Recently, National Geographic visited PFP and featured on Instagram this photo of PFP tank spikes staged in front of the PFP visitor trailer.

Plutonium Finishing Plant (PFP) Closure Project

River & Plateau Committee
Hanford Advisory Board

Mike Swartz, Vice President  PFP Closure Project
Larry Romine, Federal Project Director

November 13, 2013
Agenda

- Overview
- Progress
- PFP Remedial Action Work Plan
- PFP Open Air Demolition
- Path Forward
- Issues/Challenges
- Key Points
# Plutonium Finishing Plant Overview

## Demolishing the Plutonium Finishing Plant – safely and compliantly by 2016

### Performance - Increasing productivity while maintaining safety

<table>
<thead>
<tr>
<th>Description</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFP glovebox removal</td>
<td>85% complete (202 of 238 removed)</td>
</tr>
<tr>
<td>PFP pencil tank units removal</td>
<td>59% complete (115 of 196 removed)</td>
</tr>
<tr>
<td>PFP facility deactivation</td>
<td>66% complete</td>
</tr>
<tr>
<td>Disposition of Process Vacuum System Piping</td>
<td>36% complete</td>
</tr>
<tr>
<td>Disposition of Process Transfer Lines</td>
<td>76% complete</td>
</tr>
<tr>
<td>Removal of asbestos insulation in the duct level</td>
<td>73% complete</td>
</tr>
</tbody>
</table>

### Schedule - Identifying ways to safely and compliantly advance schedule

| Maximizing efficiencies                                                      | Demolish low-level waste in place |
| Reducing preventative maintenance activities                                 | Working parallel activities        |
| Eliminating surplus facilities                                              | Establishing 4x10 schedule         |
Plutonium Finishing Plant Closure Progress

- Completed draining, flushing, removing and disposing of the first of three nitrate lines in PRF
- Resumed work on the mechanical isolation of Miscellaneous Treatment gloveboxes in PRF
- Achieved DOE-RL’s FY2013 KPGs related to PFP
  - Disposition of 20 pencil tank units
  - Removal of 18 gloveboxes
- Reduced preventative maintenance activities
  - Replaced large, legacy air system with portable system
  - Combined fire alarm tests
  - Cancelled preventative maintenance activities for equipment and buildings slated for demolition
Activities have been conducted under CERCLA authorization since May 2005 in accordance with:

- DOE/RL-2005-14, Removal Action Work Plan for the PFP Above-Grade Structures: Facility Deactivation

To complete deactivation and conduct demolition of major structures, DOE/RL-2011-03 (Draft B) was submitted to DOE-RL in June 2011. RAWP Draft B is scheduled to be updated FY2014:

- Updates include D4 strategy changes and current regulatory requirements.
- Draft RAWP estimated to be available for DOE-RL review in Winter 2013 and Regulator review in Spring 2014.
- Estimated schedule completion for RAWP approval is September 2014.

Demolition and dismantlement may be conducted using standard industrial equipment with assorted implements (e.g. shears, cutters, thumb and bucket, hammers, etc.)

Demolition and dismantlement techniques selected to:
- Mitigate industrial safety risks to project personnel
- Minimize radiological emissions outside work area boundary and eliminate potential emissions to the environment and public

Risk mitigation determination will be supported by:
- Characterizing source term (amount and locations)
- Implementing methods to protect source term (including TRU) during demolition
- Implementing methods of handling source term during disposal/transport
- Implementing real-time assurance methods to ensure we are in control
209E Critical Mass Laboratory is an example of previous experience in conducting safe demolition of contaminated facilities with plutonium-bearing source term (See photo examples). Techniques used included:

- Applying fixatives to contaminated items prior to demolition.
- Identifying contaminated items that will remain in place during demolition by painting with highly visible paint (Photo 1).
- Using standard industrial demolition practices to expose contaminated items containing source term (Photo 2).
- Surgical removal of contaminated items containing source term (Photo 3).
Plutonium Finishing Plant Closure

Path Forward

- Relocate employees, establish central location for D4 team
- Eliminate surplus facilities in preparation for staging D4 equipment
- Begin D4 of ancillary facilities at the beginning of CY2014
- Reduce mortgage costs and dependence on aging support systems
- Implement integrated strategy
- Increase productivity while maintaining worker safety

HA-23S glovebox removal
Plutonium Finishing Plant Closure

**Issues/Challenges**

- Managing culture change through mounting distractions
- Implementing efficiencies

Left: Exploring use of MSA PremAire supplied air respiratory system suits Suit

Below: Conducting pilot foaming glovebox project
Plutonium Finishing Plant Closure  
Key Points

• PFP is one of the most challenging and complex clean-up projects within DOE complex today

• Stability of craft work force is essential to safety and progress to meet TPA milestone, 2016 demolition to Slab-on-Grade

• Stabilized funding saves the Government approximately $1.0B and accelerates project completion

• To maintain the PFP safety systems requires $30-50M per year; ventilation for confinement/material-at-risk is key driver

• For more information visit the PFP chapter of the Hanford Story at http://www.youtube.com/watch?v=d0_vVczQxr0)
Backup Slides
Performance Management Baseline (PMB)
GLOVEBOX AND HOOD STATUS
RMA-RMC AREAS

COLOR CODE
STATUS AS OF AUGUST 7, 2013

GLOVEBOXES THAT HAVE BEEN REMOVED
GLOVEBOXES REMAINING TO BE REMOVED

Plutonium Finishing Plant Closure
RMA and RMC Glovebox Status
Plutonium Finishing Plant Closure
Rooms 230A, B, and C and 235B Status

GLOVEBOX AND HOOD STATUS
ROOMS 230A-B-C AND 235B

COLOR CODE
SERVICED AS OF AUGUST 1, 2013
- GLOVEBOXES THAT HAVE BEEN REMOVED
- GLOVEBOXES REMAINING TO BE REMOVED

ENERGY