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O.U. 5 ISA REPORT
(OHIO EPA COMMENTS)

01/19/93

OEPA/DOE-FN

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COMMENTS

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G-01741

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George V. Voinovich
Governor

January 19, 1993

Mr. Jack R. Craig
Project Manager
U.S. DOE FEMP
P. O. Box 398705
Cincinnati, Ohio 45239

Dear Mr. Craig:

Attached are Ohio EPA comments on the O.U. 5 ISA Report. If you have any questions please contact Tom Schneider or me.

Sincerely,

Graham E. Mitchell
Project Manager

GEM/bjb

cc: Jenifer Kwasniewski, DERR
Tom Schneider, DERR
Jim Saric, U.S. EPA
Dennis Carr, FERMCO
Lisa August, GeoTrans
Jean Michaels, PRC
Robert Owen, ODH

(Verace)
partial
action
response
to doe-0331-93
(5465)

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OHIO EPA COMMENTS
OU5 ISA

1) Page 1-31, Line 3: The statement needs further explanation concerning all aspects of the alleged radioactive waste, survey, and findings. Was a geophysical survey conducted in the area of the second flag pole to see if the radioactive wastes were buried there? If so, what were the findings, etc.?

2) Page 1-17, Line 12: Please insert "(SSOD)" after "storm sewer outfall ditch" and include this acronym on the acronym list.

3) Page 1-19, Line 26: Plant 8 is referred to here as the "recovery plant" while it is labeled on Figure 1-8 as the "water treatment plant." Select the most representative term and use it consistently.

4) Page 1-27, Column 2: Prill should be footnoted as "g."

5) Section 3.0, General Comment: As in the past, Ohio EPA has concerns regarding the acceptability of the background ground water locations and data. These background locations were never approved by Ohio EPA.

6) Pages 3-28, Line 30 and Table A-1: The text reports background quantities of total uranium in perched ground water in micrograms per liter (ug/l), while Table A-1 reports the concentrations in milligrams per liter (mg/l). Please report all concentrations of total uranium (and thorium), including those applicable in Table A-2, to ug/l.

7) Page 3-30, Line 4: Delete "only" from this sentence as it is misleading. The wells that were sampled only once may have had more than one detection if they had been sampled repeatedly. This comment applies to every statement made to this effect (i.e., Page 3-40, Line 6, etc.)

8) Page 3-32, Line 30: Table 4-56 does not appear in this document. Table A-7 most closely resembles the data being discussed here. Please clarify.

9) Page 3-35, Last Paragraph: Again, Ohio EPA has reservations regarding the validity of the background data, as the locations were never approved by the agency.

10) Page 3-43, Section 3.5: Preliminary remediation goals (PRGs) should be developed based on U.S. EPA guidance, in particular Risk Assessment Guidance for Superfund Sites (RAGS), Part B. Soils above background are considered contaminated. DOE's use of the word "contaminated" is unacceptable. The text should

be rewritten to replace the word "contaminated" with a more appropriate term or simply designate as <35 pCi/g.

11) Page 3-48, Line 2: Amend this line to read "...and ≤ 135...."

12) Page 3-59, Line 24: Is the 3,200 cubic yards of soil limited to the zone from 0.0 to 1.5 feet? Or has the contamination that may have migrated down to 15 feet in depth been taken into account?

13) Sections 3.10.1 and 3.11.1: DOE fails to consider dermal contact with soil and water as a means of exposure. Please amend this discussion to include this possibility.

14) Page 3-61, Line 5: The techniques used for the repair of cracked or leaking surfaces will require evaluation to ensure the concrete overlay on the impermeable membrane provides sufficient strength to withstand its storage applications. The use of an epoxy based paint to seal the exterior surfaces may also be a practicable alternative.

15) Page 3-69, Line 17: Please detail the applicable tank closure sections of CERCLA that will be addressed.

16) Page 3-70, Line 13: The text should specify whether background concentrations (Table A-31) are based on regional or site specific data.

17) Page 3-88, Paragraph 3, Sentence 5: The statement that "dilution prior to reaching the FEMP boundary may be sufficient to reduce uranium concentrations below the 20 ug/l criterion" does not agree with current data. Additionally, sources located near the boundary may be contaminating ground water and thus would contribute to higher concentrations near the boundary, not more diluted concentrations. Please correct.

18) Page 3-88, Line 16: SWIFT III model output data has not yet been approved by the Ohio EPA.

19) Page 3-96, PRG column: The designation "ARAR/TBC" is incorrect, as is the explanation given in the footnote, "c." An ARAR (applicable or relevant and appropriate requirement) is an approved regulatory requirement (legally enforceable) with which any selected remedy at a Superfund site must comply. Criteria that are "to be considered" (TBCs) include standards or limits that are not promulgated but are generally included in permits as well as guidance documents. TBCs are not legally enforceable. Please correct the footnotes and

change those PRGs designated as "ARAR/TBC" appropriately.

Also, each of the PRGs listed in Table 3-9 are to be based on ARARs. If this is not possible, risk-based numbers are to be the next alternative in determining PRGs. The last choice on which to base PRGs is TBCs. Please see comment 7 above.

20) Page 4-1, Line 4: Change "alternatives" to "objectives."

21) Page 4-3: The items listed in this table should be referred to as "preliminary remedial action objectives" both here and throughout the document.

22) Page 4-26, Line 11: This statement does not make sense. If discharge to Paddys Run represents a variation of the discharge to the Great Miami River then it should be independently evaluated.

23) Page 4-33: Retain soil aeration as a process option as it is applicable to some of the contaminants found at the FEMP. Correct all pertinent sections of the text.

24) Page 5-8, Table 5-1: Under "Implementability" for the General Response Action of Discharge: Public acceptance/approval is not part of the implementability criteria. Remove all references to this effect wherever they appear in the text. Also, while the administrative feasibility of a technology or alternative may be impacted by agency approval of permits or similar aspects of the work process, this should not be confused with "state acceptance" of the alternative or technology as a whole, as discussed in the National Contingency Plan (NCP) under the nine criteria of the detailed analysis (Section 300.430 (e)(7) and (9)). Clarify that agency approval in this sense is associated with the administrative aspects of a technology or alternative (i.e., can the necessary permits be obtained?) and not with acceptance of the alternative on the whole as a means of remediating a site.

25) Page 5-11: Include a technology and alternative in which contaminated groundwater is extracted, treated, and reinjected as a means of gradient control.

26) Page 5-36, Line 18: Typo: "with for."

27) Page 6-2, Line 1-3: This is representative of the SWIFT III model, which has not approved by the Ohio EPA (see comment 18 above). Figure 6-1 is not representative of the existing south plume contaminant concentrations and/or flow conditions.

Please correct.

28) Page 6-13, Lines 19-21: Clarify whether or not the 45,000 cubic yards of overburden is included in the estimated total cubic yardage to be handled by this alternative.

29) Page 6-14, Line 29: Clarify the time constraints for temporary storage (i.e., not to exceed 10 years). If the waste is stored for a longer period what will be the justification? Also, explain at this point the reasoning behind allowing a 10-year temporary storage (an explanation is not given until page 7-13, currently).

30) Section 7: Part of meeting the effectiveness criterium as discussed in the NCP is the ability of an alternative to comply with ARARs. This is not mentioned anywhere in this section. Rewrite the effectiveness evaluations to address compliance, or lack thereof, with ARARs.

31) Page 7-4, Line 16: Again, agency acceptance in this context is mistakenly referring to "state acceptance" and not to whether or not the alternative is administratively feasible. Please see comment 24 above and delete this sentence from the text.

32) Page 7-14, Lines 8 and 25: See comments 24 and 31 above. Public acceptance is not part of the implementability criteria. Agency acceptance is involved only as related to the administrative aspects of the alternative (i.e., is it administratively possible and legal?), not whether or not the state will accept the alternative.

33) Section 7.3: Develop and evaluate an alternative for soils and sediments that includes soil washing with batch vitrification of the concentrated residues prior to disposal (on-site and off-site).

34) Page 7-21, Line 17: Retain alternative SS-8 (batch vitrification with disposal (on-site or off-site)). It has been assumed in the ISA that this alternative has comparable effectiveness to alternative SS-7 (batch vitrification with backfilling) and therefore SS-8 has been eliminated based on high costs and questions regarding the availability of a disposal facility. The Ohio EPA disagrees that these two alternatives have comparable effectiveness. Proper disposal of vitrified waste is more protective than replacing the waste in the hole from which it was excavated. Cost may only be used to eliminate an alternative when all other elements of effectiveness and implementability are equal, which is not the

case when comparing alternatives SS-7 and SS-8. Uncertainty regarding the availability of a disposal facility is not a sufficient reason for screening an alternative. Retain alternative SS-8 and amend Table 7-2 as appropriate.

35) Table A-1: Please include appropriate units for the concentrations on this table (total thorium and total uranium are the only constituents with units as footnoted).

36) Page A-39, Southeast and Northeast Quadrants - Area between Plants 4 & 5: Possible origins of the levels of contamination at the 15 - 20 feet levels will need to be addressed.

37) Page A-95, Tables A-48 - A-50: State what the analytical units are. Explain why there is a range to the constituents sample detection limits.

38) Tables A-1 and A-4: The Ohio EPA has reservations regarding the validity of the background data as stated above in comments 5 and 9 above.

40) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: Table of Contents Pg. #: X Line #:
Code: E
Original Comment #
Comment: Tables 3-5 to 3-11 are located on page numbers one prior to those listed.
Response:
Action:

41) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: Executive Summary Pg. #: ES-4 Line #: 11
Code: E
Original Comment #
Comment: Typographical error "contaminated".
Response:
Action:

42) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 4 Pg. #: 4-16 Line #: Reverse Osmosis
Code: E
Original Comment #
Comment: Typographical error "steam" should be "stream".
Response:
Action:

43) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 5 Pg. #: 5-12 Line #: 21
Code: C

Original Comment #
Comment: The degree that implementing this action would slow plume migration should be discussed in this section. The corresponding reduction in cost of the final treatment alternative due to implementation should be evaluated.
Response:
Action:

44) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 5 Pg. #: 5-15 Line #: 6
Code: C
Original Comment #
Comment: Installation of a 130 foot deep slurry wall is contradictory to the limit of readily feasibly depth of 50 to 70 feet indicated on page 5-14, line 11.
Response:
Action:

45) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 5 Pg. #: 5-19 Line #: 8-9
Code: C
Original Comment #
Comment: Change "high permeable" to "low permeable".
Response:
Action:

46) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 5 Pg. #: 5-25 Line #: 6-8
Code: M
Original Comment #
Comment: Adsorption processes are indicated to effectively remove uranium from water, but are not carried into alternative development for uranium reduction.
Response:
Action:

47) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: M Pg. #: 5-26 Line #: 11
Code: M
Original Comment #
Comment: pH adjustment of groundwater is easily, cost-effectively accomplished and should not be a basis for precipitation elimination. Ion-exchange uranium removal is also pH sensitive.
Response:
Action:

48) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 5 Pg. #: 5-34 Line #: 6 in Table

Code: E
Original Comment #
Comment: Typographical error "equipment metal rental".
Response:
Action:

49) Commenting Organization: OEPA Commentor: GeoTrans, Inc.

Section #: 5 Pg. #: 5-38 Line #: 15
Code: C
Original Comment #
Comment: Effectiveness should be scored moderate, at best, as single layer capping is less effective than multi-layer capping which is scored moderate.
Response:
Action:

50) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 5 Pg. #: 5-38 Line #: 31
Code: C
Original Comment #
Comment: O&M would also include vegetation control.
Response:
Action:

51) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 5 Pg. #: 5-39 Line #: 10
Code: C
Original Comment #
Comment: The filter and drainage layer above impermeable membranes in capping design functions to transmit infiltrated water away from the capped area to prevent ponding.
Response:
Action:

52) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 5 Pg. #: 5-43 Line #: 13, 31
Code: C
Original Comment #
Comment: Ex-situ and in-situ stabilization processes should be described and evaluated separately.
Response:
Action:

53) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 6 Pg. #: 6-10 Line #: 12-23
Code: M
Original Comment #
Comment: Discharging 500 GPM through a 1½" injection well is not

realistic. Reinjection well costs in Appendix C should also be modified.
Response:
Action:

54) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: E Pg. #: 6-15 Line #: 17; 21
Code:
Original Comment # Typographical error "clayer".
Comment:
Response:
Action:

55) Commenting Organization: OEPA Commentor: GeoTrans, Inc.
Section #: 7 Pg. #: 7-5 Line #: 13-15
Code: C
Original Comment #
Comment: Short-term effectiveness refers to reduction of TMV in the construction and implementation phases, not reducing treatment time span.
Response:
Action: