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**COMMENTS ON THE O.U. 2 TREATABILITY
STUDY REPORT**

09-17-92

**OEPA/DOE-FN
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LETTER**



State of Ohio Environmental Protection Agency

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George V. Voinovich
Governor

September 17, 1992

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. 2 Treatability Study Report received by Ohio EPA on July 15, 1992. We apologize for the delay in reviewing this document and hope these comments can still be addressed. These comments should at least be evaluated for the O.U. 2 FS.

If you have any questions about these comments please contact Tom Schneider or me.

Sincerely,

Graham E. Mitchell
Project Manager

GEM/ycr

Enclosure

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

OHIO EPA COMMENTS
ON THE
OU2 TREATABILITY STUDY REPORT

General Comments

1. It is not acceptable to only use the data for UCS and leachability testing for evaluating overall protection of human health and the environment and compliance with ARARs in the FS. The problem is that this only demonstrates short-term protection and compliance. The FS will also need to look at the future risk scenario. Therefore, durability testing would provide data which would allow for long-term extrapolation for evaluating overall protection of human health and the environment.
2. It is not clear how DOE will use the data achieved through this treatability test to compare with the To Be Considered standards set up in the NRC Technical Position on Waste Form (1/91). DOE should note that an evaluation of the proposed waste forms with respect to the measurements stated in the Waste Form paper is expected within the Feasibility Study.

Specific Comments

1. Section 1.0, pg. 1-14 line 31 thru Pg 1-15 line 1: States, "The resulting stabilized waste should be a monolith with low permeability to water, limits surface areas, and sufficient physical strength and durability for land disposal." To state that the monolith will have sufficient durability is concluding that there is a standard to compare the results to. This is not the intention for durability testing; rather, it is to determine what matrix will come up with the best durability results.
2. Section 2.0, pg. 2-1, lines 13-14: a) It is improper to report the concentration range by beryllium in the leachate as a risk. Rather, the actual concentrations should be reported followed by the respective risk range.
b) ~~This section states beryllium was not below action levels but is not listed in any of the Tables 4-17 thru 4-22. There appears to be some inconsistency here, please clarify or correct.~~
3. Section 2.2, pg. 2-2, Recommendations: This section recommends to determine what effect the addition of water has on the strength and long-term stability of the treated waste. Durability testing should be included in this section to determine the effects wetting and drying have on durability, permeability, leachability and UCS. The long term effects of the treated waste would not be known without this information.

4. Section 3.1.3.2, pg. 3-14, lines 8-10: By using the data for UCS and leachability testing for evaluating overall protection of human health and the environment and compliance with ARARs in the FS, only demonstrates short-term protection and compliance. The durability test would provide data which would allow for long-term extrapolation for evaluating overall protection of human health and the environment.
5. Section 3.6.7, pg. 3-42: Its disappointing to note that the instrument chosen by DOE to measure UCS did not even achieve a reportable limit of 500 psi. Since the basic criteria for successful runs included a minimum UCS of 500 psi, one would think an instrument capable of measuring this would have been used.
6. Section 4.1.2.1, pg. 4-23, Table 4-17: Define or footnote the meaning of "acetone^m".
7. Section 4.1.2.1, pg. 4-24, Table 4-18: Uranium data were not included in this table, please revise.
8. Section 4.1.2.1, pg. 4-29, 2nd paragraph: a) This section fails to discuss beryllium and Tables 4-17 thru 4-22 do not list it. Section 2.1, pg.2-1 suggests it failed some leaching criteria, please clarify.
b) It should be discussed within the report the fact that the characterization data from before treatment was not collected from a portion of the treated waste. The fact that OU2 characterization data rather than specific samples from the to-be-treated waste were analyzed for TCLP may explain the difference in contaminants leached. The other potential source is contaminants introduced during the study. Without analyses of pretreatment waste it is difficult to draw conclusions concerning this data.
9. Section 4.1.2.1, pg. 4-30, Table 4-23: No footnotes are provide with this table to explain the numerous footnotes cited. Please correct.
10. Section 4.1.2.1, Tables 4-23 thru 4-28: These tables are very difficult to interpret. An attempt should be made to revise the tables and make them more usable to the reader. Additionally, it should be noted that these treatability study reports will be DOE's source of information to the public concerning the treatment choice at ROD. These documents need to be clear and understandable for the public as well.