



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

APR 28 1992

MEMORANDUM FOR: Paul Lohaus, Chief
Low-Level Waste Management Branch
Division of Low-Level Waste Management
and Decommissioning, LLWS

THROUGH: Joseph Kane, Acting Section Leader
Technical and Special Issues Section JDK
LLWB/LLWM/NMSS

FROM: Mary Adams, Civil Engineer
Technical and Special Issues Section
LLWB/LLWM/NMSS

SUBJECT: WEST VALLEY SLUDGE WASH OPERATIONAL READINESS
REVIEW OBSERVERS SUMMARY MEETING, APRIL 16, 1992

Gary Comfort of IMNS, Jerome Roth of NRC Region I, and I attended this meeting at West Valley. It was billed as the summary meeting of the entire sludge wash operational readiness review. This review was performed internally by West Valley Nuclear Services (WVNS, Westinghouse), then in an oversight capacity by the West Valley Project Office of the Department of Energy, assisted by their Idaho Operations Office.

The purpose was to determine whether WVNS was ready to commence the removal and treatment of sludge wash liquids from Tank 8-D-2. The sludge mobilization has been underway since October, and WVNS would like to start removing liquids from the tank for treatment and solidification.

The meeting agenda is enclosed. The morning consisted of presentations of how the readiness review was conducted and conclusions that were reached. Generally, WVNS management and DOE have determined that the facility is "ready", with a few exceptions that are mostly related to the cement waste form qualification, including the capabilities of the on-site analytical laboratory.

The afternoon was focused on the cement waste form recipe development. In 1991, WVNS attempted to qualify a cement waste form that consisted of 33 weight percent solids in Type I cement. This recipe failed the immersion test specified in the NRC Technical Position on Waste Form. This failure and possible solutions were discussed at a meeting in Buffalo in November.

WVNS has developed three alternate cement recipes that they plan to qualify for NRC evaluation, and these were discussed during the afternoon session. The sludge wash cement processing will start with the recipe that WVNS believes has been qualified, but WVNS will change the recipe later in the sludge wash campaign if one of

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the other recipes can be qualified. These recipes are the following:

1. 20% ± 1% in Type I cement;
2. 24% and 27% in Type I cement;
3. 25-35% in Type V cement.

The first recipe qualification has been completed, and the report was provided to NRC at this meeting. WVNS and WVPO are requesting NRC evaluation of the recipe and the Process Control Program (PCP) by May 22, 1992. I said this is an optimistic schedule, but not impossible. They would like to have a meeting on May 4 to discuss any questions I may have on this report. They would like to start cement processing in late May using this recipe.

Test plans for the second recipe were provided to NRC at this meeting. WVNS wants to qualify this recipe to loosen up the tight controls imposed by the first recipe and to make fewer drums. Qualification of this recipe will consist of mixing seven drums of actual sludge wash, using a range of solids and cement proportions, and performing Technical Position qualification tests on cores from these seven drums. WVNS plans to process these seven drums in late May or early June, submit a draft qualification report in late September (complete except for final immersion test results), finalize the qualification report in October, and have NRC's evaluation of this recipe in November 1992.

At the same time, WVNS plans to test another recipe using Type V cement at higher solids loadings. This third recipe will be tested in the same manner as the second one, with cores from seven full-size drums using actual sludge wash. This testing will be started as soon as possible following preparation of the seven drums for the second recipe. WVNS expects that this testing will lag 1-2 months after testing of the second recipe.

This plan may require a greater staff commitment than we had expected. We would like to discuss this commitment and schedule with you soon.

We have prepared a letter to Tom Rowland, DOE Director of the West Valley Project Office, that confirms the discussions from the meeting and affirms our intention to accommodate DOE's schedule for NRC review as closely as possible. We requested that the May 4 meeting be rescheduled for May 6 so that you can attend. I indicated that NRC will need about two months to complete each of the reviews of the second and third cement waste form qualification reports, and that we are attempting to arrange contractor support for the reviews.

With respect to the supernatant surveillance drums, the letter also requests that data from the long-term testing be provided to NRC. The letter also recommer's that immersion testing be performed on cored specimens from the supernatant surveillance drums, to assure that they do not lose strength under immersion as the sludge wash specimens did.

ORIGINAL SIGNED BY

Mary Adams, Civil Engineer
Technical and Special
Issues Section

Enclosure: Meeting Agenda

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SUBJECT ABSTRACT: WEST VALLEY SLUDGE WASH OPERATIONAL READINESS
REVIEW OBSERVERS SUMMARY MEETING, APRIL 16, 1992

OFC : LLWB : LLWB : LLWB :

NAME: MADAMS : JKANE : PLOHAUS:

DATE: 4/28/92: 4/28/92: / / 92

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Presentation Agenda for
 Sludge Wash-Phase II ORR Observers Meeting and
 Preview of Sludge Wash Cement Waste Form
 April 16, 1991 - Conference Room A

8:00	Arrive on site	
8:15	Welcome & Introductions	T. J. Rowland/ W. G. Poulson
8:30	Purpose of Meeting - HLW Objectives - Schedule Review/Current Status - Review of Agenda	S. Ketola
8:50	WVDP Overview - Supernatant Treatment - Sludge Mobilization & Wash WVNS ORR - Results/Status - Open Items Strategy & Plans for Controlled Operations	P. J. Valenti
10:20	WVNS ORR Chairman's Summary	R. A. Humphrey
10:30	Break	
10:45	DOE Independent ORR - Plan, Authority/Delegation - Matrix 1.0 <i>Management Org. + Personnel</i> - Matrix 2.0 <i>IRTS Facilities and Hardware</i> - Matrix 3.0 <i>Procedural Readiness</i> - Matrix 4.0 <i>Technology Assessment</i> - Matrix 5.0 <i>Documentation (Compliance Rev.)</i> - Conclusion/Next Steps <i>ES&H and OH</i>	S. Ketola J. Desormeau T. Sonntag A. Yeazel S. Ketola R. Provencher S. Ketola
12:00	Lunch - Cafeteria	
1:00	Cement Waste Form Recipe Development - Scope - Development Plan - Schedule/Status/Progress - Results - Future Recipes - "Production"	J. L. Mahoney D. C. Meess/
3:00	DOE Closeout	
4:00	Depart Site	