



State of Ohio Environmental Protection Agency

**Southwest District Office**

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George V. Voinovich  
Governor

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July 16, 1999

Mr. Johnny Reising  
U.S. Department of Energy, Fernald Area Office  
P.O. Box 538705  
Cincinnati, OH 45253-8705

**RE: COMMENTS - FINAL OU-4 POP REPORTS**

Dear Mr. Reising:

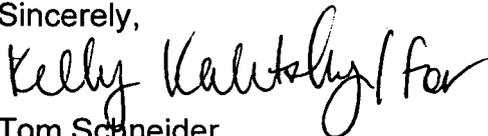
Ohio EPA is in receipt of the Silos 1 and 2 Proof of Principle Demonstration final reports received by this office on June 16, 1999. Ohio EPA submits the following comments:

- 1) Ohio EPA is not aware of any 15 ton-per-day joule heated melter being used to treat radioactive waste. This should clearly be reflected in the implementability review within the feasibility study.
- 2) Ohio EPA is aware that during the 72-hour Proof of Principle tests, not all equipment proposed for the full-scale facilities was demonstrated (i.e. the slurry dryer proposed by Vortec). The feasibility study must clearly weigh this factor in the implementability section.
- 3) The drawbacks of any single vendor, proprietary equipment must be considered in the implementability section of the feasibility study.
- 4) The proof of principle results show the need for on-line spare parts. This information should be included when the detailed design is submitted for review.
- 5) When reviewing plans for the vitrification pilot plant, DOE expressed concern regarding the possibility of spontaneous combustion of the carbon beds. Carbon beds are again being proposed for radon control in vitrification of the silos material and none of the proof of principle reports addresses the possibility of this occurrence. These concerns should be addressed in the implementability and short-term effectiveness sections of the feasibility study.

- 6) Low flow off gas can be treated with better efficiency than higher flows. DOE should examine the flow rates of each proposed technology in the implementability and short-term effectiveness sections of the feasibility study.
- 7) The feasibility study should present a comparison of expected radon releases to the proposed treatment systems and emissions after the treatment system within the short-term effectiveness section.
- 8) Chem-Nuclear proposed macro-encapsulation as a rework method for off spec material. Ohio EPA disagrees with this method of reworking off spec material. Any rework must involve the regrinding and reprocessing of any off spec material.
- 9) Although DOE constrained the operation of the technologies to a three year period, the feasibility study must evaluate the relative ability to recover the schedule for the various technologies. In addition, the feasibility study should present the total hours of operation anticipated to complete remediation of the silos contents for each technology.
- 10) After the selected technology is selected and the full scale plant built, Ohio EPA feels that it is of utmost importance to operate the facility using in a non-radioactive surrogate to assure the ability of the technology to operate in a safe manner. This proof of process request should be included in the feasibility study as well as the Request for Proposal for the final vendor.

If you have any questions, please contact Kelly Kaletsky at (937) 285-6075.

Sincerely,



Tom Schneider  
Fernald Project Manager  
Office of Federal Facilities Oversight

cc: Jim Saric, USEPA  
Terry Hagen, FDF  
Ruth Vandegrift, ODH  
Frances Barker, TetraTech EM Inc.  
Manager, TPSS/DERR, CO  
Mark Shupe, GeoTrans