

5146

**OHIO EPA COMMENTS ON THE O.U. 1
REMEDIAL INVESTIGATION REPORT**

12/06/93

OEPA/DOE-FN

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COMMENTS

OU1



State of Ohio Environmental Protection Agency

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George V. Voinovich
Governor

December 6, 1993

Mr. Jack R. Craig
Project Manager
U.S. DOE FEMP
P. O. Box 398705
Cincinnati, Ohio 45239-8705

Dear Mr. Craig:

Attached are Ohio EPA comments on the O.U. 1 Remedial Investigation Report. If you have any questions about these comments, 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
Ken Alkema, FERMCO
Lisa August, GeoTrans
Jean Michaels, PRC
Robert Owen, ODH

Hall(J)
p.a.r to
R-0017
(7111)

OHIO EPA COMMENTS
ON
OPERABLE UNIT 1 RI REPORT

1. Commenting Organization: Ohio EPA Commentor: DERR
Section #: General Comment Pg #: Line #: Code: C
Original Comment #:

Comment: Overall, a significant number of samples were rejected due to time and/or sample preservation techniques. This failure not only greatly reduces the number of acceptable samples, but also calls into question the validity of the accepted samples. The inability of DOE to get quality data from the waste pit investigation has significantly reduced available data and wasted large quantities of time and money. Please describe the cause of sample failure and what is being done to improve the number of valid samples.

Response:
Action:

2.) Commenting Organization: Ohio EPA Commentor: DERR
Section #: General Comment Pg #: Line #: Code: c
Original Comment #:

Comment: The OU1 RI report does not discuss the K-65 drum storage area. The OU4 RI discussed this area and stated that the area lies within OU1 and would be addressed therein. DOE should review the OU4 RI and incorporate a discussion of the K-65 drum storage area within the OU1 RI.

Response:
Action:

3. Commenting Organization: Ohio EPA Commentor: DERR
Section #: General Comment Line #: Code: C
Original Comment #:

Comment: The placement of tables at the end of each section is inconvenient and makes document review difficult. All tables, figures, and other supporting documents should be placed directly after the reference in the text.

Response:
Action:

4. Commenting Organization: Ohio EPA Commentor: DERR
Section #: GENERAL Comment Pg #: Line #: Code: c
Original Comment #:

Comment: The deficiencies in organic data from the pits and the lack of data from beneath the pit will significantly impair the development of PRGs for soils below the pit. The document does not discuss how DOE intends to address these deficiencies during the development of PRGs. DOE should address this problem within the RI.

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Response:
Action:

5. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Pg #: Line #: Code: General
Original Comment #:

Comment: DOE needs to keep unit values the same in tables (eg. cuft. cuyds)

Response:
Action:

6. Commenting Organization: OEPA Commentor: GeoTrans
Section #: Pg #: Line #: Code: E
Original Comment #

Comment: Several minor errors were noted throughout the text. These consisted of spelling errors, grammatical errors, and mis-identified references to figures and tables. Some of these are noted in specific comments. We anticipate that most of these errors will be corrected by internal QA review and response to comments.

Response:
Action:

7. Commenting Organization: OEPA Commentor: GeoTrans
Section #: Pg #: Line #: Code: E
Original Comment #

Comment: The report indicates that conservative assumptions were relied upon to compensate for data limitations (due to heterogeneity of materials, limited sampling, and risks of drilling in and below the waste pits). As a result, the FS process may retain and/or select remedial technologies that are overly-conservative and not the most cost-effective. If additional data becomes available through the ongoing remedial process to reduce uncertainty regarding contaminant migration and associated risks, these data should be examined to determine whether or not less conservative remedial measures are more cost-effective.

Response:
Action:

8. Commenting Organization: OEPA Commentor: GeoTrans
Section #: Pg #: Line #: Code: E
Original Comment #

Comment: Can the geophysical anomaly maps be refined to illustrate the different intensities within the anomalies (e.g., by use of limited contouring, hatching density, or other means)? Or are the degree of precision and/or value of providing

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refined graphics insufficient to warrant such illustration?

Response:
Action:

9. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: ES Pg. #: 6 Line #: 7-8 Code: E
Original Comment #

Comment: On lines 34-35 of page ES-5, the report indicates that no subsurface investigation was made of the burn pit in contradiction to the sentence on lines 7-8 of page ES-6 referenced above.

Response:
Action:

10. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: ES Pg. #: 7 Line #: 26 Code: E
Original Comment #

Comment: The "off-property farmer" should be replaced by the "on-property farmer".

Response:
Action:

11. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Exec Summ Pg #: ES-10 Line #: 31-35 Code: c
Original Comment #:

Comment: Do the assumptions used in the OU1 risk assessment differ from the those used in the OU4 risk assessment? If so, they should be discussed and the basis for deviating from the OU4 risk assessment should be provided in the text.

Response:
Action:

12. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.1.3.1 Pg #: 1-6 Line #: 2,3 Code: c
Original Comment #:

Comment: Were the ingots depleted or enriched?

Response:
Action:

13. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 1.2.1.1 Pg #: 1-14 Line #: 7-8 Code:
Original Comment #:

Comment: What is the source for this information? What details exist for the documentation of the liner installation?

Response:
Action:

14. Commenting Organization: Ohio EPA Commentor: DERR

Section #: 1.2.1.1 Pg #: 1-14 Line #: 24-27 Code: c
Original Comment #:
Comment: a) Where did the water draining from waste pit 1 flow? Was this a discharge to Paddy's Run? Discharges from the pit should be addressed with regard to potential additional contaminated soils and sediments. b) The pipe from the K-65 pipe trench was not discussed within the OU4 RI. Additional detail should be provided as to the location of the pipe and pump.

Response:
Action:

15. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 1.2.1.2 Pg #: 1-15 Line #: 20 Code:
Original Comment #:
Comment: What was the source of the spring?

Response:
Action:

16. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 1.2.1.2 Pg #: 1-15 Line #: 23 Code:
Original Comment #:
Comment: What is the source of the liner specifications?

Response:
Action:

17. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.1.2 Pg #: 1-16 Line #: 1-2 Code: c
Original Comment #:
Comment: The receiving location of water draining from the decant lines should be discussed within the text. The potential for this discharge to contaminate additional soils and sediments should be discussed within the document.

Response:
Action:

18. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 1 Pg #: 16 Line #: 24 Code: E
Original Comment #:
Comment: Correct the depth of waste in Table 1-3. It should be 15 ft, not "15 1" ft.

Response:
Action:

19. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 1.2.1.3 Pg #: 1-16 Line #: 28-29 Code:

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Original Comment #:

Comment: How was the construction of Waste Pit 3 documented? What document/s contain this information?

Response:
Action:

20. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 1.2.1.3 Pg #: 1-16 Line #: 32-33 Code:
Original Comment #:
Comment: What is the source of this information and how was it documented?

Response:
Action:

21. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.1.3 Pg #: 1-19 Line #: 30 Code: c
Original Comment #:
Comment: Is the 1 foot indicated approximate, maximum or minimum?

Response:
Action:

22. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 1.2.1.4 Pg #: 1-20 Line #: 2-3 Code:
Original Comment #:
Comment: What is the source of this information and how was it documented?

Response:
Action:

23. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.1.4 Pg #: 1-20 Line #: 14-21 Code: c
Original Comment #:
Comment: The section fails to provide sufficient detail concerning the basis for Pit 4 being defined as a HWMU. More detailed information is necessary to support the Feasibility Study with regard to waste treatment and classification following treatment. The RI should contain a better characterization of the basis for HWMU classification of Pit 4.

Response:
Action:

24. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.1.5 Pg #: 1-22 Line #: 5-6 & 8 Code: c
Original Comment #:

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Comment: The section fails to provide sufficient detail concerning the basis for Pit 5 being defined as a HWMU. More detailed information is necessary to support the Feasibility Study with regard to waste treatment and classification following treatment. The RI should contain a better characterization of the basis for HWMU classification of Pit 5.

Response:
Action:

25. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.1.5 Pg #: 1-22 Line #: 7-12 Code: c
Original Comment #:

Comment: The text should include a discussion of the Pit 5 liner repair activities and the findings of this action. The findings of this activity reflect upon the integrity of the Pit 5 liner.

Response:
Action:

26. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1 Pg #: 23 Line #: 6-13 Code: C
Original Comment #:

Comment: The document states that during Pit #6 construction, holes were cut into the liner to prevent it from floating on pooling water. Please describe how and with what materials the holes were patched. Were these patches somehow monitored to insure the structural integrity of the pit liner?

Response:
Action:

27. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.1.7 Pg #: 1-24 Line #: 14 Code: c
Original Comment #:

Comment: Where did the reference decant lines drain to?

Response:
Action:

28. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.2 Pg #: 1-26 Line #: 17 Code: c
Original Comment #:

Comment: What is Zirnlo slurry?

Response:
Action:

29. Commenting Organization: Ohio EPA Commentor: DERR

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Section #: Table 1-12 Pg #: 1-30 Line #: Code: c
Original Comment #:
Comment: Provide chemical names for listed constituents.

Response:
Action:

30. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.2.2 Pg #: 1-31 Line #: 33-34 Code: c
Original Comment #:
Comment: Explain why this material is not considered as waste.

Response:
Action:

31. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.2.4 Pg #: 1-33 Line #: Code: c
Original Comment #:
Comment: Explain where DOE obtained the information to account for percentage differences.

Response:
Action:

32. Commenting Organization: Ohio EPA Commentor:
Section #: 1.2.2.8 Pg #: 1-34 Line #: 28 Code: c
Original Comment #:
Comment: Where did DOE dispose of this material after '68?

Response:
Action:

33. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.2.2.9 Pg #: 1-35 Line #: 23 Code: c
Original Comment #:
Comment: Insert the word physical or visual before indications.

Response:
Action:

34. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 1.3.1 Pg #: 1-36 Line #: 12-13 Code:
Original Comment #:
Comment: What evidence is there that the waste pits have not penetrated into the sand and gravel aquifer? This bullet indicates that in 1960, DOE believed that the sand and gravel aquifer had been breached. It would be logical to believe that in 1960, the construction of the pits would still be fresh in the minds of those who were involved in the construction.

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Response:
Action:

35. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.5.2.2 Pg #: 1-45 Line #: 4 Code: c
Original Comment #:
Comment: Rephrase sentence. Lose the word support.

Response:
Action:

36. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 1.5.4.1 Pg #: 1-49 Line #: Code: c
Original Comment #:
Comment: The section should include a discussion of the liner repair actions taken for waste pit 5 and the findings of that activities (e.g., liner separations continue below the water line weren't repaired, liner separations revealed gravel below the liner in places, etc.)

Response:
Action:

37. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.2.1 Pg #: 2-5 Line #: 8 Code: c
Original Comment #:
Comment: Why were 83 & 88 the only years reviewed in the 80's. DOE had four active pits at this time.

Response:
Action:

38. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 2.3 Pg #: 2-7 Line #: 23 Code:
Original Comment #:
Comment: Specifically, what is meant by the "bathtub effect"? What is the source of the water; ground water from perched zones, surface infiltration, direct placement in the GMA?

Response:
Action:

39. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2 Pg #: 8 Line #: 27 Code: C
Original Comment #:
Comment: Three samples were listed in the text for TCLP analysis, but the accompanying table shows that five samples were analyzed. Please provide the correct number of analyses conducted and include proper documentation.

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Response:
Action:

40. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 2 Pg. #: 2-12 Line #: 8-32 Code: E
Original Comment #

Comment: We concur that the sampling method reduced the detected VOC concentrations, where present. We anticipate that improved sample collection methods (e.g., use a spoon sleeve) will be utilized during future VOC sample collection events.

Response:
Action:

41. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.3.2.1 Pg #: 2-15 Line #: 17 Code: c
Original Comment #:

Comment: DOE seems to contradict itself as far as the liners for the wastes pits. The document earlier indicates that all of the pits have clay or synthetic liners. DOE indicates some uncertainties here.

Response:
Action:

42. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2 Pg #: 22 Line #: 15 Code: C
Original Comment #:

Comment: Document indicates that only two one-time grab samples were taken for Best Management Plan Surface Water Sampling. Are only two grab samples adequate to insure statistically relevant results?

Response:
Action:

43. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.3.2.1 Pg #: 2-16 Line #: 21-25 Code: c
Original Comment #:

Comment: The strategy used by DOE may have biased the results both negatively or positively. What if wood chips were used to absorb PCB's that were spilled and then disposed of in the pit. This could also impact the FS as to effectiveness of a technology.

Response:
Action:

44. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.5.1.1 Pg #: 2-21 Line #: 26 Code: c
Original Comment #:

Comment: DOE needs to qualify why these dates are representative of

Paddy's run past history.

Response:
Action:

45. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.5.2.1 Pg #: 2-25 Line #: 10 Code: e
Original Comment #:
Comment: Data in table does not match what is stated.

Response:
Action:

46. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.6.1 Pg #: 2-28 Line #: 27-28 Code: c
Original Comment #:
Comment: Figure 2-9 does not illustrate the CIS surface soil locations as suggested by the text. The text or figure should be corrected.

Response:
Action:

47. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.6 Pg #: 2-28 Line #: Code: c
Original Comment #:
Comment: Surface soil sampling was conducted as a part of the ETF removal action. These data should be discussed within this section.

Response:
Action:

48. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.6 Pg #: 2-28 Line #: 8-10 Code: c
Original Comment #:
Comment: It is unclear from the text where the data from well borings 0-24" deep are included. Additionally, it is unclear if these data were incorporated into the baseline risk assessment. DOE must clarify the locations of the samples and where the data have been incorporated.

Response:
Action:

49. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.6.2 Pg #: 2-29 Line #: 12-13 Code: c
Original Comment #:
Comment: The text suggests 34 surface soil locations were sampled. Yet, only 7 surface soil locations were used in the baselinerisk

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assessment. Additionally, Figure 2-9 does not show 34 RI/FS surface soil sampling locations. Table 2-16 and Appendix B.1.1.2 report only 14 RI/FS surface soil samples. The document does not clearly specify why such varying numbers of samples are used/reported. DOE should revise the document to be consistent or justify any inconsistencies.

Response:
Action:

50. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.6.3 Pg #: 2-31 Line #: 1-5 Code: c
Original Comment #:
Comment: The text in this section suggests that a maximum of 9 surface soil sample locations were submitted for HSL analyses. Table 2-16 and Appendices 8.1.1.3 and 8.1.1.4 suggest this number is 16 or 17 depending on the analytes. The document does not clearly specify why such varying numbers of samples are used/reported. DOE should revise the document to be consistent or justify any inconsistencies.

Response:
Action:

51. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2.12 Pg #: 2-52 Line #: 29 Code: c
Original Comment #:
Comment: Please explain the minor changes.

Response:
Action:

52. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2 Pg #: 60 Line #: 27 Code: E
Original Comment #:
Comment: Typographical error in the word "treat."

Response:
Action:

53. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2 Pg #: 72 Line #: Table 2-4 Code: C
Original Comment #:
Comment: The table shows very low quality objectives (10%-30%). Quality of samples should be much higher. How can we be assured of the sample quality when the objectives are so low?

Response:
Action:

54. Commenting Organization: Ohio EPA Commentor: DERR

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Section #: Table 2-13 Pg #: 2-88 Line #: Code: c
Original Comment #:
Comment: How much money was spent on analytical costs for the 1992 RI/FS samples that were not usable? Who paid for the non-usable samples' analytical costs.

Response:
Action:

55. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2 Pg #: 94 Line #: Table 2-17 Code: C
Original Comment #:
Comment: Documents supporting the analyses are not included in the report. Please provide proper documentation for the analyses.

Response:
Action:

56. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 2 Pg #: 96 Line #: Chart Code: E
Original Comment #:
Comment: Typographical error. Well number MW-3001 lists depth as 8/59. This figure is also used as the completion date for the well.

Response:
Action:

57. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 3.1.1 Pg #: 1 Line #: 34 Code: c
Original Comment #:
Comment: What material is DOE referencing the waste or the liner?

Response:
Action:

58. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 3.1.7 Pg #: 3 Line #: 18 Code: c
Original Comment #:
Comment: Why such a large volume of waste material if DOE states that material disposed of in the pit was liquids or burned?

Response:
Action:

59. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 3.1.9 Pg #: 5 Line #: 13 Code: e
Original Comment #:
Comment: Wrong date.

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Response:
Action:

60. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 3 Pg #: 7 Line #: 14-19 Code: C
Original Comment #:
Comment: Is the area surrounding FEMP attainment or non-attainment for criteria air pollutants (particulate matter, sulfur dioxide, carbon monoxide, ozone)?

Response:
Action:

61. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 3 Pg #: 8 Line #: 10-21 Code: C
Original Comment #:
Comment: Material is described as submerged below the water line. Is this standing water or is it somehow connected to the water table? Is there any chance of this water seeping into the water table or is it assured to be contained by the pit liner?

Response:
Action:

62. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 3.4.1.3 Pg #: 3-15 Line #: 26-27 Code:
Original Comment #:
Comment: The 1812 New Madrid Earthquake was reported to have caused minor structural damage in Cincinnati.

Response:
Action:

63. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 3.4.1.6 Pg #: 3-18 Line #: Code:
Original Comment #:
Comment: At the OU1 preview RI meeting held at the Greater Cincinnati Airport, DOE agreed to include three dimensional fence diagrams of OU1 in addition to cross sections. These diagrams should be included.

Response:
Action:

64. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 3 Pg #: 3-19 Line #: 8-9 Code: C
Original Comment #:
Comment: Please indicate how the two lenses were correlated.

Response:

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Action:

65. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 3.4.2.1 Pg #: 3-24 Line #: 7 Code:
Original Comment #:
Comment: The word "more" should be deleted from this line.

Response:

Action:

66. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 3 Pg #: 3-25 Line #: 28-29 Code: E
Original Comment #
Comment: Note that the Winter and Spring months are the major
recharge months. Recharge is pretty much finished by the
beginning of summer due to heavy ET.

Response:

Action:

67. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 3 Pg #: 3-26 Line #: 1 Code: C
Original Comment #
Comment: The text on the bottom of page 3-25 and top of page 3-26 can
be improved. Figure 3-44 shows hydrographs for wells 2004
and 3004: it does not appear to show hydrographs of wells
above and below (4000-series) the clay interbed as
indicated. A consistent, small downward hydraulic gradient
is illustrated in Figure 3-43. To state that "there is no
potential for flow across the interbed" is a bit strong.
Are there not production wells pumping from below the
interbed?

Response:

Action:

68. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 3.4.2.2 Pg #: 3-26 Line #: 11 Code:
Original Comment #:
Comment: Gallons per minute (GPM) is not a correct unit for specific
yield. Specific yield is reported as a ratio or a percent.

Response:

Action:

69. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 3 Pg #: 3-27 Line #: 16-17 Code: C
Original Comment #
Comment: Groundwater flows laterally down the indicated water table
line in the cross sections shown only if the cross sections
are drawn parallel to the flow direction. Otherwise,

groundwater flow is skew to the plotted water table elevation slope.

Response:
Action:

70. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 3.6.3.1 Pg #: 33 Line #: 25-33 Code: c
Original Comment #:
Comment: OU4 reported that questions concerning accuracy existed and that follow up surveys were being implemented. Has this information been incorporated in the OU1 RI. If not, why?

Response:
Action:

71. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 3 Pg #: 3-59 Line #: Code: E
Original Comment #
Comment: "Potentiometric surface" in the figure legend should be labeled "Bedrock surface".

Response:
Action:

72. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.0 Pg #: 1 Line #: 15 Code: c
Original Comment #:
Comment: What about determining nature and extent of the contamination?

Response:
Action:

73. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.1 Pg #: 3 Line #: 25-30 Code: c & e
Original Comment #:
Comment: Unclear paragraph and typo on Bi-210

Response:
Action:

74. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4 Pg #: 9 Line #: 23-32 Code: C
Original Comment #:
Comment: Were samples analyzed for PCB's? Were PCB's detected in any groundwater samples?

Response:
Action:

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75. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 4 Pg. #: 9 Line #: 28 Code: E
Original Comment #
Comment: Change PBCs to PCBs.
Response:
Action:

76. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4 Pg #: 10 Line #: 24 Code: E
Original Comment #:
Comment: Typographical error. Word omitted.

Response:
Action:

77. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.2.0.5 Pg #: 13 Line #: 31 Code: c
Original Comment #:
Comment: Did DOE make an attempt to resample?

Response:
Action:

78. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.2.0.5 Pg #: 15 Line #: 2 Code:
Original Comment #:
Comment: The point made is not well supported.

Response:
Action:

79. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.2.1.3 Pg #: 18 Line #: 8-14 Code: c
Original Comment #:
Comment: Is a composite profile of the pit available?

Response:
Action:

80. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.2.1.4 Pg #: 19 Line #: 18 Code: c
Original Comment #:
Comment: At what depth was the Tc-99 found?

Response:
Action:

81. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.2.1.6 Pg #: 24 Line #: 37 Code: c

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Original Comment #:
Comment: Did DOE subject the waste to TCLP analysis to meet current hazardous waste protocol?

Response:
Action:

82. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4 Pg #: 25 Line #: 2 Code: E
Original Comment #:
Comment: Typographical error.

Response:
Action:

83. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.2.2.3 Pg #: 27 Line #: 10-15 Code: c
Original Comment #:
Comment: Why is area C shown outside the boundary of Pit 2?

Response:
Action:

84. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4 Pg #: 36 Line #: 38 Code: E
Original Comment #:
Comment: Typographical error.

Response:
Action:

85. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 4 Pg #: 37 Line #: 17-18 Code: E
Original Comment #

Comment: The geophysical anomaly map for waste pit 3 is presented in Figure 4-20 rather than Figure 4-12.

Response:
Action:

86. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4 Pg #: 43 Line #: 31 Code: E
Original Comment #:
Comment: Typographical error. Tense change.

Response:
Action:

87. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4 Pg #: 45 Line #: 32 Code: C

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Original Comment #:

Comment: Since material was in such a liquid state that it could not be sampled, were any attempts made to sample the material by utilizing a different method? If not, why?

Response:

Action:

88. Commenting Organization: Ohio EPA Commentor: GeoTrans

Section #: 4 Pg. #: 4-46 Line #: 1-2 Code: E

Original Comment #

Comment: Referenced Figure 4-13 should read 4-22.

Response:

Action:

89. Commenting Organization: Ohio EPA Commentor: DERR

Section #: 4.2.4.4 Pg #: 47 Line #: 34 Code: e

Original Comment #:

Comment: DOE needs to justify why one sample is sufficient to determine the existence of radionuclides.

Response:

Action:

90. Commenting Organization: Ohio EPA Commentor: DERR

Section #: 4.2.5.5 Pg #: 57 Line #: 8-11 Code: c

Original Comment #:

Comment: Who caused the holding times to be exceeded? Did DOE attempt to resample?

Response:

Action:

91. Commenting Organization: Ohio EPA Commentor: DERR

Section #: 4.2.6.5 Pg #: 60 Line #: 20-23 Code: c

Original Comment #:

Comment: Who caused the holding times to be exceeded? Did DOE attempt to resample?

Response:

Action:

92. Commenting Organization: Ohio EPA Commentor: GeoTrans

Section #: 4 Pg. #: 4-63 Line #: 8 Code: E

Original Comment #

Comment: The geophysical anomaly map is given in Figure 4-24, not Figure 4-14 as stated. Also the anomaly area appears to cover 80% of the pit area, not 50% as noted.

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Response:
Action:

93. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.2.8 Pg #: 69 Line #: 14 Code: c
Original Comment #:
Comment: Where was the sludge disposed?

Response:
Action:

94. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.2.8.5 Pg #: 73 Line #: 8 Code: c
Original Comment #:
Comment: Who caused the holding times to be exceeded? Did DOE attempt to resample?

Response:
Action:

95. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.3.1.2 Pg #: 4-76 Line #: 24-27 Code: c
Original Comment #:
Comment: Figure 2-8 CIS sediment screening locations not surface soils locations. Figure 2-9 does not include any CIS surface soil sampling locations. The text or figures should be revised.

Response:
Action:

96. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.3.1.2 Pg #: 4-76 & 78 Line #: Code: c
Original Comment #:
Comment: The RA-226 data discussed within these bullets were not incorporated into the baseline risk assessment. Failure to include these data in the risk assessment results in a negative bias to the calculated risks. DOE should discuss why these data were not incorporated into the baseline risk assessment and the impacts of not including them.

Response:
Action:

97. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.3.1.2 Pg #: 4-78 Line #: 23-24 Code: c
Original Comment #:
Comment: The baseline risk assessment does not use all available data. Only 7 RI/FS samples (Table E.2-2) were used compared to the 13 available. DOE should revise the baseline risk assessment to

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incorporate all usable data.

Response:
Action:

98. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.3.1.2 Pg #: 4-78 & 79 Line #: Code: c
Original Comment #:
Comment: The data reported in this section is inconsistent with that used in the baseline risk assessment. Examples are U-238 max pg. 4-78 = 103.7, Table E.2-2 = 16.1; U-total max pg. 4-79 = 413.5, Table E.2-3 = 62; etc. DOE must revise the baseline risk assessment to incorporate all usable data.

Response:
Action:

99. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4.3.1.3 Pg #: 4-79 Line #: 35-36 Code: c
Original Comment #:
Comment: It is unclear what basis DOE has for making this statement. The VOC and SemiVOC data are included in Section B.1.1.4 of the report, thus they were available for evaluation.

Response:
Action:

100. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.1 Pg #: 4-85 Line #: 39 Code:
Original Comment #:
Comment: What method is used to quantify interconnection when the contouring was performed?

Response:
Action:

101. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.1 Pg #: 4-86 Line #: 10-18 Code:
Original Comment #:
Comment: These water elevations are not useful without referencing the surface elevations for the waste pits.

Response:
Action:

102. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 4 Pg. #: 4-86 Line #: 25-27 Code: C
Original Comment #:
Comment: The cited water-level data does not indicate that waste pits

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5 and 6 are not leaking; only that the rate of leakage is not so great as to result in a hydraulic gradient less than that observed. Consider providing a calculation to illustrate what the maximum leakage rate may be.

Response:
Action:

103. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.1.1 Pg #: 4-88 Line #: 10-11 Code:
Original Comment #:
Comment: This needs to be expanded. What are the "chemical interactions"? What is the stability of the complexes? What work was performed to document this/these reactions?

Response:
Action:

104. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.1.1 Pg #: 4-88 Line #: 11 Code:
Original Comment #:
Comment: What evidence indicates the mobilization of uranium instead of the retardation of Th²³⁰ and Ra²²⁶?

Response:
Action:

105. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.1.1 Pg #: 4-88 Line #: 24 Code:
Original Comment #:
Comment: What is meant by "average" concentrations?

Response:
Action:

106. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.1.1 Pg #: 4-88 Line #: 29 Code:
Original Comment #:
Comment: A table which specifies the detection of other radiological constituents should be included in the report. This will help quantify "infrequently".

Response:
Action:

107. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.1.2 Pg #: 4-91 Line #: 5-6 Code:
Original Comment #:
Comment: Is this statement indicating that significant migration has

occurred in the 1 to 2 years between the RI and the RCRA ground water sampling? If this is so, then why did the plume not migrate in this manner in the 30 years of operation prior to the RI sampling?

Response:
Action:

108. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.1.2 Pg #: 4-92 Line #: 6-8 Code:
Original Comment #:
Comment: This appears unlikely. The ground water has had 30 plus years to approach a geochemical equilibrium. In addition, no source material has been removed from the waste pit.

Response:
Action:

109. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.2.1 Pg #: 4-96 Line #: 13-14 Code:
Original Comment #:
Comment: How can this be explained without source removal?

Response:
Action:

110. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 4 Pg #: 96 Line #: 28 Code: C
Original Comment #:
Comment: The Burn Pit is described as being in close contact with the Great Miami Aquifer. If the pit is in contact with the aquifer, are contaminants being expelled into the aquifer? DOE should consider a removal action to address those pits believed to be in direct contact with the aquifer. If it is not practical to implement a removal prior to remediation, those pits should be the first remediated.

Response:
Action:

111. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.2.2 Pg #: 4-98 Line #: 28-30 Code:
Original Comment #:
Comment: The Tc⁹⁹ has been present in the waste pits for many years. There has been no source removal or addition between the RI and the RCRA sampling. Therefore, it is unlikely that a dramatic migration, such as is described in this section, could occur.

Response:
Action:

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112. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.2.2 Pg #: 4-100 Line #: 29-30 Code:
Original Comment #:
Comment: this is unlikely. These compounds have had 30 years to migrate away from the middle zone of the aquifer. What would cause them to do this in the 1 to 2 year period of time between the RI and the RCRA sampling?

Response:
Action:

113. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.2.3 Pg #: 4-103 Line #: 4-6 Code:
Original Comment #:
Comment: These compounds have had 30 years to migrate from the area into the bedrock. What would cause them to do this in the 1 to 2 year period of time between the RI and the RCRA sampling?

Response:
Action:

114. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 4.4.2.3 Pg #: 4-104 Line #: 12-13 Code:
Original Comment #:
Comment: One to two years is not enough time to significantly leach out a large enough volume of contaminants in the waste pits, so as to create a large drop in ground water contaminant concentrations.

Response:
Action:

115. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 4 Pg #: 4-104 Line #: 22-23 Code:

E
Original Comment #
Comment: Please identify the four source areas referenced on lines 22-23. Based on the discussion given on page 7-7, line 17, it appears that these areas are Waste Pits 4, 5, 6 and the Burn pit.

Response:
Action:

116. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 4 Pg #: 4-104 Line #: 22-23 Code:

C
Original Comment #
Comment: With regard to this citation, and the discussion on page 7-7 (lines 13-19), why is Waste Pit 3 not considered a potential major source area? Waste Pit 3 has very little low-

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permeability material between the waste and the Great Miami Aquifer. In places, the pit may have been excavated directly into the aquifer. High uranium concentrations in GMA groundwater are located in the monitor wells directly downgradient (east) of and nearest to Waste Pit 3 (Figure 4-33).

Response:
Action:

117. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table 4-19 Pg #: 4-256 Line #: Code: c
Original Comment #:
Comment: The data reported within this table do not incorporate all organics detected during the Stormwater Runoff Control Removal Action. Upon review of Section B.1.1.4 it is noted that several additional organics, including PAHs and VOCs were detected. DOE should revise the table or clarify that only selected organics are reported.

Response:
Action:

118. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Figure 4-25 Pg #: 4-652 Line #: Code: c
Original Comment #:
Comment: The contour lines over Pits 1,2,3,4 & 5 should be dashed or deleted since there is not data to support their presence.

Response:
Action:

119. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 5.1.2 Pg #: 5-3 Line #: 1-5 Code:
Original Comment #:
Comment: The transportation of colloidal particles of up to 2 microns is also a ground water pathway.

Response:
Action:

120. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 5 Pg #: 5-4 Line #: 18 Code: E
Original Comment #:
Comment: Change "too" to "to".

Response:
Action:

121. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 5 Pg #: 4 Line #: 28-31 Code: E

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Original Comment #
Comment: Edit sentence.
Response:
Action:

122. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 5.2.1 Pg #: 5-4 Line #: 34 Code:
Original Comment #:
Comment: Radon should be added to the list of relatively short lived radionuclides.

Response:
Action:

123. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 5.2.1 Pg #: 5-5 Line #: 1-2 Code:
Original Comment #:
Comment: These lines should be changed to "Many geochemical reactions occur that affect constituent retardation, which affects the velocity of the contaminant movement in a medium." This change is necessary because geochemical reactions can increase or decrease retardations.

Response:
Action:

124. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 5.3.2.3 Pg #: 5-19 Line #: 18 Code:
Original Comment #:
Comment: The GO-UGMAS model for OU5 is currently being updated to create a 3 dimensional model. The DOE decided that this was needed in order to accurately represent the vadose zone. Why was this not necessary for OU1?

Response:
Action:

125. Commenting Organization: Ohio EPA Commentor: DDAGW
Section #: 5.3.2.4 Pg #: 5-21 Line #: 23 Code:
Original Comment #:
Comment: How will the current OU5 model improvements affect the OU1 model? Are the input variables and grid constructions consistent between the operable units?

Response:
Action:

126. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 5 Pg #: 22 Line #: 19-23 Code: M
Original Comment #

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Comment: The sole attribution of current uranium contamination of groundwater beneath OU1 to leakage via well casings is unsubstantiated. Substantial potential exists for "direct" leakage from Waste Pit 3 (where the till is very thin), or from other waste pits via relatively permeable heterogeneities. The field data suggest that that there will be a continuum of uranium migration into the Great Miami Aquifer from the waste pits until the maximum concentrations are achieved. Different arrival times and downward migration rates are associated with different thickness and permeabilities of the media beneath the pits, and with the different vertical hydraulic gradients that drive downward fluid movement.

Response:
Action:

127. Commenting Organization: OEPA Commentor: GeoTrans
Section #: 5.3.2.5 Pg. #: 5-25 Line #: 31
Code: C

Original Comment #

Comment: There appears to be a discrepancy between the reported retardation factor used for the Great Miami aquifer in the text (factor = 12) as compared with the appendix, specifically Tables D.3-4 and D.3-11 in which a value of 10.1 is reported for U-238. A value of 10.1 is the value for the vadose (ODAST) modeling, whereas a value of 12 is the nominal value used in the saturated (SWIFT) modeling.

Response:
Action:

128. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 6.2 Pg #: 6-3 Line #: 5-7 Code: c
Original Comment #:

Comment: With the development of pit by pit CPCs does DOE intend to develop pit specific remediation goals? Based upon the lack of characterization data below the pits, such pit specific PRGs would seem inappropriate.

Response:
Action:

129. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 6.3 Pg #: 6-4 Line #: 30-34 Code: c
Original Comment #:

Comment: DOE's assumption that the pits 1, 2, and the burn pit are covered with soil rather than waste would not seem to agree with previous portions of the document which state that waste was continually transferred from pit to pit between 1, 2 and 3. Figure 4-

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26 contradicts this assumption showing the highest FIDLER measurements on top of the waste pits. The lack of surface samples from within these pit may result in a significant under estimation of risks. Additionally, the assumption that vegetation will cover the pits seems questionable, since vegetation does not completely cover these pits currently.

Response:
Action:

130. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 6.5.4 Pg #: 6-9 Line #: 14-19 Code: c
Original Comment #:

Comment: DOE should provide data to support its contention that sufficient water is not available to provide a potable water supply. DOE's choice of background wells for the perched ground water support the fact that the perched aquifer can provide sufficient water for residential usage. DOE should provide data to support the rate at which water could be provided by the perched aquifer and a rate acceptable for residential usage.

Response:
Action:

131. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 6.7.2 Pg #: 6-14 Line #: 6-14 Code: c
Original Comment #:

Comment: This paragraph seems to make light of the significant data gaps within the RI database and their potential impact on the risk assessment. The paragraph does not even discuss the lack of surface soil data from within the waste pits. This lack of data could potentially have a significant negative bias on the risk assessment (see Figure 4-26). Additionally, the lack of any VOC or Semi-VOC data for surface soils (see pg. E-1-13) could significantly negatively bias the risk assessment.

Response:
Action:

132. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table 6-1 Pg #: 6-18 Line #: Code: e
Original Comment #:

Comment: The total for all media for the visitor should be "9.9 X 10⁻⁴" not "3 X 10⁻⁴".

Response:
Action:

133. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table 6-7 Pg #: 6-25 Line #: Code: c
Original Comment #:
Comment: The table understates the potential affects of the database adequacy. See previous comment concerning database adequacy. The magnitude of this uncertainty is at a minimum moderate if not more based on the potential for overlooking CPC and underestimating concentration source terms.

Response:
Action:

134. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 7 Pg. #: 7-1 Line #: 9 Code: E
Original Comment #
Comment: The "Contaminant Fate and Transport" topic is not noted as a bulleted item.

Response:
Action:

135. Commenting Organization: Ohio EPA Commentor: DERR
Section #: 7.3.1 Pg #: 6 Line #: 15-18 Code: c
Original Comment #:
Comment: DOE seems to be downplaying the role of organics contaminates within the waste pits. The lack of valid data to support the nature and extent should be noted in this paragraph.

Response:
Action:

136. Commenting Organization: Ohio EPA Commentor: GeoTrans
Section #: 7 Pg. #: 7-58 Line #: Code: C
Original Comment #
Comment: Why are no PRGs presented in Table 7-10 for air (e.g., surface radiation)?

Response:
Action:

137. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.3.6.2 Pg. #: D-3-24 Line #: 21
Code: C
Original Comment #
Comment: In Table D.3-14 the source loading concentrations are reported in mg/l. Subsequently, the predicted concentrations in Table D.3-17 are also reported in mg/l. Of interest is the dilution ratio in the Great Miami aquifer. For example:

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Component	From Table D.3-14 Maximum Loading Concentration (mg/l)	From Table D.3-17 Maximum Concentration in Groundwater (mg/l)	Calculated Dilution Ratio
Tc-99	4.11e-4	1.935e-4	2.1
U-238	1228.	12.475	98.4
Vinyl Chloride	.0103	.001459	7.06

Please clarify why there are different apparent dilution ratios.

Response:
Action:

138. Commenting Organization: OEPA Commentor: GeoTrans
Section #: D.3.6.1 Pg. #: D-3-21 Line #: 5-7
Code: C
Original Comment #

Comment: The Darcy calculation for the Clearwell does not appear to be correct. There is no layer 1 (low permeability), only a 23.7 ft section of Great Miami aquifer (from Table D.3-2). The reported vertical hydraulic conductivity is 45 ft/day and the vertical flow rate is 2.29e-3 ft/day. Given this information, the depth of pond liquid can be calculated to be 0.0012 ft as per page D-3-20. In other words, for 10.1 inches per year, the ponded depth needs only to be 0.0012 feet. The field data can not support such a low value of ponded depth. Surely there is more standing water present in Clearwell than 0.0012 feet. From Figures 3-47 and 3-48, the water elevation is approximately 574 feet. From Figure 1-18, the bottom of the pit elevation is 548 feet. This would indicate standing water depth is approximately 26 feet. There is an approximate 1 foot clay liner (Figure 3-24). Please clarify the calculations in Table D.3-2.

139. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.1.2.4.2 Pg #: E-1-13 Line #: Code: c
Original Comment #:

Comment: The section should discuss which of the samples discussed within section 2.6 are used for the risk assessment and why those

which weren't used were excluded.

Response:
Action:

140. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.1.2.4.2 Pg #: E-1-13 Line #: 18-22 Code: c
Original Comment #:
Comment: a) VOCs and SemiVOCs were collected during the Waste Pit Area Storm Water Runoff Control Removal Action but were not included within the risk assessment. DOE should discuss the basis for this decision.
b) Lines 21-22 state that Aroclor-1260 was detected but Table E.2-2 does not include this contaminant as a CPC. DOE should provide a justification for this exclusion.

Response:
Action:

141. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.1.2.4.6 Pg #: E-1-15 Line #: Code: c
Original Comment #:
Comment: This section should include a discussion of the vegetation samples collected during the ETF removal action and the data from those samples.

Response:
Action:

142. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.1.3.2 Pg #: E-1-16 Line #: 19-25 Code: c
Original Comment #:
Comment: As stated previously, DOE must provide additional information to justify excluding risks from consuming perched groundwater. Information regarding the perched aquifer productivity vs. the yield required for residential usage must be included.

Response:
Action:

143. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.2.1.9 Pg #: E-2-4 Line #: 12-18 Code: c
Original Comment #:
Comment: It is unclear how the organic samples discussed here relate to the statement in section E.1.2.4.2 that, "...volatile and semivolatile organic analyses were not performed on surface soils...". DOE must clarify which surface soil data, as discussed in section 2.6, are included in the risk assessment and which are not. The sampling discussed within section E.2.1.9 does not match that discussed in

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sections E.1.3.4.2 or 2.6.

Response:
Action:

144. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.2.2.2.1 Pg #: E-2-7 Line #: 8-24 Code: c
Original Comment #:

Comment: DOE fails to provide any justification for the use of 4 detects to determine usage of the MDV. The approved OU4 RI used 7 detects to make this determination. The use of 4 detects to support the assumption that the population is normally distributed is questionable at best. The necessity of using nonparametric statistics to make comparisons to background further detracts from the normal distribution assumption. DOE should consistently apply the methodology included in the OU4 Baseline Risk Assessment or supply detail justification for a deviation. DOE's reduction of the number of detects required in OU1 significantly affects the source term concentrations and subsequent risk calculations.

Response:
Action:

145. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.2.3.1.2 Pg #: E-2-9 Line #: Code: c
Original Comment #:

Comment: a) In order to evaluate DOE's application of these screening processes for developing CPCs, DOE should define which screening character as displayed in Attachment E.II apply to each of the bullets listed in section E.2.3.1.2 (e.g., E.2.3.1.2 2nd bullet = C in E.II).
b) DOE should reference guidance documents supporting each bulleted screening criteria.
c) DOE should provide an example contaminant eliminated by each bulleted screening criteria.

Response:
Action:

146. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.2-3 Pg #: E-2-14 Line #: Code: e
Original Comment #:

Comment: The units for the organics (g/kg) appear to be incorrect.

Response:
Action:

147. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.2-3 Pg #: E-2-14 Line #: Code: c
Original Comment #:

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Comment: It would seem DOE has failed to incorporate data from location WPA16 within the table. If the data from this location were incorporated the maximum detection for antimony, arsenic, etc., would be higher (see section B.1.1.3). DOE must incorporate the data from WPA16 and revise the calculations to obtain the correct UCL.

Response:
Action:

148. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.2-5 Pg #: E-2-16 Line #: Code: e
Original Comment #:
Comment: a) The units for the organics (g/kg) appear to be incorrect.
b) CIS Data Aroclor-1254 Representative concentration should be "9980."

Response:
Action:

149. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.2-11 Pg #: E-2-28 Line #: Code: e
Original Comment #:
Comment: The units for the organics (g/kg) appear to be incorrect.

Response:
Action:

150. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.2-13 Pg #: E-2-33 Line #: Code: e
Original Comment #:
Comment: The units for the organics (g/kg) appear to be incorrect.

Response:
Action:

151. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.2-17 Pg #: E-2-38 Line #: Code: e
Original Comment #:
Comment: The units for the organics (g/kg) appear to be incorrect.

Response:
Action:

152. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.2-21 Pg #: E-2-43 Line #: Code: c
Original Comment #:
Comment: a) The CPC concentration for Acenaphthene should be "1100" not "810."
b) The units for the organics (g/kg) appear to be incorrect.

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Response:
Action:

153. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.2-23 Pg #: E-2-47 Line #: Code: e
Original Comment #:
Comment: The units for the organics (g/kg) appear to be incorrect.

Response:
Action:

154. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.3.2.4 Pg #: E-2-6 Line #: 7-14 Code: c
Original Comment #:
Comment: This section should relate the data discussed to the potential yield of the perched aquifer for a residential user.

Response:
Action:

155. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.3.2.9 Pg #: E-3-10 Line #: 7-13 Code: C
Original Comment #:
Comment: Another site which should be added to this section is the Chemical Lehman site located in Ross. The site is on CERCLIS and has undergone an Expanded Site Inspection.

Response:
Action:

156. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.3.3.1.6 Pg #: E-3-17 Line #: 13-16 Code: c
Original Comment #:
Comment: The section should include or reference a figure defining the location of the RME receptor.

Response:
Action:

157. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.3.3.2.2 Pg #: E-3-22 Line #: 32-38 Code: c
Original Comment #:
Comment: See previous OEPA comments regarding the need for additional justification to support statements concerning the useability of the perched aquifer.

Response:
Action:

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158. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.3.4.8 Pg #: E-3-35 Line #: 15-30 Code: c
Original Comment #:
Comment: DOE should provide the basis for being inconsistent with the selection process used in the OU4 Baseline Risk Assessment. At what point was the use of the EPA Region III screening values approved for screening at the FEMP?

Response:
Action:

159. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.3-5 Pg #: E-3-68 Line #: Code: c
Original Comment #:
Comment: The future exposure point concentration for silver is incorrect. It should be "5.31 X 10²" (see Table 2-11). Risk assessment values should be recalculated using the correct concentration.

Response:
Action:

160. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.6.2.1 Pg #: E-6-4 Line #: Code: c
Original Comment #:
Comment: This section should include a discussion of the lack of surface soil organic data and surface soil samples from the pits themselves. These missing data decrease conservatism of the baseline risk assessment.

Response:
Action:

161. Commenting Organization: Ohio EPA Commentor: DERR
Section #: E.6.2.2.1 Pg #: E-6-7 Line #: 38-41 Code: c
Original Comment #:
Comment: Ohio EPA disagrees with the impact of this assumption to be low. Based upon the discussions of waste being transferred from Pit 3 to 1 and 2, it is likely some of the surface materials on the pits is waste. This is further supported by the findings of Removal Action 22, which reported exposed waste on the pits. The removal covered these areas, but their existences suggests the cover material is limited and may contain waste. The assumption discussed in this bullet may result in underestimate the baseline risks posed by the unit.

Response:
Action:

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162. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.6-1 Pg #: E.6-1-16 Line #: Code: c
Original Comment #:

Comment: The magnitude of uncertainty associated with the adequacy of the database should be higher. The deficiencies associated with organic data and the lack of surface soil samples from the waste pits impact the number of CPCs as well as the baseline risks. Additionally, these organic data deficiencies and the lack of data from the base of the pits will affect the Feasibility Study risk assessment and the development of PRGs.

Response:
Action:

163. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.6-1 Pg #: E.6-1-16 Line #: Code: c
Original Comment #:

Comment: The calculated exposure in concentrations uncertainty may decrease conservatism due to the lack of surface soil samples from the waste pits. The concentrations of contaminants are likely to be higher on top of the pits than in the surrounding soils.

Response:
Action:

164. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Attachment E.II Pg #: E-II-1 Line #: Code: c
Original Comment #:

Comment: a) DOE must provide additional justification for these screens. Relevant guidance documents supporting these screens should be cited. Additionally, when the tables following are compared it appears the screens have been inconsistently applied (i.e., keeping some contaminants of equal concentration that were excluded from another pit). These screens should be revised to be consistent with those discussed in section E.2.3 and previous Ohio EPA comments on that section.

- b) "B" should only be used consistent with USEPA's RAGS guidance and the 10X or 5X rules.
- c) "D" - provide specific cutoffs must be for "low toxicity compound".
- d) "E" - Clarify if the compound was used for uranium extraction at the FEMP.
- e) "I" - provide specific cutoffs for "insufficient data". If in doubt the compound should be kept.

Response:
Action:

165. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.II-1 Pg #: E-II-5 thru 13 Line #: Code: c
Original Comment #:

Comment: a) Aroclor-1260 should be retained. It was detected twice thus "A" is not an appropriate screen.
b) Bis(2-ethylhexyl)phthalate should not be screened out unless the concentrations are less than the 10X rule. This compound has both a slope factor and an reference dose.
c) 1,4 Dioxane should not be screened out. This contaminant has a slope factor.

Response:
Action:

166. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.II-2 Pg #: E-II-14 thru 25 Line #: Code: c
Original Comment #:

Comment: a) The screening of the first 15 contaminants based upon "I" is unacceptable. DOE's failure to obtain sufficient data is not an acceptable reason for screening out a contaminant. All but one of these contaminants were detect however many times they were sampled. The contaminants detected should be retained.
b) Dimethyl phthalate, carbon disulfide, and carbon tetrachloride should be deleted due to "A".

Response:
Action:

167. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.II-3 Pg #: E-II-27 Line #: Code: e
Original Comment #:
Comment: Delete "A" from phosphorous, sulfate, and sulfide.

Response:
Action:

168. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.II-18 Pg #: E-II-95 Line #: Code: c
Original Comment #:
Comment: a) Are the data collected under the Waste Pit Area Storm Water Runoff RA (WPASWRRRA) included in the RI/FS data? It must be made clear which of the data discussed in section 2.6 of the RI are included within this table.
b) The PAH data from the WPASWRRRA are not included in the table. These data should be included.
c) A number of contaminants have been deleted inconsistently with the other tables. Cyanide, mercury and thallium should be included as they were for Pit 1.

Response:
Action:

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169. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.IV-1 Pg #: E-IV-2 Line #: Code: c
Original Comment #:
Comment: The sum for the air, inhalation, radionuclide column should be 2.6×10^{-5} (see Ra-226). The table should be corrected and all subsequent representations of the data.

Response:
Action:

170. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.IV-9 Pg #: E-IV-10 Line #: Code: c
Original Comment #:
Comment: The sum for the sediment, external exposure, radionuclide column should be 1.3×10^{-5} (see Th-232). The table should be corrected and all subsequent representations of the data.

Response:
Action:

171. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.IV-12 Pg #: E-IV-15 Line #: Code: c
Original Comment #:
Comment: The sum for the air, dermal contact w/ drinking water column should be 4.0×10^{-1} (see Uranium). The table should be corrected and all subsequent representations of the data.

Response:
Action:

172. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.IV-16 Pg #: E-IV-19 Line #: Code: c
Original Comment #:
Comment: The sum of the soil, external exposure, radionuclide column should be 3.6×10^{-2} (see Ra-226 & Th-232). The table should be corrected and all subsequent representations of the data.

Response:
Action:

173. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.IV-18 Pg #: E-IV-22 Line #: Code: c
Original Comment #:
Comment: Why are the Inhalation of VOCs and Dermal Contact columns both "NA" under groundwater? These would seem to be appropriate pathways.

Response:

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Action:

174. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.IV-21 Pg #: E-IV-28 Line #: Code: c
Original Comment #:
Comment: a) The sum of the air, ingestion of vegetable/fruit column should be 2.6×10^4 (see tin). The table should be corrected and all subsequent representations of the data.
b) The sum of the air, ingestion of meat column should be 2.4×10^1 (see As, Cu, U). The table should be corrected and all subsequent representations of the data.

Response:
Action:

175. Commenting Organization: Ohio EPA Commentor: DERR
Section #: Table E.IV-22 Pg #: E-IV-30 Line #: Code: c
Original Comment #:
Comment: The sum of the soil, dermal contact column should be 9.1×10^4 (see tetrachloroethene, TCDD, HxCDD, both PECDFs). The table should be corrected and all subsequent representations of the data.

Response:
Action: