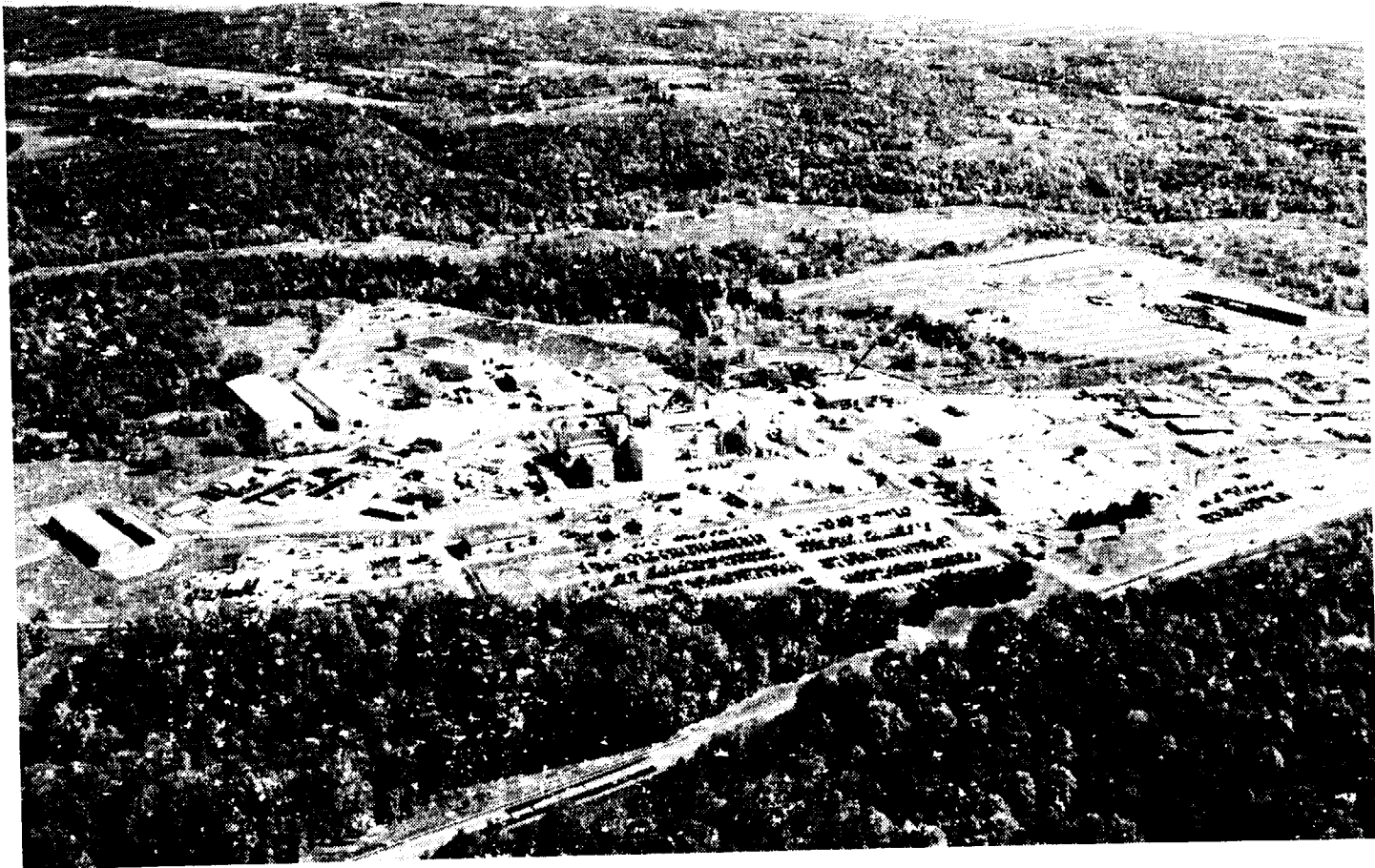


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West Valley Demonstration Project Regulatory Roundtable June 29, 2000

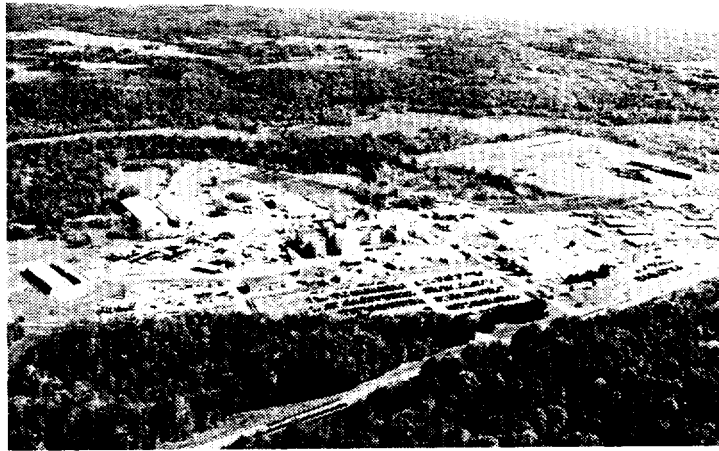


June 15, 2000

Kimberly



West Valley Demonstration Project Regulatory Roundtable June 29, 2000



WVDP-00-000001

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001



West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Agenda

Welcome/Introduction

Elizabeth Lowes/ Jim
Little/ Colleen Gerwitz

Brief Project Overview

Moira Maloney

Status of RCRA Programs/Agreements

Moira Maloney

Environmental Monitoring

- Summary of 1999 Site Environmental Annual Report
- Update on North Plateau Groundwater Activities

Anthony Nagel
Bob Steiner

Safety and Health

Linda Calderon

High-Level Waste Processing/Tank Heel Removal

Steve Barnes

Activities in the "Head End Cell" of the Main Process Plant

Ken Schneider

Lunch

Waste Management

Jackie Jackson

Spent Nuclear Fuel Shipment

Tom Weiss

Environmental Impact Statement for Project Completion

Dan Sullivan

Tour

WVDP-00-000001

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002



West Valley Demonstration Project Regulatory Roundtable June 29, 2000

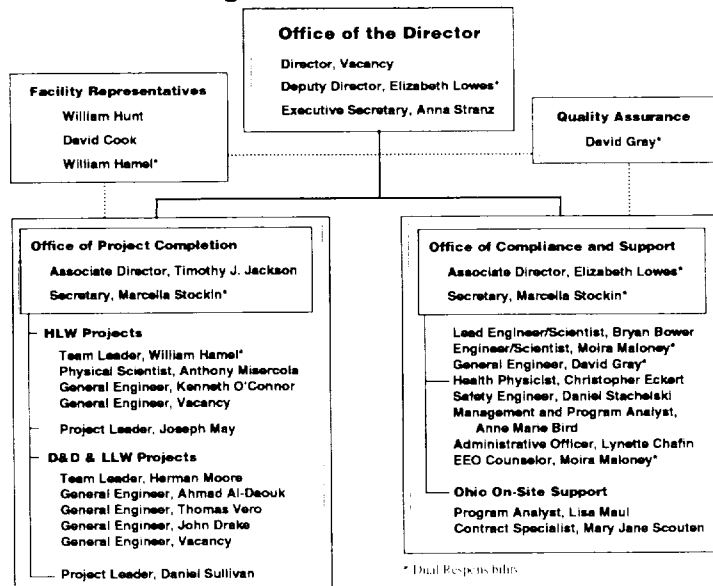
Elizabeth Lowes, Deputy Director
DOE-OH/WVDP

June 29, 2000

10/6/00 ppt



West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 DOE-OH/WVDP Organization



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West Valley Demonstration Project Regulatory Roundtable June 29, 2000

**Jim Little, Executive Vice-President
WVNS**

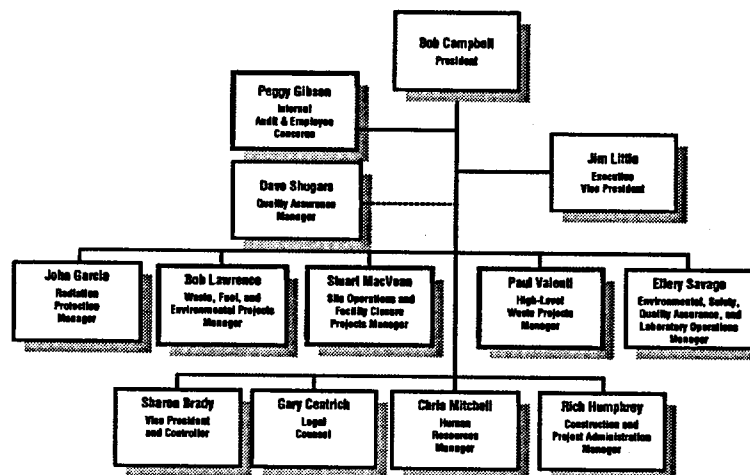
June 18, 2000

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 WVNS Organization

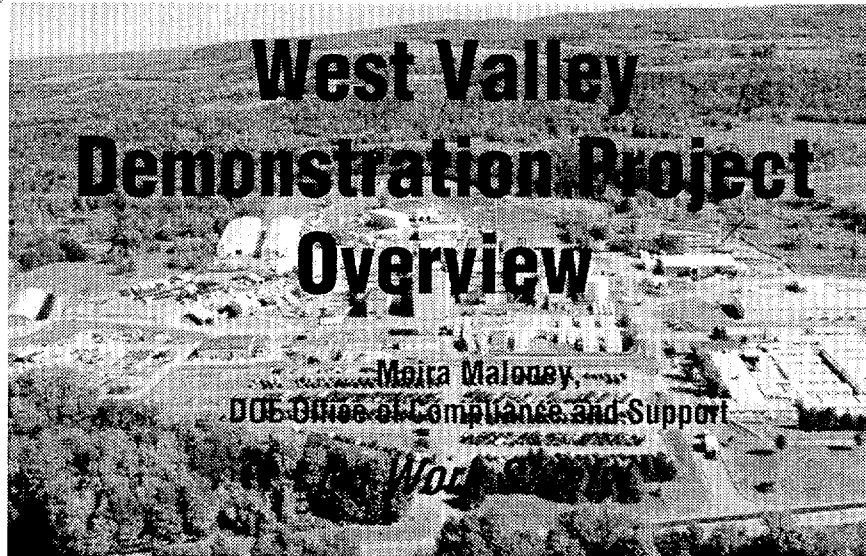


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West Valley Demonstration Project



West Valley Demonstration Project Overview

Maira Maloney,
DOE Office of Compliance and Support

June 28, 2000

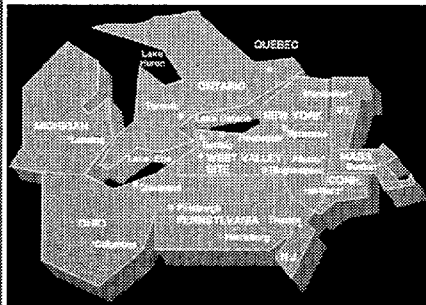
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West Valley Demonstration Project

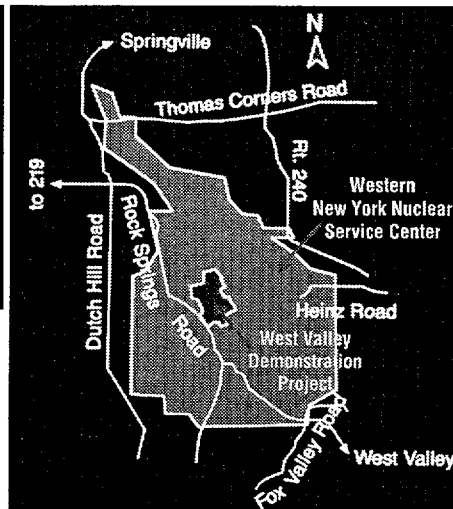
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Site Location



Surrounding States

WWDP: 200 acres within
the 3,345 acre WNYNSC

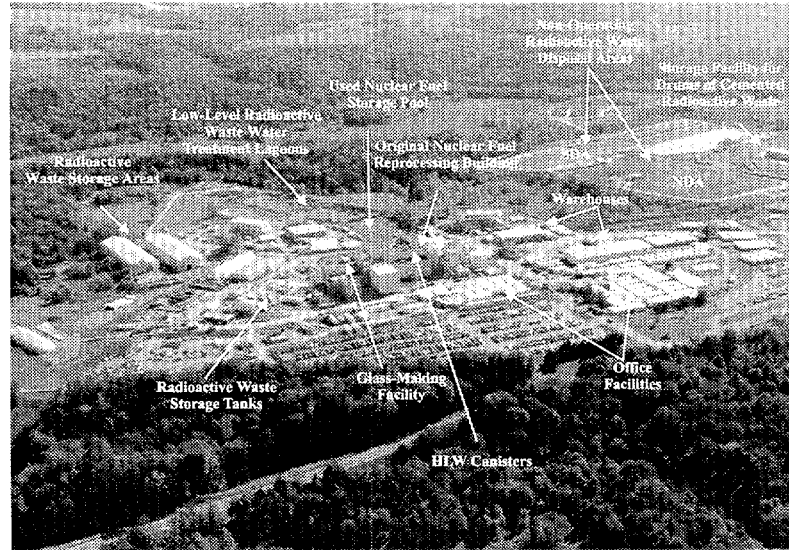


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WVDP Facilities



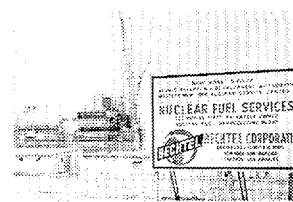
June 29, 2000 Key WVDP Facilities

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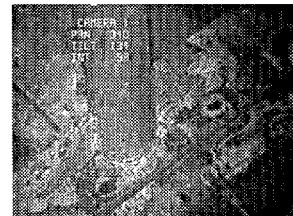
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WVDP History

- 1962** Nuclear Fuel Services reached an agreement with the Atomic Energy Commission and New York State to construct the first commercial nuclear fuel reprocessing plant in the US
- 1966 - 1972** Spent nuclear fuel was reprocessed; majority supplied by Federal Government — 660,000 gallons of liquid high-level waste resulted
- 1972 - 1976** The reprocessing plant was shut down for modifications. Operations were never resumed
- 1980** West Valley Demonstration Project Act passed



1962 - 1966 — Reprocessing Plant Constructed



1999 — View inside the high-level radioactive waste storage tank

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

WVDP History — The Act

- October 1, 1980
 - Public Law 96-368 Signed into Law by President Carter in Niagara Falls, NY
 - Act Authorizes the US Department of Energy to Conduct a High-Level Radioactive Waste Management Demonstration Project at the Western New York Nuclear Service Center (the Center)
 - DOE is directed to:
 - Solidify the high-level radioactive waste at the Center
 - Develop containers suitable for permanent disposal of the waste
 - Transport the solidified waste to a Federal Repository for permanent disposal
 - Dispose of low-level radioactive waste and transuranic waste produced by solidifying the high-level radioactive waste
 - Decontaminate and decommission the tanks, facilities, and any material and hardware used in connection with the Project

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

WVDP History — Shared Responsibilities


- September 1981
 - Cooperative Agreement between DOE and NYSERDA
 - Provided working arrangements
 - NRC license amended so DOE could take control of the site
- November 1981
 - DOE and NRC signed a Memorandum of Understanding to outline respective roles and responsibilities



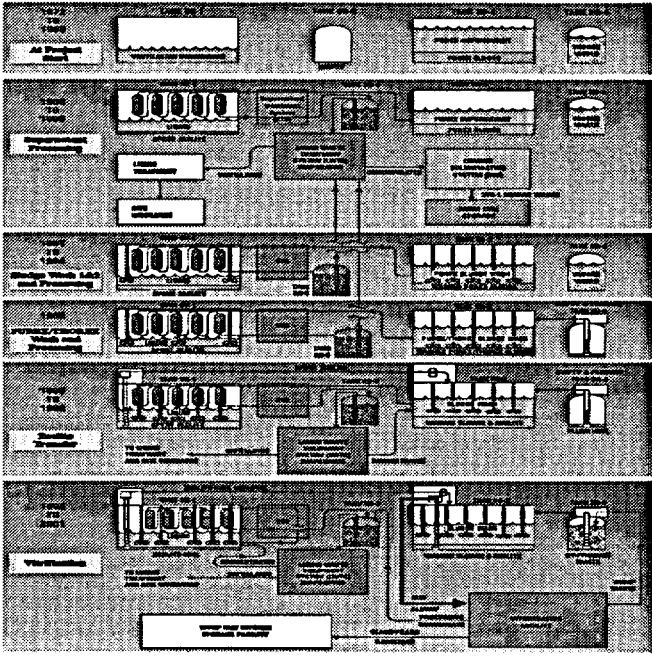
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History of HLW Treatment



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Recent Accomplishments

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- **WVDP Safety Success**
- **Tank Cleanliness**
- **Vitrification Expended Materials Processing (VEMP) Technology -- Valuable Lessons Learned**
- **Remote-Handled Waste Facility (RHWF)**
- **Installed Pilot Permeable Treatment Wall**
- **Constructed Shipping Depot to Support Waste Shipping**
- **Good Progress on Access to Cells -- Gained Visual Access**
- **Continuing Discussions with NYS to agree on a Preferred Path Forward**

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West Valley Demonstration Project
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**Environmental
Compliance Programs**

Moirá Maloney
DOE Office of Compliance
and Support

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Status of Environmental Projects

RCRA Agreements

- RCRA Part A Permit Application
- 3008(h) Consent Order
- Federal Facility Compliance Act (FFCAct) Order

10632.001 Key WVD Facilities

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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Status of Environmental Projects**

RCRA 3008(h) Consent Order

- **RCRA Facility Investigation for all Identified Super Solid Waste Management Units has been completed**
 - **No Units Require Immediate Action**
 - **Continue to Perform Monitoring at Six Units**
- **Quarterly Reporting Required under the Order Continues**
- **Semi-Annual Meetings with NYSDEC to Provide Updates on Site Activities and Review Monitoring Results**
- **EIS ROD to Provide Direction of Future Actions for Units**
- **Anticipate Coordinating and Integrating RCRA Corrective Measures Process with Other Site Planning Activities and Documentation**

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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Status of Environmental Projects**

Federal Facility Compliance Act FFCAct

- **Waives Sovereign Immunity and Subjects Federal Facilities to the Imposition of Civil Fines and Penalties for Violations of RCRA Requirements**
- **A Consent Order was Negotiated with the New York State Department of Environmental Conservation (NYSDEC) to Develop a Site Treatment Plan (STP)**
- **A Site Treatment Plan was Developed and Commits DOE to Meet the Regulatory Milestones for Treatment of Mixed Waste Inventories**

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Status of Environmental Projects

FFCAct Status

- All FY 1999 STP Milestones Completed
- FY 2000 STP Update Submitted in February
- Working with NYSDEC on Earlier Submittal and Approval of Updated STP
- Working with NYSDEC to Create Flexibility in STP Milestones to Address Changes and Delays at Treatment Facilities Beyond WVDP Control

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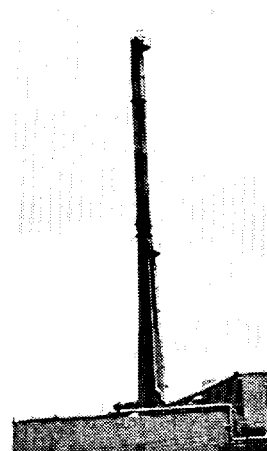
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Status of Environmental Projects

Clean Air Act Program

- Nonradiological Point Sources for Air Emissions are Regulated by NYSDEC
 - Site-Wide State Facility Air Permit obtained June 1, 2000
- Radiological Point Sources for Air Emissions are Regulated by EPA
 - Six Permitted Sources at WVDP
 - WVDP was at .11% of 10 mrem Standard for Calendar Year 1999
 - Submitted Request to EPA to Eliminate Some Permits Based on Process Information



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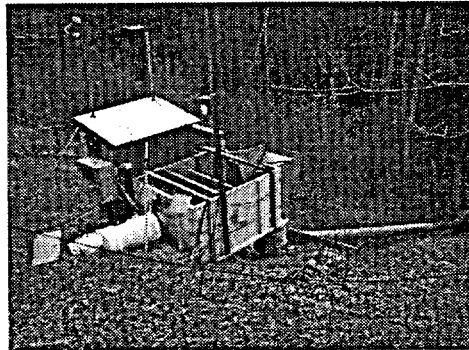
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Status of Environmental Projects

Clean Water Act Program

- **New York State Pollutant Discharge Elimination System (SPDES) Permit**
- **Four Compliance Points Monitored for Chemical Constituents**
- **No SPDES Permit Limit Exceedances Since 1997**



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Status of Environmental Projects

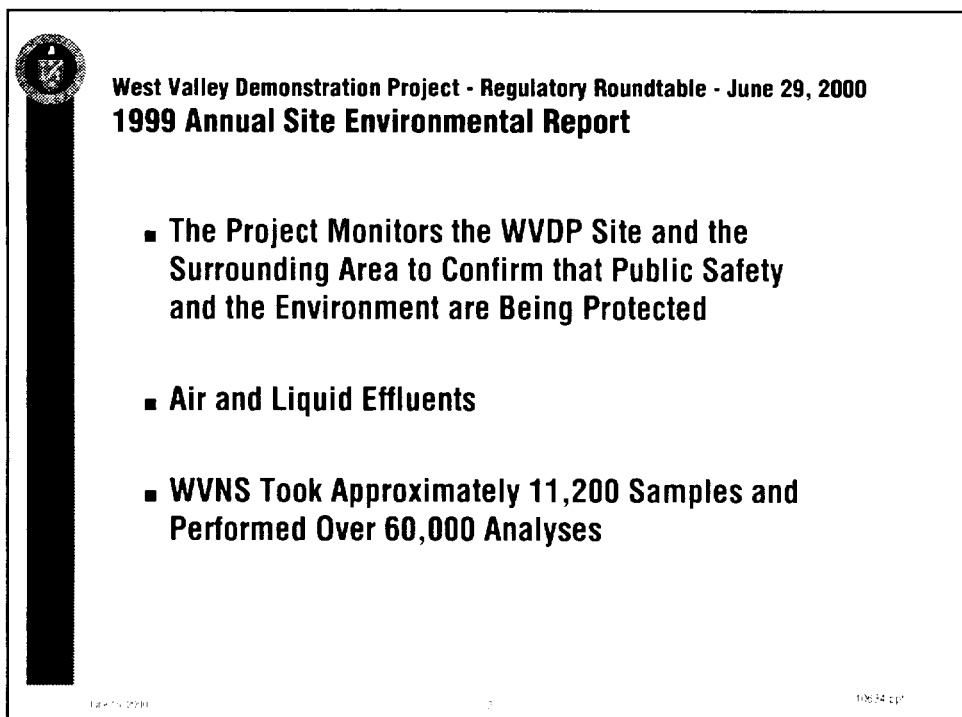
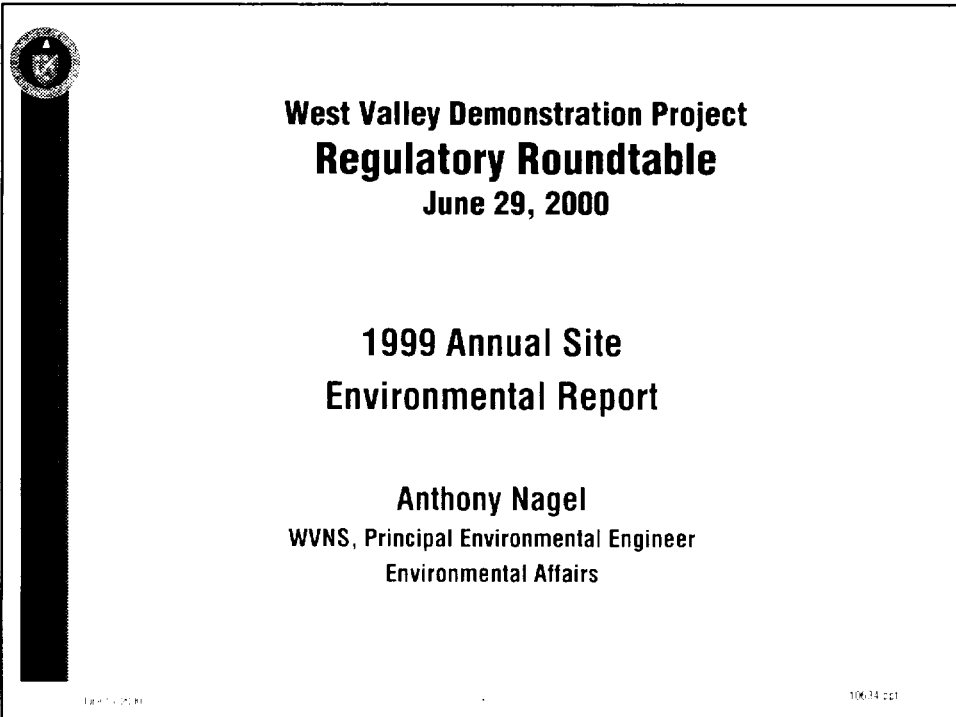
Pending/Upcoming Activities

- **RCRA**
 - **Amending RCRA Part A in Support of Upcoming Projects (Remote Handled Waste Facility)**
 - Added RHWF as a Treatment and Storage Unit
 - Added Container Sorting and Repackaging Facility as a Storage Unit
 - Updated Maps and Process Unit Descriptions
- **Clean Air Act**
 - Revision of NESHAP Permits to Update Descriptions
 - Preparing to Comply with New ANSI N13.1 1999 Standard for RHWF
- **Clean Water Act**
 - Two Pending SPDES Permit Modifications Covering Six Filed Notifications and Applications, Including Storm Water Discharges and Mercury Abatement
 - Preparing SPDES Notifications/Permit Modification Applications for RHWF and Storm Water Drainage Modifications

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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
1999 Annual Site Environmental Report**

**1999 Estimated Dose Equivalent to the
Maximally Exposed Off-Site Individual**

EDE to the MEOSI

| | |
|---------------------|------------------------|
| DOE Standard | 100 mrem/year |
| 1996 WVDP | 0.076 mrem/year |
| 1997 WVDP | 0.073 mrem/year |
| 1998 WVDP | 0.065 mrem/year |
| 1999 WVDP | 0.068 mrem/year |

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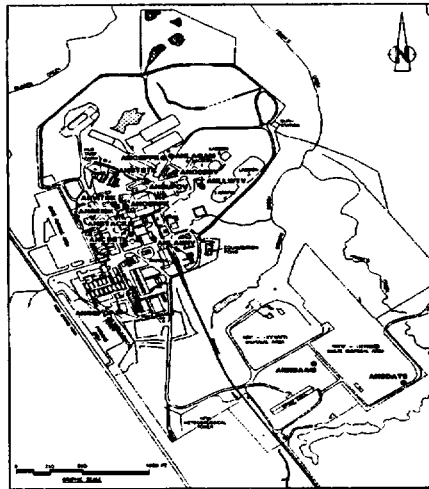
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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
1999 Annual Site Environmental Report**

**On-Site Air
Monitoring
and
Sampling
Points**



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

1999 Annual Site Environmental Report

| | | |
|-------------------|--------|-----------|
| ♦ NESHAP Standard | 10 | mrem/year |
| ♦ 1996 | 0.0087 | mrem/year |
| ♦ 1997 | 0.049 | mrem/year |
| ♦ 1998 | 0.034 | mrem/year |
| ♦ 1999 | 0.011 | mrem/year |

- Decrease in Project Air Effluent Radioactivity--Less Vit
- ANSTSTK - Moved to Speed Space Outside PVS
- Evaluating RHWF Air Monitoring Requirements

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On-Site Air Monitoring and Sampling Points



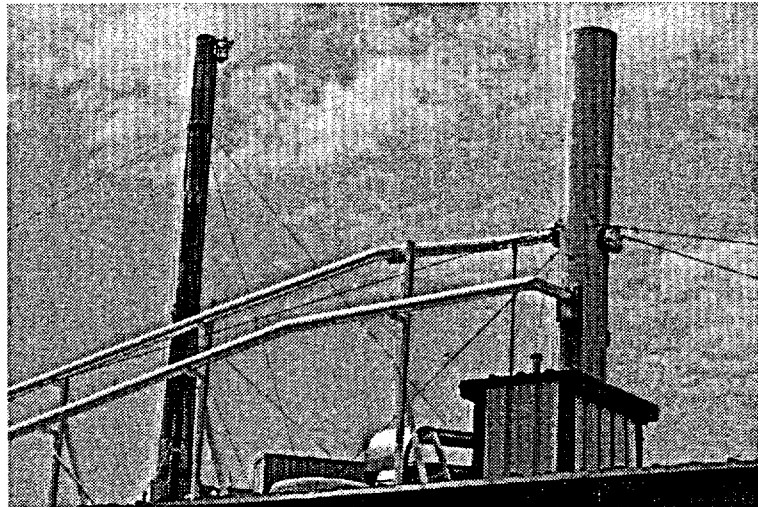
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On-Site Air Monitoring and Sampling Points



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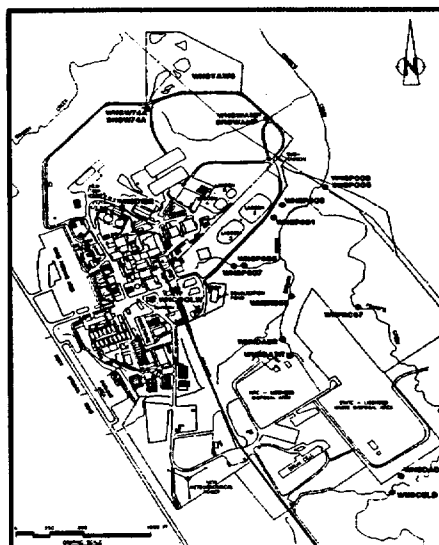
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
1999 Annual Site Environmental Report

**Sampling
Location for
On-Site
Surface
Water**



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
1999 Annual Site Environmental Report

Estimated Dose Equivalents from Liquid Effluents

- **Dose Contribution from SPDES Discharges**
 - 1996 0.0430 mrem/year
 - 1997 0.0120 mrem/year
 - 1998 0.0081 mrem/year
 - 1999 0.0283 mrem/year
- **Dose Contribution from the North Plateau**
 - 1996 0.0240 mrem/year
 - 1997 0.0120 mrem/year
 - 1998 0.0229 mrem/year
 - 1999 0.0282 mrem/year
- **Estimated Dose Equivalent from WVDP Liquid Effluents**
 - 1996 0.067 mrem/year
 - 1997 0.024 mrem/year
 - 1998 0.031 mrem/year
 - 1999 0.056 mrem/year

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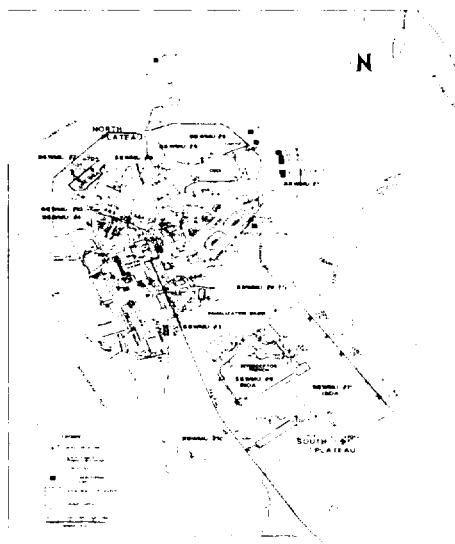
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
1999 Annual Site Environmental Report

**On-Site
Groundwater
Monitoring
Network**



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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
1999 Annual Site Environmental Report**

Groundwater Monitoring

- **Results from 1999 Groundwater Monitoring Show No New Concerns**
 - Sr-90 at North Plateau
 - Volatile Organic Compounds at Four Wells
- **Historical Results, Process Knowledge, and NYSDEC Input Continue to Help Focus Site Groundwater Monitoring**

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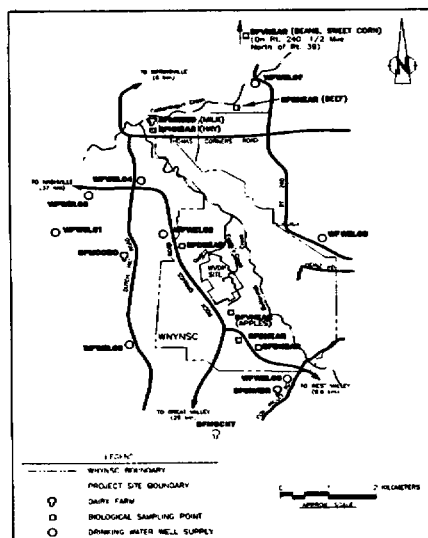
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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
1999 Annual Site Environmental Report**

Biological Sample Points



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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
1999 Annual Site Environmental Report**

Biological Monitoring

- Corn, Apples, Hay, Beef, Milk, Fish, and Venison
- Dose Contribution from Biological Matrices Below Safe Limits
- 230 Pigeons Removed From Main Plant Areas

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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
1999 Annual Site Environmental Report**

Summary

- Overall Results Demonstrate Continuing, Well-Managed Environmental Programs at the WVDP

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**West Valley Demonstration Project
Regulatory Roundtable
June 29, 2000**

**Environmental Projects
North Plateau Groundwater Update
&
Underground Storage Tank Remediation**

**Bob Steiner
WVNS, Sr. Environmental Engineer
Environmental Projects**

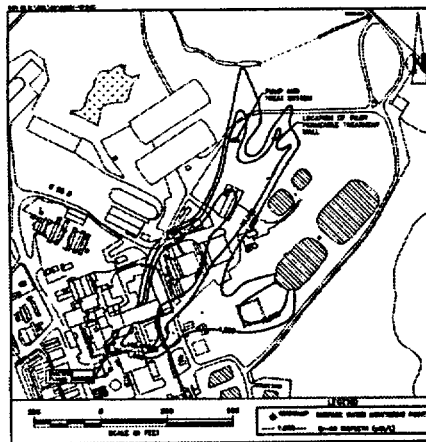
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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
North Plateau Groundwater Update**

**North Plateau
Groundwater
Plume**



Sr-Pb Groundwater Plume of the West Valley Demonstration Project
Figure 1-1

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
North Plateau Groundwater Update

**North Plateau Groundwater
Recovery System**

- Three Recovery Wells Operate 24 Hours per Day
- Over 19 Million Gallons of Groundwater Have Been Treated With Most Spent Resin Shipped for Disposal
- Fluctuating Water Levels and the Environmental Setting Make Pump and Treat Operations Very Challenging
- A New Controller System Installed Last Fall Automatically Adjusts Pumping Rates to Maintain Optimal Drawdown

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
North Plateau Groundwater Update

Pilot Permeable Treatment Wall

- Installed Pilot PTW in the Second Lobe of the Groundwater Plume
 - Completed Installation in November 1999
 - Installed Monitoring System in December 1999
- Collected and Evaluated Early Operational Data
- Prepared Preliminary Operational Assessment Report
 - Submitted Draft for External Peer Review

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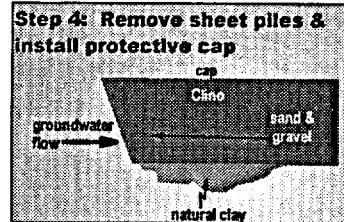
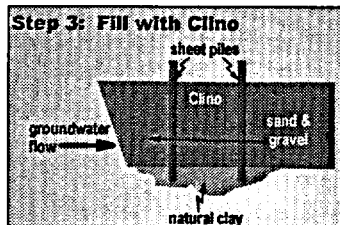
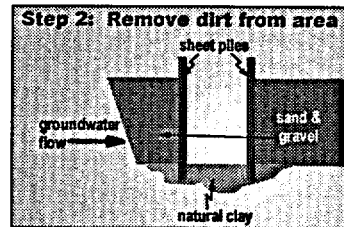
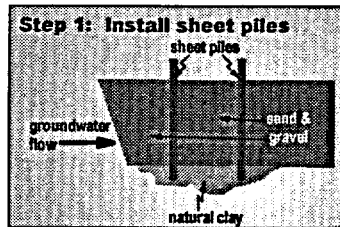
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
North Plateau Groundwater Update

Pilot Permeable Treatment Wall



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
North Plateau Groundwater Update

Pilot Permeable Treatment Wall

- **Operational Assessment Program Results:**
 - Sr-90 Levels Entering the PTW are Being Effectively Reduced
 - Groundwater Flow Has Not Yet Returned to Pre-Construction Conditions
- **Next Steps:**
 - Continue Monitoring
 - Implement Recommendations to Promote Flow Through the PTW

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
North Plateau Groundwater Update


Petroleum Contaminated Soils Remediation

- A Small, Localized Area of Soil Contamination was Delineated Near a Former UST
- A Soil Bio-Venting System was Installed and is Being Operated in Accordance With a Stipulation with the NYSDEC
- A Report on System Operation Will be Prepared Following the First Year of Operation

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West Valley Demonstration Project Regulatory Roundtable

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Safety and Health

Linda Calderon
WVNS, Industrial Hygiene and Safety

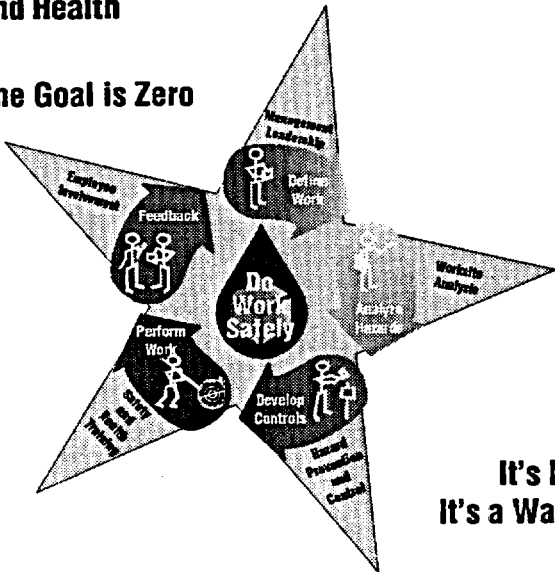
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Safety and Health

The Goal is Zero



**Safety--
It's Not a Job
It's a Way of Life!**

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Zero Campaign

ZERO

- Radiological Contaminations
- Unsafe Conditions
- Injuries
- Occupational Illnesses
- Unsafe Acts
- Environmental Insults

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Safety and Health

Path to VPP STAR

- | | |
|---------------------------------|------------|
| • Development of Application | Feb. 1999 |
| • Corporate Review | June 1999 |
| • Submittal to DOE area offices | July 1999 |
| • Submittal to DOE-HQ | Sept. 1999 |
| • Preliminary Review | Oct. 1999 |
| • On-Site Review | Nov. 1999 |
| • Awarded Recognition | Feb. 2000 |
| • Celebration | May 2000 |

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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Safety and Health**

Path to VPP STAR

- **Program Results - Statistics**
- **Management Leadership**
- **Employee Involvement**
- **Worksite Analysis**
- **Hazard Prevention and Control**
- **Safety and Health Training**
- **Review Process**
 - ◆ **Application Validation**
 - ◆ **Interviews**
 - ◆ **Site Tour**



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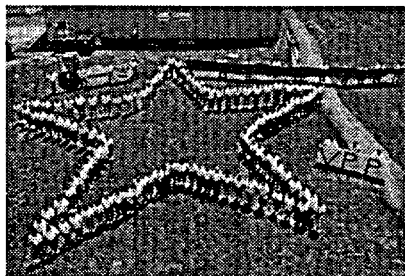
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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Safety and Health**

- **Result**
 - ◆ **VPP STAR Site (Outstanding Safety Program)**
 - ◆ **6 VPP Sites Within DOE**
 - ◆ **5 VPP - STAR Sites**
 - ◆ **Unprecedented - "No Recommendations or Findings"**



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Safety and Health

■ Comments from On-site Review Report

- "Zero tolerance for accidents that might result in injuries/illnesses"
- "Hazards are well understood and communicated to workers"
- "Line managers proactive on safety matters"
- "Subcontractors folded into program"
- "Employees view the range of subjects, content and quality of training as excellent"
- "Employees fully engaged in safety program"
- "Employees are free to develop and carry out safety campaigns and activities to raise awareness"
- "Employer is committed to the proper hierarchy of controls"
- "Cooperation and respect underlie the conduct of an excellent safety and health program"

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Safety and Health

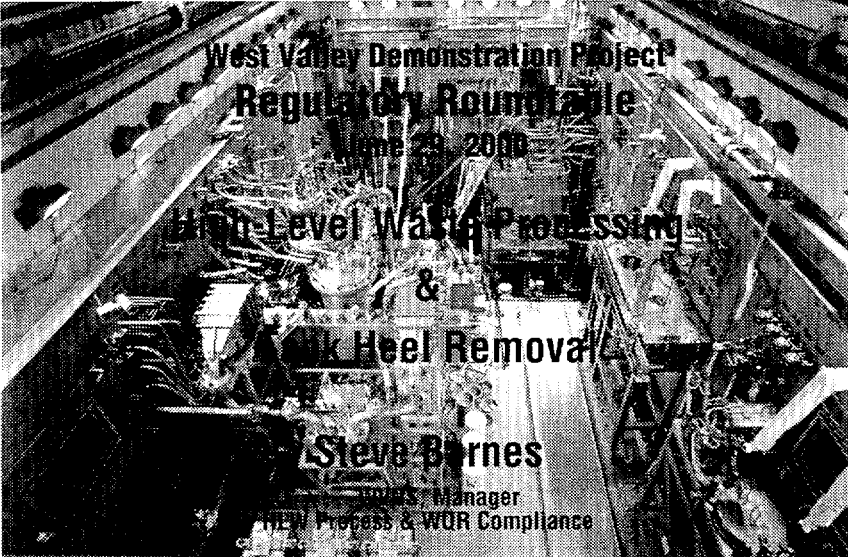


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West Valley Demonstration Project



West Valley Demonstration Project
 Regulatory Roundtable
 June 29, 2000
 High-Level Waste Processing
 &
 Tank Heel Removal
 Steve Barnes
 Projects Manager
 HLW Process & WQR Compliance

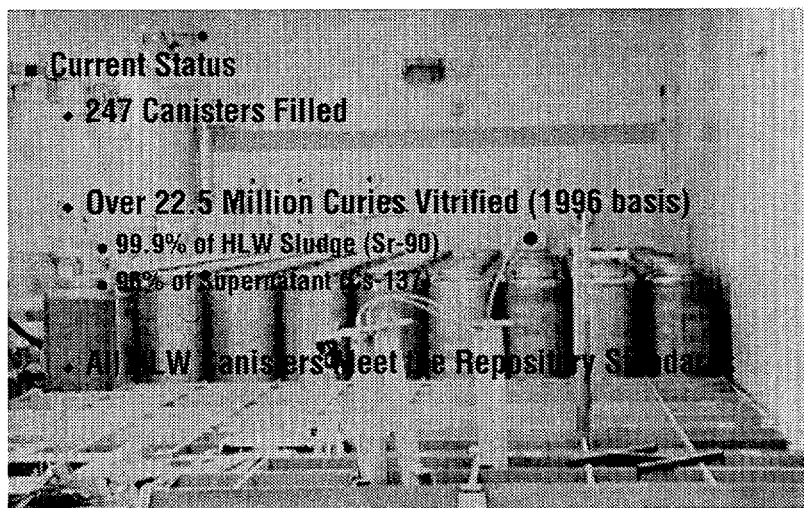
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West Valley Demonstration Project

West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
HLW Vitrification



- Current Status
 - 247 Canisters Filled
 - Over 22.5 Million Curies Vitrified (1996 basis)
 - 99.9% of HLW Sludge (Sr-90)
 - 98% of Supernatant Cs-137
 - All HLW canisters meet the Repository Standard

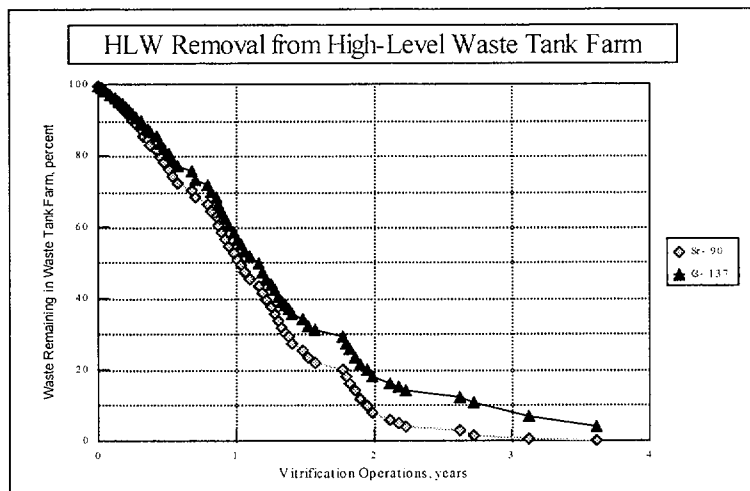
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Vitrification Progress



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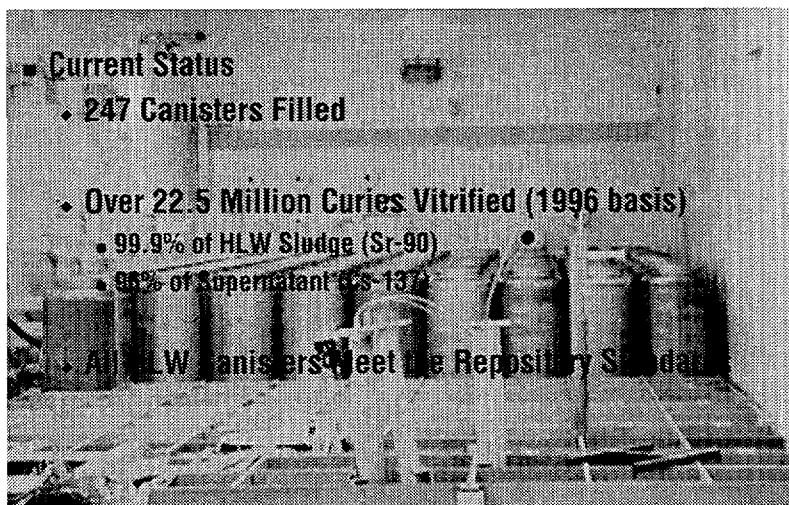
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 HLW Vitrification

- Current Status
 - 247 Canisters Filled
 - Over 22.5 Million Curies Vitrified (1996 basis)
 - 99.9% of HLW Sludge (Sr-90)
 - 96% of Supernatant Cs-137
 - All HLW canisters meet the Repository Standard



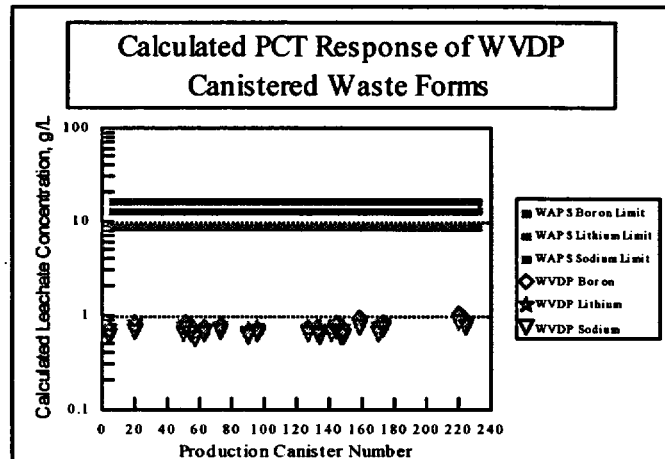
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Vitrification Progress



First 22 randomly selected canister shard samples

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 VEMP Status

■ Size Reduction of Expended Vitrification Components is Continuing

- Twenty-four High-Level Waste Components (206 cubic feet of disposal volume) have been Segregated and Consolidated into:
 - 71 Cubic Feet of Low-Level Waste
 - 22 Cubic Feet of High-Level Waste
- Four Drums of Low-Level Waste have been Removed from the Vitrification Facility for Disposal
- A "Lessons Learned" Report has been Issued, and a Second is Being Compiled

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Vitrification is HLW Treatment Standard

- Melter has Been at Operating Temperature Since Early 1996
- WVDP Completion is at Risk if Melter Fails Before HLW is Vitrified
- The Project is Preparing to Execute the 'Waste Incidental to Reprocessing' (WIR) Provisions of DOE Order 435.1

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Meeting the WIR Criteria

- Demonstrate that the HLW has been Removed to the Extent Technically and Economically Practical
- Show that the Residual Waste can be Incorporated in a Waste Form Suitable for Disposal
 - WVDP is Assuming 40 Inches of Grout in Tanks 8D-1 and 8D-2 and 10CFR61 Class C LLW
 - Class C Determination Driven by Long-Lived, Alpha-Emitting Transuranic Isotopes
- Complete Long-Term Performance Assessments (Intruder and Resident)

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

WIR Process Status

- Preliminary Waste Removal and Performance Assessment Practicality Assessments Completed
 - ◆ Social Cost Benefit Using NRC Guidance of \$2,000/Person-Rem
 - Cleaning Below 2% Residual No Positive Benefit
 - ◆ Long-Term Performance Achieved Requirement at 3% of Original Waste
 - ◆ Exhaustive Technique Development and Evaluation Processes.
Select Most Efficient (Arms, Robots, Sluicers, Vacuums, Chemicals, Grinders, etc.)

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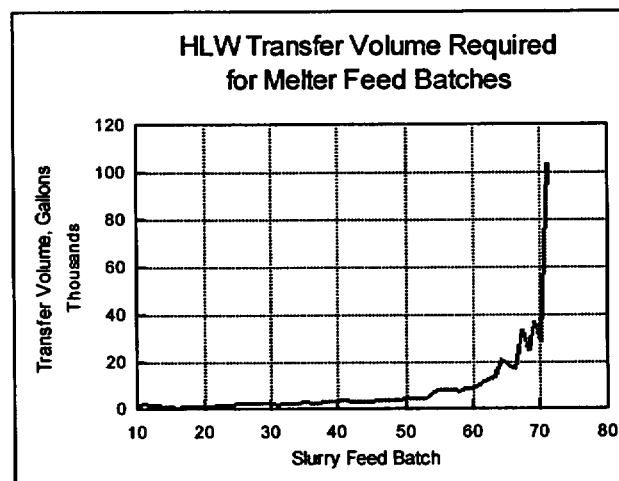
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

WIR Process Status



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
WIR Process Status

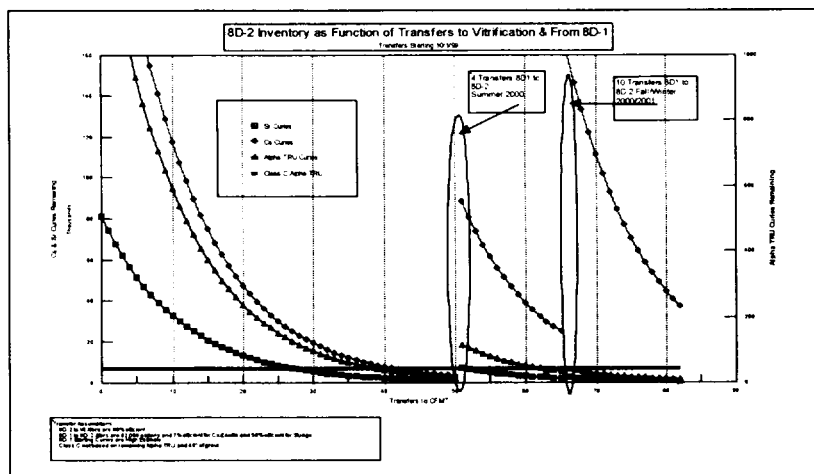
- Initial Waste Assessments Versus 10CFR61 Requirements Completed
 - 10CFR61 Transuranic Isotopes Must be Less Than 0.1% of Original Inventory
 - Focusing in Vitrification of Long-Lived, Alpha-Emitting, Transuranic Isotopes from Site

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Tank 8D-2 Inventory Projection



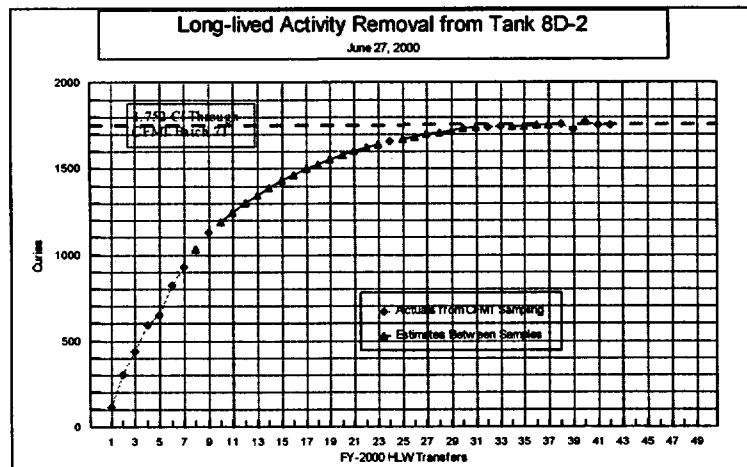
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Tank 8D-2 Activity Removal



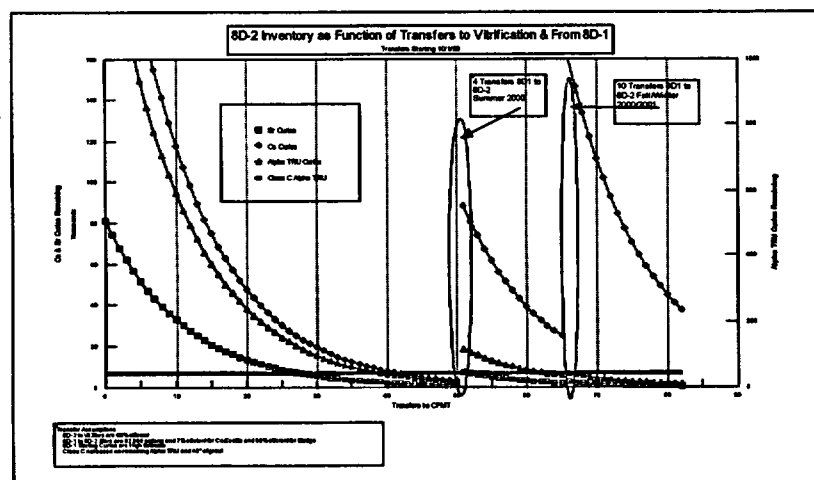
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Tank 8D-2 Inventory Projection



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

WIR Process Activities

- **LLW Class C Waste Concentrations Should be Achieved in 8D-1 and 8D-2 This Fall**
- **Detailed Plan to Quantify the Residual Tank 8D-1 and 8D-2 Isotopes has been Prepared**
- **External Peer Review of the Residual Waste Quantification Plan was Conducted May 2000**
- **Implementing Quantification Plan Currently**
- **HLW Inventory Assessments will Continue Through FY 2001**

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**West Valley Demonstration Project
Regulatory Roundtable
June 29, 2000**

Head-End Cells

Ken Schneider
WVNS, Head End Cell Project

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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Head End Cells Project**

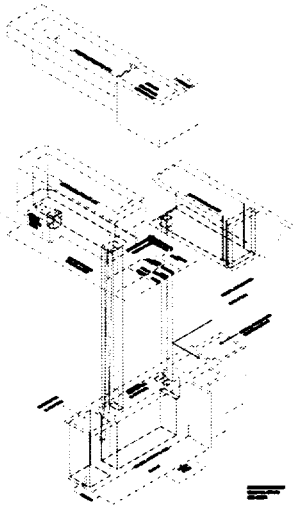
Scope

- ♦ **Clean Up and Package the High Activity
Waste Contained in the Head End Cells**

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Head End Cells Project



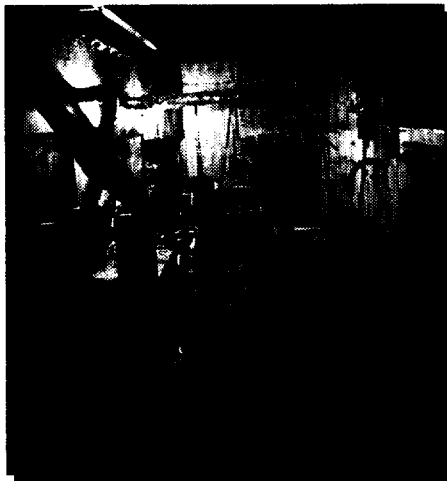
Head End Cells

- Cells used in the mechanical processing of spent nuclear fuel
- Process Mechanical Cell
 - Ends of fuel assemblies cut off
 - Fuel assemblies sheared
- General Purpose Cell
 - Sheared fuel collected and stored prior to chemical processing
 - Leached hulls packaged for disposal

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Head End Cells Project



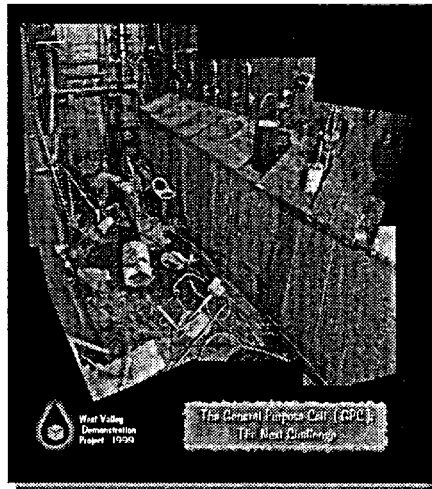
- Process Mechanical Cell
 - 52 ft. long, 12 ft. wide, 25 ft. high
 - Shield Walls, 5 ft. 6 in. thick
 - General Field 100R/hr
 - Hot Spots 2000 R/hr
 - Cranes and Bridge-Mounted Manipulator System (BMMS) Inoperable

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Head End Cells Project



- **General Purpose Cell**
 - ◆ 45 ft. 7 in. long, 11 ft. wide, 29 ft. 6 in. high
 - ◆ Shield Walls 4ft.
 - ◆ General Field 100 R/hr
 - ◆ Hot Spots 650 R/hr
 - ◆ Crane and BMMS Inoperable

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Head End Cells Project

Waste Streams

- ◆ Particles
- ◆ Miscellaneous Fuel Bearing Objects
- ◆ Leached Hulls
- ◆ Fuel Assembly Hardware
- ◆ Contaminated Equipment and Scrap
- ◆ Sump Liquid
- ◆ Laboratory Wastes
- ◆ Containerized CPC Floor Debris

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Head End Cells Project

- Processing Plans
 - Vacuum Loose Debris
 - Decon Scrap Material as Needed
 - Sort, Segregate and Perform Initial Characterization
- Initial End State
 - Cells Ready for the Implementation of the Record of Decision

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10096-011



West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Head End Cells Project



- PMC Infrastructure Upgrade
 - Construct New Enclosure
 - Remove PMCR Roof Hatches
 - Remove 2 Cranes and BMMS
 - Install New Crane/BMMS
- GPC Infrastructure Upgrade
 - Repair Shield Door
 - Construct New Enclosure
 - Remove Crane and BMMS
 - Install New BMMS
 - Refurbish Shield Windows

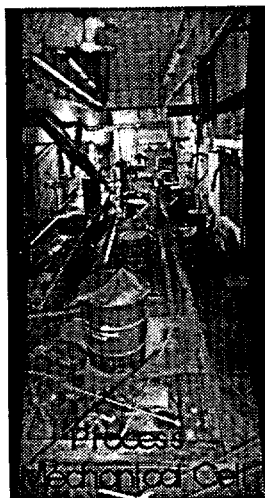
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10096-011



West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Head End Cells Progress to Date



- Completed Initial Visual Inspections of all 8 Head End Cells
- Developed Material Handling and Processing Plan to Define Cleanup of Head End Cells



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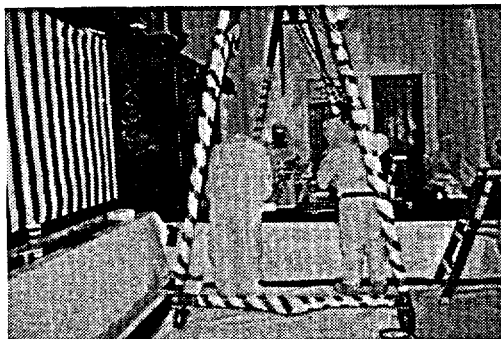
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Head End Cells Progress to Date

- Completed Refurbishment of Four Shield Windows in the PMC
- Completed Refurbishment of PMCR Shield Window



PMC Window Refurbishment

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Head End Cells Progress to Date

Procurement of Equipment Required to Begin Clean Up in Progress

- Bridge Mounted Manipulator Systems
- Remote Manipulators



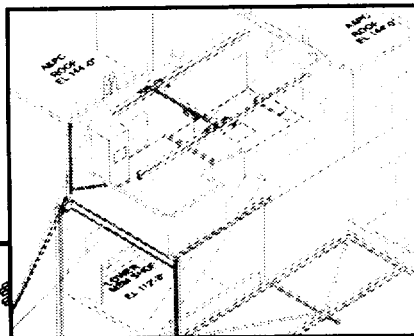
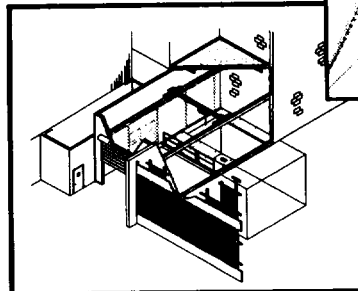
Bridge Mounted Manipulator

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Head End Cells Progress to Date

- Construction Complete for the PMCR Enclosure
- Construction in Progress for the GCR Enclosure



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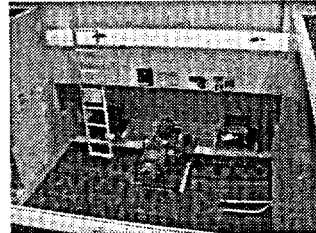


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Head End Cells Progress to Date

Work in Progress to
Repair the GPC Shield
Door

- ♦ Room Size - 15 ft. x 11 ft.
- ♦ Shield Door Weighs Approximately 50 Tons
- ♦ High Radiation / High Contamination



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Head End Cells Acceleration Dates

- | | |
|--|------------|
| ■ Remove Existing Cranes and Install New Crane | Feb. 2001 |
| ■ Begin Cleanup in PMC | Sept. 2001 |
| ■ Issue SAR Addendum to DOE | Aug. 2000 |
| ■ Complete Construction of GCR Enclosure | Jan. 2001 |
| ■ Complete Crane Removal and Installation of New Crane | July 2001 |
| ■ Begin Cleanup in GPC | May 2002 |

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**West Valley Demonstration Project
Regulatory Roundtable
June 29, 2000**

Waste Management

Jackie Jackson
WVNS, Waste Management Services

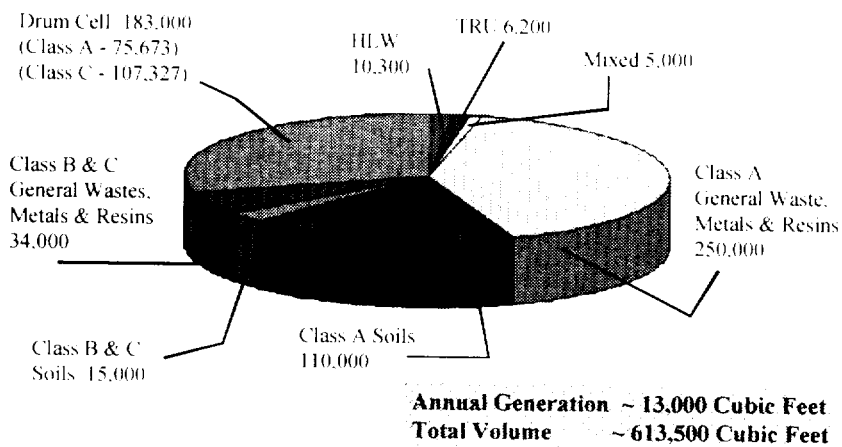
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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Overview of Radioactive Waste at WVDP**



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Waste Streams

- Broad Radionuclide Distribution from Reprocessing Fuels
- Radiological Fingerprint of the Old Reprocessing Facility is Underway
- Detailed Waste Planning and Subsequent Follow-Through Will Dictate Success
- Consistently Eliminating Hazardous and Mixed Waste Streams

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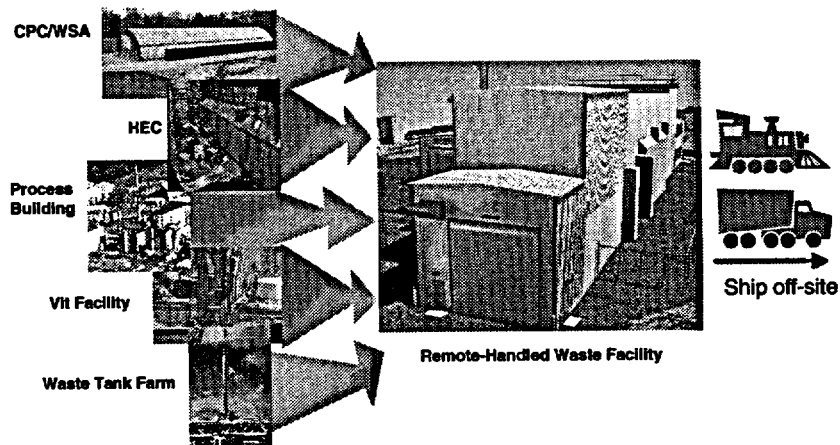
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Waste Streams



June 27, 2000

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Remote-Handled Waste Facility

- Design/Build Contract Awarded to Butler Construction, Located in Springville, NY, on September 24, 1999
- Raytheon (formerly known as Ebasco) Began Preliminary Design December 15, 1999
- The Facility is Expected to Cost Approximately \$31 million
- Construction is Scheduled to Begin October 2, 2000
- NRC Review of the Preliminary Safety Analysis Report for the RHWF is On Going

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Transportation

- Hazardous Waste Transport is Routine
- Moving to Direct Rail Shipments
- Working with Rail Companies to Determine Appropriate Routes for LLW and Spent Fuel
- WVDP Will Continue to Use a Variety of Transport Options to Maximize Efficiency

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Transportation



June 27, 2000

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Transportation



June 27, 2000

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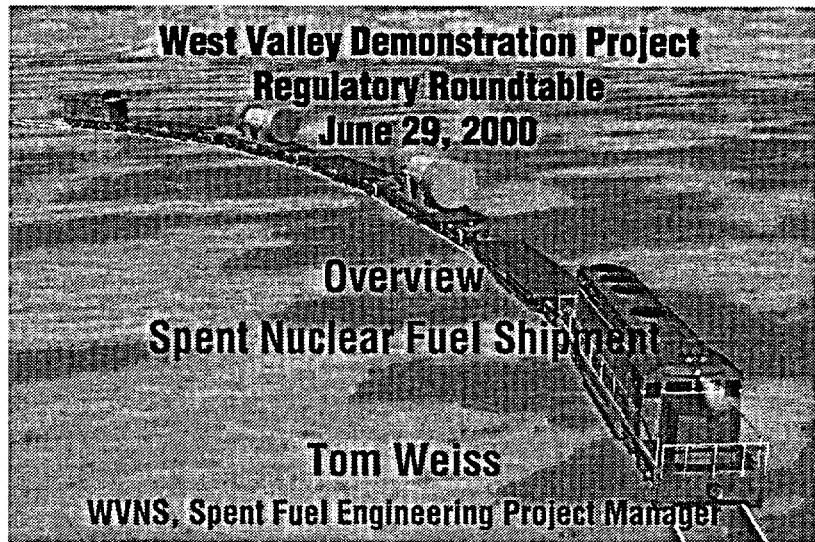
Disposal

- Collaboration with DOE Oakland Has Opened an Additional Path for Disposal of Mixed Waste
- Coordinating with Fernald for 9:1 Cost Savings on a Large Low-Level Debris Shipment in July
- No Pathway to Disposal for Non-Defense TRU
- Evaluating Options for Greater than Class 'A' Wastes
- WVDP Will Use a Variety of Disposal Sites as they Become Available
- ATG and M&EC are Opening More Mixed Waste Treatment Disposal Paths

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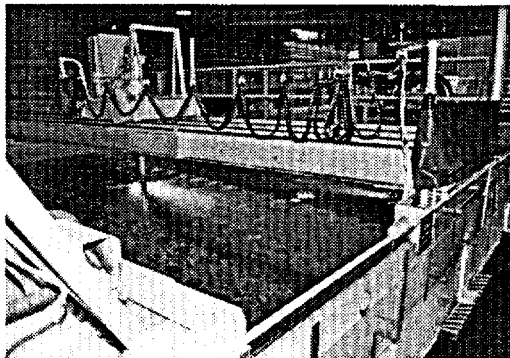
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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Spent Fuel Shipping Project**

- **Closure of Site
Requires
Remaining Fuel be
Removed**
- **Storage Pool
Contains 125 Fuel
Assemblies
Received in the
1970s for
Reprocessing**



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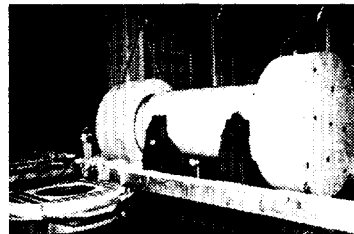
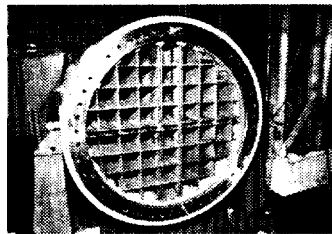
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Spent Fuel Shipping Project

- DOE Took Title to the Fuel in Exchange for Two Special Casks
- Dual Purpose (Shipping and Storage) Casks Procured by NFS and Licensed for Shipping by NRC in the 1980s
- Specific Agreement Between NYSERDA and U.S. DOE
- Settlement Agreement Among State of Idaho, DOE Dept. of Navy



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Spent Fuel Shipping Project

■ Preparing for Shipment

- Operational Readiness Being Worked at Both Facilities
- Transportation, Emergency Preparedness and Communication Plans Drafted
- Original Planning Involves Two Shipments; Working With NRC to Make One Full-Load Shipment to Idaho
- Shipment Scheduled for 2001



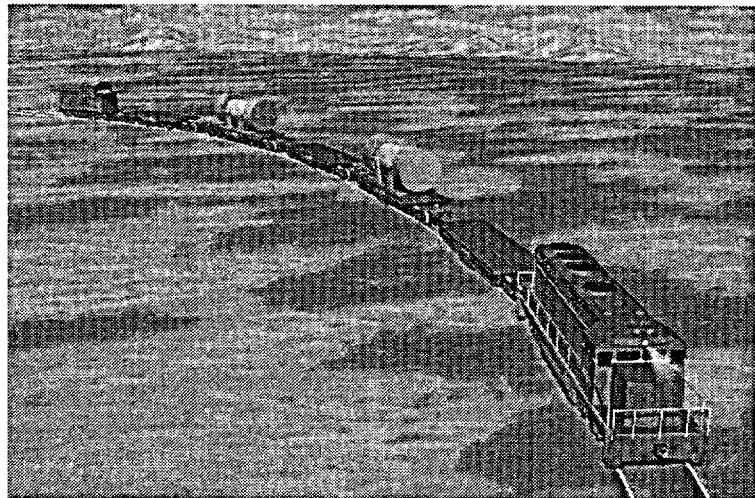
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Spent Fuel Shipping Project - Transportation



June 23, 2000

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Spent Fuel Shipping Project - Transportation

■ **Shipment Regulations**

- ◆ **Cask Licensing - NRC 10 CFR 71**
- ◆ **Cross Country Transport - DOT 49 106-180, 200**
- ◆ **DOE Orders**
 - ◆ **460.1A, Packaging and Transportation Safety**
 - ◆ **460.2, Departmental Materials Transportation and Packaging Management**
 - ◆ **Manual M 5632.1C-1, Chapter IV, Protection of Unclassified Irradiated Reactor Fuel in Transit**

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Spent Fuel Shipping Project - Transportation



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Spent Fuel Shipping Project - Transportation

■ **Routing**

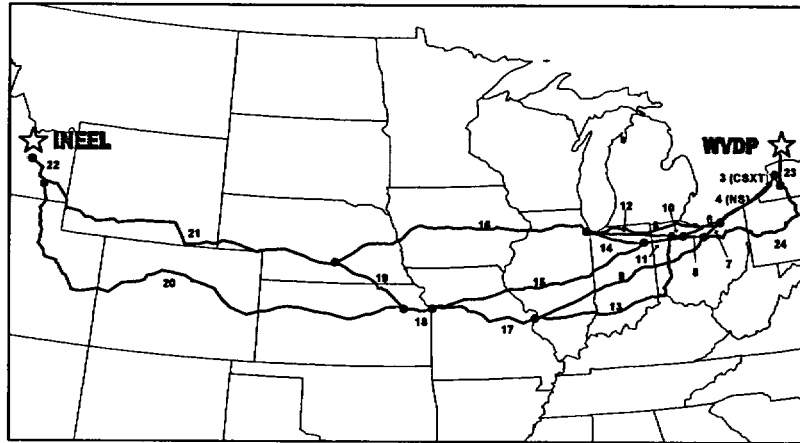
- ◆ ORNL Study Using INTERLINE & RADTRAN (Complete)
- ◆ RR Carriers (In Progress)
- ◆ Independent Review - ALK Associates (In Progress)
- ◆ States and Tribes (In Progress)

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Spent Fuel Shipping Project - Potential Routes



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Spent Fuel Shipping Project - Transportation

■ Conclusions

- The Shipment Will be Made Safely and Securely
- Effective Coordination Between DOE, Railroad Carriers and States and Tribes is Important for Successful Completion of the Shipment

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**West Valley Demonstration Project
Regulatory Roundtable
June 29, 2000**

**EIS for Project Completion
Dan Sullivan**

DOE Project Completion

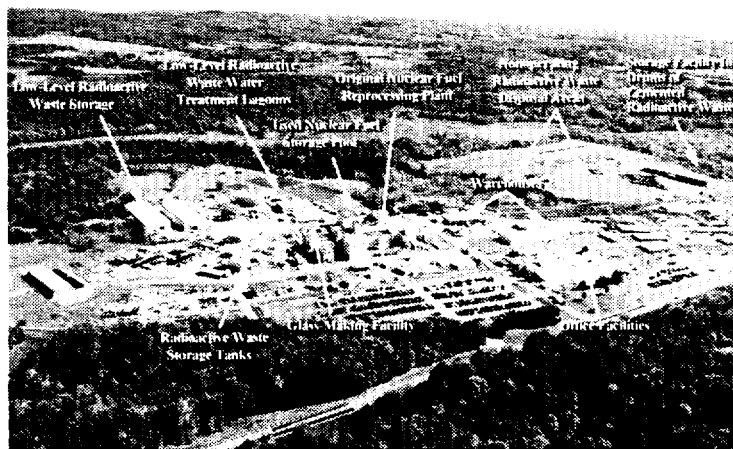
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**West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000
Vision for the Future**



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Site Cleanup Alternatives from DEIS

1 Off-site Disposal \$8 billion



- + Eliminates environmental risk
- + Positive economic impact on local economy
- + No long-term institutional control required
- Increased potential risk to workers

2 Aboveground Storage \$3.7 billion



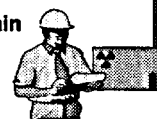
- + All waste is contained, accounted for
- + Positive economic impact on local economy
- + Does not transfer responsibilities to another state
- Long-term institutional control required
- Increased potential risk to workers

3 Stabilize in place \$0.4-1.1 billion



- + Lower costs
- + Reduces potential risk to workers
- + More experience in applying technology
- Long-term institutional control required
- Potential erosion, groundwater movement higher
- ? Economic impact similar to current operations

4 Monitor and Maintain \$30 million/year



- + Implementation cost low
- + Potential risks to workers low
- Significant reduction in support for local economy
- Long-term institutional control

Note: Cost estimates are in 1996 dollars.

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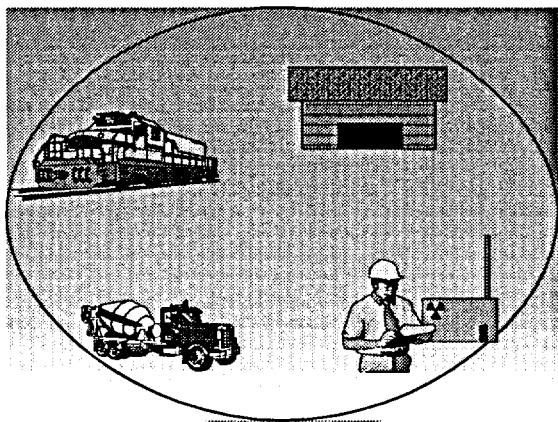
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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000 Vision for the Future

- The Preferred Alternative is Under Development and is Envisioned to be a Combination of the Actions Analyzed Under the Four Alternatives:



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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Vision for the Future

- The Preferred Alternative will be Protective of Public Health and Safety, and the Environment
- An Additional Objective is to Clean Up the Site to the Extent that is Technically and Economically Practical
 - Remove Smaller Units (e.g., LLWTF)
 - Perform More Decontamination on Major Facilities (e.g., Process Building)
 - Ship Stored Wastes and Newly Generated Wastes Off Site for Disposal
 - For Those Units Where it is not Technically and Economically Practical to Remove the Waste, the Units Will be Managed In-Place

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Preferred Alternative Development

DOE Vision on Site Closure

| Facility | DOE Vision |
|---|-----------------------------------|
| Vitrification Facility and Tank Farm | Decontaminate and close in-place |
| Process Building | Decontaminate and close in-place |
| North Plateau Plume | Manage in-place |
| Low Level Wastewater Treatment Facility | Remove and offsite waste disposal |
| TSAs and CPC WSA | Ship waste offsite and remove |
| Drum Cell | Ship waste offsite and remove |
| NDA | Manage in-place |

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Ongoing EIS Activities

- **DOE and NYSDERDA are Developing the Next NEPA Document**
- **The Preferred Alternative is Assumed to be the DOE Vision Until Negotiations are Completed**
- **The Closure Engineering Reports for the Process Building, Vitrification Facility, and HLW Tanks have been Revised**
- **The Analysis of Erosion is Being Revised to Incorporate Comments Received from NRC and NYSDEC**
- **The Performance Assessment Methodology is Being Revised to Reflect Comments Received from the NRC**

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Regulatory Involvement

- **EIS Status is Provided in Biweekly Conference Calls**
- **Periodic Conference Calls and Video Conferences are used to Discuss Technical Issues**
- **NRC and NYSDEC will be Reviewing and Commenting on Key Sections of the EIS as they are Developed**
 - - Appendix D (Risk Assessment Methods)
 - - Appendix E (Release Models)
 - - Appendix J (Groundwater Modeling)
 - - Appendix L (Erosion Analysis)
 - - Section 3.8 (Description of the Preferred Alternative)
 - - Section 5.7 (Analysis of the Preferred Alternative)
- **Technical Basis for Incidental Waste Determination**

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West Valley Demonstration Project - Regulatory Roundtable - June 29, 2000

Path Forward

- **DOE and NYSERDA Need to Complete Negotiations and Agree on a Preferred Alternative**
- **DOE and NYSERDA Need to Revise the Next EIS Document to Reflect Comments Received from NRC and NYSDEC**
- **NRC Needs to Finalize the Policy Statement on D&D Criteria for West Valley and Describe Their NEPA Process for Prescribing the Criteria**
- **DOE and NYSERDA Need to Define a NEPA Strategy that Complements NRC's NEPA Approach for Prescribing D&D Criteria**

June 29, 2000

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