Fernald Environmental
FERMCO
Restoration Management Corporation
(now renamed Fluor Daniel Fernald)
P. O. Box 538704 Cincinnati, Ohio 45253-8704 (513) 648-3000

June 27, 1997

Fernald Environmental Management Project
Letter No. C:WMTSP(SP):97-0075

Ms. Nina Akgunduz
Department of Energy
Fernald Environmental Management Project
P. O. Box 538705
Cincinnati, Ohio 45253-8705

Dear Ms. Akgunduz:

CONTRACT DE-AC24-92OR21972, RECOMMENDATION/JUSTIFICATION TO PROCEED WITH BASELINE ACTIVITIES - RHEOLOGY/HYDROLOGY TESTING AND SILOS 1 AND 2 BACK-UP (CEMENTATION) TESTING

As requested, please find attached further justification for the subject planned testing . Fluor Daniel Fernald recommends that Rheology/Hydrology testing and Silos 1 and 2 Back-up (cementation) testing be continued.

Upon review of the attached justification, please provide your concurrence, if appropriate, by signing and returning a copy of this letter. If you have any questions or require additional information, please call Dennis A. Nixon at 648-4800.

Sincerely,

Donald Paine
Silos Project Deputy Manager

DP:DAN:jco
Attachment

Concurrence: _____

Nina Akgunduz Date
Department of Energy

Fernald Environmental
FERMCO
Restoration Management Corporation
(now renamed Fluor Daniel Fernald)

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JUSTIFICATION - RHEOLOGY/HYDROLOGY TESTING AND SILOS 1 AND 2 BACK-UP (CEMENTATION) TESTING

Rheology/Hydrology Testing:

Physical data for the K-65 residues is lacking and the original plan was to develop this information during the pilot plant testing. As a result of the decision not to perform additional testing at the pilot plant, the information was not gathered. It has been discussed frequently that the information that is being requested is critical to the path forward regardless of the ultimate approach for remediation. The concern that has been voiced by various individuals, including the Independent Review Team (IRT) and other stake-holders, is in regard to the issue of retrieval. Although the concept that is currently being considered reflects lessons learned from work at the Niagra Falls site, there is one concern that we have not been able to address that could have a significant impact. We have been told that although they were successful in moving the material from their silo, the material was difficult to move and pump because of its physical characteristics. The documentation that we have reviewed does not address the physical characteristics of their material sufficiently to provide the technical information that will be required to design an appropriate slurry handling system.

The ability to handle the K-65 residues in a slurry form continues to be the open question with the retrieval process. Experience in the pilot plant with the surrogate has proven that the slurry system is a concern that will require careful attention. Since we are very aware of the concerns, it is important that we provide information regarding this concern to the potential vendors. It is impractical and perhaps unfeasible for all of the prospective bidders to perform the tests with actual radioactive material. Therefore, it is to our benefit from a cost and potential schedule benefit, to have this testing performed by an outside laboratory and the information furnished with the bid package. In addition, since this is a major area of uncertainty, it will provide a means for evaluating proposals and designs to help assure that significant programmatic costs and associated delays do not impact the project.

Silos 1 & 2 Back-up (Cementation) Testing:

As recommended by the Independent Review Team (IRT), it is imperative that we expand our knowledge base on cementation for the Silos 1 & 2 residues beyond the treatability studies previously performed. The proposed testing will provide cement based formulations at various waste loadings to determine what is feasible while meeting all applicable waste acceptance criteria. The data generated by the baselined testing will be utilized for preparation of cost estimates and pre-conceptual engineering of stabilization alternatives for the revised Feasibility Study/Proposed Plan (FS/PP).

JUSTIFICATION (Continued)
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Proof of Principle testing identified in the revised Silos Project path forward will provide the definitive data used to ultimately select the remedy, however, this data will not be available until September 1999. It is extremely important that the FS/PP be essentially complete by September 1999 due to the fact that the schedule allows only 2 months to incorporate the Proof of Principle data. Additionally, the test results will provide the basis needed by Fluor Daniel Fernald and the Department of Energy to evaluate the Proof of Principle vendor's test proposals and test results.

It is planned that the testing will be performed by NFS, Inc. NFS has the technical expertise, experience, and regulatory licenses to conduct low level and mixed waste optimization tests at their site. Additionally, NFS, as a teaming partner will perform the testing at pre-approved hourly rates with no fee added.