

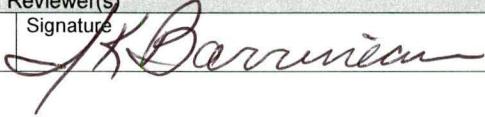

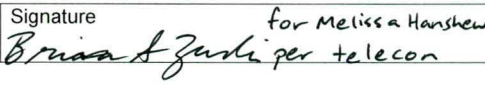

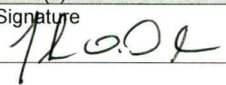



# Procurement Specification/Statement of Work (SOW) Cover Sheet

Proc. Ref. E7, 2.14

<b>1. Title</b>		
<b>Decommissioning of Buildings 480-3D, 482-2D, 704-7D, 710-16D &amp; 717-3D</b>		
<b>2. Specification/SOW Number</b>	<b>3. Revision</b>	<b>5. Functional Classification</b>
G-SOW-D-00012	0	GS
<b>6. Requester Department</b>	<b>7. Requester Division</b>	
EC&ACP	M&O	
<b>8. Responsible Engineer/Cognizant Technical Function</b>		
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Department		
EC&ACP Engineering		
<b>9. Verifier/Checker</b>		
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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 480-3D, 482-2D, 704-7D, 710-16D and 717-3D 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 five facilities in D-Area of the Savannah River Site (SRS).
  - 1.2.1.1 480-3D, Maintenance Field Office and Shop
  - 1.2.1.2 482-2D, Switchgear Building
  - 1.2.1.3 704-7D, D-Area Maintenance Building
  - 1.2.1.4 710-16D, Storage Building
  - 1.2.1.5 717-3D, D-Area Welding Shop
- 1.2.2 The work to be performed includes demolition and removal of the buildings and all associated appurtenances (such as equipment, fencing, covered buildings, portable skid-mounted shed, electrical cabinets, etc.) as described herein.
- 1.2.3 The proposed decommissioning end-state for the portable, skid-mounted shed ancillary to 704-7D, which has no defined or anticipated future missions, is to completely dismantle and remove from the site.
- 1.2.4 The proposed decommissioning end-state for Buildings 480-3D, 482-2D, 704-7D, 710-16D, and 717-3D, along with any associated fencing, storage areas, covered storage buildings, electrical cabinets, 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 480-3D** is a 24' X 24' prefabricated structure built in the early 1950s. It is a single-story building located northwest of the 485-D Cooling Tower in the northern section of 400-D Area of the SRS. (See Attachment 5.1 Photos and Drawings, Figures 1, 2 and 3).
  - 1.3.1.1 In the original construction the siding and roof were made of corrugated asbestos. The original interior walls were asbestos cement board but have been replaced with drywall. The siding and roof, as well as the interior drywall have been removed by the asbestos abatement contractor per G-SOW-D-00009, the SOW for the Abatement of Asbestos Containing Material in D-Area Buildings 480-3D, 482-2D, 484-4D, 485-D, and 704-D.
  - 1.3.1.2 The framing of the walls utilized steel studs. The doors were hollow metal. The windows were standard commercial, externally projected, steel sash with adjustable louvers. It was constructed with two hollow steel personnel access doors and a double, side-swinging bay door.

### 1.3 Facility Descriptions (Continued)

- 1.3.1.3 The building was erected on a concrete slab and had two partitioned rooms within: a “chemical (lime) storage room” and a “chlorine cylinder room”. The building was originally used as a preparation building for treatment of cooling tower water.
- 1.3.1.4 In the timeframe of 1976–1977, plans were made and executed to convert the building to office space. All equipment was removed, and domestic water service was installed for the conversion. Alterations were made to the drainage and process water supply lines within the facility.
- 1.3.1.5 The original plan for the building identified multiple floor drains, hubs and clean-outs inside the building. All drains, hubs and clean-outs were plugged and grouted except one (1) hub and one (1) floor drain inside the former Lime Storage Room and one (1) clean-out and one (1) floor drain inside the former Chlorine Cylinder Tank Room. (See Attachment 5.1 Photos and Drawings, Figure 3). These exceptions remain in good condition and are still connected to the Storm Sewer drain system. Remaining hub, cleanout, and floor drains will also be plugged and grouted during decommissioning.
- 1.3.1.6 The facility also had a 3” process water supply which has now been disconnected exterior to the building and capped. A hub to the Storm Sewer drain lines was removed and the piping was filled with grout. The process water piping and valves were removed to the floor and the remaining pipe filled with grout. In addition, domestic water supply lines, water heater, sink and drinking fountain were installed as part of the office conversion. Currently, the domestic water supply line has been disconnected exterior to the building and capped. The building contains no sump.
- 1.3.1.7 Currently, the building is abandoned and retains a skeletal structure of exposed steel studs and rafters, as well as the original windows and doors.
- 1.3.1.8 There are three spaces partitioned off in the building. The floor of the building in the original construction was tiled over the concrete slab. The tiles have been removed by the asbestos abatement contractor per G-SOW-D-00009, the SOW for the Abatement of Asbestos Containing Material in D Area Buildings 480-3D, 482-2D, 484-4D, 485-D, and 704-7D.
- 1.3.2 **Building 482-2D**, constructed in 1952, is in the northern portion of the 400-D Area (Figure 1), just north of the 485-D Cooling Tower. The 576 square feet (24’ x 24’) Switchgear Building used to contain the dry transformers and switchgear for the cooling tower equipment. The transformers and switchgear were removed during deactivation. (See Attachment 5.1 Photos and Drawings, Figures 4 and 5).
- 1.3.2.1 The building has a steel frame structure on a concrete slab.
- 1.3.2.2 In the original construction the siding and roof of the building were corrugated asbestos. Both the siding and roof have been removed by the asbestos abatement contractor per G-SOW-D-00009, the SOW for the Abatement of Asbestos Containing Material in D-Area Buildings 480-3D, 482-2D, 484-4D, 485-D, and 704-7D.
- 1.3.2.3 The building has an 8’ by 10’ roll-up door in the west wall and a standard metal 36” hinged personnel door in the east wall.
- 1.3.2.4 Building 482-2D has no floor drains or sumps.

### 1.3 Facility Descriptions (Continued)

- 1.3.2.5 Two 200-amp, 2.4 kilovolt (kV) feeders provided line power from the Powerhouse to the 2.4 kV switchgear in 482-2D. The 2.4 kV switchgear fed the cooling tower pumps and two transformers. One transformer stepped down to 120 V for control power. The other transformer stepped down the 2.4 kV feed to 440 V. The 440 V switchgear was used to provide power to the cooling tower fans, the heaters in 482-2D, power to 483-D and a lighting transformer that fed a miscellaneous power panel. All the switchgear and the transformers described resided within Building 482-2D and were disconnected and removed during deactivation.
- 1.3.2.6 Outside, to the southeast of 482-2D, are two ancillary, back-to-back electrical cabinets mounted on a raised concrete pedestal (See Attachment 5.1, Photos and Drawings, Figure 5). Both electrical cabinets have been electrically isolated, and their contents removed. The east cabinet is approximately 5' tall by 3' wide by 16" deep. The west cabinet is approximately 42" tall by 42" wide by 16" deep.
- 1.3.3 **Building 704-7D** is in the west central section of the 400 D-Area of the SRS (Figure 1) northwest of the 484-D Powerhouse and north of the 483-D Water Treatment Softener Building. Building 704-7D is a standard, single story office structure. While it is called a maintenance building, it has been an office structure for powerhouse operations and the different maintenance and construction trades since it was put in place in 1991. The structure initially started as the 2,110 square foot main structure to the north. Shortly after its construction, offices and bathrooms were added to the back of the structure for the maintenance and construction trades. The original building and addition are considered one structure. (See Attachment 5.1 Photos and Drawings, Figures 6-13).
- 1.3.3.1 Building 704-7D includes the following ancillary structures:
- A. Portable skid-mounted shed (PB00277)
  - B. Electrical Feeder Boxes
  - C. Fencing and fence posts
  - D. Building Related Appurtenances as shown on Figures 9-13 (electrical equipment racks including conduits, telephone pedestals, bollards, concrete equipment pads, ductwork and supports, insulation box over and including above grade water piping, small dry transformer).
- 1.3.3.2 The main building is a prefabricated unit that contained office space and office furniture, storage, computers, telecommunications equipment, restrooms, and a small kitchenette. The kitchenette contains a water heater, as well as typical kitchenette fixtures such as a sink and cabinet. The bathrooms and kitchenette contain sanitary sewer drains as appropriate for sinks, showers and toilets. The building also contains a First Aid room.
- 1.3.3.3 The main building is a wood and steel, light-frame structure, with exterior dimensions of approximately 35' X 60'. Interior walls are paneled. Flooring is standard tile/linoleum. Exterior siding is vinyl. Roofing is asphalt shingle. The building sits on concrete footings.
- 1.3.3.4 The addition is approximately 25' x 65' and is a light construction unit with no interior doors. All doors open to the exterior of the building to landings typically shared by two adjacent rooms in the addition.

### 1.3 Facility Descriptions (Continued)

- 1.3.3.5 The addition's interior walls are paneled. The roof is asphalt shingle. The flooring is standard tile/linoleum. The siding is vinyl. The framing appears to be all wood. Wooden timbers support the structure from the ground underneath.
- 1.3.3.6 The addition contains restroom facilities at the far end from the main building. The restroom facilities contain sinks, toilets and showers with their related drains to the sanitary sewer system. The men's facility is more expansive than the women's facility. The remaining rooms within the addition were being used for offices. The structure has dimensions of approximately 25' X 65'.
- 1.3.3.7 In addition to Building 704-7D, there is a portable, skid-mounted shed (PB00277) to the west of 704-7D that is included in the project boundaries for decommissioning. The structure is approximately 8' X 10', wood and steel construction. (See Attachment 5.1 Photos and Drawings, Figures 6 and 8).
- 1.3.3.8 Electrical service to both Building 704-7D and its ancillary shed, PB00277, has been electrically isolated.
- 1.3.3.9 Within the boundary of the facility for decommissioning are electrical power feeder boxes, no longer in service, that were in place for additional small structures that were once within the boundaries of the project. (See Attachment 5.1 Photos and Drawings, Figure 8).
- 1.3.3.10 The area is partially fenced. (See Attachment 5.1 Photos and Drawings, Figures 1 and 8).
- 1.3.3.11 There is a pad on the outside of the structure where a heating, ventilation and air-conditioning (HVAC) unit was once installed, but the unit was removed, and the ductwork was abandoned in place. (See Attachment 5.1 Photos and Drawings, Figure 12).
- 1.3.3.12 There is a concrete pad at the southeast corner of the original structure containing abandoned electrical disconnects, and a dry type transformer. Adjacent to the pad are a signal box, two telephone junction boxes and 4 bollards. (See Attachment 5.1 Photos and Drawings, Figures 11 and 13).
- 1.3.3.13 Building 704-7D has been determined to be unsafe to enter because of deteriorated flooring. Therefore, all demolition activities on this building shall be completed utilizing heavy equipment until such time as the building is completely dismantled and hand demolition may be necessary.
- 1.3.4 **Building 710-16D** is in the west central section of the 400-D Area of the SRS (Figure 1) northwest of the 484-D Powerhouse and north of the 483-D Water Treatment Softener Building. The 710-16D storage building was built in 1993. The 1580 square foot (49.75' x 31.76') building is wood frame construction on a concrete foundation. The foundation is not a slab; however, it does consist of some interior concrete floor as it extends inward beyond the walls in many locations. The remaining floor space is natural dirt. (See Attachment 5.1, Photos and Drawings, Figures 14, 15 and 16).
  - 1.3.4.1 Building 710-16D includes the following ancillary structures:
    - A. Fencing and fence posts
  - 1.3.4.2 The building has an asphalt shingle roof and vinyl siding.
  - 1.3.4.3 It has eight (8) storage areas. Additional "attic" storage, with ladder access in Storage 1, is available above the ceilings installed over Storage 2 and 3 and over Storage 4, 5, 6, 7 and 8. (See Attachment 5.1 Photos and Drawings, Figure 16).

### 1.3 Facility Descriptions (Continued)

- 1.3.4.4 Currently there are no building contents.
- 1.3.4.5 The building has no associated sumps or drains. Further the building has no services to or from the facility.
- 1.3.4.6 What appears to be a small (~1 ft<sup>2</sup>) oil stain is evident on the concrete within Storage 8. There is no evidence of the spill having reached onto the adjacent dirt floor area. Stained concrete will be cleaned with BioSolve<sup>®</sup> or equivalent surfactant during decommissioning.
- 1.3.4.7 The area is partially fenced. (See Attachment 5.1 Photos and Drawings, Figures 1 and 15).
- 1.3.5 **Building 717-3D** is in the north end of 400-D Area of the SRS (Figure 1) in South Carolina. Building 717-3D is currently a storage building. The building was constructed in 1991 to serve as a welding shop, but within a couple of years it was converted into storage space. The building is approximately 26.5' by 73.5' and 14' high at the peak of the roof, giving it approximately 1,900 ft<sup>2</sup> of floor space. The building is light steel frame construction with insulated walls and ceiling. Vinyl siding, wood and composite materials (non-asbestos) are also included in the construction. (See Attachment 5.1, Photos and Drawings, Figures 17-22).
  - 1.3.5.1 Building 717-3D includes the following ancillary structures:
    - A. Fencing and fence posts
    - B. Building Related Appurtenances as shown on Figures 19, 20, and 21 (translucent skylight discs, concrete equipment pads, and bollards).
  - 1.3.5.2 The roof of the structure is asphalt shingle. Most of the floor is tile on concrete, except for one office which is carpeted and the small electrical room which is bare concrete.
  - 1.3.5.3 The building had electricity supplied, which has since been electrically isolated. There was no domestic water or sewer supplied to the structure.
  - 1.3.5.4 The building was provided with a speaker from the area's public address system which is no longer in service.
  - 1.3.5.5 The building has a small sump in the center of the largest room in the building (south end). The sump is 64" long x 28" wide x 5-3/4" deep. The sump is covered with a metal grate. There are no readily apparent stains on the slab of the structure or within the sump. Further, there are no observed cracks or loss of integrity in the slab or inside the sump.
  - 1.3.5.6 The area is partially fenced. (See Attachment 5.1 Photos and Drawings, Figures 1 and 18).
  - 1.3.5.7 The HVAC unit (including the freon) was removed from the concrete pad on the exterior east side of the building. (See Attachment 5.1 Photos and Drawings, Figure 21).

## 2.0 REFERENCES

### 2.1 Definitions

#### 2.1.1 Acronyms

~	approximate, approximately
ACM	Asbestos Containing Material
CFR	Code of Federal Regulations
EC&ACP	Environmental Compliance and Area Completion Projects

## 2.1 Definitions (Continued)

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
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.
- 2.1.2.2 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 Definitions (Continued)

- 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

- 2.2.2.1 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 Orders / Regulations (Continued)**

- 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 S5-4-615, Rev. 0, dated 3/23/1976 “Office Addition Piping”
- 2.4.1.2 S5-4-610, Rev. 0, dated 3/23/1976 “Office Addition Plan and Details”
- 2.4.1.3 S5-4-611, Rev. 0, dated 3/23/1976 “Office Addition Details”
- 2.4.1.4 S5-4-612, Rev. 0, dated 3/23/1976 “Office Addition Reflection Ceiling Plan”
- 2.4.1.5 S5-4-613, Rev. 0, dated 3/23/1976 “Office Addition Lighting and Electrical”
- 2.4.1.6 S3-4-132, Rev. 0, dated 2/18/1953 “Chemical Building Monorail”

### 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-00010, Rev. 0, dated November 11, 2019, “Baseline Asbestos Inspection Report of Building 480-3D”
- 2.4.2.3 Q-APG-D-00006, Rev. 0, dated October 30, 2019, “Baseline Asbestos Inspection Report of Trailer 482-2D”
- 2.4.2.4 Q-APG-D-00016, Rev. 0, dated November 18, 2019, “Baseline Asbestos Inspection Report of Building 704-7D”
- 2.4.2.5 Q-APG-D-00019, Rev. 1, dated October 21, 2019, “Baseline Asbestos Inspection Report of Building 710-16D”
- 2.4.2.6 Q-APG-D-00019, Rev. 0, dated November 21, 2019, “Baseline Asbestos Inspection Report of Building 710-16D”
- 2.4.2.7 Q-APG-D-00008, Rev. 1, dated October 21, 2019, “Baseline Asbestos Inspection Report of Building 717-3D”
- 2.4.2.8 Q-APG-D-00008, Rev. 0, dated November 5, 2019, “Baseline Asbestos Inspection Report of Building 717-3D”
- 2.4.2.9 V-PCOR-D-00042, Rev. 0, dated July 1, 2014, “Deactivation Project Final Report Building 484-D Powerhouse and Ancillary Buildings”
- 2.4.2.10 V-PMP-D-00016, Rev. 1, dated November 02, 2020, “Decommissioning End Points Document Building 480-3D, Maintenance Field Office and Shop”
- 2.4.2.11 V-PMP-D-00017, Rev. 1, dated November 02, 2020, “Decommissioning End Points Document Building 704-7D, D-Area Maintenance Building”

## **2.4 SRNS Documents (Continued)**

- 2.4.2.12 V-PMP-D-00030, Rev. 1, dated November 02, 2020, "Decommissioning End-Points Document Building 717-3D, D-Area Welding Shop"
- 2.4.2.13 V-PMP-D-00042, Rev. 1, dated November 02, 2020, "Decommissioning End-Points Document Building 482-2D, Switchgear Building"
- 2.4.2.14 V-PMP-D-00018, Rev. 1, dated November 02, 2020, "Decommissioning End-Points Document Building 710-16D, Storage Building"
- 2.4.2.15 Q-SDD-D-00009, Rev. 0, dated November 02, 2020, "Engineering Survey and Interference Report for Building 480-3D, Maintenance Field Office and Shop"
- 2.4.2.16 Q-SDD-D-00010, Rev. 0, dated November 02, 2020, "Engineering Survey and Interference Report for Building 482-2D, Electrical Switchgear Building"
- 2.4.2.17 Q-SDD-D-00011, Rev. 0, dated November 02, 2020, "Engineering Survey and Interference Report for Building 704-7D, D-Area Maintenance Building"
- 2.4.2.18 Q-SDD-D-00012, Rev. 0, dated November 02, 2020, "Engineering Survey and Interference Report for Building 710-16D, Storage Building"
- 2.4.2.19 Q-SDD-D-00013, Rev. 0, dated November 02, 2020, "Engineering Survey and Interference Report for Building 717-3D, D-Area Welding Shop"
- 2.4.2.20 E-SDD-D-00001, Rev. 1, dated August 19, 2020, "Verification of Hazardous Energy Isolations for Building 484-D Powerhouse and Ancillary Buildings"
- 2.4.2.21 E-SDD-D-00002, Rev. 0, dated August 17, 2020, "Closeout of Verification Document for Building 484-D Powerhouse and Ancillary Buildings"
- 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)"
- 2.4.2.23 G-SOW-D-00009, Rev. 0, dated April 07, 2020, "Statement of Work for the Abatement of Asbestos Containing Material in D-Area Buildings 480-3D, 482-2D, 484-4D, 485-5D and 704-7D"

## **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

### 3.1 General Scope (Continued)

- 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. 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 building will also be inspected for mercury.
- D. Receptacles/Accumulation Areas, as necessary, for all light bulbs, ballasts, etc.
- E. Containers/roll-off pans for disposition of all recyclable materials and universal waste.
- F. STR will provide OSR Form 4-356s for shipments of recyclable materials.
- G. Special Waste Manifests/Worksheets for the disposition of special waste materials to the Three Rivers Landfill.
- H. As built the final Demolition configuration and closure of the Site Clearance Permit(s) for buildings within the scope of this SOW.
  - I. Work completed prior to Subcontractor mobilization shall include:
    - 1. Isolate, relocate and/or eliminate all power/communication systems.
    - 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. 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.) to be provided by SRNS to the C&D Landfill or Three Rivers Landfill as directed by SRNS.
- C. Tools, equipment, and consumables for non-radiological demolition work
- D. Portable toilets for work location
- E. Worker break/change facilities
- F. All required personal protective safety equipment
- G. All other required safety equipment
- H. 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 General Scope (Continued)

- 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
    - 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 480-3D, 482-2D, 704-7D, 710-16D, 717-3D 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.

### 3.1 General Scope (Continued)

- 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 2.4.2.10, 2.4.2.11, 2.4.2.12, 2.4.2.13, and 2.4.2.14) 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.
- 3.1.1.10 Prepare a Decommissioning Plan and Activities Schedule which identify in detail the step-by-step activities relative to the dismantlement and removal of Buildings 480-3D, 482-2D, 704-7D, 710-16D, 717-3D 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 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 General Scope (Continued)

- 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.
- 3.1.1.14 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 five 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.

### 3.1 General Scope (Continued)

- 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.
    - 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 General Scope (Continued)

- 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 480-3D, 482-2D, 704-7D, 710-16D, and 717-3D 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 Ensure any oil stains discovered on the concrete slabs are cleaned using a strong surfactant (i.e. BioSolve<sup>®</sup>) as part of the final clean-up of the concrete slabs and surrounding area.
- 3.1.1.27 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.
- 3.1.1.28 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.
- 3.1.1.29 Minimize interference with other personnel, roads, streets, etc. during all demolition activities.
- 3.1.1.30 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.).
- 3.1.1.31 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.
  - 3.5.3.2 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 Deliverables and Submittals (Continued)

- 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.
  - 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](mailto:vendordocuments@srs.gov) for:
- A. EDR submittals,

### **3.6 Deliverables and Submittals (Continued)**

- 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**

##### **3.8.3.1 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 SRNS Surveillance and Audits (Continued)**

- 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.
- 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, and final removal of all equipment and materials utilized in performance of this work.
  - B. A Final Inspection Acceptance 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 completion of the specified work (i.e. no open punch list items) prior to final acceptance.

## **5.0 ATTACHMENTS**

### **5.1 Photos and Drawings**

### **5.2 Engineering Document Requirements with Instructions (2 Pages)**

### Attachment 5.1 – Photos and Drawings

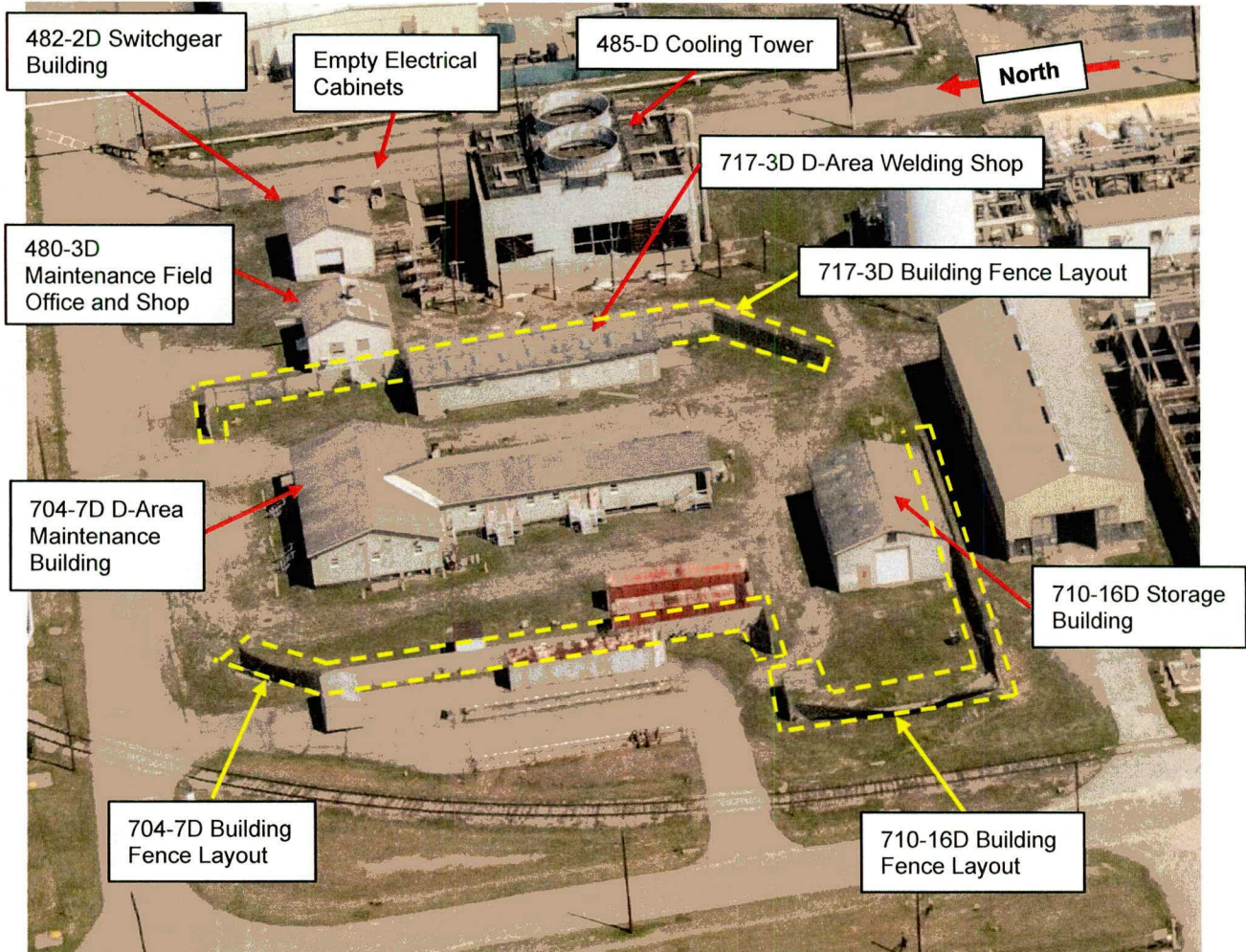


Figure 1. Building Locations



Figure 2. Building 480-3D, Maintenance Field Office and Shop

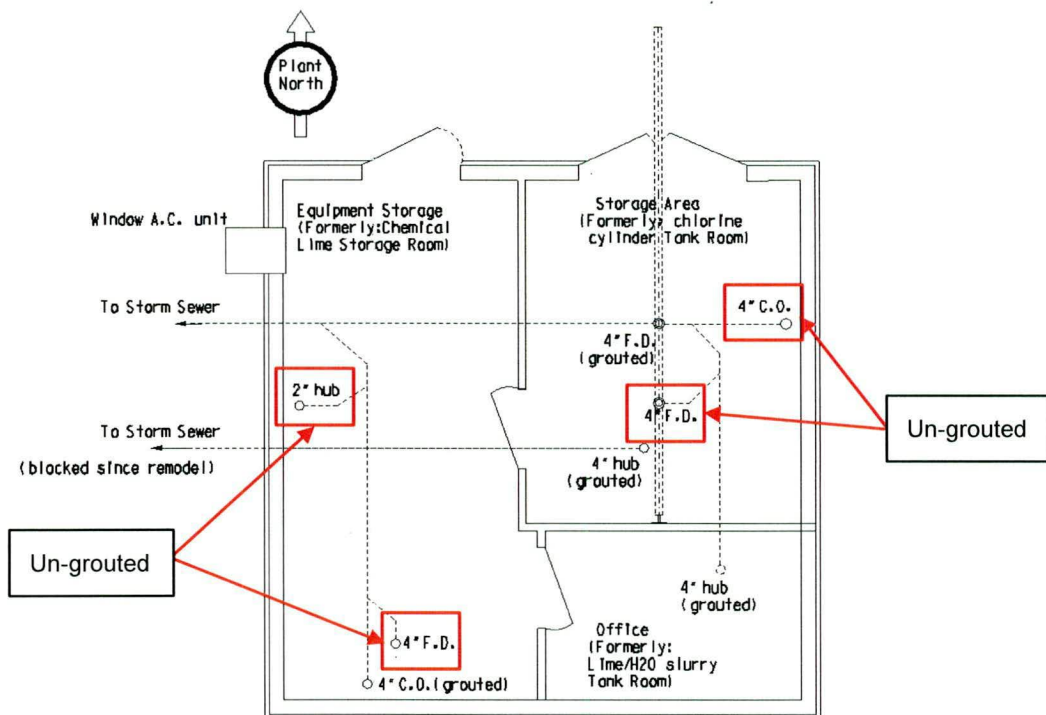
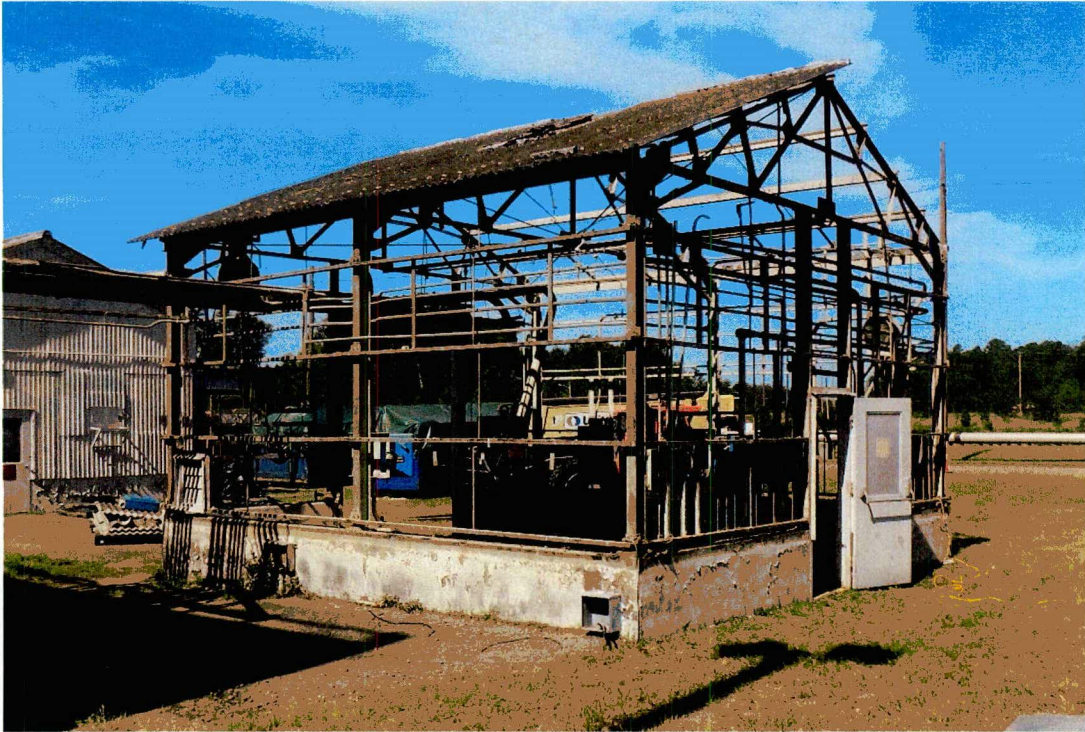


Figure 3. Building 480-3D, Building Layout



**Figure 4. Building 482-2D, Switchgear Building**

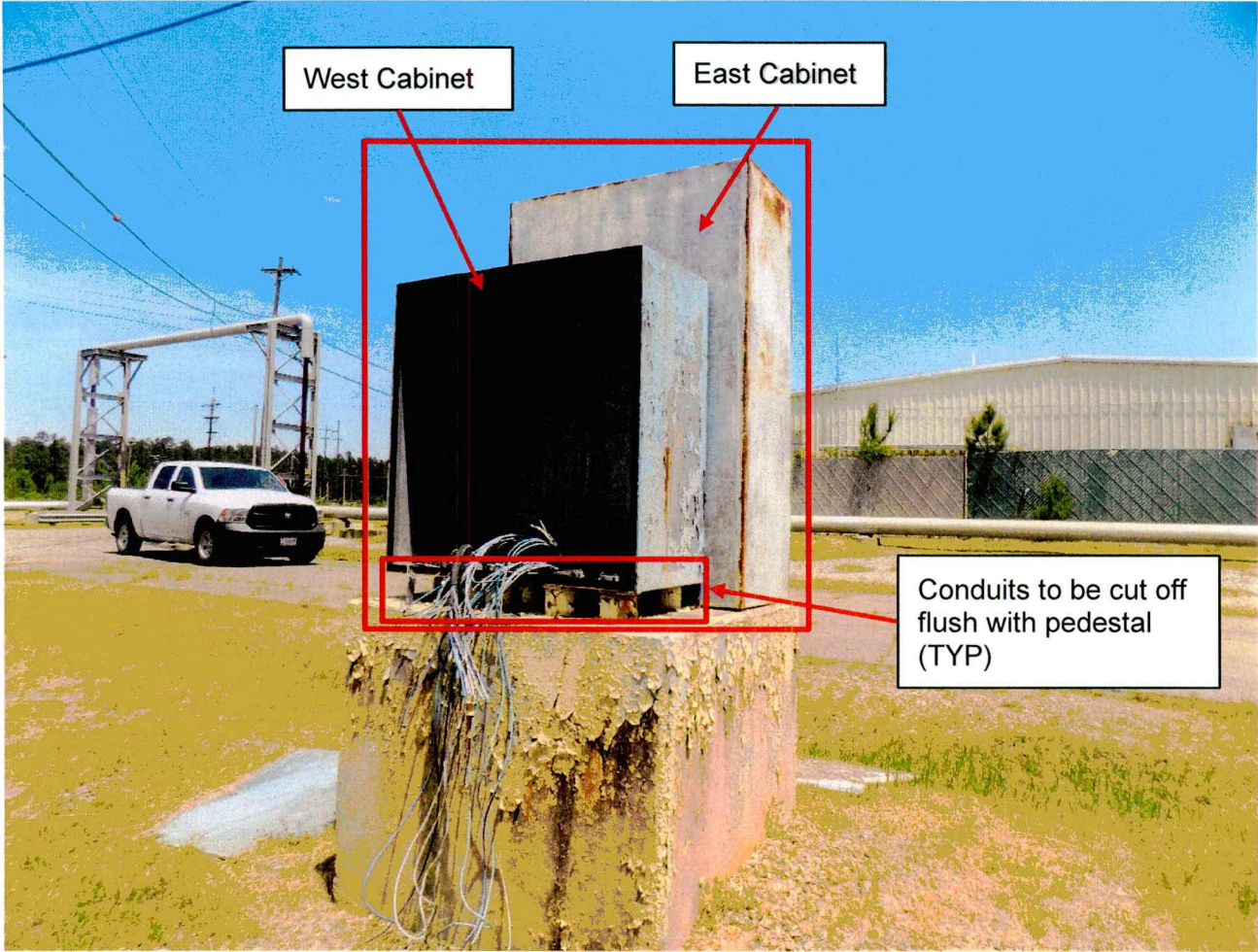


Figure 5. Building 482-2D, Outside Electrical Cabinets



**Figure 6. Building 704-7D, D-Area Maintenance Building**

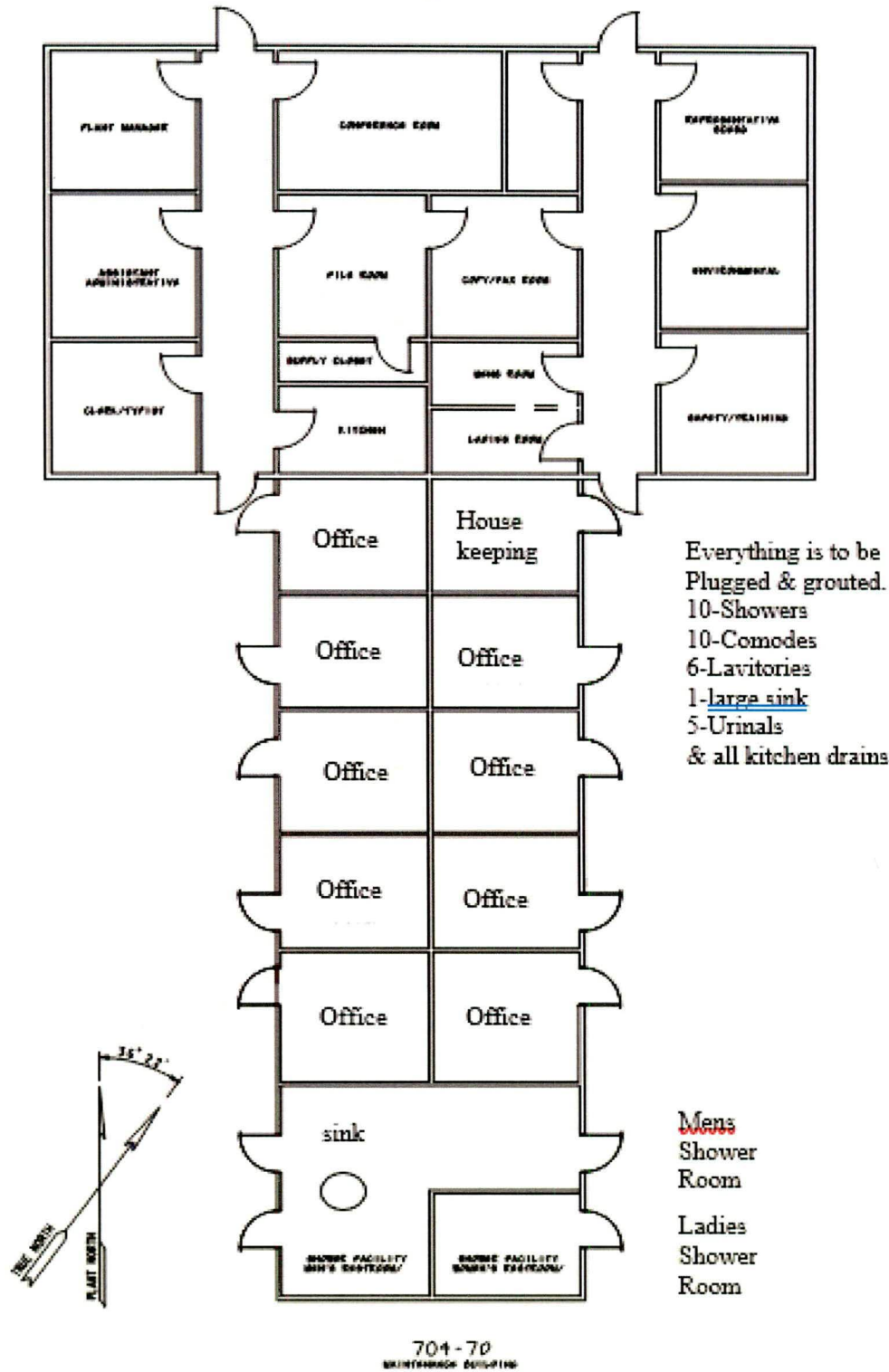


Figure 7. Building 704-7D, Building Layout

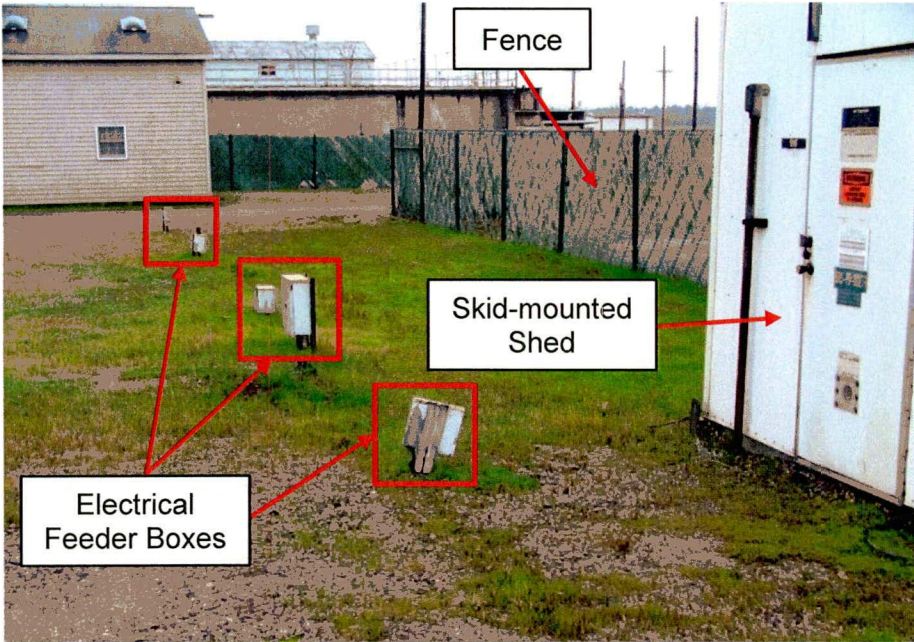


Figure 8. Building 704-7D, Ancillary Structures

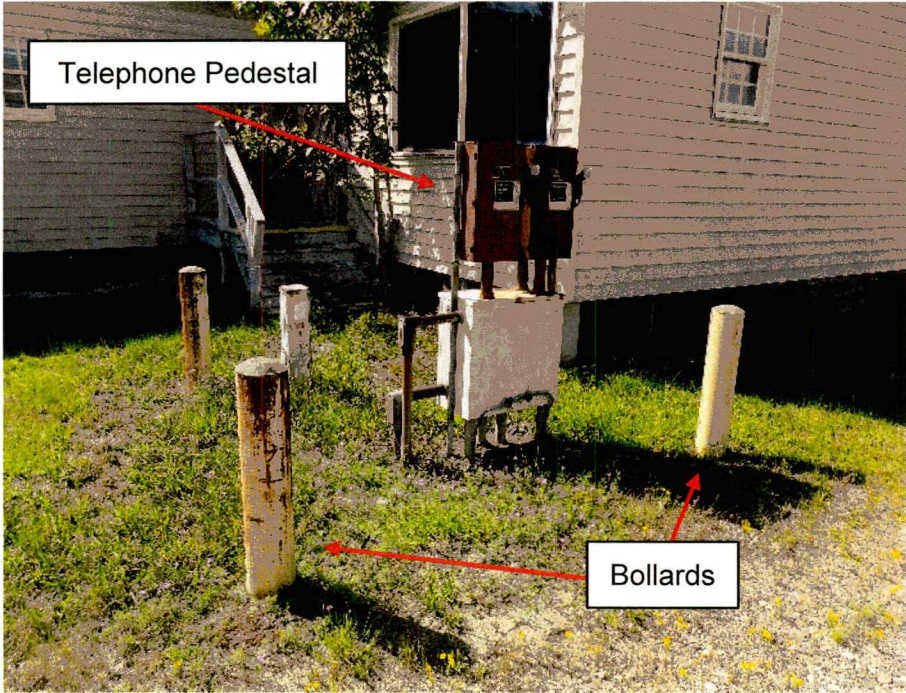


Figure 9. Building 704-7D, Building Related Appurtenances

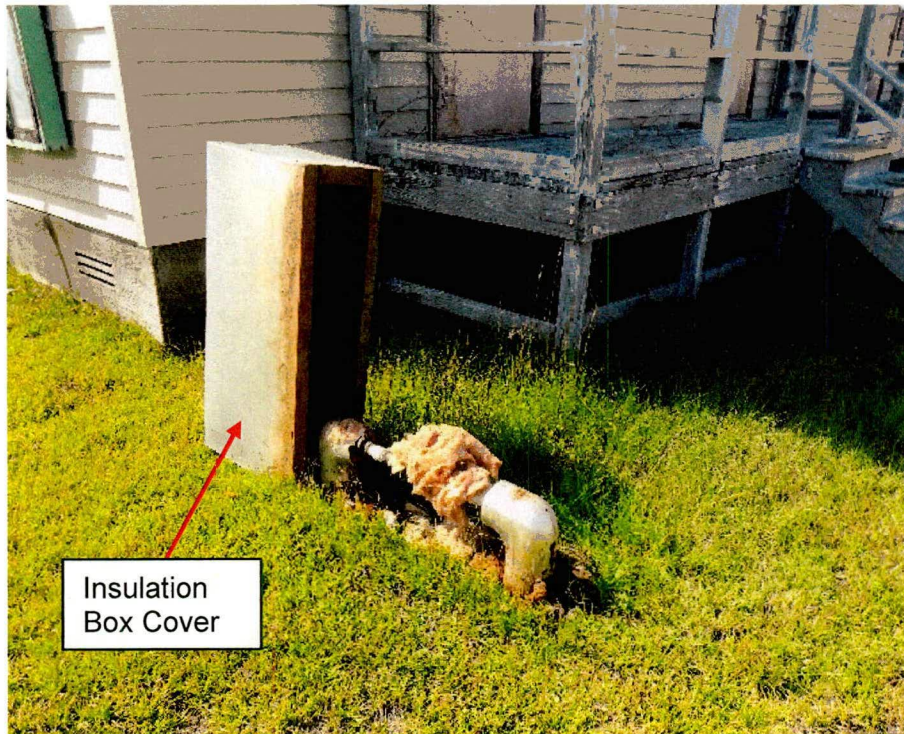


Figure 10. Building 704-7D, Building Related Appurtenances

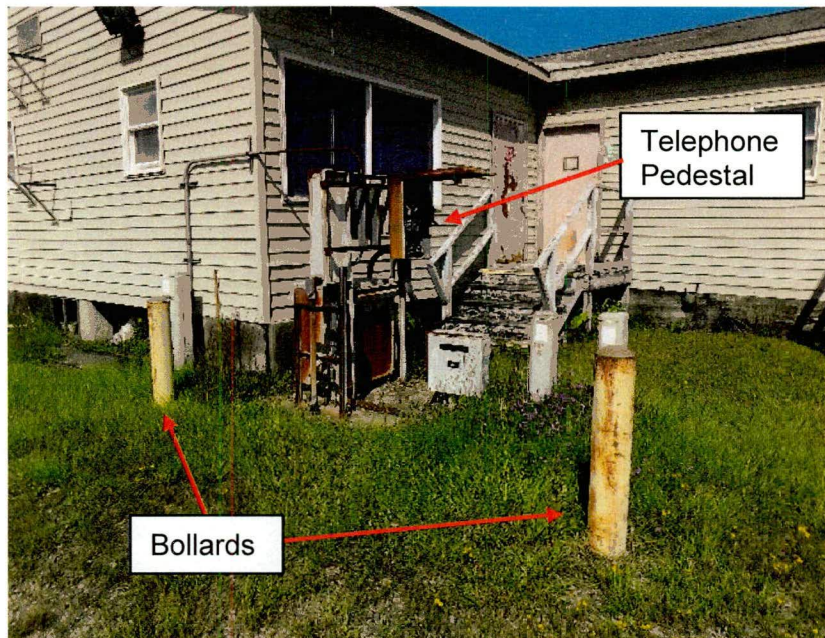


Figure 11. Building 704-7D, Building Related Appurtenances

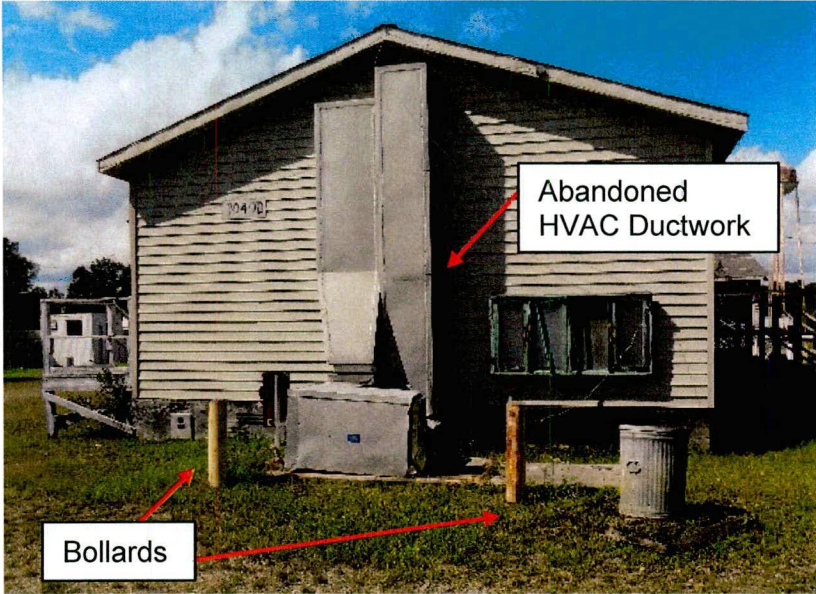


Figure 12. Building 704-7D, Building Related Appurtenances

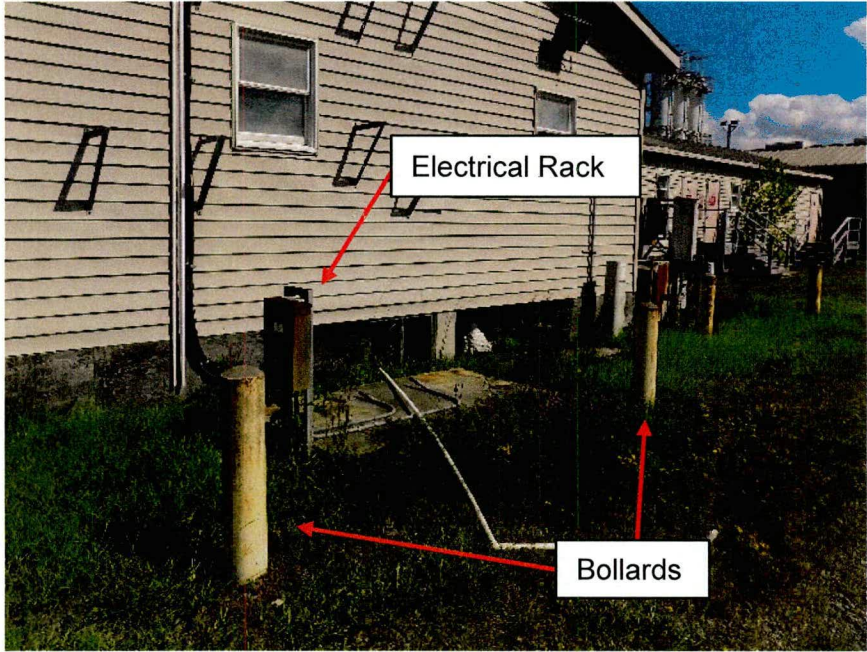


Figure 13. Building 704-7D, Building Related Appurtenances



Figure 14. Building 710-16D, Storage Building

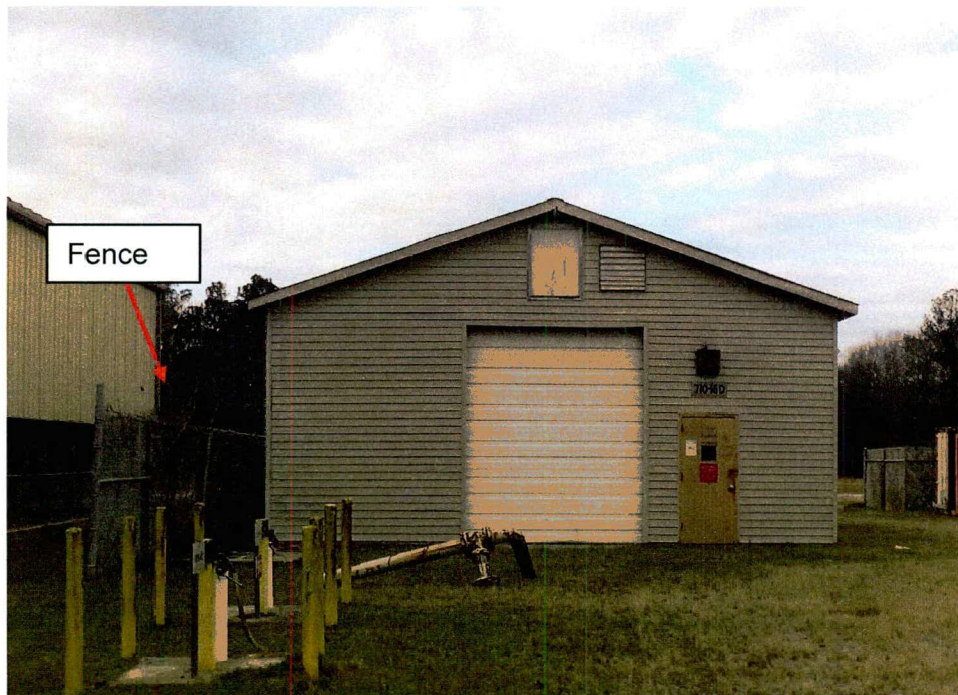


Figure 15. Building 710-16D, Ancillary Structures - Fence

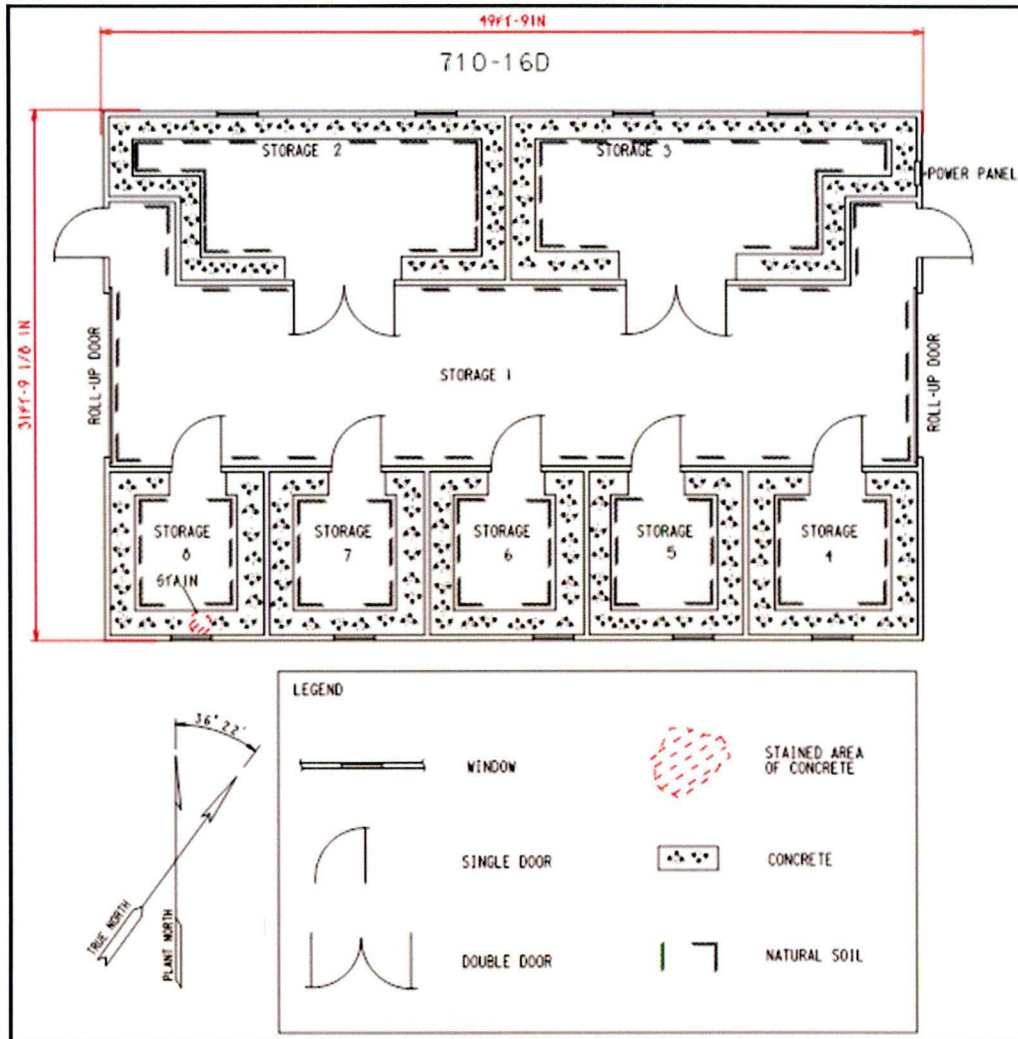


Figure 16. Building 710-16D, Storage Building Layout



Figure 17. Building 717-3D, D-Area Welding Shop

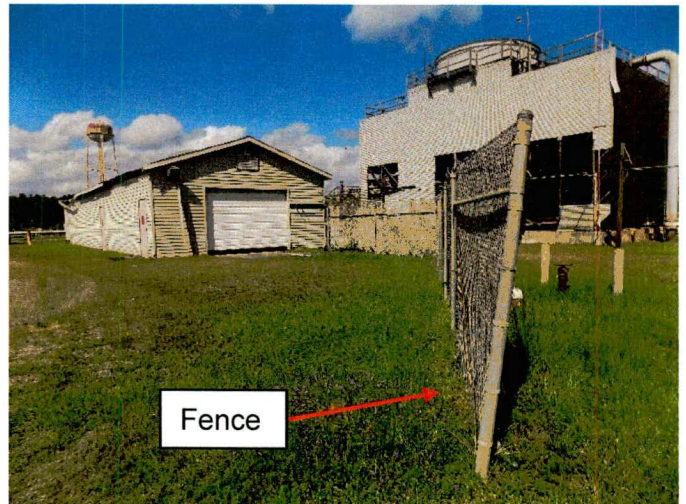
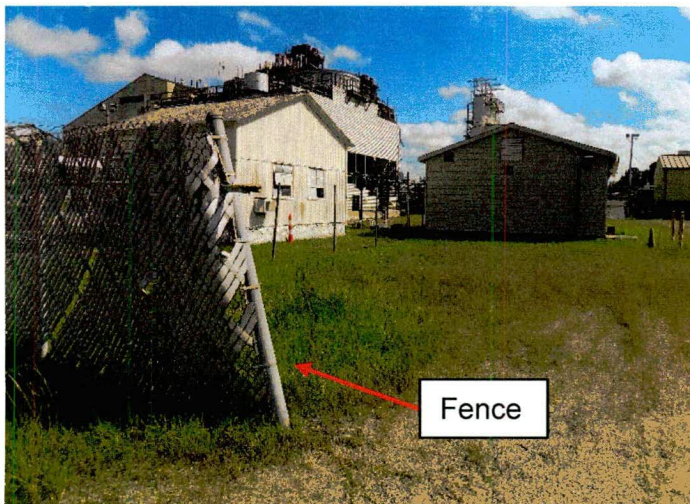


Figure 18. Building 717-3D, Ancillary Structures – Fence

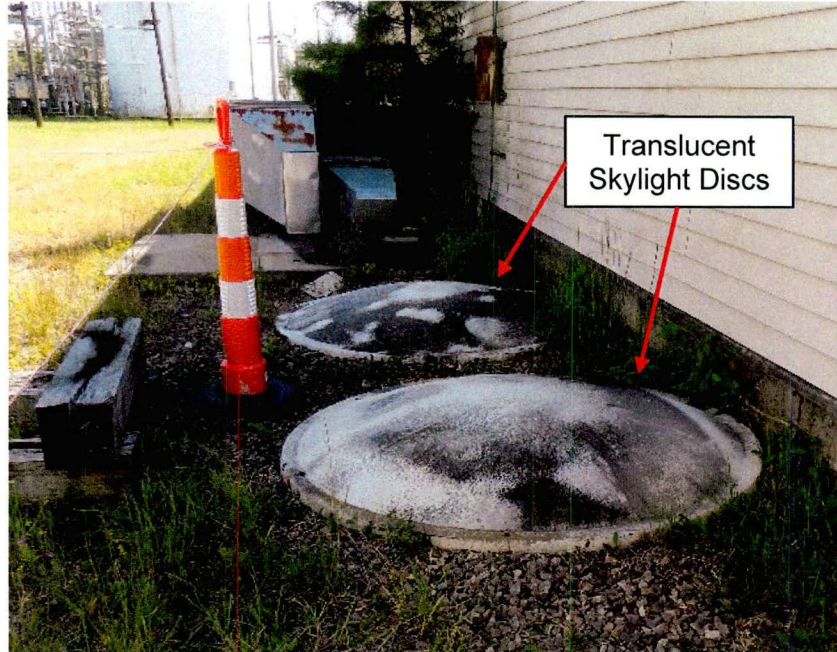


Figure 19. Building 717-3D, Building Related Appurtenances

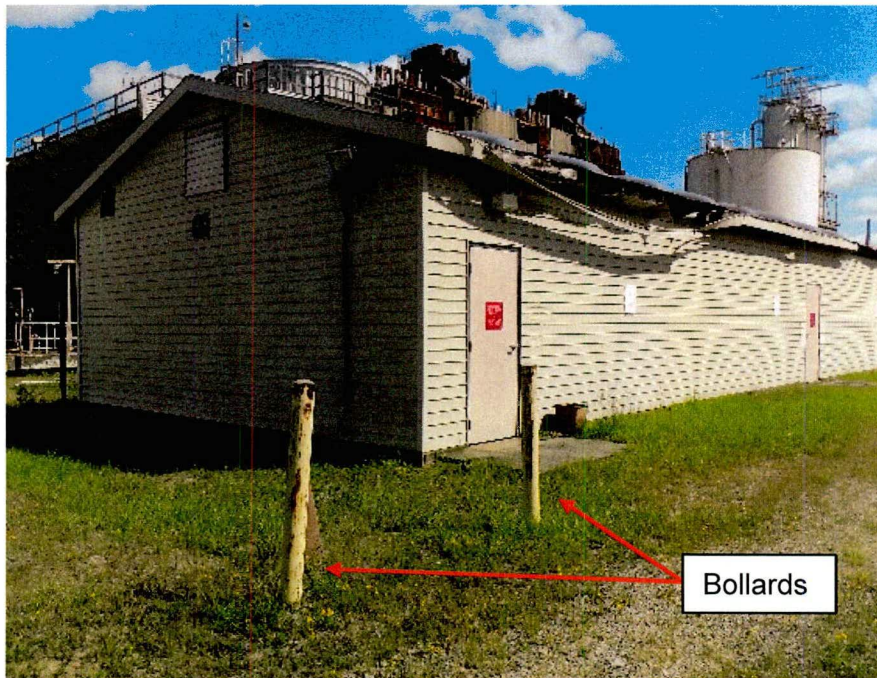


Figure 20. Building 717-3D, Building Related Appurtenances



**Figure 21. Building 717-3D, Building Related Appurtenances**

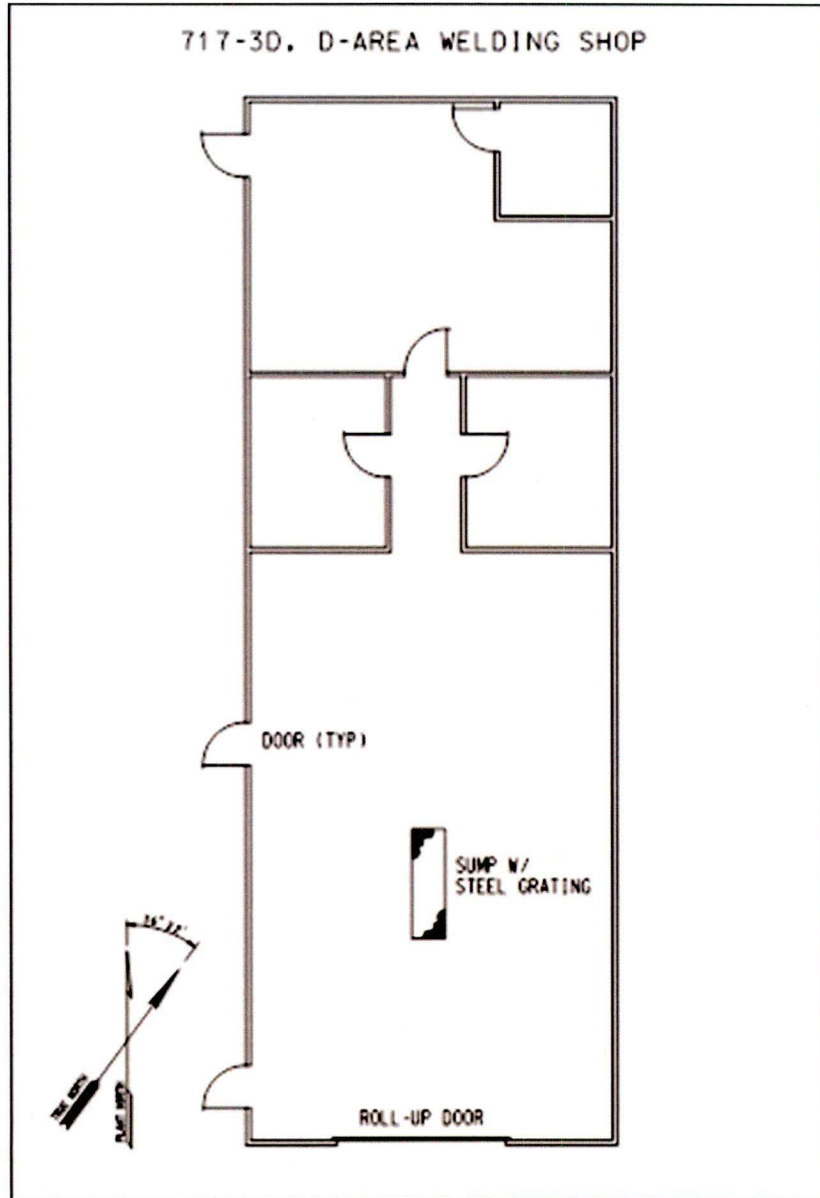


Figure 22. Building 717-3D, Building Layout

## 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. Document Category Number	2. Specification Paragraph Reference	3. Document Description	4. Permission to Proceed Required		5. Submittal Schedule	6. Quantity Required		7. Kind of Copies	8. 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	