



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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November 1, 1999

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HLWB/DWM/NMSS

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SUBJECT: TRIP REPORT - U.S. DEPARTMENT OF ENERGY HIGH-LEVEL
WASTE TANK CLOSURE WORKSHOP, LAS VEGAS NEVADA,
OCTOBER 12-13, 1999

On October 12-13, 1999, B.J. Davis, J. Parrott, and J. Contardi attended a U.S. Department of Energy (DOE) sponsored conference on high-level waste (HLW) tank closure. The focus of the conference was to allow each DOE site to comment on past accomplishments, current status, future projects, and to address specific technical, programmatic and regulatory issues regarding tank closure.

DOE sites represented at the workshop included the following: Savannah River Site (SRS), Hanford (DOE-RL), Oak Ridge National Laboratory (ORNL), Idaho National Engineering and Environmental Laboratory (INEEL), and the West Valley Demonstration Project (WVDP). Other groups in attendance included tribal nations, state regulators (NY, WA, ID, and OR), U.S. Environmental Protection Agency (EPA), stakeholders, the Defense Nuclear Facilities Safety Board and the National Academy of Sciences. A complete attendee list is attached.

Key issues discussed by representatives of each DOE site are as follows:

SRS: The current activities at SRS were addressed with respect to the ongoing HLW tank closure process. SRS is preparing an environmental impact statement (EIS) for future HLW tank system closures as well as an EIS for the replacement of the in-tank precipitation process. The draft EIS for tank closure is currently under review at DOE-headquarters. A public meeting regarding the draft EIS for tank closure will be scheduled for late October or early November. The next HLW tank closure, Tank 19, is scheduled for fiscal year (FY) 2003 with a goal of waste

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and heel removal by FY00. The tank system "four-pack" consisting of Tanks 17, 18, 19, and 20 will be operationally closed first and upon the completion of the four operational closures the entire four-pack will be closed under the Comprehensive Environmental Response, Compensation, and Liability Act. Future activities include the preparation of a Tank 19 system closure model, and the evaluation for closure requirements for the 1F-Evaporator system, which may include an incidental waste determination per DOE Order 435.1.

DOE-RL: Eighteen tanks that posed an organic safety issue have been removed from the watch list. Concerns involving the high heat Tank 241-C-106 are nearing resolution due to the transfer of 188,000 gallons of sludge to Tank AY-102. Waste transfer processes for 7 of the remaining 29 single shell tanks have been initiated. Vadose zone characterization for 2 tanks farms has begun. Bench scale tests have been completed to establish operation capabilities for the immobilization facilities. Vitrification is still being planned for the low activity waste.

INEEL: Tanks contain no significant fraction of solids due to the very low pH of the waste. Last HLW fuel reprocessing raffinates were calcined in February 1998. First Resource, Conservation and Recovery Act closure plan is required by December 2000. Tanks WM-182/WM-183 are selected as first tanks for closure. The DOE closure plan will include a performance assessment, composite analysis, and incidental waste determination. Total closure costs for grouting in place methodology are estimated at \$100 - \$150 million. A draft EIS is due out in November 1999 and a final EIS is scheduled for issue in May 2000. Key accomplishments for FY 99 include: completed sampling WM-188 with a light duty utility arm (LDUA), a full-scale waste removal and grouting mockup in June 99, and the set up of the LDUA over Tank WM-182.

WVDP: Tasks accomplished in FY99 include: re-establish zeolite transfer from Tank 8D-1 to 8D-2, and continue dilute waste retrieval from Tank 8D-2. Future FY00 goals are: complete removal of HLW from Tank 8D-2, install advanced retrieval in Tank 8D-1 and complete HLW removal, characterize and quantify tank residuals, flush vitrification facility and shut down melter, and place tanks in surveillance and monitoring mode. The next National Environmental Policy Act document is planned for 2000 which will include a revised draft EIS with a preferred alternative. A reversible grout is currently being developed and tested for tank closure.

ORNL: The Tennessee Department of Environment and Conservation requires transuranic waste processing to begin by 2003. The Federal Facility Agreement requires the tank systems at ORNL to comply with RCRA underground storage tank requirements. Future goals include: consolidation of legacy tank waste in the Melton Valley storage tanks by 2000, treat newly generated wastes at the source to avoid future inventories of highly radioactive, transuranic waste in the underground storage tanks, and treat highly radioactive legacy waste before disposal at the Waste Isolation Pilot Plant or the Nevada Test Site. The Gunite tank remediation project will deploy 26 technologies for waste removal and characterization. ORNL reiterated the fact that their waste is not considered HLW but instead is classified as remote handled transuranic waste.

Comments from the public and state regulators consisted of: ensuring timetables are maintained and met, compliance with local, state, and federal regulations are addressed and complied with, and priorities for waste removal and stability should be driven from high risk tanks first.

In summary, the conference was an excellent forum for DOE sites to share ideas regarding new-found problems, as well as solutions to old problems. The conference also allowed stakeholders an opportunity to address concerns regarding the entire DOE complex.

To view or obtain copies of handouts from the workshop, please see John Contardi in T-7C14 (415-6680).

Attachment: Attendee List

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Slip in sheet

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