



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

M-32

June 20, 1997

Mr. Thomas Rowland, Director  
U. S. Department of Energy, Ohio Field Office  
West Valley Demonstration Project  
P.O. Box 191  
West Valley, New York 14171

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION MONITORING VISIT  
MAY 12-16, 1997

Dear Mr. Rowland:

On May 12-16, 1997, a monitoring visit was made to the Department of Energy (DOE) West Valley Demonstration Project site to review activities of West Valley Nuclear Services Company, Inc., the DOE contractor. Specifically, the purpose of the monitoring visit was to review the status of the contractor's program for the operation of the vitrification facility relative to its impact on public health and safety from a radiological standpoint. This visit focused on the conduct of operations and followup to recent events. The monitoring visit was conducted by Mr. Todd Jackson, Project Engineer - West Valley, of this office. Details of this review are provided in Enclosure 1. Some of the individuals contacted during the visit are indicated in Enclosure 2.

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

If you have any questions about this report, please contact me at (610)337-5200.

Sincerely,

*Ronald R. Bellamy*

Ronald R. Bellamy, Ph.D., Chief  
Decommissioning and Lab Branch  
Division of Nuclear Materials Safety

4/1  
NFO9

Enclosures:

1. Review of the Project Status
2. Contact List

PROJECT M-32 92132

NRC FILE CENTER COPY

Add: Pam Shear 4/4

9707080131 970620  
PDR PROJ  
M-32 PDR



T.R. Rowland, Director

-2-

cc w/encls:

P. Piciulo, Program Director, Radioactive Waste Management Program  
State of New York

Distribution w/encls:

PUBLIC

Nuclear Safety Information Center (NSIC)

W. Dean, OEDO (OWFN 5 E6)

D. Screnci, RI/PAO

J. Parrott, NMSS/DWM (TWFN 8 F37)

H. Astwood, NMSS/DFCSS (TWFN 8 D14)

NRC File Center

C. Gordon, RI

T. Jackson, RI

## ENCLOSURE 1

### REVIEW OF THE PROJECT STATUS

The monitor observed selected activities in progress at the site, held discussions with cognizant DOE - West Valley Demonstration Project (WVDP) and West Valley Nuclear Services (WVNS) personnel, and reviewed related documentation. This visit was a routine periodic monitoring visit to observe site operations and current project status.

#### 1.0 PROJECT STATUS OVERVIEW

DOE and WVNS personnel presented updated status briefings on activities at the site. Presentations focused on areas reviewed by the monitor during this visit:

- Current Status of Site Operations

- Followup to Previous NRC Monitor Comments

- Activities of the Conduct of Operations (ConOps) Team and WVNS Management Re-Commitment to ConOps

- Radiation Protection Followup to Worker Contamination Event

- "Near-Miss" Electrical Shock Event

- Waste Tank Farm Ventilation Filter Changeout

- WVNS Self-Assessment Programs

The monitor toured the New York State Disposal area with a representative from the New York State Energy Research and Development Authority. WVNS personnel also described the site implementation of DOE's Integrated Safety Management System (ISMS). DOE completed pilot programs at 10 facilities and has begun to put the program into effect at West Valley through WVNS line management.

#### 2.0 CURRENT STATUS OF VITRIFICATION OPERATIONS

The melter was operating during this monitoring visit. The 94<sup>th</sup> canister was filling at the end of the visit, with 90 canisters having been transferred to the High Level Waste (HLW) interim Storage Facility. As of May 16, approximately 4.2 million curies of radioactive strontium and cesium in 27 HLW transfers had been moved from tank 8D2 to the Vitrification Facility. Progress continued on track to complete vitrification by mid-1998.

Recent management organizational changes were also described. Mr. Robert Campbell had replaced Mr. William Poulson as President, West Valley Nuclear Services (WVNS). Mr. John Volpe, VP for Environmental, Safety, Health & Quality Assurance had also left the site and was being replaced on a temporary basis by Mr. Jim Little. This was in addition to Mr. Little's other responsibilities as WVNS Executive VP.

### 3.0 FOLLOWUP TO PREVIOUS NRC MONITOR COMMENTS

The monitor reviewed activities related to three items identified during the previous monitoring visit for future followup, including management objectives for the "Walk Your Spaces" program, status of Radiation Protection procedure review following the personnel contamination event, and how the Radiation Protection Department review efforts would be integrated into the Procedure Compliance Team efforts. WVNS personnel provided the monitor with a current status of actions taken related to the comments in the previous NRC monitoring report, and these are discussed below.

### 4.0 CONDUCT OF OPERATIONS TEAM ACTIVITIES

The Procedure Compliance Team (PCT), created early in 1997, had been superseded by the Conduct of Operations (ConOps) Team, in order to better reflect the long term focus to improve ConOps in all areas, not to focus solely on compliance with procedures. In addition to incorporating all aspects of ConOps into the Team charter, staffing of the Team had begun to include different personnel rotating from different parts of the WVNS organization. The intent of this evolution was to provide more people with the experience as Team members of focusing full-time on ConOps improvements, and also to inject different perspectives into the Team to keep its approach fresh. A management steering committee had also been created to direct the focus of the team.

Since the previous monitoring visit the Team had continued to observe in the field performance of many procedures, and had incorporated Radiation Protection (RP) procedures and personnel into its scope. A total of 49 procedures had been performance-based reviewed by the Team, with 60 issues/corrective actions generated as a result of the observations. The ConOps Team had identified performance measures to track, and had established contacts with the Institute of Nuclear Power Operations (INPO).

Work by the ConOps Team to revise the process for changing procedures was continuing. Operating personnel were becoming more involved in the responsibilities for revising procedures that affected them, with increasing focus on the operating personnel becoming the "owners" of the procedures.

### 5.0 ANALYSIS OF RECENT EVENTS

#### 5.1 Followup to Personnel Contamination

WVNS personnel summarized the results of reviews completed and ongoing in the RP Department which followed the investigation into, and root cause analysis of, the February 4, 1997, personnel contamination incident. A corrective action plan had been developed by teams within RP and was being implemented. As described above, RP had also established an interface with the ConOps Team to continue improvement efforts.

#### 6.2 "Near-Miss" Electrical Event

On April 19, 1997, workers were nearly injured while working on a panel with energized components. Metal tools being used inside the panel contacted live wires, causing an arc.



One of the workers was not qualified to perform the work he had been asked to do, contributing to the near-miss. A site-wide stand-down was called to explain the details and causal factors for this occurrence and to assure all personnel were aware of their responsibilities for working safely. Policy for work on energized components was evaluated, and emphasis placed on the requirement to review with appropriate management all changes to work scope that arise on a job.

## **7.0 SOIL SORTING AND WASTE TANK FARM FILTER CHANGE**

The monitor observed site activities involved with planning and set-up for changing the HEPA filters for processing ventilation exhaust from the vaults housing waste tanks 8D-1 and 8-D2. Filter change was required because the filter train 8T-1 failed its annual DOP efficiency test. Filter changes had been necessary twice in the last six years, and the dose rates measured on the filter were lower this time than in past change-outs. Mock-ups had been built and the procedure tested and practiced in advance of the filter change.

Final preoperational testing was being performed on the processing equipment for demonstration monitoring and sorting of soil. Feed materials with known contamination limited to gamma emitting radionuclides had been selected to screen during the demonstration. The objective of the process is to identify and segregate soil with less than 45 pCi/g contamination. Contaminated soil with 45 pCi/g or greater contamination would be collected and packaged as waste. According to the equipment vendor, the detection limit of the sorting equipment, which used arrayed sodium iodide 2x2 gamma detectors, was approximately 5 pCi/g.

Of the 1,452 boxes of low level contaminated soil in storage, 166 boxes were contaminated by purely gamma emitting radionuclides which can be detected by the test equipment. The demonstration project had targeted 50 boxes for sorting. If successful, the balance of 116 boxes and an additional 100 rolloff containers could be screened using the process.

## **7.0 PLANS FOR FUTURE WORK**

### 7.1 Waste Shipments

A total of 20 boxes of low-level radioactive Class A waste had been shipped to date. Material had been sent for volume reduction, through either supercompaction or incineration, followed by burial. Shipments were intended to fulfill the objectives of demonstrating the capability to dispose of site waste, and to reduce the need to build additional on-site disposal capacity. In order to maximize use of existing waste storage capacity, the Container Sorting and Packaging Facility had been created and was being used to sort and repackage existing waste materials. Shipments for disposal are part of this strategy for optimizing waste storage, and were expected to continue.

### 7.2 Trailer City plans

As part of the site objective to eliminate unnecessary facilities, WVNS described plans to reduce the size of the trailer complex. It was intended to reduce the existing 15 trailer

complex to contain only the cafeteria, medical facility and related restrooms. Personnel occupying offices in the balance of the trailers will be relocated to other existing office spaces. This work was expected to be completed by September 30, 1997.

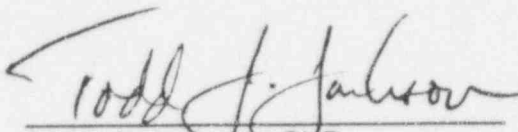
## 8.0 SELF ASSESSMENT PROGRAMS

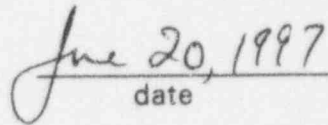
The monitor reviewed WVNS programs for self-assessment and "Walk Your Spaces", the program to encourage management staff to spend at least two hours per week observing activity in the field. The implementing elements of the WVNS Self Assessment Program are contained within approximately 140 guidance documents, covering the operational categories of Overall Site Operations/Management, Environmental Protection, Industrial Health and Safety, and Radiological Protection/Control. The products of self assessment activities by various WVNS functional groups varied significantly in character. Some were quite detailed and were evidence of in-depth efforts, while others consisted of repetitive checklists. Some organizations participated on a more regular basis than others.

Good examples of thorough approaches to self-assessment included recent reviews performed by the Maintenance Department and Environmental Affairs Department, both performed during March 1997. Other examples of "Walk Your Spaces" reviews focused more on repetitive checklists with most blocks checked as "satisfactory", emphasizing items that are going well and reinforcing the "status quo" condition. Some of the checklists appeared more appropriate for records from proceduralized shift rounds and were not designed to prompt a questioning approach to observations by supervisors and staff.

The monitor noted that the Procedure Compliance Team, now becoming the ConOps Team, had developed assessment methods appropriate for on-going use in self-assessment programs. Team members had begun analyzing procedures and methods for work in different ways than had been used previously, such as including the workers in the analysis process. The ConOps Team members represent a resource for improving the self-assessment process and could be used to teach others how to implement their assessment tools.

Project Engineer:

  
Todd J. Jackson, CHP  
Health Physicist

  
date

## ENCLOSURE 2

### Partial List of Individuals Contacted

#### 1.0 Department of Energy - West Valley Demonstration Project

W. Hamel, Operations & Engineering Team Leader  
T. Jackson, Safety, Health & QA Team Leader  
B. Mazurowski, Deputy Director  
D. Cook, Facility Representative

#### 2.0 West Valley Nuclear Services, Inc.

R. Campbell, President  
J. Little, Executive Vice President  
R. Fussner, Vitrification Operations Shift Manager  
P. Valenti, Vitrification Operations Manager  
D. Harward, Radiation Protection Manager  
W. Chiquelin, Procedure Compliance Team Leader  
M. Sheridan, Senior Engineer  
P. Klanian, Project Manager  
M. Wright, Operations Support Manager  
J. Gerber, Project Appraisals Manager  
J. Mahoney, Analytical & Process Chemistry Manager  
S. Schneider, Environmental Affairs Manager  
R. Keel, Transition Field Engineering Manager

#### 3.0 State of New York

P. Piciulo, Program Director, NYSERDA  
C. Gurwitz, Regulatory Compliance Manager, NYSERDA  
T. Szonntag, Manager, Radioactive Waste Management Program, NYSERDA