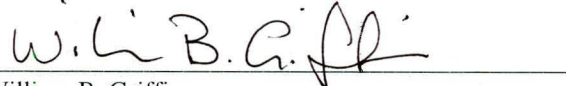




## Facility Decommissioning Evaluation Building 483-3D, Electrical Control Building

This is a Simple Model Decommissioning per Facility Disposition Manual 1C

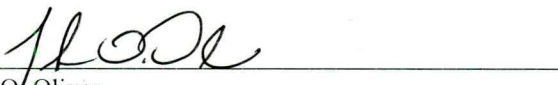
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Printed in the United States of America  
Prepared for  
U. S. Department of Energy  
and  
Savannah River Nuclear Solutions LLC  
Aiken, South Carolina

## Introduction

This document contains an evaluation of available existing information about a facility that is slated for decommissioning. This evaluation screens the project to determine whether it is appropriate to conduct the decommissioning under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or to use a simpler graded approach.

This Facility Decommissioning Evaluation (FDE) consists of three sections. Part 1 contains a description of the project scope, including a brief summary of the purpose and history of the facility and photographs of the structures that are part of the project. Part 2 encompasses a series of questions, the answers to which determine the decommissioning model (CERCLA Model, Integrated Sampling Model, or Simple Model) that will be used. The three graded approach models are described in Facility Disposition Manual 1C, Procedure 501. Part 2 also includes a justification for the answers to each question. Part 3 is a list of references that were used for the evaluation.

## Conclusion

A review of the existing characterization data, process/building history, sample data and walk downs of the facility, supports the determination that this building and its ancillary structures meet the criteria of a Clean Building, Simple Model as described in Facility Disposition Manual 1C, Procedure 501. This decision is supported by the documentation found throughout the body of this document. No chemical or hazardous radioactive contaminants are associated with this structure.

## Part 1. Project Scope

### Scope

This Evaluation has been prepared in accordance with requirements found in Facility Disposition Manual 1C, Procedure 502, "Preparing Decommissioning Decision Documents." The scope of this evaluation includes the following buildings and ancillary structures, which are further described in the next section:

Building 483-3D and the following ancillary structures:

Exterior North Cable Trench  
Pipe and Conduit Bridge

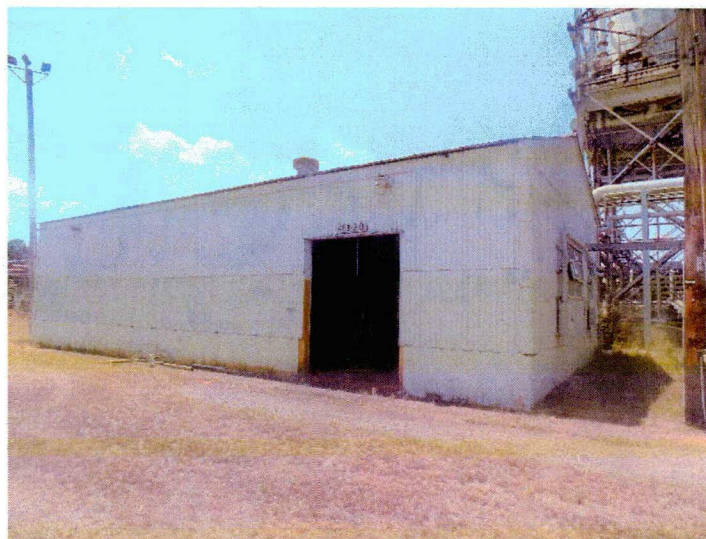
The proposed decommissioning end-state for this facility is demolition to the building slab, with the exception of the North Cable Trench ancillary structure.

The proposed decommissioning end state for the North Cable Trench is In Situ Disposal. The structure is essentially concrete and predominantly below grade. Demolition is therefore impractical, and consequently, a portion of the structure will remain intact after decommissioning. Below grade equipment and components will be removed during decommissioning. Remaining below grade structure will be filled to grade with CLSM or a flowable, self-leveling grout mix.

The described decommissioning activities are not the final area closure actions. The decommissioning of a building is intended to reduce landlord costs, increase safety by removing excess facilities and reduce the potential for releases of hazardous substances to the environment.

### Facility Description

Building 483-3D (Figure 1), Electrical Control Building, is at the southeast corner of the boiler and process water treatment facilities' Softener Building, 483-D, of D-Area in the Savannah River Site (SRS) (Figure 2). Note that Figure 2 shows the boundaries of the scope of this decommissioning in red dash outline. Construction of the building was completed and operations began circa 1952. The building is steel frame construction sitting on a concrete slab. The siding and roof are corrugated asbestos. The dimensions of the structure are 32.5' by 62.5' by 14' high (Figure 3). There is a 8.5' wide roll-up door on the south wall of the structure and a standard swinging door on the north wall of the structure. The building had electrical power supplied at 13.8 kilovolts (kV), which has been cut off and isolated. A Public Address system was present inside the structure. Heat to the structure used to be provided by overhead electric heaters inside the structure.



**Figure 1. Building 483-3D, D-Area Electrical Control Building**

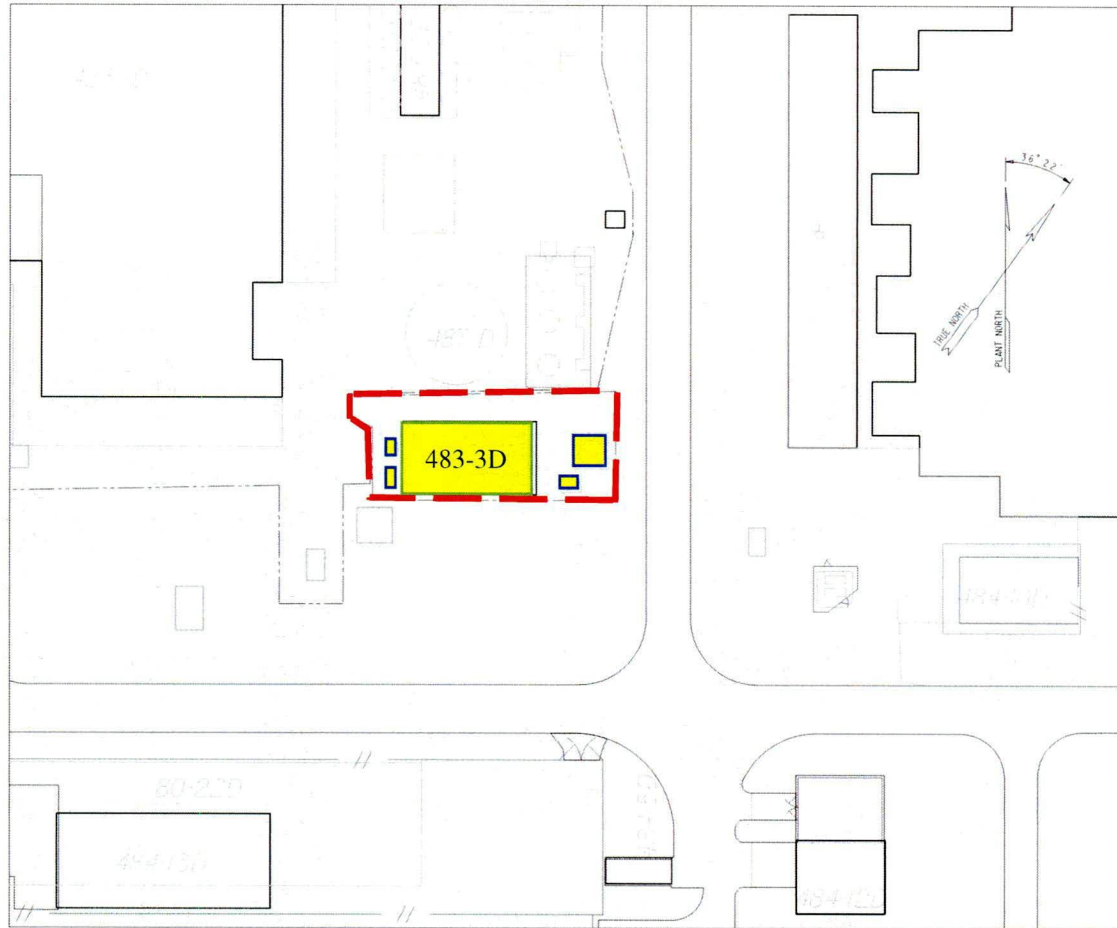


Figure 2. Building 483-3D, D-Area Electrical Control Building (FDE boundary in red)

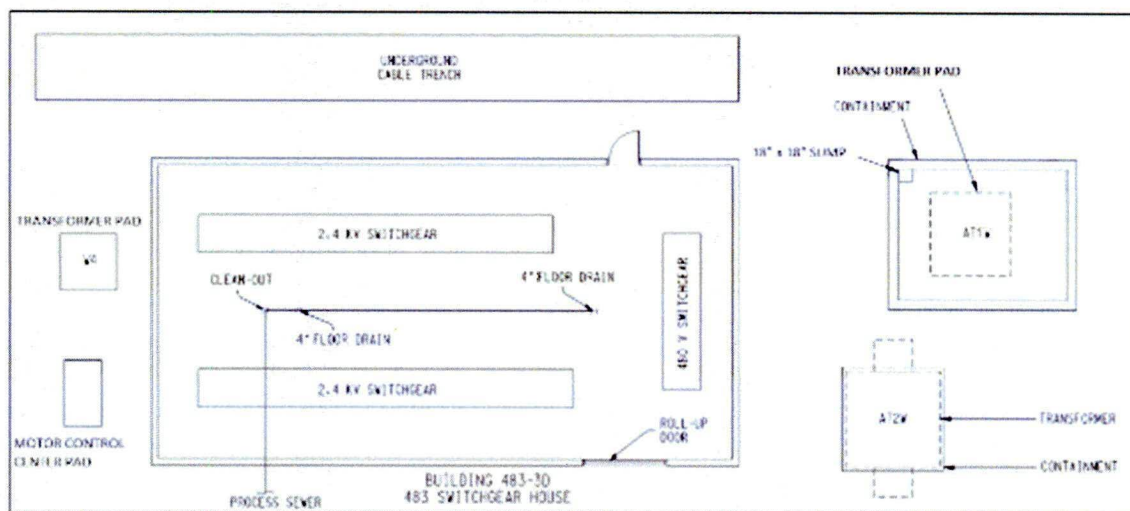
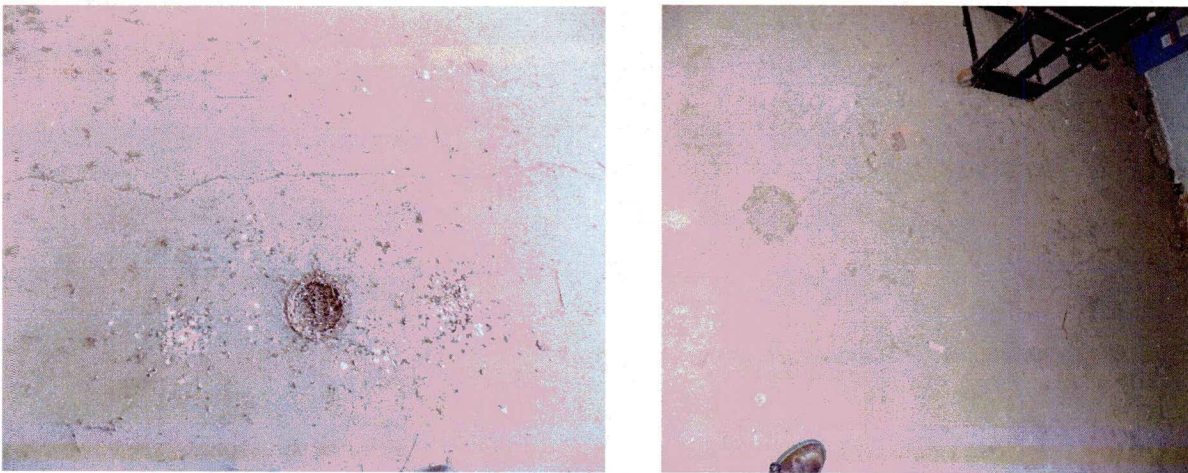


Figure 3. Building 483-3D, D-Area Electrical Control Building Original Layout  
(The only equipment left to be removed is AT2W, outside the scope of this FDE)

Within the building there were three switchgear banks, all previously removed. Two switchgear banks were 2.4kV and the other was 480V. The 2.4kV switchgear banks were aligned east to west, opposite each other on the north and south sides of the structure. The 480V switchgear bank was aligned north-south on the east side of the structure. On each end of the 480V switchgear bank was an integral 2.4kV to 480V transformer. The northeast (AT1W) transformer pad has an empty cable tray that goes overhead to the west and enters Building 483-3D. Note that the scope of this decommissioning ends at the end of the north cable trench concrete slab. This is also the boundary for the conduit bridge that is mounted above the cable trench.

Inside the building are two floor drains and a cleanout. All are in line with the center of the building slab running east-west. The drains go to the area process sewer. It is noted that the building's concrete slab has cracks through the center of it. A crack in the slab passes within approximately 18" of the cleanout and another crack passes through the locations of both floor drains. However, the concrete cracks do not affect the structural integrity of the floor drain piping.



**Figure 4. Floor Cracks In Proximity To Clean out And Drains**

On the east side of the structure is one transformer, AT2W (southeast) (Figure 5), still remaining to be removed as a maintenance action outside the decommissioning scope of this FDE. On the west side of AT1W transformer pad and containment dike is a 12" thick, 16' wide, 6' high concrete wall. The former location of transformer AT1W (Figure 6) has a 16' by 20' gravel-filled containment with an 18" x 18" x 12" deep sump in the northwest corner, while transformer AT2W is mounted on a concrete pad in an 8' by 10' gravel-filled containment. Each transformer was designed to step down 13.8 kV to 2.4 kV.



**Figure 5. Transformer AT2W (Drained & Disconnected)**



**Figure 6. Transformer AT1W Transformer Pad Location with Containment Dike**

To the north of Building 483-3D is a cable trench (Figure 7). The cable trench used to contain many of the electrical cables leaving Building 483-3D to area loads. The cable trench is approximately 75' long by 6'11" wide and approximately 8' deep. There were six (6) vertically stacked cable trays running along the south wall of the trench. The cable trench is concrete and has three (3) hinged access plates. Mounted on and above the cable tray is a pipe and conduit bridge of steel construction.

To the west of the building was the transformer W4. Transformer W4 was a 2.4kV to 480V step-down transformer which sat on a 4' x 4'4" concrete pad (Shown in Figure 8).

Figure 9 shows the location of the old spill control motor control center, which provided power to the spill control pump pit for the 484-D Powerhouse. The spill control pump pit is not applicable to this scope.

Various other electrical distribution equipment was interior to the structure, including lighting transformers, lighting and power panels, disconnects, junction boxes and conduit. Further, there was conduit exterior to the structure going to the transformers and conduit runs and bridges to the facility.



**Figure 7. Building 483-3D Cable Trench**



**Figure 8. Old Location of Transformer W4**



**Figure 9. Old Location of Spill Control Motor Control Center**

### Process History

Building 483-3D has served its intended purpose as a switchgear building since it was built in 1951. There is no process associated with the building. Review of records, walkdowns and interviews indicate that no chemical or radioactive processes were performed in this building (i.e., no chemical, mechanical or electrical energy or interaction was performed to change the state of the input material or to produce a new output product).

According to the spill files maintained by SRS, no spill history exists for Building 483-3D or the transformers associated with the structure.

The decommissioning effort for 483-3D can be performed under a Simple Model decommissioning, according to Part 2 Evaluation

### Chemical Process

<i>Chemical Name</i>	<i>Process location</i>	<i>Evidence of spills?</i>
N/A	N/A	N/A

### Radioactive Process

<i>Isotope</i>	<i>Contaminated areas/others</i>
N/A	N/A

### Summary of Existing Characterization

Characterization has been accomplished using a combination of process knowledge/historical release information, verification walk downs and sampling as appropriate.

An important part of the characterization portion of this evaluation is a historical review of spills/releases to the environment. This review includes a review of the Occurrence Reporting and Processing System/ Site Item Reportability and Issue Management (ORPS/SIRIM) database conducted from the effective date of the FFA, August 16, 1993 to present and a review of the FFA. The FFA serves as a review of releases/spills to the environment prior to August 16, 1993. Review of the ORPS/SIRIM database did not present any evidence of spills having occurred in the area applicable to this evaluation since January 1993 and the FFA review has provided that no spills have occurred prior to January 1993.

The transformers AT1W and W4 have been removed. There are no remaining transformers except for AT2W, which is an item of equipment still to be removed outside the decommissioning scope of this FDE. Holes in the slab (e.g., beneath the lighting panel) will be plugged and grouted.

An asbestos survey of the building was conducted on November 25, 2019 and several areas tested positive for asbestos containing materials (ACM). The results of that survey are included in Q-APG-D-00020, Baseline Asbestos Inspection Report of Building 483-3D, Reference 7. In accordance with 40 CFR part 61.145, a ten-day notification will be filed with the South Carolina Department of Health and Environmental Control (SCDHEC) prior to demolition and all ACM removal will be performed by asbestos trained personnel with proper permitting and waste disposal procedures.

Wastes generated during decommissioning will be characterized and managed in accordance with SRS procedures and State and Federal regulations.

### **Historical Significance**

A review has been conducted in accordance with a Programmatic Agreement. This review resulted in the publication of a Cultural Resources Management Plan (Reference 4) in which the facilities with historical significance are listed. Building 483-3D is listed as having historical significance in that reference. Mitigating actions will have to be completed as identified in that reference. These actions, along with proper notification to the South Carolina Historical Preservation Office, will be completed prior to initiation of work that significantly alters the physical appearance of the building.

## Part 2. Evaluation

Clean Facilities				
	Question	Yes	No	Justification
1.	Has the facility ever contained or processed radioactive or hazardous material other than stored packaged material or materials of construction? <i>If yes, go to question 4.</i>		X	Building 483-3D is an electrical switchgear building. The building has never contained or processed radioactive or hazardous materials.
2.	If there was stored packaged material, has there ever been a spill? <i>If No or N/A, this is a Simple Model. Stop.</i>		X	There is no evidence of spills within the 483-3D facility. <b>This is a Simple Model Decommissioning.</b>
3.	Was spill confined inside structure and cleaned to free release standard per Radiological Control Manual 5Q (for radiological) or continued occupancy per Industrial Hygiene Manual 4Q (for hazardous)? <i>If Yes, this is a Simple Model. Stop.</i>			N/A
Contaminated Facilities				
	Question	Yes	No	Justification
4.	Is the facility listed as a RCRA/CERCLA Unit in Appendix C of the SRS FFA? <i>If Yes, this is a CERCLA Model. Stop.</i>			N/A
5.	Is the facility listed as a Site Evaluation Area in Appendix G of the SRS FFA? <i>If Yes, this is a CERCLA Model. Stop.</i>			N/A
6.	Is there evidence that there has been a release of hazardous or radioactive materials outside the structure? <i>If Yes, this is a CERCLA Model. Stop.</i>			N/A
7.	Is there a substantial threat of a release of hazardous or radioactive materials outside the structure? <i>If Yes, this is a CERCLA Model. Stop.</i>			N/A
8.	Has the facility been assigned a hazard category as defined in Facility Safety Document Manual 11Q? <i>If No, stop and refer facility for evaluation to assign a hazard category, then proceed</i>			N/A

<b>Contaminated Facilities (cont'd)</b>				
	<b>Question</b>	<b>Yes</b>	<b>No</b>	<b>Justification</b>
9.	Is the hazard category Nuclear (HC- 2 or 3), radiological, or high hazard chemical? <i>If Yes, this is a CERCLA Model. Stop</i>			N/A
10.	Has the Department of Energy-Savannah River directed that the decommissioning be performed using the CERCLA Model? <i>If yes, this is a CERCLA Model. Stop</i>			N/A
12.	Is the facility a formerly nuclear, radiological, or high-hazard chemical facility? <i>If Yes, this is an Integrated Sampling Model. Stop.</i>			N/A
13.	Has Environmental Compliance and Area Completion Project's Regulatory Support Group determined that a final survey is not required for this facility? <i>If Yes, this is a Simple Model. If No, this is an Integrated Sampling Model. Stop</i>			N/A

N/A – not applicable

## Part 3. Review of Existing Records

The following facility records were reviewed as a part of this evaluation:

Ref #	Document No.	Revision/Date	Title
1	SRNS-RF-2008-00086-000-M&O	Revision 19-01-MO Feb.14, 2019	Standard Requirements Identification System FA00 Facility List.
2	WSRC-OS-94-42	Rev 0, Aug. 16, 1993 All updates through Sept. 21, 2018, including Rev. 0 Appendices C, G and K for Fiscal Year 2019	FFA for the SRS, Administrative Document No. 89-05-FF
3	N/A	N/A / Since 1993	D-Area SIRIM and ORPS reports 08/1993 to 05/2009.
4	N/A	Final January 26, 2005	Savannah River Site's Cold War Built Environment Cultural Resources Management Plan
5	S-EHS-D-00001, Rev 0	April, 2006	D-Area Hazards Survey
6	WSRC-RP-2007-4079	Rev 1.1, April 2009	RCRA Facility Investigation/Remedial Investigation (RFI/RI) Work Plan and RFI/RI Report with Baseline Risk Assessment for the D- Area Operable Unit (U)
7	Q-APG-D-00020	Rev. 0/November 25, 2019	Baseline Asbestos Inspection Report of Building 483-3D