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**OPERABLE UNIT 3 TREATABILITY STUDY WORK PLAN - ADDENDUM**

06/01/94

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LETTER



**Department of Energy**  
**Fernald Environmental Management Project**  
P.O. Box 398705  
Cincinnati, Ohio 45239-8705

JUN 01 1994  
DOE-1588-94

Mr. James A. Saric, Remedial Project Manager  
U. S. Environmental Protection Agency  
Region V - 5HRE-8J  
77 W. Jackson Blvd.  
Chicago, IL 60604-3590

Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
40 South Main Street  
Dayton, Ohio 45402-2086

Dear Mr. Saric and Mr. Schneider:

**OPERABLE UNIT 3 TREATABILITY STUDY WORK PLAN - ADDENDUM**

The purpose of this letter is to provide you with the findings obtained during the initial evaluation of the ABCOV asbestos treatment technology and notify you, based on these findings, that the ABCOV asbestos conversion treatability study has been eliminated from the Operable Unit 3 (OU3) Treatability Study Work Plan. In addition, as per discussions with Mr. Schneider, the United States Department of Energy (DOE) will provide a letter to both the United States Environmental Protection Agency (USEPA) and the Ohio Environmental Protection Agency (OEPA) by June 15, 1994, outlining additional potentially viable treatability studies which OU3 is investigating.

The ABCOV technology was identified as a Treatability Study for the chemical conversion of Asbestos-Containing Material (ACM). Since the submittal of the Work Plan, the DOE has conducted a screening review of this technology and rejected it because it fails to adequately demonstrate the capability to meet all the evaluation criteria for Fernald OU3 ACM wastes. Based on our review of the technology, DOE has concluded that the ABCOV process will likely not greatly reduce volume, significantly limit mobility, nor reduce toxicity of radiological contaminants in OU3 ACM wastes.

As you may recall from the work plan, the ABCOV method is a wet, acidic process designed to chemically destroy the asbestos fibers. In the pH ranges utilized in the process, only a fraction of the uranium would be expected to dissolve into the treatment solution, resulting in both the liquid-phase filtrate and the solid-phase presumably having radiological contamination. Since there is no total extraction of radiological species, all generated waste still would need to be sent to a low-level waste disposal facility.

In addition, large quantities of radiologically contaminated ABCOV solution and equipment would be generated. Generation of radiologically contaminated liquid wastes is highly undesirable, as further treatment would be required and additional wastes would be generated.

The main benefit is a reduction in the toxicity of the asbestos. However, asbestos is relatively immobile in subsurface environments and can easily be contained. Therefore, the limited benefit from the treatment does not justify the additional cost to develop the treatment technology, or the risks associated with handling the chemicals.

The ABCOV asbestos conversion method could purportedly reduce the volume of the ACM waste within OU3 requiring disposal. The total estimated volume of ACM within OU3 represents less than one percent (1%) of the estimated OU3 waste volume. (ACM wastes within OU3 are approximately 66,000 cubic feet (ft<sup>3</sup>), comprised of approximately 60,000 ft<sup>3</sup> of transite and 6,000 ft<sup>3</sup> of thermal system insulation (TSI)). Therefore, the costs associated with converting the ACM using the ABCOV conversion process do not appear to be justified on the basis of waste volume reduction.

Based on these findings, the ABCOV Treatability Study will be eliminated. The funding that was to be used for this treatability study and any subsequent development work will be utilized more effectively in other program areas.

If you or your staff have any questions, please contact Robert Janke at 648-3124.

Sincerely,



for

Jack R. Craig  
Assistant Manager for  
Environmental Restoration

FN:RJ Janke

cc:

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