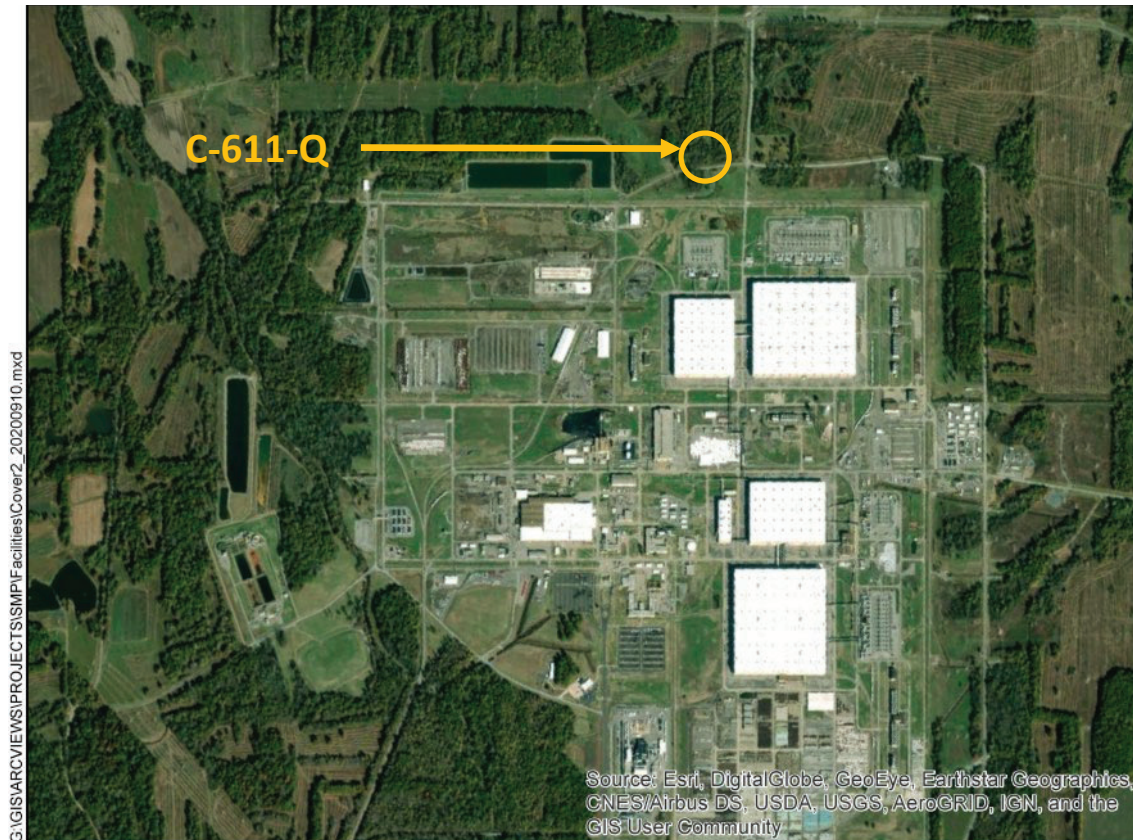


C-611-Q 36" Raw Water Line Booster Station



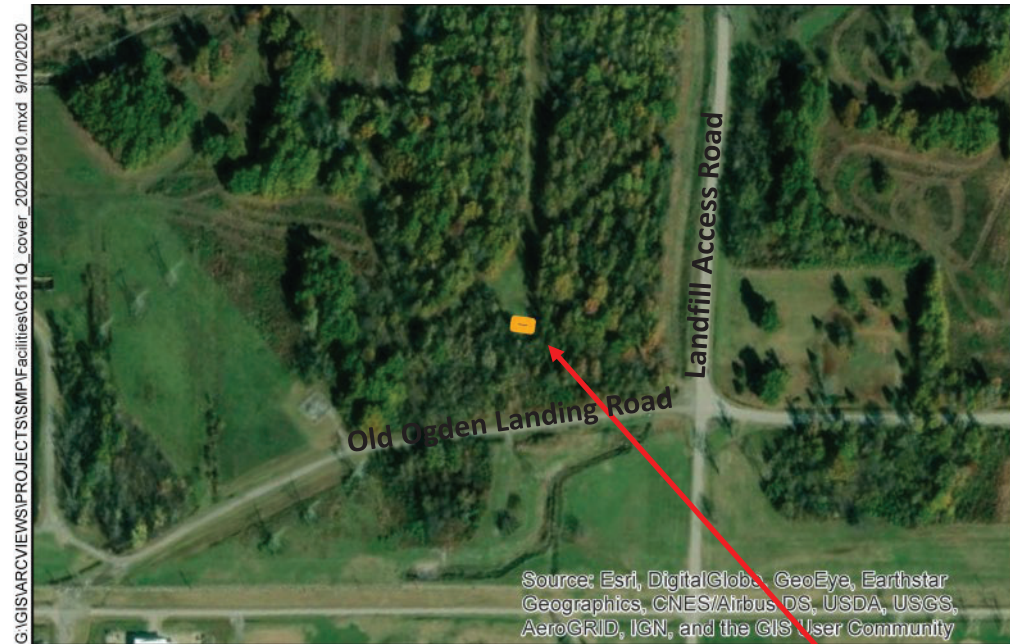
Facility Overview Briefing

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

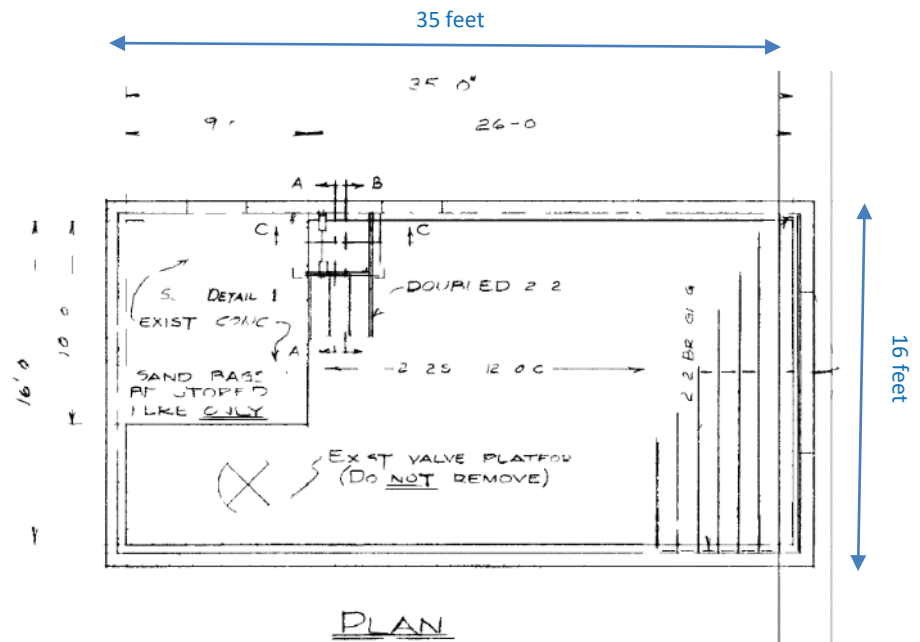
- The C-611-Q 36-inch Raw Water Line Booster Station is a candidate for future demolition and disposal, contingent upon funding priorities.
- Listed in Appendix 6 of the Site Management Plan (SMP); requires consultation with EPA and Kentucky for CERCLA screening prior to demolition.
- This presentation 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, sump/basement area, and soils will be subject to a future CERCLA evaluation under Geographical Area (GA) 8.



C-611-Q Facility Photo: 7/2020

Construction History

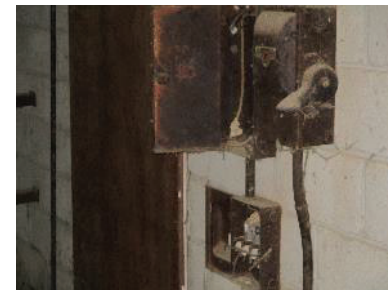
- C-611-Q is located outside the Paducah Site security fence and the Property Protection Area, near the intersection of Old Ogden Landing Road and the Landfill Access Road. It is north of C-335 and east of C-616-E.
- A construction update to the C-611-Q facility occurred in 1955.
 - ❑ C-611-Q was part of a sizable upgrade to the Water Treatment Plant and No. 1 Raw Water line that was originally constructed for the Kentucky Ordinance Water Works (KOW) in 1942.
- The facility is constructed of unit masonry with a small basement/sump area measuring approximately 6 ft x 6 ft x 10 ft.
 - ❑ Approximately 80% of the facility contains a wooden floor with a small concrete pad measuring ~ 6 ft x 8 ft on north west corner.
- The facility is approximately 560 ft².
 - ❑ Measuring ~16 ft x ~35 ft.



Floor Plan View: Excerpt from Engineering Drawing C-PA-P4113, dated 1954

Operational History

- C-611-Q operated as a raw water line booster station for the No. 1 Raw Water Line from the 1950s – 1960 to pump water from the Ohio River to the Paducah Site Water Treatment Plant.
- In 1960, the No. 2 Raw Water Line was installed and the No. 1 Raw Water line (which included C-611-Q) set idled until approximately 1978/1979.
- In 1978/1979, the No. 1 Raw Water Line was cleaned and refurbished for use; however, C-611-Q was not brought on-line and was no longer considered part of the No. 1 Raw Water Line.
- After 1978/1979, C-611-Q was used to store various types of equipment used to support the Water Treatment Plant.
- USEC leased the facility in the early 1990s and continued to use C-611-Q as a temporary storage facility.



Operational History

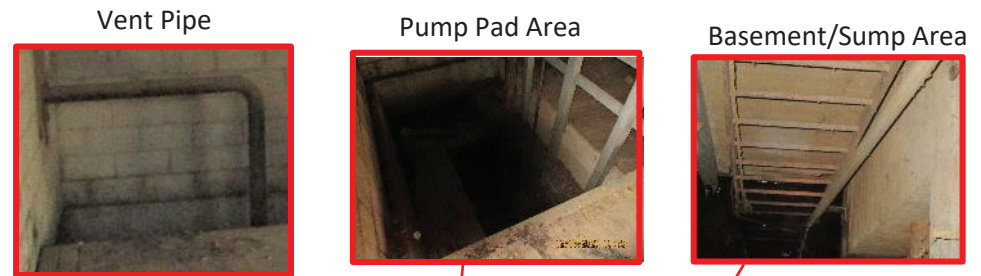
- C-611-Q transitioned from USEC to DOE in 2014.
- In December 2020, DOE determined that C-611-Q was no longer required for storage.
- Miscellaneous items were removed from the facility and properly disposed of or targeted for re-use or transfer to Paducah Area Community Reuse Organization (PACRO); no RCRA items were discovered.
 - ❑ Pipe insulation
 - ❑ Flanges
 - ❑ Pipe and pipe spools
 - ❑ Metal flashing
 - ❑ Fiberglass covers
 - ❑ Large steel piping
- The facility has been locked and posted with signage restricting entry.



C-611-Q Facility Photos: 7/2020 and 12/2020

Current Status

- C-611-Q is no longer operational nor is it used for a storage facility to support the Water Treatment Plant.
- Walkdown inspection conducted in December 2020 and employee interviews confirmed the following conditions.
 - Sump/basement area (measuring ~6 ft x 6 ft) is typical of a water booster station.
 - Pump and sump pump have been removed.
 - Sump/basement area contains some water.
 - No floor drains.
 - No known chemical spills.
 - No radiological contamination.
 - Roofing material is transite and contains asbestos-containing materials.
 - Facility has been disconnected from power.
 - No Generator Staging Area (GSA) or Satellite Accumulation Area (SAA).



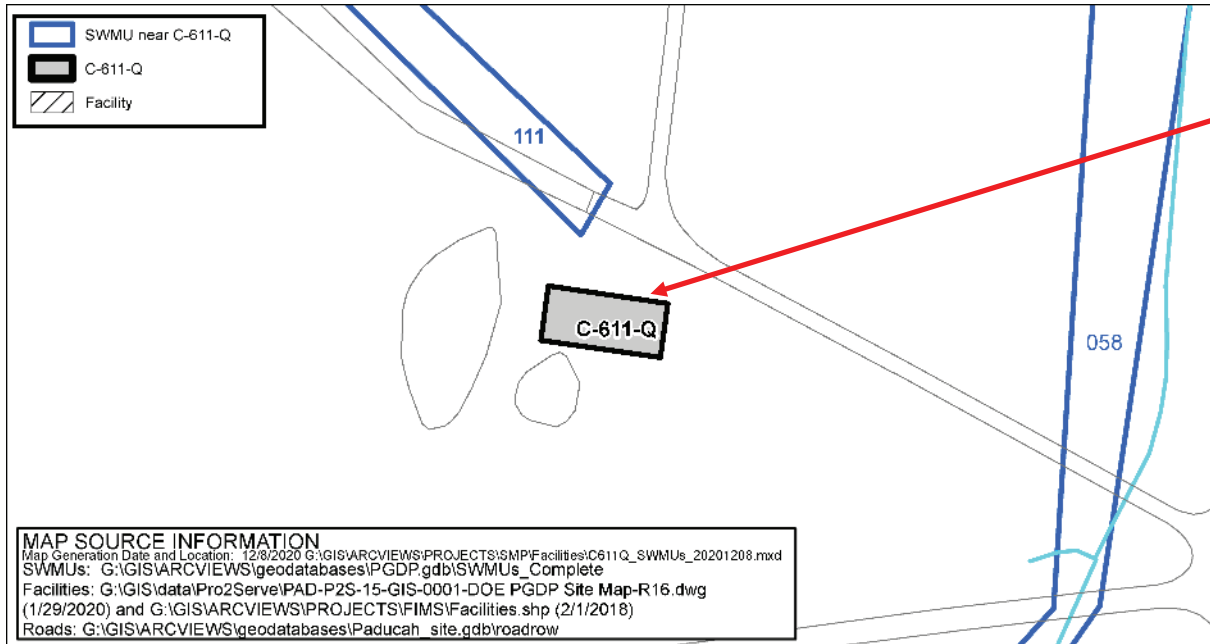
West Side View



East Side View

C-611-Q Facility Photos: 12/2020

Environmental Impacts (Solid Waste Management Units)



The C-611-Q 36" Raw Water Line Booster Station is not designated as a SWMU/AOC.

| SWMU No. | Facility Name | Current Status | NFA Approval By |
|----------|-------------------------------------|----------------|--|
| 058 | NSDD (Outside) (includes KPDES 003) | SWOU Removal | |
| 111 | Concrete Rubble Pile (9) | NFA | EPA and KY via WAG 17 ROD 9/29/1997 |

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-611-Q was operated as a raw water booster station from the 1950s – 1960 and a storage facility to store various types of equipment used to support the Water Treatment Plant from 1978/1979 to 2020; C-611-Q currently is no longer in use.

- ❑ 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-611-Q roofing material is transite known to be made up of asbestos-containing material.

- ❑ No history or records of chemical use or spills that would pose environmental release threat.
 - Water remaining in the basement/sump area can be attributed to either rainwater infiltration, groundwater infiltration, or water line leakage.
 - C-611-Q is not located within the footprint of the NE/NW Plume and any groundwater present would not be assumed to be contaminated.

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.
- Subject to completion of deactivation and availability of funding, proceeding with demolition and disposal of the C-611-Q 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 be 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)).

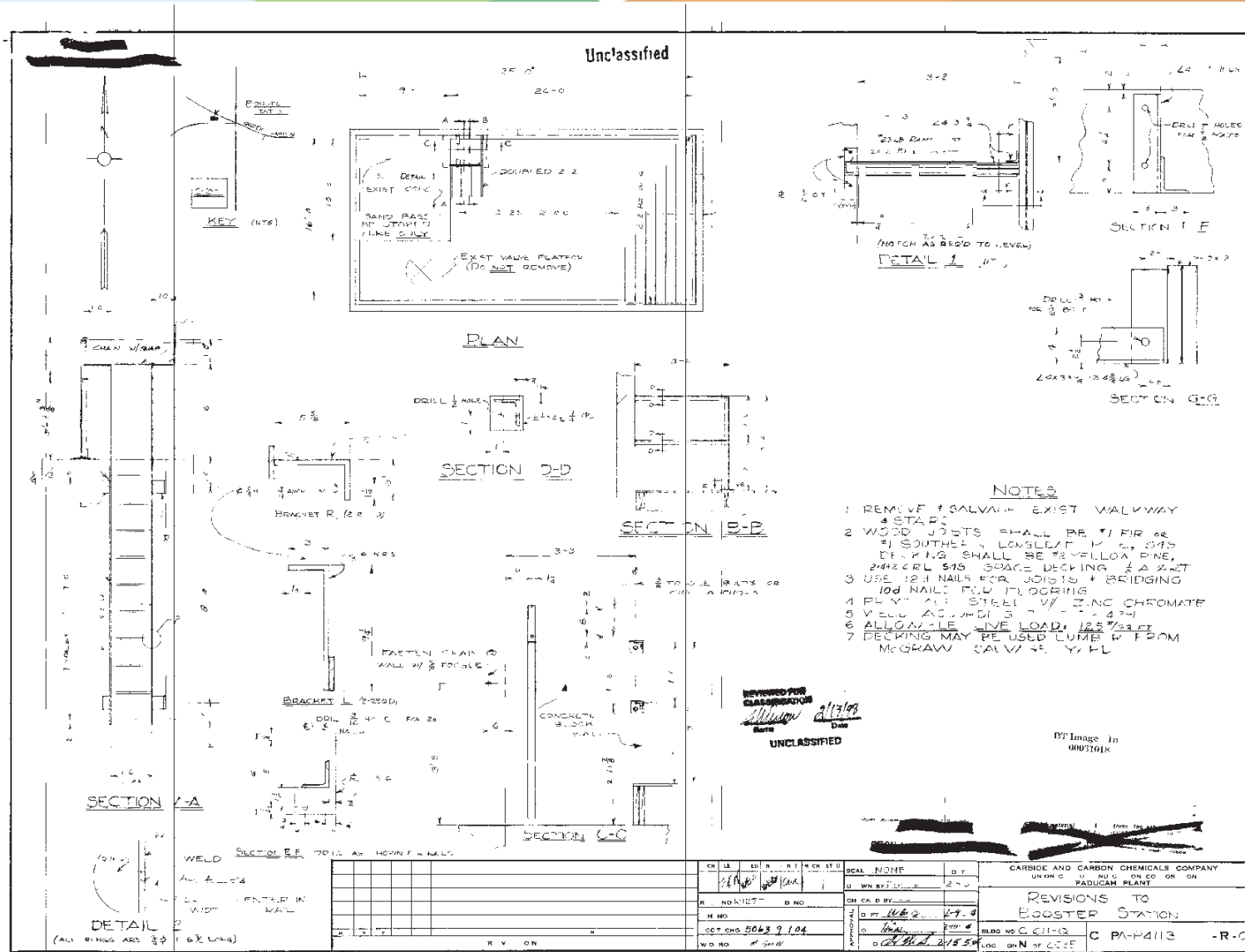
- Removal of the C-611-Q facility will be documented in the appropriate annual SMP revision.

- The future evaluation conducted for GA 8 will further evaluate the potential threat of release associated with the slab, sump/basement area, and soils from the C-611-Q facility.

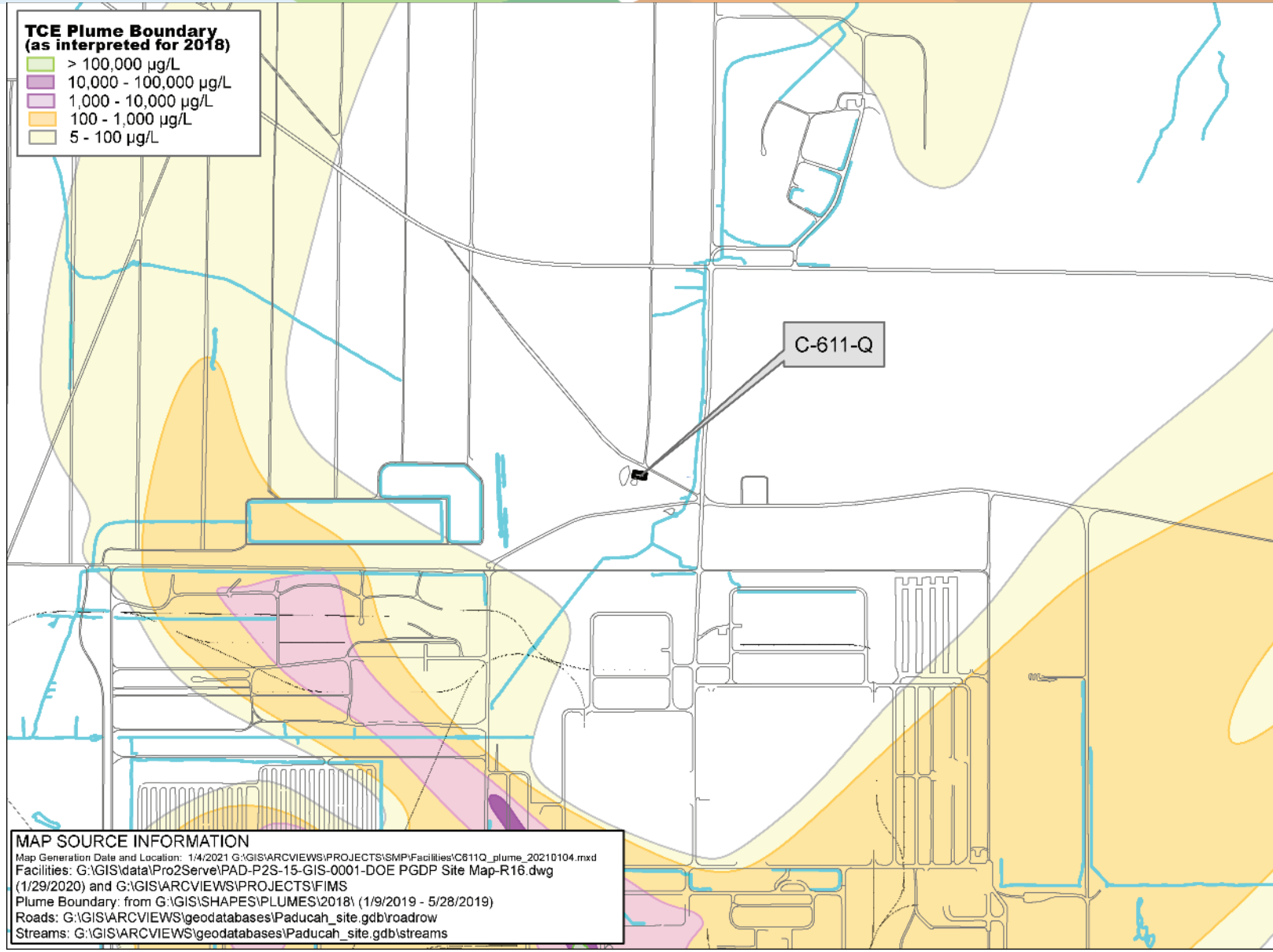
C-611-Q 36" Raw Water Line Booster Station

BACKUP INFORMATION

C-611-Q Engineering Drawings

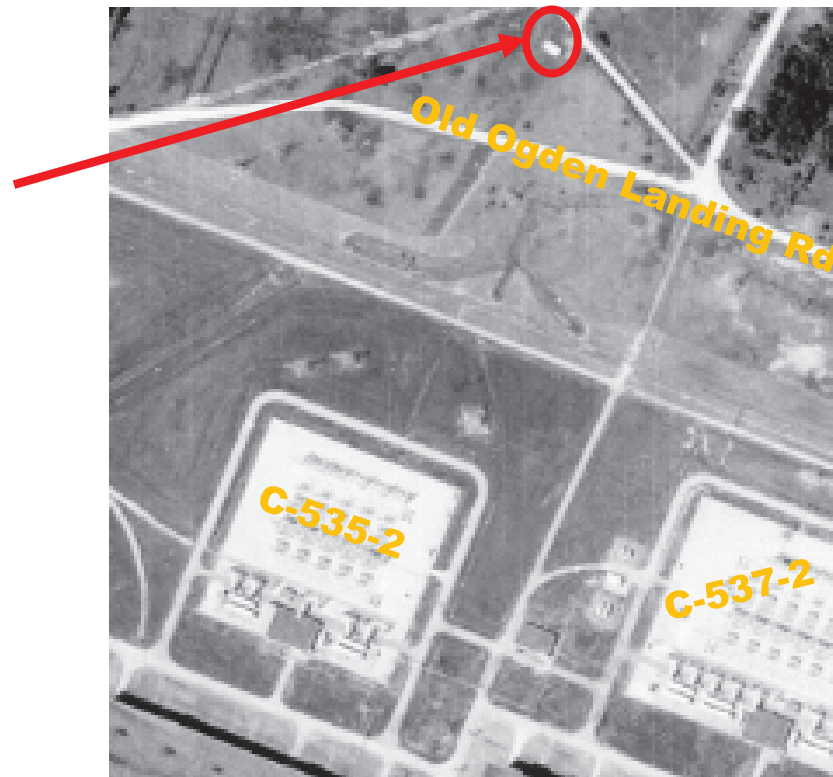


C-611-Q With Plume Overlay



C-611-Q Aerial Photograph

C-611-Q



Modified from Aerial Photo: May 14, 1971 (ADZ-411-Z)

C-611-Q 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)