West Valley Demonstration Project

Project Update

Bryan Bower
DOE-WVDP Project Director
May 26, 2010
Citizen Task Force Meeting
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EM Environmental Management
safety ❖ performance ❖ cleanup ❖ closure

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Safety Performance

- As of April 30, 2010, WVDP employees have worked more than 2.5 million hours without a lost-time accident or illness
- Safety Performance
  - No first aids or recordable injuries in May
- TRC is 0.2 and the DART is 0.2

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May 10 Contamination Event

- On May 10, four operators were contaminated while bagging waste out of a contaminated area in the Main Plant
- Waste included anti-contamination clothing debris, and components from Extraction Cell-3

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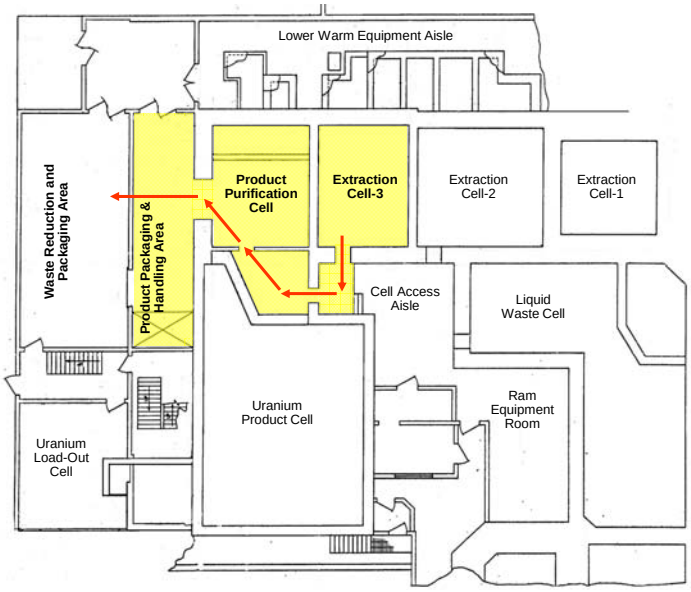
May 10 Contamination Event

Main Plant Process Building



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May 10 Contamination Event

- Immediate Response
  - Area was secured to prevent spread of contamination, a time out was taken across the site pending determination of the causes
  - Personnel were safely decontaminated
    - No internal dose and no significant external dose to the workers

Individual 1	
– Top of shoe by laces	2,500,000 dpm
– Right arm	12,500 dpm
Individual 2	
– Front of shirt	1,250,000 dpm
– Right hand	750,000 dpm
Individual 3	
– Right coverall leg	3,100,000 dpm
Individual 4	
– Right finger	3,200 dpm

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May 10 Contamination Event

- Beta Contamination
  - Highest activity on individual was 750,000 dpm/probe beta-gamma (mostly beta in the form of Sr-90)
  - The piping being handled was vent pipe from the extraction cell tanks.
  - Beta radiation is not as penetrating as gamma radiation so it only affects the skin
  - Maximum exposed individual <0.200 rad
  - Annual external dose limit is 50.0 rad (Roentgen Absorbed Dose)

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May 10 Contamination Event

- Investigation and Recovery
  - A time out was taken and a critique was performed. Management concluded that improvements were necessary with regard to:
    - Stopping when conditions are different than planned and briefed
    - Waste boxes need to be as close as possible to waste generation
    - All materials must be radiologically cleared prior to movement from contamination area to a radiological buffer area
    - Sharp and protruding objects must be covered to prevent bag damage
    - Bagging and sealing techniques for waste need to be reinforced
    - Waste needs to be dispositioned in a timely manner
    - Investigate procedure changes to allow modified (safer) techniques for handling and disposing of pipe
  - All workers were briefed on the incident and corrective actions before resuming work

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Project Update

$11M Funding Reduction Impacts

- Main Plant liquid solidification
- ARRA newly-generated radioactive waste disposition
- Waste Tank 8D-4 characterization
- Offsite waste shipping and disposition
- Main Plant decontamination efforts will be reduced, including discontinuing work in the Liquid Waste Cell and reducing the amount of piping and utility isolation
  - The work scope reductions were chosen to minimize the impact on the work force
  - The funds were transferred to the Brookhaven Laboratory in New York and the SLAC National Accelerator Laboratory in California, to assist them with working toward closure in fiscal year 2011.

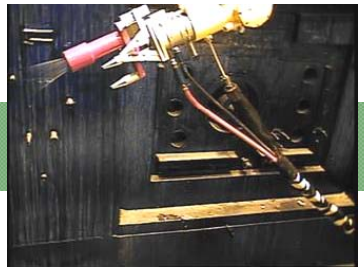
Project Update: Main Plant Process Building (MPPB)

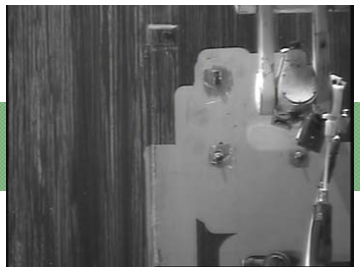
- Extraction Cell-1(XC-1)
  - Removed outer hatch covers and relocated to FRS
  - Removed inner hatch cover and placed in waste box
  - Completed core drilling for installation of in-cell camera and utilities
  - Testing robotic arm at Test Tower

The robotic arm that will be used to dismantle the equipment inside XC-1 is being tested at the Test Tower

Project Update: Main Plant Process Building (MPPB)

- Process Mechanical Cell
  - Nitrocision® is effective with removing paint and fixative from cell walls
    - 75% of cell wall penetration areas now cleaned
    - Working on penetrations on west wall
    - Vacuum system deployed
    - Expect to obtain rad data next month





In-cell Nitrocision ® images obtained from video capture

Project Update: Tank & Vault Drying System (T&VDS)

- Ventilation Line Replacement Underway
- New above ground ventilation lines installed in Waste Tank Farm
- Rotary Dryer moved into place
- Temporary ventilation lines in place and operational
- Existing ventilation header removal in progress

New ventilation lines installed in Tank Farm to prepare for connection to T&DVS

Section of underground 16" ventilation header removed

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Project Update: Waste Management

- Waste Processing Statistics as of April 30, 2010
  - Processed 72,937 ft^3 of legacy (stored) low-level waste (LLW)
  - Processed 39,670 ft^3 of Transuranic (TRU) waste
  - Disposed of 47,079 ft^3 of LLW
- Waste shipping halted due to funding reduction
- Processing areas undergoing upgrades to prepare for new waste stream groups
  - HEPA filters in Remote Handled Waste Facility (RHWF)
  - Plasma cutting in Container Sorting and Repackaging Facility (CSRF) and Vitrification Facility

Enhanced air handling capability and smoke removal capacity installed to support plasma cutting activities in CSRF

38 boxes containing HEPA filters will be processed in the RHWF in the second half of 2010

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