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**MINIMUM ADDITIVE WASTE STABILIZATION TREATABILITY STUDY  
WORK PLAN - MANAGEMENT OF UNPROCESSED WASTE PIT NUMBER  
5 FEED MATERIAL AND HANDLING OF RINSEATE RESIDUES  
DURING SHUTDOWN**

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LETTER



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Fernald Environmental Management Project  
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Mr. James A. Saric, Remedial Project Director  
U.S. Environmental Protection Agency  
Region V - 5HRE-8J  
77 W. Jackson Boulevard  
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
401 East 5th Street  
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

**MINIMUM ADDITIVE WASTE STABILIZATION TREATABILITY STUDY WORK PLAN - MANAGEMENT OF UNPROCESSED WASTE PIT NUMBER 5 FEED MATERIAL AND HANDLING OF RINSEATE RESIDUES DURING SHUTDOWN**

The purpose of this letter is to provide information on the pending shutdown of the Minimum Additive Waste Stabilization (MAWS) melter and confirm the verbal approval received from your office by Terry Hagen on December 8, 1994, to proceed with a proposed plan to manage unprocessed Waste Pit Number 5 feed material by returning this material to Waste Pit Number 5. Since the Consent Decree between the Ohio Environmental Protection Agency (OEPA) and the Department of Energy, Fernald Area Office (DOE-FN) (Civil Number C-1-86-0217), entered December 2, 1988, states that no "sewage," "industrial waste," or "other waste" shall be discharged or placed into Waste Pit Number 5 without prior written approval of the OEPA; formal approval for the return of this material back into Waste Pit Number 5 is being requested.

All feed material that could be processed in the MAWS Program has been fed to the MAWS melter. The remaining material consists of the "heel" in the two feed tanks. This material could not be fully processed due to the feed system configuration (flat bottom tank with elevated feed pickup line), along with a failure of the heat exchanger in the off-gas system which lead to other problems with the High-Efficiency Particulate Air (HEPA) filtration unit. Processing the remaining feed would require a retrofit at significant expense. Additionally, a volume of water has been utilized for removal of feed residue from the associated tank and piping, and collected in the feed tank. This water has a low solids content which is not amendable to processing in the melter. The objectives of the MAWS Program have been satisfied and, therefore, there is not adequate justification to incur the expense associated

with a system retrofit to process such a limited amount of material.

Disposition of the unprocessed Waste Pit Number 5 feed material was not addressed in the MAWS Work Plan. Approximately 1000 gallons of the feed material remain in the feed tanks. The feed material consists predominantly of Waste Pit Number 5 material, along with inert, non-hazardous additives. The composition of the material is Pit Number 5 sludge (82 wt.%), soils that were washed in the MAWS soil washing process (10 wt.%) and additives (8 wt.%) consisting of silica, boric acid, sodium fluoride, and food grade potato starch. The added soils were originally taken from the Plant 1 Pad removal action. The additives were added to ensure the glass composition achieved a highly leach resistant and durable waste form product.

Since the Waste Pit Number 5 material was originally taken from Waste Pit Number 5 at the beginning of the MAWS Project, our intent is to return this material back to Waste Pit Number 5. This replaces part of the material that was removed from Waste Pit Number 5 and does not add any new substantive contamination. The liquid fraction that can be decanted as appropriate from the feed material, and from the rinse water used to flush out the tank, will be processed through the Fernald Environmental Management Project (FEMP) Plant 8 waste water treatment system prior to discharge in accordance with the National Pollutant Discharge Elimination System (NPDES) permit. The proposed plan is to remove the feed material from the feed tank (by pumping to dumpster tank); the feed tank and associated piping will then be thoroughly decontaminated with high pressure water. To the extent practicable, the liquid fraction will be decanted from the feed and rinse water, sampled, and transported to Plant 8 for waste water treatment prior to discharge. The removed feed material will then be transported by dumpster tank and returned to Waste Pit Number 5. This is the same dumpster tank that was used to bring the Waste Pit Number 5 material to Plant 9 at the beginning of the MAWS Project, in accordance with a minor modification to the Work Plan approved by OEPA on January 24, 1994.

This proposal will allow needed flexibility during shutdown in managing the Waste Pit Number 5 feed material, and will not result in increased risk to site personnel or additional environmental contamination. The two alternatives to the proposed plan are: 1) to drum the material for long-term storage or 2) leave the material in the feed tank. Alternative Number 1 would require allocation of additional storage space and resources for on-going management. Moreover, this alternative requires more material handling than the proposed alternative, which may result in increased personnel exposure. Alternative Number 2 would also require additional resources for daily inspections and management. Since the feed material consists predominately of Waste Pit Number 5 material, returning the material to Waste Pit Number 5 will not in any way affect the ability to implement final remediation of the material in accordance with the remedial alternative that was documented in the Feasibility Study/Proposed Plan (FS/PP) for Operable Unit 1 (OU1). In addition to being the most cost-effective, this alternative would be in compliance with the current FEMP "Waste Minimization and Pollution Prevention Awareness Plan" and would minimize handling, possible personnel exposures, and unnecessary long-term storage.

If you or your staff have any questions, please contact Rod Warner at (513) 648-3156.

Sincerely,

*Johnny Rensing*

for Jack R. Craig  
Fernald Remedial Action  
Project Manager

FN:Warner

cc:

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