

R-012-207.3

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**OHIO EPA COMMENTS ON DRAFT PLANT 1
PAD CONTINUING RELEASE REMOVAL
ACTION WORK PLAN**

01-11-91

OEPA/DOE

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ATTACHMENT

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OHIO EPA COMMENTS ON DRAFT PLANT 1 PAD CONTINUING RELEASE REMOVAL
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1. Page 2, Introduction, first full paragraph: Because final cleanup levels have not been established the work plan should state that it is possible that additional actions may be required depending on the selection of final cleanup levels.
2. Page 2, first full paragraph: This removal action may not contribute to the efficient performance of long-term remedial actions at the site if the build over criteria suggested is implemented. The 35 pCi/g total uranium build over criteria fails to address other radionuclides which are especially relevant to this action. Thorium is a common contaminant, yet DOE fails to implement any build over criteria for this radionuclide. Total thorium exceeds 10 ppm in several soil samples in which the total uranium level is below the 50 ppm build over criteria (ie. borings 1342-5'; 1345-1' & 5'; 1338-3'; 1349-2' thru 5.5'). Technetium-99 was found at 1.4 pCi/g (background assumed 0 pCi/g; fission product) at sample location 1345 while total uranium was below the build over criteria. Tc-99 is a highly mobile isotope and should receive more attention as it was detected in the only boring analyzed for it. This removal action may impair the implementation of final remediation if a final cleanup level of less than 35 pCi/gm of total uranium is determined and a structure vital to the removal action is placed over soils above the final remediation cleanup level for total uranium or other radioisotopes.
3. Page 2, first full paragraph: The completion of this removal action may impede the final remediation of perched groundwater contamination within the immediate area of the removal action. DOE should include a discussion of how contaminated perched groundwater, such as that encountered in borings 1337 and 1339 (689 and 441 ug/l total U respectively) may be remediated under Operable Unit 3 final remediation or the current removal action designed to remove and treat contaminated perched groundwater.

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4. Page 10, third paragraph: The volatile organic compound (VOC) analysis adjacent to the western edge of the pad provides little useful information due to the extensive contamination of laboratory blanks (Attachment 1(RSE), Table A-3). The presence or absence of acetone in the soil is especially questionable since all sample locations but one had blank contamination. DOE has failed to appropriately address VOC contamination west of the pad and should keep this fact in mind when addressing the potential for mixed waste to result from excavation in the area. Consideration should be given to TCLP analysis for VOC's in excavated soil.
5. Page 11, second paragraph: The only boring analyzed for Tc-99 contained above background levels of Tc-99 while total uranium was 13.3 ug/g, not above the current build over criteria. An individual soil sample did exhibit an above background concentration of a non-naturally occurring radionuclide in the absence of elevated total uranium concentrations.
6. Page 12, second paragraph: The unit of measurement reported for trichlorethane in this section "mg/kg" does not correspond to the unit reported in Appendix A, page 3 of Attachment 1 (RSE) "ug/kg". If the unit of measure is mg/kg, DOE should consider TCLP(VOC) analysis of the soil.
7. Page 14, Section 6.2: DOE fails to include plans for dealing with perched groundwater which may be encountered during excavations to achieve build over criteria. The potential for this to occur is supported by the sporadic nature of perched groundwater levels and total uranium concentrations in the borings already completed. A good example of potential perched water encounter is shown in boring 1338 in which groundwater is reached at 6.5' and at 5.5' the total uranium concentration (73 ppm) still exceeds the build over criteria.
8. Attachment 1 (RSE), Page 6, second paragraph: In this section DOE discusses the 1981 NRC Branch Technical Position Paper and reports the 35 pCi/g (approx. 50 ppm) level for total uranium. A level of 10 pCi/g for natural thorium is presented but no conversion to ppm is provided. DOE should provide this conversion for thorium since most of the thorium data presented are in ppm and are not readily comparable to the standard. This conversion will allow the reviewer to better judge DOE assertions that levels of thorium in excess of its standard are only found in areas where total uranium exceeds 35 pCi/g.

9. Attachment 1 (RSE), Appendix A, Page 3, Analysis Table: See comment 5.
10. Attachment 1 (RSE), Appendix A, Table A-7: The relatively high detection limits for thorium (23 ppm) on a number of borings do not allow for determining if current standards or future cleanup levels for thorium are being exceeded. Lower detection limits for thorium would allow for a better judgement of the effectiveness of the 35 pCi/g total U build over criteria. DOE should work to reduce detection limits for total thorium.
11. Attachment 1 (RSE), Appendix A, Table A-10: The second series of U-235 measurements are probably U-238 and should be corrected.