



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

January 2, 2003

Project No. P00M-032

Alice C. Williams  
Director  
Department of Energy  
West Valley Demonstration Project  
10282 Rock Springs Road  
P.O. Box 191  
West Valley, NY 14171-0191

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION MONITORING VISIT 2002-002

Dear Ms. Williams:

On November 19-21, 2002, James Kottan of this office conducted a routine monitoring visit at the Department of Energy's (DOE) West Valley Demonstration Project to review the activities of West Valley Nuclear Services Company, Inc., the DOE contractor at the site. Mr. Kottan has replaced Mr. Todd Jackson as the NRC monitor for the West Valley Demonstration Project. The purpose of the monitoring visit was to review the status of the contractor's program for the vitrification facility, high level radioactive waste projects and the site relative to its radiological impact on public health and safety. The results of this monitoring visit were discussed with you and with WVNS management on November 21, 2002. Details of this review are provided in the enclosed report.

As a result of this review, the monitor determined that the contractor has established and maintained controls, processes, and programs adequate to protect public health and safety.

Please contact me at (610)337-5200 with any questions about this report.

Sincerely,

*/RA/*

Ronald R. Bellamy, Chief  
Decommissioning and Laboratory Branch  
Division of Nuclear Materials Safety

Enclosure:  
Monitoring Report No. 02-02

A. Williams  
Department of Energy

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cc:  
Paul Piciulo, Ph.D., Program Director, NYSERDA  
J. Spath, NYSERDA  
State of New York

A. Williams  
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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

MONITORING REPORT

Monitoring Visit No. P00M-032/2002002

Project No. P00M-032

Location: West Valley Demonstration Project  
10282 Rock Spring Road  
West Valley, NY 14171-0191

Visit Dates: November 19-21, 2002

Monitor:	<i><u>/RA/</u></i> <hr/> James J. Kottan Senior Health Physicist	1/2/03 <hr/> date
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Approved By:	<i><u>/RA/</u></i> <hr/> Ronald R. Bellamy, Chief Decommissioning and Laboratory Branch Division of Nuclear Materials Safety	1/2/03 <hr/> date
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## **EXECUTIVE SUMMARY**

US Department of Energy  
West Valley Demonstration Project

NRC Monitoring Report No. 02-02

A routine monitoring visit was conducted November 19-21, 2002, to observe site operations and current project status at the West Valley Demonstration Project. Areas reviewed included site organization, recent operational events, head end cell work, spent fuel shipment, and radioactive waste management. As a result of this review, the monitor determined that the Department of Energy's contractor has established and maintained controls, processes, and programs which were adequate to protect public health and safety.

## **REPORT DETAILS**

### **I. Introduction**

This report documents the monitoring visit to the West Valley Demonstration Project (WVDP) on November 19-21, 2002. The NRC monitor observed activities in progress, held discussions with Department of Energy (DOE) and West Valley Nuclear Services (WVNS) personnel, and reviewed related documentation. DOE and WVNS personnel presented status briefings on site activities since the last monitoring visit in June 2002, including the following:

- Organization
- Project Overview
- Recent Site Events (Reportable and Non-Reportable)
- High Level Radioactive Waste Projects
- Site Operations
- Radioactive Waste Management

### **II. Organization Changes**

DOE and WVNS management outlined and discussed their organizations in order to inform the new NRC monitor how their organizations related to the WVDP. Additionally, the New York State Energy Research and Development Authority (NYSERDA) site director outlined the NYSERDA WVDP site organization. It appeared that no significant changes in the WVNS organization have taken place since the previous NRC monitoring visit in June. Site staffing has been reduced in conjunction with the end of vitrification and refocusing on project completion activities.

### **III. Recent Site Events**

The monitor reviewed and discussed with WVNS personnel selected event fact sheets, critiques, and occurrence reports describing recent operational events at the WVDP. The following were discussed in detail:

Occurrence Report FRS-2002-0004, FRS Decontamination Project Unplanned Exposures.

In July 2002, routine and activity driven whole body counting of three individuals who had worked in the Fuel Receiving and Storage (FRS) area identified an uptake of radioactive material that resulted in an unplanned exposure. The exposures resulted from the inhalation of airborne contamination generated during decontamination of pool components above the pool surface. WVNS conducted an independent review of these FRS Decontamination Project Unplanned Exposures. The root cause was determined to be the failure to recognize the airborne potential of contamination in the pool water given changes in pool water chemistry, and from sediments on components being lifted from the pool. The Lessons Learned included identifying that spraying contaminated components with high pressure water above the pool water surface creates the potential for generating airborne contamination. Recommendations included ensuring that all decontamination take place under water and low pressure spray be used to rinse rather than decontaminate components.

## WVNS-CF-2002-0002, Near Miss-GPCE Crane Failure.

In May 2002, the General Crane Room Enclosure (GCRE) overhead crane hoist was being lowered into the General Crane Room (GCR) Extension to aid in the packaging and removal of debris. The cable came off the crane hoist drum when the crane hoist block was approximately two feet above the floor and fell to the floor. Individuals were in the GCRE and GCR Extension, but no personnel injuries occurred when the crane hoist block fell to the floor. The results of the WVNS investigation indicated that the overhead crane did not have a lower limit switch, and because the crane hoist block would not reach the floor of the GCR Extension, this allowed the cable to come off of the crane hoist drum. The corrective actions included an evaluation of site cranes and hoists for lower limit switch requirements, installation of a lower limit switch on the GCRE crane, and the addition of check sheets with specific crane limitations to crane operating procedures.

### **IV. Site Closure Projects**

Spent Fuel Shipping Project: The NRC monitor observed the two casks loaded with commercial spent fuel assemblies for rail shipment to the Idaho National Environmental and Engineering Laboratory (INEEL). One cask held 85 boiling water reactor fuel assemblies and the other cask held 40 pressurized water reactor fuel assemblies. Each cask was loaded onto a separate rail car for shipment. WVNS continued to maintain the integrity of the casks in a shipping-ready mode, by conducting leak tests of the casks and performing routine rail car maintenance. A date for shipment to INEEL has not yet been determined by DOE.

Head End Cell Decontamination and Decommissioning Work: Since the previous monitoring visit, WVNS has continued decontamination and decommissioning work on the head end cells. The head end cells consist of the process mechanical cell (PMC), the general purpose cell (GPC), the scrap removal room (SRR), and the miniature cell (MC). To date approximately 42 drums containing about 200 cubic feet of debris have been removed from the PMC. This represents approximately 70 percent of the loose floor debris. Approximately six drums of debris have been packaged in the GPC. WVNS plans to continue clean up of the PMC and GPC. Plans were to use the SRR for transfer for disposal of the drums removed from the PMC via the GPC. WVNS plans to remove the balance of equipment from the PMC and GPC, and then perform a final radiation survey of these cells.

### **V. Waste, Fuel & Environmental Projects**

The NRC monitor discussed radioactive waste management with WVDP personnel. Additionally, the NRC monitor reviewed activity (Curie) estimates and radionuclide content for solid radioactive waste shipped offsite as well as the volume of waste shipped. Low level radioactive waste shipments have been made to Envirocare and Nevada Test Site. Also, three significant shipments of mixed waste have been made for off-site treatment and disposal. WVDP continued to focus on disposal of radioactive waste and shipping and disposal of newly generated waste.

The NRC monitor toured the Remote Handled Waste Facility to observe construction progress. The facility, when completed, will allow WVDP personnel to remotely size reduce, characterize, and package highly radioactive equipment and components from the WVDP for shipment. Construction completion is scheduled for 2004.

## **VI. Exit Meeting**

The monitor discussed the results of this visit with DOE site management, and also with WVNS management, on November 21, 2002.



## **PARTIAL LIST OF PERSONS CONTACTED**

### Department of Energy, Ohio Field Office-West Valley Demonstration Project

Alice C. Williams, Director  
T.J. Jackson, Associate Director  
Herman Moore, Team Leader, D&D Projects  
Tom Vero, General Engineer  
Ahmad Al-Daouk, General Engineer

### West Valley Nuclear Services

James Little, President  
Stuart MacVean, Site Closure Projects Manager  
Ken Schneider, Head End Cells Project Manager  
Lee McGetrick, Site Services Manager  
Thomas Kocialski, Vitrification Deactivation Manager  
Dan Meess, Tank Farm Deactivation Engineering Manager  
Dan Westcott, Regulatory Programs Manager  
Sheila Komasa, Waste Management Operations  
Larry Myszka, Site Operations  
Robert Steiner, Senior Environmental Engineer

### New York State Energy Research and Development Authority

Paul Piciulo, WVDP Program Director