



Department of Energy

Ohio Field Office
West Valley Area Office
P.O. Box 191
West Valley, NY 14171

March 6, 1995

Mr. Gary C. Comfort
Headquarters
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Nuclear Regulatory Commission (NRC) Requested Additions to Sludge Wash
Cement Waste Long-Term Test Program

Dear Mr. Comfort:

The West Valley Demonstration Project has agreed with the requests of Joe Kane and Robert Lewis of the NRC to provide additional long-term test data from Cement Solidification System (CSS) drums produced with decontaminated sludge wash and Type V and Type I portland cement, respectively. Attachments A and B provide summary information for each of the planned additional tests and the associated activities involved. All test results are expected to be within the range of results which is consistent with previous, acceptable long-term test data.

Please contact Ahmad Al-Daouk of my staff at (716) 942-4629 if you have any questions or comments.

Sincerely,

T. J. Rowland, Director
West Valley Area Office

Enclosure: Attachment A and B

cc: H. R. Moore, DOE-WV, w/o enc.

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Attachment A

Additional Long-Term Tests on Decontaminated Sludge Wash Waste Stabilized With Type I Portland Cement

NRC Request: Perform long-term test on samples obtained from a cement-waste drum produced with decontaminated Sludge Wash #1 concentrate having the lowest process control cube compressive strength.

- WVDP Actions:
- Lowest cube strength is 476 psi from sludge wash concentrate sample 1993-A2 #13, laboratory log #9301276.
 - Add a single drum from this concentrate batch, that is easily accessible from the drum cell, to the long-term test program
 - Core seven samples from the drum to compression test three, perform a 14-day immersion test on one, and provide three for subsequent achieve examinations.
 - Issue internal long-term test report that will be submitted to the NRC, presenting the results from this additional testing, providing a comparison of these results to other available long-term test data, and summarizing test conclusions.

Attachment B

Additional Long-Term Test on Decontaminated Sludge Wash Waste Stabilized with Type V Portland Cement

NRC Request: Perform long-term test on samples obtained from a cement waste drum produced with decontaminated Sludge Wash #1 at 20 wt% TDS and also with decontaminated Sludge Wash #2 at approximately 30 wt% TDS.

- WVDP Actions:
- Decontaminated 20 wt% TDS Sludge Wash #1 concentrate was processed during the transition from Type I to Type V portland cement usage. A drum from concentrate batch 1993-A2 #21 (Lab. Log #9301533) or 1993-A2 #27 (Lab. Log #9301551), that is easily retrieved from the drum cell will be added to the long-term test program. These two concentrate batches have the lowest process control cube strengths of the three batches processed (727, 729 & 1220 psi).
 - A drum produced with decontaminated Sludge Wash #2 concentrate at least a 30 wt% TDS waste loading and having the lowest process control cube strength that is easily retrievable from the drum cell, will be added to the long-term test plan.
 - Seven core samples from each drum will be obtained: three for compression testing, one for the 14-day immersion test and three for subsequent archive examinations.
 - Issue internal long-term test report, that will be submitted to the NRC, presenting the results from this additional testing, providing a comparison of these results to other available long-term test data, and summarizing test conclusions.