Procurement Specification/Statement of Work (SOW) Cover Sheet

Proc. Ref. E7, 2.14

1. Title			
Decommissioning of Buildings 483-3D, 484-5D, 484-9D, & 485-D			
2. Specification/SOW Number	3. Revision	5. Functional Classification	
G-SOW-D-00013	0	GS	
6. Requester Department	7. Requester Division		
EC&ACP	M&O		

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Procurement Specification/Statement of Work (SOW)
Revision History Sheet

1. Specification/SOW No.			2. Revision No.	3. Page
G-SOW-D-00013 Decommissioning of Buildings 483-3D, 484-5D, 484-9D, & 485-D			0	Page 2 of 42
4. Date	5. Revision No.	6. Paragraph No.	7. Description of Changes	
May 26, 2021	0	N/A	Initial Issue for Procurement	

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1.0 SCOPE

1.1 General Description

1.1.1 Summary

1.1.1.1 Provide labor, materials, and services required for the Decommissioning of Buildings 483-3D, 484-5D, 484-9D, and 485-D as defined in the procurement documentation including this Statement of Work (SOW).

1.2 General Description of Services

1.2.1 This SOW describes the activities required for the safe Decommissioning of four facilities in D-Area of the Savannah River Site (SRS).

1.2.1.1 483-3D, Electrical Control Building

1.2.1.2 484-5D, D-Area Powerhouse Storage Building

1.2.1.3 484-9D, D-Area Valve House

1.2.1.4 485-D, D-Area Cooling Tower

1.2.2 The work to be performed includes demolition, management of non-friable asbestos, and removal of the buildings and all associated appurtenances (such as equipment, fencing, pole supports, bollards, conduit bridges, handrails, etc.) as described herein.

1.2.3 The proposed decommissioning end state for the North Cable Trench ancillary to 483-3D, which has no defined or anticipated future missions, is In Situ Decommissioning. 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 flowable grout, and/or controlled low strength material (CLSM).

1.2.4 The proposed decommissioning end-state for the pipe bridge ancillary to 484-9D, which has no defined or anticipated future missions, is demolition to the bridge foundations. The proposed decommissioning end-state for the remaining ancillaries to 484-9D, which have no defined or anticipated future missions is as follows; 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.

1.2.5 The proposed decommissioning end state for Building 485-D, which has no defined or anticipated future mission, is “Demolish” to, but not including, the concrete Cooling Tower Basin and Pump Basin. The above grade Cooling Tower structure and appurtenances to its concrete basin will be removed, as well as the Pump Basin appurtenances to its concrete cover slab. The concrete access steps to the Pump Basin and Cooling Tower stair tower, which have no defined or anticipated future mission, will be demolished to grade. The proposed decommissioning end state for the Cooling Water Return Lines on the south side of the Cooling Tower and Pump Discharge Lines on the Pump Basin north side, which have no defined or anticipated future mission, is cut off to grade and piping filled with riprap up to 2 feet below grade and with #57 stone the remaining 2 feet to grade. Concrete 4’-6” x 4’-6” x 6” thick cap slabs will be formed, reinforced with #4 bars on 12” centers each way, and poured at

1.2 General Description of Services (Continued)

grade over the cutoff Cooling Tower return lines and pump discharge lines. The proposed decommissioning end state for the Cooling Tower Basin and Pump Basin structures "In Situ" disposal. The proposed decommissioning end-state for the pole supports ancillary to 485-D, which have no defined or anticipated future missions, is demolition to grade.

1.2.6 The proposed decommissioning end-state for Buildings 483-3D, 484-5D, 484-9D, and 485-D, along with any associated fencing, pole supports, bollards, conduit bridges, handrails, etc., which have no defined or anticipated future missions, is "Demolish" to, but not including, the concrete slab(s)/ foundations and removal from the site.

1.3 Facility Descriptions

1.3.1 **Building 483-3D**, 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 SRS. (See Attachment 5.1, Figures 1-11). Note that Figure 3 shows the boundaries of the scope of this decommissioning in red dot-dash-dot outline. The remaining facilities in Attachment 5.1, Figure 3 (Buildings 483-D Softener Building, 483-1D Water Filtration and Treatment Plant, 483-2D Softener and Silica Absorber Building, and 487-D Process Water Storage Tank) are in another decommissioning project not within the scope of this SOW.

1.3.1.1 Building 483-3D includes the following ancillary structures:

A. Exterior North Cable Trench (See Attachment 5.1, Figure 9)

B. Pipe and Conduit Bridge (See Attachment 5.1, Figures 4 and 9)

1.3.1.2 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. 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. (See Attachment 5.1, Figure 5).

1.3.1.3 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, previously removed.

1.3.1.4 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.

1.3.1.5 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. (See Attachment 5.1, Figure 4).

1.3.1.6 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. (See Attachment 5.1, Figure 6).

1.3.1.7 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

1.3 Facility Descriptions (Continued)

1.3.1.8 through the locations of both floor drains. However, the concrete cracks do not affect the structural integrity of the floor drain piping. (See Attachment 5.1, Figure 6).

1.3.1.9 On the east side of the structure is one transformer, AT2W (southeast), still remaining to be removed outside the decommissioning scope of this SOW. (See Attachment 5.1, Figure 7).

1.3.1.10 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 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. (See Attachment 5.1, Figure 8).

1.3.1.11 To the north of Building 483-3D is a cable trench. 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. (See Attachment 5.1, Figure 9).

1.3.1.12 To the west of the building was the transformer W4. (See Attachment 5.1, Figure 10).

1.3.1.13 Attachment 5.1, Figure 11 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 SOW. (See Attachment 5.1, Figure 11).

1.3.1.14 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.

1.3.1.15 The work to be performed includes demolition, management of non-friable asbestos (Reference 2.4.2.2).

1.3.2 **Building 484-5D** is located in the southwest section of the 400 D-Area of the SRS, north of the 454-D Diesel Fuel Storage Facility and south-southwest of the 484-D Powerhouse (See Attachment 5.1, Figure 1). It was erected on site circa 1980. The structure is an aluminum tube-frame structure with a corrugated aluminum skin. The structure is attached to a concrete slab. The structure itself is approximately 12' X 30', with a non-partitioned interior. The structure has double, swinging doors at its front for access. (See Attachment 5.1, Figures 12-15).

1.3.2.1 Building 484-5D includes the following ancillary structures:

A. Fencing and fence posts (See Attachment 5.1, Figure 13)

1.3.2.2 Historically, the 484-5D Building was used for storage of miscellaneous construction equipment/materials for the 484-D powerhouse. The structure has no utilities serving it, including water, sewer, communication, or electrical.

1.3.2.3 The concrete slab appears to be in good condition with exception of a minor, tight crack running across the slab. (See Attachment 5.1, Figure 15).

1.3.2.4 The area is partially fenced. (See Attachment 5.1, Figure 13).

1.3.2.5 The work to be performed includes demolition, management of non-friable asbestos (Reference 2.4.2.3).

1.3 Facility Descriptions (Continued)

1.3.3 **Building 484-9D**, D-Area Valve House, is located on the SRS in South Carolina in the southeast portion of 400-D Area, near the northeast corner of the D-Area coal yard (See Attachment 5.1, Figure 1). It was constructed circa 1988. 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). (See Attachment 5.1, Figures 16-21).

1.3.3.1 Building 484-9D includes the following ancillary structures:

A. 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

B. Fire hydrant, fire hose box supports, and bollards east of Building 484-9D (See Attachment 5.1, Figure 21)

1.3.3.2 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 Attachment 5.1, Figure 19).

1.3.3.3 The valve room 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, catwalk, 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. (See Attachment 5.1, Figure 20).

1.3.3.4 The fire panel and control room 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 have been isolated and "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.

1.3.3.5 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 and "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.

1.3.3.6 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.

1.3.3.7 All services (i.e., fire water, steam, instrument air, and electrical) have been isolated and "air-gapped" to render the facility "cold and dark."

1.3.3.8 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. 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. (See Attachment 5.1, Figures 16-18).

1.3 Facility Descriptions (Continued)

1.3.3.9 To the east of Building 484-9D is a fire hydrant, a support frame for a fire hose box, and two bollards. 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. (See Attachment 5.1, Figure 21).

1.3.4 **Building 485-D** is a standard updraft industrial cooling tower constructed in 1952. The general materials of construction of the building are galvanized steel, wood and concrete. (See Attachment 5.1, Figures 22-28).

1.3.4.1 Building 485-D includes the following ancillary structures:

A. Sodium hypochlorite piping and communications pole supports to the facility from 683-D (See Attachment 5.1, Figure 23).

1.3.4.2 The area bounded by red dotted lines in Figure 23 delineates the area within the scope of this SOW.

1.3.4.3 The cooling tower had two 264" diameter updraft fans with 50 hp motor mounted on top of the structure. Fans and motors were removed during deactivation of the facility. (See Attachment 5.1, Figure 23).

1.3.4.4 The tower basin is reinforced concrete, approximately 63' long by 49' wide and 7'1" deep at the shallowest section (distal to the pump basin) and 7'3" proximal to the pump basin. The walls of the cooling tower basin extend approximately 3' above grade.

1.3.4.5 There is a stairway on the east side of the cooling tower that allows access to the top of the cooling tower and a walkway across the top for access to the fans and drive motors. (See Attachment 5.1, Figure 26).

1.3.4.6 The three old 200 hp, vertically mounted, centrifugal recirculating pumps on the north side of the tower atop the pump basin (Figure 24) have been removed (Figure 25).

1.3.4.7 The pump basin is approximately 20'8" by 26' wide and 10'11" deep, giving it a usable capacity of approximately 35,000 gallons. Access to the cooling tower basin is by a rung ladder on the west side of the basin, at the transition from the cooling tower basin to the pump basin.

1.3.4.8 Sodium hypochlorite was provided to the cooling tower basin from Building 683-D. The sodium hypochlorite was used as a biocide/ algaecide in the cooling water. Sodium hypochlorite feed piping, as well as communication lines were carried overhead by a series of wooden poles, running northeast from Building 683-D. The poles are specific to the cooling tower and are included in the scope of this decommissioning.

1.3.4.9 The cooling tower provided cooling to the condenser circulating water for the 484-D Powerhouse. The Condenser Cooling Water Header is 42", influent and effluent. Piping is below grade. The cooling water header returning from the Powerhouse enters a manifold that split flow to the two sections of the cooling tower via two 20" pipes. (See Attachment 5.1, Figure 27).

1.3.4.10 The 24" discharge pipes from each of the three former cooling tower pumps go below grade at the north end prior to combining at a manifold to the 42" header feeding the Powerhouse. (See Attachment 5.1, Figure 28).

2.0 REFERENCES

2.1 Definitions

2.1.1 Acronyms

~	approximate, approximately
ACM	Asbestos Containing Material
BMP	Best Management Practice
CFR	Code of Federal Regulations
CMC	Commercial Metal Company
D&D	Deactivation and Decommissioning
D&R	Dismantlement and Removal
EC&ACP	Environmental Compliance and Area Completion Projects
EDR	Engineering Document Requirements
ft	foot, feet
FPP	Fire Protection Plan
GCO	Generator Certification Official (for SRS waste)
HSO	Health and Safety Officer
HVAC	Heating Ventilation and Air Conditioning
in.	inch, inches
kVA	kilovolt-amps
NCR	Non-Conformance Report
OSHA	Occupational Safety and Health Administration
PACM	Presumed Asbestos Containing Material
PCBs	Polychlorinated Biphenyls
PDF	portable document format
PHSS	Packaging, Handling, Shipping, and Storage Requirements (PHSS)
PO	purchase order
SC	(State of) South Carolina
SCDHEC	South Carolina Department of Health and Environmental Control
SDDR	Supplier Deviation Disposition Request
SOW	Statement of Work
SRNS	Savannah River Nuclear Solutions, LLC
SRS	Savannah River Site
STR	Subcontract Technical Representative
TSP	Task Specific Plan
WPP	Worker Protection Plan

2.1.2 Terms

2.1.2.1 Administrative Hold Point: A designated verification beyond which work does not proceed until verification is performed and documented by a Subcontract Technical Representative.

2.1 Definitions (Continued)

2.1.2.2 Repro: Reproducible paper copy.

2.1.2.3 Verification: The act of reviewing, inspecting, testing, checking, auditing, or otherwise determining and documenting whether items, processes, services, or documents conform to specified requirements.

2.1.2.4 Competent Person: One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsafe, unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them - usually also identified as "Qualified" (29 Code of Federal Regulations [CFR] 1926.32 incl.1101).

2.1.2.5 Qualified (Person): One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

2.1.2.6 Engineering Survey/Report: The Subcontractor shall be required to prepare an engineering survey/report that addresses the requirements of 29 CFR 1926.850(a). Prior to permitting employees to start demolition operations, an engineering survey shall be made, by a competent person, of the structure to determine the condition of the framing, floors, and walls, and possibility of unplanned collapse of any portion of the structure. Any adjacent structure where employees may be exposed shall also be similarly checked. The employer shall have in writing evidence that such a survey has been performed and outlines the methods, equipment to be used and sequence of events for all dismantlement and removal activities, including but not limited to removal and placement in supplied containers of all recyclables, removal and handling of any hazardous materials, segregation, appropriate size reduction and disposition of all materials, etc. Also include as a minimum a proposed layout/location for office trailers, toilet facilities, equipment staging area, material staging area(s), etc. A competent (qualified) person shall perform the survey.

2.1.2.7 Facility: Any building, structure, or other improvement to real property including their functional systems and equipment; site development features such as landscaping, roads, walks, and parking areas; outside lighting and communications systems; central utility plants; utility supply and distribution systems; and other physical plant features. For purposes of this SOW, this facility consists of the structures, appurtenances, equipment, etc. identified within the body of this SOW and its Attachment A.

2.2 Codes / Standards

2.2.1 General

2.2.1.1 Use the edition in effect at date of contract award unless noted otherwise.

A. Material standard editions dated within the previous 10 years from the date of contract award are acceptable.

2.2.1.2 Obtain SRNS acceptance for Codes / Standards not required by this specification prior to use.

2.2.1.3 Obtain SRNS acceptance for editions and/or addenda of Codes / Standards not specifically authorized by this specification prior to use.

2.2.2 Required National Codes / Standards

2.2 Codes / Standards (Continued)

2.2.2.1 None

2.3 Orders / Regulations

2.3.1 Regulations

2.3.1.1 10 CFR 851 – Worker Safety and Health Program

2.3.1.2 29 CFR 1910 – Occupational Safety and Health Standards (OSHA)

2.3.1.3 29 CFR 1926 – Safety and Health Regulations for Construction

A. 29 CFR 1926 Subpart T – Demolition

B. 29 CFR,1926.32, 1101 (Labor, Definitions), including Subpart Z, Asbestos

2.3.1.4 40 CFR Part 61.145 Standard for Demolition and Renovation

2.3.1.5 S.C. Reg. 61-107.19, Solid Waste Landfill Regulation"

2.3.1.6 South Carolina Department of Health and Environmental Control (SCDHEC) Stormwater Management Best Management Practice Handbook, (2006)

2.4 SRNS Documents

2.4.1 Drawings (for Subcontractor reference)

2.4.1.1 S5-4-853, Rev. 3, dated 1/22/1980 "Powerhouse Storage Building, Building Foundation and Driveway"

2.4.1.2 W814386, Rev. 0, dated 11/25/1987 "Savannah River Plant, Building 484-9D Area 400D, Deluge Valve House Plan and Elevations, A&C Architectural"

2.4.1.3 W814389, Rev. 2, dated 3/7/1988 "Savannah River Plant, Building 484-9D Area 400D, Deluge Valve House-Plan, Sect., Det. Steam & Inst. Air Piping Arrangement Power"

2.4.1.4 W831995, Rev. 0, dated 8/18/1991 "Savannah River Site, Building 484-9D Area 400, Deluge Vlv. House Ppg. Modification Plan, Sections & Details, Power"

2.4.1.5 W814399, Rev. 2, dated 5/9/1989 "Savannah River Plant, Building 484-9D Area 400D, Deluge Valve House-Plan, Sections and Details A&C Architectural"

2.4.1.6 W137813 Rev. 15, dated 7/15/1989 "Cooling Tower-Building No. 485-D, Electrical Conduits and Cables-Details and Sections"

2.4.1.7 W136401 Rev. 31, dated 5/28/1952 "Cooling Tower - Building 485-D Circulating Water Pit And Pump Well Plan And Sections"

2.4.1.8 W136402 Rev. 15, dated 3/19/1952 "Cooling Tower - Building 485-D Circulating Water Pit And Pump Well Section And Details Sheet-1"

2.4.1.9 W136403 Rev. 9, dated 1/22/1952 "Cooling Tower - Building 485 D Circulating Water Pit And Pump Well Sections And Details Sheet 2"

2.4.1.10 W136404 Rev. 0, dated 2/15/1952 "Switchgear Building No. 485D Foundation Plan"

2.4.1.11 W136318 Rev. 27, dated 7/21/1995, "Bldg 485D 400D AREA Cooling Tower Plan And Elevations Arrg't Of Circ. Water Pumps Piping (U)"

2.4 SRNS Documents (Continued)

2.4.2 Documents

2.4.2.1 OSR 45-4, 2016, Supplier Deviation Disposition Request (SDDR)

A. With instructions

2.4.2.2 Q-APG-D-00020, Rev. 0, dated November 25, 2019, "Baseline Asbestos Inspection Report of Building 483-3D"

2.4.2.3 Q-APG-D-00007, Rev. 0, dated November 4, 2019, "Baseline Asbestos Inspection Report of Building 484-5D"

2.4.2.4 Q-APG-D-00027, Rev. 1, dated May 4, 2021, "Baseline Asbestos Inspection Report of Building 484-9D"

2.4.2.5 Q-APG-D-00026, Rev. 1, dated May 10, 2021, "Baseline Asbestos Inspection Report of Building 485-D"

2.4.2.6 V-PCOR-D-00042, Rev. 0, dated July 1, 2014, "Deactivation Project Final Report Building 484-D Powerhouse and Ancillary Buildings"

2.4.2.7 V-PMP-D-00026, Rev. 1, dated November 02, 2020, "Decommissioning End Points Document Building 483-3D, Electrical Control Building"

2.4.2.8 V-PMP-D-00019, Rev. 1, dated November 02, 2020, "Decommissioning End Points Document Building 484-5D, D-Area Powerhouse Storage Building"

2.4.2.9 V-PMP-D-00036, Rev. 1, dated November 02, 2020, "Decommissioning End Points Document Building 484-9D, D-Area Valve House"

2.4.2.10 V-PMP-D-00044, Rev. 0, dated May 17, 2021, "Decommissioning End Points Document Building 485-D, D-Area Cooling Tower"

2.4.2.11 Q-SDD-D-00009, Rev. 0, dated November 02, 2020, "Engineering Survey and Interference Report for Building 483-3D, Electrical Control Building"

2.4.2.12 Q-SDD-D-00005, Rev. 0, dated November 02, 2020, "Engineering Survey and Interference Report for Building 484-5D, D-Area Powerhouse Storage Building"

2.4.2.13 Q-SDD-D-00007, Rev. 0, dated November 02, 2020, "Engineering Survey and Interference Report for Building 484-9D, D-Area Valve House"

2.4.2.14 Q-SDD-D-00014, Rev. 0, dated May 20, 2021, "Engineering Survey and Interference Report for Building 485-D, D-Area Cooling Tower"

2.4.2.15 G-FDE-D-00049, Rev. 0, dated April 28, 2020, "Facility Decommissioning Evaluation Building 483-3D, Electrical Control Building"

2.4.2.16 G-FDE-D-00047, Rev. 0, dated April 27, 2020, "Facility Decommissioning Evaluation Building 484-5D, D-Area Powerhouse Storage Building"

2.4.2.17 G-FDE-D-00055, Rev. 0, dated May 20, 2020, "Facility Decommissioning Evaluation Building 484-9D, D-Area Valve House"

2.4.2.18 G-FDE-D-00050, Rev. 0, dated May 11, 2020, "Facility Decommissioning Evaluation Buildings 485-D and 482-2D, D-Area Cooling Tower and Switchgear Building"

2.4.2.19 E-SDD-D-00001, Rev. 1, dated August 19, 2020, "Verification of Hazardous Energy Isolations for Building 484-D Powerhouse and Ancillary Buildings"

2.4 SRNS Documents (Continued)

2.4.2.20 E-SDD-D-00002, Rev. 1, dated March 31, 2021, "Closeout of Verification Document for Building 484-D Powerhouse and Ancillary Buildings"

2.4.2.21 S-EHS-D-00001, Rev. 1, dated October 2009, "Hazards Survey for D-Area"

2.4.2.22 SDD-2005-00170, Rev. 2, dated October 22, 2020, "Environmental Compliance and Area Completion Projects (EC&ACP) Deactivation and Decommissioning (D&D) Policy on Decommissioning End Points for Slabs, Pits, Basements and Basins (U)"

3.0 WORK REQUIREMENTS

3.1 General Scope

3.1.1 Employ all measures as required to protect personnel and the environment during the performance of this decommissioning work.

3.1.1.1 Prescriptive worker safety requirements are identified in 29 CFR 1926.

3.1.1.2 Provide all management, labor, materials, tools, equipment, supervision, and services required for the completion of this SOW.

3.1.1.3 Work shall be performed in accordance with all applicable OSHA, SCDHEC and S.C. construction/demolition regulations and codes.

3.1.1.4 SRNS furnished material, equipment, services

A. SRS specific requirements for Subcontractor work on SRS in accordance with Special Provisions / Field Conditions which may include:
   1. General Employee Training
   2. Remote Worker Training
   3. Emergency Response Briefing
   4. Site Badging
   5. Site Clearance Permit(s)
   6. EC&ACP Waste Generator/Waste Verifier Training and Area Specific Training

B. Asbestos project design/management services to represent SRNS for the duration of these demolition activities, if any asbestos containing material (ACM) or presumed asbestos containing material (PACM) is subsequently identified during performance of this subcontract.

C. Receptacles/Accumulation Areas, as necessary, for all light bulbs, ballasts, etc.

D. Containers/roll-off pans for disposition of all recyclable materials and universal waste.

E. STR will provide OSR Form 4-356s for shipments of recyclable materials.

F. Special Waste Manifests/Worksheets for the disposition of special waste materials to the Three Rivers Landfill.

G. As built the final Demolition configuration and closure of the Site Clearance Permit(s) for buildings within the scope of this SOW.

H. Work completed prior to Subcontractor mobilization shall include:
   1. Isolate, relocate and/or eliminate all power/communication systems.

3.1 General Scope (Continued)

2. Buildings mechanically and electrically isolated rendering them "Cold and Dark."

3.1.1.5 Subcontractor furnished material, equipment, and/or services

A. Generators, as needed, qualified to site requirements

B. Hazardous material such as fluorescent bulbs, thermostats with mercury switches, circuit boards may still require removal as universal waste prior to demolition. For light ballasts that remain in the buildings, the ballasts will be removed and inspected to determine if they contain polychlorinated biphenyls (PCB). Any switches that remain in the buildings will also be inspected for mercury.

C. Containers/roll-off pans, skid pans, and trucks for collection, transportation, and disposal of waste materials and debris (other than as specified in Sections 3.1.1.4.C. and 3.1.1.4.D.).

D. Tools, equipment, and consumables for non-radiological demolition work

E. Portable toilets for work location

F. Worker break/change facilities

G. All required personal protective safety equipment

H. All other required safety equipment

I. Prepare an Engineering Survey (Section 2.1.2.6) as required by 29 CFR 1926, Subpart T, for inclusion in the Subcontractor's Worker Protection Plan (Reference 3.1.1.7.G.)

3.1.1.6 Prepare and submit a Fire Protection Plan (FPP) that defines and establishes the process and program for protecting life and property from fire during demolition activities.

A. The FPP shall outline the assignments of key personnel in the event of a fire and provide an evacuation plan for workers on the site.

B. The FPP may be included in the Worker Protection Plan (WPP) and shall consider requirements, programs and life safety plans already in place as well as adherence to all applicable OSHA guidelines.

C. Work shall be performed in accordance with the approved and accepted FPP.

1. Where guidelines are or may be in conflict, the strictest criteria shall apply.

D. The FPP shall specifically address and include as a minimum the following:

1. Implementation of 29 CFR 1926 requirements.
2. Use of and adherence to S.C. Reg. 61-107.19
3. Control of exits in and around the facilities
4. Control of transient combustibles (wood, paper, plastic, oily rags, etc.)
5. Control of flammable/combustible liquids
6. Temporary enclosures – self-extinguishing polyethylene
7. Temporary barricades
8. Use/refueling of internal combustion engines
9. Smoking in designated areas

3.1 General Scope (Continued)

10. Temporary lighting
11. Maintenance of access around the buildings for firefighting purposes
12. Hot work operations:
    a. Generate and submit a Hot Work Permit Procedure.
    b. Notify the SRNS STR that the permit is in place prior to beginning hot work.

3.1.1.7 Prepare a WPP and submit for the dismantlement and removal of Buildings 483-3D, 484-5D, 484-9, 485-D, and all associated appurtenances as described herein (see Section 1.3).

A. The WPP shall cover the entire scope of field activities, potential hazards and describe the measures to be implemented to safeguard the health and welfare of workers in this Decommissioning effort.

B. As noted in 3.1.1.6.B, the WPP may also include the FPP.

C. No work will be allowed to start until WPPs have been reviewed and accepted by SRNS.

D. Include WPPs for the Subcontractor and any Sub-tier Subcontractors (if not covered by the Subcontractor's WPP) completely describing all measures in place to ensure the safety and wellbeing of those involved in these activities.

E. Work shall be performed in accordance with approved and accepted WPPs.

F. Describe the implementation requirements of 10 CFR 851, 29 CFR 1910 and 29 CFR 1926 for this demolition scope.

G. Include the Engineering Survey required by 29 CFR 1926, Subpart T.

H. Proposed location(s) for parking individual workers' vehicles.

I. Proposed location(s) for lay-down and material sorting/segregating areas.

J. Proposed areas for loading SRNS supplied skid pans.

K. Proposed areas for loading Subcontractor supplied skid pans, containers/roll-off pans, trucks, etc.

3.1.1.8 Prepare and submit Task Specific Plans (TSPs) including any other safety and health provisions described in this SOW as necessary for each specific task/job.

A. No task work will be allowed to start until TSPs have been reviewed and accepted by SRNS.

B. Include TSPs for the Subcontractor and any Sub-tier Subcontractors that describe in detail how each aspect of the work will be handled by the performing entity.

C. TSP shall demonstrate how the requirements of each Decommissioning End Points Document (References 2.4.2.7, 2.4.2.8, 2.4.2.9, and 2.4.2.10) shall be met.

D. Work shall be performed in accordance with SRNS approved and accepted TSPs

3.1.1.9 Verify the existing physical conditions, utilities, dimensions, and details affecting the work in each facility/area/site of this project.

3.1 General Scope (Continued)

3.1.1.10 Prepare a Decommissioning Plan and Activities Schedule which identify in detail the step-by-step activities relative to the dismantlement and removal of Buildings 483-3D, 484-5D, 484-9D, 485-D, and all associated appurtenances including, but not limited to:

A. Mobilization/demobilization,

B. Staffing level to meet project schedule,

C. Removal, collection, packaging and transportation for final disposition of materials identified as:

1. Hazardous and universal waste materials discovered during decommissioning that were not previously removed by SRNS.
2. Recyclable metals: All brass will require segregation for metal recycle through the salvage yard. Scrap metals will be size reduced and segregated through the salvage yard. Leaded joints will be segregated and managed per GCO direction.
3. Plugging and grouting openings through the floor slab and surrounding ground such as drainpipes, conduits, etc.

D. No decommissioning activities shall start until the Plan has been reviewed and accepted by SRNS.

3.1.1.11 Inform the SRNS Subcontract Technical Representative (STR) immediately of any spills or releases to the environment (air, water, soil, slab, etc.), regardless of amount.

A. STR will provide guidelines for any required remedial action.

B. Subcontractor is responsible for performing remedial actions.

3.1.1.12 Install sediment control Best Management Practice (BMP) as required around storm water drainage system prior to starting any demolition activities.

A. Prepare and submit placement, sizing, and modifications of Sediment Control BMPs. Additional information on the design and proper use of Sediment Control BMPs can be found in SCDHEC Stormwater Management BMP Handbook.

B. BMP Description:

1. Inlet protection is achieved by placing a temporary filtering device around any inlet to trap sediment.
2. The mechanism shall prevent sediment from entering inlet structures.

C. Inspect/document every 7 calendar days and after a storm event of 0.5 inch or greater.

D. Remove accumulated sediment once it reaches 1/3 the height of the inlet filter.

E. Sediment tubes may be installed in conjunction with or in place of a silt fence to provide additional protection to the storm water system

3.1.1.13 Obtain demolition permits as required by South Carolina Department of Health and Environmental Control (SCDHEC) Codes and Regulations, SC Reg. R61-86.1, Section V for these Buildings.

A. In accordance with 40 CFR Part 61.145 permit shall be requested at least ten (10) working days before any demolition begins.

B. Submit two (2) copies of the SCDHEC approved demolition permit to SRNS.

3.1 General Scope (Continued)

3.1.1.14 All demolition work shall be performed, as a minimum, in compliance with 29 CFR 1926, Subpart T and the demolition permit.

3.1.1.15 Work shall be performed in accordance with all applicable OSHA and S.C. construction/demolition regulations, codes, permits and guidelines.

3.1.1.16 Implement waste management requirements to handle, segregate, package, and containerize waste materials as directed by the SRNS GCO and described in ACP Waste Generator/Waste Verifier Training and Area Specific Training.

3.1.1.17 Submit copies of the Three Rivers Sanitary Landfill scale ticket for each waste shipment.

3.1.1.18 Building demolition shall be accomplished using heavy equipment and/or hand demolition as necessary or as identified and approved in TSPs.

3.1.1.19 Demolish, remove and dispose of the four buildings within the scope of this SOW (excluding the buildings' concrete slabs). Also include all above ground appurtenances and equipment as described in the body of this SOW and as shown in the Attachment 5.1 photos in accordance with SRNS approved Decommissioning End Points Documents and all applicable SRS, Federal, State, and local rules and regulations.

3.1.1.20 Recycling containers for scrap metal will be provided by SRNS via the Commercial Metal Company (CMC) which has a recycling contract with SRNS.

3.1.1.21 All hazardous materials (such as light bulbs, fluorescent tubes, light ballasts, lead pipe joints, etc.) shall be removed and placed in receptacles provided by SRNS prior to decommissioning to insure there is no cross contamination.

A. All light bulbs (incandescent bulbs, fluorescent bulbs, fluorescent tubes, emergency lights, strobe lights, etc.) shall be counted and verified by subcontractor during the removal process and shall be removed from their housings and placed in containers provided by SRNS to be managed as universal waste by SRNS.

B. Exact quantity of light bulbs, by type, shall be counted and verified by the subcontractor during the removal process.

1. **ADMINISTRATIVE HOLDPOINT** - Verification and count of light bulbs by GCO (incandescent bulbs, fluorescent bulbs, fluorescent tubes, emergency lights, strobe lights, etc.) prior to removal by SRNS from mutually agreed upon temporary storage area and relocation to a designated material hold area prior to final disposition by SRNS.

C. Light ballasts shall be removed, segregated by PCB containing and non-PCB containing, and placed in containers provided by SRNS for final disposition.

D. Exact quantity of ballasts, by type, shall be counted and verified by the subcontractor during the removal process.

1. **ADMINISTRATIVE HOLDPOINT** - Verification and count by GCO of light ballasts prior to removal by SRNS from mutually agreed upon temporary storage area and relocation to a designated material hold area prior to final disposition by SRNS.
2. **ADMINISTRATIVE HOLDPOINT** – For any ballasts found to be leaking, the Subcontractor shall immediately communicate the condition to the STR and the STR will immediately notify the GCO for appropriate management determination.

E. Cut and segregate any lead pipe joints.

3.1 General Scope (Continued)

1. **ADMINISTRATIVE HOLDPOINT** - Verification by GCO. If pipe joints are found to be lead containing, then place the item(s) into a container in a satellite accumulation area as designated by the GCO prior to disposition by SRNS as hazardous waste.

3.1.1.22 All demolition work shall be planned and supervised by a "Competent Person".

A. This person shall ensure an engineering survey of the building and associated appurtenances listed in Attachment 5.1 is performed.

B. The Subcontractor shall be required to prepare an engineering survey/report that outlines the methods, equipment to be used and sequence of events for all deactivation, dismantlement and removal activities, including but not limited to removal and placement in supplied containers of all recyclables, removal and handling of any hazardous materials, segregation, appropriate size reduction and disposition of all materials, etc. Also, include as a minimum a proposed layout/location for office trailers, toilet facilities, equipment staging area, material staging area(s), etc.

C. Submit a copy of the Engineering survey or surveys.

D. This survey does not require Subcontractor to prepare any drawings.

3.1.1.23 Deactivation work (if required) to be performed includes removal of all remaining hazardous materials (such as light bulbs, fluorescent tubes, light ballasts, lead (including pipe joints), emergency lights, light ballasts (PCB and non-PCB), and brass valves). All deactivation activities shall be performed in accordance with an SRNS approved Deactivation Plan and all applicable Federal, State, and local rules and regulations.

A. Scrap materials removed during deactivation shall be reduced in size, as necessary.

3.1.1.24 Ensure the 483-3D, 484-5D, 484-9D, and 485-D building slabs/foundations are free of all debris and floor coverings at conclusion of demolition activities.

3.1.1.25 Ensure all floor penetrations (electrical conduit, piping, floor drains, etc.) have been cut flush with the top of the floor slab or grade, as applicable, and are plugged/filled with non-shrink grout or concrete.

3.1.1.26 Following decommissioning of 485-D, ensure the area surrounding where the 24" discharge pipes were at the north end of the pump basin and the area surrounding the 20´water return lines at the south end of the cooling tower are capped with a six inch (6") thick, reinforced concrete slab. Placement of the cap slabs is outside the scope of this SOW.

3.1.1.27 Ensure any oil stains discovered on the concrete slabs are cleaned using a strong surfactant (i.e. BioSolve®) as part of the final clean-up of the concrete slabs and surrounding area.

3.1.1.28 Ensure all protrusions (anchor bolts, etc.) are cut flush with the top of concrete or grade, as applicable, where equipment, structural steel, supports, etc. are removed.

3.1.1.29 Any curbing remaining on the building slabs or areas around the buildings shall be breached or cleaved at as many locations as necessary to ensure drainage of rainwater.

3.1.1.30 Minimize interference with other personnel, roads, streets, etc. during all demolition activities.

3.1 General Scope (Continued)

3.1.1.31 Work area is not a guaranteed/exclusive work zone accessible only to the Subcontractor and his/her sub-tiers. SRNS will respect the boundaries of the area. However, there may be occasions where Fire and Rescue and/or Security forces require access to the area. Other access by SRNS Engineering and Operations personnel will be limited to as necessary by agreement (such as Asbestos Designer, SRNS Safety, GCO, etc.).

3.1.1.32 The subcontractor is responsible for providing Safety Data Sheets, maintaining a chemical inventory of all chemicals brought on site and removing all chemicals at the end of the project.

3.2 Quality Requirements

3.2.1 This SOW is a Level 3 procurement – no quality requirements are applicable.

3.3 Site Conditions

3.3.1 See Special Provisions / Field Conditions

3.4 Period of Performance / Schedule

3.4.1 From the date of award through completion of field activities, including SRNS acceptance, work shall be completed as specified in Subcontract Field Conditions. Demobilization shall be within thirty (30) days of accepted project completion

3.5 Key Personnel Qualification / Certification

3.5.1.1 Subcontractor may employ the services of a qualified sub-tier subcontractor to perform the work under this subcontract if approved by SRNS

3.5.1.2 Copies of required licenses and worker qualifications shall be submitted to SRNS with the proposal.

3.5.1.3 Subcontractor shall have successfully completed projects of similar scope and magnitude within the last five (5) years.

3.5.1.4 Subcontractor shall submit qualification documentation with the proposal, including all sub-tier subcontractors, with three (3) references from clients for jobs/projects of similar scope and magnitude.

3.5.1.5 These engineers/supervisors are expected to possess a minimum of a bachelor's degree in Engineering and a minimum of five (5) years of experience in similar operations.

A. Personnel with extensive experience but without a degree may be submitted for consideration.

3.5.2 Every supervisor, worker, building inspector, or management planner shall have any current, required license(s) specific to the duties performed under the license for completion of activities required by this SOW.

3.5.3 Assign a full-time Health and Safety Officer (HSO) to the project.

3.5.3.1 The HSO shall have documented evidence of field experience as HSO in areas with comparable demolition activities.

3.5 Key Personnel Qualification / Certification (Continued)

3.5.3.2 Submit HSO resume with proposal

3.5.4 Assign a Project Manager/Superintendent who will be responsible for overall contract administration, scheduling and record keeping as well as managing the day-to-day activities of work.

3.5.4.1 The Project Manager/Superintendent shall have demonstrated ability to conduct and manage the project via previous experience with similar projects.

3.5.4.2 Submit Project Manager/Superintendent resume with proposal

3.5.5 Assign a full-time competent person/supervisor in accordance with referenced codes, standards, procedures and regulations.

3.5.5.1 Due to the relatively small size of this project, the competent person/supervisor and Project Manager/Superintendent may all be the same person if qualified and accepted as such by SRNS.

3.5.5.2 This/these individuals shall by reason of experience, training, or education be able to identify unsafe fire/life safety acts or conditions and have the authority to "Stop Work" and/or take other corrective action(s), as needed.

3.5.5.3 Submit resume(s) with proposal

3.6 Deliverables and Submittals

3.6.1 Required Submittals:

3.6.1.1 Review all documents for completion prior to submission and certify conformance of documents to SOW requirements by signature of the Subcontractor's Authorized Engineering Representative.

3.6.1.2 See Attachment 5.2 "Engineering Document Requirement (EDR)" for deliverables required for this SOW.

3.6.1.3 List the following on each submittal transmittal cover letter:

A. Document category number, and applicable SOW Section and paragraph number.

B. Document description.

3.6.1.4 Reference the following information on transmittal letters, submittals and other correspondence:

Date of transmittal,

Sequence page number and total number of pages on each page,

Subcontractor Name, _____

SRNS Purchase Order (PO) No.: _____(Defined on Award)

SRNS Project No.: _____(Defined on Award)

SRNS Project Title: _____(Defined on Award)

Subcontractor's Order Number: _____

A. Transmit with a completed Transmittal Letter.

3.6.1.5 Provide documentation in unprotected Adobe Acrobat – Portable Document Format (PDF), unless specifically directed otherwise.

A. Use the latest version available at time of subcontract award.

3.6 Deliverables and Submittals (Continued)

B. Files shall print legibly on 8.5 in. by 11 in., 11 in. by 17 in., or 22 in. by 34 in.
C. Title for PDF file: “SRS PO ...”
   1. Append the SRS PO number to end of file name.
   2. No symbols such as "&" or "," (comma) can be in the PDF file name.
D. Include only 1 PO related information per email.
   1. Don't send in multiple PO numbers in a single email.
   2. Each email is converted to a single vendor package number and assigned to one PO number.
E. Only PDFs can be sent into email account noted below.
   1. Excel, Word, CADD and TIFF formatted files cannot be received.
F. Zip files
   1. Multiple PDF files related to identified SRS PO are acceptable.
   2. Include only PDF files - folders within a zip file are unacceptable.
G. Maximum email size limit: 30 megabytes
H. Verify each file is virus free.

3.6.1.6 Provide formal transmittal of documentation in Adobe Acrobat (PDF attached to an email (unless directed otherwise by the STR) sent to vendordocuments@srs.gov for:

A. EDR submittals,
B. SDDR forms.
C. Use black markings on white paper.
D. Paper submittals with less than 30% recycled content are acceptable.

3.7 Packaging, Handling, Shipping, and Storage Requirements (PHSS)

None specified

3.8 Deviations

3.8.1 SDDR Preparation

3.8.1.1 Prepare a SDDR for each proposed exception to this SOW

A. Applies to proposed deviations after award of contract.

3.8.2 Perform the following for each deviation;

3.8.2.1 Identify SOW and revision number.

3.8.2.2 Identify criteria that cannot be met by item and SOW section number.

3.8.2.3 Present explanation for the deviation.

3.8.2.4 Present proposal for resolution of the deviation.

3.8.2.5 Present price and schedule adjustment for the proposed resolution of the deviation.

3.8.2.6 Do not perform work on, remove, or install any item for which a SDDR is submitted until a written disposition of the SDDR is received from SRNS.

3.8.2.7 Submit SDDR to STR for disposition prior to SDDR implementation.

3.8.3 Nonconformance

3.8 Deviations (Continued)

3.8.3.1 Identify on a SDDR.

3.8.3.2 Include supporting technical justification when requesting acceptance of a "Use-As-Is" or "Repair" disposition.

3.8.3.3 Attach a copy of the Non-Conformance Report (NCR)

3.8.3.4 Submit SDDR with NCR to STR for disposition prior to SDDR implementation.

3.8.4 Prior to close-out

3.8.4.1 Complete the SDDR(s), if any, in accordance with the SDDR instructions.

3.8.4.2 Provide completed SDDR(s) to the STR or with turn-over package.

4.0 ACCEPTANCE OF SERVICES

4.1 Inspection / Examination / Testing

4.1.1 Final Acceptance Inspection of New, Altered, or Dispositioned Facilities or Equipment per Manual 8Q, Procedure 51.

4.2 SRNS Surveillance and Audits

4.2.1 SRNS STR Verification

4.2.1.1 Verification by GCO of light bulbs (incandescent bulbs, fluorescent bulbs, fluorescent tubes, infrared heat lamp bulbs, emergency lights, strobe lights, etc.) with STR oversight.

4.2.1.2 Verification and count by GCO of Light ballasts with STR oversight.

4.2.1.3 Verification that no internal or external insulation is included with the recyclable waste.

4.2.1.4 Verifications per each respective Decommissioning End Points Document.

4.3 Final Acceptance Method

4.3.1 Acceptance of Services

4.3.1.1 Successful completion of a walk down of the facilities by the STR and Subcontractor after completion of all SOW related activities.

4.3.1.2 Confirmation that all submittals have been accepted by SRNS.

4.3.1.3 Confirmation that all decommissioning end points have been completed.

4.3.1.4 Confirmation of satisfactory performance in accordance with procurement contract as documented by the STR and the SRNS procurement representative, per Manual 11B, Procedure 7.3.

4.3.1.5 Successful completion

A. Services will be accepted based on achieving the requirements of this SOW, including complete removal and disposal of all specifically identified materials and equipment, clean-up of the facilities, final removal of all equipment and materials utilized in performance of this work, and completion of all punch list items.

B. A Final Acceptance Inspection of New, Altered or Dispositioned Facilities or Equipment per Manual 8Q, Procedure 51 will be conducted by applicable SRNS representatives and the performing entity to confirm satisfactory safe condition and proper disposition of facilities listed in the SOW prior to final acceptance.

5.0 ATTACHMENTS

5.1 Photos and Drawings

5.2 Engineering Document Requirements with Instructions (2 Pages)

5.3 Asbestos Management Program Aid (2 Pages)

Attachment 5.1 – Photos and Drawings

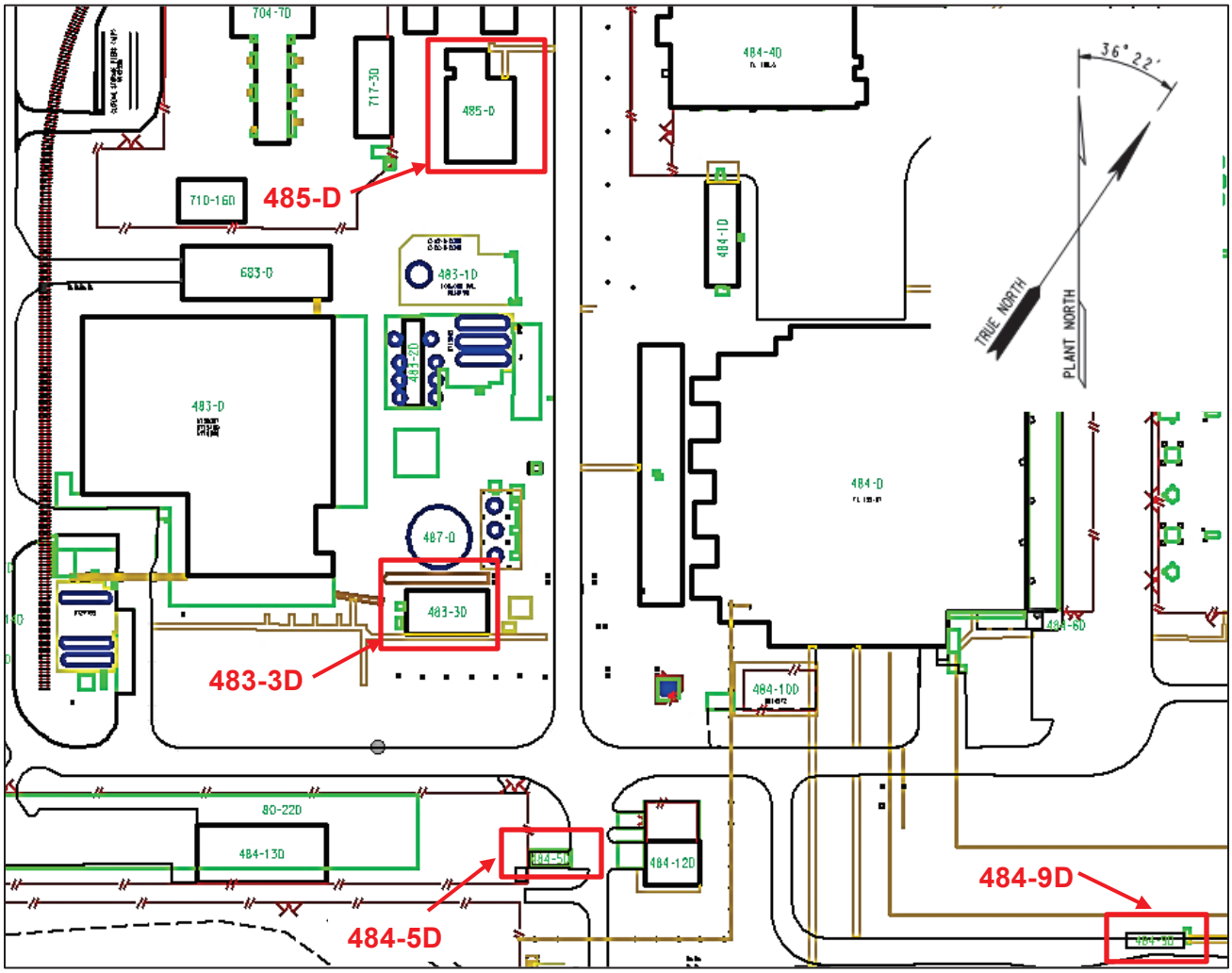

Figure 1. Building Locations

Figure 2. Building 483-3D, Electrical Control Building

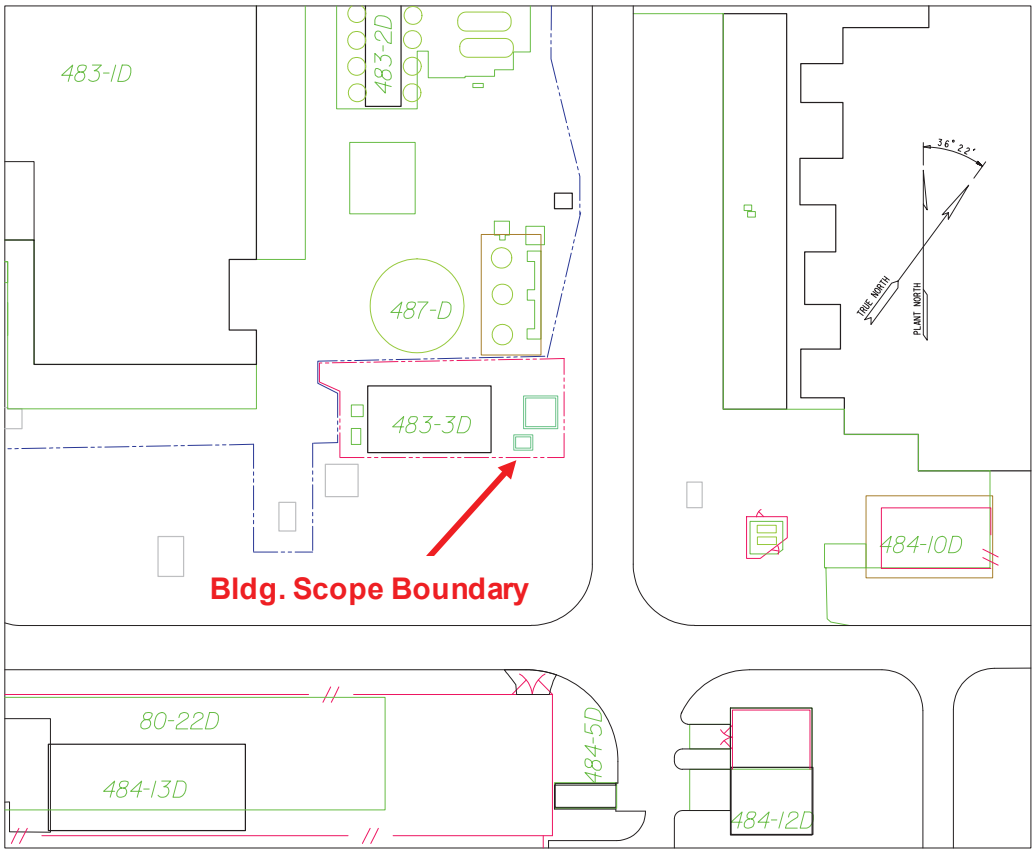

Figure 3. Building 483-3D, Electrical Control Building Area

Figure 4. Building 483-3D, Above-ground Pipe Chase Showing Supports to Remain

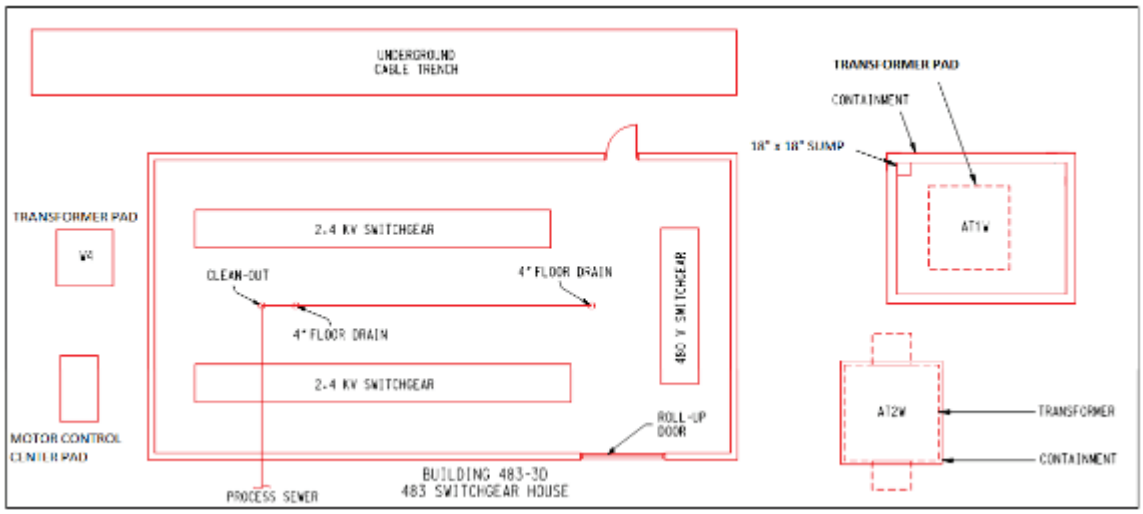

Figure 5. Building 483-3D, D-Area Electrical Control Building Original Layout (The only equipment left to be removed is AT2W, outside the scope of this SOW)

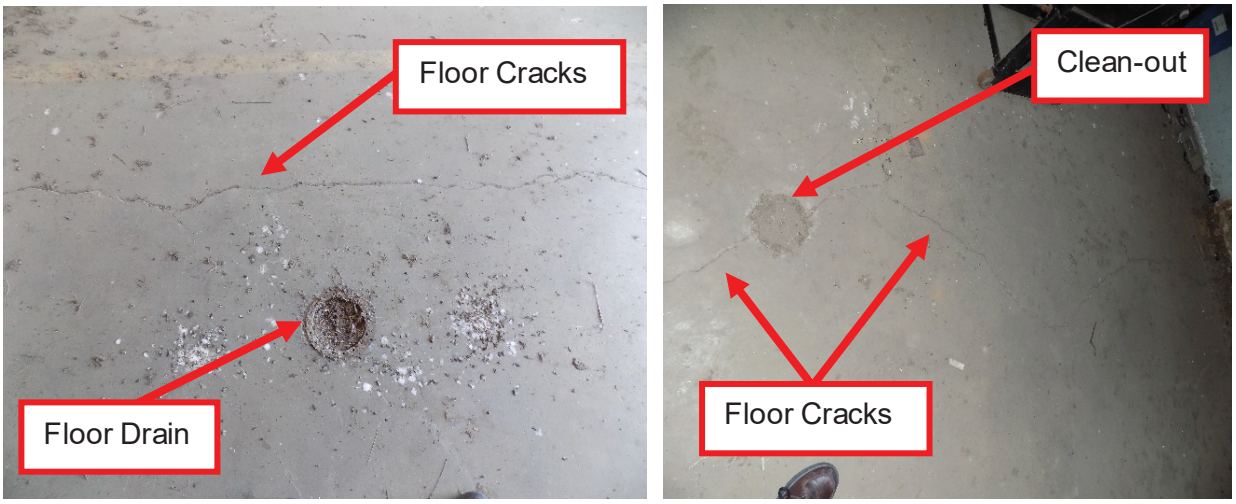

Figure 6. Building 483-3D, Floor Cracks In Proximity To Clean-out And Floor Drains

Figure 7. Transformer AT2W (Drained & Disconnected, outside scope of this SOW)

Figure 8. Transformer AT1W Transformer Pad Location with Containment Dike

Figure 9. Building 483-3D, Cable Trench

Figure 10. Building 483-3D, Old Location of Transformer W4

Figure 11. Building 483-3D, Old Location of Spill Control Motor Control Center

Figure 12. Building 484-5D, D-Area Powerhouse Storage Building

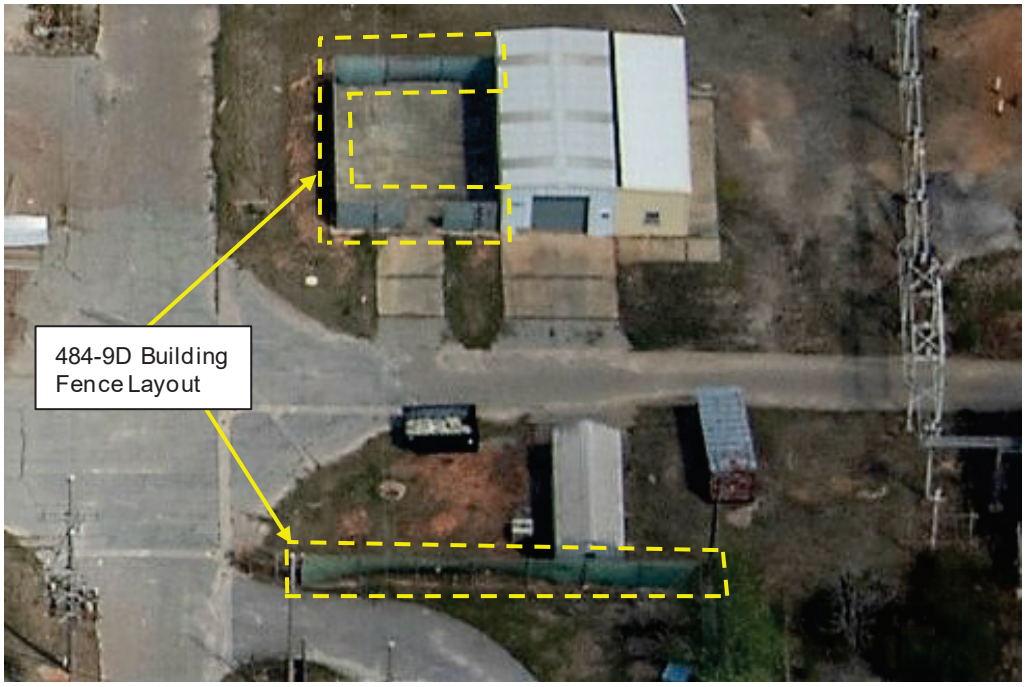

Figure 13. Building 484-5D, Building Fence Layout

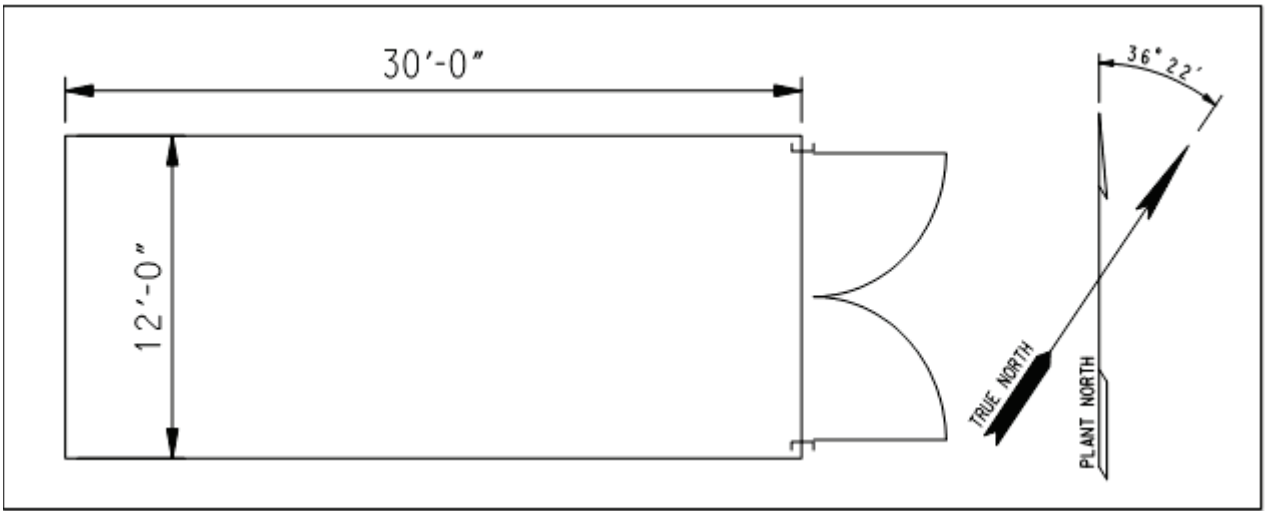

Figure 14. Building 484-5D, Building Layout

Figure 15. Building 484-5D, Interior (Looking West)

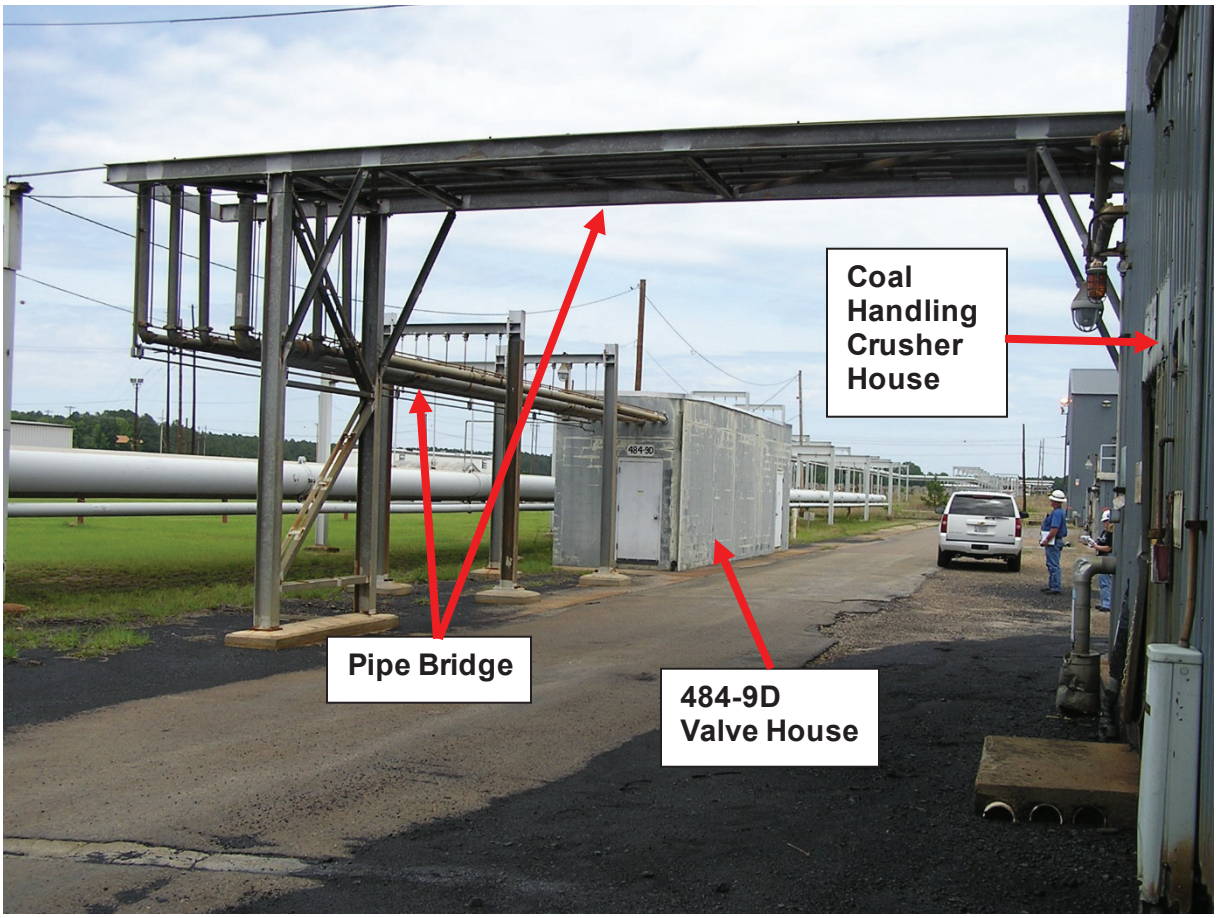

Figure 16. Building 484-9D, D-Area Vale House (Looking East)

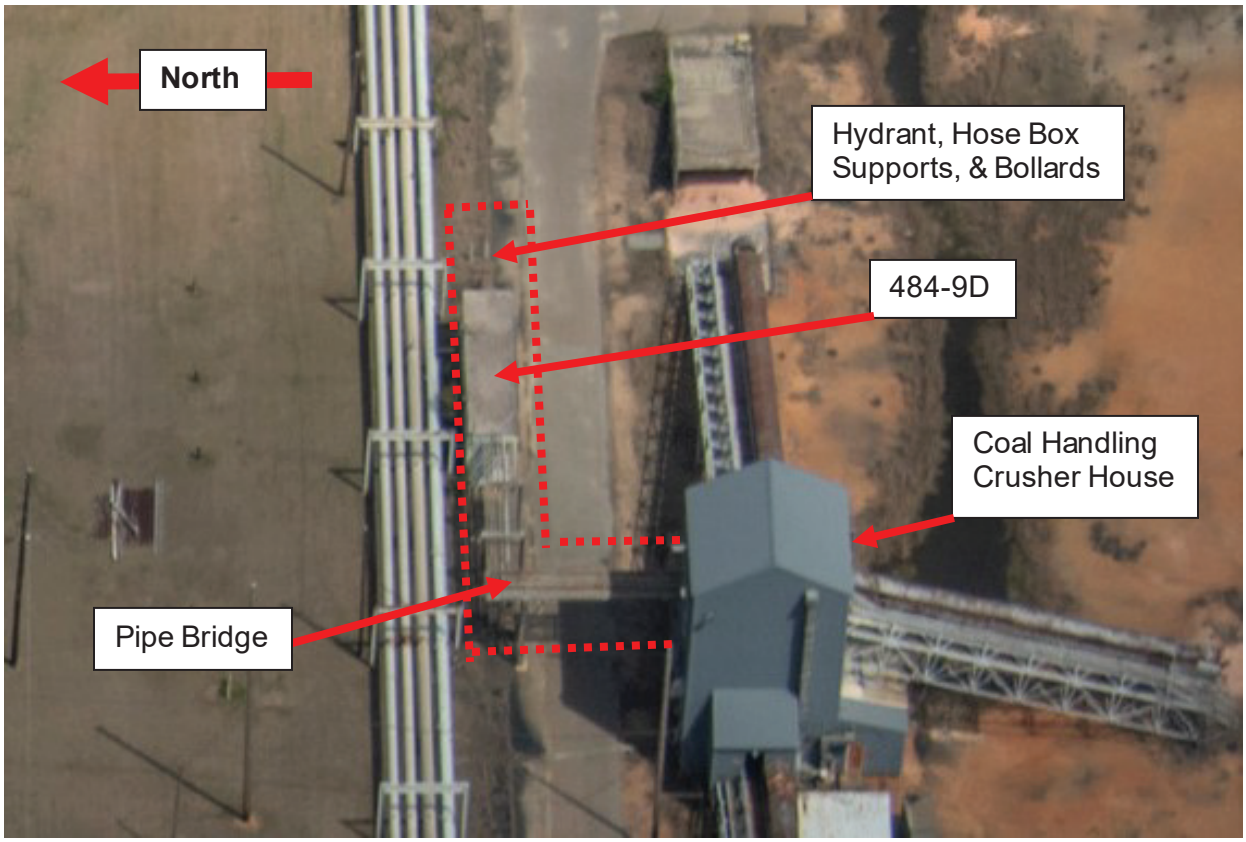

Figure 17. Aerial View of 484-9D and Ancillary Structures (Looking East)

Figure 18. Pipe Bridge at the Coal Handling Crusher House (Looking Upward and South)

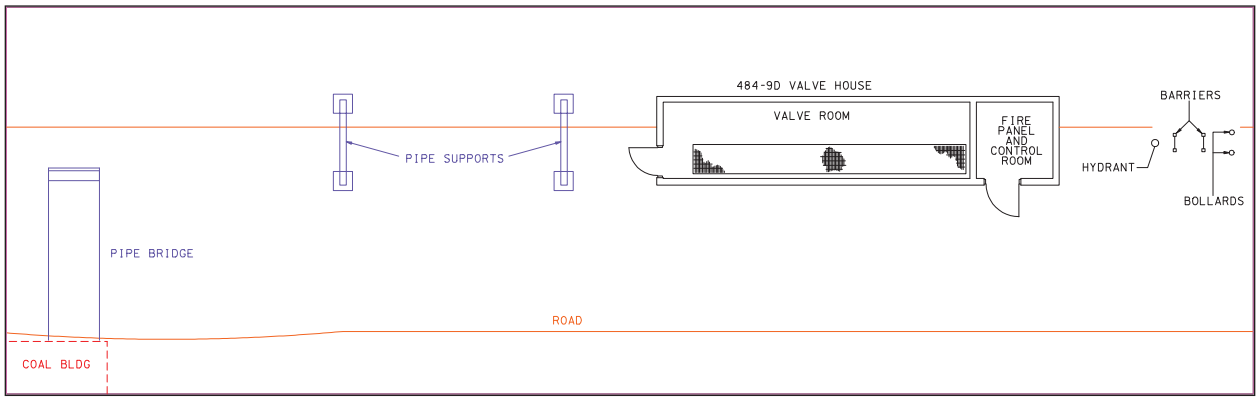

Figure 19. Building 484-9D, D-Area Valve House and Ancillary Facilities Layout

Figure 20. Building 484-9D, Valve Room (Looking East)

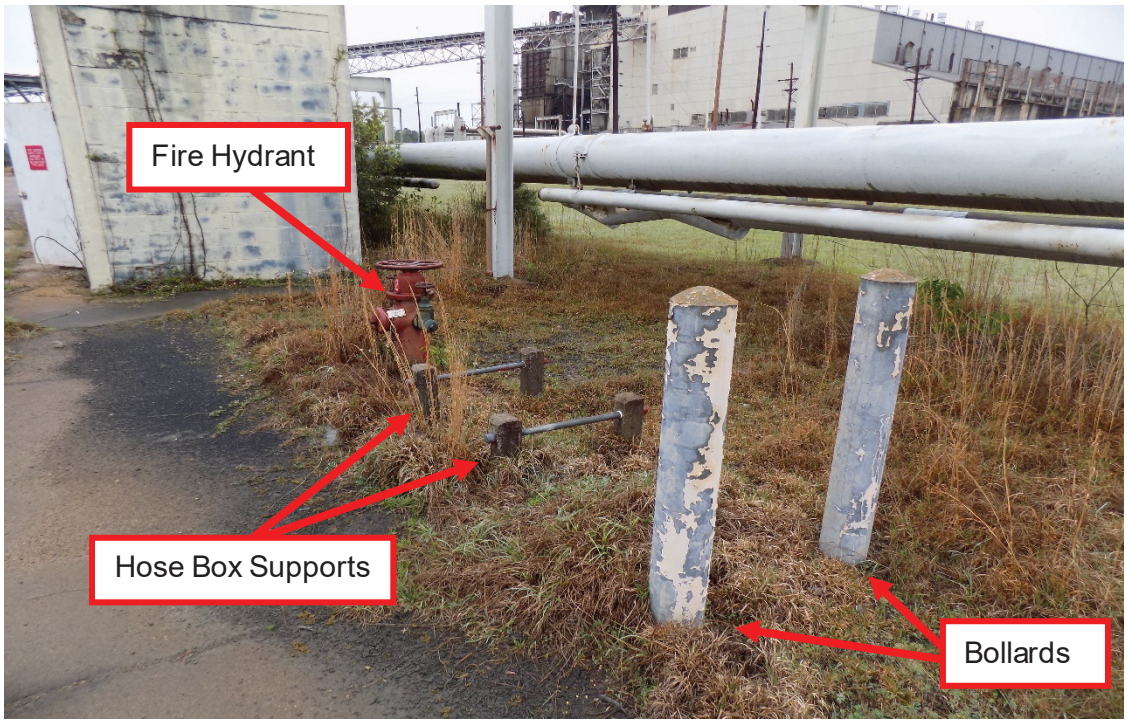

Figure 21. Building 484-9D Hydrant, Support Frame and Bollards

Figure 22. Building 485-D, D-Area Cooling Tower

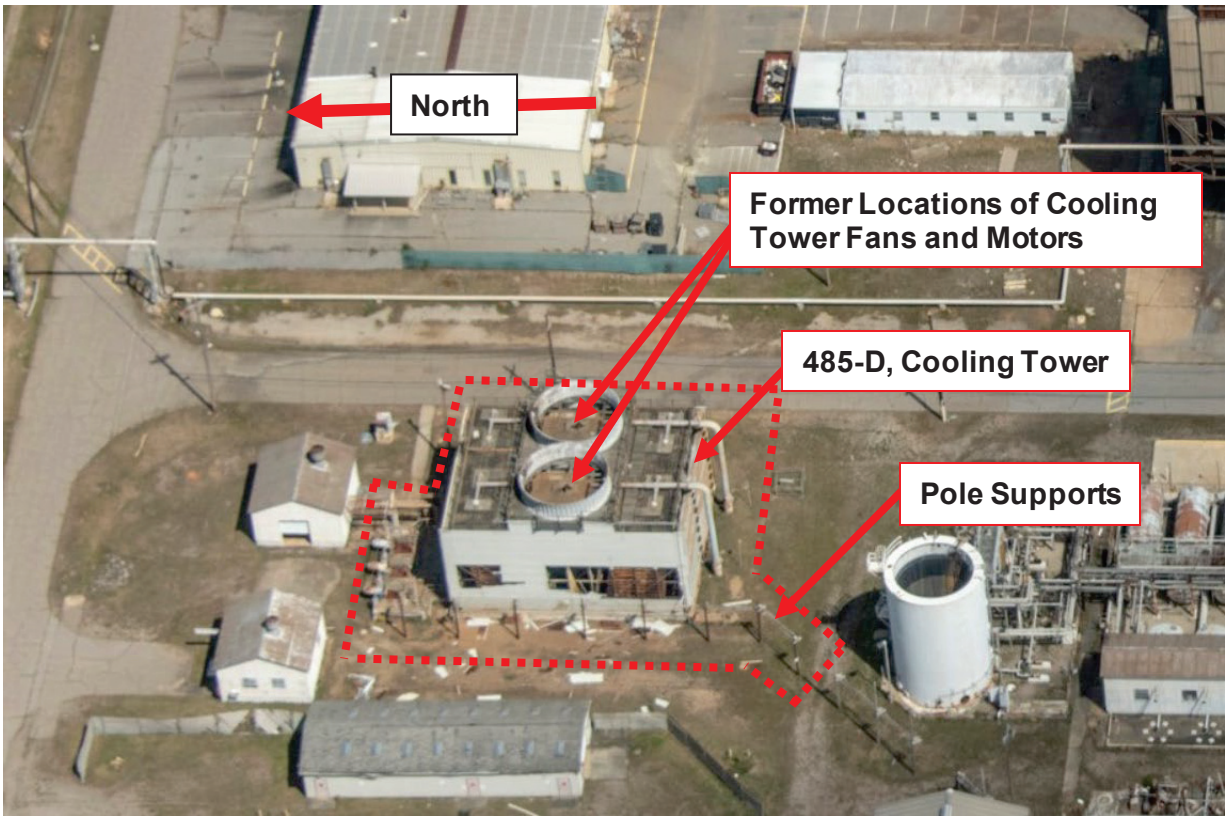

Figure 23. Building 485-D Aerial Photo

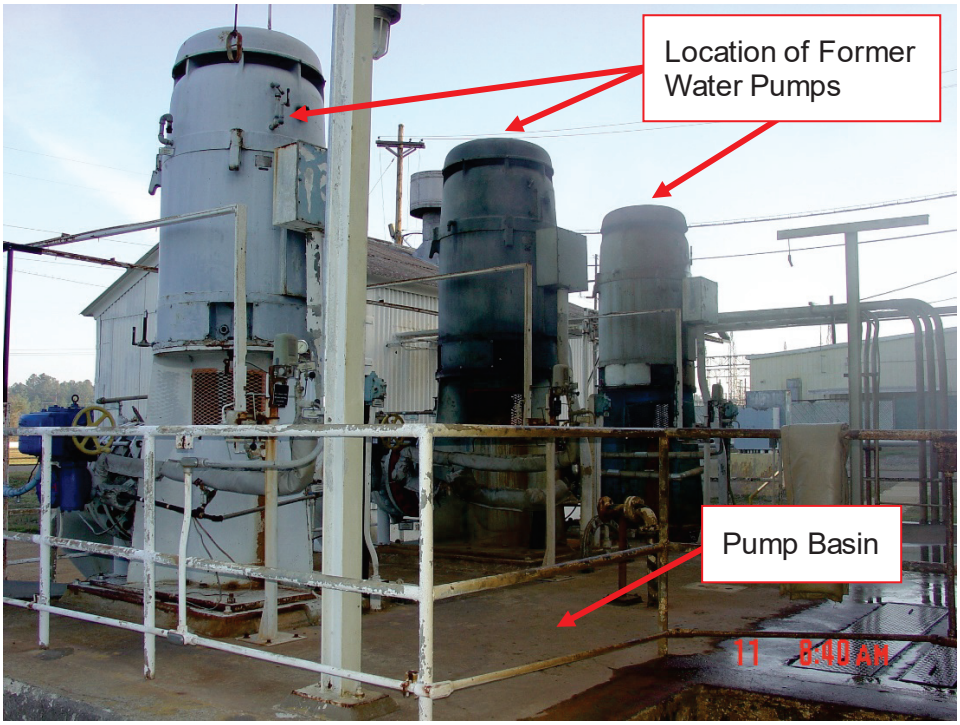

Figure 24. Building 485-D, Cooling Water Pumps Prior to Removal

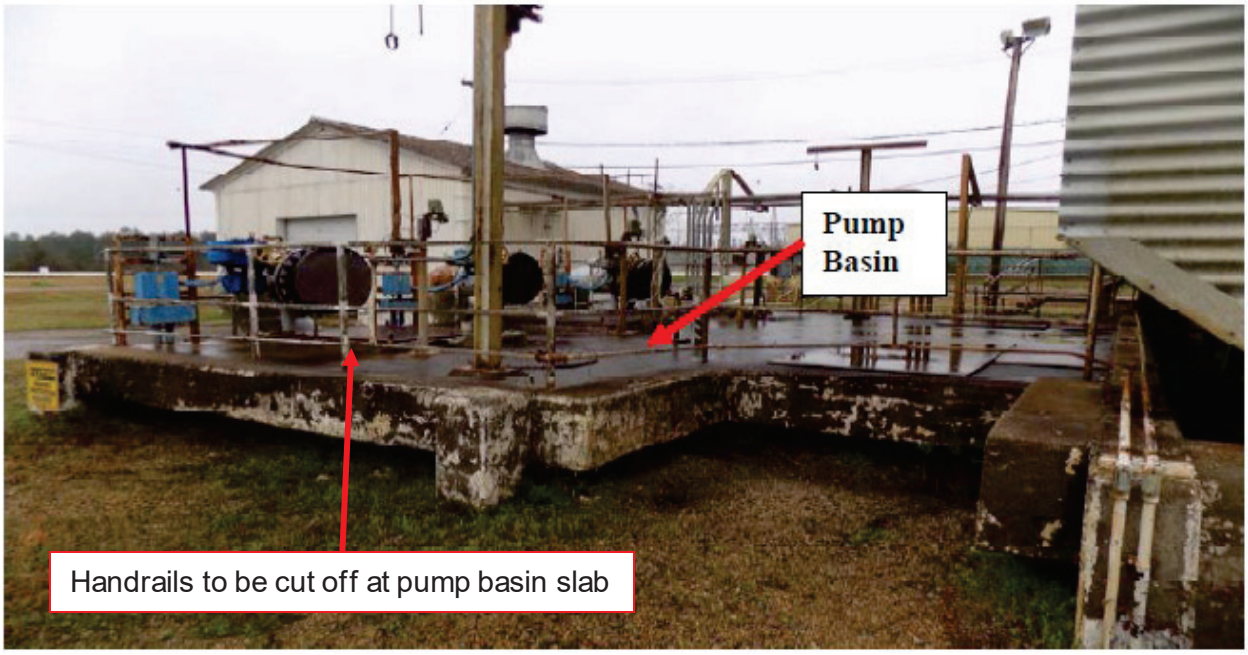

Figure 25. Building 485-D, Cooling Water Pumps After Removal (Current Configuration)

Figure 26. Building 485-D, D-Area Cooling Tower Concrete Stairways

Figure 27. Building 485-D, D-Area Cooling Tower Water Return Lines

Figure 28. Building 485-D, D-Area Cooling Tower Discharge Pipes

Attachment 5.2 – Engineering Document Requirements

Purpose The Engineering Document Requirements (EDR) form is prepared by the originator, establishes a basis for actions required of a Supplier and provides the schedule for the submittal of engineering documents by the Supplier.

Legend Entry

No.	Information Required
1	Document category number – see below.
2	Applicable specification number and appropriate paragraph.
3	Description corresponding to document category number.
4	Permission to proceed with fabrication or other specific processes is marked yes, if required.
5	List a milestone after award i.e., prior to fabrication, prior to test, prior to shipment, or with shipment that the listed document is to be submitted by Supplier.
6	Number of copies required for submittal.
7	Reproducible, Mylar, Vellum, etc.
8	Enter remarks when appropriate.

Document Category Number and Descriptions

1.0 Drawings
- 1.1 Outline Dimensions, Services, Foundations and Mounting Details – Drawings providing external envelope, including lugs, centerline(s), location and size for electrical cable, conduit, fluid, and other service connections, isometrics and details related to foundations and mountings.
- 1.2 Assembly Drawings – Detailed drawings indicating sufficient information to facilitate assembly of the component parts of an equipment item.
- 1.3 Shop Detail Drawings – Drawings which provide sufficient detail to facilitate fabrication, manufacture, or installation. This includes pipe spool drawings, internal piping and wiring details, cross-section details and structural and architectural details.
- 1.4 Wiring Diagrams – Drawings which show schematic diagram equipment, internal wiring diagrams, and interconnection wiring diagram for electrical items.
- 1.5 Control Logic Diagrams – Drawings which show paths which input signals must follow to accomplish the required responses.
- 1.6 Piping and Instrumentation Diagrams – Drawings which show piping system scheme and control elements.

2.0 Parts Lists and Costs – Sectional view with identified parts and recommended spare parts for one year's operation and specified with unit cost.

3.0 Complete SRS Data Sheets – Information provided by Supplier on data sheets furnished by SRS.

4.0 Instructions
- 4.1 Erection/Installation – Detailed written procedures, instructions, and drawings required to erect or install material or equipment.
- 4.2 Operations – Detailed written instructions describing how an item or system should be operated.
- 4.3 Maintenance – Detailed written instructions required to disassemble, reassemble and maintain items or systems in an operating condition.
- 4.4 Site Storage and Handling – Detailed written instructions, requirements and time period for lubrication, rotation, heating, lifting or other handling requirements to prevent damage or deterioration during storage and handling at jobsite. This includes shipping instruction for return.

5.0 Schedules: Engineering and Fabrication/Erection – Bar charts or critical path method diagram which detail the chronological sequence of activities, i.e., Engineering submittals, fabrication and shipment.

6.0 Quality Assurance Manual/Procedures – The document(s) which describe(s) the planned and systematic measures that are used to assure that structures, systems, and components will meet the requirements of the procurement documents.

7.0 Seismic Data Reports – The analytical or test report which provides information and demonstrates suitability of material, component or system in relation to the conditions imposed by the stated seismic criteria.

8.0 Analysis and Design Reports – The analytical data (stress, electrical loading, fluid dynamics, design verification reports, etc.) which demonstrate that an item satisfies specified requirements.

9.0 Acoustic Data Reports – The noise, sound and other acoustic vibration data required by the procurement documents.

10.0 Samples
- 10.1 Typical Quality Verification Documents – A representative data package which will be submitted for the items furnished as required in the procurement documents.
- 10.2 Typical Material Used – a representative example of the material to be used.

11.0 Material Descriptions – The technical data describing a material which a Supplier proposes to use. This usually applies to architectural items, e.g., metal siding, decking, doors, paints, coatings.

12.0 Welding Procedures and Qualifications – The welding procedure, specification and supporting qualification records required for welding, hard facing, overlaying, brazing and soldering.

13.0 Material Control Procedures – The procedures for controlling issuance, handling, storage and traceability of materials such as weld rod.

14.0 Repair Procedures – The procedures for controlling materials removal and replacement by welding, brazing, etc., subsequent thermal treatments, and final acceptance inspection.

15.0 Cleaning and Coating Procedures – The procedures for removal of dirt, grease or other surface contamination, and preparation and application of protective coatings.

16.0 Heat Treatment Procedures – The procedures for controlling temperatures and time at temperature as a function of thickness, furnace atmosphere, cooling rate and methods, etc.

19.0 UT – Ultrasonic Examination Procedures – Procedures for detecting discontinuities and inclusions in materials by the use of high frequency acoustic energy.

20.0 RT – Radiographic Examination Procedures – Procedures for detecting discontinuities and inclusions in materials by x-ray or gamma ray expose of photographic film.

21.0 MT – Magnetic Particle Examination Procedures – Procedures for detecting surface or near surface discontinuities in magnetic materials by the distortion of an applied magnetic field.

22.0 PT – Liquid Penetrant Examination Procedures – Procedures for detecting discontinuities in materials by the application of a penetrating liquid in conjunction with suitable developing materials.

23.0 Eddy Current Examination Procedures – Procedures for detecting discontinuities in materials by distortion of an applied electromagnetic field.

24.0 Pressure Test – Hydro, Air, Leak, Bubble or Vacuum Test Procedures – Procedures for performing hydrostatic or pneumatic structural integrity and leakage tests.

25.0 Inspection Procedures – Organized process followed for the purpose of determining that specified requirements (dimensions, properties, performance results, etc.) are met.

26.0 Performance Test Procedures – Test performed to demonstrate that functional design and operational parameters are met.
- 26.1 Mechanical Tests – e.g., pump performance, data, valve stroking, load, temperature rise, calibration, environmental, etc.
- 26.2 Electrical Test – e.g., impulse, overload, continuity, voltage, temperature rise, calibration, saturation, loss, etc.

Attachment 5.2 – Engineering Document Requirements (EDR)

1.	2.	3.	4.		5.	6.		7.	8.
Document Category Number	Specification Paragraph Reference	Document Description	Permission to Proceed Required		Submittal Schedule	Quantity Required		Kind of Copies	Remarks
			Yes	No		Initial	Final		
4.0	3.1.1.6	Fire Prevention Plan (FPP)	Yes		30 calendar days after Award		1	Repro / PDF	
16.0	3.1.1.6. D.12.a.	Hot Work Permit Procedure	Yes		Prior to any Hot Work operations		1	Repro / PDF	
4.0	3.1.1.7	Worker Protection Plan (WPP)	Yes		30 calendar days after Award		1	Repro / PDF	
4.0	3.1.1.8	Task Specific Plans (TSP)	Yes		10 calendar days prior to start of each task		1	Repro / PDF	
5.0	3.1.1.10	Decommissioning Plan & Activities Schedule	Yes		30 calendar days after Award		1	Repro / PDF	
4.0	3.1.1.13	Approved Demolition Permit(s)	Yes		4 working days prior to start of any demolition activities		2	Repro / PDF	
4.0	3.5.1.2.	Copies of worker qualifications and any required licenses	Yes		With proposal		1	Repro / PDF	
4.0	3.1.1.17	Three Rivers Sanitary Landfill scale ticket for each waste shipment	Yes		After each shipment		1	Repro / PDF	
6.0	3.1.1.22.C	Engineering Survey	Yes		30 calendar days after Award		1	Repro / PDF	

Attachment 5.3 – Asbestos Management Program Aid

	Manual:	3Q
	Procedure:	4.14
Asbestos Management Program	Revision:	11
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APPENDIX 8.6
Aid for Determining Demolition License Requirements at the Savannah River Site
Page 1 of 2

Aid for Determining Demolition License Requirements at the Savannah River Site

Regulatory Integration and Environmental Services

March 28, 2012
Revision 2

Contact your area/ project Environmental Compliance Authority for assistance and more information.

This document is provided as a service to Savannah River Site organizations and contractors by the Regulatory Integration and Environmental Services Department

Additional Information Required for Compliance

This aid is a supplement to Procedures 3Q 4.14 and 3Q 5.1, and to South Carolina Department of Health and Environmental Control (SCDHEC) Regulation 61-86.1 as they relate to the demolition of structures. It should not be used as a replacement for compliance with the procedures and regulation. Items to be considered in determining the need for a demolition license:

- A demolition is defined as the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations, the burning of a facility, or the moving of a structure.
- Renovation is the altering of a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos from a facility component.
- A demolition license is required even if no asbestos is present in the building.
- An inspection by a certified asbestos inspector is required before applying for a license.
- SCDHEC requires a 10-day mandatory waiting period after the application is received and before a license can be issued and work begins.
- Start and finish dates are enforced by SCDHEC but can be modified with 24-hour notice to the RIAES licensing agent.
- SCDHEC licenses and license modifications must be obtained through the RIAES licensing agents via the following e-mail address: "ASBESTOS PERMITTING" or by calling 2-6553.

Attachment 5.3 – Asbestos Management Program Aid

Asbestos Management Program	Manual:	3Q
	Procedure:	4.14
	Revision:	11
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APPENDIX 8.6
Aid for Determining Demolition License Requirements at the Savannah River Site
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