Plutonium Finishing Plant (PFP) Closure Update

River & Plateau Committee
Hanford Advisory Board

Bryan Foley, Acting Federal Project Director
PFP Closure Project
June 10, 2014
Plutonium Finishing Plant

- Mission: Safely and compliantly demolish PFP to slab-on-grade by 2016
PFP Recent Accomplishments

- Continued Glovebox/Hood deactivation activities:
  - Removed HC-17 (HC-17P, HC-17DC, HC-17SBB) in March
  - Completed HA-40F, in room 166, during the month of March
  - Completed HA-7A (in room 235-A3) and HC-4 in backside rooms in May
  - PFP, 28 GB’s remaining
    - Key Performance Parameter - 1, 7 GB’s remaining

- Continued work in PRF
  - Completed 16 Pencil Tank units (PTU) in March
  - Completed PT 31/28A in April
  - PFP, 60 PTU’s remaining
  - 4, PTU’s remaining for FY14 Key Performance Goal completion

- The improved breathing air system Generator Modules were delivered on March 31, 2014
Plutonium Finishing Plant Progress

Progress

- 55 of 81 facilities demolished
- 210 of 238 glove boxes removed
- 136 of 196 pencil tank units removed

Challenges

- Crews are preparing to enter the McCluskey Room in late summer/early fall timeframe
- New strategy of removing large glove boxes from the facility
Progress: Removing Hazards Inside

<table>
<thead>
<tr>
<th></th>
<th>Original</th>
<th>Remaining</th>
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</thead>
<tbody>
<tr>
<td>Glove Boxes Removed</td>
<td>238</td>
<td>28</td>
</tr>
<tr>
<td>Pencil Tank Units Sealed out</td>
<td>196</td>
<td>66</td>
</tr>
</tbody>
</table>

Progress to-date

• 88% glove boxes removed
• 69% pencil tank units sealed out
• 33 ancillary buildings demolished/removed from the PFP complex
Current Activity Overview

• Plutonium Reclamation Facility (PRF) Pencil Tank Size Reduction (66 units remain)
• PRF Gallery, Miscellaneous Treatment, and Column Glove Box cleanout & isolation
• PRF Cold and Dark Preps
• Remote Mechanical (RM) A Line glovebox isolation, cleanout and separations
• RM - C Line glovebox isolation, cleanout and separations
• Preparing for 242-Z entries
• 8 ancillary facilities being readied for demo
• Characterization and demo preps throughout
• Min-safe maintenance, surveillances, rounds, and routines
Remaining Work

Overall deactivation is 71% complete

- PRF Canyon (Pencil Tanks)
- 242-Z Americium Recovery Facility
- 234-5Z (Gloveboxes)

**LEGEND**
- Green: Gloveboxes removed/Dispositioned in place
- Red: Key areas left to address
<table>
<thead>
<tr>
<th>TPA Milestone</th>
<th>Due Date</th>
<th>Status</th>
<th>Milestone Description</th>
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</thead>
<tbody>
<tr>
<td>M-083-24-T01</td>
<td>09/30/16</td>
<td>On Schedule</td>
<td>Submit Rv. 0 of the PFP Complex S&amp;M Plan to Ecology</td>
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<tr>
<td>M-083-44</td>
<td>09/30/15</td>
<td>In Jeopardy</td>
<td>Complete transition of 234-5Z &amp; -ZA, 243-Z, 291-Z and 291-Z-1 buildings to support decommission, deactivation, and preparation for dismantlement of the above grade portions of these PFP facilities</td>
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<tr>
<td>M-083-00A</td>
<td>09/30/16</td>
<td>In Jeopardy</td>
<td>Complete PFP Facility Transition &amp; Selected Disposition Activities</td>
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Updating the Safety Analysis

Challenge: stepping out of fire, criticality, and ventilation systems

• Define facility condition and deactivation and demolition hazards present during each phase
• Revise Fire Hazards Analysis to reflect specific facility conditions during each phase
• Define allowable hold-up in glove boxes, pipe and duct during each phase
Changing the Conversation

Challenge: transitioning the culture from surveillance and maintenance to deactivation and demolition

• Ensure understanding and acceptance of:
  • Unique challenges of deactivation and demolition
  • Standards, requirements and allowances for deactivation and demolition
  • Changing risk levels
Glove Bag Incident

• Workers heard loud noise, saw orange-red flame when cutting into 1-inch diameter pipe
• The work was being conducted inside a sealed plastic glove bag
• The glove bag was not burned and workers saw no sign of damage or pressurization of the bag
• No injuries. Surveys did not detect any spread of contamination

The pipe was part of a demister system that was being dismantled. The demister line being size-reduced inside of the glove bag
Timeline

- December 2014: Last glove box cleaned out & stabilized
- January 2015: Demo prep begins
  - Grouting, drain line removal, asbestos abatement
- Spring 2016: Demolition begins
  - March: 234-5Z begins
  - May: 291-Z begins
  - June: 242-Z begins
  - July: 236-Z begins