoted to define those ARARs driving the concentrations presented in the ARAR column.
b) The table should designate which of the presented concentrations (ILCR, HI, or ARAR) is the PRL for each contaminant. Presumably the lowest concentration is the PRL, but this is unclear.
c) It is unclear where footnote "b" is employed within the table. This footnote is only applicable for radionuclides.
d) DOE should review the table for accuracy. It does not seem appropriate for higher PRLs to exist for waste over the GMA (see IAFP and SF) than for waste over the till.
Response:
Action:

9) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.4.1.2.2 Pg #: 5-63 Line #: 10-13 Code: c
Original Comment #:
Comment: This sentence should be deleted. It is inappropriate to consider on-property disposal for this material when the alternative being discussed proposes off-site disposal of all other waste.
Response:
Action:

10) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.4.2.5.1 Pg #: 5-78 Line #: 1-3 Code: c
Original Comment #:
Comment: There appears to be an editorial problem with one of these sentences. The risks differ but the text doesn't for each sentence.
Response:
Action:

11. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 5-10 Pg #: 5-85 Line #: Code: c
Original Comment #:
Comment: a) The table should be footnoted to define those ARARs driving the concentrations presented in the ARAR column.
b) The table should designate which of the presented concentrations (ILCR, HI, or ARAR) is the PRL for each contaminant. Presumably the lowest concentration is the PRL, but this is unclear.
c) It is unclear where footnote "b" is employed within the table. This footnote is only applicable for radionuclides.
Response:
Action:

12) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Figure 5-19 Pg #: 5-89 Line #: Code: c
Original Comment #:
Comment: This figure is confusing. The use of "A" and "B" circles adds to the confusion. DOE should attempt to clarify the figure. A good starting point for the flow chart revision is, where does it start?
Response:
Action:

13) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.5.1.2.2 Pg #: 5-94 Line #: 31-33 Code: c
Original Comment #:
Comment: The last sentence of this paragraph should be deleted. DOE should specify within the FS/PP the disposition of wastes within OU2. On-site disposal for this material should only be considered as a

contingency in the event off-site disposal is not possible. Unless DOE intends to provide a detailed evaluation of on-site disposal and treatment for mixed waste within the FS, the sentence should be deleted.
Response:
Action:

14) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Figure 5-23 Pg #: 5-99 Line #: Code: c
Original Comment #:
Comment: Ohio EPA has expressed concerns during previous meetings regarding infiltration through the side slopes where the composite cap does not extend. DOE should revise the design to extend the cap over these berms. In order to comply with Ohio EPA solid waste disposal facility design requirements the synthetic liner and cap should meet at the edges of the cell.
Response:
Action:

15) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 5-11 Pg #: 5-104 Line #: Code: c
Original Comment #:
Comment: It doesn't seem prudent for DOE to design a disposal cell that would be expected to contaminate the aquifer up to the MCL. The lack of room for error may result in DOE having to remediate the cell in the future. DOE should revise the Waste Acceptance Criteria to provide a margin of safety in meeting the MCL ARAR.
Response:
Action:

16) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.5.2.2.2 Pg #: 5-105 Line #: 9-10 Code: c
Original Comment #:
Comment: The contaminants left in place would still be considered a waste and will require long-term monitoring. The long-term monitoring will ensure land-use is still being controlled and that contaminants have not migrated into the groundwater or surface water.
Response:
Action:

17) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.6 Pg #: 5-121 Line #: 12-15 Code: c
Original Comment #:
Comment: This section is unacceptable. The way the text is written, by concurring with the OU2 FS/PP the State of Ohio would essentially be waiving any NRD claims against the DOE. Please remove this section in its entirety.

Response:
Action:

18) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Appendix B Pg #: Line #: Code: c
Original Comment #:
Comment: An additional action specific ARAR should be 40 CFR 60.670 Subpart OOO. This ARAR addresses standards for the use of a crusher.
Response:
Action:

19. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.I.6 Pg.#: D-1-82 Line #: 11-22 Code: C
Original Comment #
Comment: Considering that simulated uranium concentrations in the unsaturated GMA exceed 50 ug/L given leachate uranium concentrations of 175-375 ug/L based on the analysis presented in D-1-III, what factors (e.g., simulated flow rate and mixing zone thickness) are responsible for the dilution of a leachate uranium concentration of 71.38 mg/L down to 20 ug/L in the saturated GMA in the analysis described on page D-1-82?
Response:
Action:

20. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.1.7 Pg.#: D-1-84 Line #: Code: C
Original Comment #
Comment: Do the results provided in Table D.I-26 assume that $K_L = K_d$? Please clarify in the paragraph on page D-1-84.
Response:
Action:

21. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.1-III Pg.#: D-1-III-1 Line #: 20 Code: E
Original Comment #
Comment: Suggest changing "Under similar conditions to what has occurred at the lysimeters" to "to match uranium concentrations detected in lysimeter samples."
Response:
Action:

22. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.1-III Pg.#: D-1-III-1 Line #: 28 Code: E
Original Comment #

Comment: Change "I" to "The model".
Response:
Action:

23. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.1-III Pg.#: D-1-III-4 Line #: Code: M
Original Comment #
Comment: Based on the ODAST runs, what uranium concentrations are simulated in the unsaturated GMA after 45 years due to the assumed 5-year loadings? Please provide results to describe the simulated movement of the concentration slug through the top of the GMA. If the model is correct, we should see significantly increasing uranium concentrations in the unsaturated GMA and decreasing uranium concentrations in the lower till with time. Although there are many potentially confounding factors, the 9 months of available do not reflect these simulated trends. Will the lysimeters continue to be sampled at some less frequent interval (e.g., quarterly)? What does this new analysis suggest about future uranium concentrations in the saturated GMA?
Response:
Action:

24. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.1-III Pg.#: D-1-III-4 Line #: Code: E
Original Comment #
Comment: Change "ration" to "ratio" in each table.
Response:
Action:

25. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.1-IV Pg.#: D-1-IV-3 Line #: 1 Code: C
Original Comment #
Comment: Text is missing between page D-1-IV-1 and this page.
Response:
Action:

26. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.1-IV Pg.#: D-1-IV-3 Line #: 2 Code: C
Original Comment #
Comment: The change in retardation factor is attributable to the different value of K_d used.
Response:
Action:

27. Commenting Organization: OEPA Commentor: GeoTrans
Section #: E.2.2 Pg.#: E-2-2-1 Line #: 8 Code: M

Original Comment #
Comment: The WAC for on-site disposal are identified as preliminary. What analyses/investigations are envisioned to be made during design of the disposal facility to derive final WAC?
Response:
Action:

28. Commenting Organization: OEPA Commentor: GeoTrans
Section #: E.2.2 Pg.#: E-2-2-1 Line #: 20 Code: E
Original Comment #
Comment: The distribution coefficient units need to be corrected. Change "mL" to "mL/g".
Response:
Action:

29. Commenting Organization: OEPA Commentor: GeoTrans
Section #: E.2.2 Pg.#: E-2-2-1 Line #: 22 Code: C
Original Comment #
Comment: Change "and results in a lower associated uranium concentration" to "and results in a higher associated dissolved uranium concentration" or to "and results in a lower WAC for uranium concentration in soil."
Response:
Action:

30) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Appendix E.2.2 Pg #: E-2-2-2 Line #: Code: c
Original Comment #:
Comment: Several exponential notation errors in Table E.2.2-1 should be corrected (e.g., change "E+0.3" to "E+03"). Please review the preliminary waste acceptance criteria for total uranium listed within this table. The value of 1.1E+0.3 seem uncharacteristically low. Please verify and modify accordingly.
Response:
Action:

31) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Figure E.3-1-4 Pg #: E.3-1-8 Line #: c Code: c
Original Comment #:
Comment: Please re-evaluate the design of the composite cap. As shown in this diagram the cap material pinches out into the dike material. This current design may lead to failure of the cap in this area. An alternate design should extend the cap material over the disposal cell to the existing land surface.
Response:

Action:

32) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Appendix E.7 Pg #: E-7-1 Line #: 4 Code: c
Original Comment #:
Comment: Please include a discussion within the text as to what the on-site borrow material will be used for.
Response:
Action:

33. Commenting Organization: OEPA Commentor: GeoTrans
Section #: WAC criteria Pg.#: Line #: Code: M
Original Comment #
Comment: Please provide OEPA with copies of the ODAST and SWIFT codes and data sets used to evaluate WAC.
Response:
Action:

PROPOSED PLAN COMMENTS

34) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.1.5 Pg #: 5-3 Line #: 5-8 Code: c
Original Comment #:
Comment: The contaminated soils left in place are considered a waste and will require long-term monitoring in accordance with CERCLA. Long-term monitoring will be necessary to ensure contaminants have not migrated and to ensure that the selected land use is maintained.
Response:
Action:

35) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 5-2 Pg #: 5-6 Line #: Code: c
Original Comment #:
Comment: This table fails to include a number of the contaminants listed in Table 5-10 of the Feasibility Study. The table should be revised to agree with the FS.
Response:
Action:

36) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Table 5-3 Pg #: 5-7 Line #: Code: c
Original Comment #:
Comment: This table fails to include a number of the contaminants listed in Table 5-3 of the Feasibility

Study. The table should be revised to agree with the FS.
Response:
Action:

37) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.5.4 Pg #: 5-27 Line #: 2 Code: c
Original Comment #:
Comment: The OAC citation in the paragraph is incorrect. These rules were revised effective 6/1/94. The correct citations should be OAC 3745-27-07(H)(2)(c) and (2)(d).
Response:
Action:

38) Commenting Organization: Ohio EPA Commentor: OFFO
Section #: Appendix A Pg #: A-3 Line #: Code: c
Original Comment #:
Comment: An additional action specific ARAR should be 40 CFR 60.670 Subpart OOO. This ARAR addresses standards for the use of a crusher.
Response:
Action: