Plutonium Finishing Plant Update
For the Week Ending October 21, 2018

Summary: The Plutonium Finishing Plant (PFP) crew continued size-reducing demolition debris on the ground and continued loading waste containers for shipment to the Environmental Restoration Disposal Facility (ERDF). Using newly implemented enhanced controls, ERDF workers safely disposed of the first PFP waste received.

Accomplishments: (Week of Oct. 15)

- Loaded the debris at the load out line that has been on the ground since December 2017.
- Transferred eight ERDF containers to the Container Transfer Area (CTA). The CTA is a radiologically controlled hand-off location to allow ERDF crews to pick up waste containers from the PFP.
- Shipped a total of 26 m³ of waste to ERDF.

Safety Issues or Concerns:

- On Oct. 22, PFP project management held project-wide safety meetings to review recent issues involving respiratory protection issuance and the importance of having a questioning attitude and paying attention to detail.
- During the week of Oct. 15, a PFP worker issued a stop work after the project experienced several failures of newly-purchased lapel air samplers. PFP management and workers resolved the stop work by testing run times and replacing battery chargers. Workers also identified a vibration sensitivity with the pumps, and will limit placement on where individuals can wear pumps to limit vibration sensitivity. PFP industrial hygiene will continue to monitor and perform testing trying to re-create failures, as well as working with the manufacturer to troubleshoot the issues.

Radiological Issues or Concerns:

- On Oct. 19, after a seven-day decay count, an air sample located in the radiological buffer area near the contamination area boundary recorded 2.7 percent of a DAC (Derived Air Concentration, or level of radiological contamination in the air). The reading was less than the 30 percent of a DAC required for posting as an Airborne Radioactivity Area at the PFP. The PFP team is following enhanced radiological control procedures, including additional surveys and investigatory work. All cookie sheets surveys performed during the work and following the work showed no contamination above action levels, and the nearly 150 follow-up surveys performed showed no contamination above action levels.

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<tr>
<th>Contamination Discovered Outside the Radiological Buffer Area (RBA):</th>
<th>Bioassays Requested:</th>
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<td>None</td>
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Upcoming Work:

- Ensuring infrastructure is in place for winter weather (warming shelters, etc.)
- Size reduction of demolition debris will continue near the northeast corner of the NE corner of the Main Processing Facility (234-5Z).
- No waste load out will occur the week of Oct. 22 as workers place steel plates to slightly raise the elevation of the load out areas; ERDF cans will then be placed on the steel plates for loading. This work, planned since December 2017, will improve safety in the load out areas.
- Workers will continue planning and constructing mock-ups and Management Assessment for higher-risk work.

Employee Interface:

Summary:

- On Oct. 22, PFP management will brief the HAMMER training facility’s Medical Surveillance Subcommittee on the revised PFP demolition approach and enhanced controls.
- During the week of Oct. 15, PFP management held similar briefings to Mission Support Alliance employees.
- PFP management continues holding regular (bi-weekly) roundtables with employees.
Photos from September (left) and October (right) show the removal of one of debris piles that have been on the ground since December.
MAR and Waste Reduction During Demo

234-SZ Bubble
Represents <1% total remaining MAR

26 m$^3$ of 875 m$^3$
8 years of 5 years

234-SZ Building (Excluding Processing Lines)
Represents <1% total remaining MAR

0 m$^3$ of 1072 m$^3$
8 years of 5 years

234-SZ Processing Lines
Represents 2% total remaining MAR

0 m$^3$ of 323 m$^3$
8 years of 5 years

PFR Rubble
Represents 7% total remaining MAR

0 m$^3$ of 589 m$^3$
8 years of 5 years

% Total MAR shipped
(312 grams total)
% Total volume shipped
(2,859 m$^3$ total)

90%
1%

Overall % MAR shipped
(3,059 grams total)

Loaded Low Level Waste

LLW Drums

51%

54 of 103 containers shipped

LLW RORO's

59%

25 of 42 containers shipped

LLW Boxes

Loaded Universal/Hazardous Waste

Recycle Drums

Recycle Boxes

Hazardous Waste Drums

TRU Waste Dispositioning During Stabilization

TRU TL100
Represents 39% total remaining MAR

10 Shipped of 18

TRU SL37
Represents 4% total remaining MAR

12 Shipped of 12

TRU Super SL6
Represents 60% total remaining MAR

20 Shipped of 20

TRU SWB
Represents 0% total remaining MAR

4 Shipped of 4

TRU Drum
Represents <1% total remaining MAR

30 Shipped of 34

Current waste shipped as of October 22, 2018

MAR=Material at Risk (Plutonium)
234-SZ=Main Processing Facility
LLW RORO=Low-Level Waste Roll-On Roll-Off Containers
PLF=Plutonium Reclamation Facility
SL62=Standard Large Box 2
SWB=Standard Waste Box
TRU=Transuranic (Waste)