

## Decommissioning Project Final Report 233-22H, Administration Building

Prepared by:	Ira Alexander Davis <small>Digitally signed by Ira A Davis Date: 2023.09.27 16:30:49 -04'00'</small>	Date: <u>9/27/23</u>
	Ira A. Davis EC&ACP Engineering Environmental Compliance & Area Completion Projects	
Reviewed by:	Heather Dunbar <small>Digitally signed by Heather Dunbar Date: 2023.09.27 16:35:43 -04'00'</small>	Date: <u>9/27/23</u>
	Heather Dunbar EC&ACP Engineering Environmental Compliance & Area Completion Projects	
Approved by:	ELIZABETH CONNELL (Affiliate) <small>Digitally signed by ELIZABETH CONNELL (Affiliate) Date: 2023.09.28 09:19:00 -04'00'</small>	Date: <u>9/28/23</u>
	Elizabeth Connell Manager, Environmental Compliance & Waste Management NNSA Capital Projects	
Approved by:	JUSTIN FULLER (Affiliate) <small>Digitally signed by JUSTIN FULLER (Affiliate) Date: 2023.09.28 09:23:35 -04'00'</small>	Date: <u>9/28/23</u>
	Justin Fuller Construction Manager, Tritium Finishing Facility Savannah River Tritium Enterprise	
Approved by:	WILLIAM POOL (Affiliate) <small>Digitally signed by WILLIAM POOL (Affiliate) Date: 2023.09.28 10:27:05 -04'00'</small>	Date: <u>9/28/23</u>
	Brian Pool Manager, Tritium Finishing Facility Engineering NNSA Capital Projects Engineering	
Approved by:	THELESIA OLIVER (Affiliate) <small>Digitally signed by THELESIA OLIVER (Affiliate) Date: 2023.09.28 15:12:45 -04'00'</small>	Date: <u>9/28/23</u>
	T. O. Oliver EC&ACP Chief Engineer Environmental Compliance & Area Completion Projects	
Approved by:	CHRISTOPHER BERGREN (Affiliate) <small>Digitally signed by CHRISTOPHER BERGREN (Affiliate) Date: 2023.09.28 15:26:25 -04'00'</small>	Date: <u>9/28/23</u>
	C. L. Bergren Director, EC&ACP Environmental Compliance & Area Completion Projects	

Savannah River Site  
Aiken, South Carolina 29808



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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**

<b>Revision</b>	<b>Date</b>	<b>Revised Section</b>	<b>Change</b>
0	9/27/23	N/A	Initial Issue

**LIST OF ABBREVIATIONS AND ACRONYMS**

ACM	Asbestos Containing Material
DOE-SR	U.S. Department of Energy Savannah River Site Operations
EPA	U.S. Environmental Protection Agency
EC&ACP	Environmental Compliance & Area Completion Projects
FAI	Final Acceptance Inspection
FDE	Facility Decommissioning Evaluation
ft.	foot, feet
ft <sup>2</sup>	square foot, square feet
ft <sup>3</sup>	cubic foot, cubic feet
in.	inch, inches
NNSA	National Nuclear Security Administration
PACM	Presumed Asbestos Containing Material
S&M	Surveillance and Maintenance
SCDHEC	South Carolina Department of Health and Environmental Control
SRNS	Savannah River Nuclear Solutions, LLC
SRS	Savannah River Site
SRTE	Savannah River Tritium Enterprise

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## **1.0 SUMMARY**

The 233-22H Administration Building was located near the northwest corner of the Savannah River Tritium Enterprise (SRTE) area of the Savannah River Site's (SRS) H-Area. Constructed in 1989, the building formerly housed Operations, Engineering, and Construction personnel offices and storage and fabrication areas in support of SRTE activities.

A review of the existing characterization data, process/building histories, sample data, and walkdowns of the building conducted prior to decommissioning supported the determination that the 233-22H Administration Building 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 information reported in the Facility Decommissioning Evaluation (FDE) (Reference 8.01). Decommissioning activities were completed by CTI and Associates, Inc. (Savannah River Nuclear Solutions, LLC's [SRNS] mentor-protégé subcontractor). Since there was no evidence of contamination on the slab either before or after structure demolition, no final verification survey was required. Final Acceptance Inspection (FAI)-51 was performed on September 13, 2023, and no additional work or cleanup was required.

The proposed decommissioning end-state for this building was demolition to, but not including the building slab. The above-ground portion of the structure was demolished to the top of the floor slab elevation and removed. All interfacing utilities were, and remain, isolated, disconnected, and plugged. All coarse debris was removed from the remaining slab. All concrete slab penetrations greater than 2 inches (in.) in diameter were cut off flush with the slab and plugged and grouted in accordance with "Site D&D Policy on Decommissioning End Points for Slabs, Pits, Basements, and Basins" (Reference 8.02). Slab protrusions were cut off flush with the slab. Stains identified on the concrete slab during decommissioning were pressure washed and/or cleaned as much as reasonably achievable with an effective surfactant. Some staining does remain from the carpeting adhesive.

## **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 8.03).

## **2.01 Facility Description**

The 233-22H Administration Building had a 6,156 square foot (ft<sup>2</sup>) footprint with a concrete foundation/floor slab, structural steel frame and painted, corrugated, metal panel exterior walls and roof. The building was originally used for Construction offices, warehousing for materials of construction, and contained a small shop area for fabrication of insulation fittings. In later years, the functional use of the building changed to a support facility, providing offices for a variety of organizations, including SRTE Operations, Engineering, and Construction personnel, in addition to a small Construction Insulation Fitting Fabrication and Storage Area and Construction Carpenter Storage Area. During this conversion, the two (2) large warehouse-type doors were removed, and the opening enclosed with sheet metal. The interior was further divided into additional office and classroom space. The concrete floor was covered in carpet in all areas except for a small telephone equipment room located in the northwest corner of the facility, which had vinyl tile installed. All the carpeting was found to be adhered with a rubber-based adhesive known not to contain asbestos. The 11 foot (ft.) high interior walls were erected with a nail-able steel stud system and covered with gypsum board. The ceiling was lowered and finished with a suspended grid and drop-in cellulose type tiles. A total of six (6) heating, ventilation, and air conditioning units were installed, three (3) along each long side of the facility. Exterior ductwork for five (5) of the six (6) units was insulated with polyisocyanurate insulation under an aluminum jacket. The sixth, which had been replaced, was covered with fiberglass Thermal System Insulation.

A baseline asbestos inspection for 233-22H Administration Building was performed on June 20, 2022, and issued on August 4, 2022 (Reference 8.04). The inspection identified no Asbestos Containing Materials (ACM). See Appendix A for photos of the facilities/structures before and after 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 facilities were decommissioned using the Simple Model as described in Facility Disposition Manual 1C. The selection of the model was based on information reported in the FDE (Reference 8.01). Multiple walkdowns were performed by SRTE and SRNS Environmental Compliance & Area Completion Projects groups (i.e., Engineering, Project Management, Safety, Industrial Hygiene, Environmental Compliance Authority, etc.). A facility walkdown, including an overview, was not pre-scheduled with SCDHEC and EPA. However, the FDE submittal letter stated that SCDHEC and EPA could contact U.S. Department of Energy Savannah River Site Operations (DOE-SR) if the regulatory agencies were interested in an overview and field visit. Of the three core team members, only DOE-SR participated in a walkdown of the facility. The FDE received SCDHEC concurrence on August 19, 2022, and EPA concurrence on August 29, 2022 (References 8.05 and 8.06, respectively).

#### 4.0 DECOMMISSIONING ACTIVITIES COMPLETED

233-22H Administration Building was demolished to, but not including the concrete slab. The above-ground portion of the structure was demolished to the top of the floor slab elevation and removed. Stains identified on the concrete slab were pressure washed and/or cleaned as much as reasonably achievable with an effective surfactant (e.g., BioSolve™) as part of the decommissioning activities for this facility. Some staining does remain from the carpeting adhesive. All interfacing utilities were isolated, disconnected, and plugged. All concrete slab penetrations greater than 2 in. in diameter were cut off flush with the slab, plugged, and grouted in accordance with “Site D&D Policy on Decommissioning End Points for Slabs, Pits, Basements, and Basins” (Reference 8.02). Slab protrusions were cut off flush with the slab.

#### 5.0 WASTE MANAGEMENT

##### 5.01 Salvage and Reuse

Seven thousand five hundred (7500) cubic feet (ft<sup>3</sup>) of scrap metal from the 233-22H decommissioning was transferred to the 632-G C&D Debris Landfill for recycling.

##### 5.02 Waste Disposal

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	Tritiated Exit Signage	SRTE GCO	2 ft <sup>3</sup>
ACM	N/A	N/A	N/A
PACM	Electrical Component	Three Rivers Landfill	3 ft <sup>3</sup>
Special Waste	Non-PCB Ballast	Three Rivers Landfill	50 ft <sup>3</sup>
PCB	N/A	N/A	N/A
CSR	Miscellaneous sanitary waste/debris	632-G C&D Debris Landfill	14773 ft <sup>3</sup>
Recycle Metals	Underpins, door frames, siding, roofing, duct work	632-G C&D Debris Landfill	7500 ft <sup>3</sup>

LLW – Low level radioactive waste  
 N/A – Not applicable  
 ACM – Asbestos Containing Material  
 GCO – Generator Certification Official

PCB – Polychlorinated biphenyl  
 CSR – Clean Structural Rubble  
 C&D – Construction and Demolition  
 PACM – Presumed Asbestos Containing Material

## **6.0 FINAL FACILITY CONDITION**

### **6.01 Final Facility Condition and Remaining Hazards**

Decommissioning activities were completed by CTI and Associates, Inc. Any remaining holes were filled to the top of elevation with grout. All interfacing utilities were isolated, disconnected, and plugged. All coarse debris was removed from the remaining slab. All concrete slab penetrations greater than 2 in. in diameter were cut off flush with the slab, plugged, and grouted in accordance with Reference 8.02. Slab protrusions were cut off flush with the slab. Any stains identified on the concrete slab during decommissioning were pressure washed and/or cleaned as much as reasonably achievable with an effective surfactant. Some staining does remain from the carpeting adhesive.

### **6.02 Risk Assessment Summary**

A review of the existing characterization data, process/building history, and sample data, along with walkdowns of the facilities conducted prior to decommissioning supported the determination that the 233-22H Administration Building 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 information reported in the FDE (Reference 8.01). Since there was no evidence of contamination on the slab either before or after structure demolition, no final verification survey was required, and no human health risk screening or assessment was performed.

### **6.03 Post Decommissioning Requirements**

The remaining concrete slab 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 slab because it poses no threat to human health or the environment while awaiting area completion.

## **7.0 CONCLUSIONS/RECOMMENDATIONS**

The 233-22H Administration Building has been demolished and the remaining concrete slab has been left in place. All decommissioning activities have been completed in accordance with federal and state regulations. The remaining slab is free of physical, chemical, and radiological hazards; therefore, it needs no further decommissioning action or evaluation. No S&M activities were identified for the remaining slab because it poses no threat to human health or the environment.

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 H-Area Completion, Record of Decision. To ensure facility remnants are addressed during the completion process, 233-22H Administration Building 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-H-00006, Rev. 0, dated August 25, 2020, “Facility Decommissioning Evaluation Building 233-22H, Administration Building”
- 8.02** SDD-2005-00170, Rev. 2, dated October 22, 2020, “Environmental Compliance and Area Completion Projects (EC&ACP) Deactivation & Decommissioning (D&D) Policy on Decommissioning End Points for Slabs, Pits, Basements, and Basins”
- 8.03** SRNS-RP-2021-00120, Rev. 1, dated August 2022, “Core Team Protocol for Review and Concurrence on Facility Decommissioning Evaluations and Decommissioning Project Final Reports”
- 8.04** Q-APG-H-00408, Rev. 0, dated August 4, 2022, “Environmental Compliance & Area Completion Projects Baseline Asbestos Inspection Report of Building 233-22H”
- 8.05** SRNS-OS-2022-00258, Rev. 0, dated August 19, 2022, “SCDHEC Approval of the Facility Decommissioning Evaluation (FDE): Building 233-22H, Administration Building (G-FDE-H-00006, Revision 0, August 25, 2020), Cover Letter Dated July 11, 2022
- 8.06** SRNS-OS-2022-00269, Rev. 0, dated August 29, 2022, “EPA Approval of the Facility Decommissioning Evaluation Building 233-22H, Admin Building [G-FDE-H-00006], R0, Simple Model Savannah River Site, Aiken, South Carolina”

## **9.0 APPENDICES**

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

**Appendix A - Before and After Photos of the Facility/Structure**



**Figure 1: 233-22H Looking West-Northwest (Before)**



**Figure 2: 233-22H Looking West-Northwest (After)**

**Appendix A - Before and After Photos of the Facility/Structure (Continued)**



**Figure 3: 233-22H Looking West-Southwest (Before)**



**Figure 4: 233-22H Looking West-Southwest (After)**

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



**Figure 5: 233-22H Looking East (Before)**



**Figure 6: 233-22H Looking East (After)**