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**MAWS TREATABILITY STUDY WORK PLAN  
(OHIO EPA COMMENTS)**

**01/19/93**

**OEPA/DOE-FN  
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COMMENTS**



State of Ohio Environmental Protection Agency

Southwest District Office

40 South Main Street  
Dayton, Ohio 45402-2086  
(513) 285-6357  
FAX (513) 285-6404

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G-01735  
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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 the Ohio EPA comments on the MAWS Treatability Study Work Plan. If you have any questions please contact Tom Schneider, Phil Harris or me. If you would prefer a meeting to discuss some of these issues, please call me.

Sincerely,

Graham E. Mitchell  
Project Manager

GEM/ycr

Enclosure

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

(warner)  
partial  
action  
response  
to doe-0415-93  
(5396)

OHIO EPA COMMENTS  
MAWS TRT WP

General Comments

1. It appears that DOE failed to incorporate a number of Ohio EPA's comments on the MAWS Compliance Plan into this Treatability Study Work Plan. DOE has not sufficiently addressed Ohio EPA's concerns about fully characterizing influents and effluents to the treatment processes. DOE should analyze initial pit 5 waste, initial soil, treated soil, effluent water, and effluent air for full HSL and RADs. These data are essential to determining the effectiveness of these treatments in meeting the goal of reducing mobility, toxicity, and volume. Ohio EPA previously expressed these concerns in comments on the MAWS Compliance Plan.
2. As stated in Ohio EPA's comments on the MAWS Compliance Plan, the use of a 35 pCi/g uranium concentration soil cleanup goal is unacceptable. The use of 35 pCi/g as the cut off for this treatability study will still leave questions about its effectiveness for a final remedy. It is likely the final cleanup level could be below 35 pCi/g. DOE must pursue a determination of the lowest achievable concentration in washed soils. The determination of this lowest achievable concentration, the respective increases in cost and decrease in volume reduction is essential for the justification of this effort as a treatability study.
3. The document discusses a number of sampling events within the MAWS treatment process but fails to list chemicals to be analyzed for, their respective detection limits, and number of samples to be collected. DOE should clarify how it intends to fully characterize influent and effluent media from these treatment processes.

Specific Comments

1. Section 1.2.1, pg. 1-2: The fact that concrete and structural steel were added to Pit 5 is new information and this should be stated in this report. Any other information about when this occurred and where and how the material was deposited should be given to the EPA's in a separate letter report.
2. Section 1.3.1, pg. 1-8, Table 1-1: Are the units in this table correct? The Aroclor 1254 of 750 ppm does not match up with the value of 75 ug/kg reported on pg. 1-4.
3. Section 2.2, pg. 2-2, 3rd paragraph, 3rd sentence: Please clarify.
4. Section 3.1, pg. 3-1: The first objective should be "overall waste volume reduction with minimum uncontaminated additives."

5. Section 3.2.2, pg. 3-1, fourth line: This is not a sentence.
6. Section 3.2.2, pg. 3-1: The fact that uranium is the most prevalent contaminant in OU1 is not reason enough to only target it during the treatability study. Other contaminants may be more mobile, less removable and thus concentrated in the "cleaned" soil, or introduced during treatment. Full HSL and RAD characterization of the "to be treated" and the "cleaned" soils need to be performed.
7. Section 4.2.1.3, pg. 4-3, 3rd paragraph: No schedule is provided for the submission of these work plan addenda. The long-term stability of this waste form is critical and needs to be evaluated. DOE should provide a schedule for submission of these addenda.
8. Figure 4-1, pg. 4-5: DOE should be characterizing all inputs materials and output waste streams shown on this figure.
9. Pg. 4-5: What is the disposition of prefilter and filter sand media?
10. Pg. 4-9: How is the output increased to 1000 kg/day in a nominal design unit of 300 kg/day? Is this unit oversized? What modifications are necessary for the rate increase?
11. Pg. 4-11: What is the disposition of the 55 gallon drums and the 6 drum overpacks after the treatability test is completed?
12. Section 4.4.3, pg. 4-22, 4th paragraph: Include PCT tests at 90 C as described in Section 4.2.1.2, page 4-2.
13. Section 6A.1.1.1, pg. 6A-1 paragraph, 5th bullet: DOE's justification for analyzing treated soils for Full TCLP is unclear. If non-hazardous soils are used, sampling for full TCLP will not yield useful information. DOE should use full HSL and Rads for analysis of treated soils.
14. Section 6B.1, pg. 6B-1: Sampling should not be aimed solely at achieving compliance, but with the goal of determining the fate of contaminants within the treatment process and the reduction of toxicity, mobility and volume.
15. Section 13.1, Table 13-1: DOE's cover letter suggests treatment of soils and water will begin in January. If this is the case then the NTP must have been issued and the schedule should be revised to include actual dates. The schedule needs to be updated to reflect the current plans of DOE.

## DHWM (RCRA) COMMENTS ON MAWS TREATABILITY STUDY

1. Data provided in Section 1.2.2. and Table 1-1 in insufficient to adequately characterize the contents of Pit 5. For example, Section 1.2.2 states that the sludge was determined not to exhibit a hazardous waste characteristic based on EP-Toxic analysis. However, Table 1-1 provides no EP analytical results. The concentrations provided for some of the metals, assumed to indicate total metal concentrations, are at levels which appear to be high enough to fail EP regulatory levels (i.e, 36,939 ppm for Barium, 236 ppm for Lead, etc.). In addition, detectable concentrations of organics are attributed to laboratory contamination without providing further data, explanation, or justification. The fact that Pit 5 received listed wastes is also ignored in this characterization discussion. Additional data, clarification, and/or explanation must be provided in this section.
2. The RCRA permitting issue is ambiguously addressed in the MAWS work plan. On page [A1]-1 it is stated that the treatability study is exempt from the procedural requirements to obtain Federal, State, or local permits in accordance with Section 121(e) of CERCLA and Section XIII.A of the Amended Consent Agreement under CERCLA Sections 120 and 106(a). However, on page [A1]-5, DOE cites ORC 3734.02(E) and Paragraph 3.2 of the 1988 Ohio EPA/DOE Consent Decree as reasons why a state hazardous waste permit would be required. Yet the work plan does not propose the submittal of any permit applications. This issue must be resolved and clarified within the work plan.
3. Regardless of whether a hazardous waste permit is required or not required, so long as hazardous waste is stored, treated or disposed through implementation of this project, DOE will be expected to demonstrate compliance with applicable and appropriate hazardous waste regulations. Some of these requirements are briefly outlined in Table 1 of Attachment 1 and in the discussion on pages [A1]-1 and [A1]-5. However, this section of the plan does not address all ARARs nor does it provide enough detail to demonstrate compliance with some of the regulations that are cited.

For example, if hazardous waste is stored or treated in tanks, OAC 3745-66-90 through 66-991 apply. Table 1 merely refers to the single requirement of inspecting tanks daily for leaks. A second example would be the fact that OAC 3745-68-70 through 68-81, which are regulations specific to the thermal treatment of hazardous waste, are not cited nor discussed in this section.

DHWM Comments on MAWS Treatability Study  
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Ohio suggests DOE expand Table 1 and the discussion in this section to cite all ARARs and provide documentation demonstrating compliance with these regulations. If DOE feels information already provided in the work plan satisfies the requirements of some of these ARARs, Table 1 can be used to indicate the location of the existing information. Otherwise, the Work Plan should be revised to include all necessary information to demonstrate compliance with applicable and appropriate hazardous waste regulations.

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