

DEACTIVATED SM-1A NUCLEAR POWER PLANT DECOMMISSIONING AND DISMANTLEMENT

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INTRODUCTION & WELCOME



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AGENDA

- Introduction & Welcome
- SM-1A Project Overview – Current Status
- SM-1A Project Overview – One Year Look Ahead
- Waste Transportation
- Safety + Mitigation
- Questions / Discussion





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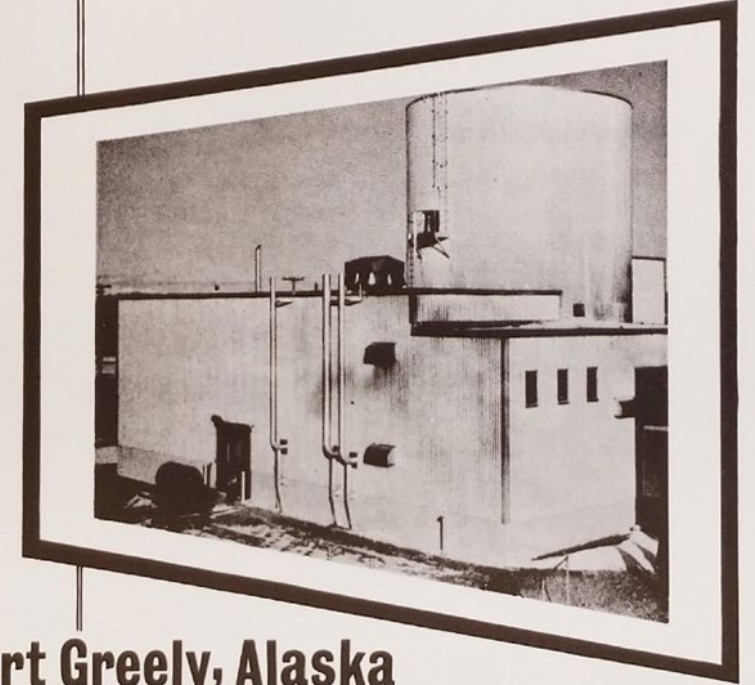
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PURPOSE OF THIS MEETING

The goal of this informational public meeting is to present an updated status of the SM-1A Decommissioning and Dismantlement Project to our valued stakeholders.

The SM-1A team has revised work elements to ensure safe working conditions due to various challenges associated with the Bldg. 606N weather enclosure. These adjustments allow adequate time for the team to address recently discovered challenges with the encasement material.

THE *SM-1A* NUCLEAR POWER PLANT



Fort Greely, Alaska

SM-1A PROJECT OVERVIEW – CURRENT STATUS



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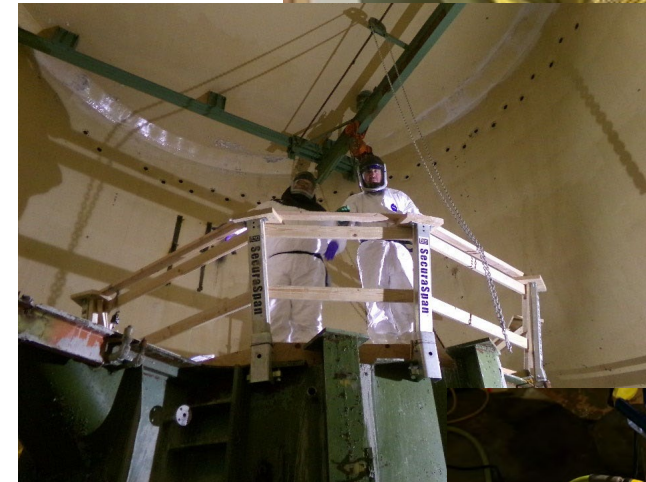
CURRENT PROGRESS

Inner Vapor Container (VC) Entry (January / February 2024)

- First entry since 2011
- Multiple investigations were completed:
 - Air sampling
 - Radiological Surveys
 - Structural Assessments (stairs, catwalk, and overhead crane).
 - Samples of the encasement materials
- Findings of note:
 - Ammonia (NH_3) was detected (through real time air monitoring and offsite sample analysis)
 - Lead-based paint, detectable levels of PCBs, and asbestos were reported in the lab data.

VC Entry video:

[SM-1A VC Entry](#)





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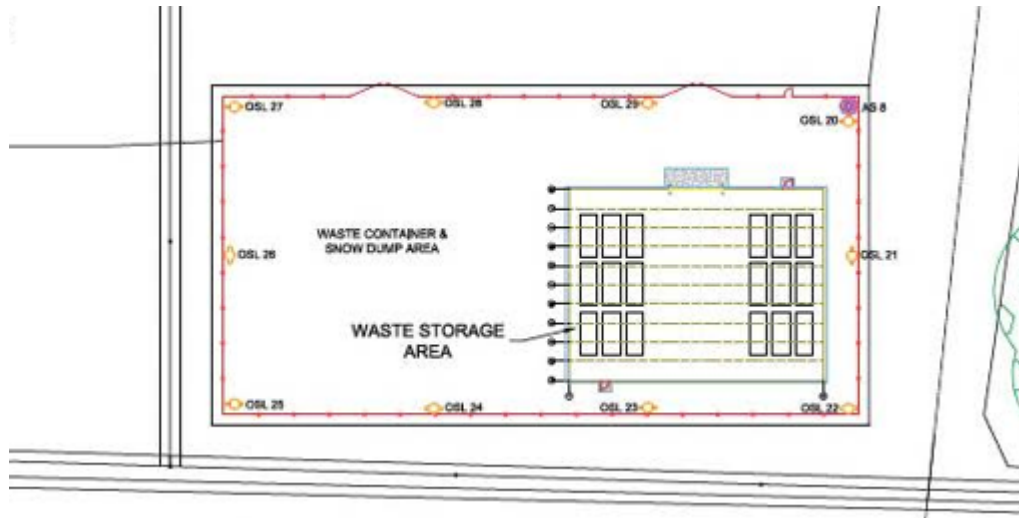
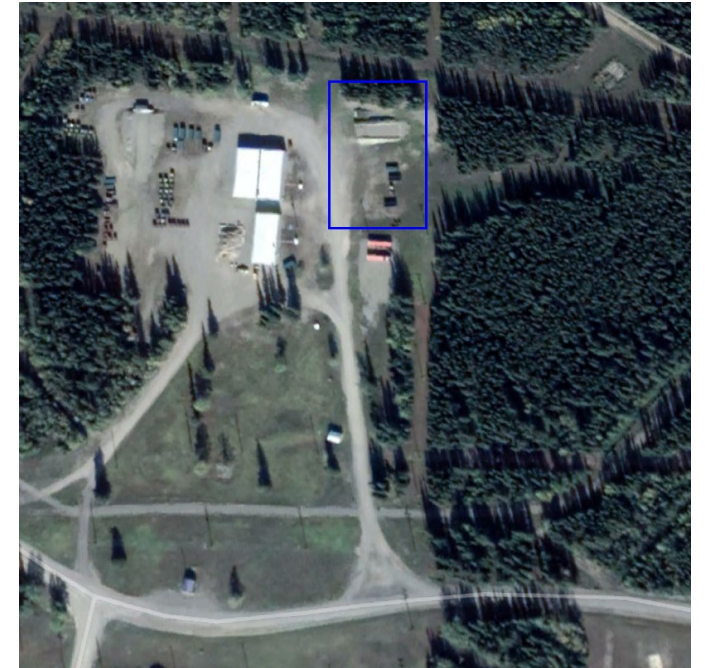


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CURRENT PROGRESS - SITE MOBILIZATION AND SET-UP

- A3D and USACE mobilized Key Staff to Fort Greely in May 2024
- Challenges prompted a re-design of Bldg. 606N weather enclosure
- Installation of Bldg. 606N security fencing (Phase I)
- Baseline radiological and environmental surveys completed
- Site preparation for the Waste Storage Area (WSA) completed
 - Construction of the foundation for the WSA Weather Enclosure underway
- Installation and start-up of radiological site monitoring
 - Radiological dosimeters (OSLs) and radiological air monitoring stations



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SM-1A PROJECT OVERVIEW - ONE YEAR LOOK AHEAD



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PROJECT SUMMARY

Project Objective: Decommission and Dismantle the SM-1A Deactivated Power Plant and release the property for unrestricted use.

Project Plan Summary:

Remainder of 2024:

- Complete construction of WSA
- Establish environmental/radiological monitoring
- Site set-up: trailers, temporary power, fencing
- Abatement and demolition of Building 607 (J-5)
- Abatement of Building 606N



Site Clearing for WSA

2025:

- Materials and Equipment (M&E) removal from 606N
- Demolition of 606N (Non-encased structures)
- Remove wooden roof and steel dome from outer VC
- Construct Bldg. 606N Weather Enclosure



WSA Excavation



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ONE YEAR LOOK AHEAD

Environmental Monitoring

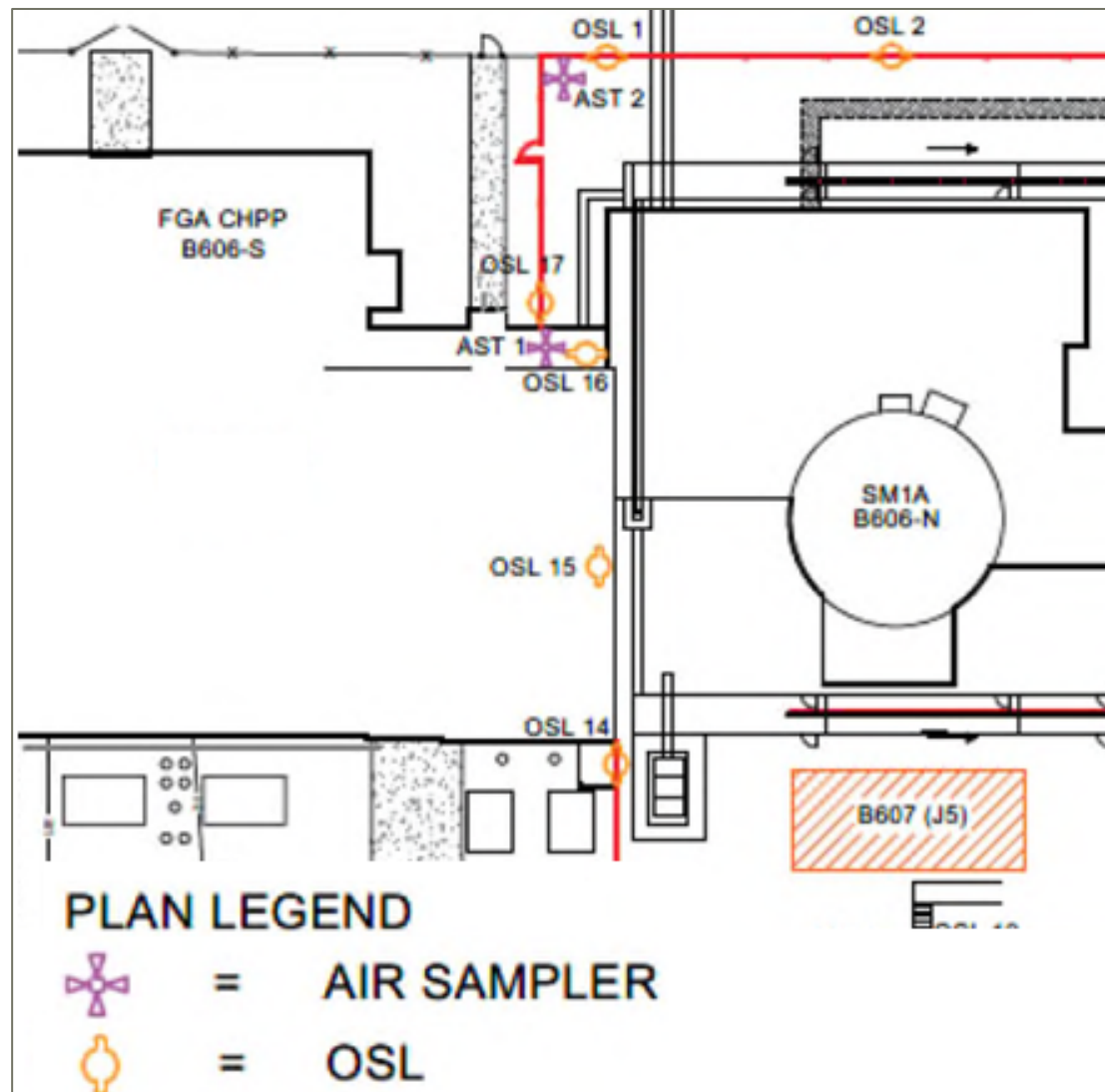
Multiple monitoring types and locations

Optically-Stimulated Luminescence

- Dosimeter used to measure direct radiation
- Two currently in place in 606S (OSL 15 and 16)
- Accessible through 606N/606S common wall.

Air Samplers

- Capture airborne particulates that contain contamination that could be inhaled
- One will be installed in 606S the next weeks (AST 1).





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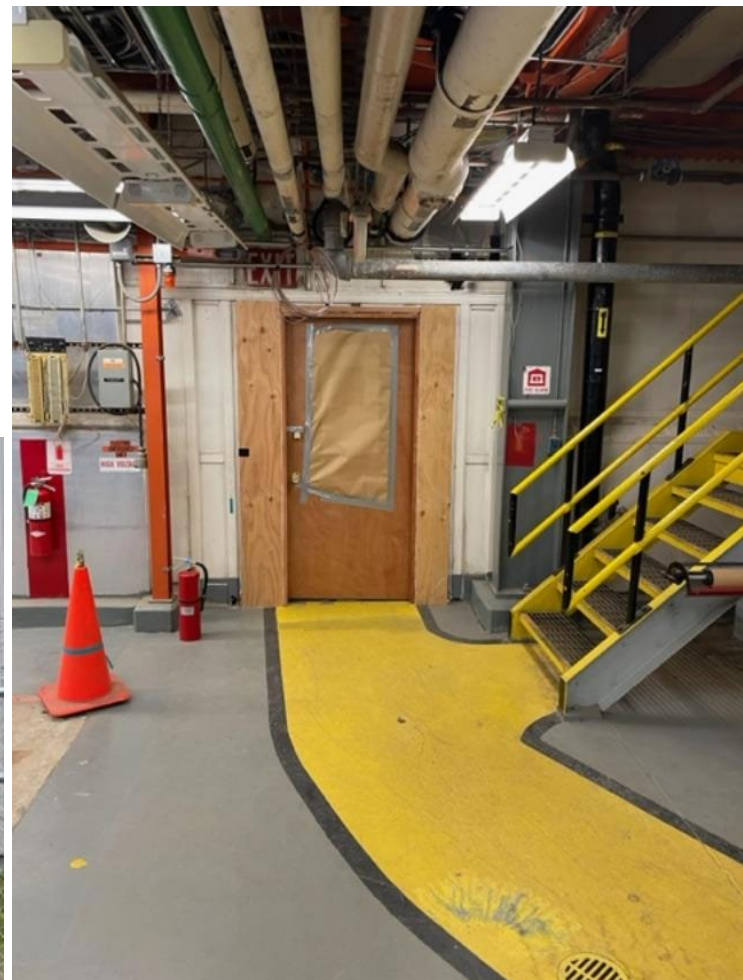
ONE YEAR LOOK AHEAD

Environmental Monitoring

The access point for the monitors in 606S is through the common 606S/660N wall. During 606N demo, this doorway will be removed and the wall closed.

At that point, A3D will need access through the Doyon West side entrance to process these monitors.

This will start in the first quarter of 2025.





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ONE YEAR LOOK AHEAD

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Demolition of J-5 (607)

A single-story, Quonset hut-type structure in a north-south orientation, about 60 ft long with an arch height of about 12 ft.

During reactor operations, it was used as a waste processing and storage building.

After abatement and placement of fixatives on the walls, demolition activities will be completed before the end of October.

By removing this building, we improve access to Bldg. 606N and clear the way for future work.





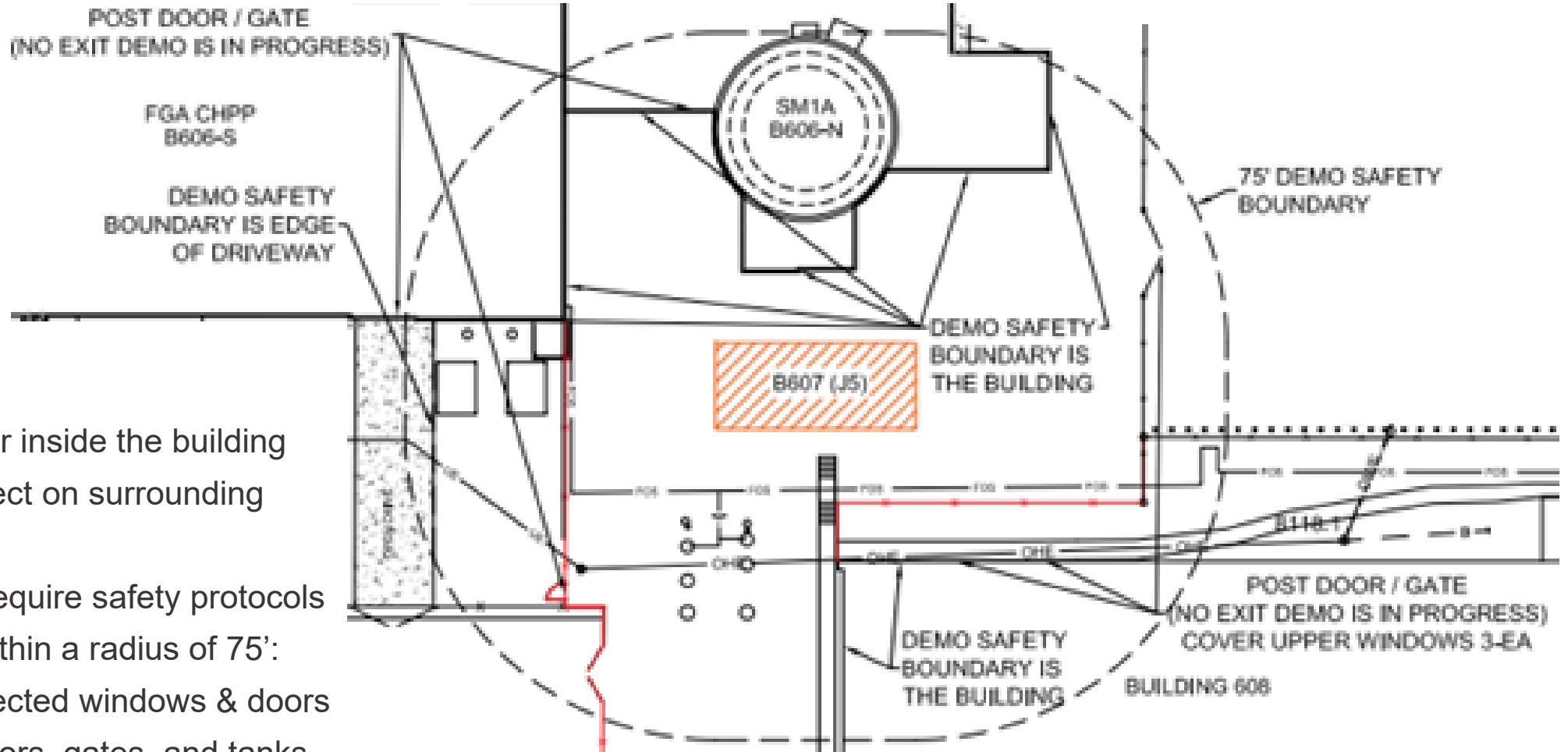
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ONE YEAR LOOK AHEAD



Two steps:

- Abatement will occur inside the building and will have no effect on surrounding neighbors
- Building demo will require safety protocols to be put in place within a radius of 75':
 - Building 608 –affected windows & doors
 - 606S – Doyon doors, gates, and tanks
 - Signage on exterior doors and gates
 - Demarcations on exterior pathways



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ONE YEAR LOOK AHEAD



606N Hazardous Materials Abatement

- Install additional site security fencing to establish our expanded site boundary
- Commence hazardous material abatement
 - Asbestos
 - Lead-based paint
 - PCBs
 - Universal waste (lightbulbs, mercury, etc.)
- This work will start in November 2024 and will continue through the first quarter of 2025.



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ONE YEAR LOOK AHEAD

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Bldg. 606N Materials and Equipment (M&E) Removal

- Large components will be disassembled, as necessary, and packaged and made ready for transport. This includes:
 - Steam turbine
 - Generator
 - Electrical panels
 - Bridge crane
 - System piping
- This work is expected to occur over a few weeks at the beginning of the second quarter of 2025.





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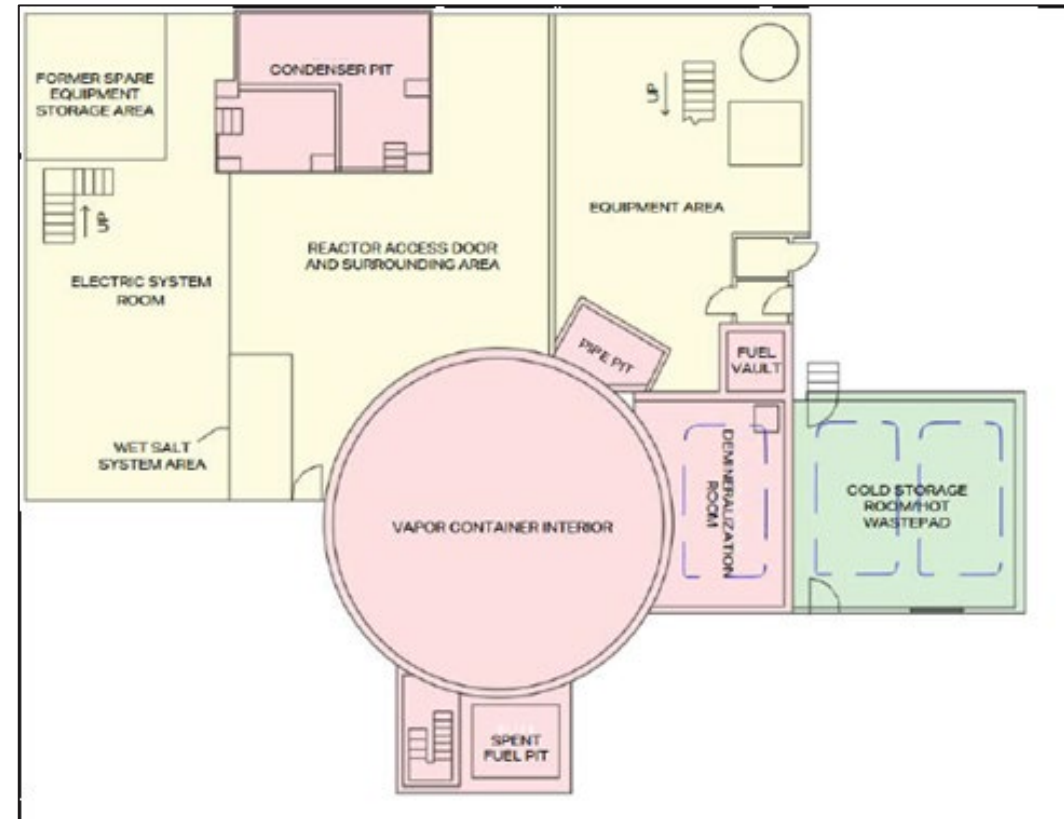
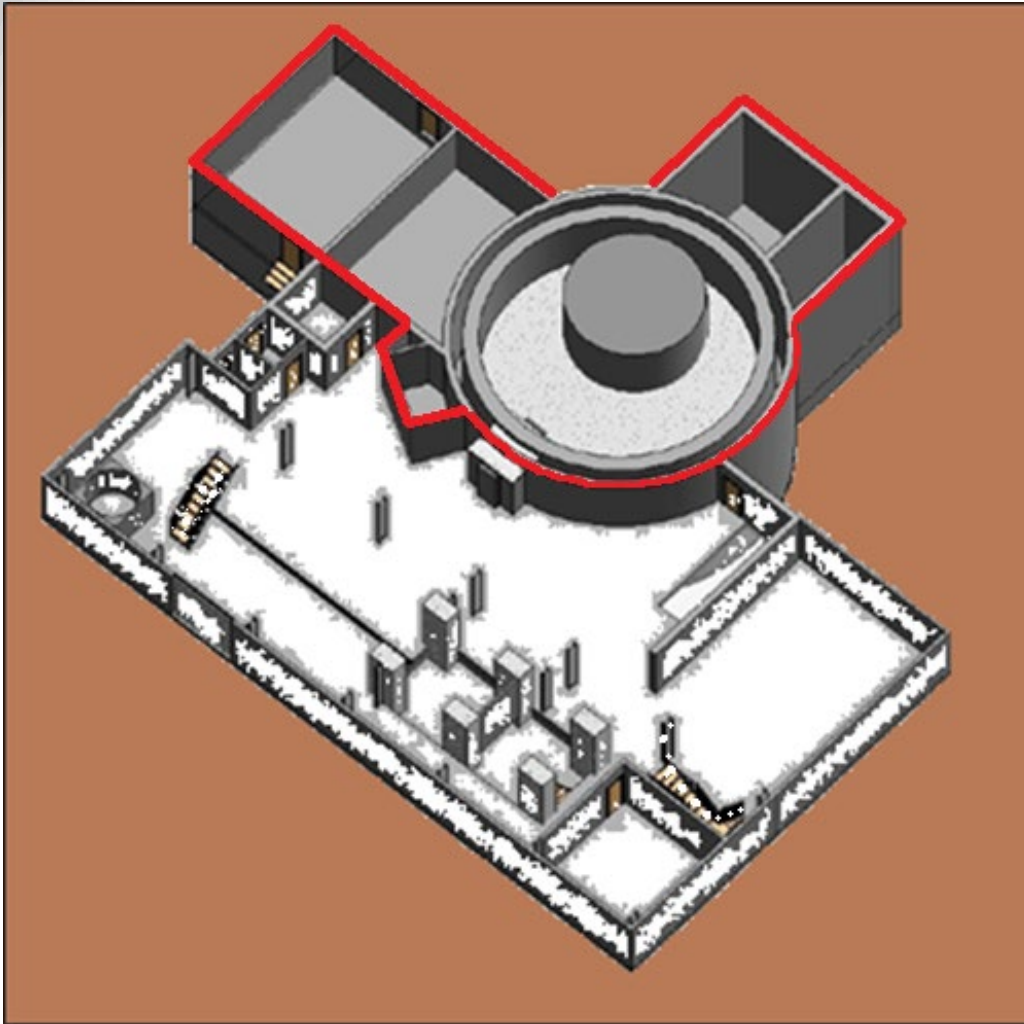


ONE YEAR LOOK AHEAD

Demolition of non-encased areas of Bldg. 606N

This demolition will start in the second quarter of 2025 and will last into the third quarter of 2025.

Removing Building 606N will allow access to the VC from multiple sides.





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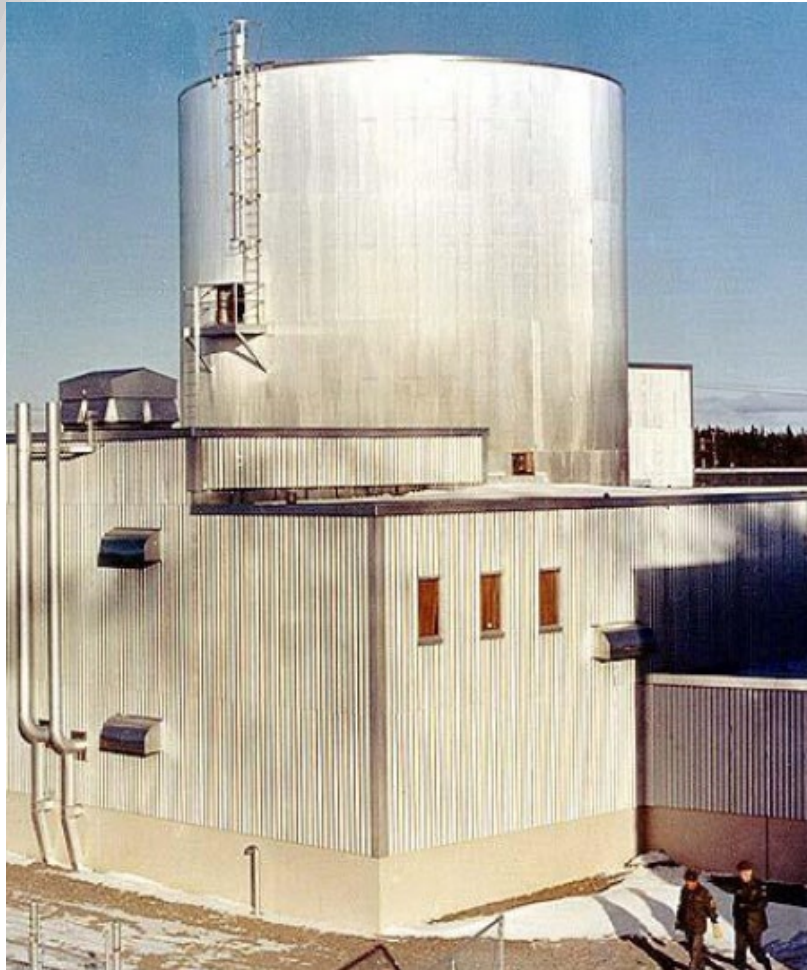
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ONE YEAR LOOK AHEAD

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Removal of the Outer VC Wooden Roof and Steel Dome

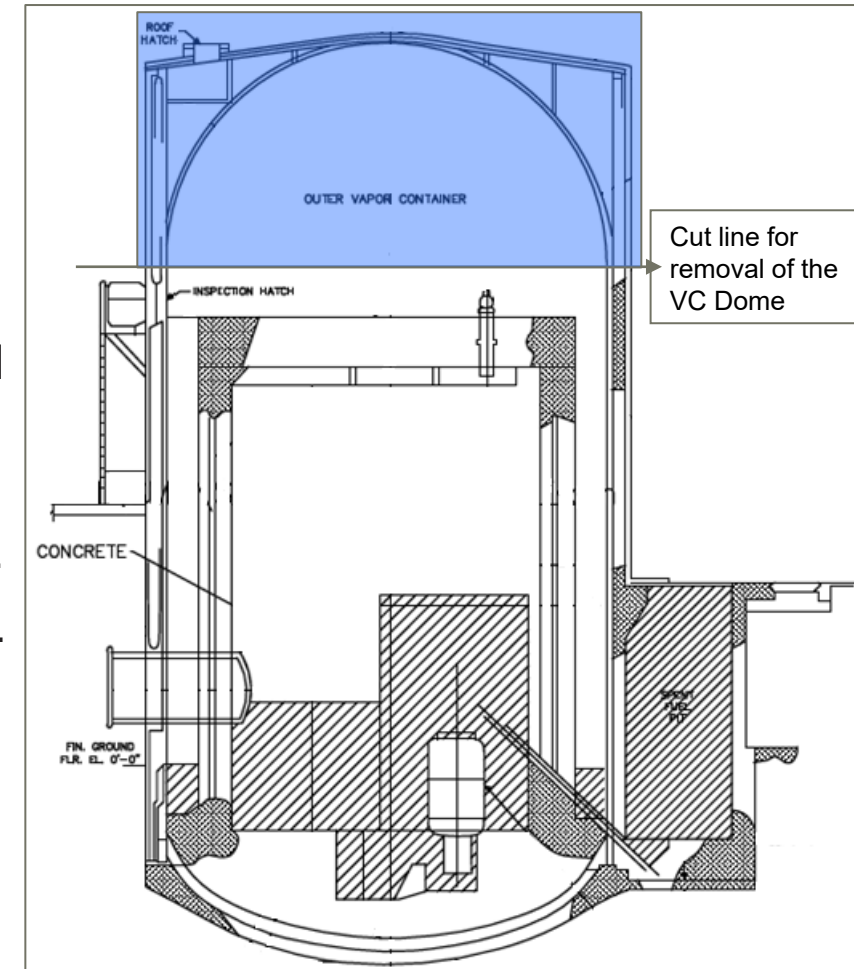


After demolition of Bldg. 606N, the wooden roof will be removed.

Inspections and surveys will be completed to verify acceptable conditions under the metal dome. A fixative will be applied as an additional layer of protection.

The steel dome will be removed, downsized and packaged for disposal.

This work will be performed after Bldg. 606N demolition is complete.



WASTE TRANSPORTATION



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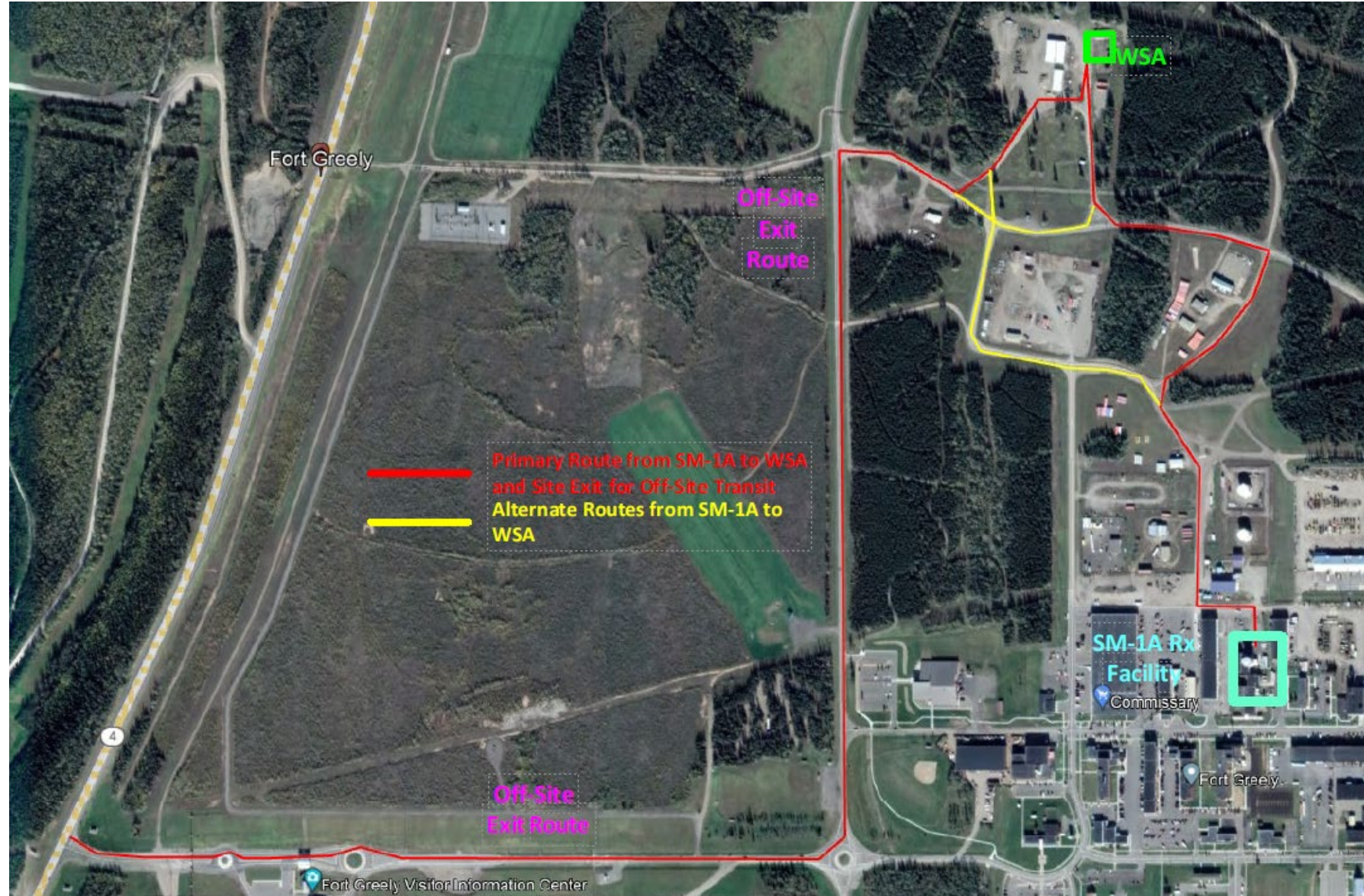


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WASTE TRANSPORT

As the SM-1A reactor is dismantled, generated waste will be packaged and transported to the WSA, where it will be stored until transport to its final disposal site in the lower 48.





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OFF-SITE WASTE TRANSPORT



SAFETY MEASURES



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SAFETY PROGRAMS

To ensure the safety of both our team and our adjacent tenants, we have established multiple sets of requirements that must be followed while working at our site. Examples include:

Accident Prevention Plan

Provides requirements need to ensure safety, including:

- Industrial safety
- First aid
- Equipment Inspections
- Chemical / radiological exposure
- Fire control
- Emergency Response
- Hazardous material management
- Heat / Cold Stress
- Lock-out/Tag-out/Try-out
- Stop Work Authority, etc.

Radiation Protection Plan

Gives explicit administrative (training, procedures, PPE use) and engineered controls (monitoring and containment devices, air filtering) to limit radiological exposures and eliminate the spread of contamination.

“This RPP defines the radiological safety program requirements applicable to the pre-decommissioning and D&D scope of work. The SM-1A Radiation Protection Program is implemented through the A3D procedures ... which have been tailored to the requirements of this project and meet or exceed the minimum requirements of this Radiation Protection Program.”

Environmental Radiation Monitoring Plan

Clear, prescriptive steps for radiological monitoring to be completed through-out the duration of this D&D project, including surface water, soil and sediment sampling, environmental air monitors (Figure A), and radiological detectors (Figure B).





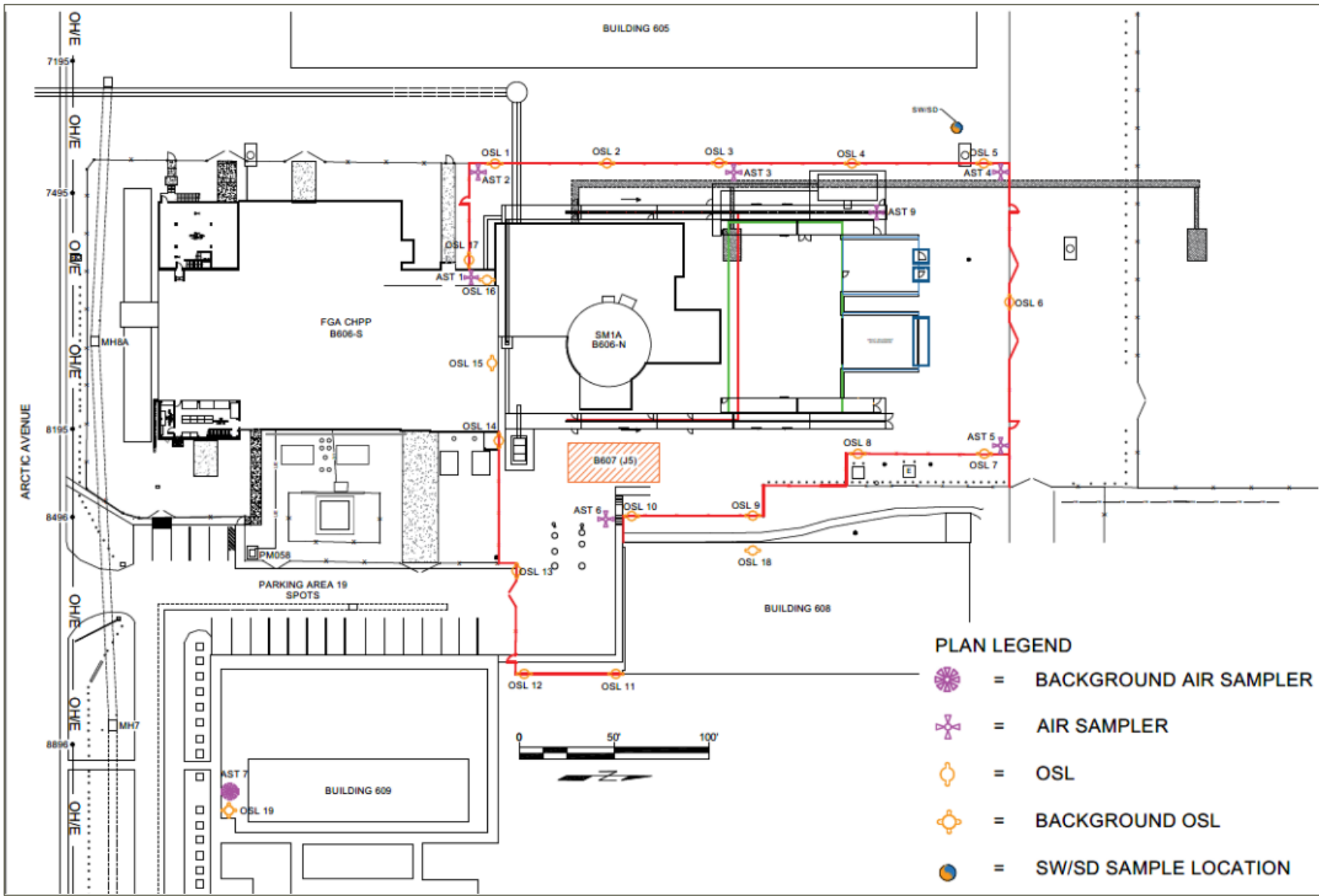
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ERMP SAMPLING PROGRAM





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SAFETY DETAILS

Additional safety measures include:

- Delta Medical Transport will provide additional rescue capabilities to augment the Fort Greely Fire and Emergency Services
- Weather Enclosure protects the team against snow, wind, and seismic activity for year-round operations
- Ventilation scrubbers provide a secondary layer of protection to ensure a safe environment for our team and neighboring Garrison community and tenants.
- Based on conservative safety approach, the team will initially wear Level B PPE when working in areas with encasement material.

QUESTIONS / DISCUSSION



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