Facility Decommissioning Evaluation
Building 484-9D, D-Area Valve House

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

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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 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 buildings and ancillary structures, which are further described in the next section:

Building 484-9D Valve House and the following ancillary structures:

- The pipe and associated pipe supports/bridge from the west wall of 484-9D, near the north corner, westward then southward to the Coal Handling Crusher House
- Fire hydrant, fire hose box supports, and bollards east of Building 484-9D

The proposed decommissioning end-state for Building 484-9D is demolition to the building slab. The proposed decommissioning end-state for the pipe bridge is demolition to the bridge foundations. The proposed decommissioning end-state for the fire hydrant is removal to grade; for the hose box removal of support posts to or below grade; and for bollards removal to or below grade.

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 substance to the environment.

Facility Description

Building 484-9D (Figure 1), D-Area Valve House, is located on the Savannah River Site (SRS) in South Carolina in the southeast portion of 400-D Area, near the northeast corner of the D-Area coal yard. Figure 2 shows an aerial view of the facility and ancillary structures. Figure 3 shows the end of the pipe bridge at the Coal Handling Crusher House.

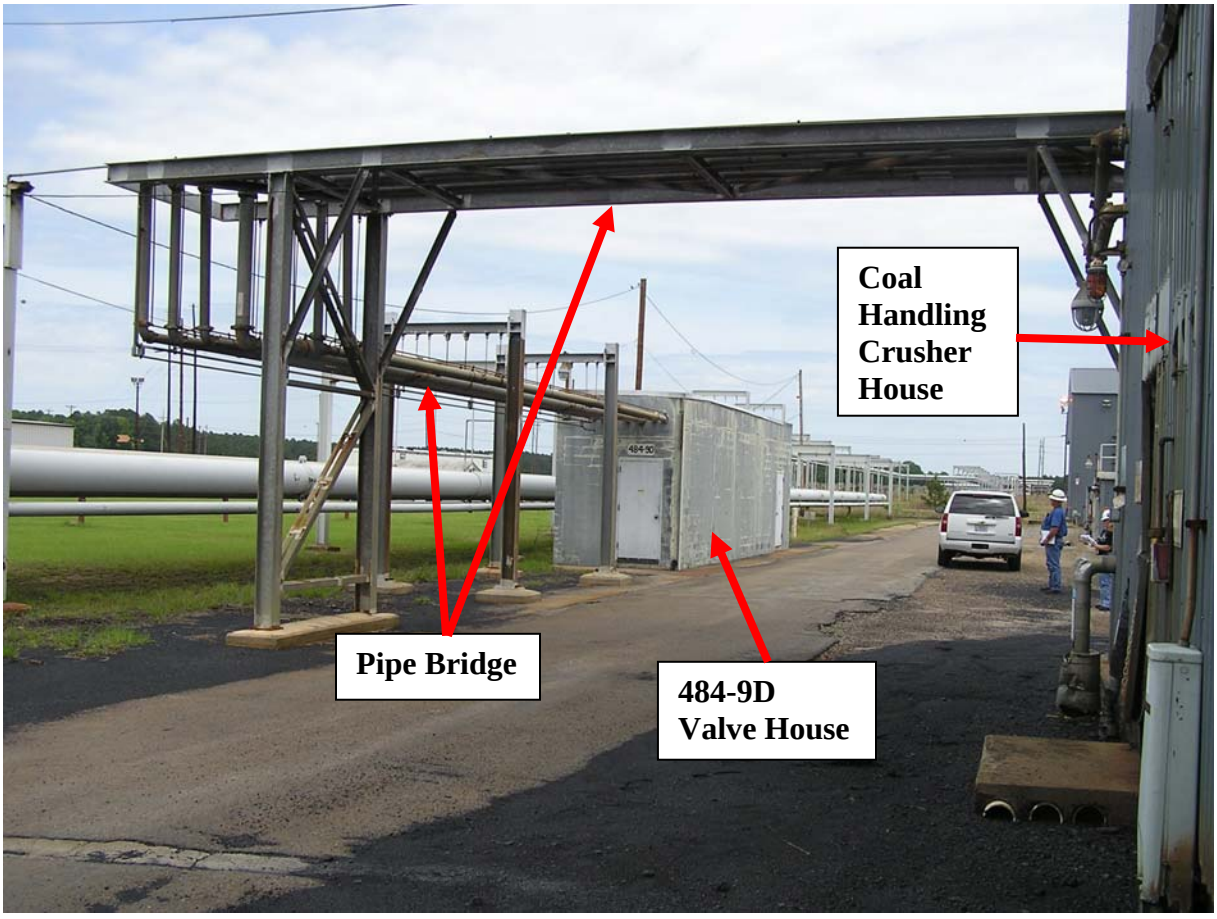

Figure 1. 484-9D, D-Area Valve House (Looking East)

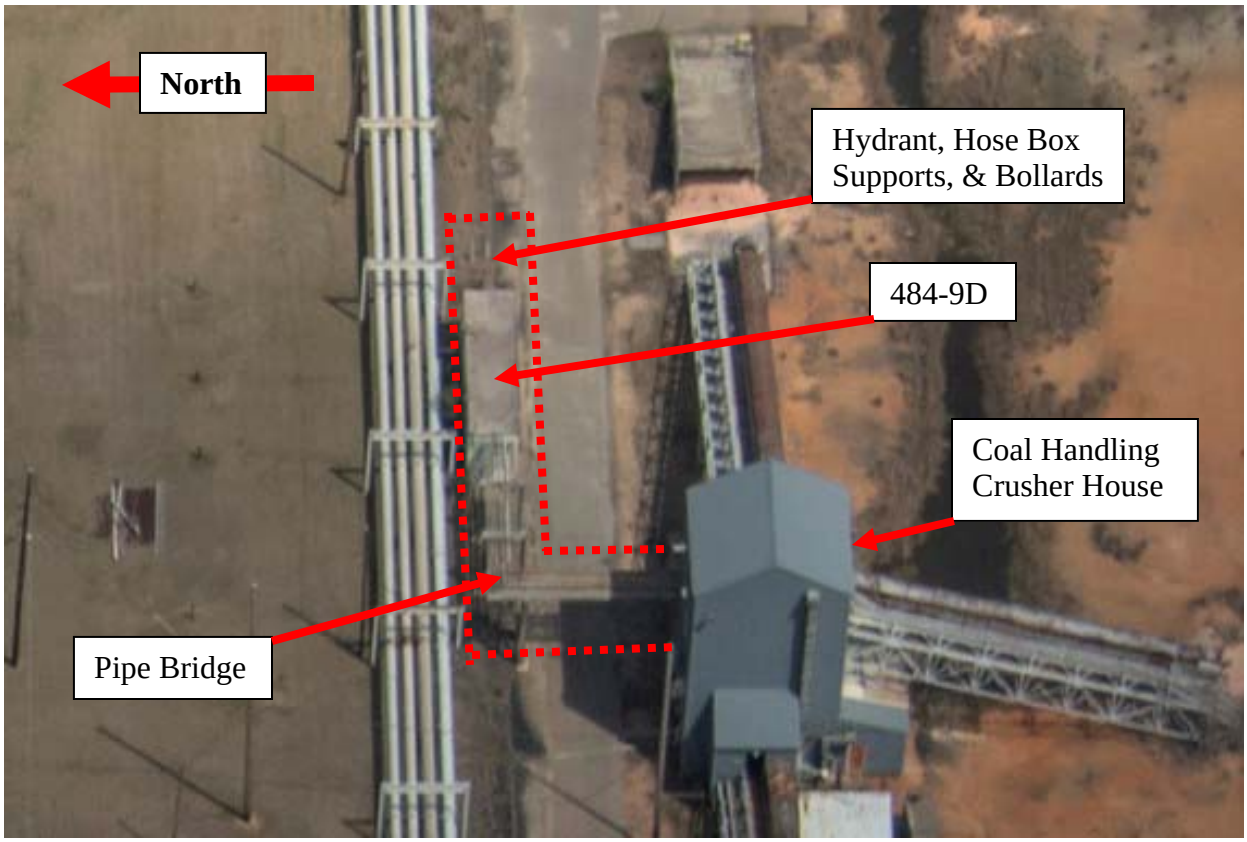

Figure 2. Aerial View of 484-9D and Ancillary Structures (Looking East)

Figure 3. Pipe Bridge at the Coal Handling Crusher House (Looking Upward and South)

Building 484-9D is a masonry block building sitting on a concrete slab. The roof of the building is poured concrete. The building is approximately 392 ft^2 (42' by 9' 4" and 12' high). The building interior is split into two sections. The larger section, the valve room, is 32' by 8' (interior dimensions). The smaller section, the fire alarm panel and control room, is 8' by 8' (interior dimensions). See Figure 4.

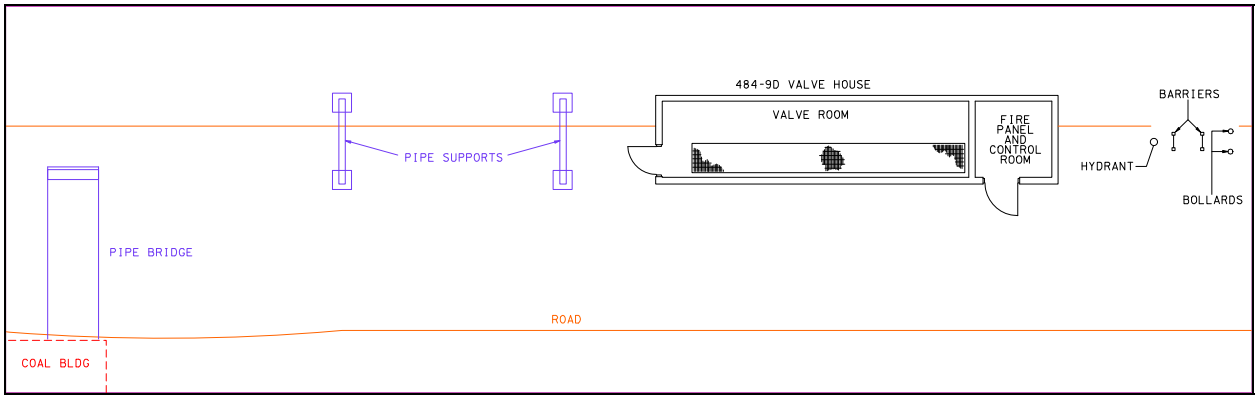

Figure 4. Building 484-9D, D-Area Valve House and Ancillary Facilities Layout

Figure 5 shows the position of 484-9D with respect to surrounding structures in 400-D Area. The structure was constructed circa 1988.

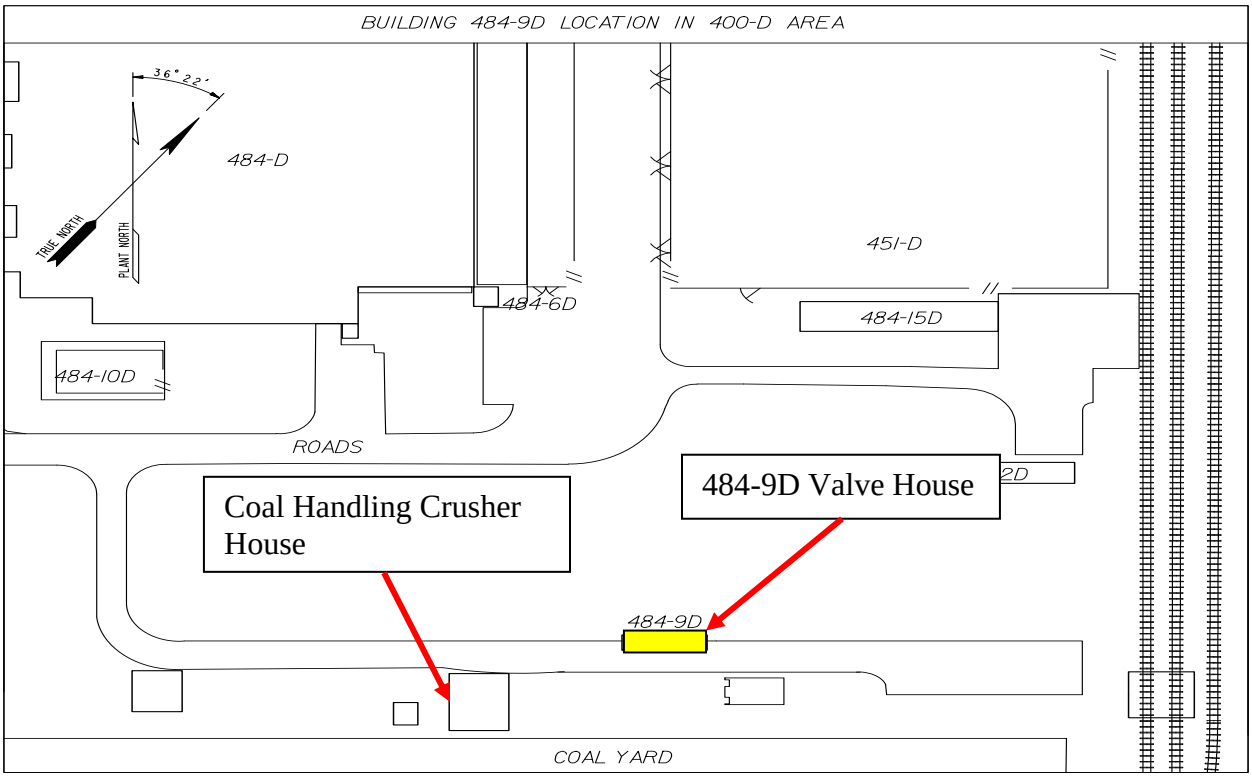

Figure 5. Building 484-9D, D-Area Valve House

The valve room (Figures 4 & 6) has a catwalk running along the south wall. Along the north wall are the fire water deluge pipes and valves, pressure switches, instrument air system lines and steam lines. The fire water lines, cat walk, pipe hangers, and personnel shield for the steam piping and radiators are galvanized steel. The steam lines are carbon steel and are partially insulated. The air lines are carbon steel. The 6" fire water control valves were air actuated with electrical position indicators. There is a wall mounted space heater (electric), which has been electrically isolated, above the entrance to the valve room. Lighting in the valve room was provided by eight (8) wall-mounted incandescent lights, which have been electrically isolated.

Figure 6. 484-9D Valve Room (Looking East)

The fire panel and control room (Figures 4 & 7) contains the Panalarm® fire control panels, pull stations, system annunciator panels, battery backups, switches and relays, and other fire control devices necessary for the system, all of which are now isolated, but not "air-gapped" to render the facility "cold and dark." A single ceiling-mounted incandescent light in the control room, which has also been electrically isolated, provided lighting in the alarm panel and control room.There is a leak in the ceiling of the fire panel and control room.

Figure 7. Fire Panel and Control Room (Looking Northeast)

There was no PA system, no floor drains, no sump(s) and no domestic water to the structure. All electrical to the facility, now isolated but not "air-gapped" to render the facility "cold and dark", was provided to the building via a junction box on the west side of the structure. The roof of the structure drains through the gravel stop along the north wall at two scuppers with downspouts to concrete splash blocks at grade, each located 10'6" inboard of the ends of the building.

All services (i.e., fire water, steam, instrument air, and electrical) have been isolated but not "air-gapped" to render the facility "cold and dark."

The fire water deluge pipes proceed from inside the valve room, out the west wall near its north corner westward then southward to the Coal Handling Crusher House (Figures 1, 2, 3, & 4). The pipes and associated pipe supports/bridge, to the exterior wall of the Crusher House, are ancillary to 484-9D and within the scope of this decommissioning. The pipe supports and bridge outside the 484-9D structure are galvanized steel atop concrete foundations.

To the east of Building 484-9D is a fire hydrant, a support frame for a fire hose box, and two bollards (Figure 8). The hydrant is a standard fire hydrant. The hose box supports consist of steel bars running between reinforced concrete posts. The bollards are standard 4" galvanized, concrete-filled pipe bollards extending about 42" above grade. The hydrant, support frame and bollards are ancillary to Building 484-9D and within the scope of this decommissioning.

Figure 8. Building 484-9D Hydrant, Support Frame and Bollards

Process History

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).

Building 484-9D was constructed as a fire water valve house and has always been used for this purpose. There are not, nor have there ever been, any chemical or radiological processes or storage associated with the facility. The facility has no floor drains or sumps. The concrete floor slab is intact and in good condition.

Chemical Process

Chemical Name	*Process location*	*Evidence of spills?*
N/A	*N/A*	*N/A*

Radioactive Process

Isotope	*Contaminated areas/others*
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 (Reference 3) conducted from the effective date of the Federal Facility Agreement (FFA), August 16, 1993 (Reference 2) 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 and the FFA reveals no documented occurrence of spills having occurred in or from the facility. Further, there is no physical evidence of spills having occurred in or from 484-9D.

An asbestos survey of the building was conducted on January 9, 2020. No Asbestos Containing Material (ACM) was identified. However, piping gaskets, inaccessible for bulk sampling, are considered Presumed Asbestos Containing Material (PACM). The results of that survey are included in Q-APG-D-00027, Baseline Asbestos Inspection Report of Building 484-9D (Reference 6). 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/PACM 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. This facility is not listed in that reference and therefore is not historically significant.

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? *If yes, go to question 4.*		X	The facility is a fire water valve house and has never been used to store or process radioactive or hazardous materials.
2.	If there was stored packaged material, has there ever been a spill? *If No or N/A, this is a Simple Model. Stop.*			N/A - The facility is a fire water valve house and has never been used to store or process radioactive or hazardous materials, ergo no spill(s). **Decommissioning of this facility shall be performed using a Simple Model.**
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)? *If Yes, this is a Simple Model. Stop.*			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? *If Yes, this is a CERCLA Model. Stop.*			N/A
5.	Is the facility listed as a Site Evaluation Area in Appendix G of the SRS FFA? *If Yes, this is a CERCLA Model. Stop.*			N/A
6.	Is there evidence that there has been a release of hazardous or radioactive materials outside the structure? *If Yes, this is a CERCLA Model. Stop.*			N/A
7.	Is there a substantial threat of a release of hazardous or radioactive materials outside the structure? *If Yes, this is a CERCLA Model. Stop.*			N/A
8.	Has the facility been assigned a hazard category as defined in Facility Safety Document Manual 11Q? *If No, stop and refer facility for evaluation to assign a hazard category, then proceed*			N/A

Contaminated Facilities *(cont'd)*				
	Question	**Yes**	**No**	**Justification**
9.	Is the hazard category Nuclear (HC- 2 or 3), radiological, or high hazard chemical? *If Yes, this is a CERCLA Model. Stop*			N/A
10.	Has the Department of Energy-Savannah River directed that the decommissioning be performed using the CERCLA Model? *If yes, this is a CERCLA Model. Stop*			N/A
12.	Is the facility a formerly nuclear, radiological, or high-hazard chemical facility? *If Yes, this is an Integrated Sampling Model. Stop.*			N/A
13.	Has Environmental Compliance and Area Completion Project's Regulatory Support Group determined that a final survey is not required for this facilty? *If Yes, this is a Simple Model. If No, this is an Integrated Sampling Model. Stop*			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 03/2020.
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	0/April, 2006	D-Area Hazards Survey
6	Q-APG-D-00027	0/January 9, 2020	Baseline Asbestos Inspection Report of Building 484-9D