

NNSA Briefing to DNFSB on SRPPF Safety Strategy

February 21, 2024



NNSA
National Nuclear Security Administration

Agenda

INNOVATE. COLLABORATE. DELIVER.

- Facility Worker Self Protect (FWSP)
- Glovebox (GB) Procurement – Strategy and Safety Designation
- Actions Taken
- Path forward

Facility Worker Self Protect

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- Evaluated the SRPPF Safety Basis and determined there was an over reliance on FWSP.
- Requested a policy interpretation from EHSS.
- Considered the control strategies for the protection of facility workers at other plutonium facilities in the defense nuclear complex.
- Updating the Consolidated Hazard Analysis and Safety Design Strategy to incorporate the EHSS policy on the appropriate use of FWSP.

Glovebox Procurement – *Strategy and Safety Designation*

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Strategy

- Long lead procurement initiated and will be conducted in multiple phases.
- Fabrication will not start until design is complete.
- Evaluating additional structures, systems and components (SSCs) while minimizing impacts to existing design.

Safety Designation

- In the initial design 18 furnace GBs were designated as Safety Class (SC). Remaining GBs were designated as General Service.
- NNSA decided to designate the remaining GBs as Safety Significant (SS).

NNSA elevated the following controls to SS:

1. GB differential pressure alarms
2. GB oxygen monitor alarms
3. Robust outer oxide containers
4. GB design
 - 18 GBs initially designated as SC will remain SC.
 - All remaining GBs are designated as SS.

5. 226-F Fire Suppression system from the Fire Water Tank / Pump system forward and throughout the 226-F facility.
6. Continuous Air Monitors (CAMs) and associated trouble alarm(s) to provide indication of degraded support systems.

As the design and safety analysis matures, additional controls will be evaluated, including for facility worker protection.

- Continue to engage throughout the remaining design to finalize the set of hazard controls.
- Follow through on CSO for Safety direction to the NNSA Enterprise to consider EHSS's policy interpretation on the application of FWSP in future evaluations of approved safety basis documentation.
 - Transmitted guidance on use & application of EHSS policy interpretation regarding FWSP to all NNSA Program and Field Office management.
 - Requested NNSA Field Offices verify that the concept of integrating safety into design has been appropriately applied to safety basis documentation.

- Identify lessons learned from safety strategy issues to include representation and insight from key stakeholders.
 - Deep dive/root cause analysis to ensure that ongoing and future nuclear construction projects continue to meet safety requirements and properly and judiciously integrate safety into design.
 - Results will be shared with the DNFSB and across the DOE Complex.

Questions?