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

January 19, 2001

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

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION MONITORING VISIT 00-03

Dear Ms. Williams:

On December 11-13, 2000, Todd Jackson 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. The purpose of the monitoring visit was to review the status of the contractor's program for the operation of 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 your staff and with WVNS management on December 13, 2000. 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,

Original signed by Ronald R. Bellamy

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

Enclosure:
Monitoring Report No. 00-03

cc:
Paul Piciulo, Ph.D., Program Director, NYSERDA
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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

MONITORING REPORT

Report No.	00-03
Site Visited:	U.S. Department of Energy West Valley Demonstration Project
Location:	10282 Rock Springs Road West Valley, NY 14171-0191
Visit Dates:	December 11-13, 2000

Monitor: ***/RA/*** ***01/19/01***

Todd J. Jackson, CHP — date
Health Physicist

Approved By: ***/RA Craig Z. Gordon for/*** ***01/22/01***

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

Document Name: C:\rp00m-032.00-03.01222001.wpd

EXECUTIVE SUMMARY

U.S. Department of Energy
West Valley Demonstration Project
NRC Monitoring Report No. 00-03

A routine monitoring visit was conducted December 11-13, 2000, to observe site operations and current project status at the West Valley Demonstration Project. Areas reviewed included site organizational changes, recent operational events, self-assessment, vitrification operations, high level radioactive waste projects, head end cell work, site operations, facility closure projects, radioactive waste management, and the spent fuel shipping project. 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 are adequate to protect public health and safety.

REPORT DETAILS

I. Introduction

This report documents the routine monitoring visit of December 2000 to observe site operations and current project status at the West Valley Demonstration Project (WVDP). The 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 July 2000, with emphasis on the following:

Organization Changes
Recent Site Events (Reportable and Non-Reportable)
Self-Assessments
High Level Radioactive Waste Projects
Site Operations and Facility Closure Projects
Radioactive Waste Management
Spent Fuel Shipping Project

II. Organization Changes

Alice Williams is the new Director for DOE at the WVDP. WVNS management described the contractor's organizational changes since July, 2000. An early retirement program had caused more changes in the WVNS organization than have been typical. Forty-six WVNS employees retired in the program, with a total staff of 737 remaining at WVDP. Additionally, WVNS management indicated the possibility that some key WVNS personnel at WVDP would transfer to another DOE site as the result of WVNS's parent company being selected to build another vitrification facility at that site.

III. Recent Site Events

Operational events occurring at the WVDP since the last visit in July 2000 had limited consequences, were investigated to correct specific problem areas, and were documented by WVNS for lessons learned value. As discussed in the previous monitoring report, recent event reports have generally been indicative of fewer and less significant operating problems than were occurring in previous years. Issues were being identified before they became major problems, thereby accomplishing an objective of the lessons learned program at the site. This approach to using experience and lessons learned continued to be a strength at WVDP. Examples of effectively using operating experience to improve performance include the following:

Violation of Lockout/Tagout Requirements by a Subcontractor (FRS-2000-0004): When this lockout/tagout (LO/TO) error occurred, an operator observed the circumstances and immediately stopped the work. While it remains undesirable for such an error to occur, this event indicates an increased awareness of unacceptable conditions by Operations staff, and a willingness to take immediate corrective action. Additionally, corrective action included revising

site procedures to require all personnel who prepare LO/TO instructions to complete training on LO/TO procedures (field engineers were previously not required to complete this training).

Roll Up of Fuel Receiving and Storage (FRS) Building Operating Issues/Questions (CM 2000-029): This critique was prompted by an individual getting sprayed with demineralized water during training, which could cause contamination under other circumstances. During the critique, workers identified other issues to be addressed to improve how work was performed, resulting in various changes to eliminate potential problems.

Radiological Skin Contamination During Decommissioning and Decommissioning (D&D) Work (CM 2000-028): A worker was contaminated slightly on the knees during work. The low level of contamination was not reportable, and the limiting conditions in the applicable radiation work permit were not exceeded. It was concluded that the anti-contamination (anti-c) clothing used did not provide the protection expected, and in spite of the low level of contamination the issue was investigated. As a result, work practices were changed for procuring anti-c clothing which will improve the effectiveness of these materials in the future.

The site lessons learned database has continued to grow, with many more industry-wide experience reports added to the collection of WVDP reports. The searchable database is being used by personnel during work planning to review pertinent experience.

IV. Self-Assessments and Conduct of Operations (ConOps)

WVNS staff described continuing progress in integrating DOE ConOps principles into daily routine activities instead of through only periodic special emphasis. The objective is to achieve a routine ConOps awareness by personnel, similar to the routine emphasis on personnel safety awareness. Regular self-assessments have continued, with the current program (described in Monitoring Report 2000-02) now in effect for about six months. The focus on integrating ConOps into routine operations is a significant innovation of the self-assessment program. An indicator of the program's effectiveness is the reduced number of major operational problems, as well as the lesser relative significance of the issues described in the various event and experience documents (Critiques and Reports).

V. High Level Waste Projects

The melter was in idle during this monitoring visit, with the 255th canister in position under the melter feed pour spout. Work continued to focus on mobilizing and removing as much radioactive material as possible from the "heels" remaining in the high level waste tanks 8D-1 and 8D-2. WVNS estimates radioactivity remaining in the tanks is as follows:

Curies Remaining x 1000* (change since July 2000)	Tank 8D-1	Tank 8D-2	Combined Total
	Mobile/Fixed/Total (change)	Mobile/Fixed/Total (change)	Mobile/Fixed/Total (change)
^{137}Cs	110 / 30 / 140 (-10)	75 / 60 / 135 (-15)	185 / 90 / 275 (-25)
^{90}Sr	4 / 2 / 6 (+6)	2 / 20 / 22 (+17)	6 / 22 / 28 (+22)
Total	114 / 32 / 146 (-4)	77 / 80 / 157 (+2)	191 / 112 / 303 (+3)

*As of November 1, 2000 (derived from 1/1/96 activity estimate baseline).

Mobile radioactivity refers to radioactivity in the liquid contained within the tanks, and fixed radioactivity refers to the contamination on the interior surfaces of the tank. The radioactivity in either of the tanks may increase month-to-month because there are also process inputs into the tanks, which can add radioactive material as part of vitrification operations.

A burnishing sampler to collect surface contamination samples from inside the tanks had been fabricated and was being tested. Work also continued to enable use of a gamma camera to better characterize activity and its location within the tanks. Contamination on the tank interior surfaces was better defined using a beta-gamma detector deployed within the tanks. Additional efforts were also being made to better characterize the transuranic elements in the tanks, such as the planned use of a neutron flux detector.

VI. Site Operations and Facility Closure Projects

Head End Cells

Through the installed shield windows, the monitor observed activities within the Process Mechanical Cell (PMC) Crane Room. Work during this visit involved the PMC Crane and preparations to work inside the PMC. Airborne contamination levels in the PMC Crane Room had been significantly reduced using a strippable coating sprayed onto interior surfaces. The failed original PMC crane, which will not be used for future work in the PMC, was being segmented using an oxy-gasoline cutting tool.

Other Projects

Construction had begun on the Remote Handled Waste Facility (RHWF), which will process waste materials that are too radioactive or too large to be handled in other site facilities. Waste from planned D&D activities involving the tank farm, head end cells, vitrification facility, and other site areas, will be processed in the RHWF.

VII. Waste, Fuel, and Environmental Projects

Radioactive Waste Management

Radioactive waste was shipped from WVDP to a burial site by rail, with the costs for rail shipping from the site being significantly lower than shipping costs using trucks. WVNS expects to complete certification by the DOE National Test Site (NTS) in 2001, which will enable further waste disposal cost reductions by permitting disposal at DOE burial facilities.

Spent Fuel Shipping Project

Preparations continued for shipment of spent fuel in 2001 from WVDP to Idaho National Engineering Lab. A WVNS site readiness review and a site DOE/WVNS line management self-assessment of readiness had been completed, and plans were in progress for a DOE Operational Readiness Review to be performed early in 2001. Fuel handlers had been trained and certified to move the fuel stored in the pool, and facility readiness established. Work on the shipping cask safety analysis reports was nearing completion.

VIII. Exit Meeting

The monitor presented the results of this visit to senior DOE management, and also to WVNS management, on December 13, 2000.

PARTIAL LIST OF PERSONS CONTACTED

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

T.J. Jackson, Associate Director
William Hammel, High Level Waste Projects Team Leader
Ken O'Connor, Engineer, High Level Waste Projects Team

West Valley Nuclear Services

Jim Little, Executive Vice President
Robert Lawrence, Waste, Fuel, and Environmental Projects Manager
Paul Valenti, High Level Waste Projects Manager
Stuart MacVean, Site Operations and Facility Closure Projects Manager
Joe Jablonski, Spent Fuel Shipping & Main Plant Operations Manager
Ken Schneider, Head End Cells Project Manager
Scott Roberts, Operations Manager-Waste Management
Rand Dunn, HLW Tank Farm Operations Manger
Bob Steiner, Senior Environmental Engineer
Bruce Covert, Deputy Site Manager
Ed Yusis, Operations Planning and Support
Sonja Allen, Public Affairs
Ida Klahn, Public Affairs