

Decommissioning Project Final Report Building 480-3D, Maintenance Field Office and Shop

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History of Revisions

Revision	Date	Revised Section	Change
0	07/05/2021	N/A	Initial Issue

LIST OF ABBREVIATIONS AND ACRONYMS

ACM	Asbestos Containing Material
EPA	(U.S.) Environmental Protection Agency
EC&ACP	Environmental Compliance & Area Completion Projects
FAI	Final Acceptance Inspection
FDE	Facility Decommissioning Evaluation
ft	feet
PACM	Presumed Asbestos Containing Material
S&M	Surveillance and Maintenance
SCDHEC	South Carolina Department of Health and Environmental Control
SOW	Statement of Work
SRNS	Savannah River Nuclear Solutions
SRS	Savannah River Site
yd	yard(s)

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1.0 SUMMARY

Building 480-3D was a single-story, 24-feet (ft) by 24-ft prefabricated structure located in the northern section of 400-D Area of the Savannah River Site (SRS). It was built in the early 1950s and was used primarily as a preparation building for treatment of cooling tower water.

A review of the existing characterization data, process/building history, sample data and walk downs of the facility prior to decommissioning supported the determination that Building 480-3D met the criteria of a Clean Building, Simple Model as described in the Facility Disposition Manual 1C, Procedure 501. This decision was supported by the documentation found in the Facility Decommissioning Evaluation (FDE), G-FDE-D-00044, Rev. 0, dated 4/28/2020, Reference 8.01. No chemical, hazardous or radioactive materials were associated with this structure other than commonly used materials of construction, which were managed as waste during demolition in accordance with established SRS practices. Since there was no evidence of contamination on the slab before structure demolition, no final verification survey was required. The FAI-51 Final Acceptance Inspection (Reference 8.06) was performed on 4/28/2021 and no additional work or cleanup was required.

The proposed decommissioning end-state for Building 480-3D was demolition to, but not including, the building's concrete slab.

2.0 PURPOSE AND SCOPE

The purpose of this report is to document what was done to the facility as a part of the decommissioning project, and the condition the facility was left in at the completion of the project. The requirement for this report is found in the Facility Disposition Manual 1C, Procedure 506, "Preparing a Decommissioning Project Final Report".

2.01 Facility Description

The D-Area Maintenance Building 480-3D was a 24-ft x 24-ft prefabricated structure built in the early 1950s. It was used primarily as a preparation building for treatment of cooling tower water.

In the original construction the siding and roof were made of corrugated asbestos, and the original interior walls were asbestos cement board (as noted in Rev. 0 of Reference 8.02, dated 11/11/2019). The interior walls were replaced with drywall. The floor was tiled over the concrete slab. The siding, roof and floor tiles, as well as the interior drywall were removed by the asbestos abatement contractor prior to decommissioning per G-SOW-D-00009, the Statement Of Work for the Abatement of Asbestos Containing Material in D-Area Buildings 480-3D, 482-2D, 484-4D, 485-D, and 704-7D (Reference 8.09). The framing of the walls were steel studs.

The doors were hollow metal. The windows were standard commercial, externally projected, steel sash with adjustable louvers. It was constructed with two hollow steel personnel access doors and a double, side-swinging bay door. The building was put in place on a concrete slab and originally had two partitioned rooms within: a “chemical (lime) storage room” and a “chlorine cylinder room”. In the period of 1976–1977, plans were made and executed to convert the building to office space. There were three spaces partitioned off in the building. After the asbestos abatement (Per Rev. 0 of Reference 8.02) performed under G-SOW-D-00009 was completed, a follow-up asbestos survey of the building was conducted on November 19, 2020, indicating no Asbestos Containing Materials (ACM) or Presumed Asbestos Containing Materials (PACM) (Rev. 1 of Reference 8.02). See Appendix A, Figure 1 for a photo of the building prior to asbestos abatement. See Figure 2 for a photo after completion of the asbestos abatement. See Figure 3 for a photo of the facility/structure after decommissioning.

2.02 New Facility Information

SRS identified no new facility information during or as a result of the facility decommissioning.

3.0 DECOMMISSIONING MODEL APPROVAL

The facility was decommissioned using the Simple Model as described in Facility Disposition Manual 1C. The selection of the model was based on an FDE (Reference 8.01). No regulator walkdown of the facility occurred due to COVID-19 travel restrictions. The FDE received South Carolina Department of Health and Environmental Control (SCDHEC) concurrence on June 28, 2020, and U.S. Environmental Protection Agency (USEPA) concurrence on December 5, 2020 (References 8.03 and 8.04 respectively).

4.0 DECOMMISSIONING ACTIVITIES COMPLETED

Execution of the Building 480-3D decommissioning was planned and described in the FDE (Reference 8.01) and the Decommissioning End Points Document (Reference 8.05). Building 480-3D was decommissioned by CTI and Associates, Inc (Savannah River Nuclear Solution’s mentor protégé subcontractor). The 480-3D structure was demolished to its concrete slab. Piping penetrations were cut off flush with the top of the slab and floor openings were filled with grout to achieve a uniform surface. It was confirmed complete in the FAI-51 walkdown performed on 4/28/2021 (Reference 8.06).

5.0 WASTE MANAGEMENT

5.01 Salvage and Reuse

Thirty (30) cubic yards of scrap metal from Building 480-3D decommissioning were transferred to 741-N, Salvage and Reclamation Building, for recycling.

5.02 Waste Disposal

Table 1. Waste Generation

Waste Classification	Waste Source	Disposed to	Total Volume
LLW	N/A	N/A	N/A
ACM	Non-friable Asbestos	Three Rivers Landfill	N/A
PCB	Lamp/light ballasts	Solid Waste	N/A
CSR	Construction debris	Three Rivers Landfill	N/A
Recycle Metals	Doors, wall studs, beams	741-1N Salvage Yard	30 yd ³

LLW – Low level radioactive waste
N/A – Not applicable
ACM – Asbestos-containing material

PCB – Polychlorinated biphenyl
CSR – Clean Structural Rubble

6.0 FINAL FACILITY CONDITION

6.01 Final Facility Condition and Remaining Hazards

480-3D was demolished down to the concrete slab. Piping penetrations were cut off flush to the slab and floor openings were filled with grout to achieve a uniform surface. Curbing on the remaining slab was breached to ensure drainage of rainwater.

6.02 Risk Assessment Summary

A review of the existing characterization data, process/building history, sample data and walk downs of the facility prior to decommissioning supported the determination that Building 480-3D met the criteria of a Clean Building, Simple Model as described in Manual 1C, Procedure 501.

This decision was supported by the documentation found in the FDE, Reference 8.01. No chemical, hazardous, or radioactive materials were associated with this structure other than commonly used materials of construction, which were managed as waste during deactivation in accordance with established SRS

practices. Since there was no evidence of contamination on the slab either before or after structure demolition, no final verification survey was required.

6.03 Post Decommissioning Requirements

The remaining structure is free of physical, chemical, and radiological hazards; therefore, it needs no further decommissioning action. No surveillance and maintenance (S&M) activities were identified for the remaining structure (concrete slab) because it poses no threat to human health or the environment while awaiting area completion.

7.0 CONCLUSIONS/RECOMMENDATIONS

Building 480-3D was decommissioned and the concrete slab has been left in place. All decommissioning activities have been completed in accordance with Federal and State regulations. The remaining structure is free of physical, chemical, and radiological hazards; therefore, it needs no further decommissioning action. No S&M activities were identified for the remaining structure because it poses no threat to human health or the environment while awaiting area completion.

In accordance with the “Memorandum of Agreement for Achieving an Accelerated Cleanup Vision at the Savannah River Site”, this report will be maintained as a record for reference and use in the D-Area Operable Unit Completion Record of Decision. To ensure facility remnants are addressed during the completion process, Building 480-3D will be added to Appendix K.2 of the Federal Facility Agreement for the SRS.

8.0 REFERENCES

- 8.01** G-FDE-D-00044, Revision 0, dated 4/28/2020, “Facility Decommissioning Evaluation Building 480-3D, Maintenance Field Office and Shop”
- 8.02** Q-APG-D-00010, Revision 1, dated November 23, 2020, “Baseline Asbestos Inspection Report of Building 480-3D”
- 8.03** SRNS-OS-2020-00273, dated June 28, 2020, SCDHEC Concurrence on the FDE for 480-3D
- 8.04** SRNS-OS-2020-00459, dated December 5, 2020, USEPA approval of the FDE use of the Simple Model for 480-3D, 704-7D, 483-3D, 485-D, 482-2D, 710-16D, 484-5D, 484-9D, and 717-3D

- 8.05** V-PMP-D-00016, Rev. 1, dated November 02, 2020, “Decommissioning End Points Document Building 480-3D, Maintenance Field Office and Shop”
- 8.06** G-SDD-D-00004, dated 4/29/2021, “FAI-51, Final Acceptance Inspection of Building 480-3D”
- 8.07** V-PCOR-D-00042, Revision 0, dated 7/1/2014, “Deactivation Project Final Report 484-D Powerhouse and Ancillary Buildings”
- 8.08** V-PCOR-D-00053, Revision 0, dated 7/5/2021, “Completion of Decommissioning End Points for Building 480-3D, Maintenance Field Office and Shop”
- 8.09** G-SOW-D-00009, Revision 0, dated 4/6/2020, “Statement of Work for the Abatement of Asbestos Containing Material in D Area Buildings 480-3D, 482-2D, 484-4D, 485-D, and 704-7D”

9.0 APPENDICES

Appendix A – Photographs

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Figure 1. Building 480-3D (Looking South) Before Asbestos Abatement

Appendix A – Photographs



Figure 2. Building 480-3D (Looking South) After Asbestos Abatement

Appendix A – Photographs



Figure 3. Building 480-3D (Looking South) After Decommissioning