



Cylinder Storage Yards

C-745-A (DUF6)

Yard	Construction Material	Area/Capacity (Approximate)
C-745-B	Compacted DGA	207,975 ft ² and has a capacity of approximately 4,200 10-ton or 14-ton cylinders

Environmental Concerns:

- Radiological contamination

Near-Term Plans FY 15–FY 17:

- Continue utilization for DUF₆ storage





C-206 Pumper Drafter Pit



C-206-B Inactive Smoke Training Facility

Facility Information

The C-206 Pumper Drafting Pit is used to run performance tests on the fire engine pumbers. The only material used for testing is water.

C-206 is a reinforced concrete tank that will hold 14,800 gal.

C-206, C-206-B (DEA)

Environmental Concerns:

- No known environmental issues are associated with C-206 or C-206-B
- Available documentation and interviews indicate no PCB-contaminated equipment or waste at C-206 or C-206-B

Near-Term Plans FY 15–FY 17:

- Assessment of future use for C-206
- Excess C-206-B





Facility Information

Between 1973 and 1979 the Oil Landfarm was used for landfarming waste oils contaminated with TCE, uranium, PCBs, and 1,1,1-trichloroethane (TCA). These waste oils are believed to have been derived from a variety of PGDP processes. Two 1,125-ft² plots plowed to 1-ft to 2-ft depth. Waste oils were spread on the surface every 3 to 4 months, then limed and fertilized.

Southwest Plume Groundwater Sources C-747-C Oil Landfarm (SWMU 1) (REM)

Environmental Concerns:

- A record of decision was signed in March 2012 selecting soil mixing to address TCE and other volatile organic compounds at SWMU 1
- This unit also will be investigated as part of Soils RI 2 upon completion of the soil mixing operations

Near-Term Plans FY 15–FY 17:

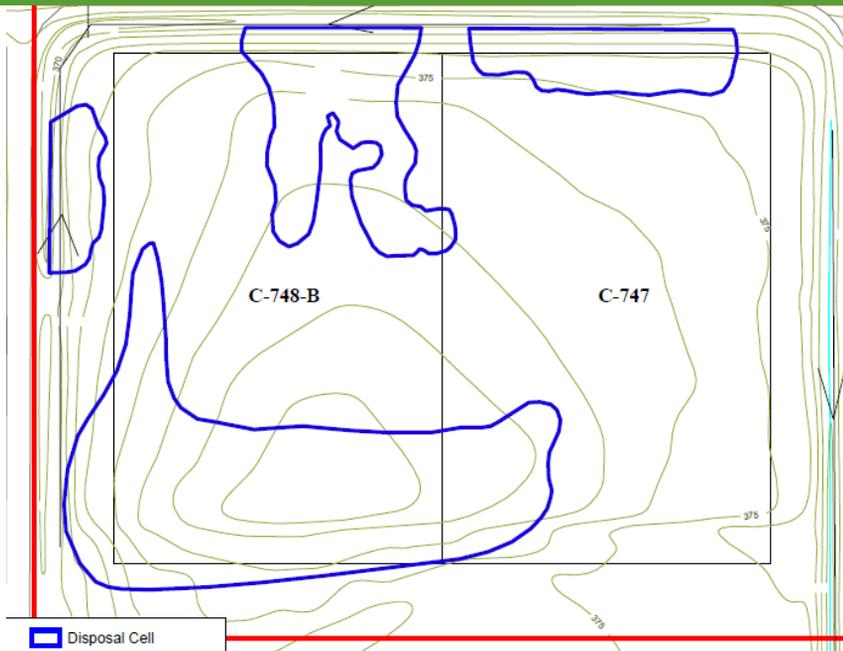
- Complete the soil mixing remedial action
- Prepare the remedial action completion report and operation and maintenance plan



Facility Information

The C-747 Contaminated Burial Yard and the C-748-B Burial Area (SWMU 4) is located in the western section of the PGDP secured area. SWMU 4 (which covers an area of approximately 286,700 ft²) is bounded on the north, east, and south by plant roads and on the west by an active railroad spur. This SWMU is an open field that, at one time, was used for the burial and disposal of various waste materials in designated burial cells. A short, narrow, gravel road that enters from the west is nearly completely grass-covered. Except for this rarely used road, the entire site is covered with a variety of field grasses and clovers. The site typically is mowed once a month from April through September.

Both burial yards, C-747 and C-748-B, were covered with 2 ft to 3 ft of soil material and a 6-inch clay cap was placed over the area in 1982.



Burial Grounds C-747 and C-748-B (SWMU 4) (REM)

Environmental Concerns:

- Additional sampling was recommended and scoped by the FFA parties
- DOE continues to conduct the sampling as scheduled

Near-Term Plans FY 15–FY 17:

- Complete the scheduled sampling
- Begin development of an FS specific for SWMU 4



AOC 100 Fire Training Area (REM)



Facility Information

The Fire Training Area, SWMU 100, is located in the southwest corner of PGDP. At the time of the investigation of this area, it consisted of one large rectangular surface burn area, two circular burn pan areas, one circular electric pump area, an elevated and bermed fuel tank area, and two square burn area depressions. The burn areas were unlined and were not bermed. The Fire Training Area has been used since 1982 for staging fire training exercises involving waste oils, fuels, and other combustible liquids. Combustible liquids were not burned in the unlined areas after 1987. Fire training exercises continue to be conducted in the vicinity, but in order to prevent any negative impacts to the environment, no burning is conducted in unlined areas, and flammable liquids are no longer used.

Environmental Concerns:

- The selected remedy, which depends on the area remaining industrial, for the Fire Training Area, SWMU 100, was NFA (outside of maintaining institutional controls), as documented in the *Record of Decision for Waste Area Groups 1 and 7 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/OR/06-1470&D3

Near-Term Plans FY 15–FY 17:

- Maintain control of the property, as specified in the ROD





Facility Information

The C-745-A Radiological Contamination Area (AOC 212) is located in the west-central portion of the plant site. The area is approximately 2,500 ft². There is no direct connection to surface water from this AOC.

While the exact history is unknown, supposition is that the area may have been used as an unloading site near railroad tracks, and a release of radiological contaminants may have occurred.

AOC 212 C-745-A Radiological Contamination Area

(REM)

Environmental Concerns:

- AOC 212 was investigated further as part of the Soils OU RI—Refer to RI report for current data summary
- The representative data set used is sufficient to support decision making and indicate that an FS is appropriate for AOC 212
- Possible remedial technologies applicable for this unit, as discussed in the work plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

SWMU 213 is located north of C-745-A in the west-central portion of the plant site. This area was known formerly as DMSA Outside (OS)-02 and is approximately 7,000 ft². The western part of this SWMU abuts KPDES Outfall 015.

DMSA OS-02 was used to store excess or unused material. Items formerly stored at this location included a spill storage tank; an old “drop test” cylinder with overpack; metal parts from forklifts, cranes, cylinder slings, and carts; and wood to make cylinder saddles.

SWMU 213 Outside DOE Material Storage Area OS-02 (REM)

Environmental Concerns:

- SWMU 213 was investigated further as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used is sufficient to support decision making and indicate that an FS is appropriate for SWMU 213
- Possible remedial technologies applicable for these units, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15—FY 17:

- None—Soils OU FS baselined for 2025



SWMU 215



SWMU 216



Facility Information

SWMU 215, which is the former location of DMSA OS-04, included a rail tank car located west of the C-743 Trailer Complex in the west-central portion of the plant site. The area of the DMSA was approximately 480 ft² (40 ft x 12 ft). The SWMU currently is empty, and the waste was dispositioned properly.

SWMU 216 is located north of C-206 in the west central portion of the plant site at the location formerly known as DMSA OS-05. SWMU 216 is approximately 7,000 ft². This area was controlled by fire services and used to store excess material and supplies, primarily fire extinguishers. The date that this area began to be used as a storage area for fire extinguishers is unknown; however, in 1997 or 1998, the majority of the fire extinguishers were placed in a covered metal bin located next to the roped portion of the DMSA. All RCRA-regulated items and other waste have been dispositioned properly.

Outside DOE Material Storage Areas

OS-4, OS-5(REM)

Environmental Concerns:

- SWMU 215 (OS-4) was investigated further as part of the Soils OU RI—Refer to RI report for current data summary
- SWMUs 216 (OS-5)—A certified RCRA Closure Report was approved by Kentucky on February 13, 2007, for this DMSA
- The representative data sets used are sufficient to support decision making and indicate that an FS is appropriate for SWMUs 215 and 216
- Possible remedial technologies applicable for these units, as discussed in the work plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

The C-603 Nitrogen Generating Facilities were constructed to generate liquid nitrogen at the PGDP. The C-603 facilities replaced a similar facility used for the same purpose (C-601). Some of the C-601 equipment, including the receiver storage tanks, were used at the C-603 facility.

The steel tanks, steel piping and supports, and the buildings themselves originally were declared a solid waste at the C-603 site. During the October 2005, D&D activities, these wastes were segregated, and removed from the unit for disposal or recycling off-site as described in the following section. As a result of segregation, some hazardous wastes were generated and placed into compliant storage or shipped off-site. The concrete slabs were left in place to be managed at a later date under the Soils Operable Unit activities.

SWMU 483 Nitrogen Generating Facilities slab and underlying soils

(REM)

Environmental Concerns:

- Soils adjacent and under the area may be contaminated with site contaminants as a result of historical operations

Near-Term Plans FY 15–FY 17:

- None—to be addressed as part of the Soils and Slabs Operable Unit



Geographical Area (GA) 12

Mission Support Facilities (MS)

- C-600 Steam Plant
- C-601 Nitrogen Generator Building Addition
- C-601-A, B, C, D Fuel Tanks/House
- C-602 Coal Storage Yard
- C-604 Utilities Maintenance Building
- C-604-A Utilities Storage Building
- C-605 Substation Building
- C-606 Coal Crusher Building
- C-607 Emergency Air Compressor Generator Building
- C-616-Q Fly Ash Settling Lagoon

Former Support Facilities (FSF)

- C-400 Cleaning Building (SWMUs 98 and 203)
- C-616-L Pipeline and Vault (AOC 165)
- C-403 Neutralization Tank (SWMU 40)

Remediation Program Facilities (RPF)

- SWMU 55 C-405 Incinerator Building Slab and Underlying Soils
- SWMU 480 C-402 Lime House Building Slab and Underlying Soils

Other SWMUs/AOCs (non-NFA)

- SWMU 11 C-400 Trichloroethylene Leak Site
- SWMU 47 C-400 Technetium Storage Tank Area
- SWMU 533 TCE Spill Site From TCE Unloading Operations at C-400





Facility Information

47,424 ft²

The C-600 Steam Plant provides steam, a portion of the compressed air, nitrogen, and chilled water used at the Paducah Site. C-600 is constructed of structural steel with corrugated siding.

The plant produces steam and consists of three water-wall tube boilers (two coal-fired and one oil- and gas-fired), each capable of producing 100,000 lb of steam per hour at 250 psi, plus associated equipment.

C-600 Steam Plant and Supporting Facilities

C-600, C-601, C-601-A, B, C, D, C-602, C-604, C-604-A, C-605, C-606, C-607 (DEA)

Environmental Concerns:

- Potential sources (sulfur dioxide, nitrogen oxide, carbon monoxide, and particulate matter, TCE, sulfuric acid, chlorine trifluoride, fuel oil, chromated water, and asbestos)
- 17,300-gal release of fuel oil in 1979 through various leaks in the piping
- Stains of chromated water throughout facility
- Asbestos-containing material
- Potential lead-based paint and PCB-containing ballasts

Near-Term Plans FY 15–FY 17:

- Evaluate whether restart of the steam plant is necessary to support deactivation or cylinder activities
- If not restarted, disposition excess coal and other resources (resale/reuse preferred)





Facility Information

This is a lagoon used to settle residual fly ash to prevent ash emitting to air.

C-616-Q Fly Ash Settling Lagoon

(DEA)

Environmental Concerns:

- Fly ash accumulated in the lagoon

Near-Term Plans FY 15–FY 17:

- Continue operations as long as the C-600 Steam Plant is operational





Facility Information

116,140 ft²

The C-400 Chemical Operations Facility, built in 1953, provides cleaning and decontamination services for the plant and has a floor area of 116,140 ft². Equipment removed from the process buildings for repair is cleaned here prior to being moved to the maintenance facility.

Cylinders also are cleaned and tested at this facility.

The Chemical Operations Facility also houses the plant's laundry.

C-400 Cleaning Building

(DEA)

Environmental Concerns:

- **SWMU 98**—C-400 Basement Sump
- **SWMU 203**—C-400 Discard Waste System
- **NFA**—**SWMUs 48, 49, 50, 51, 52, 53, 54, 383, 384, 537**
- TCE historically leaked to the C-400 basement sump and discharged TCE into the storm sewer
- Cleaning agents from contaminated equipment such as TCE, TCA, nitric acid, hydrofluoric acid, sodium hydroxide, trioxide, and chromic acid were spilled onto the floor
- Asbestos-containing material throughout
- Radiological contamination (uranium and Tc-99)
- Chromated water spills

Near-Term Plans FY 15–FY 17:

- Evaluate use of the laundry facility/off-site laundry vendors
- Determine if cylinder cleaning and testing capabilities are needed for future cylinder activities
- Regulators have indicated desire to D&D this facility to address potential contamination beneath the facility (sources of groundwater contamination)





Facility Information

The C-616-L Pipeline and Vault Soil Contamination Site (AOC 165) is located in the central portion of the plant site. The C-616-L Vault and Lift Station are located on the south side of Virginia Avenue and north of the C-600 Steam Plant. The SWMU dimensions consist of two areas: Area 1 is 105-ft wide by 210-ft long; and Area 2 is 30-ft wide by 130-ft long. This area discharges directly into KPDES Outfall 015.

The C-616-L Vault historically served as an effluent collection system. The area collects runoff from the C-602 Coal Storage Yard. This runoff was transferred to the NSDD, causing the ditch to overflow onto an adjacent stretch of 10th Street at PGDP during heavy rains.

C-616-L Pipeline and Vault (AOC 165) (REM)

Environmental Concerns:

- This area was investigated further as part of the Soils OU RI—Refer to RI report for current data summary
- The representative data set used is sufficient to support decision making and indicates that an FS is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the work plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

The C-403 Neutralization Tank (SWMU 40) is located at the northeast corner of the C-400 Building. The tank is 25 ft² by 26-ft deep, inground, and open-topped. It is constructed of concrete and lined with two layers of acid brick. The tank was used for the storage and treatment of acidic, uranium-bearing waste solutions generated during cleaning operations in the C-400 Building until 1957. In 1957, neutralization equipment was installed in the C-400 Building, and the C-403 Neutralization Tank no longer was used to neutralize waste solutions. Although neutralization no longer was carried out at C-403, contaminated wastewater such as low-level and uranium-bearing wastewater continued to be discharged to C-403 until 1990. These discharges included UF₆ cylinder hydrostatic test-water, overflow and runoff from cleaning tanks, discharge from floor drains, and other unknown sources. After 1990, the C-403 Neutralization tank was removed from service.

C-403 Neutralization Tank (SWMU 40) (REM)

Environmental Concerns:

- Analytical results indicated that TCE concentrations in nine water samples ranged from 17 to 1,300 µg/L and TCE concentrations in the three sediment samples ranged from 35 µg/L to 6,700 µg/L
- Other potential contaminants include uranium metal, PCBs, and radionuclides
- This unit was proposed for a removal action in 2008; however, the potential for damage to the waterline was too great to proceed with excavation at (C-403)

Near-Term Plans FY 15–FY 17:

- Continue surveillance and maintenance of area





Facility Information

D&D of the C-405 Incinerator (SWMU 55) was performed as a non-time-critical removal action. The C-405 D&D field activities began on November 28, 2006, and were completed on July 25, 2007.

SWMU 55 C-405 Incinerator Building Slab and Underlying Soils (REM)

Environmental Concerns:

- Soils adjacent and under slabs may be contaminated with site contaminants as a result of historical operations

Near-Term Plans FY 15–FY 17:

- Continue surveillance and maintenance of area
- Final action to be addressed as part of the Soils and Slabs OU





Facility Information

D&D of the C-402 facility was performed as a non-time-critical removal action in 2006.

The C-402 facility was a single, one-story building constructed in 1953. Its original function was to prepare a lime slurry for neutralization of water discharged from C-400 that was piped into the C-403 Acid Neutralization Pit located immediately north of the facility. Later, the main floor area was used to house several pieces of equipment that were necessary to produce magnesium fluoride (MgF_2) pellets. The facility ceased operation prior to 1978. It later was used as a storage facility. The building was constructed of reinforced concrete (walls, roof, and floor) with a partial, below-grade basement located in the northern third of the building. The footprint of the building encompassed 1,742 ft².

SWMU 480 C-402 Lime House Building Slab and Underlying Soils (REM)

Environmental Concerns:

- The C-402 facility was radiologically contaminated (primary radionuclides were uranium and Tc-99)
- The facility was demolished in 2006, and the basement was filled with flowable fill
- A permanent safety barrier surrounds the perimeter of the concrete slab
- A 6-inch concrete cap was poured on top of the fill and sealed
- The concrete slab is posted as a fixed contamination area

Near-Term Plans FY 15–FY 17:

- Continue surveillance and maintenance of area
- Final action to be addressed as part of the Soils and Slabs OU





SWMU 11 C-400 TCE Leak Site SWMU 533 TCE Spill Site From TCE Unloading Operations at C-400 (REM)

Facility Information

In June 1986, a routine construction excavation along the 11th Street storm sewer revealed TCE soil contamination. The cause of the contamination was determined to be a leak in a drain line from the C-400 Cleaning Building's basement sump to the storm sewer. The area of contamination became known as the C-400 Trichloroethene Leak Site and was designated as SWMU 11.

SWMU 533 is composed of a concrete pad, the pumping station, and an aboveground TCE storage tank. The off-loading pump station and associated piping were used to transfer or off-load TCE from railroad tank cars or tank trucks into an aboveground storage tank (day holding tank).

SWMU 11 (TCE Leak Site) is located approximately 10-20 ft northeast of SWMU 533.

Environmental Concerns:

- Release occurred from leakage of TCE at the southeast corner of the C-400 building
- Releases occurred from transfer/unloading operations from railroad tank cars and tank trucks to an above ground storage tank
- DOE Signed an Interim Record of Decision in 2005 to address the TCE and other volatile organic compounds in the soils and groundwater in these areas
- ERH was used in 2003 and 2010 to remove approximately 2,400 gal of VOCs from the southwest and east areas of the C-400 Cleaning Building

Near-Term Plans FY 15–FY 17:

- Complete the Phase IIa data analysis from the Electrical Resistance Heating remediation conducted in 2014
- Complete installation, operation, and reporting for the Phase IIb Steam Heating Treatability Study to address lower RGA contamination





Facility Information

A 4,000-gal tank was used to store a waste solution of chromium and Tc-99. The tank was located on a concrete pad outside of the C-400 Building.

The tank was removed in December 1986.

SWMU 47 C-400 Technetium Storage Tank Area (REM)

Environmental Concerns:

- Chromium and Tc-99

Near-Term Plans FY 15–FY 17:

- None—this unit will be addressed as part of the Soils and Slabs OU



Geographical Area (GA) 13

Mission Support Facilities (MS)

- C-415 Feed Plant Storage Building Slab and Underlying Soils (SWMU 482)
- C-754 Low-Level Waste Storage Facility

Former Support Facilities (FSF)

- C-410-D Fluorine Storage Building (AOC 198)
- C-410-K Fluorine Facility

Remediation Program Facilities (RPF)

- C-410/C-420 Complex (SWMUs 41, 478, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513)
- C-410-B Hydrogen Fluoride Neutralization Lagoon (SWMU 19)
- C-410-E Emergency Holding Pond Slab and Underlying Soils (SWMU 20)

Other SWMUs/AOCs (non-NFA)

- SWMU 78 C-420 PCB Spill Site
- SWMU 92 Fill area for dirt from the C-420 PCB Spill Site
- SWMU 169 C-410-E HF Vent Surge Protection Tank
- SWMU 76 C-632-B Sulfuric Acid Storage Tank
- SWMU 222 Outside DOE Material Storage Area OS-11





Facility Information

The C-415 Feed Plant Storage Building is a one-story, prefabricated steel storage building. It has a poured-concrete foundation, a gable roof of corrugated metal, and an exterior of vertical steel panels.

The facility is being used to store D&D equipment.

C-415 Feed Plant Storage Building (SWMU 482)(REM)

Environmental Concerns:

- Soils adjacent and under slabs may be contaminated with site contaminants as a result of historical operations

Near-Term Plans FY 15–FY 17:

- Continue utilization of the facility for equipment storage
- Final action to be addressed as part of the Soils and Slabs OU





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Facility Information

This facility was used to store USEC waste.

C-754 Low-Level Waste Storage Facility (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Evaluate if needed to support waste management operations





Facility Information

This facility was used to store fluorine needed for routine operations. The facility was turned over to DOE in a “shutdown” and secure condition. There is no inventory currently in the facility.

C-410-D Fluorine Storage Building (AOC 198) (DEA)

Environmental Concerns:

- Fixed radiological contamination
- Transite siding
- Detectable radiological and PCB contamination was identified in the area where the facility was being constructed. This was identified as AOC 198

Near-Term Plans FY 15–FY 17:

- Perform S&M activities
- Final action to be addressed as part of the Soils and Slabs OU





Facility Information

This facility was used to store fluorine, helium, nitrogen, and other chemicals needed for routine operations. The facility was turned over to DOE in a “shutdown” and secure condition. There is no inventory currently in the facility.

C-410-K Fluorine Facility (DEA)

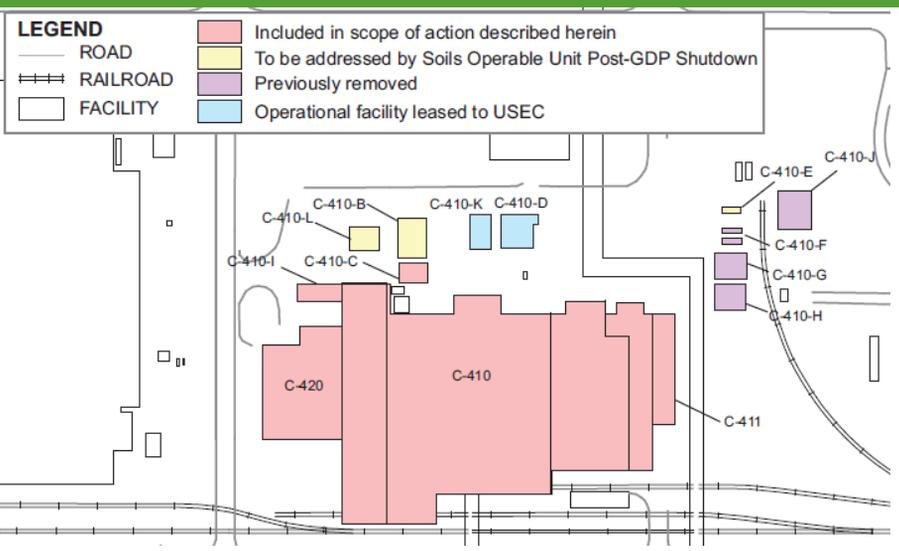
Environmental Concerns:

- Fixed radiological contamination
- Transite siding

Near-Term Plans FY 15–FY 17:

- Perform S&M activities





Facility Information

The C-410 Complex consists of three main process buildings and several auxiliary facilities. The buildings and facilities that are included in the non-time-critical removal action are as follows:

- C-410 Original Feed Plant with Two East Expansions and One West Expansion
- C-410-C Hydrogen Fluoride (HF) Neutralization Building
- C-410-I Ash Receiver Shelter
- C-411 Cell Maintenance Building
- C-420 Green Salt Plant

The primary structural system in the C-410 (including expansions), C-411, and C-420 Buildings is steel frame supporting interior floors made of concrete slabs, steel grating, or steel deck plates. Exterior walls are made of corrugated transite siding, masonry, and concrete with steel sash windows. The roofs are comprised of steel sheathing, insulation, asphalt felt, and gravel ballast.

C-410/C-411/C-420 Complex

(SWMUs 41, 478, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513) (REM)

Environmental Concerns:

- The contaminants that are expected to remain after deactivation of these facilities will be radiological contamination from uranium, PCBs in paint, and small amounts of hazardous substances that cannot be accessed for removal

Near-Term Plans FY 15–FY 17:

- Complete the demolition activities and place slab in condition for S&M
- Submit the removal action report
- Incorporate facility into the S&M Program



Facility Information

The C-410-B HF Neutralization Lagoon (SWMU 19) was a below-grade impoundment with an earth/clay floor and wire-reinforced concrete walls and was located north of the C-410 Building in the central portion of the plant site. SWMU 19 was approximately 1,900 ft² (38 ft x 51 ft) and 7-ft deep. This SWMU was excavated as described in the *Removal Action Report for Soils Operable Unit Inactive Facilities Solid Waste Management Units 19 and 181 at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0356&D2*. SWMU 19 received effluent from the C-410-C Neutralization Building, where lime was used for the neutralization of HF cell electrolyte from fluorine cells. In addition, trucks transporting fly ash to the C-746-T Inert Landfill were rinsed in this impoundment. All processes in the C-410 Building ceased in the late 1970s.

C-410-B Hydrogen Fluoride Neutralization Lagoon

(SWMU 19)(REM)

Environmental Concerns:

- SWMU 19 was investigated further as part of the Soils OU RI—refer to RI report for current data summary
- The representative data set used is sufficient to support decision making and indicate that an FS is appropriate for SWMU 19
- Possible remedial technologies applicable for these units, as discussed in the work plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

The C-410-E HF Emergency Holding Pond (SWMU 20) is located at the HF Tank Farm, east of the C-410 Feed Plant Building.

The pond is a 600 ft² rectangular and approximately 7-ft deep, below-grade impoundment, with an earthen floor and wire-reinforced grout walls. The C-410-E HF Emergency Holding Pond was constructed in the 1950s as a holding pond for potential releases of HF, but the pond was never used for its original purpose or to hold any other types of waste materials. It presently acts as a storm water/surface water catch basin.

C-410-E Emergency Holding Pond Slab and Underlying Soils (SWMU 20)(REM)

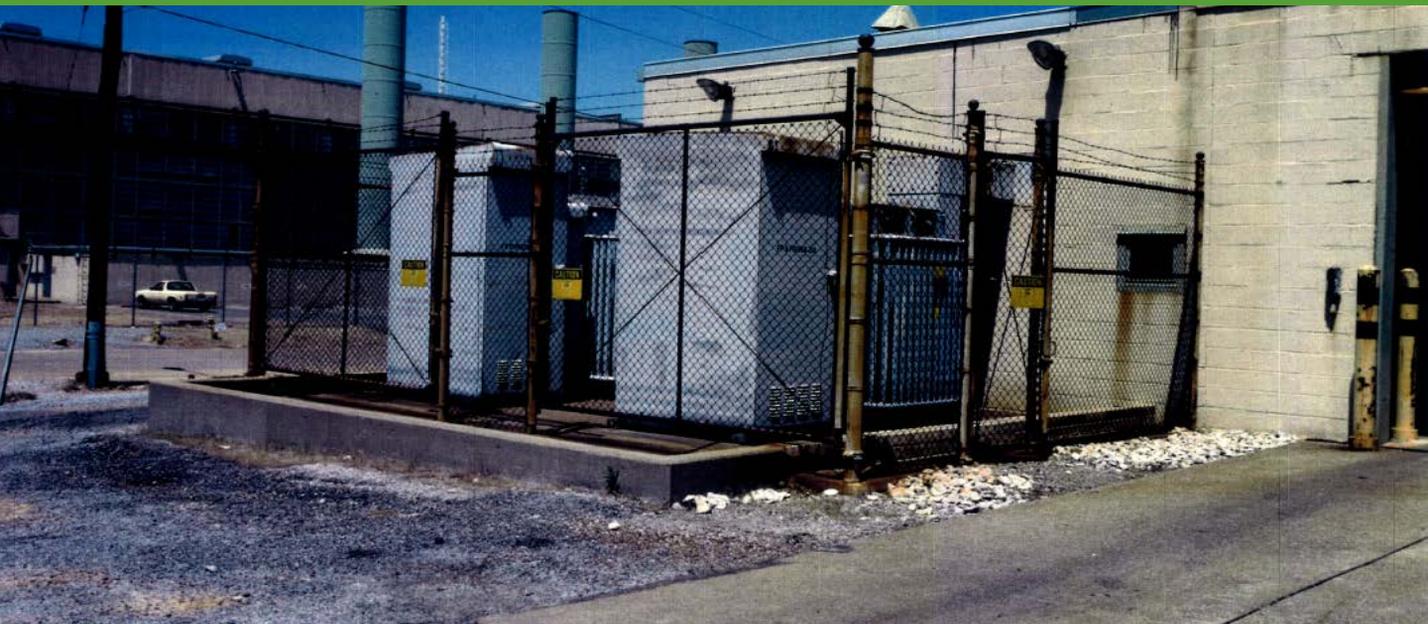
Environmental Concerns:

- Sampling of the sludge indicated the presence of contaminants in the sludge, including technetium-99, uranium, neptunium-237, nickel, and PCBs
- Soils adjacent and under slabs may be contaminated with site contaminants as a result of historical operations

Near-Term Plans FY 15–FY 17:

- Continue S&M of area
- Final action to be addressed as part of the Soils and Slabs OU





Facility Information

This SWMU was identified due to a spill from a transformer rupture.

PCB-containing oil was released from a transfer. Some soil was removed and the area covered with asphalt.

SWMU 78 PCB Spill Site

(REM)

Environmental Concerns:

- Soils adjacent and under slabs may be contaminated with site contaminants as a result of historical operations

Near-Term Plans FY 15–FY 17:

- Continue S&M of area
- Final action to be addressed as part of the Soils and Slabs OU





Facility Information

PCB-contaminated soil from transformer failure (August 1967) at the C-420 area was transported to this location and spread on the ground as fill material.

SWMU 92 Fill area for dirt from the C-420 PCB Spill Site

(REM)

Environmental Concerns:

- This area was addressed as part of the Surface Water OU(On-site) Removal Action
- Any remaining risk will be evaluated as part of the Surface Water OU Remedial Action

Near-Term Plans FY 15–FY 17:

- None—Baselined with the Surface Water OU RI scheduled for 2029





Facility Information

The C-410-E HF Vent Surge Protection Tank (SWMU 169) is located in the east central portion of the plant site. The tank had an approximate volume of 150 gal and was operated from 1952 to 1977.

The tank was an aboveground tank that was used for surge protection. It was part of a system that produced HF for the feed facility. Visual observation of staining on the ground indicated probable release of materials from the tank. The tank is no longer present in the area.

SWMU 169 C-410-E Hydrogen Fluoride (HF) Vent Surge Protection Tank (REM)

Environmental Concerns:

- Historical sampling indicates the presence of chromium
- SWMU 169 was investigated further as part of the Soils OU RI—refer to RI report for current data summary
- The representative data set used is sufficient to support decision making and indicate that an FS is appropriate for SWMU 169
- Possible remedial technologies applicable for these units, as discussed in the work plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025





Outside DOE Material Storage Area (SWMU 222 and SWMU 76) (REM)

Facility Information

SWMU 222 includes SWMU 76, the C-632-B Sulfuric Acid Storage Tank, and DMSA OS-11 at the south and north ends, respectively. SWMU 222 is located northeast of the C-410 facility and southwest of the C-631 Pump House and Cooling Tower near the central portion of the plant site. SWMU 222 is approximately 1,738 ft².

Environmental Concerns:

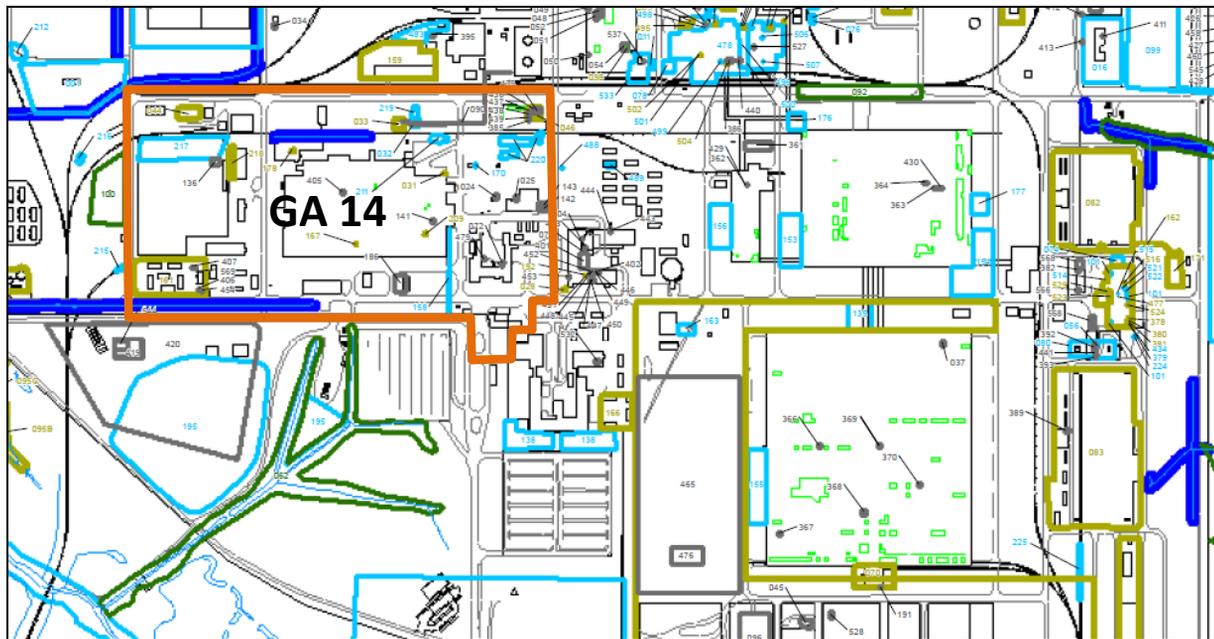
- SWMU 222 (OS-11) and SWMU 76 were investigated further as part of the Soils OU RI—refer to RI report for current data summary
- A certified RCRA closure report was approved by Kentucky on February 13, 2007, for this DMSA
- The representative data sets used are sufficient to support decision making and indicate that an FS is appropriate for SWMUs 222 and 76.
- Possible remedial technologies applicable for these units, as discussed in the work plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025



Geographical Area (GA) 14



- ✓ Emergency Management and Security Support Facilities
- ✓ C-720 Area Facilities and Trailers
- ✓ C-743 Area Facilities and Trailers
- ✓ C-750 Garage Area
- ✓ 39 SWMUs/AOCs
 - ✓ 22 NFA SWMUs/AOCs
 - ✓ 1 Permitted Facility
 - ✓ 2 Groundwater Units under a ROD
 - ✓ 9 Soils and Slabs Units
 - ✓ 5 Soils Remedial Unit



Geographical Area (GA) 14

Mission Support Facilities (MS)

C-200 Guard and Fire Headquarters
C-202 Guard Training Building
C-203 Emergency Vehicle Shelter
C-200-A Annex
C-200-B Trailer
C-201 Emergency Equip Storage Building
C-201-A Emergency Equip Storage Building
C-201-B Emergency Equip Storage Building
C-201-C Emergency Equip Storage Building
C-201-D Emergency Equip Storage Building
C-205 Respirator Issue Facility
C-212 and C-212-U Office Building
C-212-A guard Post (Gate 15)
C-215 Portals 18-19
C-224 Post 15
C-229 Post 229
C-409 Stabilization Building (SWMU 46)
C-720 Machine Shop and Stores Building
(includes C-720-A, B, C, C1, E, J, K, L)
(SWMUs 31, 167, and 209)
C-720-D Transformer Building
C-720-G Warehouse
C-720-H Warehouse
C-720-M, T01, T02, C-720-S Trailers
C-720-R, C-720-T, C-720-U Trailers
C-732-1 Maintenance Materials Storage
Building
C-733 Waste Storage Facility (SWMU 44)
C-741 Mobile Equipment Building
C-743-T01, T02, T03, T04, T07, T09, T11,
T12, T13, T14 T15, T16, T17, T17A, T18
Trailers
C-743-B, C Storm Shelters
C-743-D Storage Building
C-743 Office Building
C-743-A, A1, A2 Storage Sheds
C-750 Garage
C-801 Bus Shelter

Former Support Facilities (FSF)

C-721 Gas Manifold Storage
C-724-A (SMWU 178), B, C Maintenance
Shops
C-724-D Lumber Storage Building
C-724-T01 Change House Trailer
C-725 Paint Shop
C-728 Motor Cleaning Facility
(SWMU 33)
C-729 Acetylene Building (SWMU 170)
C-731 Railroad Repair Equipment
Storage Building
C-742 Cylinder Storage Building
C-744 Material Handling Building
C-751 Fuel Facility (AOC 186)

Remediation Program Facilities (RPF)

SWMUs 211A and 211B

Other SWMUs/AOCs (non-NFA)

SWMU 27 C-722 Acid Neutralization
Tank
SWMU 32 Clean Waste Oil Tanks Slab
and Underlying Soils
SWMU 158 Chilled Water System Leak
Site
SWMU 161 C-743-T01 Trailer Site (Soil
Backfill)
SWMU 217 Outside DOE Material
Storage Area OS-06
SWMU 218 Outside DOE Material
Storage Area (OS-07)
SWMU 219 Outside DOE Material
Storage Area OS-08
SWMU 220 Outside DOE Material
Storage Area OS-09





Facility Information

24,800 ft²

The C-200 Guard and Fire Headquarters currently houses the sites security forces and fire services personnel. The C-203 Emergency Vehicle Shelter is attached and is 1,800 ft².

C-200 is constructed of reinforced concrete with 19,490 ft² of floor space. It contains offices, two conference rooms, a firing range, and bays for emergency response vehicles.

The C-202 Guard Training Building is an addition to the southwest corner of the C-200 Building. C-202 is a one-story, L-shaped, masonry structure built in the early 1980s with approximately 3,450 ft² of floor area. C-202 includes a large class/conference room and an indoor pistol range.

C-200 Guard and Fire Headquarters C-202 Guard Training Building C-203 Emergency Vehicle Shelter

(DEA)

Environmental Concerns:

- Lead from the firing range and CO₂ powder from fire extinguisher recharge shop
- Asbestos-containing material throughout
- Gaskets in the ventilation ductwork may contain asbestos, PCBs, and chromate contamination
- Lead-based paint

Near-Term Plans FY 15–FY 17:

- Continue to house the guard and emergency personnel to support site operations





Facility Information

3,720 ft²

Seven mobile/modular units that serve as storage and support facilities for emergency and guard services.

Guard and Emergency Support Facilities

C-200-A Annex, C-200-B Trailer, C-201, C-201-A, C-201-B, C-201-C, C-201-D C-205 (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue to support emergency and guard operations



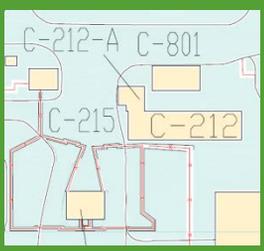
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Facility Information

5,466 ft²

The C-212, C-212-A, and C-212-U Building is concrete structure built in the 1950s.



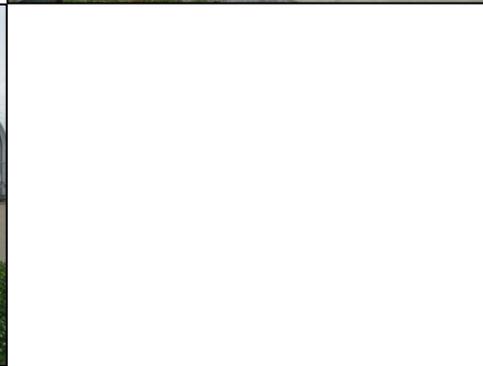
C-212, C-212-A, C-212-U Buildings (DEA)

Environmental Concerns:

- The C-212 and C-212-A Buildings include asbestos-containing material and lead-based paint

Near-Term Plans FY 15–FY 17:

- Continue to utilize to support site personnel



Facility Information

Three portals are used to access the facility and the limited area.

Guard Posts and Portals

C-215 Portals 18-19, C-224 Post 15, C-229 (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use as guard posts for limited area entrance





Facility Information

27,000 ft²

The C-409 Stabilization Building previously was used for disassembling and decontaminating high assay process equipment, stabilizing new equipment, and testing assembled converters before service. This building currently houses facilities for the cleaning and decontamination of uranium-contaminated equipment and uranium recovery.

This rectangular prefabricated building is made of structural steel with corrugated metal siding and has about 27,000 ft² of floor area. The receiving booth is used for storage and disassembly of contaminated equipment that is to be decontaminated. The booth has HEPA filtration and consists of a sheet metal housing located inside C-409.

C-409 Stabilization Building (SWMU 46) (DEA)

Environmental Concerns:

- **NFA SWMU 46**—C-409 Hazardous Waste Pilot Plant
Radiological contamination
- Potential asbestos-containing material on piping insulation and other equipment
- Surfaces may be coated with lead-based paint

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating facility use to support deactivation activities due to its cleaning capabilities



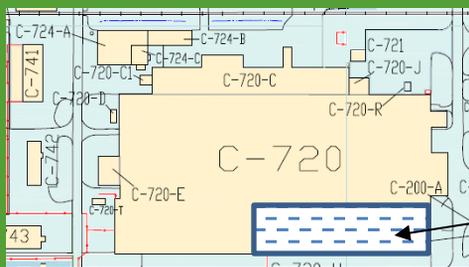


Facility Information

336,498 ft²

C-720 Maintenance and Stores Building is primarily a maintenance area containing both high bay and low bay areas. The facility also contains numerous offices, conference rooms, large storage areas, maintenance shops and loading docks.

C-720 is constructed of structural steel with corrugated siding. Almost every industrial craft is represented here, including machining, forming, welding, heat treating, electronics, painting, carpentry, and plumbing.



C-720 Machine and Stores Building

C-720, C-720-A, B, C, C1, D, E, J, K, L (DEA)

Environmental Concerns:

- SWMU 31—C-720 Compressor Pit Water Storage Tank Slabs and Soils; SWMU 167—C-720 White Room Sump; SWMU 209—C-720 Compressor Shop Pit Sump
- **NFA SWMUs 90, 141, 405**
- Historic releases of radiation were reported in the C-720-C Old Compressor Area and in a pit in the compressor shop (SWMU 209)
- TCE was utilized in the Closed Inactive TCE Degreaser Pit (SWMU 141—NFA) and suspected to be a source of groundwater contamination
- Radiological contamination
- Potential lead-based paint
- Other sources present are Freon, xylene, solvents, acids, lead, oil, and hydrogen

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating facility use to support deactivation activities due to its fabrication and large equipment handling capabilities
- Continue to utilize stores, office space, and receiving areas



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GA14-8



Facility Information

400 ft²

C-720-D is a small metal building.

C-720-D Transformer Building (DEA)

Environmental Concerns:

- Asbestos
- Potential PCBs

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations



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GA14-9



Facility Information

10,800 ft²

C-720-G is a one-story steel, rectangular-plan building erected in 1976. The building has a poured-concrete foundation and a gable roof and exterior walls of steel panels.

This building is used for storage of furniture and other new equipment for other facilities.

C-720-G Warehouse (DEA)

Environmental Concerns:

- Asbestos

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations





Facility Information

2,400 ft²

C-720-H is a one-story prefabricated steel building that was erected in 1978. The building has a poured-concrete foundation and roof and exterior walls of steel panels.

C-720-H Warehouse (DEA)

Environmental Concerns:

- Lead-based paint
- Asbestos
- PCBs in ballasts
- This facility has been used to stored hazardous chemicals

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential





Facility Information

3,000 ft²

C-720-M is a double-wide trailer.

C-720-M-T01 and C-720-S are single-wide trailers.

C-720-M, C-720-M-T01 , C-720-S, Trailers (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential



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Facility Information

2,000 ft²

C-720-R is a small office/storage trailer.

C-720-T is a single-wide trailer.

C-720-U is a tractor storage trailer.



C-720-R, C-720-T and C-720-U Trailers (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential



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GA14-13



Facility Information

1,680 ft²

This structure is used to store materials necessary for site maintenance.

C-732-1 Maintenance Materials Storage Building

(INF)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential





Facility Information

4,245 ft²

A concrete floored and diked area used for container and tank storage. The facility is roofed but is not equipped with side walls. A sump in the area serves for the collection of precipitation.

C-733 Waste Storage Facility

(SWMU 44) (REM)

Environmental Concerns:

- None—permitted storage facility

Near-Term Plans FY 15–FY 17:

- Continue use as a permitted facility to support waste management operations





Facility Information

C-740-A is a concrete structure used for loading and unloading trailers.

C-740-A Loading Dock (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations





Facility Information

5,360 ft² (Building)

C-741 is a structural steel-framed building with a 21-inch crushed gravel floor.

C-741 Mobile Equipment Building

(DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations





Facility Information

21,000 ft²

This complex consists of 2 storm shelters, a change house, 2 storage buildings, 1 field support and 14 office trailers and is located in inside the limited area on the east side of PGDP.

C-743 Trailer Complex

C-743-B, C, D, T11, T13, T14 (INF)

C-743-T01, T02, T03, T04, T07, T09, T12, T15, T16,
T17, T17A, T18 (REM)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- DOE contractors will continue to utilize the complex for office space and change trailer for personnel



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GA14-18



Facility Information

9,973 Ft²

Building C-743 is a one-story steel building erected in 1971. The building has a gable roof of rolled asphalt roofing material, a concrete foundation, and an exterior of vinyl siding. The east side has an entrance with paired-style light glass and steel doors. There is a metal shed-roof canopy supported by steel posts at the entrance. Extending the length of this façade is a concrete loading dock with a steel-pipe railing.

Building C-743 is used for offices, and includes a health physics laboratory.

C-743 Office Building (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use as laboratory and office space for site personnel





Facility Information

800 ft²

Three wooden storage sheds.

C-743-A, C-743-A1, C-743-A2 Storage Buildings (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Evaluate if needed for future storage



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GA14-20



Facility Information

11,866 ft²

The C-750 Garage is constructed of structural steel with corrugated siding (transite). There have been USTs associated with the garage in the past; however, these have been closed in accordance with applicable regulations.

The garage area also includes a vehicle parking area.

C-750 Garage (INF)

Environmental Concerns:

- Oil, antifreeze, diesel fuel, and gasoline have been used/stored in this facility
- Lead-based paint
- Asbestos
- TCE

Near-Term Plans FY 15–FY 17:

- Continue use as laboratory and office space for site personnel





C-801 Bus Shelter (DEA)

Facility Information

1,080 ft²

The C-801 Ohio Drive Bus Shelter is located inside the security fence due north of the C-212 Building and is used to provide shelter for personnel awaiting transportation.

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations





Facility Information

The C-721 Gas Manifold Storage Building, built in 1950, housed a calibration well for radioactive instruments and was used for material storage. C-721 is made of unit masonry and occupies 962 ft². The building is divided into two main sections: the west side stored equipment for Health Physics and the environmental departments; the east side stored equipment for the Fire Services department.

C-721 Gas Manifold Storage (DEA)

Environmental Concerns:

- Lead-based paint
- Asbestos
- Radionuclides
- Potential PCBs

Near-Term Plans FY 15–FY 17:

- Evaluate for future D&D





C-724-A Carpenter Shop Annex



C-724-C Paint Shop



C-724-B Carpenter Shop

Facility Information

16,000 ft²

C-724-A is a one-story concrete block building built in 1956. The building has a poured-concrete foundation, a flat roof of gravel and tar, and an exterior of concrete block.

Attached on the east façade of C-720 is Building C-724-B, which is a one-story steel building, built in 1954. This building has a concrete foundation and gable roof and walls of crimped steel panels. Windows are original six-light hinged design.

Building C-724-C is a one-story steel building that was constructed in 1954. It has a gable roof of steel panels, an exterior of steel panels, and a concrete foundation. The west façade has a bank of three eight-light steel and glass windows. At the roofline is a circular vent.

C-724-A, B, and C Shops

Environmental Concerns:

- **SWMU 178**—C-724-A Paint Spray Booth—The system would operate similar to a vent hood pulling paint drift through a cascade of water. The water would then collect in a tank at the base of the system.
- Asbestos-containing material
- Lead-based paint suspected
- Light ballasts may contain PCBs

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential
- Consolidate parts, equipment, and other materials to a central location to prepare facilities for potential D&D when no longer needed





Facility Information

2,880 ft²

Building C-724-D is a one-story steel building that was constructed in 1956. This building has a concrete foundation, shed roof of steel panels, and an exterior of steel panels.

C-724-D Lumber Storage Building

(DEA)

Environmental Concerns:

- Surfaces may be coated with lead-based paint

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential





Facility Information

200 ft²

C-724-T01 was a change house trailer.

C-724-T01 Change House Trailer (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Evaluate operations for removal





Facility Information

1,280 ft²

Building C-731 is a metal structure used to store equipment.

C-731 Railroad Repair Equipment Storage Building

(DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential



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Facility Information

1,680 ft²

Building C-744 provided office space for the custodial group and shop space for the lubrication and rigging sections.

C-744 Materials Handling Building

(DEA)

Environmental Concerns:

- Lead-based paint
- Asbestos
- PCBs
- Other chemicals and oils have been stored in the building

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential



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C-725 Paint Shop (DEA)

Facility Information

410 ft²

Building C-725 was a paint shop that is now a storage facility for various maintenance equipment.

Environmental Concerns:

- Potential lead-based paint and asbestos
- Chemicals that have been used to support maintenance activities

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential





Facility Information

430 ft²

Building C-729 is a one-story, rectangular-plan building that was erected in 1956. The building has a poured-concrete foundation, an exterior of transite panels, and a shed roof of transite.

The C-729 Acetylene Building houses an acetylene gas cylinder manifold that supplies acetylene gas to C-720, C-409, and C-400.

C-729 Acetylene Building (SWMU 170) (DEA)

Environmental Concerns:

- SWMU 170—drain pits that collected residue from the operations
- Acetylene
- Asbestos
- Lead-based paint

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential





Facility Information

1,597 ft²

Building C-728 is a one-story steel building that was constructed in 1958. It has a concrete foundation, gable roof transite panels, and exterior walls of transite. On the main (north) façade is a garage bay with a roll-up steel door. This façade also has a pedestrian entrance with a solid-steel door. On the east façade is a solid-steel door and on the south façade is a two-light steel and glass door.

This building is in standby.

C-728 Motor Cleaning Facility

(SWMUs 32 and 33) (REM)

Environmental Concerns:

- Until -1975, motors were cleaned by dipping in a tank containing mineral spirits—operation was discontinued and a steam cleaning unit and a water treatment unit were installed
- Radiological contamination
- Asbestos-containing material
- Lead-based paint

Near-Term Plans FY 15–FY 17:

- Perform S&M activities while evaluating reuse potential
- Consolidate parts, equipment, and other materials to a central location to prepare facilities for potential D&D when no longer needed





Facility Information

The C-751 Fuel Facility is AOC 196 and contained two 10,000-gal tanks that were used for fuel storage. One tank was used for gasoline and the other was used for diesel. This facility currently is being demolished, and the USTs are undergoing closure under the Subtitle I requirements.

C-751 Fuel Facility (AOC 186) (REM)

Environmental Concerns:

- This SWMU is NFA
- Sampling identified the presence of 1,1-dichloroethane in the observation well/sump located between the USTs that was released during initial constructions
- The spill and the surrounding soil were removed during construction

Near-Term Plans FY 15–FY 17:

- Complete UST removal in accordance with Kentucky regulations





Facility Information

C-720 is located in the southwest portion of the plant. The source of the contaminants to both the Northeast and Southeast Sites is not known. It is suspected that spills originated the C-720 Northeast site. These spills include leaks of solvents that were released during routine equipment cleaning and rinsing performed in the area.

A record of decision was signed in March 2012 that identified two remedies for these areas depending on the results from the remedial design investigation. Either bioremediation or long-term monitoring would be selected for each area.

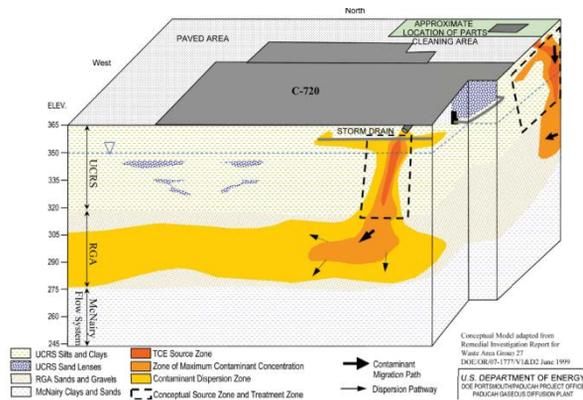
EPA requested additional characterization work prior to determining the appropriate remedy.

SWMUs 211A and 211B

(REM)

Environmental Concerns:

- TCE and degradation products



Near-Term Plans FY 15–FY 17:

- Conduct the additional characterization work
- Select the remedy and being implementation





Facility Information

SWMU 32 consisted of two aboveground tanks approximately 8,000 gal and 4,000 gal. The tanks have been removed. A 40 ft by 40 ft curbed cement pad lies beneath where the tanks were stored.

The C-728 Clean Waste Oil Tanks were used to store waste oil and motor cleaning solvents (mineral spirits). The terminology “clean waste oil,” when referring to the C-728 tanks, originally was intended to mean waste oil that did not contain radiological contaminants. There is evidence, however, that two drums of radiologically contaminated waste oil were pumped into the large C-728 tank in November 1990.

SWMU 32 C-728 Clean Waste Oil Tanks Slab and Underlying Soils (REM)

Environmental Concerns:

- Metals
- PCBs
- Potential radionuclides

Near-Term Plans FY 15–FY 17:

- None—to be addressed as part of the Soils and Slabs OU





Facility Information

The C-722 Acid Neutralization Tank (SWMU 27) is an underground concrete tank lined with an acid-resistant membrane and acid brick. SWMU 27 is located at the northeast corner of the C-720 Building in the central portion of the plant site. The tank pad is approximately 180 ft². There is no direct connection between this SWMU and surface water.

The C-722 Acid Neutralization Tank was designed as a holdup tank for instrument shop effluent from the 1950s. All lines were capped from the instrument shop. All sludge and water were removed after the lines were capped. Discharge to the tank was stopped in 1992.

SWMU 27 C-722 Acid Neutralization Tank (REM)

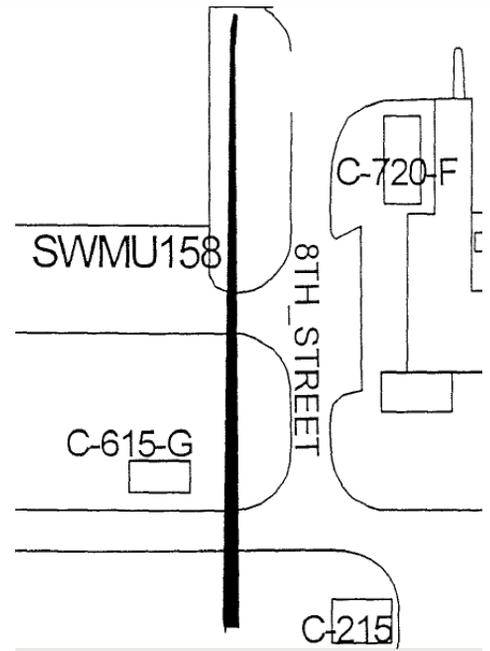
Environmental Concerns:

- SWMU 27 was investigated further as part of the Soils Operable Unit Remedial Investigation (RI)—refer to RI Report for current data summary
- Additional samples were recently collected as part of RI 2

Near-Term Plans FY 15—FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

The Chilled Water System Leak Site (SWMU 158) is located in the central portion of the plant site, southeast of the C-720 Building. The SWMU consists of chilled waterlines located under the concrete pad near the C-720 Truck Alley. The SWMU 158 area is approximately 10-ft wide by 30-ft long.

The primary function of the system was to provide cooling water for computer systems and HVAC systems in various plant buildings. The site is an area where approximately 3,500 gal of chromated water from the chilled water system leaked into an adjacent electrical vault and spilled over to another connected vault. Suspected contamination is hexavalent chromium due to process knowledge.

SWMU 158 Chilled Water System Leak Site (REM)

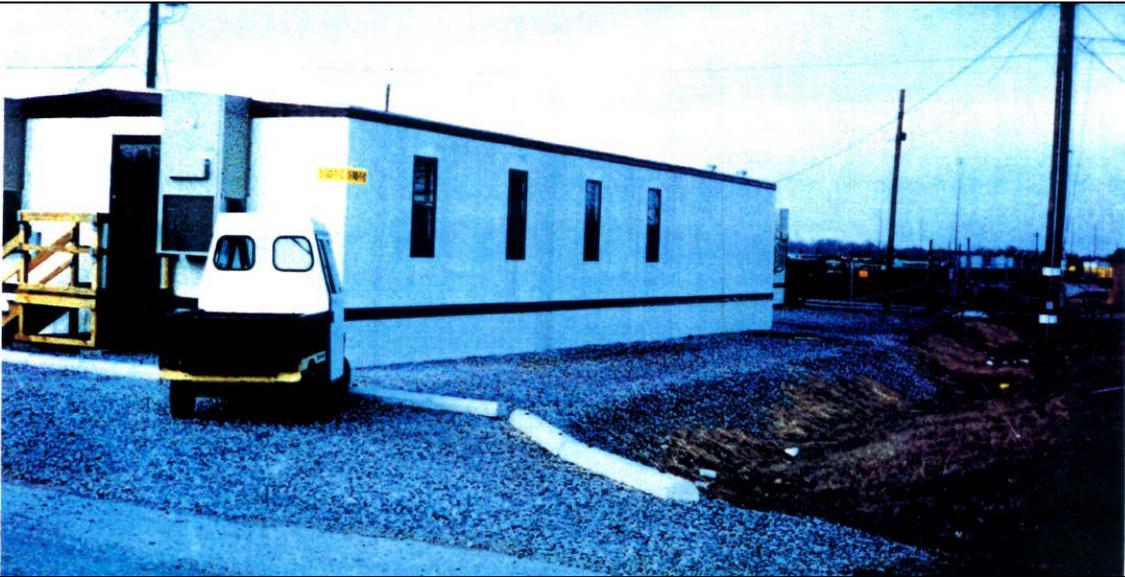
Environmental Concerns:

- SWMU 158 was investigated further as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used is sufficient to support decision making and indicate that an FS is appropriate for SWMU 158
- Possible remedial technologies applicable for these units, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15—FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

200 ft by 200 ft

Soil used from borrow area during construction may have contained PCBs.

SWMU 161 C-743-T01 Site (Soil Backfill) (REM)

Environmental Concerns:

- Potential PCBs

Near-Term Plans FY 15–FY 17:

- None—to be addressed as part of the Soils and Slabs OU





Facility Information

SWMU 217 is located at C-740 in the west-central portion of the plant site at the location formerly known as DMSA OS-06. SWMU 217 is approximately 57,600 ft².

Beginning in the late 1970s, this area originally was used as an excess material and/or staging area for C-720. Over time, DMSA OS-06 became a storage area for excess materials from various areas within the plant. In 2001, DOE began characterization and remediation of the materials in the DMSA Material Storage Area.

The SWMU currently is empty. All waste was removed and disposed of appropriately.

SWMU 217 Outside DOE Material Storage Area OS-06 (REM)

Environmental Concerns:

- SWMUs 217 (OS-06) A certified RCRA Closure Report was approved by Kentucky on February 13, 2007, for this DMSA
- SWMU 217 was investigated further as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used is sufficient to support decision making and indicate that an FS is appropriate for SWMU 217
- Possible remedial technologies applicable for these units, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15—FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

6,000 ft²

This area was used for the storage of excess equipment.

This SWMU currently is empty.

SWMU 218 Outside DOE Material Storage Area OS-07 (REM)

Environmental Concerns:

- SWMU 218 (OS-07)—A certified RCRA Closure Report was approved by Kentucky on February 13, 2007, for this DMSA
- Soils adjacent and under slabs may be contaminated with site contaminants as a result of historical operations

Near-Term Plans FY 15–FY 17:

- None—to be addressed as part of the Soils and Slabs OU





Facility Information

SWMU 219 includes the former location of DMSA OS-08, and is located east of C-728. SWMU 219 is an empty 4,722 ft³ fiberglass tank that was used to store PCB-contaminated water prior to treatment, as appropriate, and disposal. PCB spill documentation records indicate that this tank was used to store PCB-contaminated rainwater that had collected in a pit in the C-537 Switchyard. Two transformer spills in 1989 resulted in rainwater collecting in the C-537 pit that would have been subject to TSCA rules. This rainwater would have been transferred to SWMU 219. The water from the diked area was sampled, with results of PCBs at < 0.1 mg/L. The tank was drained and cleaned according to TSCA requirements.

SWMU 219 Outside DOE Material Storage Area OS-08 (REM)

Environmental Concerns:

- SWMU 219 was investigated further as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used is sufficient to support decision making and indicate that an FS is appropriate for SWMU 219
- Possible remedial technologies applicable for these units, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15—FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

10,500 ft²

This area was created when USEC was formed (1993) to store vehicles and equipment that remained the responsibility of DOE.

The SWMU currently is empty. Newly discovered RCRA/mixed waste formerly stored included the antifreeze drained from the vehicles and tow motor.

SWMU 220 Outside DOE Material Storage Area OS-09 (REM)

Environmental Concerns:

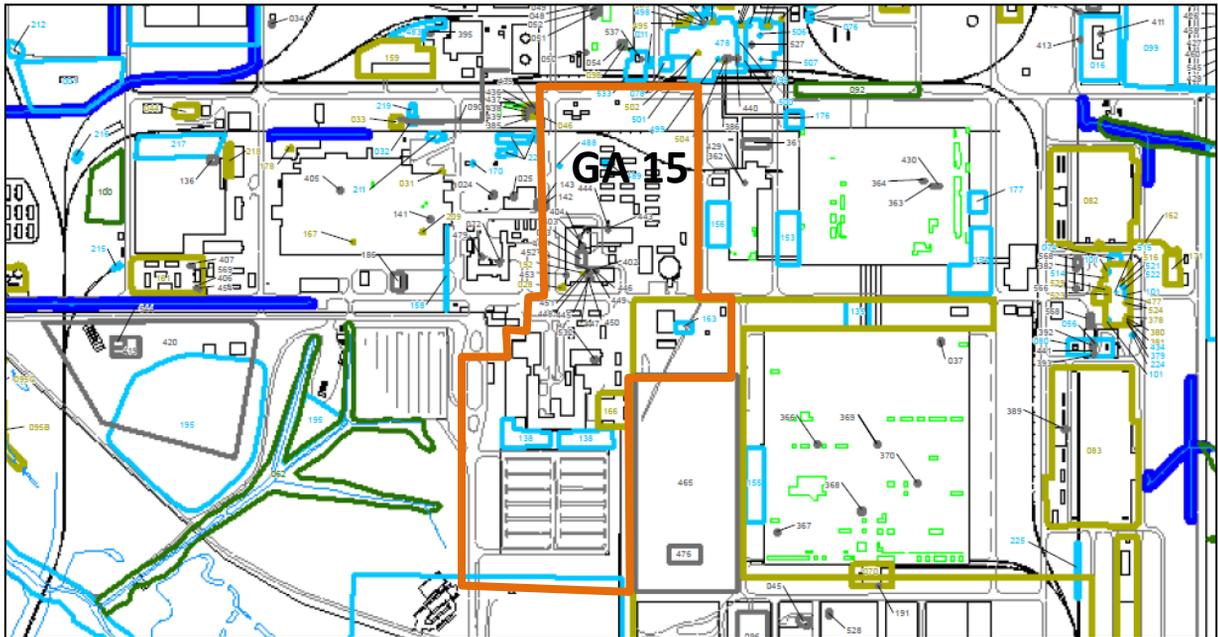
- SWMUs 220 (OS-07) A certified RCRA Closure Report was approved by Kentucky on February 13, 2007, for this DMSA
- Soils adjacent and under slabs may be contaminated with site contaminants as a result of historical operations

Near-Term Plans FY 15—FY 17:

- None—to be address as part of the Soils and Slabs OU



Geographical Area (GA) 15



- ✓ Includes C-100 area facilities
- ✓ Includes C-710 area facilities
- ✓ Includes the C-412 trailer area
- ✓ Includes the C-300 central control facilities and office facilities
- ✓ 24 SWMUs/AOCs
 - ✓ 17 NFA SWMUs/AOCs
 - ✓ 7 Soils/Soils and Slabs



Geographical Area (GA) 15

Mission Support Facilities (MS)

- C-100 Administration Building
- C-101 Cafeteria
- C-102 Hospital
- C-100-T04, T05, T06, T08 Trailers
- C-102-T01, T02, T03, T04, T05, T06, T07, T08, T09 Trailers
- C-302-T01, C-320-A, C-320-B Trailers
- C-300 Central Control Facility
- C-302 Operations Data Center
- C-303 Data Building
- C-320 Communication Building
- C-304 Training and Cascade Office Building
- C-412-T01 through T14 Trailers
- C-709/710/712 Laboratory
- C-710-A Gas Cylinder Storage
- C-710-B Storage Facility
- C-711 Gas Manifold
- C-800 Motorcycle Parking Shelter
- C-802 Meteorological Tower
- C-802-A Communication Building
- C-802-B Meteorological Equipment Building

Former Support Facility

- C-615-J

Other SWMUs/AOCs (non-NFA)

- SWMU 138
- SWMU 163
- SWMU 166
- SWMU 488
- SWMU 489

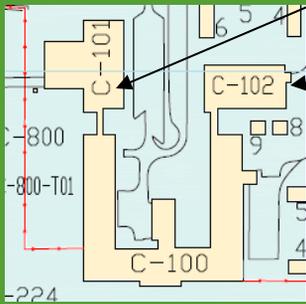




Facility Information

The C-100/101/102 Administrative Complex consists of numerous offices and conference rooms, two fireproof vaults, cafeteria facilities, and medical facilities. The buildings are constructed of reinforced concrete and have a total of 97,508 ft² of floor space. The facility is equipped with an elevator.

Additionally, the Administration Building contains the plant's cafeteria, with seating capacity for approximately 250 people, and the medical facility.



C-100 Administrative Complex

C-100 (INF), C-101 (INF), C-102 (DEA)

Environmental Concerns:

- Asbestos containing material throughout
- Gaskets in the ventilation ductwork may contain asbestos, PCBs, and chromate contamination
- Lead-based paint

Near-Term Plans FY 15–FY 17:

- Use office space for site personnel
- Maintain record storage area
- Evaluate potential cafeteria use to support future site operations
- Evaluate potential medical facility use to support future site operations





Facility Information

23,040 ft²

Sixteen trailers, 1,440 ft² each, are located in the C-100 and C-300 areas.

C-100/C-102/C-300 Area Trailers

- C-100-T04, T05, T06, T08 (DEA)
- C-102-T01, T02, T03, T04, T05, T06, T07, T08, T09 (DEA)
- C-302-T01, C-320-A, C-320-B (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Use office space and storage for site personnel
- Evaluate facilities for early D&D



Facility Information

16,000 ft²

The Central Control Facility monitors, coordinates, and/or controls critical plant processes, power distribution, utilities, communications, plant alarm systems, and emergency operations. More than 10,000 miles of cable supply to this building electronic information about the plant's process systems.

The Central Control Facility was constructed in 1953 and is circular in design and constructed of reinforced concrete. The foundation, walls, and elliptical roof all are reinforced concrete. An elliptical, one-story wing is located on the south facade.

C-300 Central Control Facility

(DEA)

Environmental Concerns:

- Gaskets in the ventilation ductwork may contain asbestos, PCBs, and chromate contamination
- Asbestos containing material throughout
- Potential PCB and chromate contamination
- Lead-based paint
- Radiological contamination

Near-Term Plans FY 15–FY 17:

- Continue use as Emergency Operations Center and plant shift operations
- Cascade management for deposit removal activities





Facility Information

7,366 ft²

The C-302 Building is a one-story building built in 1981 as a data center. The building has a concrete foundation, a built-up flat roof, and an exterior of synthetic stucco.

C-302 Operations Data Center

(DEA)

Environmental Concerns:

- C-302—None

Near-Term Plans FY 15–FY 17:

- Utilize facility for deactivation office space





Facility Information

3,225 ft²

C-303 is a one-story, rectangular-plan building of concrete construction built in 1984. The building has a concrete foundation, a built-up, flat roof, and a textured concrete exterior. On the main (south) façade is an entrance with a solid steel door.

Building C-320 is a one-story concrete building constructed in 1952 in a rectangular plan. The building has a built-up roof, exterior walls of smooth concrete, and a concrete foundation.

C-303 and C-320 Data Buildings (DEA)

Environmental Concerns:

- C-303 had a large bank of lead-acid batteries in the northwest room that supplies emergency power for the computer system
- C-303 and C-320 may contain PCBs, lead-based paint, and suspected asbestos containing materials were observed in the floor tile and exhaust vent pipes
- C-320 also has a small bank of batteries in the southeast corner that provides emergency power for the site PAX communication system

Near-Term Plans FY 15–FY 17:

- Determine if facilities are needed to support future operations





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Facility Information

8,000 ft²

Building C-304 is a one-story, brick veneer building built in 1991. The building has a poured-concrete foundation, a built-up, flat roof, and an exterior of stretcher-bond brick.

C-304 Training and Cascade Office Building

(DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Use facility for deactivation office space



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GA15-8



Facility Information

19,680 ft²

This complex consists of 14 trailers located inside the limited area in the center of the site. This includes three shower and change trailers, two break trailers, and nine office trailers.

C-412 Trailer Complex

C-412-T01 through T-14 (REM)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Remediation Contractor uses the complex for office space and change trailer for personnel





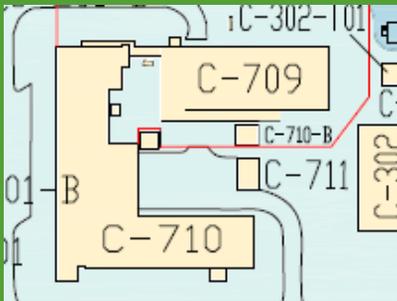
Facility Information

98,000 ft²

The C-709 Plant Laboratory Annex and the C-710 Technical Services Building house laboratories with an array of modern analyzers and test equipment, offices, a conference room, and vault for records retention and storage.

C-709 is constructed of structural steel and cement-coated siding and has 13,500 ft of floor space.

C-710 is constructed of reinforced concrete with 84,333 ft² of floor space.



C-709/710/712 Laboratory (DEA)

Environmental Concerns:

- **SWMU 28**—C-712 Laboratory Equalization Tank
- **SWMU 192**—C-710 Acid Interceptor Pit
- Asbestos containing material throughout
- Lead based paint
- PCBs, hazardous chemicals, heavy metals, and uranium are likely present in the sanitary sewer piping from lab floor drains and sinks
- Vents and hoods probably are contaminated with uranium and neptunium

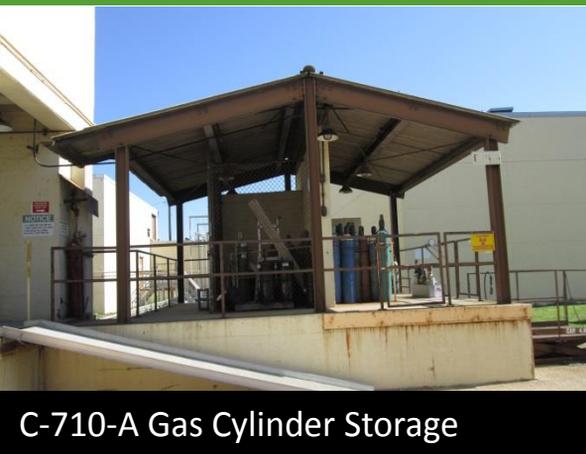
Near-Term Plans FY 15–FY 17:

- Use portions of the facility to support NDA Program
- Maintain record storage area
- Perform laboratory optimization analysis and evaluate privatization options



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GA15-10



C-710-A Gas Cylinder Storage



C-711 Gas Manifold



C-710-B Storage Facility

Facility Information

The C-710-A Gas Cylinder Storage Building is approximately 400 ft².

The C-710-B Storage Facility is approximately 224 ft².

The C-711 Gas Manifold is approximately 962 ft².

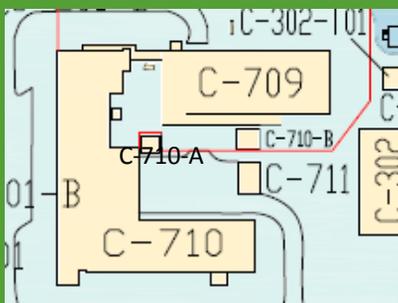
C-710-A, C-710-B, C-711 (DEA)

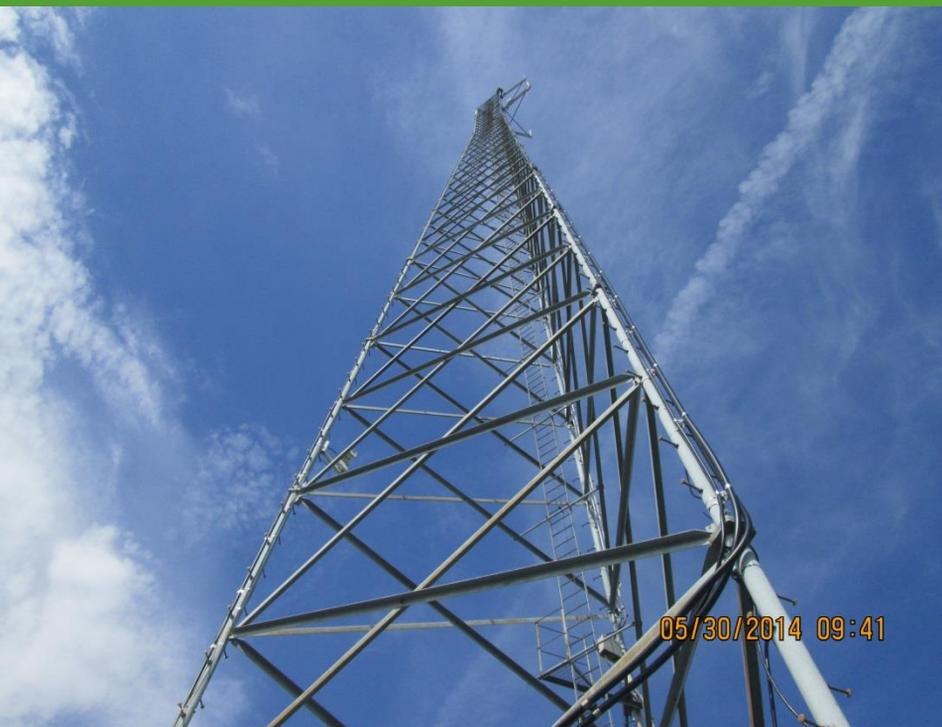
Environmental Concerns:

- Asbestos

Near-Term Plans FY 15–FY 17:

- Evaluate for future site needs





Facility Information

The site has a meteorological tower available use to support site operations.

C-802 Meteorological Tower, C-802-A Communications Building C-802-B Meteorological Equipment Building (INF)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use for site operations





Facility Information

The C-615-J Inactive Chromate Lift Station consists of a concrete slab of approximately 160 ft². This was made inactive sometime before the mid-1970s.

C-615-J Chromate Lift Station (Inactive) (DEA)

Environmental Concerns:

- Chromate contamination may exist

Near-Term Plans FY 15–FY 17:

- None





Facility Information

1,620 ft²

The C-800 Motorcycle Parking Shelter is used by site personnel for parking.

C-800 Motorcycle Parking Shelter

(DEA)

Environmental Concerns:

- None

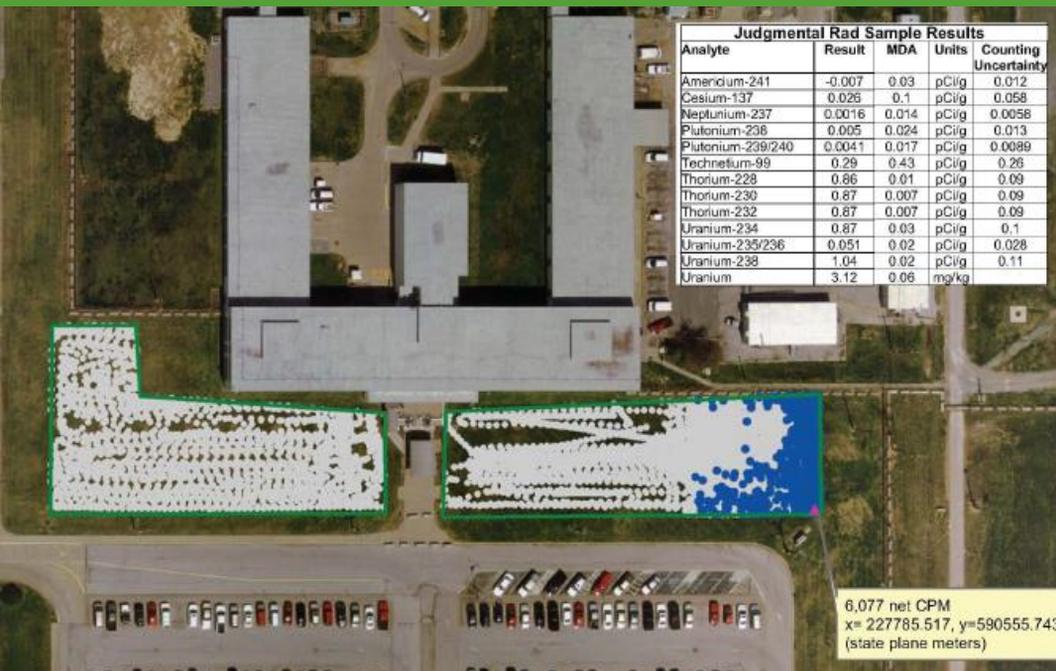
Near-Term Plans FY 15–FY 17:

- Continue use to support site operations



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GA15-14



Facility Information

20,000 ft²

The C-100 Southside Berm (SWMU 138) is located south of the C-100 Building, on the south side of the plant site. SWMU 138 consists of two soil berms, each approximately 10,000 ft² (200 ft x 50 ft), which were constructed in 1979. The berms consist of sludge dredged from the C-611 Lagoon, the potable drinking water treatment plant, and the C-615 Sewage Treatment Plant.

SWMU 138 C-100 Southside Berm (REM)

Environmental Concerns:

- Originally, suspected mercury from the sewage treatment plants
- This area was further investigated as part of the Soils Operable Unit RI—refer to RI Report for current data summary
- The representative data set used for SWMU 138 is sufficient to support decision making and indicates that a feasibility study is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

100 ft x 200 ft

This area provides a heat sink for the C-304 HVAC system.

Soils from the C-611-V Lagoon borrow area were used for fill material for the C-304 construction activities. The fill material was used as a base for the HVAC piping system and is located approximately 6 ft below grade.

It is adjacent to C-304, the Training and Cascade Office Building. The contaminant source, soil from the C-611-V Sludge Lagoon is at 4–13 ft bgs. A response action at this depth could have an impact on the adjacent office building.

SWMU 163 C-304 Building/HVAC Piping System Soil Backfill

(REM)

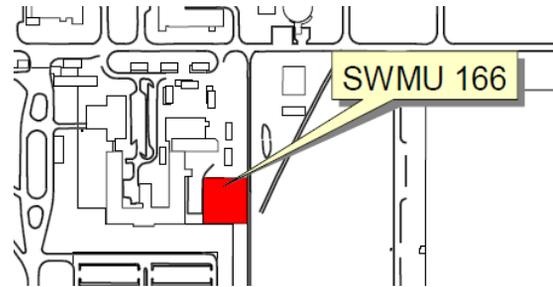
Environmental Concerns:

- The C-611-V Lagoon has identified detectable PCB levels
- This area was investigated further as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used for SWMU 163 is sufficient to support decision making and indicates that an FS is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

100 ft by 150 ft

This SWMU is located on the southeast side of the C-100 Building inside the controlled access area of the plant.

This area serves as the location of several trailers, which are used as office space.

SWMU 166 C-100 Trailer Complex Contamination, East Side (DEA)

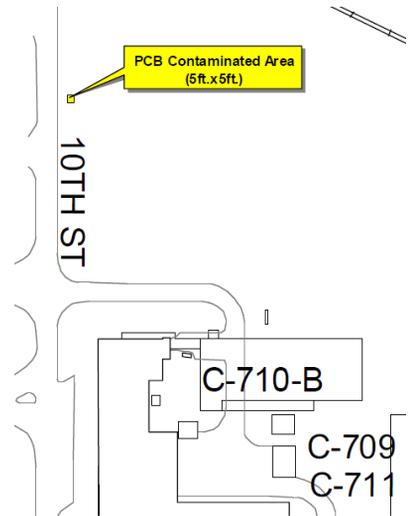
Environmental Concerns:

- Radiological contamination
- This SWMU is listed in the Soils and Slabs OU

The Near-Term Plans FY 15–FY 17:

- Continue use of area to support site operations





Facility Information

25 ft²

The PCB Contamination Area by the C-410 Trailer Complex (SWMU 488) is a PCB soil contamination area located in a grassy drainage swale in the field north of the C-710 Laboratory in the central portion of the plant site. It is unknown how this area experienced a PCB spill.

The contamination area was discovered as a result of a surface soil sampling and characterization conducted to place the DMSA office trailers. In May 2001, radiological surveys of this area indicated no radiological contamination was present. Soil samples were obtained as part of site characterization. The only contaminant detected above background in the soil was PCBs.

SWMU 488 C-410 Trailers PCB Contamination Area

(REM)

Environmental Concerns:

- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used for SWMU 488 is sufficient to support decision making and indicates that an FS is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025



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GA15-18



Facility Information

200 ft²

The septic tank north of C-710 (SWMU 489) is constructed of cement blocks and is below a doublewide trailer.

Due to the construction materials and the manner in which it was constructed, it is believed that the septic tank was associated with the original construction activities of PGDP in the early 1950s. During excavation, what appeared to be an inactive septic tank was discovered. The tank appeared to have had the top and contents removed and backfilled with sand prior to being left in place. When the septic tank was uncovered, water was present in the interior of the tank from past rainfall events. The septic tank has been backfilled, the backfill has been compacted and graded, and 9–10 inches of dense grade aggregate was put on top of the tank area.

SWMU 489 C-710 North Septic Tank (DEA)

Environmental Concerns:

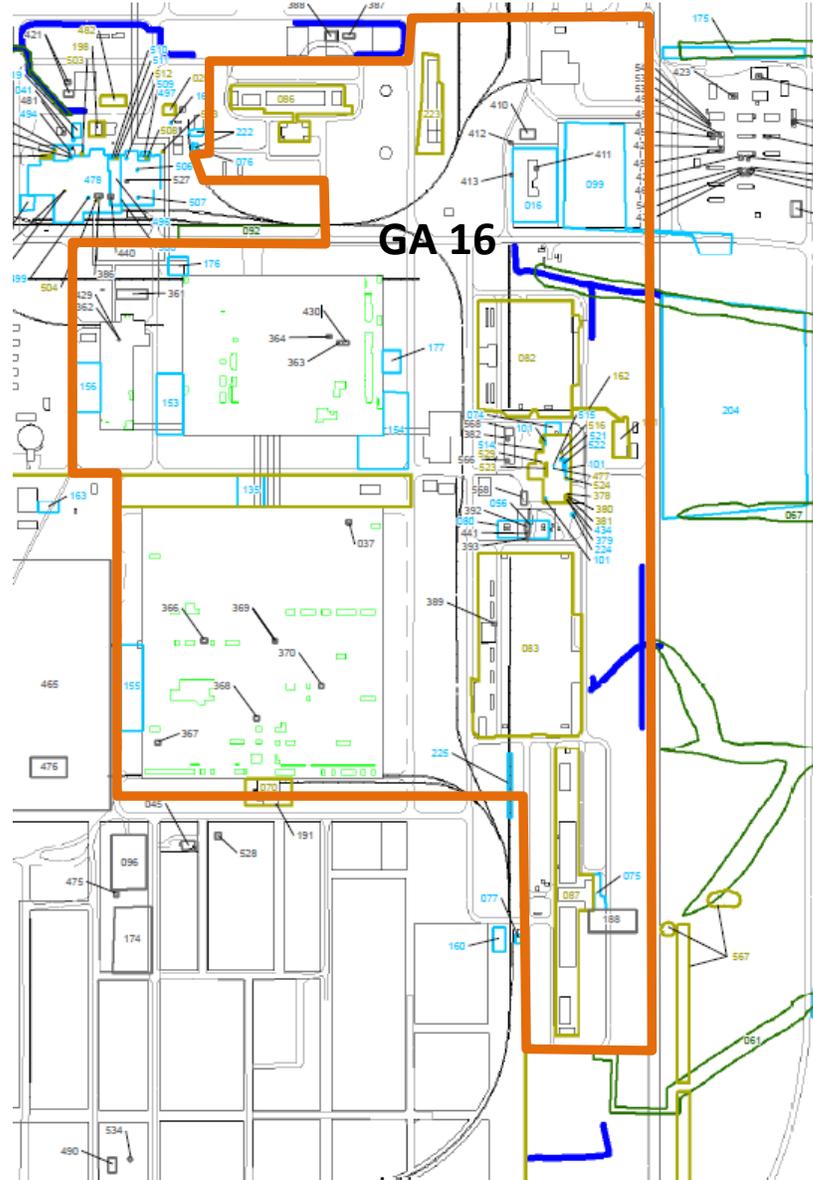
- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used for SWMU 489 is sufficient to support decision making and indicates that an FS is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025



Geographical Area (GA) 16



- ✓ Includes the C-331 and C-333 process buildings and supporting facilities: NOTE: facilities that contain residual materials (e.g., trap mix) may also contain contaminants associated with those residual materials (e.g., arsenic).
- ✓ Includes the C-340 Slab
- ✓ 67 SWMUs/AOCs
 - ✓ 27 NFA SWMUs/AOCs
 - ✓ 15 SWMUs/AOCs for the C-340 slab area
 - ✓ 7 gaseous diffusion plant facility SWMUs/AOCs
 - ✓ 18 other Soils/Soils and Slabs SWMUs/AOCs



Geographical Area (GA) 16

Mission Support Facilities (MS)

- C-225 Post 48
- C-746-G, C-746-G-T01, T02 Electrical Equipment Storage
- C-727 Storage Facility
- C-754-B Waste Storage Facility

Utilities Infrastructure

- C-531-1, 2, 3A, 3B Switchyard Facilities (SWMU 82)
- C-533-1, 2, 3A, 3B, 3C, 3D Switchyard Facilities (SWMU 83)
- C-532 Relay House
- C-540-A Oil Pump House
- C-540-B, C, D, E Oil Storage Tanks
- C-611-O Sanitary Water Storage Tank
- C-611-R RCW Fire Water Tank
- C-617-A Lift Station and C-617-B Lagoon (AOC 171)

Former Process Facilities

- C-310 Purge and Product Building
- C-310-A Product Withdrawal Building
- C-315 Surge and Tails Building
- C-620 Air Compressor Room
- C-331 Process Building
- C-333 Process Building
- C-333-A Feed Vaporization Facility (SWMU 70)
- C-310-331-A Bridge (Enclosed)
- C-310-331-B Tie Line (East)
- C-310-410 Tie Line (West)
- C-331-333-A Bridge (Enclosed)
- C-331-333-B Tie Line (East)
- C-331-333-C Tie Line (West)
- C-315-333 Tie Line
- C-631-1 Pump House (SWMU 86)
- C-631-2 Cooling Tower (SWMU 86)
- C-631-3 Fire Water Pump House (SWMU 86)
- C-631-4 Blending Pump House (SWMU 86)
- C-631-5, 6 Blending Cooling Towers (SWMU 86)
- C-633-1 Pump House (SWMU 87)
- C-633-2A, 2B Cooling Towers (SWMU 87)
- C-633-3 Blending Pump House (SWMU 87)
- C-633-4, 5 Blending Cooling Towers (SWMU 87)
- C-633-6 Sand Filter Building (SWMU 87)

Former Support Facilities

- C-331-T02, T03, T07 Trailers
- C-360 Toll Transfer & Sampling
- C-360-A Toll Transfer & Sampling Annex
- C-360-T01, T02 Trailers
- C-631-T08, T09, T11, T14, T16 Trailers
- C-631-10, 12, 13, 15 Storage Building

Cylinder Yards (CYLYD)

- C-745-E Cylinder Storage Yard (SWMU 99A)

Remediation Program Facilities

- C-340 Slab (SWMUs 477, 522, 523, 524, 529)

Other SWMUs/AOCs (non-NFA)

- SWMU 16
- SWMU 56
- SWMU 74
- SWMU 75
- SWMU 80
- SWMU 99B
- SWMU 135
- SWMU 153
- SWMU 154
- SWMU 155
- SWMU 156
- SWMU 162
- SWMU 176
- SWMU 177
- SWMU 223
- SWMU 224
- SWMU 225A and B





Facility Information

500 ft²

Portal used to access the facility and the limited area.

Guard Posts and Portals

C-225 Post 48
(DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use as guard posts for limited area entrance



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GA16-3



Facility Information

The C-746-G Electrical Equipment Storage Facility consists of a prefabricated steel building with a concrete 2,400 ft² floor. The building has been used for storage and maintenance of electrical equipment since its construction.

There are two storage trailers in the area used for storage also.

C-746-G, C-746-G-T01, T02 Electrical Equipment Storage (DEA)

Environmental Concerns:

- Lead-based paint

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations





Facility Information

Originally, C-727 was used as a heat treating facility and maintenance pipe-fabricating shop. C-727 is made of prefabricated metal and occupies 4,428 ft². It is located within the PGDP security fence north of C-310 and west of C-331.

C-727 Storage Facility (DEA)

Environmental Concerns:

- Asbestos
- Radiological contamination
- Lead-based paint
- Volatiles

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations





Facility Information

This facility was used for storage of low-level waste.

C-754-B Waste Storage Facility (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations



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GA16-6



Facility Information

31,688 ft² (buildings only)

The C-531 switchyards contains the 161 kV electrical system components necessary for operation of PGDP.

The switchyard contains a switch house and two fire valve houses.

C-531 Switchyard

C-531-1, 2, 3A, 3B (DEA)

Environmental Concerns:

- **SWMU 82**—C-531 Switchyard slab and underlying soils
- PCBs
- Chlorinated solvents used to clean the external surfaces of transformers and switchgear
- Fixed Contamination Areas/Radiological Material Areas due to surface radiological contamination on the equipment

Near-Term Plans FY 15–FY 17:

- Establish power reconfiguration plans with power companies (e.g., TVA, EEI, KU)
- Reconfigure site power configuration to use this switchyard to service all DOE operations at PGDP



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GA16-7



Facility Information

38,000 ft² (buildings only)

The C-533 switchyard contains the 161 kV electrical system components necessary for operation of PGDP.

Each switchyard contains a switch house (3 total) and fire valve houses (10 total).

The plant was built with the capacity to use up to 3,000 megawatts.

C-533 Switchyard

C-533-1, 2, 3A, 3B, 3C, 3D (DEA)

Environmental Concerns:

- **SWMU 83**—C-533 Switchyard slab and underlying soils
- PCBs
- Chlorinated solvents used to clean the external surfaces of transformers and switchgear
- Fixed Contamination Areas/Radiological Material Areas due to surface radiological contamination on the equipment

Near-Term Plans FY 15–FY 17:

- Establish power reconfiguration plans with power companies (e.g., TVA, EEI, KU)
- Consolidate four switchyards into one (C-531) and abandon these three switchyards



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GA16-8



Facility Information

7,784 ft²

The C-532 building is an electrical relay house built between the C-531 and C-533 switchyards. The building was constructed in 1952 and is a one-story, reinforced concrete building. The building has a poured-concrete foundation, a built-up flat roof, and a smooth concrete exterior.

C-532 Relay House (DEA)

Environmental Concerns:

- PCBs
- Chlorinated solvents used to clean the external surfaces of transformers and switchgear
- Fixed Contamination Areas/Radiological Material Areas due to surface radiological contamination on the equipment
- Potential asbestos and lead-based paint

Near-Term Plans FY 15–FY 17:

- Determine if facilities are needed once the switchyard reconfiguration is completed



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GA16-9



Facility Information

312 ft²

The C-540-A Oil Pump House is constructed of structural steel and corrugated siding (transite).

There are four steel, transformer oil aboveground storage tanks associated with the Oil Pump House (C-540-B, C-540-C, C-540-D, and C-540-E) (two 15,000-gal and two 7,500-gal). The PCB staging area is listed as SWMU 56.

C-540-A Oil Pump House C-540-B, C, D, E Oil Storage Tanks (DEA)

Environmental Concerns:

- Asbestos
- PCBs
- Lead-based paint

Near-Term Plans FY 15–FY 17:

- Perform surveillance and maintenance

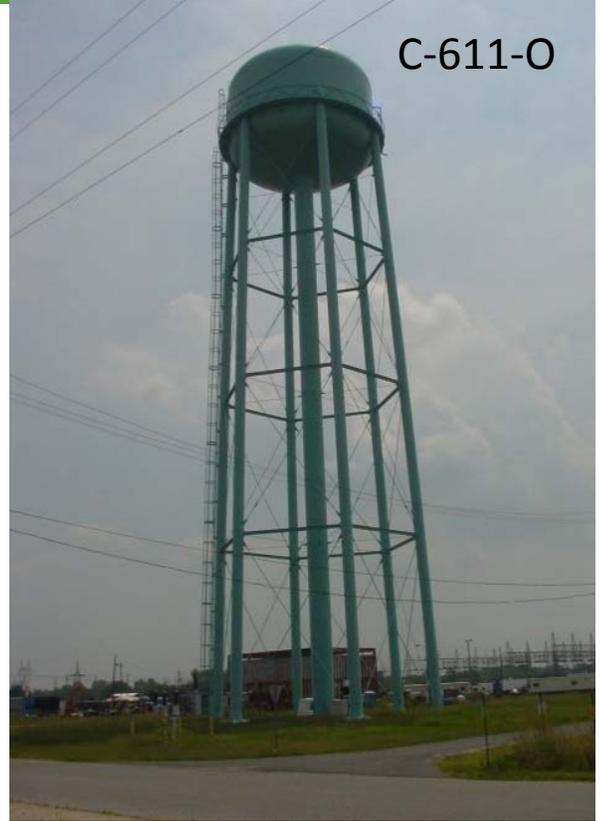


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GA16-10



C-611-R



C-611-O

Facility Information

The C-611-R tower provides water to the plant's fire protection system. This tower is 325-ft tall and holds about 325,000 gal of water. The fire water tower provides water to more than 100,000 sprinkler heads installed in the plant that cover approximately 8.5 million ft² of buildings and equipment. There are also more than 3,200 portable fire extinguishers in the plant. The fire protection system covers all the process buildings and most of the support facilities.

C-611-O tower provides water for the plant's sanitary water supply. This tower is 185-ft tall and holds approximately 250,000 gal of water.

C-611 Water Treatment Distribution Facilities

C-611-O, R (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue operations to support plant activities
- Perform optimization analysis to determine if more effective systems or privatization are implementable



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ENERGY

GA16-11



Facility Information

130 ft x 70 ft

The C-617-B Lagoon, SWMU 171, is located in the southeastern part of the plant. The lagoon is lined with a plastic liner. It is used primarily for temperature control of effluent, specifically from Outfalls 002, 010, 011, and 012. The effluent from these outfalls merges into the lagoon where sodium thiosulfate was added to reduce the chlorine content of the water.

Additionally, the merging of the outfalls into the C-617-B Lagoon provides temperature control, preventing the high temperature effluent from discharging directly into Little Bayou Creek. The lagoon has operated from October 1991 to the present.

C-617-B Lagoon C-617-A Lift Station (AOC 171) (DEA)

Environmental Concerns:

- This is identified as an AOC because effluent received at the lagoon is from outfall ditches identified as SWMUs
- Radiological contamination

Near-Term Plans FY 15–FY 17:

- None—This is part of the GDP Lagoons and Ditches OU



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GA16-12



Facility Information

115,516 ft²

Enriched uranium was withdrawn from the cascade at the Product Withdrawal Facility. This building is equipped with withdrawal positions to accommodate either 2½-ton (30B) or 10-ton (48X) product cylinders. The large tower next to the west side of the building is a 200-ft stack used to vent gases from the enrichment process.

Building C-310 is a two-story building and has a poured-concrete foundation, a built-up flat roof, and a transite panel exterior. The building has an approximate 13-acre footprint with a rail connector.

C-301-A is the area of the building at the north side of C-310.

C-310 Purge and Product Building & C-310-A Product Withdrawal Building (DEA)

Environmental Concerns:

- Freon
- Lubrication oil leaks
- Radionuclide contamination
- PCB contamination
- Lead-based paints and asbestos-containing material (ACM)
- Sanitary sewer piping may contain residual PCBs and hexavalent chromium due to past spills

Near-Term Plans FY 15–FY 17:

- Deposit removal
- Deactivation activities



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GA16-13



Facility Information

16,040 ft²

At the Depleted Uranium (Tails) Withdrawal Facility, the uranium that is depleted of most of its U-235 atoms was pulled from the cascade process and drained into 14-ton cylinders for storage.

This is a two-story building that shares a common party wall on the south façade with building C-620. Building C-315 has a poured-concrete foundation, a built-up flat roof, and an exterior transite panel. The facility has a rail connector. The upper façade and rest of the first story has a transite panel exterior.

C-315 Surge and Tails Building (Includes the C-620 Compressor Room) (DEA)

Environmental Concerns:

- Freon
- Lubrication oil leaks
- Radionuclide contamination
- PCB contamination
- Lead-based paints and ACM
- Sanitary sewer piping may contain residual PCBs and hexavalent chromium due to past spills

Near-Term Plans FY 15–FY 17:

- Deposit removal
- Deactivation activities



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GA16-14



Facility Information

1,029,120 ft² (two floors)

Building C-331 was completed in 1952 and contains cascade machinery used in the gaseous diffusion process. The building has a built-up flat roof, a poured-concrete foundation, and a transite panel exterior. The north façade is incised with large steel support posts extending the width of the building. This recessed section is referred to as a “truck alley” and provides protected access to the building for vehicles and railroad cars.

Above the truck alley are eight sets of removable steel hatches that allow process equipment to be moved from or to the truck alley by interior building access. The first floor within this recessed façade has four entrances, each with paired sliding-track steel doors. These doors are set within concrete surrounds.

C-331 Process Building (DEA)

Environmental Concerns:

- Potential release of Freon to the atmosphere
- Lubrication oil leaks
- Radionuclide contamination
- PCB contamination resulting from ventilation duct gasket oil seepage
- Lead-based paints and ACM
- Documented releases of chromated water

Near-Term Plans FY 15–FY 17:

- Deposit removal
- Deactivation activities



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ENERGY

GA16-15



Facility Information

2.138 Million ft² (two floors)

This building is a large processing facility and contains the cascade machinery used in the gaseous diffusion extraction process. The building has a poured concrete foundation, a built-up flat roof, and exterior walls of transite panels.

There are two levels, with approximately a 26-acre footprint. The main (north) façade has a recessed or incised first-floor level. This level has a series of steel posts, which support the upper façade.

C-333 Process Building C-333-A Feed Vaporization Facility (DEA)

Environmental Concerns:

- **SWMU 70**—C-333-A Vaporization Facility (PCB Spills)
- Potential release of Freon to the atmosphere
- Lubrication oil leaks
- Radionuclide contamination
- Trichloroethene
- Chromated water
- PCB contamination from ventilation duct gasket oil
- Lead-based paint and ACM
- Sanitary sewer piping may contain residual PCBs and hexavalent chromium due to past spills

Near-Term Plans FY 15–FY 17:

- Deposit removal
- Deactivation activities



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ENERGY

GA16-16



Facility Information

Overhead piping called tie lines connect with all of the main process buildings, as well as C-310.

Once sufficiently enriched throughout the cascade, the U-235 was transferred via the tie lines into Building C-310, the Purge and Product Building.

Process Building Tie Lines and Enclosed Bridges

C-310-331-A, C-310-331-B, C-315-333, C-331-333-A, C-331-333-B, C-331-333-C, C-331-410 (DEA)

Environmental Concerns:

- Radionuclide contamination
- ACM

Near-Term Plans FY 15–FY 17:

- Deposit removal
- Deactivation activities



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GA16-17



Facility Information

16,500 ft² (buildings)

The cooling towers and pump houses serve to remove the heat produced in the gaseous diffusion process and to pump cooled water back into the process buildings to cool the diffusion machinery.

There are four sets of cooling towers used to remove heat from the enrichment process—one set of cooling towers dedicated to each process building. About 500 million gal of water was recirculated in the plant every 24 hours.

Nearly 12–25 million gal of water evaporated each day depending on the plant load or power level. These towers include C-631, C-633, C-635, and C-637. Each complex contains a pump house, cooling tower, blending cooling towers, and other support buildings.

Cooling Towers

C-631-1, 2, 3, 4, 5, 6, C-633-1, 2A, 2B, 3, 4, 5, 6 (DEA)

Environmental Concerns:

- **SWMU 86**—C-631 Pump House and Cooling Tower slab and underlying soils
- **SWMU 87**—C-633 Pump House and Cooling Tower slab and underlying soils
- Chromated water may have leaked from the basins
- Sulfuric acid may have leaked from tanks
- Asbestos-containing material and lead-based paint

Near-Term Plans FY 15–FY 17:

- Perform surveillance and maintenance to keep the facility available to support future industrial activities



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GA16-18



Facility Information

Three trailers that were used to support C-331 operations.

C-331-T02, T03, 07 Trailers (DEA)

Environmental Concerns:

- Lead-based paint

Near-Term Plans FY 15–FY 17:

- Evaluate the need for future use



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GA16-19



Facility Information

21,593 ft²

The C-360 Toll Transfer and Sampling Facility provides systems for receiving, sampling, transferring, and shipping cylinders containing UF₆. Four autoclaves, similar to the ones housed in the vaporizer facilities, are used to sample and/or transfer UF₆. An annex facility was used to prepare customer orders for shipment.

The building is constructed of structural steel with built-up roof, cement-asbestos and metal siding with concrete floor slabs and foundations. The building is divided into a high-bay work area of about 18,000 ft² and a low-bay service area of 3,593 ft².

C-360 Toll Transfer & Sampling C-360-A Annex (DEA)

Environmental Concerns (C-360 Only):

- Facility contained freon, chlorine trifluoride, paints, hydraulic oil, chromated water, and asbestos-containing material
- Releases of UF₆
- Potential oil spill beneath the facility due to the decrease in oil in the leveler
- Chromated water release that may have escaped from the building through the floor drains and the elevator shaft
- Asbestos-containing material

Near-Term Plans FY 15–FY 17:

- Perform surveillance and maintenance to keep the facility available to support cylinder and future industrial activities



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ENERGY

GA16-20



Facility Information

These are two storage trailers that were used to support C-360 operations.

C-360-T01, T02 Trailers (DEA)

Environmental Concerns (C-360 Only):

- None

Near-Term Plans FY 15–FY 17:

- Evaluate the need for future use





Facility Information

These are five trailers and four storage buildings that were used to support C-631 operations.

C-631-T08, T09, 11, 14, 16 Trailers C-631-10, 12, 13, 15 Storage Building

Environmental Concerns :

- None

(DEA)

Near-Term Plans FY 15–FY 17:

- Evaluate the need for future use



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GA16-22



Facility Information

2.36 acres

This SWMU was the site of a former C-745 Kellogg Building and consisted of temporary support facilities used during construction of the PGDP cascade facilities. This SWMU originally consisted of one of the two buildings built in 1951 of steel and sheet metal constructed on concrete slabs. The buildings were used for pipe fabrication and pipe cleaning activities. Trichloroethene was used commonly as a degreaser and was possibly used during the pipe cleaning operations. A gravel access road ran between the buildings. The buildings were demolished in 1955, leaving only the concrete slabs. The area is used now to store UF₆ cylinders at the C-745-E Cylinder Storage Yard.

Cylinder Storage Yards

C-745-E (SWMU 99A) (DUF₆)

Yard	Construction Material	Area/Capacity (Approximate)
C-745-E	Concrete and compacted DGA	114,000 ft ² and has a capacity of approximately 2,000 10-ton or 14-ton cylinders

Environmental Concerns:

- Investigated during the CERCLA Phase II Site Investigation and the WAG 28 Remedial Investigation
- Refer to the WAG 28 RI/FS for additional data and risk assessment

Near-Term Plans FY 15–FY 17:

- Continue utilization for DUF₆ storage



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GA16-23



Facility Information

The demolition of the C-340 Complex was conducted as a removal action under the FFA. The demolition project involved removing the transite siding and demolishing the building structure, including any remaining piping and equipment on the slab and packaging it for disposal. The aboveground portions of the C-340 Hydraulic System, SWMUs 101 and 477, have been removed and disposed of. For SWMUs 378, 379, 380, 381, 382, and 434, all waste has been removed and these SWMUs no longer exist. SWMUs 514, 515, 516, and 521 have been completely removed and equipment disposed of and only the slabs remain. SWMUs 522, 523, 524, and 529 were backfilled with Portland cement concrete; the slabs were double washed and rinsed; and two contrasting colors of epoxy fixative were applied.

C-340 Complex Slab (SWMUs 477, 522, 523, 524, 529) (REM)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Perform surveillance and maintenance of slab





SWMU 16 C-746-D **Former Scrap Yard** **(REM)**

Facility Information

180 ft by 330 ft

The *Removal Action Work Plan for Paducah Scrap Metal Removal and Disposal at the Paducah Gaseous Plant, Paducah Kentucky*, DOE/OR/07-2013&D2, included both the northwest corner scrap yards and the C-746-D classified yard (DOE 2002). Fieldwork began in the C-746-D yard in August 2003, and the last shipments completed April 18, 2006. Scrap metal totaling 5,067.28 net tons and 678.84 net tons of classified soils was shipped off-site via 343 truck shipments.

This area now is being used for equipment storage and parking.

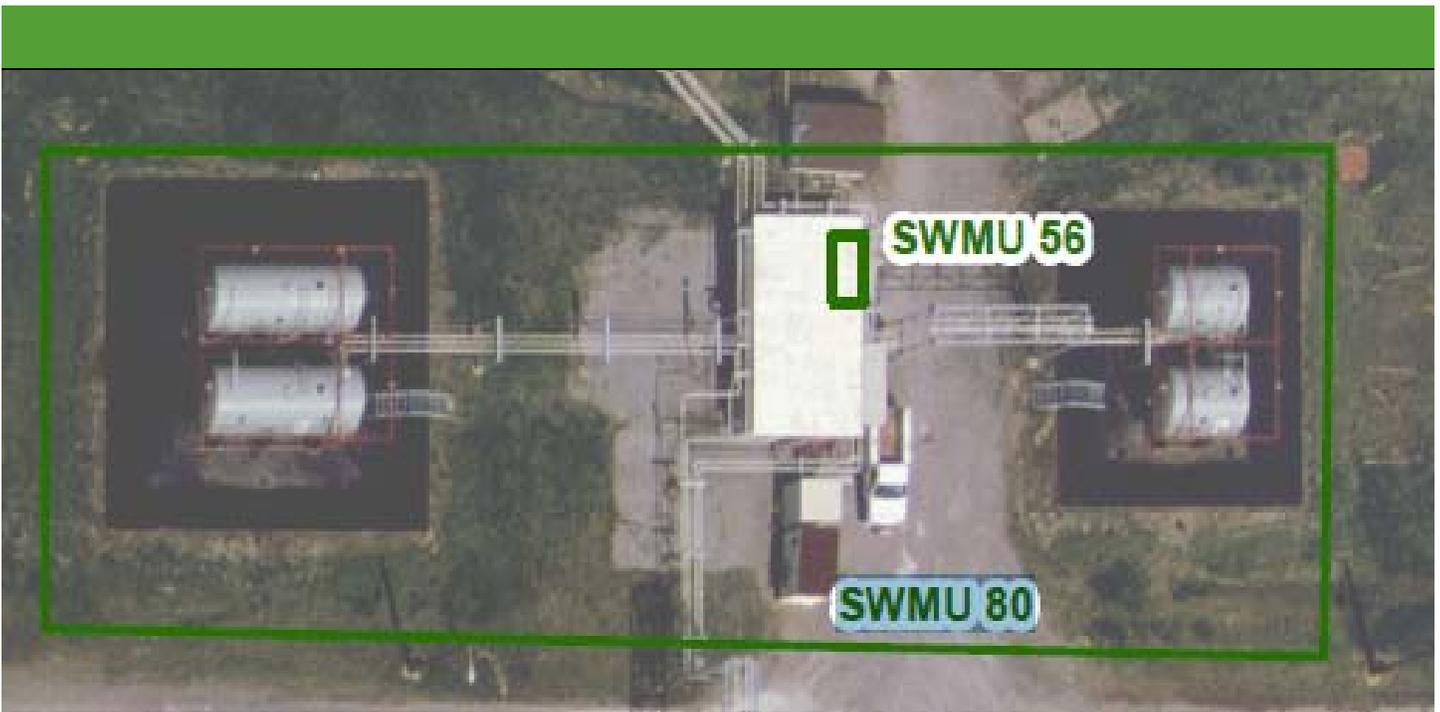
Environmental Concerns:

- Potential radiological contamination

Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU





Facility Information

The C-540-A PCB Staging Area (SWMU 56) is located in the east-central portion of the plant site. SWMU 56 is made up of leaks and spills of oils containing PCBs as a result of past operations that contaminated the soils. The entire area of SWMU 56 is inside SWMU 80.

The C-540 PCB Spill Site (SWMU 80) is located in the east-central portion of the plant site. SWMU 80 is made up of leaks and spills of oils containing PCBs as a result of past operations that contaminated the soils.

In 1997, as part of the WAG 23 non-time-critical removal action, 23 yd³ of soil contaminated with dioxins and 72 yd³ of soil contaminated with PCBs were excavated from SWMUs 56 and 80.

SWMU 56 C-540-A PCB Waste Staging Area SWMU 80 C-540-A PCB Spill Site

(REM)

Environmental Concerns:

- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- These also were investigated as part of RI 2

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025



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GA16-26



Facility Information

PCBs have been known to be released in this area.

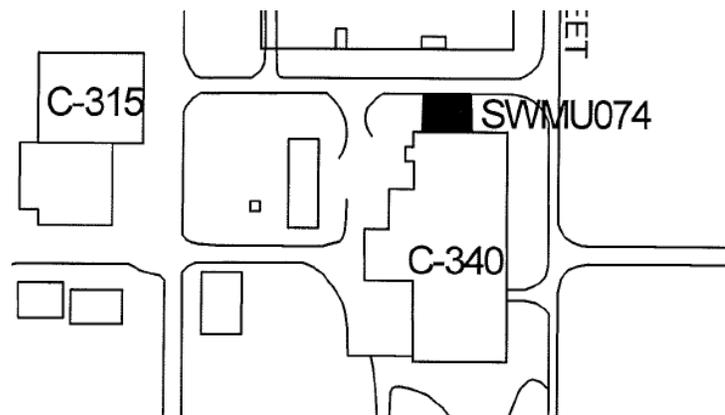
SWMU 74 C-340 PCB Transformer Spill Site (DEA)

Environmental Concerns:

- PCBs

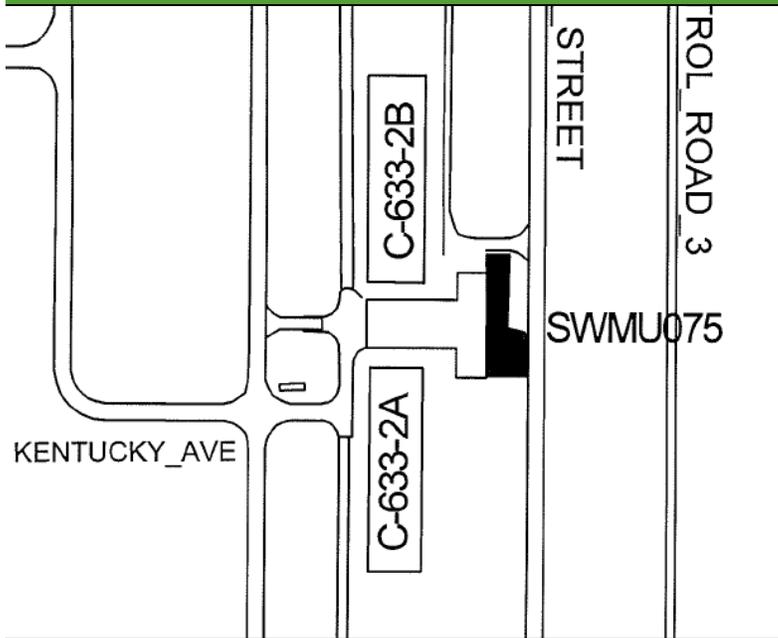
Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU



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GA16-27



Facility Information

PCBs have been known to be released in this area.

SWMU 75 C-633 PCB Spill Site (DEA)

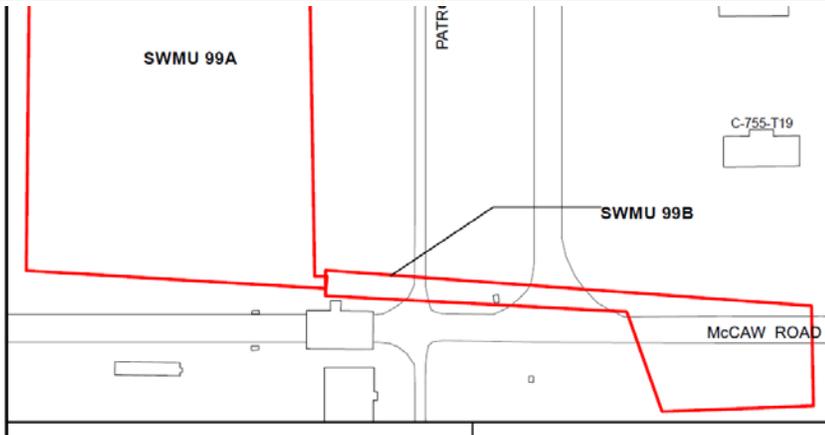
Environmental Concerns:

- PCBs

Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU





Facility Information

The C-745 Kellogg Building site, septic system/leach field (SWMU 99B) is located in the east-central portion of the plant site. Runoff from the SWMU flows south and east directly into Outfall 010. Included in the SWMU are a former septic tank, leach field, clay piping, and the gravel covered parking area southeast of the former building location (concrete pad) (SWMU 99A). SWMU 99B totals approximately 0.34 acres.

The septic tank and the leaching field are believed to have been designed to receive sanitary waste from the building's operations; however, the actual configuration of the drainage system is unknown. No records exist as to what was done with the residual contents of the tank after the buildings were demolished or whether any closure or removal actions were taken. The lateral lines for the leach field were found intact when they were uncovered during construction activities in late 1994.

SWMU 99B C-745 Kellogg Building Site (REM)

Environmental Concerns:

- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used for SWMU 99B is sufficient to support decision making and indicates that an FS is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

150 ft x 100 ft

The C-333 PCB Soil Contamination (North Side) (SWMU 135) is located north of the C-333 Building and was a dust palliative area used to reduce the amount of dust taken in by the ventilation system.

It is an asphalt surface adjacent to the facility.

SWMU 135 C-333 PCB Soil Contamination (North Side) (DEA)

Environmental Concerns:

- PCBs

Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU



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ENERGY

GA16-30



Facility Information

100 ft x 420 ft

The C-331 PCB Soil Contamination (West) (SWMU 153) is located west of the C-331 Building in the west-central portion of the plant site and was a dust palliative area used to reduce the amount of dust taken in by the ventilation system.

SWMU 153 C-331 PCB Soil Contamination (West) (REM)

Environmental Concerns:

- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used for SWMU 153 is sufficient to support decision making and indicates that an FS is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025



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ENERGY

GA16-31



Facility Information

3 Areas
100 ft by 160 ft
100 ft by 160
100 ft by 210 ft

The C-331 PCB Soil Contamination (Southeast) (SWMU 154) is located southeast of the C-331 Building in the west-central portion of the plant site and was a dust palliative area used to reduce the amount of dust taken in by the ventilation system.

The SWMU is inaccessible due to underground utilities adjacent to active facility.

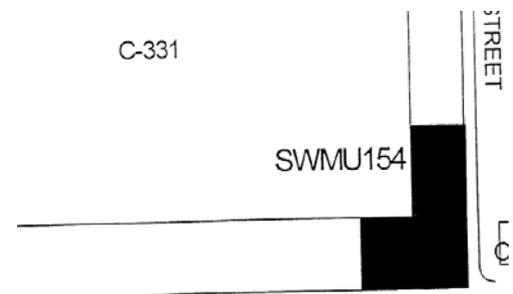
SWMU 154 C-331 PCB Soil Contamination (Southeast) (DEA)

Environmental Concerns:

- PCBs

Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU



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ENERGY

GA16-32



Facility Information

2 Areas
100 ft by 150 ft (each)

The C-333 PCB Soil Contamination (West) (SWMU 155) is located west of the C-333 Building in the west-central portion of the plant site and was a dust palliative area used to reduce the amount of dust taken in by the ventilation system.

It is an asphalt surface adjacent to the facility.

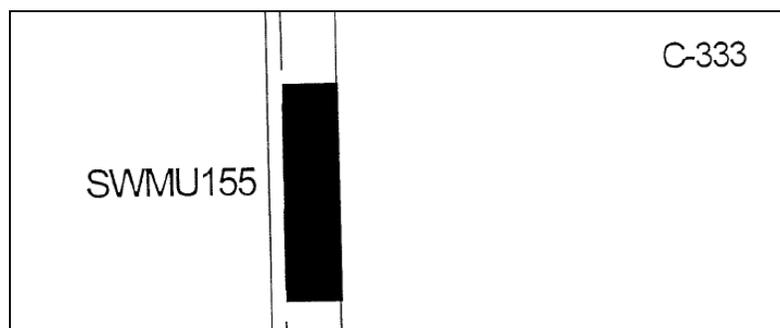
SWMU 155 C-333 PCB Soil Contamination (West) (DEA)

Environmental Concerns:

- PCBs

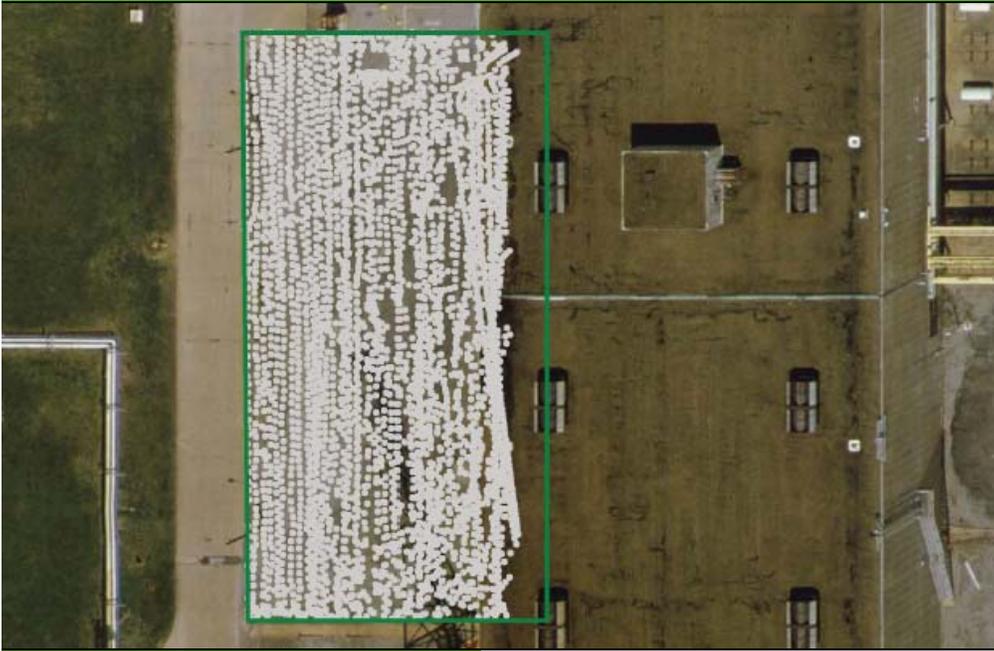
Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU



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GA16-33



Facility Information

100 ft x 160 ft

The C-310 PCB Soil Contamination (west side) (SWMU 156) is located in the central portion of the plant site.

The area historically was used as a dust palliative area to reduce the amount of dust taken in by the C-331 Building ventilation systems.

SWMU 156 C-310 PCB Soil Contamination (REM)

Environmental Concerns:

- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used for SWMU 156 is sufficient to support decision making and indicates that an FS is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025



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GA16-34



Facility Information

4 ft by 250-ft trench

Soils used from borrow area (SWMU 160) during construction may have contained PCBs.

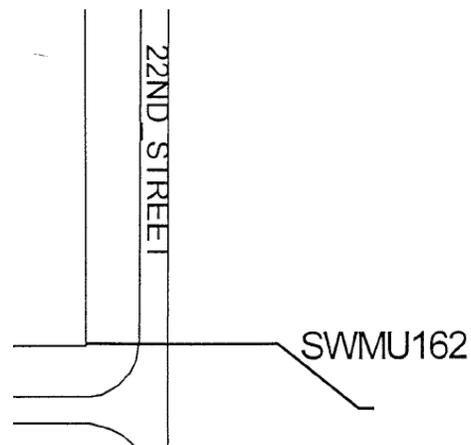
SWMU 162 C-617-A Sanitary Water Line (Soil Backfill) (DEA)

Environmental Concerns:

- PCBs

Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU



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GA16-35



Facility Information

75 ft x 75 ft

Failure in the piping in the air relief system caused a leak that resulted in approximately 200 gal of RCW being released.

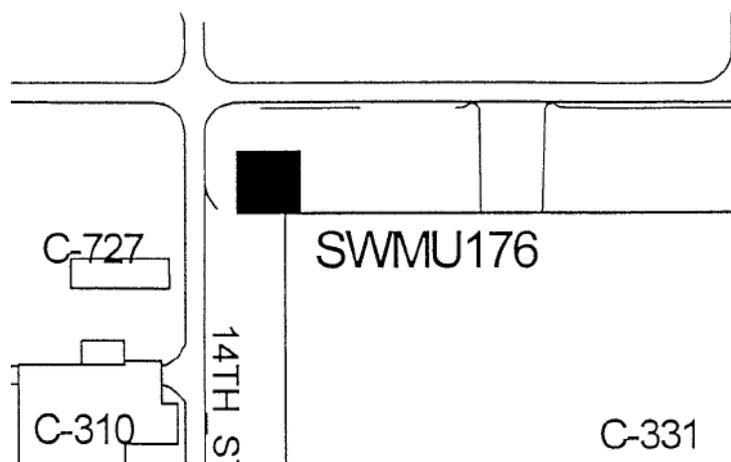
SWMU 176 C-331 RCW Leak Northwest Side (DEA)

Environmental Concerns:

- Hexavalent chromium

Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU



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GA16-36



Facility Information

100 ft x 75 ft

Failure in the piping in the air relief system, caused a leak that resulted in approximately 6,000 gal of RCW being released.

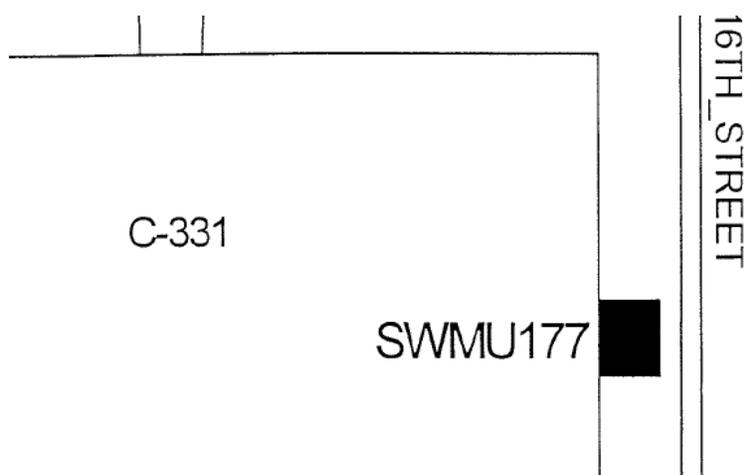
SWMU 177 C-331 RCW Leak East Side (DEA)

Environmental Concerns:

- Hexavalent chromium

Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU



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GA16-37



Facility Information

14,100 ft²

The C-301 Building (2,816 ft²) located within the DMSA was used as a Fire Services training facility until 1985. The area then became storage for excess electrical equipment and cooling tower wood. Waste Management utilized this area for the storage of low-level waste.

The DMSA was emptied and closed under RCRA. The building remains.

SWMU 223 Outside DOE Material Storage Area OS-12 (includes C-301) (REM)

Environmental Concerns:

- SWMU 223 (OS-12)—A certified RCRA Closure Report was approved by Kentucky on February 13, 2007, for this DMSA
- Radiological contamination

Near-Term Plans FY 15–FY 17:

- None—This unit is part of the Soils and Slabs OU



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GA16-38



Facility Information

2,200 ft²

SWMU 224, the location of the former DMSA OS-13, is south of C-340 Metals Reduction Complex in the east-central portion of the plant site. Empty vendor drums used for the C-340 reroofing project were stored here, beginning in 1996. During 1997 or 1998, the drums were removed.

DMSA O-13 currently is empty. The low-level waste formerly stored consisted of 49 empty 55-gal drums with lids and lid clamping rings. Reusable material formerly stored included a roll-off bin.

SWMU 224 Outside DOE Material Storage Area OS-13 (REM)

Environmental Concerns:

- This area was investigated further as part of the Soils Operable Unit RI—refer to RI Report for current data summary
- This area also was recently sampled as part of RI 2

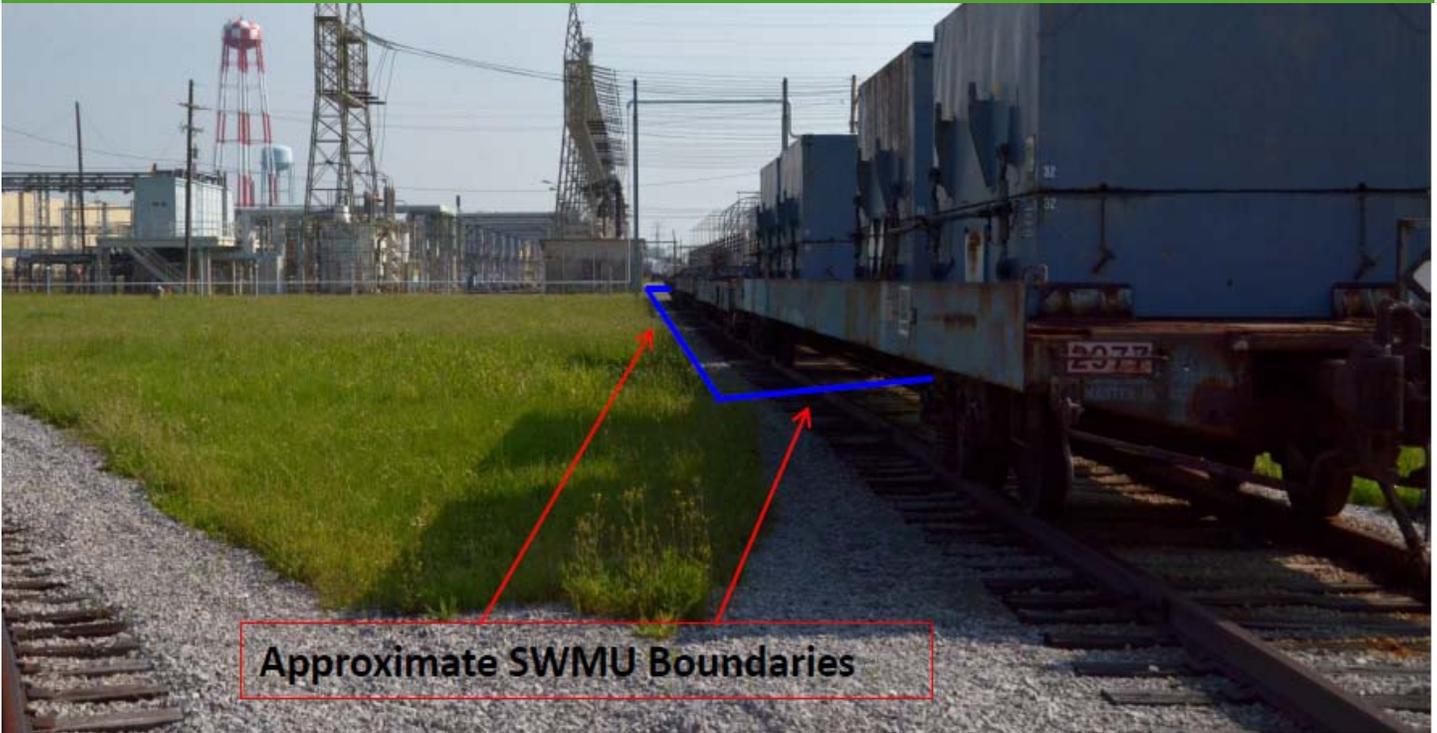
Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025



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ENERGY

GA16-39



Facility Information

7,800 ft²

This SWMU was used for rail car storage. The SWMU was emptied. Low-level waste formerly stored included a hose cabinet, five rail tank cars, and three rail flat cars.

Site personnel began using this area again for rail car movement.

SWMU 225A Outside DOE Material Storage Area OS-14 (INF)

Environmental Concerns:

- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- This area was investigated recently as part of RI 2

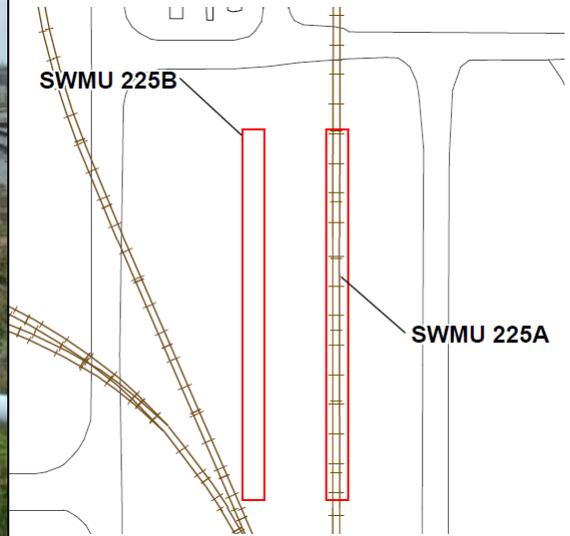
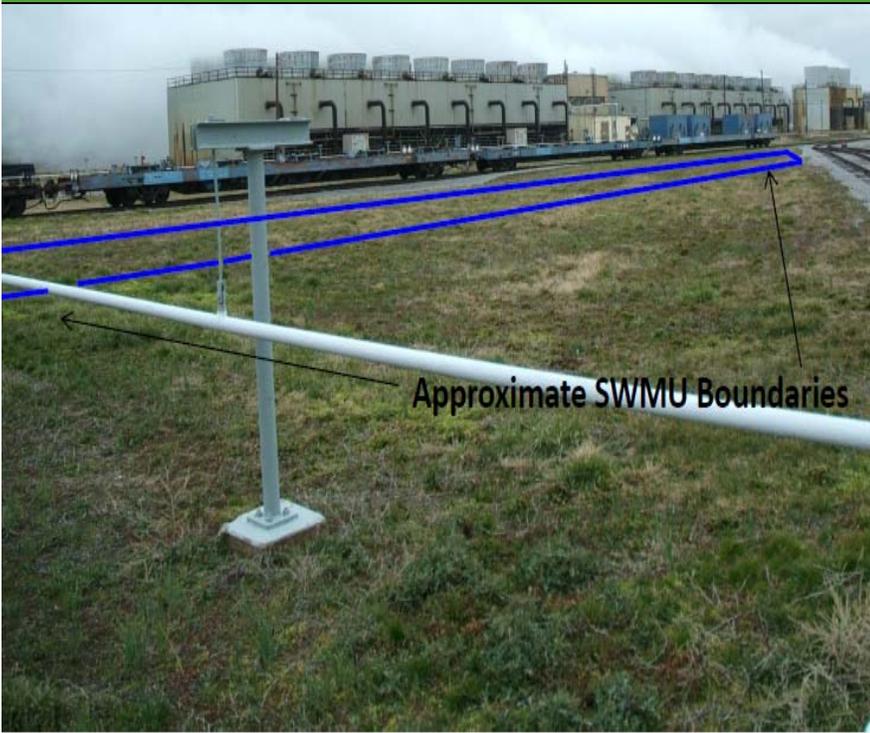
Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025



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ENERGY

GA16-40



Facility Information

15 ft by 260 ft

During the Soils OU RI, an area to the west of SWMU 225 inadvertently was sampled. Results indicate some chromium, total polycyclic aromatic hydrocarbons (PAHs), and U-238 contamination.

SWMU 225B Contaminated Soil Area Near C-533-1 DMSA OS-14 (REM)

Environmental Concerns:

- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- This area was investigated recently as part of RI 2

Near-Term Plans FY 15–FY 17:

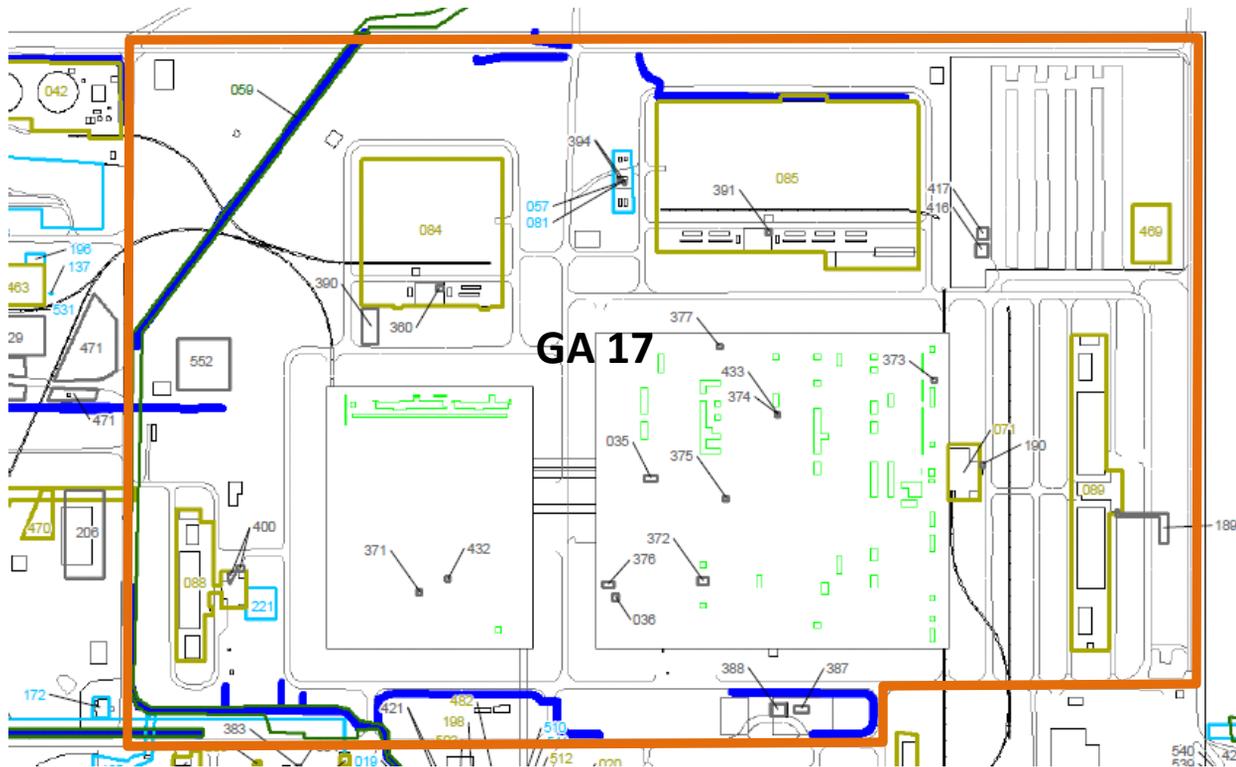
- None—Soils OU FS baselined for 2025



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GA16-41

Geographical Area (GA) 17



- ✓ Includes the C-335 and C-337 process buildings and supporting facilities
- ✓ 33 SWMUs/AOCs
 - ✓ 23 NFA SWMUs/AOCs
 - ✓ 1 Record of Decision SWMU—North-South Diversion Ditch
 - ✓ 6 gaseous diffusion plant facility SWMUs/AOCs
 - ✓ 3 Soils SWMUs/AOCs



Geographical Area (GA) 17

Mission Support Facilities (MS)

C-416 Decontamination Pad
C-754-A Low-Level Waste Storage Facility
C-757 Solid and Low-Level Waste Processing Facility
C-757-T01 Support Trailer

Former Support Facilities

C-337-T01, T02 Trailers
C-350 Drying Agents Storage Building
C-615-K Chromate Lift Station
(Inactive)
C-745-J (SWMU 469), Y, Z, Z1
Equipment Storage Yards

Utilities Infrastructure

NSDD Basin
C-400-L, C-616-C, L, H Lift Stations
C-535-1, 2, 3A, 3B, 4, Switchyard Facilities
(SWMU 84)
C-537-1, 2-, 3A, 3C, 3D, 4 Switchyard Facilities
(SWMU 85)
C-536 Relay House
C-541-A Oil Pump House
C-541-B, C, D, E Oil Storage Tanks
C-611-P Pump House
C-611-Q 36-inch Raw Water Line Booster Station
C-611-T Booster Pump Station Plant Water
C-635-6 Process Waste Heat Utilization Pump House

Remediation Program Facilities

SWMU 59

Other SWMUs/AOCs (non-NFA)

SWMU 57
SWMU 81
SWMU 221

Cylinder Yards (CYLYD)

C-745-H Cylinder Storage Yard

Former Process Facilities

C-335 Process Building
C-337 Process Building
C-337-A Feed Vaporization Facility (SWMU 71)
C-333-337-A Bridge (Enclosed)
C-333-337-B Tie Line (North)
C-333-337-C Tie Line (South)
C-635-1 Pump House (SWMU 88)
C-635-2 Cooling Tower (SWMU 88)
C-635-3 Blending Pump House (SWMU 88)
C-635-4 Blending Cooling Tower (North) (SWMU 88)
C-635-5 Blending Cooling Tower (South) (SWMU 88)
C-637-1 Pump House (SWMU 89)
C-637-2A Cooling Tower (South) (SWMU 89)
C-637-2B Cooling Tower (North) (SWMU 89)
C-637-3 Blending Pump House (SWMU 89)
C-637-4 Blending Cooling Tower (North) (SWMU 89)
C-637-5 Blending Cooling Tower (South) (SWMU 89)
C-637-6 Sand Filter Building (SWMU 89)





Facility Information

This area is used by the Remediation Program for decontaminating equipment and storing waste generated from remediation projects.

C-416 Decontamination Pad

(REM)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations





05/28/2014 10:28

Facility Information

This facility was used to support waste management operations.

C-754-A Low-Level Waste Storage Facility

(DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations





Facility Information

This facility was used to support waste management operations.

It includes a break room trailer.

C-757 Solid and Low-Level Waste Processing Facility C-757-T01 Support Trailer (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations



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ENERGY

GA17-5



Facility Information

DOE operation and maintenance activities associated with the North-South Diversion Ditch (NSDD) remedial action include operating a lift station (C-400-L) that was incorporated in the NSDD remedial system; keeping the components of the water transfer system clear of debris; activating and inspecting heat tracing on aboveground piping during cold weather; mowing surge basin and around structures; inspecting the concrete-paved ditch section and spillway in the surge basin; inspecting the surface cover in the surge basin to ensure maintenance of surface integrity; and conducting inspections to assure postings are legible. Three additional lift stations (C-616-L, C-616-H, and C-616-C) were incorporated into the NSDD remedial system.

NSDD-Basin C-400-L, C-616-C , C-616-L, and C-616-H Lift Stations (REM, DEA)

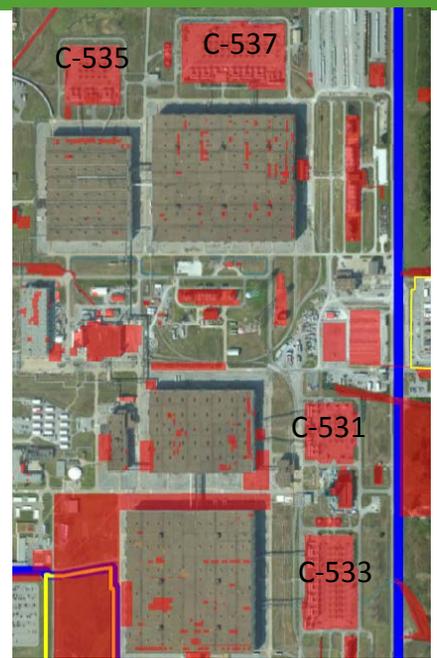
Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue meeting operation and maintenance requirements for this unit





Facility Information

28,000 ft² (buildings only)

The C-535 switchyard contains the 161 kV electrical system components necessary for operation of PGDP.

Each switchyard contains a switch house (3 total) and fire valve houses (10 total).

The plant was built with the capacity to use up to 3,000 megawatts.

C-535 Switchyard

C-537-1, 2-, 3A, 3C, 3D, 4 (DEA)

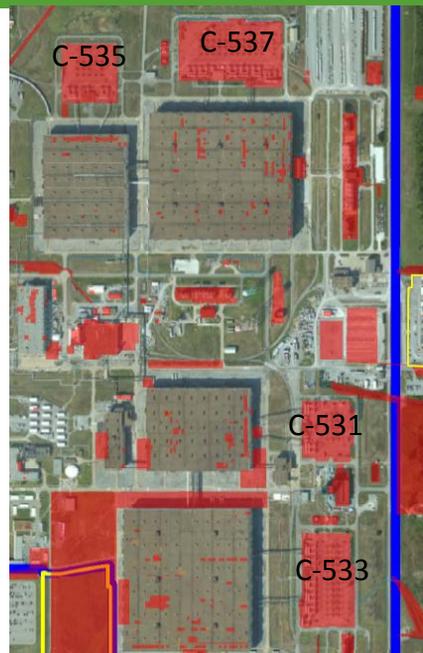
Environmental Concerns:

- **SWMU 84**—C-535 Switchyard slab and underlying soils
- PCBs
- Chlorinated solvents used to clean the external surfaces of transformers and switchgear
- Fixed Contamination Areas/Radiological Material Areas due to surface radiological contamination on the equipment

Near-Term Plans FY 15–FY 17:

- Establish power reconfiguration plans with power companies (e.g., TVA, EEI, KU)
- Consolidate four switchyards into one (C-531) and abandon the other three switchyards





Facility Information

43,000 ft² (buildings only)

The C-537 switchyard contains the 161 kV electrical system components necessary for operation of PGDP.

Each switchyard contains a switch house (3 total) and fire valve houses (10 total).

The plant was built with the capacity to use up to 3,000 megawatts.

C-537 Switchyard

C-533-1, 2, 3A, 3B, 3C, 3D (DEA)

Environmental Concerns:

- **SWMU 85**—C-537 Switchyard slab and underlying soils
- PCBs
- Chlorinated solvents used to clean the external surfaces of transformers and switchgear
- Fixed Contamination Areas/Radiological Material Areas due to surface radiological contamination on the equipment

Near-Term Plans FY 15–FY 17:

- Establish power reconfiguration plans with power companies (e.g., TVA, EEI, KU)
- Consolidate four switchyards into one (C-531) and abandon the other three switchyards





Facility Information

7,784 ft²

The C-536 relay house, built in 1954, is a one-story, reinforced concrete, electrical relay house. The building has a poured-concrete foundation, a built-up flat roof, and smooth concrete exterior walls.

C-536 Relay House (DEA)

Environmental Concerns:

- PCBs
- Chlorinated solvents used to clean the external surfaces of transformers and switchgear
- Fixed Contamination Areas/Radiological Material Areas due to surface radiological contamination on the equipment
- Potential asbestos and lead-based paint

Near-Term Plans FY 15–FY 17:

- Determine if facility is needed once the switchyard reconfiguration is completed





Facility Information

312 ft²

The C-541-A Oil Pump House is constructed of structural steel and corrugated siding (transite).

There are four steel, transformer oil aboveground storage tanks associated with the Oil Pump House (C-541-B, C-541-C, C-541-D, and C-541-E) (two 15,000-gal and two 7,500-gal). The PCB staging area is listed as SWMU 56.

C-541-A Oil Pump House C-541-B, C, D, E Oil Storage Tanks (DEA)

Environmental Concerns:

- Asbestos
- PCBs
- Lead-based paint

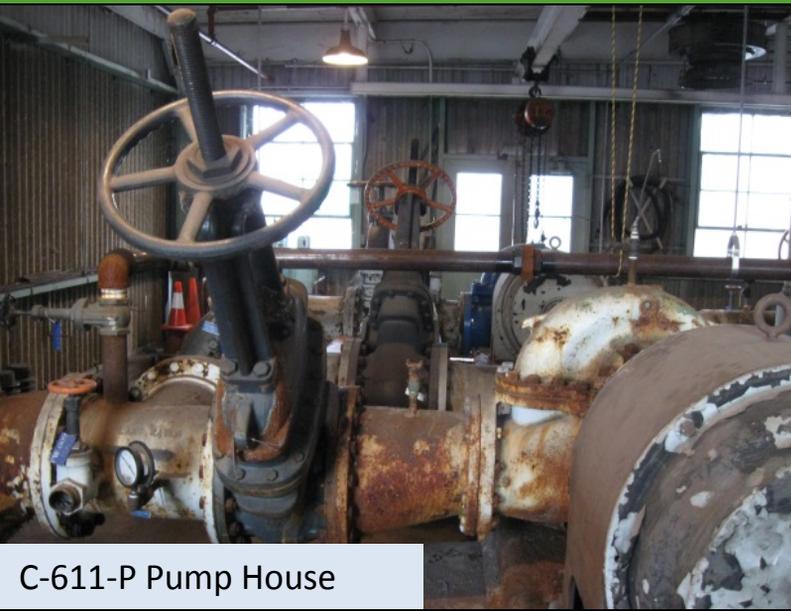
Near-Term Plans FY 15–FY 17:

- Perform surveillance and maintenance



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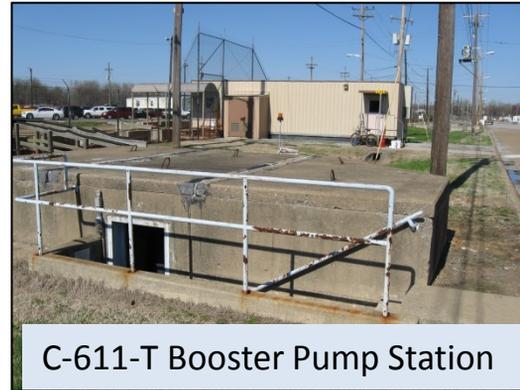
GA17-10



C-611-P Pump House



C-611-Q Raw Water Station



C-611-T Booster Pump Station

Facility Information

The C-611-P Pump House, built in 1950, is constructed of structural steel and corrugated siding. C-611-P consists of 902 ft² on one floor and is located near the intersection of Tennessee Avenue and 8th Street, adjacent to the C-600 Facility.

C-611-Q is an inactive, 36-inch water line booster station, constructed of unit masonry; area is 392 ft² on one floor. C-611-Q is located on the north side of PGDP, near the intersection of Old Water Line Road and Patrol Road.

C-611-T is a booster pump station for plant water, constructed of reinforced concrete and the area is 640 ft² on one floor. The pit-type concrete structure is below grade and is approximately 10-ft deep. The station contains one 20,000-gal per minute booster pump mounted in a 36-inch water line.

C-611 Water Treatment Distribution Facilities

C-611-P, Q, T (DEA)

Environmental Concerns:

- Asbestos
- Lead-based paint

Near-Term Plans FY 15–FY 17:

- Continue operations to support plant activities
- Perform optimization analysis to determine if more effective systems or privatization are implementable





C-635-6 Process Waste Heat Utilization Pump House

(DEA)

Facility Information

2,256 ft²

This is a one-story, prefabricated steel building built in 1983 and used as a heat utilization pump house. It has a poured-concrete foundation, a built-up flat roof, and a fiberglass panel exterior.

Systems were designed and built to pump heated recirculating cooling water from the process buildings to the buildings requiring space heating. These are the buildings heated with recirculating heating water:

C-100, C-101, C-102, C-200, C-400, C-710, C-720, C-750, C-360

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Continue use to support site operations





Facility Information

The C-745-H Cylinder Storage Yard is used to store UF₆ cylinders.

Cylinder Storage Yards

C-745-H (DUF₆)

Yard	Construction Material	Area/Capacity (Approximate)
C-745-H	Compacted DGA	23,650 ft ² and has a capacity of approximately 750 10-ton or 14-ton cylinders

Environmental Concerns:

- Possible contamination from creosoted wood timbers
- Lead-based paint on the UF₆ cylinders is documented
- Radiological contamination

Near-Term Plans FY 15–FY 17:

- Continue utilization for DUF₆ storage





Facility Information

1,029,120 ft² (two floors)

Building C-335 is a process building and contains cascade machinery used in the gaseous diffusion process. The building was constructed and placed in service in 1954. The building has a poured-concrete foundation, built-up flat roof, and a transite panel exterior. On the west façade, the first-floor section is incised, with the upper story supported by steel posts. This recessed first story has four entrance bays set within concrete-block surrounds. This recessed section is referred to as a “truck alley” and provides protected access to the building for vehicles and railroad cars.

Above the truck alley are eight sets of removable steel hatches that allow process equipment to be moved from or to the truck alley by interior building access.

C-335 Process Building

(DEA)

Environmental Concerns:

- Potential release of Freon to the atmosphere
- Lubrication oil leaks
- Radionuclide contamination
- Trichloroethene, technetium-99
- Chromated water
- PCB contamination resulting from ventilation duct gasket oil seepage
- Lead-based paints and ACM

Near-Term Plans FY 15–FY 17:

- Deposit removal
- Deactivation activities





Facility Information

2.138 Million ft² (two floors)

Building C-337 is a large process building that contains cascade machinery used in the gaseous diffusion process. Constructed in 1954, Building C-337 is a two-story rectangular-plan building of steel-frame construction.

The building has a poured-concrete foundation, a built-up flat roof, and transite panel exterior walls. The west façade has an incised first-floor section, with the upper façade supported by steel posts.

The first floor has five entrance bays that have concrete-block surrounds. Each entrance has original steel, sliding-track doors.

C-337 Process Building C-337-A Feed Vaporization Facility (DEA)

Environmental Concerns:

- **SWMU 71**—C-337-A Vaporization Facility (PCB Spills)
- Potential release of Freon to the atmosphere
- Lubrication oil leaks
- Radionuclide contamination
- Trichloroethene, technetium-99
- Chromated water
- PCB contamination resulting from ventilation duct gasket oil seepage
- Lead-based paint and ACM

Near-Term Plans FY 15–FY 17:

- Deposit removal
- Deactivation activities





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Facility Information

Overhead piping called tie lines connect with all of the main process buildings, as well as with C-310.

Once sufficiently enriched throughout the cascade, the U-235 was transferred via the tie lines into Building C-310, the Purge and Product Building.

At one time, the UF_6 was vaporized in a hot water bath in Building C-410 and sent to the process buildings via overhead piping (tie lines).

In preparation for the C-410 demolition, most of C-310/C-410 tie line was removed.

Process Building Tie Lines and Enclosed Bridges

C-333-337-A, C-333-337-B, C-333-337-C
(DEA)

Environmental Concerns:

- Radionuclide contamination
- ACM

Near-Term Plans FY 15–FY 17:

- Deposit removal
- Deactivation activities





Facility Information

16,500 ft² (buildings)

The cooling towers and pump houses serve to remove the heat produced in the gaseous diffusion process and to pump cooled water back into the process buildings to cool the diffusion machinery.

There are four sets of cooling towers used to remove heat from the enrichment process—one set of cooling towers dedicated to each process building. About 500 million gal of water was recirculated in the plant every 24 hours.

Nearly 12–25 million gal of water evaporated each day depending on the plant load or power level. These towers include C-631, C-633, C-635, and C-637. Each complex contains a pump house, cooling tower, blending cooling towers, and other support buildings.

Cooling Towers

C-635-1, 2, 3, 4, 5, C-637-1, 2A, 2B, 3, 4, 5, 6 (DEA)

Environmental Concerns:

- **SWMU 88**—C-635 Pump House and Cooling Tower slab and underlying soils
- **SWMU 89**—C-637 Pump House and Cooling Tower slab and underlying soils
- Chromated water may have leaked from the basins
- Sulfuric acid may have leaked from tanks
- Asbestos-containing material and lead-based paint

Near-Term Plans FY 15–FY 17:

- Perform surveillance and maintenance to keep the facility available to support future industrial activities





Facility Information

These two trailers supported C-337 operations.

C-337-T01, T02 Trailers (DEA)

Environmental Concerns:

- None

Near-Term Plans FY 15–FY 17:

- Evaluate for future use





Facility Information

1,570 ft²

This is a one-story building of concrete-block construction built in 1973. It is composed of two separate buildings connected by pipes below the roofline. Both buildings have poured-concrete foundations, built-up shed roofs, and concrete-block exterior walls. The east building has two entrances: the east bay has an original single-light glass and wood door and the west bay has an original double door of single-light steel and glass design.

C-350 Drying Agents Storage Building (DEA)

Environmental Concerns:

- Asbestos
- Lead-based paint

Near-Term Plans FY 15–FY 17:

- Continue use as guard posts for limited area entrance



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Facility Information

The C-615-K Inactive Chromate Lift Station consists of a 160 ft² concrete slab. This was made inactive sometime before the mid-1970s.

C-615-K Chromate Lift Station (Inactive) (DEA)

Environmental Concerns:

- Chromate contamination may exist

Near-Term Plans FY 15–FY 17:

- None





Facility Information

The C-745-J Cylinder Storage Yard (150 ft by 100 ft) was used to store UF₆ cylinders. After cylinders were removed from the area, the yard was used to store scrap metal and waste. In addition, the area was used to store equipment.

The C-745-Y, Z, and Z1 are areas used to store equipment.

Equipment Storage Yards

C-745-J (SWMU 469), Y, Z, Z1 (DEA)

Environmental Concerns:

- Radiological contamination

Near-Term Plans FY 15–FY 17:

- Evaluate the areas for future use





SWMU 59 North-South Diversion Ditch (Inside) (REM)

Facility Information

The portion of the NSDD addressed by the remedial action is comprised of two sections (i.e., Sections 1 and 2).

The NSDD originates within the north-central portion of PGDP and joins with Little Bayou Creek to the north of the plant. Historically, the NSDD received wastewater from the C-400 Cleaning Building, coal pile runoff, and storm water runoff. In 1977, the C-616-C Lift Station was constructed upstream of the point where the NSDD exits the PGDP boundary. This lift station diverts all normal flow from upstream locations in the NSDD to the C-616-F Full Flow Lagoon. The C-616-H Lift Station (Ditch 001 Lift Station) began operation in 1991.

Environmental Concerns:

- Risks associated with the NSDD are presented in *Record of Decision for Interim Remedial Action at the North-South Diversion Ditch at the Paducah Gaseous Diffusion Plant, Paducah Kentucky, DOE/OR/07-1948&D2*
- The cost of excavation of Sections 1 and 2, construction of the detention basin, and disposal of approximately 3,200 yd³ of soil in the C-746-U Landfill was \$12.2M, according to the *Remedial Action Completion Report for the North-South Diversion Ditch Sections 1 and 2 at the Paducah Gaseous Diffusion Plant, Paducah Kentucky*
- The remedial action cleaned this SWMU to industrial reuse standards

Near-Term Plans FY 15–FY 17:

- Continue meeting operation and maintenance requirements for this unit





Facility Information

SWMU 57 is small in size and is located inside of SWMU 81. The entire area of SWMU 57 is inside SWMU 81.

The C-541 PCB Spill Site (SWMU 81) is located in the northeast portion of the plant site. SWMU 81 is 0.26 acres and is not located near a surface water body. SWMU 81 is made up of leaks and spills of oils that contain PCBs as a result of past operations that contaminated the soils.

In 1997, as part of the WAG 23 non-time-critical removal action, 23 yds³ of soil contaminated with dioxins and 32 yds³ of soil contaminated with PCBs were excavated for SWMUs 57 and 81.

SWMU 57 C-541-A PCB Waste Staging Area SWMU 81 C-541-A PCB Spill Site

(REM)

Environmental Concerns:

- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used for SWMU 57 is sufficient to support decision making and indicates that an FS is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025





Facility Information

750 ft²

SWMU 221 is located east of the C-635 Recirculating Cooling Water (RCW) Pump House in the central portion of the plant site at the former location of DMSA OS-10. The area contained approximately 414 ft³ of scrap metal and an empty sulfuric acid tank. The items were characterized and disposed properly.

This SWMU currently is empty.

SWMU 221 Outside DOE Material Storage Area OS-10 (REM)

Environmental Concerns:

- This area was further investigated as part of the Soils OU RI—refer to RI Report for current data summary
- The representative data set used for SWMU 221 is sufficient to support decision making and indicates that an FS is appropriate
- Possible remedial technologies applicable for this unit, as discussed in the Work Plan, are posting, fencing (or other means of limiting access), *in situ* treatment, and additional excavation

Near-Term Plans FY 15–FY 17:

- None—Soils OU FS baselined for 2025

