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REQUEST FOR EXTENSION - OPERABLE UNIT 4 - (REQUEST FOR
EXTENSION FOR RD AND PHASE I RA WORK PLAN MILESTONES FOR
OU4)

09/26/96

DOE-1349-96

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LETTER



Department of Energy

**Ohio Field Office
Fernald Area Office**

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SEP 26 1996

DOE-1349-96

**Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - SRF-5J
77 West 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:

REQUEST FOR EXTENSION - OPERABLE UNIT 4

Reference Letter: From Johnny Reising to James Saric, U.S. EPA, and Tom Schneider, OEPA, November 3, 1995, "Delay in Operable Unit 4 Pilot Plant Construction and Operation."

The purpose of this letter is to request an extension for Remedial Design (RD) and Phase I Remedial Action (RA) Workplan milestones for Operable Unit 4 (OU4) consistent with Section XVIII of the Consent Agreement as Amended under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sections 120 and 106(a).

As stated in the above referenced letter of November 3, 1995, an evaluation of the overall Vitrification Pilot Plant (VITPP) schedule and resultant impacts to the Fernald Residues Vitrification Plant (FRVP) was undertaken. This evaluation resulted in the recognition of a schedule slippage. In an attempt to show good faith and to comply with the "early warning" concept, weekly conference calls have been conducted with both the U.S. Environmental Protection Agency (U.S. EPA) and the Ohio Environmental Protection Agency (OEPA) since early January 1996.

"Good Cause" exists for the milestone extensions as a result of the inability to collect quantitative performance data that would aid in developing and demonstrating the application of the vitrification treatment technology to the OU4 residues. The Final Record of Decision (ROD) for OU4, December 1994, in Section 8.2.1.2, acknowledges that due to

the complexity associated with implementation of the vitrification technology there was a potential for delays to occur. These delays have in turn affected the remedial design schedule.

At this time, the schedule slippage appears to be caused primarily by the following: 1) retrofit of the melter into the balance of the plant; 2) late delivery of the melter components and documents; 3) significant underestimation of the time necessary to turnover the Construction Acceptance Test (CAT) packages to Systems Operability Testing (SOT); 4) decrease in anticipated system operating efficiency based on other vitrification experiences at other sites; and, 5) equipment reliability and maintainability associated with the slurry feed preparation system, off-gas system, cooling water in the melter, gem machine, and outside support systems.

This delay will result in failure to meet the initial OU4 regulatory milestones associated with the full scale facility identified in the RD and RA Work Plans. The milestones that will be missed in the near term are the following:

New Radon Treatment System, Title I Design, Preliminary	September 30, 1996
Submit Phase II Remedial Action Work Plan	October 7, 1996
Vitrification Plant, Title I Design	December 4, 1996
Silo Superstructure Award/ Construction	November 13, 1996
Design Criteria Package, Pre-Final	December 4, 1996
New Radon Treatment System, Title I/II Design, Pre-Final	January 2, 1997

As mentioned in the November 3, 1995, letter, the schedule delay has occurred at the VITPP, primarily as a result of the technology driven nature of the project. This type of project requires an extended period of time for the proof of process. In this case, we have not been able to establish and maintain with the degree of certainty necessary, the reliability of the vitrification and auxiliary systems.

Since the recognition of the schedule delay in January 1996, the Department of Energy, Fernald Environmental Management Project (DOE-FEMP) formed a team to conduct a Value Engineering (VE) Study to evaluate potential opportunities which might improve the overall OU4 schedule. Currently, the DOE-FEMP is pursuing those VE Study recommendations which lend themselves to further evaluation and implementation.

The VE study presented three major recommendations: 1) potential upgrade evaluation of the current VITPP, 2) potential alternative treatment method for Silo 3 material other than

vitrification, and 3) potential cost savings associated with the waste transportation via both trucks and rail to the Nevada Test Site (NTS). The FEMP decided to further investigate Recommendations 1 and 2.

In July 1996, the final draft report of the Silo 3 alternative evaluation was issued for review by the EPAs and the public. Several informal discussions have taken place with the EPAs regarding the feasibility of the Silo 3 alternative treatment methods due to Silo 3's dissimilar waste characteristics compared to Silos 1 and 2 material. The study and a justification for the Silo 3 alternative evaluation was transmitted to the EPAs on July 17, 1996. A public workshop was held on August 20, 1996, to solicit input from the EPA and the public. The purpose of the workshop was to walk through the report and address any comments and questions from the public. Many questions and concerns were expressed by the public. Written comments on the study are due by October 15, 1996.

In April 1996 the VITPP Upgrade Evaluation Study was initiated. Conceptual engineering is currently being performed to determine the scope, schedule, and cost associated with the potential upgrade of the VITPP for use as a final remedial facility following the Phase II radioactive testing program. This option is being evaluated as part of the VITPP Phase II Design Modification which is required for the Phase II radioactive testing program. The existing plant configurations require additional modification to be able to satisfy the requirements of a DOE Operational Readiness Review (ORR) and for safe operations for the workers. The additional plant modification for the purpose of upgrade would only be logical and cost effective if the plant can be modified PRIOR to Phase II operation, thus avoiding decontamination of the plant after Phase II operation. The draft upgrade evaluation study report will provide the information on the feasibility, cost, and schedule for modification and upgrades. The draft VITPP Upgrade Evaluation will be completed no later than September 30, 1996, for DOE internal review. At a minimum, Campaigns 1 and 2 information of the VITPP Phase I is critical for Phase II design/upgrade evaluation. This information is also critical in developing a logical path forward and future milestones in the OU4 program.

Upon completion of the VITPP Phase I testing, the test data from both Vitreous State Laboratory (VSL) and VITPP will be evaluated. It is only at that time that an informed technical decision can be made on a path forward related to future OU4 milestones. As mentioned in the November 3, 1995, letter, once the test data is available from the VITPP and from mini-melter runs that were performed at the VSL, there should be a better estimate on the effect of the VITPP delays on the full scale facility.

As discussed in the OU4 RD Workplan, in Section 3.3, the VITPP test data are important for the remedial design and remedial action strategies. This was depicted by its "Finish-to-Start" schedule relationship with the final vitrification plant remedial design and subsequent remedial action. It would not be prudent, from either a cost or a schedule perspective, to proceed with remedial design prior to successful collection of performance data from the VITPP.

A continuing evaluation of the technical path forward on OU4 to address cost, schedule, and technical issues is taking place based on what we have encountered during initial operation of the VITPP. The previous path forward called for pilot plant and full-scale

vitrification facility design and construction activities to overlap. Based on the pilot plant data gathered to date, the DOE-FEMP now believes it is most appropriate to complete all pilot plant testing and full-scale activities in a more sequential fashion while accelerating the remediation of Silo 3.

We will continue to bolster our technical capabilities with respect to vitrification. This will include the formation of a Technical Review Committee which will have representation from West Valley, Numatec, Savannah River, local universities, stakeholders, and others with expertise in vitrification and other waste treatment technologies.

We will continue to operate the VITPP to obtain information relative to glass quality, melter capacity, and systems operability. Phase I information will be complete in January 1997. The Phase I information will be compiled in a report currently scheduled to be completed and available in March 1997. A decision on proceeding with vitrification will be made following the review of this information with input from you and our stakeholders.

The DOE-FEMP would like to discuss the need for replanning the OU4 remedial strategy and jointly work with the EPAs as well as our stakeholders to establish a more efficient and effective path forward for OU4. We are prepared to discuss this request for extension with you and provide any additional information required pertaining to the basis of the schedule extension and good cause.

If you have any additional questions or concerns, please contact me at (513) 648-3139.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

cc:

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