

Decommissioning End Points Document Building 607-14D, Chemical Feed Facility

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

History of Revisions

Revision	Date	Revised Section	Change
0	05/27/2021	N/A	Initial Issue

1.0 Purpose and Scope

This document identifies the end points (and activities to achieve those end points) necessary to meet the Savannah River Site 607-14D Chemical Feed Facility decommissioning objective and end state vision. It is an upper tier planning document to be used by the Project Manager for the development of project schedules and by the planning organization for the development of work packages.

The end points were developed using the checklist methodology¹, which is a logical, top-down, seven-step process for identifying end points. The process takes into account the initial condition of the facilities, the decommissioning end-state vision and objective, facility boundaries, and types of work to be performed (or considered). This Simple Model decommissioning scope (i.e., the before and after condition of the facility along with boundaries) is further defined by the Facility Decommissioning Evaluation (FDE) (Reference 6.1).

This document has been developed in accordance with the requirements found in the Facility Disposition Manual 1C, Procedure 505, "Preparing a Project Decommissioning Plan."

2.0 Facility Description

The 607-14D decommissioning project consists of the following buildings and ancillary structures:

Building 607-14D, Chemical Feed Facility

Building 607-14D ancillary structures:

- Remnants of Building 607-15D, 20,000 GPD Sanitary Wastewater Treatment Plant
- Remnants of Building 607-12D, Sanitary Wastewater Pumping Station
- Remnants of Building 607-7D, Sewage Treatment Plant Blower Cabinets
- Remnants of Building 607-2D, Sewage Lift Station #2
- Remnants of the Disinfection Pit
- Remnants of the 483-6D Surge Basin
- Light Poles and Lights

The 607-14D Chemical Feed Facility is one part of the overall D-Area Sanitary Waste Treatment System. All facilities listed were permitted under Industrial Wastewater Treatment (IWT) Permits. The 607-15D Sanitary Wastewater Treatment Plant was permitted under South Carolina Department of Health and Environment Control (SCDHEC) Permit No. 14,407, Expansion of Sanitary Wastewater Treatment Plant, to replace a grandfathered 10,000 GPD packaged system. 607-15D was subsequently expanded under SCDHEC Permit No. 17,715-IW to include an ultraviolet (UV)

¹ See Reference 6.2 for additional information regarding the checklist method.

disinfection structure located directly south of the main structure. The 607-14D Chemical Feed Facility (607-14D) was permitted under SCDHEC Permit No. 10,526. Subsequently, an automatic sodium hypochlorite feed system was added under SCDHEC Permit No. 14,318 to disinfect the effluent from the 607-15D Sanitary Wastewater Treatment Plant. The 483-6D Surge Basin was permitted under SCDHEC Permit No. 18078-IW. All facilities other than the 607-14D and its ancillary remnants were previously decommissioned under the SRS D-Area Sanitary Waste Treatment Plant (607-14D, 607-15D) Closure Plan, Rev. 2, and the Savannah River Site (SRS) D-Area Surge Basin (483-6D), Replace Surge Basin Liner Closure Plan, Rev. 2. The 607-14D Chemical Feed Facility was deactivated under the same Closure plan, but not decommissioned. 607-14D and remnant ancillary structures make up what remains of the overall system still to be decommissioned within the scope of this project. Decommissioning activities performed within this project scope serve as the final closure for the wastewater facilities and associated permits listed above.

Building 607-14D and its remnant ancillary structures comprise what remains of the D-Area Sanitary Waste Treatment System, located on the Savannah River Site (SRS) in South Carolina, at the southwest corner of 400-D Area (See Appendix A Figure 1). The System received effluent sanitary waste from D-Area facilities for process and discharge. Different portions of the system were constructed at different times over the life of D-Area in response to necessary upgrades. Prior to installation of the 607-15D Sanitary Waste Treatment Plant, 607-7D was the operational sewage treatment plant. 607-7D was removed from service and decommissioned in 1993. Refer to Appendix A Figure 2 and Figure 3 for layouts of the structures of the system.

Building 607-14D, Chemical Feed Building (See Appendix A Figure 4 and Figure 5), is built on a concrete slab. The lower portions of the walls (up to about 18" above the slab) are masonry block. The remainder of the structure is constructed of metal and composite materials. The structure is approximately 16' by 20' and approximately 13' high. There is a 10' roll-up door on the east side of the structure. Outside the roll-up door, on either side, are two bollards, 4" diameter and 30" above grade. There are concrete steps with a handrail to the south door of the building. The structure was formerly provided with electrical supply at 480V (3-phase) and domestic water. There is a domestic water isolation valve and an electrical disconnect on the southeast corner of the structure. There is also a domestic water isolation valve approximately 25' to the south of the structure that was associated with the structure. The building contains a soda ash mixing tank, two soda ash transfer pumps, a lab bench and sink, one floor drain, one collection sump, and a chemical storage area. Lighting inside the structure is from fluorescent lamps, while lighting on the outside of the building (east, south and west) is high pressure sodium lamps mounted on the structure. The soda ash mixing tank (See Appendix A Figure 6) is a fiberglass resin tank that is approximately 5.5' in diameter and approximately 5' tall, with a capacity of approximately 500 gallons. The mixing tank has a 120 volt (V), top-mounted, angled-entry agitator. The two soda ash transfer pumps (See Appendix A Figure 7) are small, 120V pumps (with oil removed). The lab bench and sink are standard lab equipment. The sink is stainless steel. The eyewash station is also standard. The sump (See Appendix A Figure 8) is approximately 2' by 2' and 3' deep. It has a 120V sump

pump (w/oil removed) that discharged to the Sanitary Waste Treatment Plant, 607-15D. The chemical storage area is located on the east side of the building and is elevated to about 24" above grade. The chemical storage area used to contain soda ash in 55-pound paper bags, Klaraid™ in 45-pound plastic jugs and chlorine pellets in 5-pound plastic containers. The brominator, for bromine compound (bromicide) addition to the treatment plant, was removed in 1993.

The 607-15D, Sanitary Waste Treatment Plant (See Appendix A Figures 1, 2, 3, 9, & 10) was a package treatment plant that was installed, placed into operation in 1993 and later decommissioned under an IWT Permit Interim Closure Plan. The structure is approximately 50' by 16' and 12' high, disregarding handrail and equipment height atop the structure. The majority of the 12' high structure is below grade. The structure is primarily epoxy-coated carbon steel. The walkway gratings atop the structure were made of aluminum. The top of the structure is within 4" to 6" inches of being level with grade. The more visible portions of the structure are the handrails and above grade equipment. The treatment plant had four (4) major sections: (1) the chlorine diffuser, (2) the clarifier, (3) the aeration tank and (4) the surge tank. The sewage inlet to the structure was via a 4" pipe at the north end of the structure. The treated effluent was discharged via a 6" pipe at the outlet of the weir on the south end of the structure. There was a 4" air inlet below grade on the east side of the surge tank from the surge tank blowers. There was another 4" air inlet below grade in the aeration tank from the aeration blowers. When the 607-15D structure was decommissioned under the IWT Permit Interim Closure Plan, the structure was operated until the liqueur had passed through the sanitary plant and soda ash solution was exhausted. The 607-15D cement basin was pumped and rinsed with a pump truck and sludge transported to the Savannah River Site (SRS) Central Sanitary Wastewater Treatment Facility. The in-ground basin was then filled to just above grade with a combination of gravel and rip rap. Remnants remaining to be decommissioned following implementation of the IWT Permit Interim Closure Plan are handrail, conduit, panels, racks, piping, lighting, and equipment.

On the east side of 607-15D are the blowers for the aeration and surge tanks (See Appendix A Figure 11). There are two blowers for each. The two easternmost blowers (frontmost in Appendix A Figure 11), the surge tank blowers, are remnants of the 607-7D (See Appendix A Figures 2 and 3) sanitary waste treatment plant. The aeration blowers are closer to 607-15D (See Appendix A Figures 2 and 3). Each of the blowers is a 5 horsepower (hp), 480 volt, 3-phase blower. The electrical control panel for the blowers is located to the north end of the aeration blower equipment pad. The only remnants of concern associated with the aeration and surge tank blowers remaining following implementation of the IWT Permit Interim Closure Plan are the blowers, conduit, panels, racks, piping, and lighting. Nothing else associated with 607-7D remains.

To the south of Building 607-15D is the disinfection pit (See Appendix A Figures 2, 3, 12). The disinfection pit was an open, concrete, below-grade structure. It was filled in with gravel under the IWT Permit Interim Closure Plan. The pit goes to approximately 6 feet below grade and is approximately 8' by 28'. Along the east side of the pit was the

ultraviolet (UV) disinfection chamber. Effluent sewage passed through the chamber while being exposed to ultraviolet light for disinfection and was discharged to outfall D-01. There were metal steps leading down into the pit. There was a sump in the bottom of the pit that was covered with a galvanized metal grate. The sump was equipped with a 120V sump pump that discharged to the treatment plant, 607-15D. Handrails surround the entirety of the pit, with an opening at the former step location. Remnants remaining following implementation of the IWT Permit Interim Closure Plan are handrail, conduit, panels, racks, piping, and lighting.

Station 607-12D is an abandoned-in-place sanitary sewage lift station located to the south side of Building 607-14D (See Appendix A Figures 1, 2, 3, & 13). The station was in use until 1993, when 607-2D was brought online to replace it. Station 607-12D was then abandoned. The concrete pad for the station is 10' by 10'. The interior pit is 6' in diameter and 6'6" deep. The shell of the pit is 6" thick reinforced concrete. Located above grade at Station 607-12D are 2-motors and pumps (w/oil removed), a hose rack, pipes and conduit. The lift station pumps are 480V, 3-phase pumps. On the electrical panel are two combination starters for the pumps, two junction boxes, and a receptacle. Remnants remaining following implementation of the IWT Permit Interim Closure Plan are pumps, motors, conduit, panels, racks, and piping.

Station 607-2D was the operational lift station for the sanitary sewage waste treatment plant (See Appendix A Figures 1 & 14). The lift station contained two lifting pumps (with oil removed) for transfer of the sanitary wastewater to the 607-15D treatment plant. The basin of the lift station is constructed of reinforced concrete and located mostly below grade. The upper rim of the lift station extends to about 9" above ground level (already decommissioned under the IWT Permit Interim Closure Plan). The lift station pumps were located below grade inside the lift station. The pumps were 3 hp, 480V, 3-phase centrifugal pumps. The lift station control panel is located adjacent to the lift station on the northeast and is above grade. Approximately 8' to the south of the lift station is a process water connection and a hose rack (See Appendix A Figure 14). The lift station pumps were removed and the station filled with gravel under the IWT Permit Interim Closure Plan. Remnants remaining following implementation of the IWT Permit Interim Closure Plan are the control panel, conduits, hose rack, and process water piping.

Additional sanitary sewage treatment system related items included in the scope of this decommissioning project include the following:

- The diverter valve operators located on the east side of the area between the disinfection pit and Building 607-15D (See Appendix A Figures 2 & 3). There are two (2) valve operators. The operators are in a round housing and extend to about 30" above grade (See Appendix A Figure 9).
- The junction box located on the east side of the area between the disinfection pit and Building 607-15D. The junction box is a 2' by 2' below grade structure with above grade curb and covered by a painted, carbon steel plate (See Appendix A Figure 12).
- The sounding tube at the southeast corner of Building 607-15D (See Figure 9). The sounding tube is approximately 4" diameter and extends to about 30" above grade.

- All associated pole-mounted light fixtures and support poles.

The 483-6D Surge Basin was permitted under SCDHEC IWT Permit No. 18078-IW. The Surge Basin was a 400,000-gallon capacity water plant surge basin located on the west side of the Savannah River Site's D-Area. The 483-6D Surge Basin was placed into service in 1976 with a projected service life of 50 years. The basin provided a buffer from the large flow rates required to backwash the filtration systems from the 483-D Surface Water Treatment and the 483-7D Domestic Water Treatment Plants. It also provided short-term storage of the wastewaters and residual sludge generated as by-products of the filtration processes. The Surge Basin's original Hypalon liner was later replaced when it deteriorated. The new liner consisted of a bentonite mat and a 60 mil High Density Polyethylene (HDPE) Liner, placed atop the original bentonite liner. The liner replacement was permitted under SCDHEC Construction Permit #18078-IW for discharge to the 488-1D and 2D Ash Basins (Construction Permit # 7295), which discharged into Outfall D-01 (NPDES Permit #SC0047431). An Interim Closure Plan, SRS D-Area Surge Basin (483-6D), Replace Surge Basin Liner Closure Plan, Rev. 2, was submitted to SCDHEC on December 20, 2012. Subsequently, the Surge Basin was closed in accordance with the IWT Permit Interim Closure Plan. Remnants remaining following implementation of the IWT Permit Interim Closure Plan are the conduit, panels, racks, piping, and lighting.

D-Area power has been globally disconnected from the electrical grid, thereby rendering all subject facilities electrically "cold & dark". Fuses for subject equipment have also been removed. All subject facilities have also been isolated mechanically.

3.0 End State Vision

The decommissioning end state for Building 607-14D, which has no defined or anticipated future mission, is "Demolish" to, but not including, the building's concrete slab. That end state results from removal of the above grade structure and its contents to the building slab. All coarse debris will be removed from the slab. All concrete slab penetrations greater than 2" in diameter will be cut off level with the slab, plugged and grouted in accordance with Reference 6.3. Slab protrusions will be cut off flush with the slab. The building sump will be filled with grout up to top of slab elevation. All building appurtenances, including light pole, will be cut off/removed to grade and holes plugged and grouted in accordance with Reference 6.3. Bollards will be cut off flush with grade or removed and holes filled with cementitious material.

The decommissioning end state for the remnants of the 607-15D, which have no defined or anticipated future mission, is demolition to grade. That end state results from cutting off/removal of the appurtenances remaining following implementation of the IWT Permit Interim Closure Plan (i.e., handrail, conduit, panels, racks, piping, lighting poles, equipment, sounding tube, etc.) to grade, and plugging and grouting resulting holes in accordance with Reference 6.3. Rip-rap and gravel will be removed from within the 607-15D structure down to a minimum of 6" below the top of the 607-15D side walls and replaced with compacted crusher run material up to the top of the side walls. The

structure will then be capped with a 6" thick reinforced concrete cap slab, as specified in the 607-15D IWT Permit Interim Closure Plan, thereby completing "final" IWT Permit closure.

The decommissioning end state for the four (4) remnant blowers located between 607-15D and 607-7D, which have no defined or anticipated future mission, is removal to grade. That end state results from cutting off/removal of the appurtenances remaining following implementation of the IWT Permit Interim Closure Plan (i.e., blowers, conduits, panels, racks, piping, lighting poles, utility pole, etc.) to grade, and plugging and grouting resulting holes in accordance with Reference 6.3, thereby completing "final" IWT Permit closure.

The decommissioning end state for the remnants of the disinfection pit located south of 607-15D, which have no defined or anticipated future mission, is removal to grade. That end state results from cutting off/removal of the appurtenances remaining following implementation of the IWT Permit Interim Closure Plan above (i.e., handrail, conduits, hose rack, piping, lighting poles, diverter valve operators, etc.) to grade, and plugging and grouting resulting holes in accordance with Reference 6.3, and filling the underground junction box with grout to top of its side walls, thereby completing "final" IWT Permit closure.

The decommissioning end state for the remnants of the 607-12D abandoned sanitary sewage lift station, which have no defined or anticipated future mission, is removal of all appurtenances to the top of concrete/steel plate cover/grade, as applicable, and filling of the lift station with gravel or rip-rap to the top of the lift station. That end state results from cutting off/removal of the remnants remaining following implementation of the IWT Permit Interim Closure Plan (i.e., pumps, motors, conduits, panels, racks, piping, hose rack, light pole, etc.) down to top of concrete pad/steel plate cover/grade, as applicable; the lift station filled with gravel to top of lift station pit, and openings greater than 2" plugged and grouted in accordance with Reference 6.3, thereby completing "final" IWT Permit closure.

The decommissioning end state for the remnants of the 607-2D sanitary sewage lift station, which have no defined or anticipated future mission, is removal to grade. The lift station was filled with gravel under the IWT Permit Interim Closure Plan. Remnants remaining following implementation of the IWT Permit Interim Closure Plan (i.e., control panel, conduits, hose rack, light pole, and process water piping) will be cut off/removed down to grade and holes greater than 2" plugged and grouted in accordance with Reference 6.3, thereby completing "final" IWT Permit closure.

The decommissioning end state for the remnants of the 483-6D Surge Basin, which have no defined or anticipated future mission, is removal (not including handrails) down to the top of the platform, a reinforced concrete box-type structure. The reinforced concrete box-type structure was filled with gravel and rip-rap under the IWT Permit Interim Closure Plan. Remnants remaining following implementation of the IWT Permit Interim Closure Plan (i.e., conduit, panels, racks, piping, and lighting poles) will be cut

off/removed down to the top of platform and any resulting holes greater than 2” plugged and grouted in accordance with Reference 6.3, thereby completing “final” IWT Permit closure. **NOTE:** Handrails around the platform **shall not** be removed due to the height of the platform above surrounding grade.

The end state vision for the current 607-14D, Chemical Feed Facility, and ancillary remnants is further defined by the following statements:

- The end-state does not correspond to a “new waste unit.”
- The end-state will have no remaining debris.
- The end-state will have no remaining physical hazards. The facility is not in a pedestrian heavily trafficked area, so the slightly elevated slabs will pose no additional risks to the Site workers. No additional barricades or sloping will be required.
- The end-state requires no long-term stewardship activities.

4.0 Objective and Major Activities

The overall objective of this decommissioning is to place Building 607-14D, Chemical Feed Facility and ancillary remnants, in a safe, stable and low-cost end state that supports “area closure/completion.” In other words, the decommissioning objective is threefold: (1) to reduce the risks to workers, the public and/or environment from residual radiological, chemical, biological, or physical hazards, (2) to minimize future S&M costs for the facility, and (3) to facilitate future “area closures/completion” actions by Environmental Compliance & Area Completion Projects (EC&ACP) personnel.

To meet the overall objectives, the following major activities (MAs) are required:

1. Complete preparatory operations including completing the Engineering Survey (Reference 6.4).
2. Eliminate or reduce hazards
3. Perform dismantlement and removal activities.
4. Perform demolition activities.
5. Complete project closure activities.

Appendix B further defines the decommissioning activities and provides corresponding end points for each activity.

5.0 End Point Determination and Management

The decommissioning end points were derived based on a review of (1) existing facility documents, (2) subsequent walk downs of the facilities, and (3) the strategy to execute decommissioning by using Savannah River Nuclear Solutions (SRNS) site personnel, subcontractor personnel, or a combination thereof.

Appendix A provides a layout of the structures to be decommissioned. Because they are relatively simple, the structures are handled as a single workspace (Zone A).

As required by SRS Manual 1C, Procedure 506, EC&ACP will verify the completion of each decommissioning end point. That verification will be documented in a final decommissioning report. Documentation will include the Appendix B end points along with objective evidence (e.g., reference documents, interviews, or visual inspection) that the end points are complete.

The project planner is expected to adapt the end points selectively to the structures within this scope.

6.0 References

- 6.1 J. K. Blankenship, "Facility Decommissioning Evaluation, Plant 607-14D, Chemical Feed Facility", G-FDE-D-00053, Rev. 0, dated February 23, 2021.
- 6.2 V. R. Fricke, "Choosing End-Points Using the Checklist Method", FDD-ENG-2001-00041, dated April 16, 2001.
- 6.3 "Site D&D Policy on Decommissioning End Points for Slabs, Pits, Basements and Basins (U)", SDD-2005-00170, Rev. 2, dated October 22, 2020.
- 6.4 W. B. Griffin, "Engineering Survey & Interference Report for 607-14D Chemical Feed Facility and Ancillary Facilities", Q-SDD-D-00017, Rev. 0, dated April 7, 2021.
- 6.5 Heath McGregor, "Environmental Compliance & Area Completion Projects Baseline Asbestos Inspection Report of Building 607-14D", Q-APG-D-00024 Revision 1, dated February 11, 2021.
- 6.6 Heath McGregor, "Environmental Compliance & Area Completion Projects Baseline Asbestos Inspection Report of 607-15D", Q-APG-D-00028 Revision 1, dated February 16, 2021.
- 6.7 Heath McGregor, "Environmental Compliance & Area Completion Projects Baseline Asbestos Inspection Report of 607-7D", Q-APG-D-00034 Revision 1, dated February 16, 2021.
- 6.8 Heath McGregor, "Environmental Compliance & Area Completion Projects Baseline Asbestos Inspection Report of D-Area Disinfection Pit", Q-APG-D-00041 Revision 0, dated February 16, 2021.
- 6.9 Heath McGregor, "Environmental Compliance & Area Completion Projects Baseline Asbestos Inspection Report of 607-12D", Q-APG-D-00032 Revision 1, dated February 16, 2021.
- 6.10 Heath McGregor, "Environmental Compliance & Area Completion Projects Baseline Asbestos Inspection Report of 607-2D", Q-APG-D-00035 Revision 1, dated February 17, 2021.
- 6.11 Heath McGregor, "Environmental Compliance & Area Completion Projects Baseline Asbestos Inspection Report of 483-6D", Q-APG-D-00033 Revision 1, dated February 17, 2021.
- 6.12 B. M. Montgomery, "Closeout Of Verification Document For Building 484-D Powerhouse And Ancillary Buildings", E-SDD-D-00002, Rev. 0, dated August 17, 2020.

LISTING OF APPENDICES

- A- Facility Layout
- B- Listing of End Points and/or End Point Activities Along with Completion Verification

Appendix A – Facility Layout

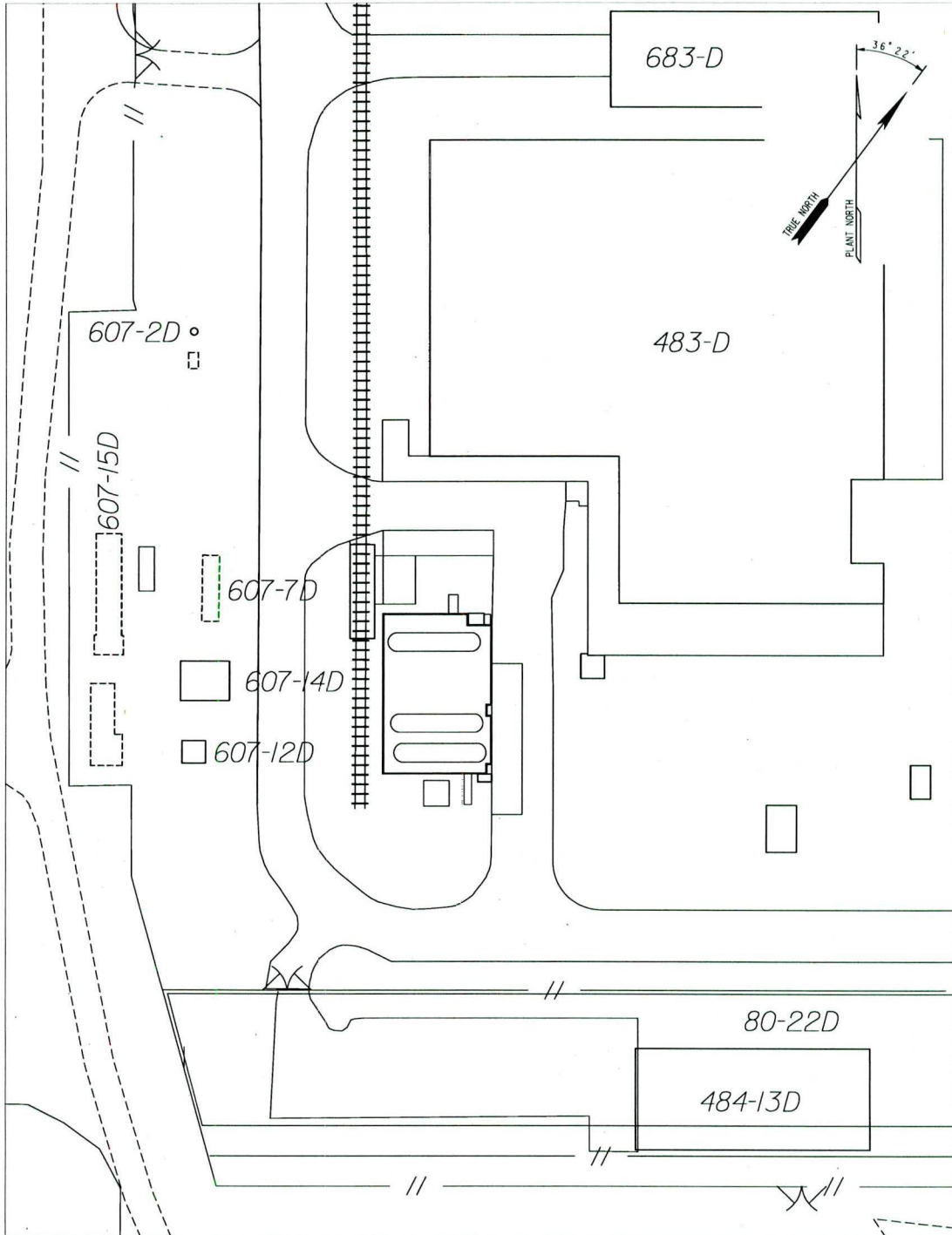


Figure 1. D-Area Wastewater Treatment Facilities Area

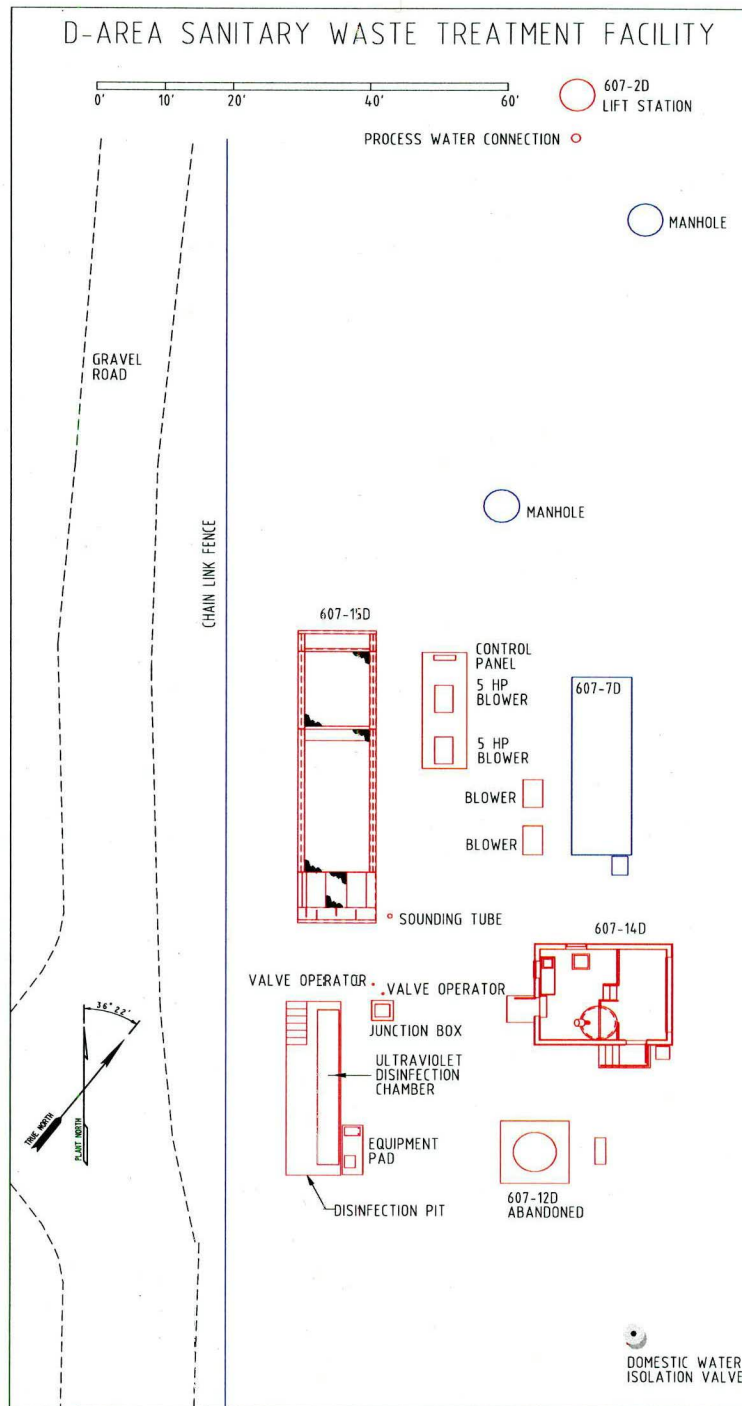


Figure 2. D-Area Wastewater Treatment Facilities Area

LEGEND: Blue – No work remains to complete.
 Red – D&D and/or remnant appurtenance removal remains to complete.

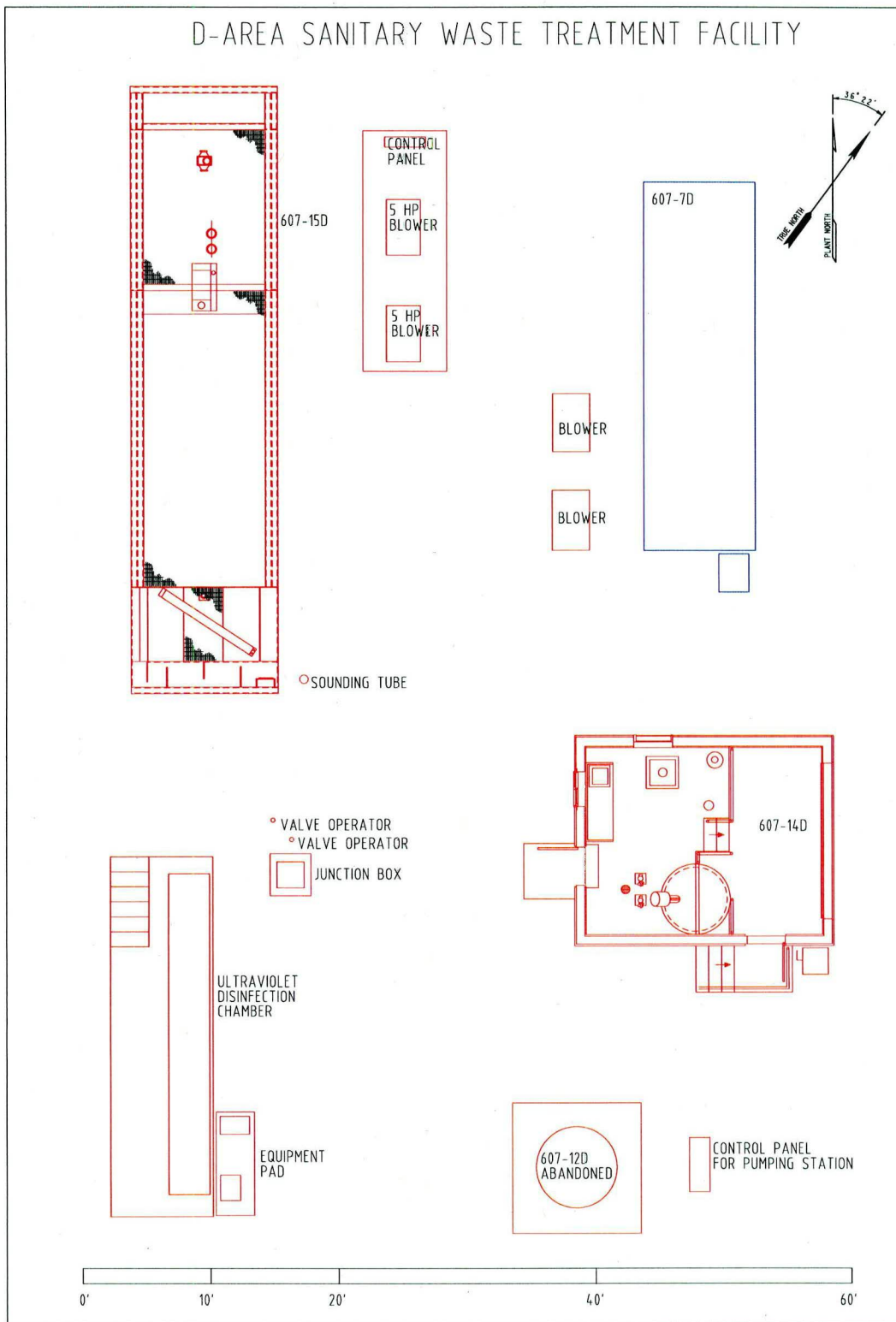


Figure 3. D-Area Wastewater Treatment Facilities Area



Figure 4. Building 607-14D, Chemical Feed Building

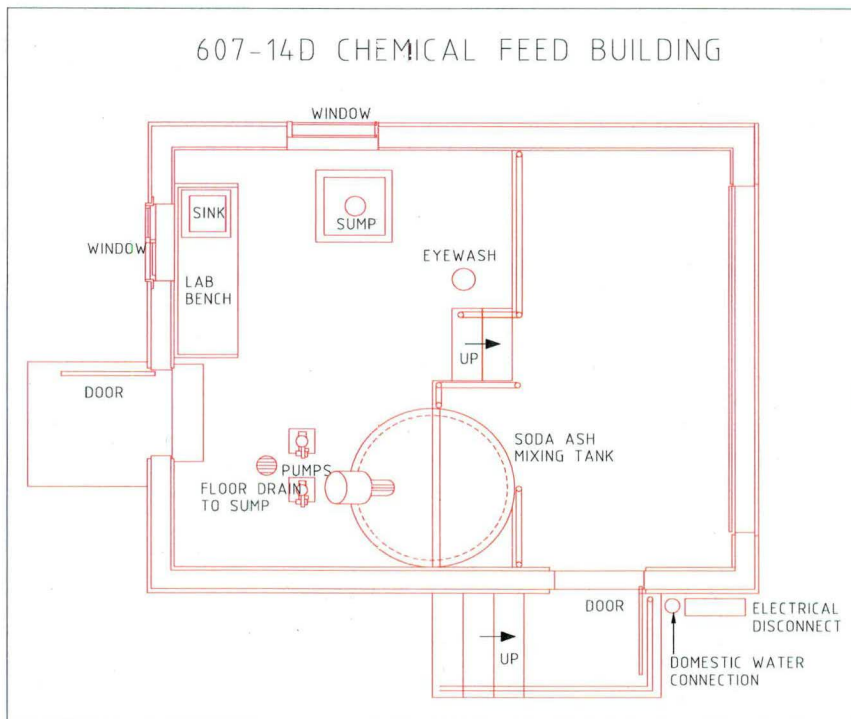


Figure 5. Building 607-14D, Chemical Feed Building Layout



Figure 6. Soda Ash Mixing Tank (607-14D)

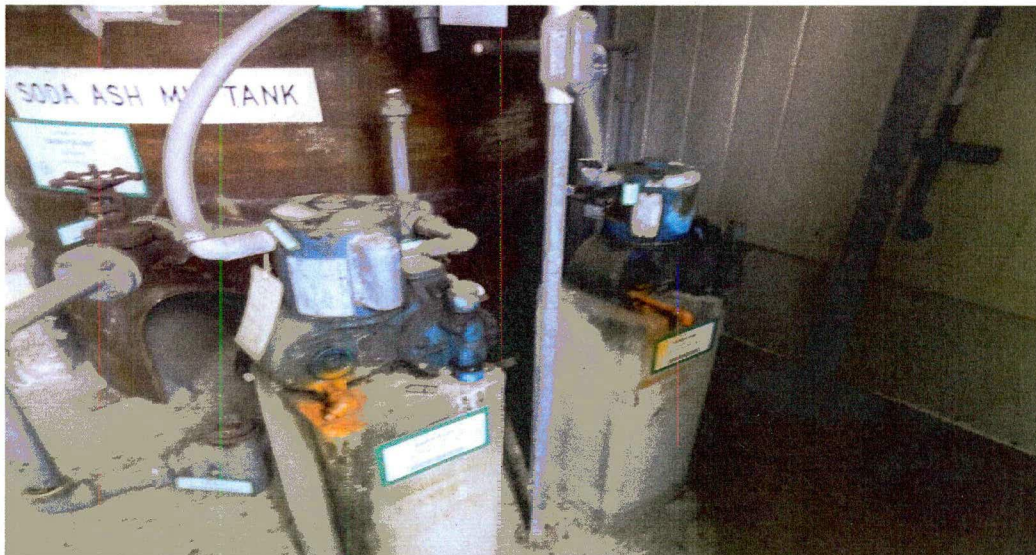


Figure 7. Soda Ash Transfer Pumps/Pedestals (607-14D)

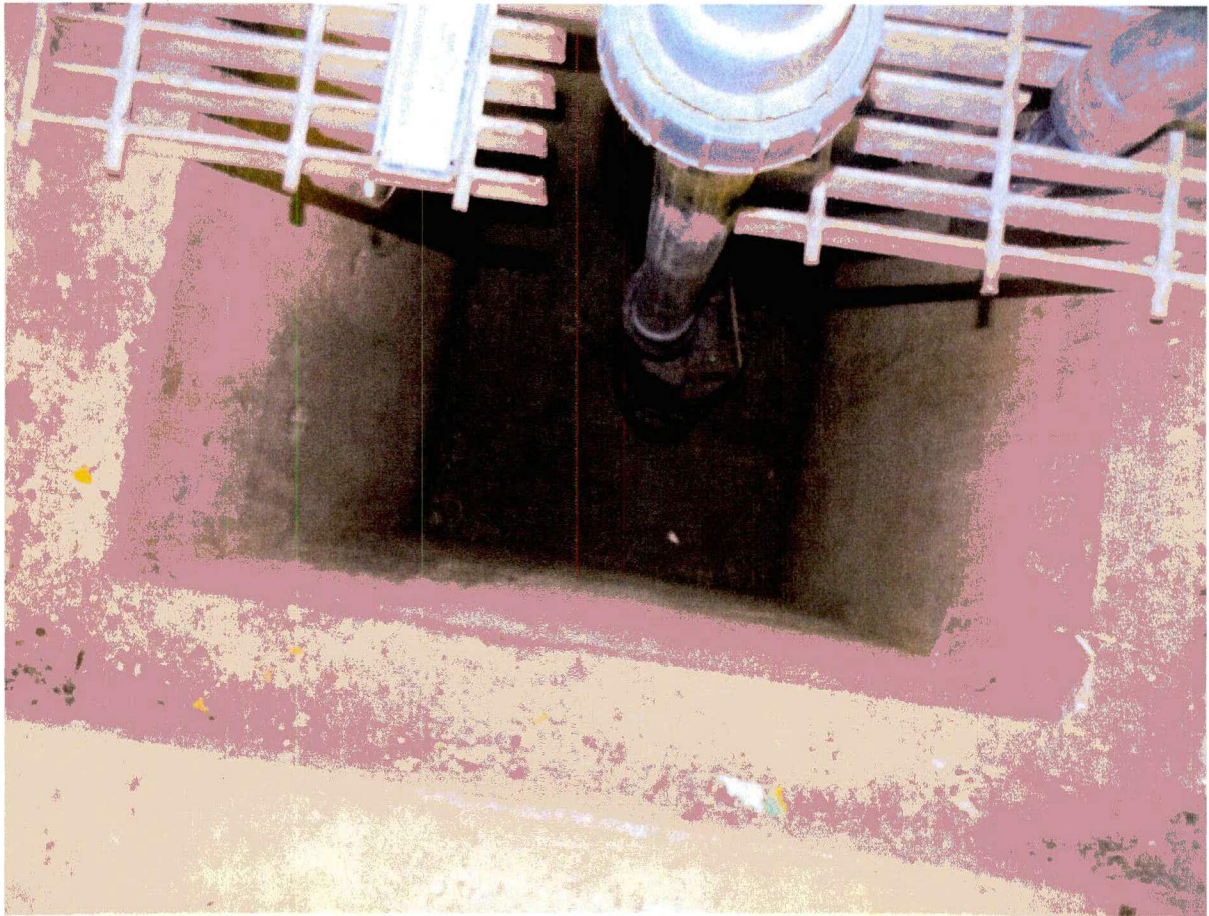


Figure 8. 607-14D Collection Sump



Figure 9. 607-15D, Sanitary Waste Treatment Plant

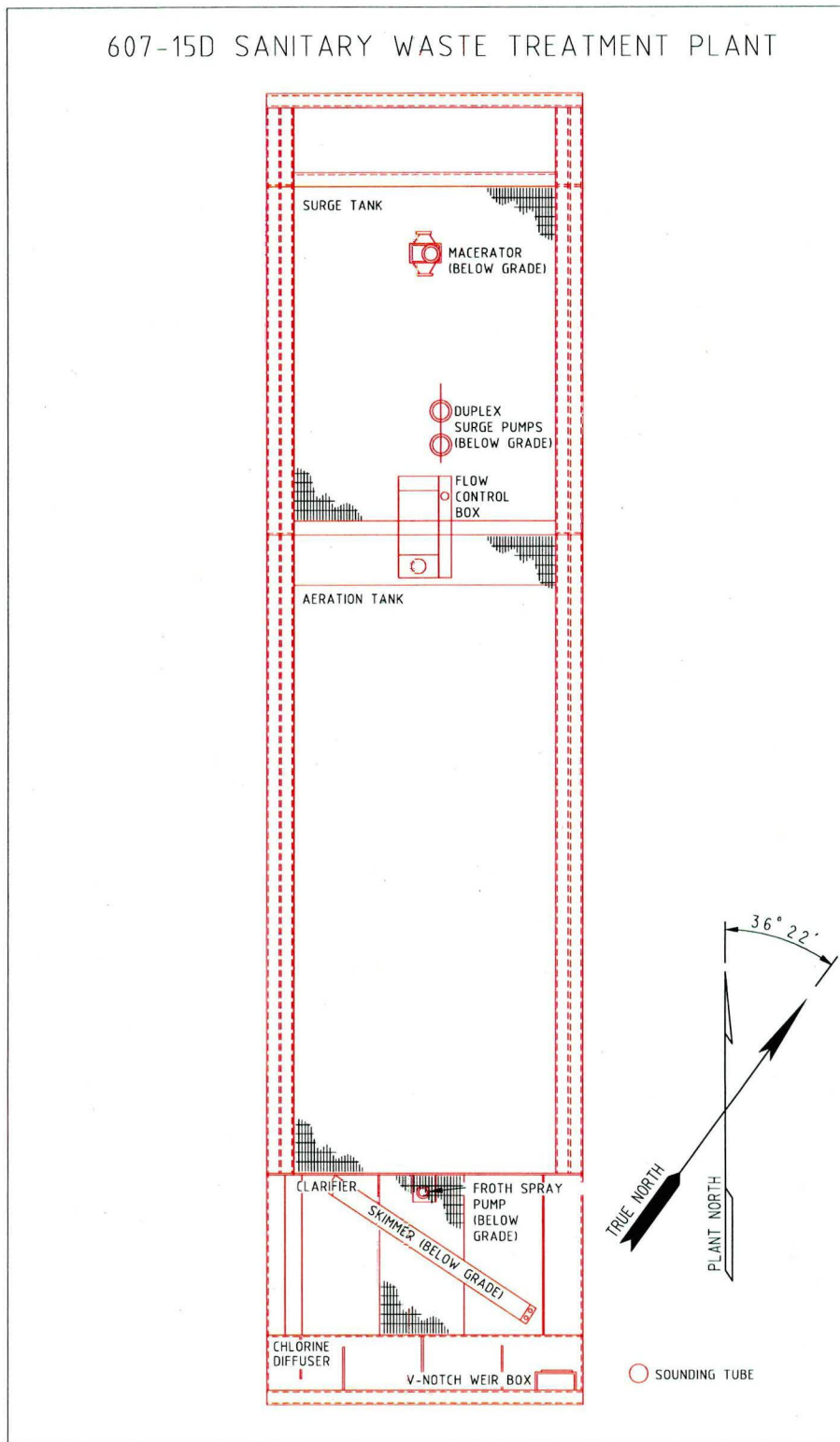


Figure 10. 607-15D, Sanitary Waste Treatment Plant



Figure 11. 607-15D Sanitary Treatment Blowers



Figure 12. Disinfection Pit



Figure 13. Sanitary Sewage Lift Station 607-12D (currently abandoned)

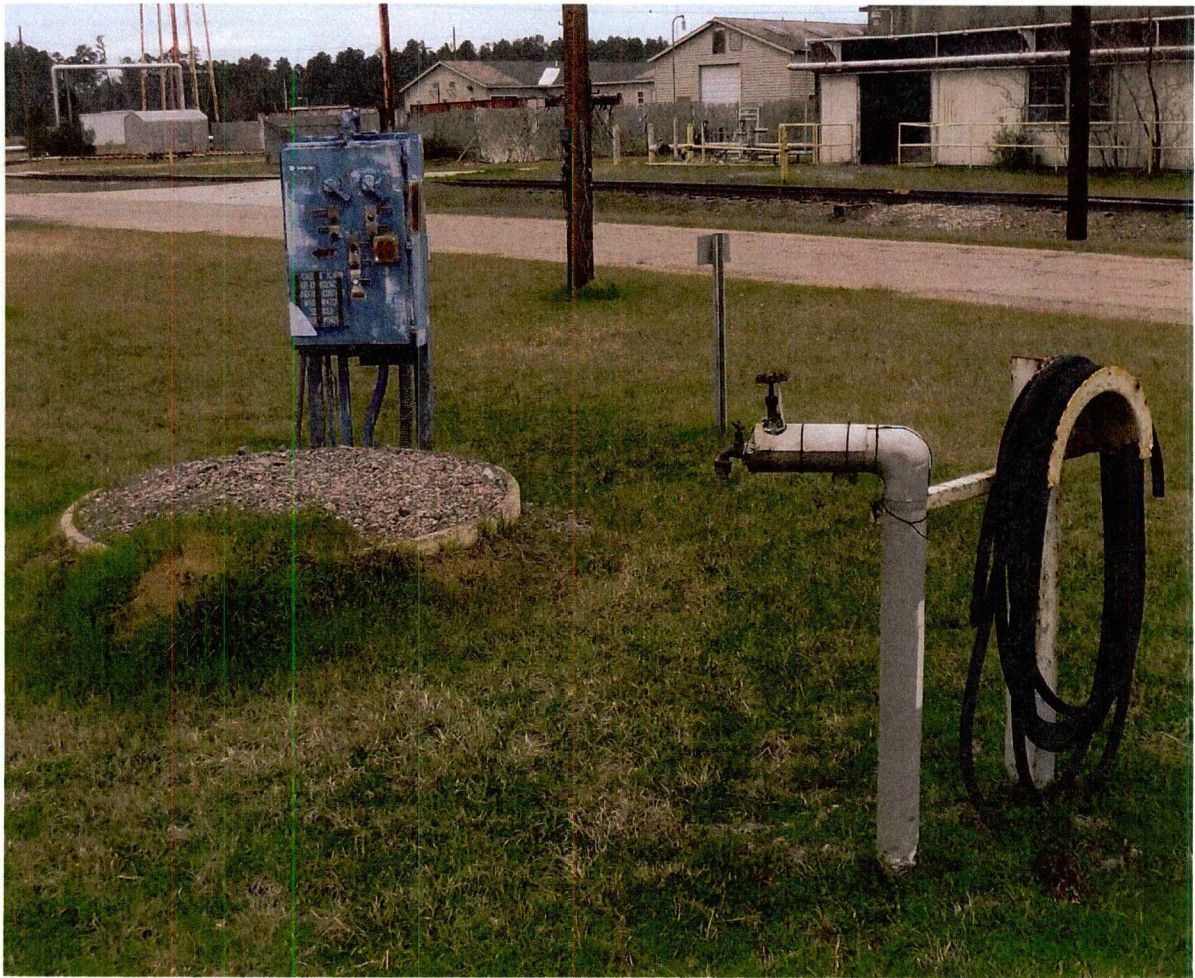


Figure 14. 607-2D, Sewage Lift Station #2 and Process Water Hose Connection

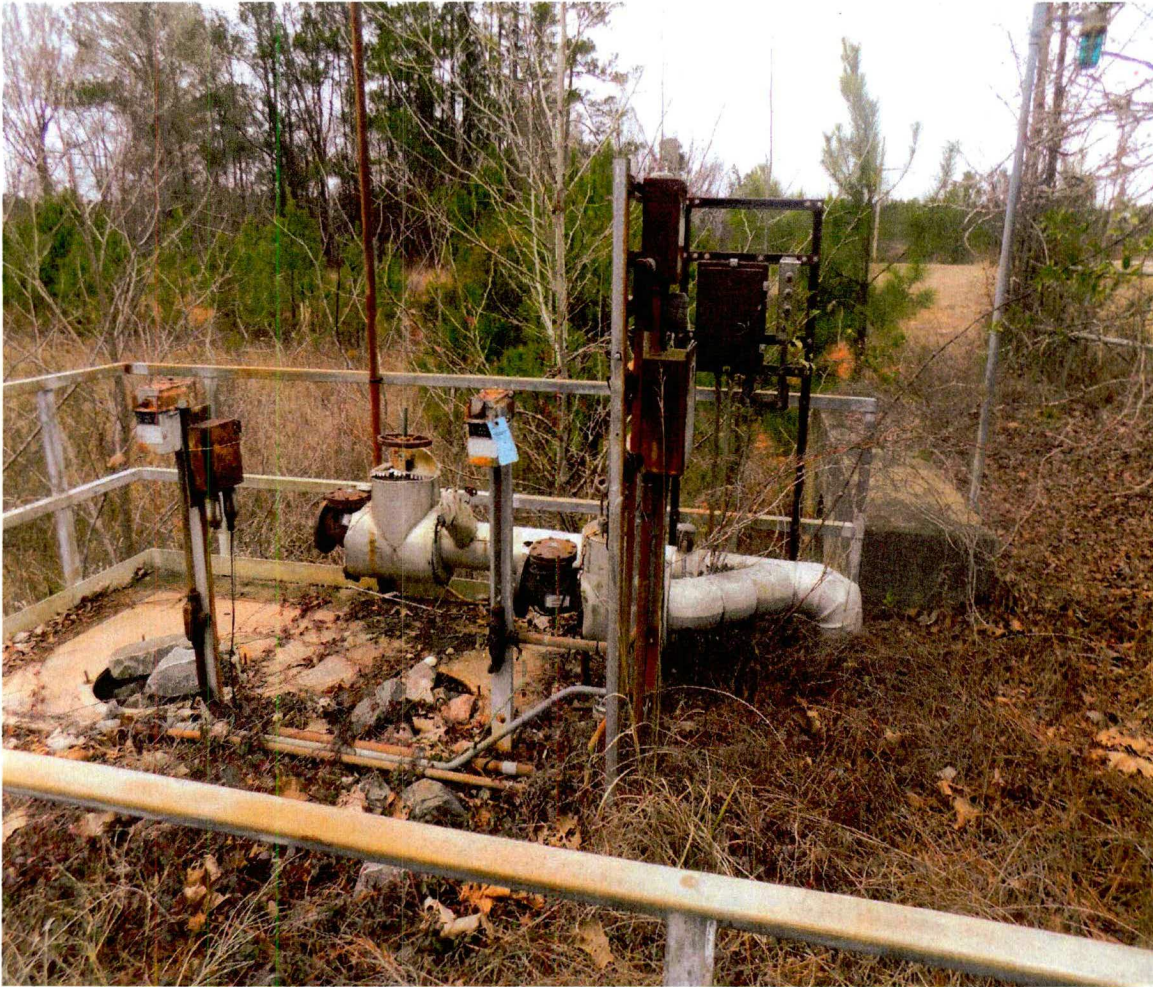


Figure 15. 483-6D Surge Basin Platform

The following utilities served the respective facilities:

607-14D – Electrical, domestic water, process water

607-15D – Electrical, air, soda ash, service water

Blowers – Electrical

Disinfection Pit – Electrical, process water

607-12D – Electrical, service water

607-2D – Electrical, process water

483-6D – Electrical, flush water

Appendix B – Listing of End Points and/or End Point Activities Along with Completion Verification

Section 1	COMPLETE PREPARATORY OPERATIONS		
End Point #	Activity	Endpoint	Verification Method
MA – 1.1	Submit Environmental Evaluation Checklist for approval to document a NEPA (National Environmental Policy Act) review and identify any environmental permits needed.	Notice of NEPA Approval (NONA) is issued.	Document Review
MA – 1.2	Submit Site Clearance Permit for approval.	Site Clearance Permit approved.	Document Review
MA – 1.3	Prepare and submit request for screening of real property for disposition.	Building and equipment, as applicable, have been declared excess.	Document Review
MA – 1.4	Update all property systems, Master Building List (MBL) and the Financial Information System (FIS).	Systems have been updated.	Interview EC&ACP & SI Property Managers, as applicable
MA – 1.5	As needed, sample and analyze materials (e.g., paints, insulation, etc.) for PCBs and other hazardous constituents. Define segregation practices and waste management for identified components. This can be done in parallel with demolition activities.	Waste Identification Form (WIF) with segregation practices is approved and issued.	Document Review
MA – 1.6	Perform facility inspections for asbestos containing materials and issue the required reports.	Building Inspection Reports are issued.	Document Review
MA – 1.7	Perform an Engineering Survey and Interference Report.	Engineering Survey is issued.	Document Review
MA – 1.8	Conduct Readiness Review.	Readiness Review is complete.	Document Review
Section 2	ELIMINATE OR REDUCE HAZARDS		
MA – 2.1	Isolate hazardous energy per Manual C2, Procedure FDP 2.04	Verification Report is approved and issued.	Document Review
MA – 2.2	Remove and dispose of hazardous materials, as applicable.	Hazardous materials are dispositioned.	Document Review
MA – 2.3	Prepare and submit notice of asbestos disturbance if any asbestos is identified.	Asbestos abatement project license is received, if any asbestos is identified.	Document Review
MA – 2.4	Complete asbestos abatement actions if any asbestos is identified.	Asbestos abatement is complete if any asbestos is identified.	Document Review
MA – 2.5	Complete any remaining deactivation activities.	All deactivation activities are completed.	Visual Verification

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Section 3			
PERFORM DISMANTLEMENT AND REMOVAL ACTIVITIES			
End Point #	Activity	Endpoint	Verification Method
MA – 3.1	Remove any remaining loose miscellaneous materials and equipment.	Building is free of loose miscellaneous materials and equipment.	Visual Verification
Section 4			
PERFORM DEMOLITION ACTIVITIES			
End Point #	Activity	Endpoint	Verification Method
MA – 4.1	Obtain demolition permit(s) as required by South Carolina Codes and Regulations, SC Reg. R61-86.1 Section XIII, for demolition of 607-14D and remnants 607-15D, Disinfection Pit, 607-12D, 607-7D, 607-2D, and 483-6D.	Demolition license(s) is/are received.	Document Review
MA – 4.2	Take precautions to minimize interference with roads and other facilities.	Traffic plan is issued.	Document Review
MA – 4.3	Take precautions to preserve any stakes, monuments or benchmarks.	If applicable, stakes, monuments or benchmarks are protected.	Document Review
MA – 4.4	Employ and implement measures for controlling suspended solids in storm water run-off as a result of demolition activities.	Storm water pollution prevention plan is issued.	Document Review
MA – 4.5	Demolish and remove the Building 607-14D, Chemical Feed Facility, structure (including all appurtenances) down to, but not including, its concrete floor slab.	Building concrete slab is free of specified elements.	Visual Observation
MA – 4.6	Clean the concrete slab.	The concrete slab is free of all coarse debris.	Visual Observation
MA – 4.7	Cut off all electrical conduit and piping penetrations flush with the top of the slab or ground level, as applicable. Plug and seal with grout if greater than 2" diameter.	Slab penetrations greater than 2" diameter have been cut flush with top of concrete slab or ground level, as applicable, and plugged/grouted.	Visual Observation
MA – 4.8	Plug other resultant holes, if present, and fill with cementitious material (e.g., grout, controlled low strength material, concrete, etc.).	Other resultant holes have been plugged and filled.	Visual Observation
MA – 4.9	Cleave or breach any remaining curbing on the slab, as necessary, to ensure drainage of rainwater.	Curbing remaining, if any, has been cleaved or breached.	Visual Observation
MA – 4.10	Inspect the 607-14D concrete slab for oil staining and remove stains, if found, using a strong surfactant, "Biosolve".	Concrete slab is free of oil stains.	Visual Observation
MA – 4.11	Grout the building sump to top of concrete elevation.	Sump has been grouted.	Visual Observation
MA – 4.12	Cut all above ground and concrete surface protrusions (e.g., bolts, rebar, etc.) level with the concrete slab, foundations, pads or grade, whichever applies.	All above ground and concrete surface protrusions have been cut level with the concrete slab, foundations, pads, or grade, whichever applies.	Visual Observation

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Section 4 (cont'd)	PERFORM DEMOLITION ACTIVITIES		
End Point #	Activity	Endpoint	Verification Method
MA – 4.13	Remove light pole associated with 607-14D and fill hole with cementitious material to grade or cut pole off flush with grade.	Light pole has been removed and hole filled to grade or cut off flush with grade.	Visual Observation
MA – 4.14	Remove bollards.	Bollards have been removed.	Visual Observation
MA – 4.15	Remove the 607-15D, Sanitary Waste Treatment Plant, remnant appurtenances (handrail, conduit, panels, racks, piping, lighting poles, equipment, sounding tube, diverter valve operators, junction boxes, etc.) down to grade.	All 607-15D remnant appurtenances have been removed to grade.	Visual Observation
MA – 4.16	Plug and seal any resulting holes with grout if greater than 2" diameter.	Resulting holes have been plugged/grouted, if greater than 2" diameter.	Visual Observation
MA – 4.17	Remove rip-rap and gravel from within the 607-15D structure down to a minimum of 6" below the top of the 607-15D side walls and replace with compacted crusher run material up to the top of the side walls.	Rip-rap and gravel have been removed down to a minimum of 6" below top of 607-15D side walls and replaced with compacted crusher run to top of side walls.	Visual Observation
MA – 4.18	Install a 6" reinforced concrete cap slab over 607-15D	6" reinforced concrete slab has been installed.	Visual Observation
MA – 4.19	Remove 607-7D Surge Tank blowers and 607-15D aeration blowers and remnant appurtenances (control panels, conduits, racks, piping, lighting poles, utility pole, etc.) down to grade.	All blower remnant appurtenances have been removed.	Visual Observation
MA – 4.20	Plug and seal any resulting holes with grout if greater than 2" diameter.	Resulting holes have been plugged/grouted, if greater than 2" diameter.	Visual Observation
MA – 4.21	Remove the Disinfection Pit remnant appurtenances (handrail, conduit, hose rack, piping, lighting poles, etc.) down to grade.	All Disinfection Pit remnant appurtenances have been removed.	Visual Observation
MA – 4.22	Plug and seal any resulting holes with grout if greater than 2" diameter.	Resulting holes have been plugged/grouted, if greater than 2" diameter.	Visual Observation
MA – 4.23	Grout the underground 2' x 2' concrete junction box east of the Disinfection Pit up to the top of the side walls.	Underground junction box has been grouted.	Visual Observation
MA – 4.24	Remove the 607-12D Sanitary Sewage Lift Station remnant appurtenances (pumps, motors, conduits, panels, racks, piping, hose rack, lighting poles, etc.) down to grade.	All 607-12D remnant appurtenances have been removed.	Visual Observation
MA – 4.25	Plug and seal any resulting holes with grout if greater than 2" diameter.	Resulting holes have been plugged/grouted, if greater than 2" diameter.	Visual Observation

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Section 4 (cont'd)			
PERFORM DEMOLITION ACTIVITIES			
End Point #	Activity	Endpoint	Verification Method
MA – 4.26	Fill the 607-12D Sanitary Sewage Lift Station with gravel up to the top of the lift station (i.e., up to the lift station cover plate).	607-12D lift station has been filled with gravel.	Visual Observation
MA – 4.27	Remove the 607-2D Sanitary Sewage Lift Station remnant appurtenances (control panel and rack, conduits, process water piping, hose rack, lighting pole, etc.) down to grade.	All 607-2D remnant appurtenances have been removed.	Visual Observation
MA – 4.28	Plug and seal any resulting holes with grout if greater than 2” diameter.	Resulting holes have been plugged/grouted, if greater than 2” diameter.	Visual Observation
MA – 4.29	Remove the 483-6D Surge Basin remnant appurtenances (conduit, panels, racks, piping, lighting poles, etc.) down to top of concrete platform structure or grade, as applicable. DO NOT REMOVE OR DAMAGE CONCRETE PLATFORM STRUCTURE HANDRAILS.	All 483-6D Surge Basin remnant appurtenances have been removed.	Visual Observation
MA – 4.30	Plug and seal any resulting holes with grout if greater than 2” diameter.	Resulting holes have been plugged/grouted, if greater than 2” diameter.	Visual Observation
MA – 4.31	Perform a Final Acceptance Inspection (8Q-51) of the completed work.	Final Acceptance Inspection completed and recorded (8Q-51).	Document Review
MA – 4.32	Complete any incomplete or new work items identified during the Final Acceptance Inspection.	Remaining work items identified during final inspection completed.	Document Review
MA – 4.33	Remove from jobsite and dispose of all equipment, rubble, sanitary waste, scrap metal, and trash as the work progresses.	Jobsite equipment and waste dispositioned.	Document Review and Visual Observation
Section 5			
COMPLETE PROJECT CLOSURE ACTIVITIES			
End Point #	Activity	Endpoint	Verification Method
MA – 5.1	Ensure all Work Packages have been completed.	Work Packages are complete.	Document Review
MA – 5.2	Prepare as-built information and a request for Site Clearance Permit Closure, OSR 3-120, and submit as required by Manual 1D Procedure 3.02.	Request for Site Clearance Permit Closure is issued.	Document review.
MA – 5.3	Issue correspondence for retirement of assets.	Property Record Closeout letter is issued and recorded in the project file.	Document Review
MA – 5.4	Issue correspondence for deletion (voiding) of engineering documents.	Records Disposition letter for Building 607-14D and associated IWT Permit Interim Closure Plan remnants is issued and recorded in the project file.	Document Review

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Section 5 (cont'd)	COMPLETE PROJECT CLOSURE ACTIVITIES		
End Point #	Activity	Endpoint	Verification Method
MA – 5.5	Revise (by Site Infrastructure Engineering) technical baseline documents, as appropriate, which cannot be voided.	Appropriate technical baseline documents have been revised.	Document Review
MA – 5.6	Prepare and issue Completion of Decommissioning End Points (CDEP) document.	CDEP document has been issued.	Document Review
MA – 5.7	Prepare and issue Decommissioning Project Final Report (DPFR).	DPFR is issued.	Document Review