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Decommissioning Project Final Report
Building 484-4D, Powerhouse Maintenance Facility

Prepared by: William B. Griffin — Digitally signed by William B. Griffin Date: 2021.06.17 09:08:11 -04'00' — Date: 6/17/21

William B. Griffin
EC&ACP Engineering
Environmental Compliance & Area Completion Projects

Prepared by: William B. Griffin — Digitally signed by William B. Griffin Date: 2021.06.17 10:55:46 -04'00' — Date: 6/17/21

John K. Blankenship
EC&ACP Engineering
Environmental Compliance & Area Completion Projects

Reviewed by: KELSEY HOLCOMB — Digitally signed by KELSEY HOLCOMB Date: 2021.06.17 11:03:44 -04'00' — Date: 6/17/21

Kelsey Holcomb
Project Team Lead
Environmental Compliance & Area Completion Projects

Reviewed by: R. Steven Shirley — Digitally signed by R. Steven Shirley Date: 2021.06.17 11:07:02 -04'00' — Date: 6/17/21

R. Steven Shirley
Manager, Area Completion Projects
Environmental Compliance & Area Completion Projects

Approved: CLARENCE WARD (Affiliate) — Digitally signed by CLARENCE WARD (Affiliate) Date: 2021.06.17 11:25:07 -04'00' — Date: 6/17/21

C. J. Ward
EC&ACP Environmental Compliance Authority Manager
Environmental Compliance & Area Completion Projects

Approved: THELESIA OLIVER (Affiliate) — Digitally signed by THELESIA OLIVER (Affiliate) Date: 2021.06.17 11:36:42 -04'00' — Date: 6/17/21

T. O. Oliver
EC&ACP Chief Engineer
Environmental Compliance & Area Completion Projects

Approved: CHRISTOPHER BERGREN (Affiliate) — Digitally signed by CHRISTOPHER BERGREN (Affiliate) Date: 2021.06.17 11:39:35 -04'00' — Date: 6/17/21

C. L. Bergren
Director, EC&ACP
Environmental Compliance & Area Completion Projects

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HISTORY OF REVISIONS

Revision	Date	Revised Section	Change
0	06/17/2021	N/A	Initial Issue

LIST OF ABBREVIATIONS AND ACRONYMS

~	approximately
ACM	Asbestos Containing Material
CSR	clean structural rubble
EPA	(U.S.) Environmental Protection Agency
EC&ACP	Environmental Compliance & Area Completion Projects
FAI	Final Acceptance Inspection
FDE	Facility Decommissioning Evaluation
ft	feet
HVAC	heating, ventilation and air conditioning
Inc.	Incorporated
LLW	Low Level Waste
N/A	not applicable
PCB	Polychlorinated biphenyl
S&M	Surveillance and Maintenance
SCDHEC	South Carolina Department of Health and Environmental Control
SRNS	Savannah River Nuclear Solutions
SRS	Savannah River Site
yd	yard(s)

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1.0 SUMMARY

Building 484-4D is in the northern section of 400-D Area of the Savannah River Site (SRS). Building 484-4D was a metal frame construction building with a metal roof, constructed on a concrete slab. The building consisted of spaces for mechanical maintenance, electrical and instrumentation maintenance, welding, miscellaneous storage, storage and distribution of tools, and personnel spaces, including office space, restrooms, locker rooms and break facilities. Construction of the facility was completed in 1981. The facility was 11,694 square feet (ft) and had climate controls, plumbing for domestic water and plumbing for sanitary sewage. Most of the sanitary sewer connections outside the restrooms were hub connections above the slab. The main shop, the welding shop and the electrical shop were not climate controlled. The remaining spaces were climate-controlled and insulated.

The lay-down yard to the west of the building structure was a partially fenced, paved area approximately (~) 137 ft by 32 ft. The fencing was a 7-ft chain link. Adjacent to the building structure were a couple of small areas that are concrete, extending from the building slab. The larger of the two areas was covered by a metal, pole supported awning. Propane cylinders were stored in this area. The two heating, ventilation and air conditioning (HVAC) units that serviced the building have been removed, leaving only duct work in the lay-down yard. The south end of the lay-down yard had a partially covered area for compressed gas cylinder storage. The compressed gas cylinder storage area contained oxygen, argon, acetylene and nitrogen cylinders, all of which were previously removed. There was a handrail installed around a portion of the compressed gas cylinder storage pad.

On the north side of the building were two small storage buildings with a covered area between them. Within the storage buildings and in the covered area were stored various consumables such as water, coveralls, cleaning supplies, raincoats, gloves, etc., all of which were previously removed. On the east side of the building was a small covered area and the ductwork from another HVAC unit that serviced the building, particularly the welding and main shops.

All fluorescent lamps, light bulbs, exit signs, HVAC units, etc. in the building were removed during deactivation (refer to "Deactivation Project Final Report Building 484-D Powerhouse and Ancillary Buildings", V-PCOR-D-00042, Reference 8.08).

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 484-4D met the criteria of a Clean Building, Simple Model as described in the Facility Disposition Manual 1C, Procedure 501, "Decommissioning of Facilities". This decision was supported by the documentation found in the Facility Decommissioning Evaluation (FDE, G-FDE-D-00037, Rev. 0, dated 11/13/2019, Reference 8.01). No hazardous, chemical or radioactive materials were associated with this structure. Since

there was no evidence of contamination on the slab before structure demolition, no final verification survey was required. Final Acceptance Inspection (FAI-51) (Reference 8.05) was performed on 3/24/2021 and was confirmed complete on 4/14/2021 after removal of a roll-off and water truck.

2.0 PURPOSE AND SCOPE

The purpose of this report is to document activities performed on the facility as a part of the decommissioning project, and the condition the facility was left 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

This facility was used for maintenance and personnel purposes. There is no history of processing of materials in the maintenance facility. Welding, grinding, milling, turning and repair of mechanical and electrical equipment and components occurred within the facility. Further, a myriad of materials necessary in the maintenance of the Powerhouse and support structures, systems and components were used in the maintenance facility, including paints, coatings, greases, lubricants, leak detection compounds, dye penetrants, cleansers and solvents. These materials were stored appropriately in flammable storage lockers or elsewhere.

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). The regulator walkdown of the facility occurred on February 27, 2020, and the FDE received final South Carolina Department of Health and Environmental Control (SCDHEC) concurrence on April 5, 2020, and final U.S. Environmental Control (EPA) concurrence on May 18, 2020 (References 8.02 and 8.03, respectively).

4.0 DECOMMISSIONING ACTIVITIES COMPLETED

Building 484-4D was decommissioned by CTI and Associates, Inc. (SRNS's mentor protégé subcontractor) in accordance with the Decommissioning End Points Document, V-PMP-D-00029, Rev. 1 (Reference 8.06), G-SOW-D-00011 (Reference 8.07), and Final Asbestos Inspection of Building 484-4D, Q-APG-D-00005, Rev. 1 (Reference 8.04). Work completion was accepted at the FAI-51 walkdown on 3/24/2021 and confirmed complete on 4/24/2021 after removal of a roll-off and water truck (Reference 8.05).

5.0 WASTE MANAGEMENT

5.01 Salvage and Reuse

Building 484-4D and all its components have been removed and properly disposed of and/or recycled.

5.02 Waste Disposal

Wastes generated with this building decommissioning are listed in the table below. Wastes not listed were removed during deactivation in 2013 (Reference 8.08, Deactivation Project Final Report, V-PCOR-D-00042).

Table 1: Waste Generation

Waste Classification	Waste Source	Disposed to	Total Volume
LLW	N/A	N/A	N/A
ACM	484-4D	Three Rivers Landfill	90 yd^3
PCB	484-4D light ballasts	Solid waste	30 (total count)
Recycle	484-4D scrap metal	741-N Salvage Yard	130 yd^3
CSR	484-4D construction debris	Three Rivers Landfill	660 yd^3

LLW – Low level radioactive waste
ACM – Asbestos-containing material
PCB – Polychlorinated biphenyl
CSR – Clean Structural Rubble
N/A – Not applicable

6.0 FINAL FACILITY CONDITION

6.01 Final Facility Condition and Remaining Hazards

484-4D was dismantled and removed down to the concrete slab. The gas cylinder shed, two small storage buildings with a covered area between them along with

the lay-down area and fence were all demolished and removed. Any remaining projections were cut off flush with the surrounding surface and resulting holes filled with grout. The slab was completely cleaned, including a few suspected oil stains that had been identified in the FDE which were cleaned with BioSolve®.

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 484-4D 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 hazardous, chemical 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 (concrete slabs) are free of physical, chemical, and radiological hazards; therefore, need no further decommissioning action. No surveillance and maintenance (S&M) activities were identified for the remaining structures (slabs) because they pose no threat to human health or the environment while awaiting area completion.

7.0 CONCLUSIONS/RECOMMENDATIONS

Building 484-4D was decommissioned (i.e., dismantled and removed) and the concrete slab was left in place, along with the concrete slab for the cylinder storage shed. All decommissioning activities have been completed in accordance with Federal and State regulations, "Decommissioning End Points Document, Building 484-4D, Powerhouse Maintenance Facility", V-PMP-D-00029, Rev. 1 dated August 24, 2020 (Reference 8.06) and Statement of Work (SOW) G-SOW-D-00011, Rev. 1, dated 10/8/2020 (Reference 8.07). The remaining structures (slabs) are free of physical, chemical, and radiological hazards; therefore, no further decommissioning actions are required. No S&M activities were identified for the remaining structures (slabs) because they pose 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 Record of Decision. To ensure facility

remnants are addressed during the area closure process, Building 484-4D should be added to Appendix K.2 of the Federal Facility Agreement for the SRS.

8.0 REFERENCES

8.01 G-FDE-D-00037, Revision 0, dated 11/13/2019, "Facility Decommissioning Evaluation Building 484-4D, Powerhouse Maintenance Facility"

8.02 SRNS-OS-2020-00158, dated April 5, 2020, SCDHEC final approval of the FDE use of the Simple Model for 484-4D

8.03 SRNS-OS-2020-00216, dated May 18, 2020, EPA final approval of the FDE use of the Simple Model for 484-4D

8.04 Q-APG-D-00005, Revision 2, dated January 28, 2021, "Baseline Asbestos Inspection Report of Building 484-4D"

8.05 Q-SDD-D-00009**,** FAI-51, "Final Acceptance Inspection of Building 484-4D" was held 3/24/2021, and certified complete on 4/14/2021.

8.06 V-PMP-D-00029, Revision 1, dated 8/24/2020, "Decommissioning End Points Document, Building 484-4D, Powerhouse Maintenance Facility".

8.07 G-SOW-D-00011, Revision 2, dated 10/8/2020, "Decommissioning of Buildings 484-1D, 484-2D and 484-4D"

8.08 V-PCOR-D-00042, Revision 0, dated 7/1/2014, "Deactivation Project Final Report 484-D Powerhouse and Ancillary Buildings"

9.0 APPENDICES

Appendix A – Photographs

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Appendix A – Photographs

Figure 1: Building 484-4D Before

Appendix A – Photographs

Figure 2: 484-4D After