F/H Laboratory Deactivation Project

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Brief to SRS Citizens Advisory Board
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Purpose

- Provide overview of the F/H Laboratory Deactivation Project

F/H Laboratory Aerial View

F/H Laboratory - Background

- **F/H Laboratory Purpose:** Primarily provided laboratory services for F-Area and H-Area facilities (e.g., Canyons and Tank Farms) in support of chemical separations.
- **F/H Laboratory Buildings:**
  - 772-F placed in service in mid-1950s – two-story structure (one above grade and one below grade)
  - 772-1F placed in service in 1987 – one story with mezzanine
  - 772-4F place in service in 1993 – Main exhaust ventilation building for 772-F
  - Other support structures: Chiller Building/Cooling Tower; External Transformers; Standby Diesel Generator; External Sheds
- **FY18: Project initiated to consolidate laboratory functions and transition analytical activities from F/H Laboratory to the Savannah River National Lab (SRNL) and B-Area Labs (BAL).**
- **February 2021: Completed transition of Analytical activities from F/H Laboratory to SRNL and BAL.**
- **August 2021: DOE-HQ Approved Declaration of Excess for F/H Laboratory Buildings and Support Structures.**
- **October 2021: DOE Authorized the Start of F/H Laboratory Deactivation**

F/H Laboratory – Layup (FY18 through FY21)

- **FY18 through FY21: Labs that were no longer in use were transitioned to layup**
  - Samples, standards, chemicals removed from the lab
  - Waste removed from the lab
  - Loose material removed (e.g., papers, tools)
- **Unused Gloveboxes, radiohoods, and radiobenches in active labs were also transitioned to layup**

772-F, Lab 115 – Before & After Layup

772-1F, Lab 128 – Before & After Layup

FY22 – F/H Laboratory Deactivation Activities

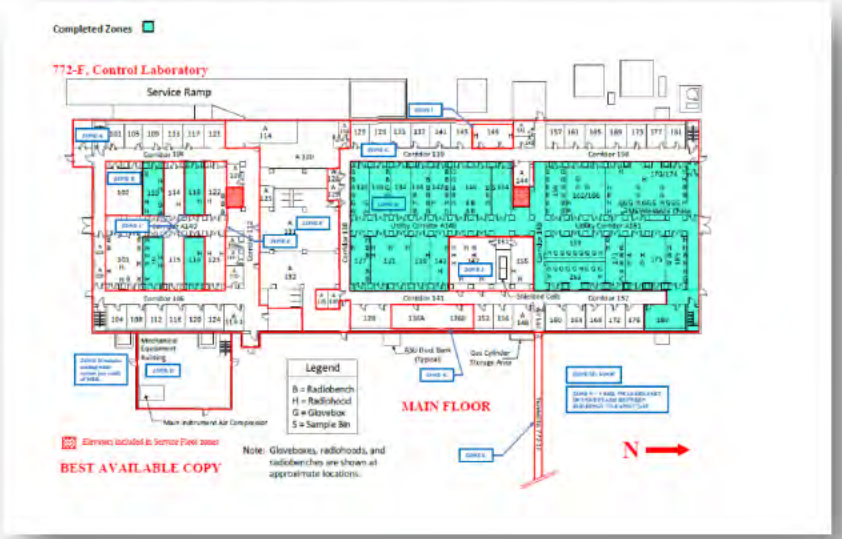
- **Deactivation:** Purpose is to place a facility in stable condition including removal/reduction of hazardous and radioactive materials to ensure adequate protection of personnel and the environment and limiting long-term cost of surveillance and maintenance.
- **Deactivation project examples include:**
  - Removal of portable equipment
  - Removal of non-radiological hazards (e.g., PCB ballasts, fluorescent bulbs, batteries, lead, ceiling tiles)
  - Isolation of gloveboxes
  - Sealing chemical drains
  - Removal of transient combustibles
- **Completed deactivation of 4 of 39 zones. Two zones in 772-F and two zones in 772-1F:**
  - ***Total of 37 of 54 Labs Deactivated***

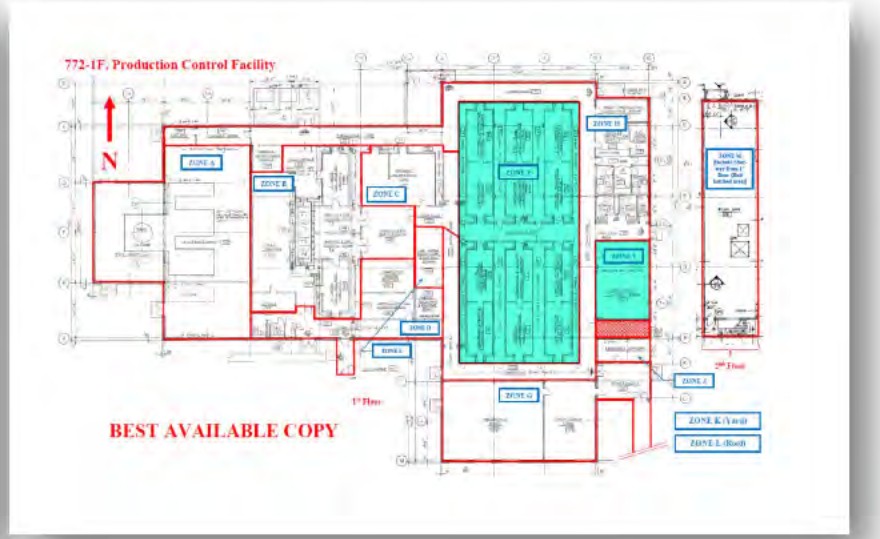
772-1F, Lab 108 – Before & After Deactivation

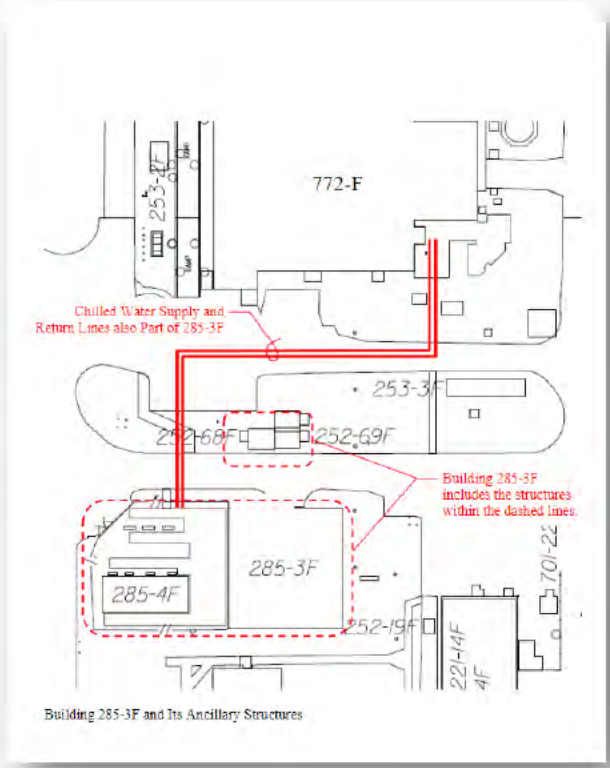
772-1F: Example Fixative in Radiohood

772-1F: Example Deactivated Glovebox

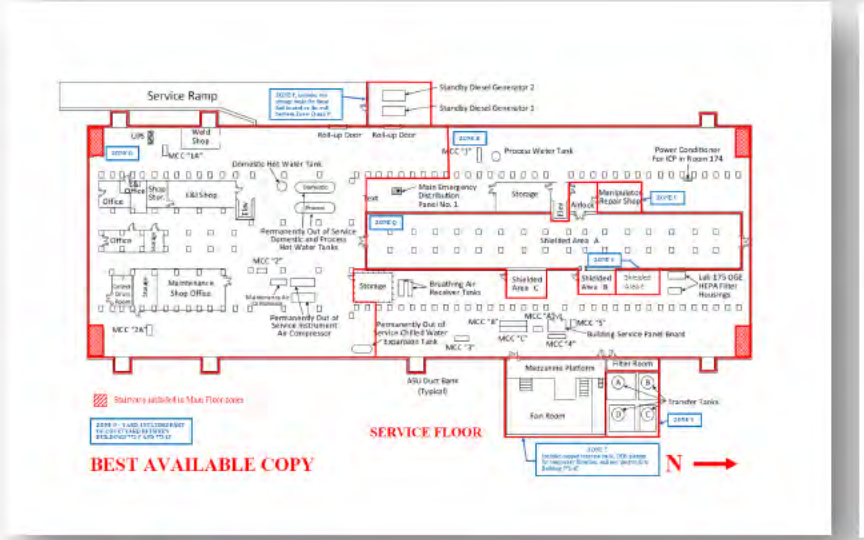
FY22 – F/H Laboratory Deactivation Activities (continued)

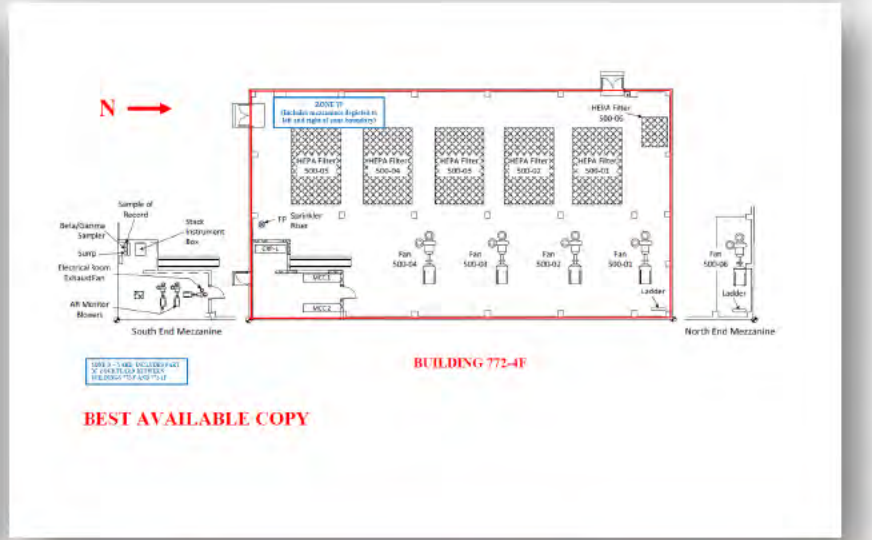






Building 285-3F and Its Ancillary Structures





F/H Laboratory Deactivation – End State

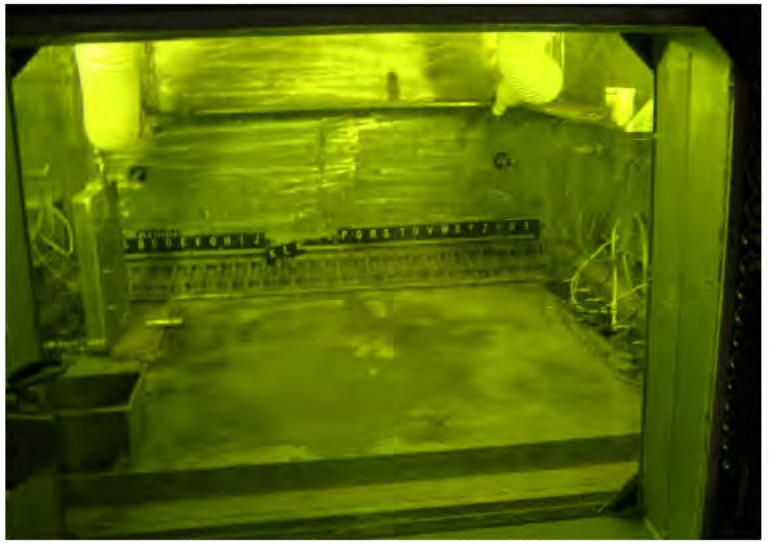
- Waste will be characterized and shipped to appropriate storage or disposal site.
- Oil, Diesel Fuel, Refrigerant, Chemicals, PCB ballasts, fluorescent bulbs, etc. will be removed and dispositioned.
- Main exhaust ventilation in 772-4F will remain in service (exhausts 772-F)
- Steam, Domestic Water, Fire Water, and Chilled Water will be isolated, drained, and air-gapped.
- Electrical services will be isolated and air-gapped except for 772-4F.

Summary

- Deactivation is performed to place a facility in a safe, low-risk configuration with reduced surveillance and maintenance costs in preparation for future decommissioning.

- Completed first year of a multi-year project to deactivate F/H Laboratory Buildings and Support Structures. Forecasting completion in FY26.

- In FY23, Deactivation continues with a focus in three zones to include the Shielded Cells.



Example:
772-1F Shielded Cell 4:
Before and After Waste Removal