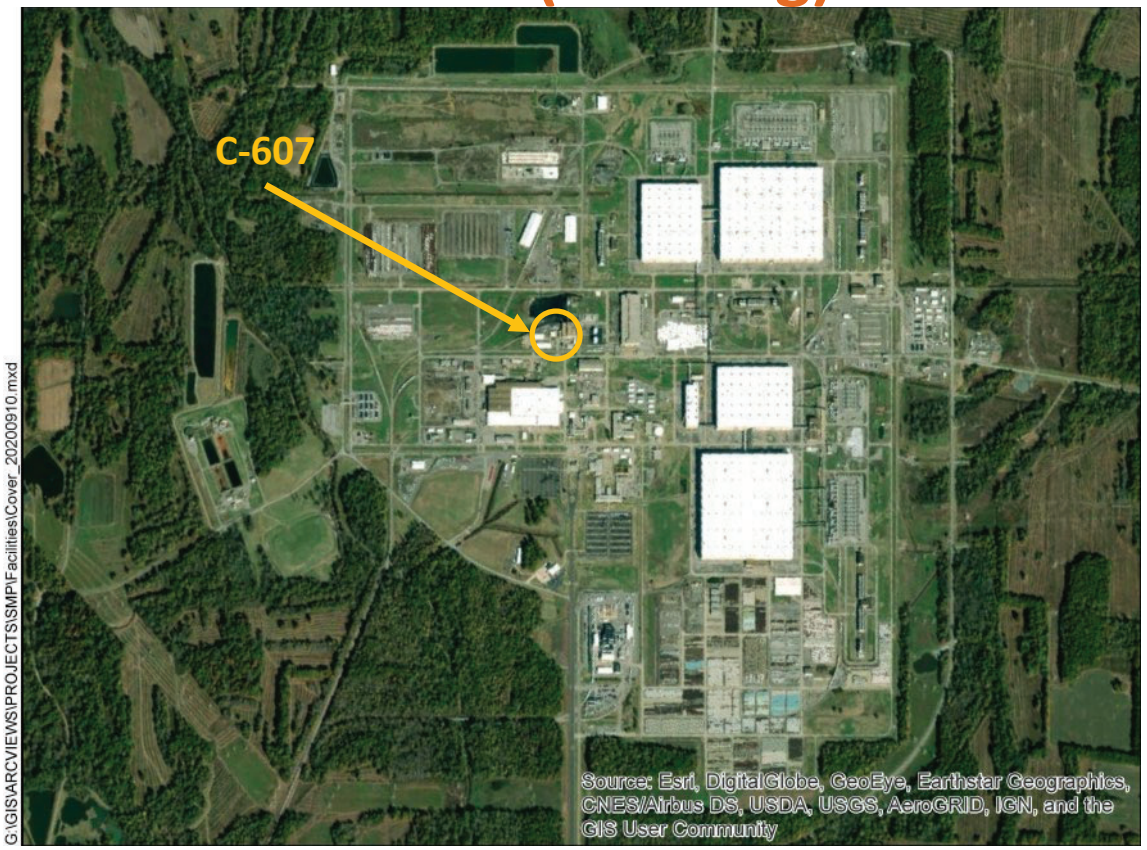
C-607 Emergency Air Compressor Generator Build (Building)



Facility Overview Briefing

March 24, 2021

Reflects consultation with EPA and Kentucky in accordance with the Site Management Plan that occurred on March 17, 2021, and includes incorporation of comments from those discussions

Purpose

- The C-607 Emergency Air Compressor Generator Build (Building) is a candidate for future demolition and disposal, contingent upon funding priorities.

- Listed in Appendix 6 of the Site Management Plan (SMP); requires consultation with EPA and Kentucky for CERCLA screening prior to demolition.

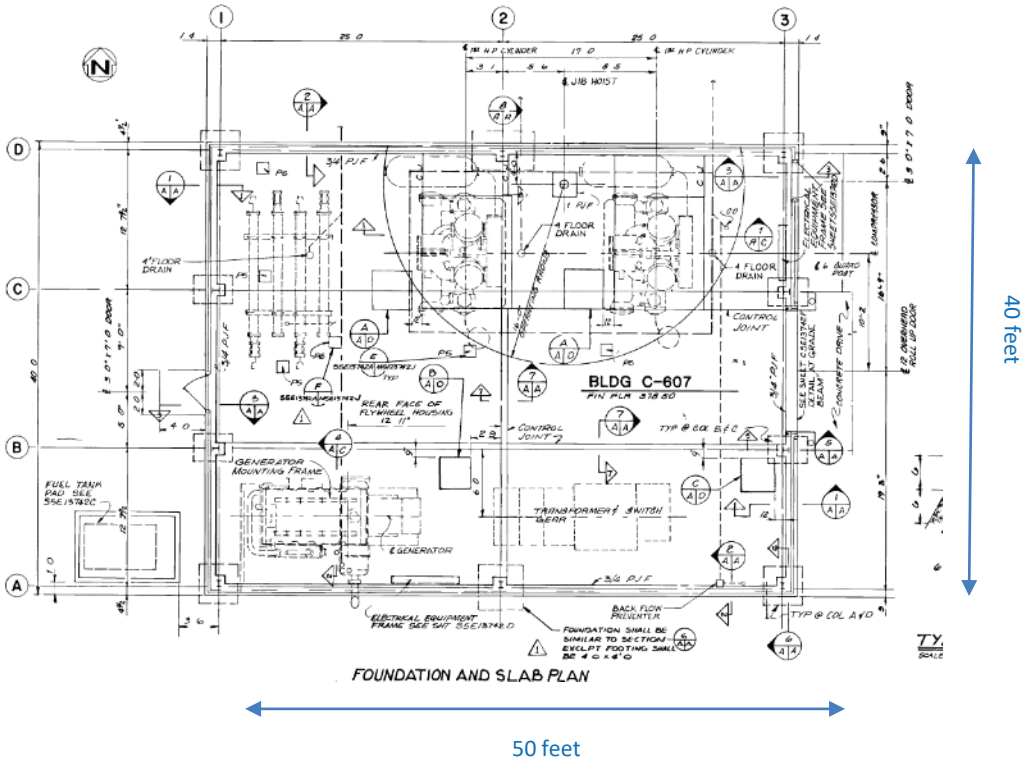
- This presentation is intended to serve as consultation, providing the basis for demolition and disposal of the aboveground structure outside of the FFA/CERCLA process.

- The remaining slab/soils will be subject to a future CERCLA evaluation under Geographical Area (GA) 12.

C-607 Facility Photo: 7/2020

Construction History

- C-607 is located within the Paducah Site security fence, west of C-600.
- The facility was constructed in 1985.
- The facility is constructed of prefabricated metal with a cement wall panel (transite) on a concrete foundation.
- The facility is approximately 2,000 ft^2.
  - Measuring ~40 ft x ~50 ft.



Floor Plan View: Excerpt from Engineering Drawing S5E-13742-A, dated 1984

Operational History

- C-607 operated as a backup support facility that supplied plant air for process instrumentation throughout the plant from 1985 to approximately 2016.
  - C-607 plant air equipment consisted of two Joy air compressors, a diesel driven generator, air intake and air discharge vessels, electrical transformer, cooling system, and piping.
  - Compressors were capable of running on either normal or emergency generated power.
  - C-607 also contained a sodium thiosulfate system to dechlorinate the cooling water used to cool the compressors prior to discharge.

- USEC leased the facility in the early 1990s and continued to use C-607 as a backup support facility to supply plant air to process instrumentation and expanded the sodium thiosulfate system in C-607 to also provide treatment at K008.

- C-607 transitioned from USEC to DOE in 2014 and continued to operate as a backup support facility that supplied plant air for process instrumentation until the system was placed in shutdown in 2016 and power to the system was disconnected.

C-607 Facility Photos: 10/2020

Operational History

- The use of the sodium thiosulfate system in C-607 for treatment at K008 was discontinued in approximately 2017 when it was determined that the treatment provided at C-615 was sufficient.

- C-607 contains a variety of equipment that served as backup support for supplied air; all of which have been taken out-of-service.
  - Joy air compressors with discharge vessels (2)
  - Diesel driven generator
  - Diesel tanks (inside and outside) (2)
  - Sodium thiosulfate unit
  - Cooling system
  - Motor control center
  - High voltage panels and switchgear
  - Equipment panels

- C-607 is currently used as a temporary storage facility for miscellaneous equipment and parts from the Stores Warehouse that support C-615 activities.

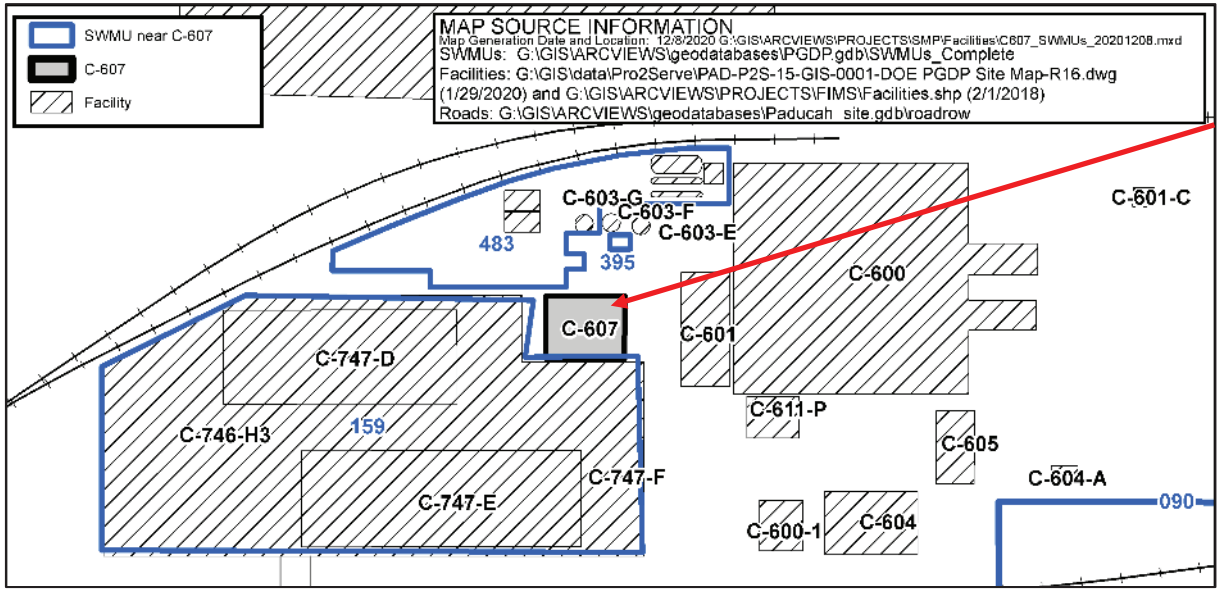
C-607 Facility Photos: 10/2020

Current Status

- C-607 no longer serves as a backup support facility for the provision of supplied plant air for process instrumentation throughout the plant or sodium thiosulfate treatment at K008.
- C-607 is used as a temporary storage facility for miscellaneous equipment and parts from the Stores Warehouse that support C-615 activities.
- Walkdown inspection conducted in October 2020 and employee interviews confirmed no unusual conditions.
  - No floor sumps; however, floor drains are present.
  - Not used for radiological storage; facility does not contain any radiological postings.
  - Compressors still contain oil.
  - Generator has been drained.
  - Diesel tanks located inside and outside have been drained.
  - No Generator Staging Area (GSA) or Satellite Accumulation Area (SAA).
  - Battery charging station has been disconnected.
  - Minor oil leaks contained within the building from compressors that were immediately addressed; minor historical diesel spill associated with filling inside diesel tank that was immediately addressed.
  - Cement wall panel and other asbestos containing materials.

C-607 Facility Photos: 10/2020

Environmental Impacts
(Solid Waste Management Units)



- The C-607 Emergency Air Compressor Build (Building) is not designated as a SWMU/AOC.
- SWMU 159 (C-746-H3 Storage Pad) is in close proximity and adjacent to C-607 and will be evaluated as part of the Soils and Slabs OU.

SWMU No.	Facility Name	Current Status	NFA Approval By
090	C-720 Petroleum Naphtha Pipe	NFA	KDWM 1/14/2015
159	C-746-H3 Storage Pad slab and underlying soils	Soils and Slabs OU	
395	G-600-01	NFA	KDWM 3/8/2007
483	Nitrogen Generating Facilities slab and underlying soils	Soils and Slabs OU	

Environmental Impacts

- No information to indicate a release or threatened release of a hazardous substance that would require an evaluation for a potential response action to protect future public health or welfare or the environment.

  - C-607 was operated as a backup support facility to supply plant air for process instrumentation throughout the plant from 1985 to 2016 and provided sodium thiosulfate treatment at K008 from the 1990s to approximately 2017; C-607 is currently used to store miscellaneous equipment and parts from the Stores Warehouse that support C-615 activities.

  - Building materials used for construction could contain lead-based paints and asbestos materials, both of which can be effectively verified during a predemolition inspection and properly managed using standard demolition and waste management practices.
    - C-607 has a cement wall panel identified as transite and other asbestos containing materials.
    - C-607 contains lead acid batteries.

  - No history or records of chemical use or spills that would pose environmental release threat.

Conclusion and Recommendations

- Walkdown inspection of the facility, employee interviews, and other reviewed historical information did not identify any unusual conditions that would pose a potential threat of environmental release during future demolition of the aboveground structure.
  - Deactivation will include removal of any accessible loose items (including the lead acid batteries) being stored (to the extent practicable) prior to demolition.
  - Floor drains will be delineated and isolated prior to demolition.
- Pending ceasing of operation, deactivation, and availability of funding, proceeding with demolition and disposal of the C-607 facility (aboveground structure) outside of the FFA/CERCLA process, contingent upon the fact that no additional changes have occurred that would affect the CERCLA determination of the facility prior to demolition, is recommended.
- All applicable laws, regulations, and DOE procedures/protocols will be followed to ensure the demolition and disposal of the aboveground structure occurs in a safe, compliant manner, including conducting any additional radiological characterization through confirmation radiological surveys (as necessary) to support demolition and waste disposition.

Conclusion and Recommendations

- As part of the demolition of the aboveground structure, the appropriate best management practices (BMPs) will be evaluated and implemented (as needed) to prevent/minimize the pooling and/or migration of storm water that may come into contact with any contamination that may exist on the pad/subsurface structure(s). For example, the following BMPs will implemented as necessary:
  - Radiological surveying will occur following demolition.
  - Decontamination and/or application of fixatives will be applied to contaminated surfaces above regulatory posting limits.
  - Isolation measures and other types of barriers to minimize and/or control runoff/pooling of contaminated storm water (e.g., seal inlets to drains/sumps/subsurface structure(s)).

- Removal of the C-607 facility will be documented in the appropriate annual SMP revision.

- The future evaluation conducted for GA 12 will further evaluate the potential threat of release associated with the slab/soils from the C-607 facility.

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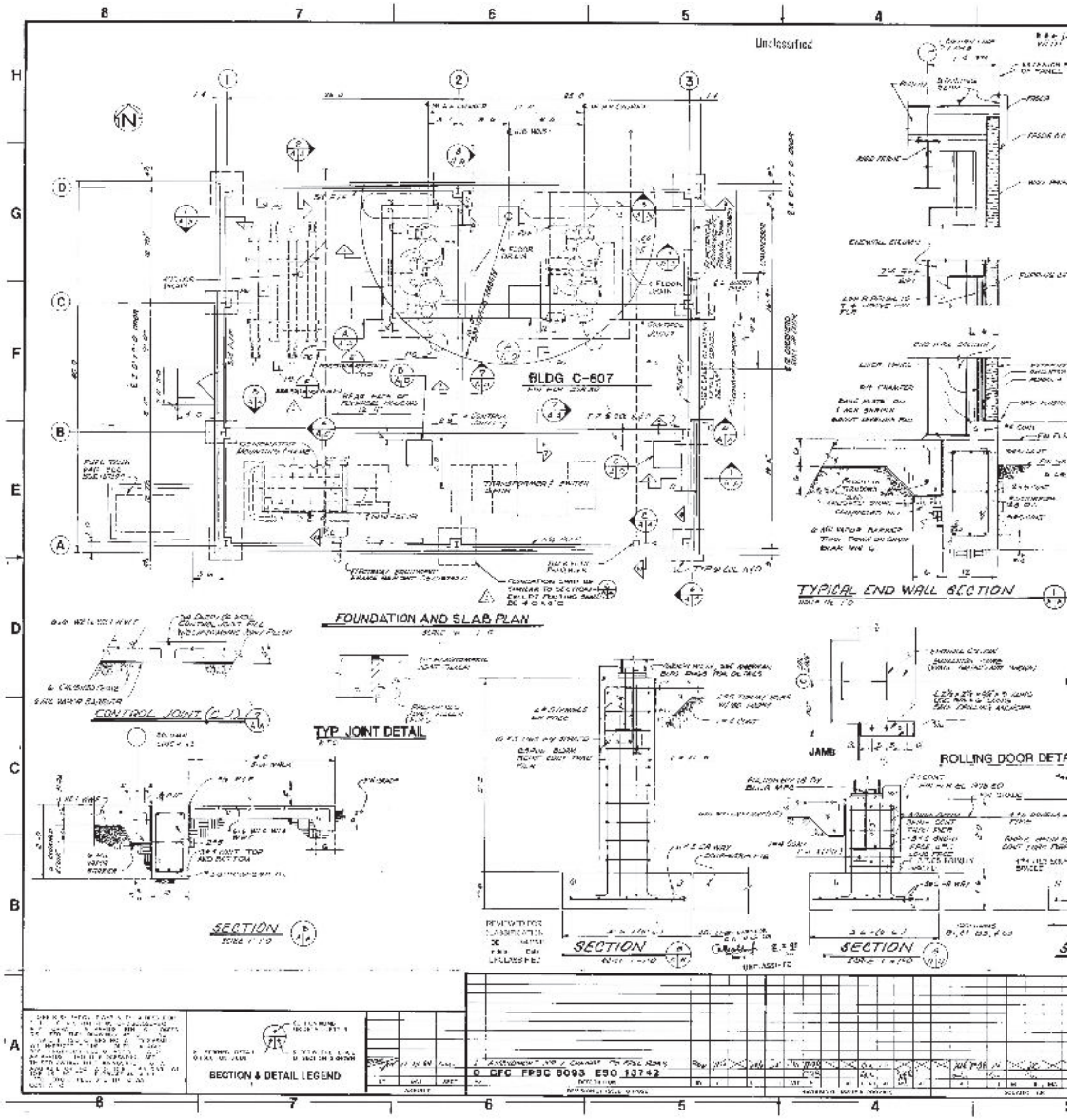
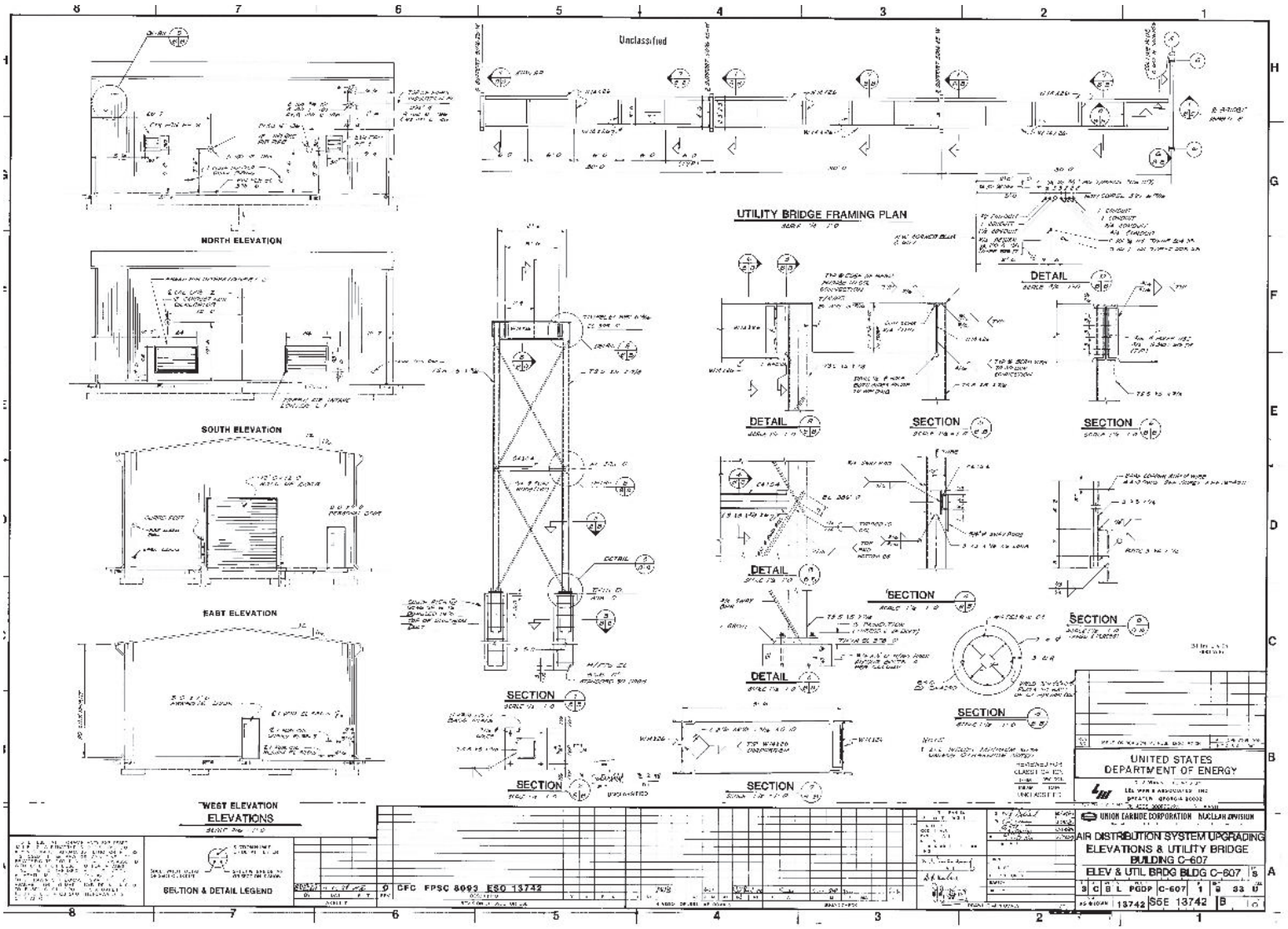
BACKUP INFORMATION

C-607 Engineering Drawings

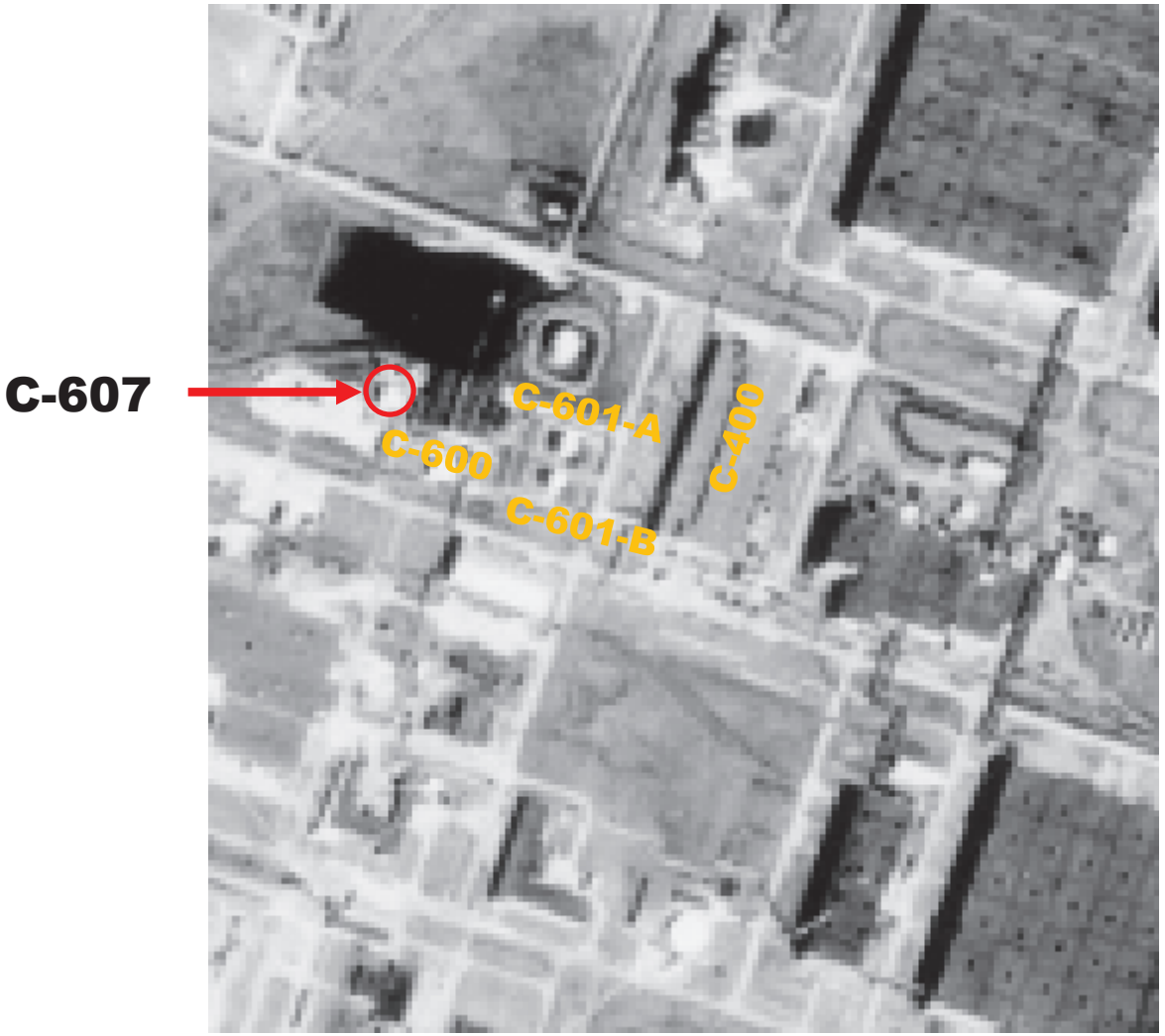


S5E-13742-A, Rev 1

C-607 Engineering Drawings



C-607 Aerial Photograph



Modified from Aerial Photo: March 27, 1988 (APP 630 039)

C-607 Sources

- Engineering Drawings:
  - Provided in presentation
- Databases:
  - USEC's BPS
  - Issues Management System
  - Regulatory Compliance Archive Spill Log (pre-2018)
  - PCB Database (1989 – 2021)
  - Active GSAs and SAAs Master List
  - Asbestos Walkdown (October 2020)
- Employee Interviews:
  - Facility Manager (42 years plant expertise)
  - Utility Operations Subject Matter Expert (45 years plant expertise; operator/manager/supervisor)
  - Compliance Subject Matter Expert (45 years plant expertise; trained on system)
- Documents:
  - Paducah Gaseous Diffusion Plant Sitewide Strategy Facility Background Information. FPDP-RPT-0021, May 2016
  - Report for Environmental Audit Supporting Transition of the Gaseous Diffusion Plants to the United States Enrichment Corporation DOE/OR/1087&V5 (June 1993)
  - Final Environmental Impact Assessment of the Paducah Gaseous Diffusion Plant Site, Paducah, Kentucky, DOE/EA-0155, August 1982
  - Fluor Federal Services, Inc., Paducah Deactivation Project Comprehensive Environmental Compliance Due Diligence Review, CP5-ES-0101
  - Paducah Asbestos Survey Executive Summary (Lee Wan Report), October 1990