

Decommissioning Project Final Report Building 484-12D, D-Area Storage Building

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Printed in the United States of America

Prepared for
U.S. Department of Energy
and
Savannah River Nuclear Solutions LLC
Aiken, South Carolina

History of Revisions

Revision	Date	Revised Section	Change
0	07/18/2022	N/A	Initial Issue

LIST OF ABBREVIATIONS AND ACRONYMS

~	approximately
COVID	Coronavirus Disease
CRO	Community Reuse Organization
D&R	dismantlement and removal, dismantled and removed
DOE-SR	Department of Energy Savannah River Operations Office
EPA	(U.S.) Environmental Protection Agency
EC&ACP	Environmental Compliance & Area Completion Projects
FAI	Final Acceptance Inspection
FDE	Facility Decommissioning Evaluation
ft	foot, feet
S&M	Surveillance and Maintenance
SCDHEC	South Carolina Department of Health and Environmental Control
SRNS	Savannah River Nuclear Solutions, LLC
SRS	Savannah River Site
yd ³	cubic yard(s)

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1.0 SUMMARY

Building 484-12D, D-Area Storage Building, was a single-story, approximately (~) 32 feet (ft) by 40 ft metal frame structure located in the southeast section of 400-D Area of the Savannah River Site (SRS). Construction of the structure was completed post-1987 and it was used primarily for storage of equipment and fabrication of insulation materials for the 484-D Powerhouse. A laydown area abutted the north side of the building. It was a concrete slab enclosed by a chain link fence. The end-state condition after decommissioning of 484-12D was demolition/removal of the above grade structure down to, but not including the building's concrete slab. The above grade portion of the structure was removed by the Community Reuse Organization (CRO) to be sold as a recycled building. The remaining decommissioning activities for Building 484-12D were completed by CTI and Associates, Inc (Savannah River Nuclear Solutions, LLC's [SRNS] mentor protégé subcontractor). All appurtenances, including the laydown area's chain link fence, were dismantled and removed (D&R) to the concrete slab. Electrical power was the only utility supplied to the structure and it was disconnected during deactivation (Reference 8.06). There were no sumps or drains associated with the facility. The concrete slab was verified to be free of equipment, structure, rubble, waste, and debris. Any surrounding soil that was disturbed during decommissioning was raked and cleared of debris.

A review of the existing characterization data, process/building history, sample data and walk downs of the facility prior to demolition supported the determination that Building 484-12D met the criteria of a Clean Building, Simple Model as described in Facility Disposition Manual 1C, Procedure 501. This decision was supported by the documentation found in the Facility Decommissioning Evaluation (FDE) (Reference 8.01). No chemical, hazardous, or radioactive materials were associated with this structure. CRO was responsible for the D&R of the 484-12D building. CRO also removed construction materials and other components associated with the building from the SRS to be reused and/or sold for use by others. CTI and Associates, Inc was responsible for the D&R of remaining appurtenances and the chain link fence. Since there was no evidence of contamination on the slab before structure demolition, no final verification survey was required. Final Acceptance Inspection (FAI)-51 was performed on 1/14/2021 and no additional work or cleanup was required (Reference 8.05).

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". Interactions with regulatory agencies, South Carolina Department of Health and Environmental Control (SCDHEC) and U.S. Environmental Protection Agency (EPA), for concurrence on this report are governed by "Core Team Protocol for Review and Concurrence on Facility Decommissioning Evaluations and Decommissioning Project Final Reports" (Reference 8.07).

2.01 Facility Description

Building 484-12D was a metal frame structure with a metal skin and roof. The structure was attached to a concrete slab. The structure itself was ~32 ft by 40 ft, with a partitioned interior. The interior was partitioned into a large storage area and a smaller office/personnel area. Electrical service to Building 484-12D was disconnected during deactivation, along with the removal of all exit signs, fluorescent tubes, ballasts, combustibles, or flammable materials, etc. (Reference 8.06). The building was used primarily for storage and fabrication of insulating materials. Construction of the structure was completed post-1987. The laydown area abutted the north side of the building. It had a concrete slab and was enclosed by a 7-ft high chain link fence.

On November 4, 2019, an initial asbestos inspection was performed to determine the presence of any suspect Asbestos Containing Material in Building 484-12D. A follow-up inspection was conducted on August 20, 2020, to evaluate electrical wiring insulation and other electrical components that were inaccessible during the November 2019 inspection. No Asbestos Containing Material or Presumed Asbestos Containing Material were found in the building or its components during the inspections (Reference 8.04). See Appendix A, Figure A-1 for a photo of the building prior to D&R and Figure A-2 for a photo of the area after final decommissioning.

2.02 New Facility Information

SRS identified no new facility information during or resulting from 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). Numerous walkdowns were performed by U.S. Department of Energy representatives and all involved SRNS EC&ACP groups (i.e., Engineering, Project Management, Safety, Industrial Hygiene, Environmental Compliance Authority, etc.). A facility walkdown, including an overview, was not pre-scheduled with the SCDHEC and EPA. However, the FDE submittal letter stated that SCDHEC and EPA could contact the U.S. Department of Energy if the regulatory agencies were interested in an overview and field visit. A walkdown of the facility with SCDHEC and EPA did not occur due to COVID-19 travel restrictions. The FDE received SCDHEC concurrence on January 9, 2020, and EPA concurrence on May 18, 2020 (References 8.02 and 8.03, respectively).

4.0 DECOMMISSIONING ACTIVITIES COMPLETED

Building 484-12D was partially decommissioned by CRO in accordance with their agreement with the Department of Energy Savannah River Site Operations Office (DOE-SR). Building 484-12D was D&R down to the concrete slab by CRO. The remaining decommissioning activities for Building 484-12D were completed by CTI and Associates, Inc. All appurtenances and the laydown area's chain link fence were D&R to the concrete slab. The concrete slab was verified to be free of equipment, structure, rubble, waste, and debris. Any surrounding soil that was disturbed during

decommissioning was raked and cleared of debris. The decommissioning was confirmed complete in the FAI-51 walkdown on 1/14/2021 (Reference 8.05).

5.0 WASTE MANAGEMENT

5.01 Salvage and Reuse

Building 484-12D was removed intact by CRO for reuse or resale.

5.02 Waste Disposal

Sixty (60) cubic yards of clean structural rubble were transferred to the C&D Landfill and ~ one hundred sixty (160) cubic yards of the building's structure materials/components were recycled by CRO. ~ Ten (10) cubic yards of clean structural rubble from the 484-12D decommissioning by CTI and Associates, Inc. were transferred to Three Rivers Landfill. See Table 1 for a list of all wastes generated during decommissioning.

Table 1: Waste Generation

Waste Classification	Waste Source	Disposed to	Total Volume
LLW	N/A	N/A	N/A
ACM	N/A	N/A	N/A
PCB	N/A	N/A	N/A
CSR	Miscellaneous sanitary waste/debris	C&D Landfill by CRO	60 yd ³
CSR	Structural steel, siding, light fixtures	Recycled by CRO	~ 160 yd ³
CSR	Miscellaneous sanitary waste/debris, fencing	Three Rivers Landfill	~ 10 yd ³
Recycle Metals	N/A	N/A	N/A

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

Building 484-12D was D&R down to the concrete slab by CRO. The remaining decommissioning activities for Building 484-12D were completed by CTI and Associates, Inc. All appurtenances and the laydown area's chain link fence were D&R to the concrete slab. The concrete slab was verified to be free of equipment, structure, rubble, waste, and debris.

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 484-12D 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. The amounts of such materials were described in Section 5.02 of this report. 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 484-12D was D&R and the concrete slab has been left in place. All decommissioning activities have been completed in accordance with federal and state regulations, and CRO's agreement with DOE-SR. 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 484-12D will be added to Appendix K.2 of the Federal Facility Agreement for the SRS. However, no further evaluation during the Area Completion process will be necessary.

8.0 REFERENCES

- 8.01** G-FDE-D-00038, Revision 0, dated November 18, 2019, "Facility Decommissioning Evaluation Building 484-12D, D-Area Storage Building"
- 8.02** SRNS-OS-2020-00048, dated January 9, 2020, SCDHEC approval of the FDE use of the Simple Model for 484-12D
- 8.03** SRNS-OS-2020-00216, dated May 18, 2020, USEPA approval of the FDE use of the Simple Model for 484-12D
- 8.04** Q-APG-D-00014, Revision 1, dated August 25, 2020, "Baseline Asbestos Inspection Report of Building 484-12D"
- 8.05** G-SDD-D-00017, dated January 14, 2021, "FAI-51, "Final Acceptance Inspection of Building 484-12D"

8.06 V-PCOR-D-00042, Revision 0, dated July 1, 2014, “Deactivation Project Final Report 484-D Powerhouse and Ancillary Buildings”

8.07 SRNS-RP-2021-00120, Revision 0, dated February 2021, “Core Team Protocol for Review and Concurrence on Facility Decommissioning Evaluations and Decommissioning Project Final Reports”

9.0 APPENDICES

Appendix A – Before and After Photos of the Facility/Structure

Appendix A – Before and After Photos of the Facility/Structure



Figure A-1. Building 484-12D (Looking East) Before

Appendix A – Before and After Photos of the Facility/Structure (Continued/End)



Figure A-2. Building 484-12D (Looking East) After