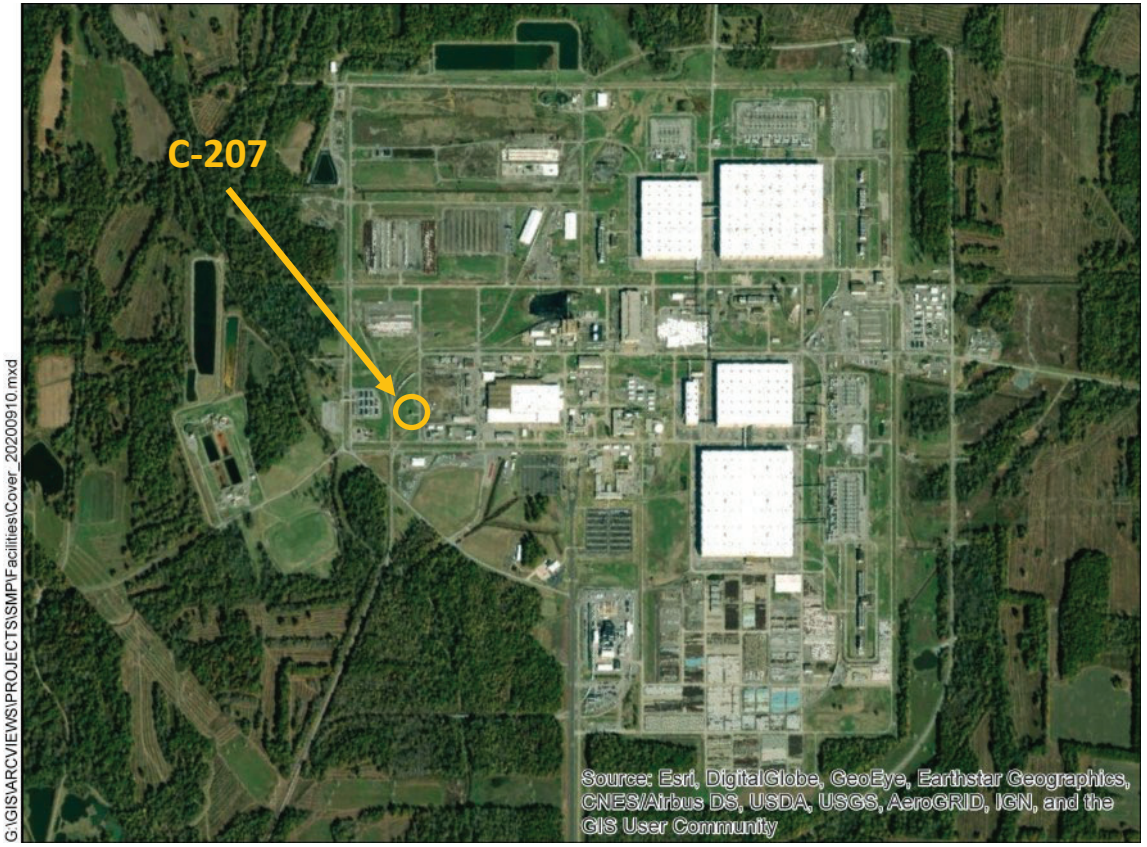
C-207 Fire Training Facility



Facility Overview Briefing

October 19, 2021

Reflects consultation with EPA and Kentucky in accordance with the Site Management Plan that occurred on October 18, 2021, and includes incorporation of comments from those discussions.

Purpose

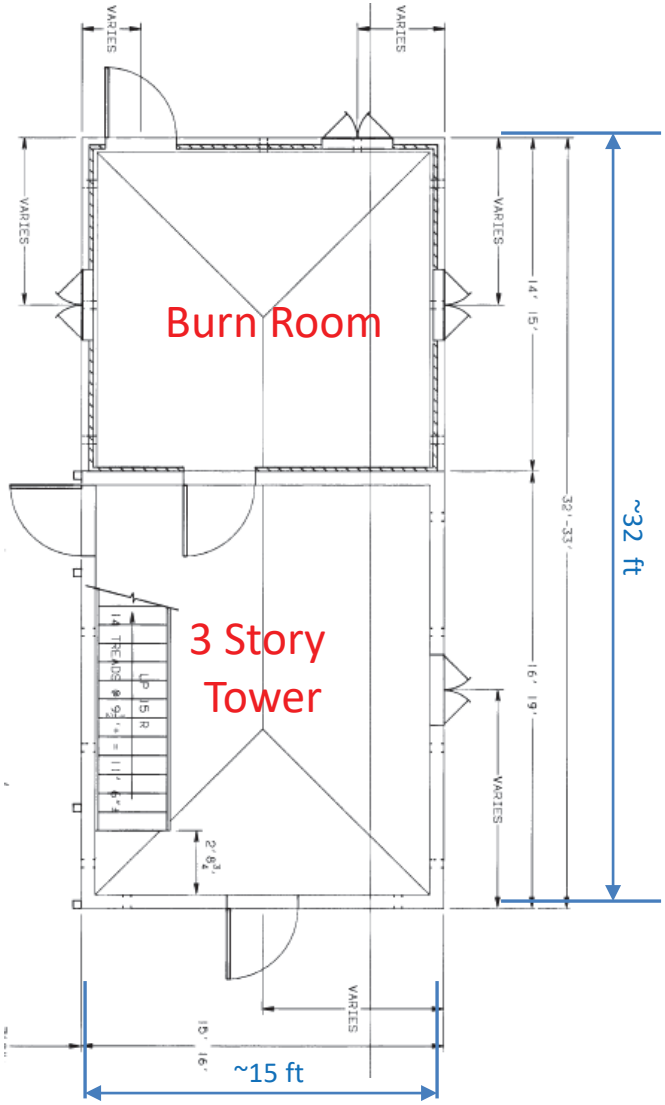
- The C-207 Fire Training Facility is a candidate for future demolition and disposal, contingent upon funding priorities.
- Listed in Appendix 6 of the Site Management Plan (SMP); requires consultation with EPA and Kentucky for CERCLA screening prior to demolition.

- 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 further CERCLA evaluation as part of a future integrated site evaluation conducted under Appendix 4 of the SMP.

C-207 Fire Training Facility Photo: 7/2021

Construction History

- C-207 is located inside the Paducah Site security fence in the southwest portion of the plant just west of the C-720 Building and northeast of the C-615 Sewage Plant.
  - The C-207 facility is not part of Solid Waste Management Unit (SWMU) 100 (Fire Training Area) located north of the C-207 facility which operated from 1982-1987.
- The C-207 facility was constructed in 1993 of prefabricated metal on a concrete slab.
  - The concrete slab ranges in thickness from 4 to 8 inches.
  - Drain ports run along the foundation structure which allow water from inside the facility to drain to a long rectangular drain located outside the building (east side).
  - The walls are primarily metal sheeting with no insulation but the burn room has some fire protective paneling on the interior.
- The structure consists of a 3 story tower on the east side with interior/exterior metal stairs and a single story burn room on the west side.
- The total facility is approximately 960 ft^2 .
  - First floor (consisting of the lower floor of the tower and burn room) collectively measuring ~ 32 ft x ~ 15 ft.
  - Second/Third floor of the tower with each floor measuring ~ 15 ft x ~ 16 ft.



Floor Plan View:
Excerpt from Engineering Drawing A5E-17634-A00, dated 1993

Operational History

- C-207 was specifically designed and has operated as a fire training facility from its construction in 1993 to present.

- Controlled fire burns were conducted within the facility and its surrounding area in support of firing training exercises.
  - A burn room located inside the facility using primarily wet hay or straw.
  - Burn pans located outside the facility utilized fuel. Burn pans may have been used at locations other than the one shown in the photo.

  Note: The fuel used in the outside fire pans consisted of diesel fuel and gasoline obtained from the Site's fueling station and did not include potentially contaminated waste oils that were historically used (prior to 1987) at other fire training facilities located elsewhere in the plant (e.g., SWMU 100, C-301).

- Aqueous film forming foam (AFFF) was historically used to extinguish the fires in the outside burn pans; AFFF was not used for fires located in the inside burn room.

- Training exercises with fire burns at C-207 have not been conducted since before the USEC transition in 2014.

- C-207 transitioned from USEC to DOE in 2014.

C-207 Facility Photo: 7/2021

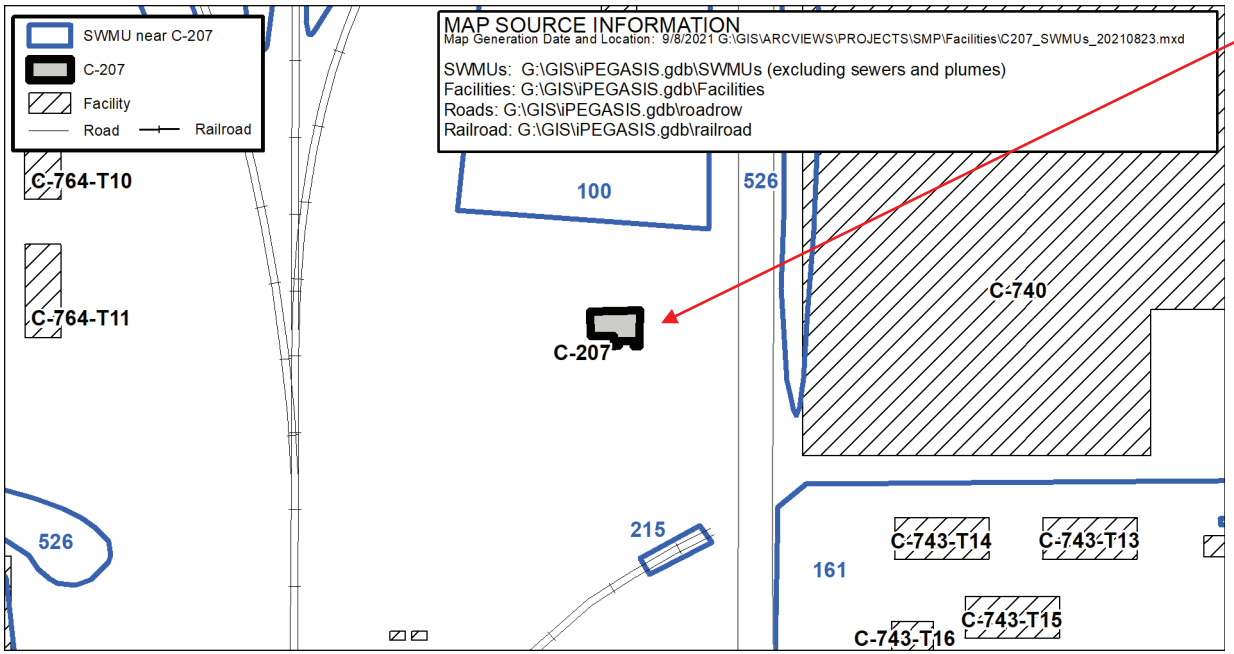
C-207 Facility and Burn Pan Photo: 10/2021

Current Status

- The facility is still active and used to support limited types of fire training (e.g., ladder training).
- Walkdown inspections conducted in July, September, and October of 2021 and employee interviews confirmed no unusual conditions except for the past use of fuels for controlled fire burns and use of AFFF.
  - ❑ Contains a fire suppression/sprinkler system and other miscellaneous "props" (e.g., stove) and combustible materials to support fire training exercises.
  - ❑ No chemicals are currently stored at the facility except one small poly container of AFFF which is planned for removal and disposal.
    - Four-55 gallon drums of AFFF were removed from the facility for off-site disposal in 2020.
  - ❑ No chemical spills of stored materials are known to have occurred.
  - ❑ Drain ports that are tied to the rectangular drain discharge to the plant storm sewer system.
  - ❑ No notable cracks were observed on the inside pad but some minor cracks are present on the outside pad.
  - ❑ No generator staging areas (GSA) or satellite accumulation areas (SAA) are present.
  - ❑ No known asbestos-containing materials (ACM) or or lead-based paints are known to be present.
  - ❑ No radiological postings are present.

C-207 Facility Photos: 7/2021, 9/2021 & 10/2021

Environmental Impacts
(Solid Waste Management Units)



- The C-207 Fire Training Facility is not designated as a SWMU/AOC; and is not part of the SWMU 100 Fire Training Area located north of the C-207 facility which operated from 1982-1987.

SWMU No.	Facility Name	Current Status	NFA Approval By
100	Fire Training Area	CSOU/5-Year Reviews	
161	C-743-T-01 Trailer Site (Soil Backfill)	Soils and Slabs OU	
215	OS-04	Soils OU	
526	Internal Plant Drainage Ditches (includes KPDES 016)	SWOU	

Environmental Impacts

- No information to indicate a release or threatened release of a hazardous substance that would require a CERCLA evaluation for a potential response action for demolition of the aboveground structure to protect future public health or welfare or the environment.
  - C-207 has exclusively operated as a fire training facility since initial construction in 1993 to present.
  - Building materials used for construction do not contain lead-based paints or asbestos-containing materials.
  - Building debris generated from demolition of the aboveground structure can be properly managed using standard demolition and waste management practices.
- Process knowledge and employee interviews indicate that historical fire training exercises (conducted prior to the USEC transition in 2014) were conducted in the burn room and outside burn pans located at C-207.
  - The fuel used in the outside fire pans consisted of diesel fuel and gasoline obtained from the Site's fueling station and did not include potentially contaminated waste oils.
  - AFFF was historically used to extinguish the fires in the outside burn pans; AFFF was not used for fires located in the inside burn room.
  - The historical use of fuels and AFFF at C-207 may pose a potential threat of release to the slab, underlying soils, and surrounding soils associated with the burn pan area.

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 being stored (to the extent practicable) prior to demolition.
  - Any floor drains will be delineated, documented, and isolated prior to demolition.
- Pending ceasing of operation, deactivation, and availability of funding, proceeding with demolition and disposal of the C-207 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 and/or barriers 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)].

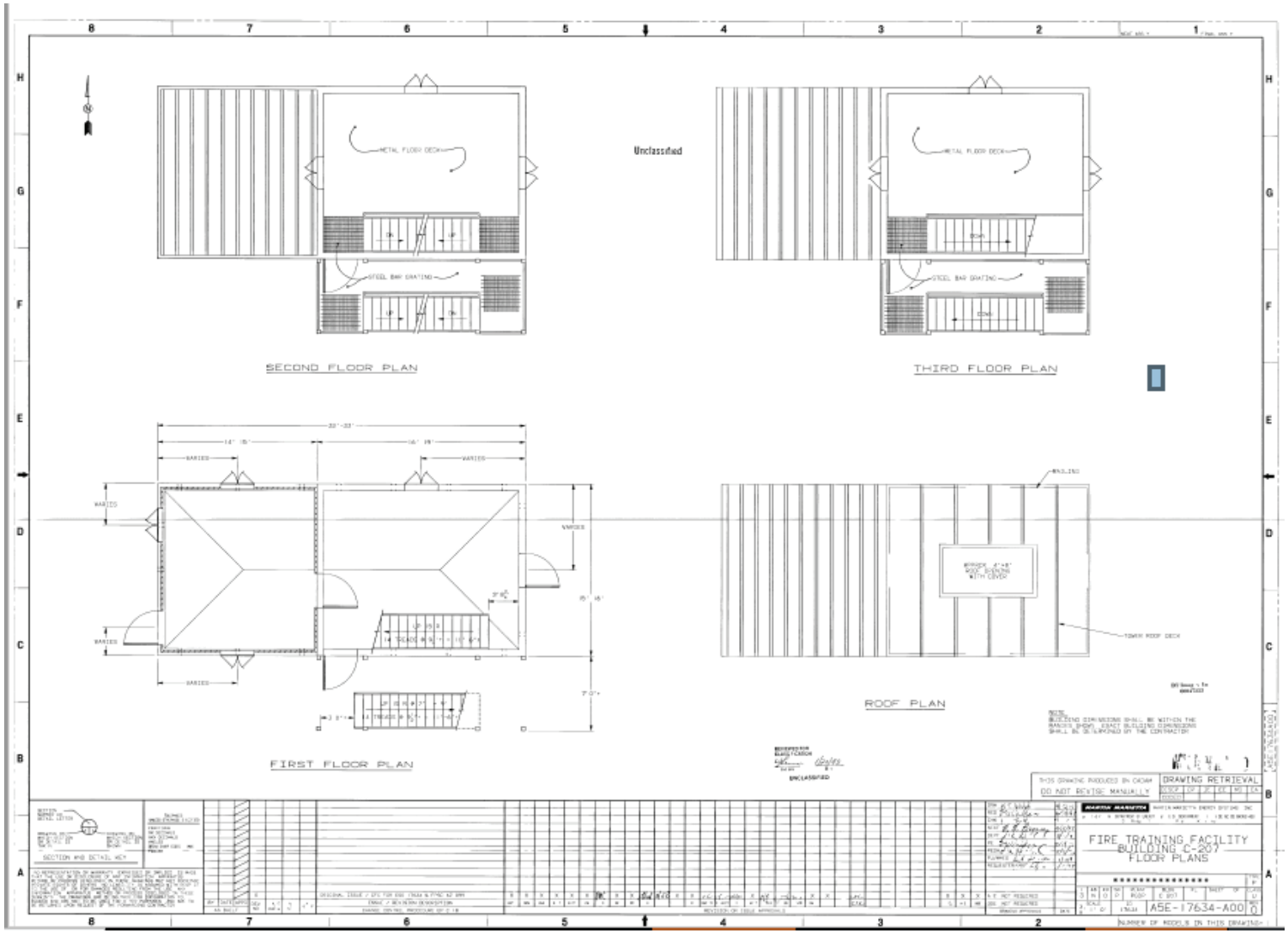
- Based on the historical use of both fuel and AFFF at C-207 during fire training exercises, it is recommended that the underlying slab and soils (including the surrounding soils associated with the burn pan area) undergo further CERCLA evaluation as part of a future integrated site evaluation conducted under Appendix 4 of the SMP.
  - Additional information regarding the historic location and condition of the burn pans will be presented in the site evaluation.
  - Consideration will be given to coordinate the timing of the future site evaluation to occur prior to removal of the aboveground structure. The development of a schedule for future site evaluations, including C-207, will be addressed as part of the fiscal year 2022 SMP scoping.

- Removal of the C-207 facility will be documented in the appropriate annual SMP revision.

C-207 Fire Training Facility

BACKUP INFORMATION

C-207 Engineering Drawings



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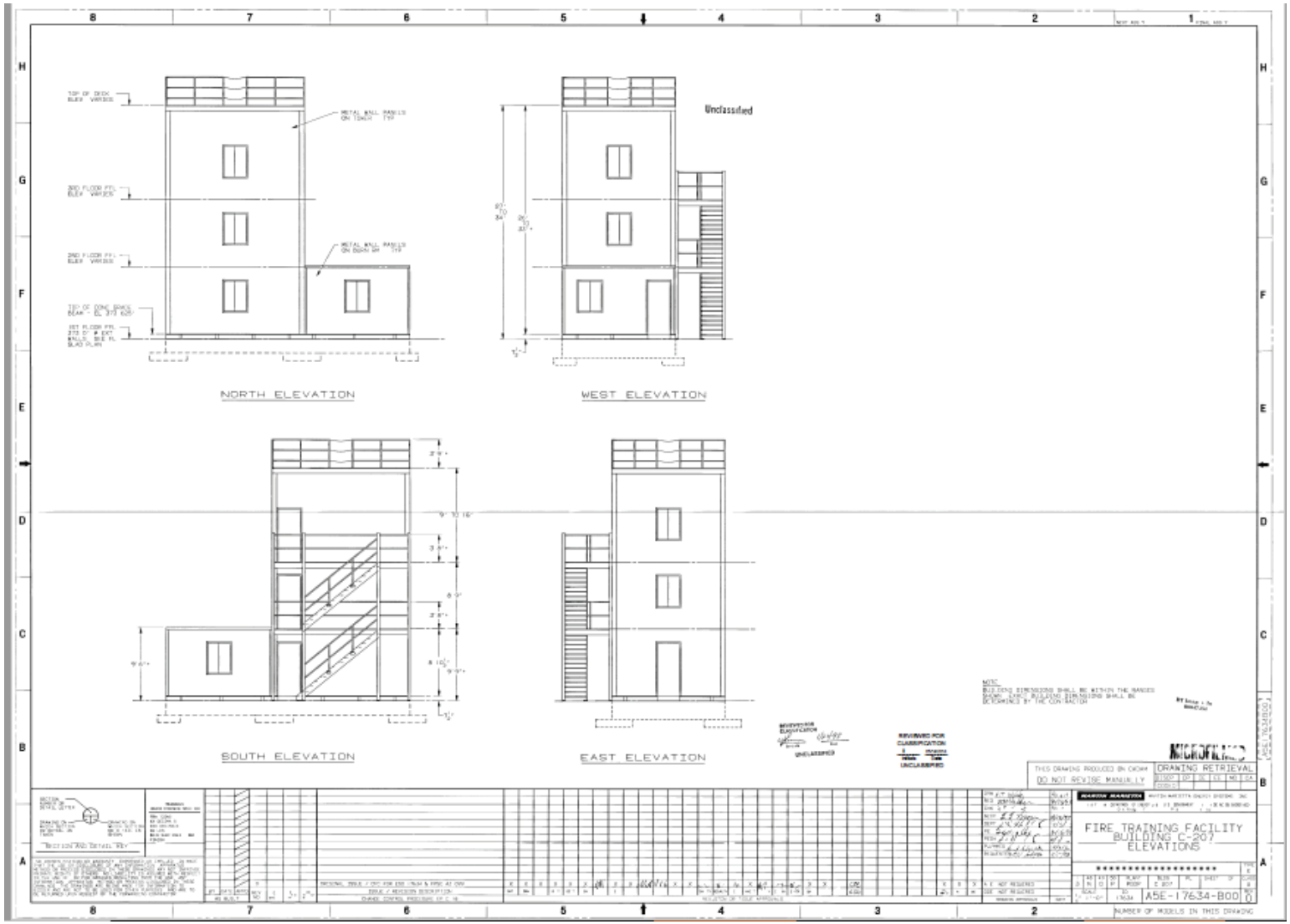
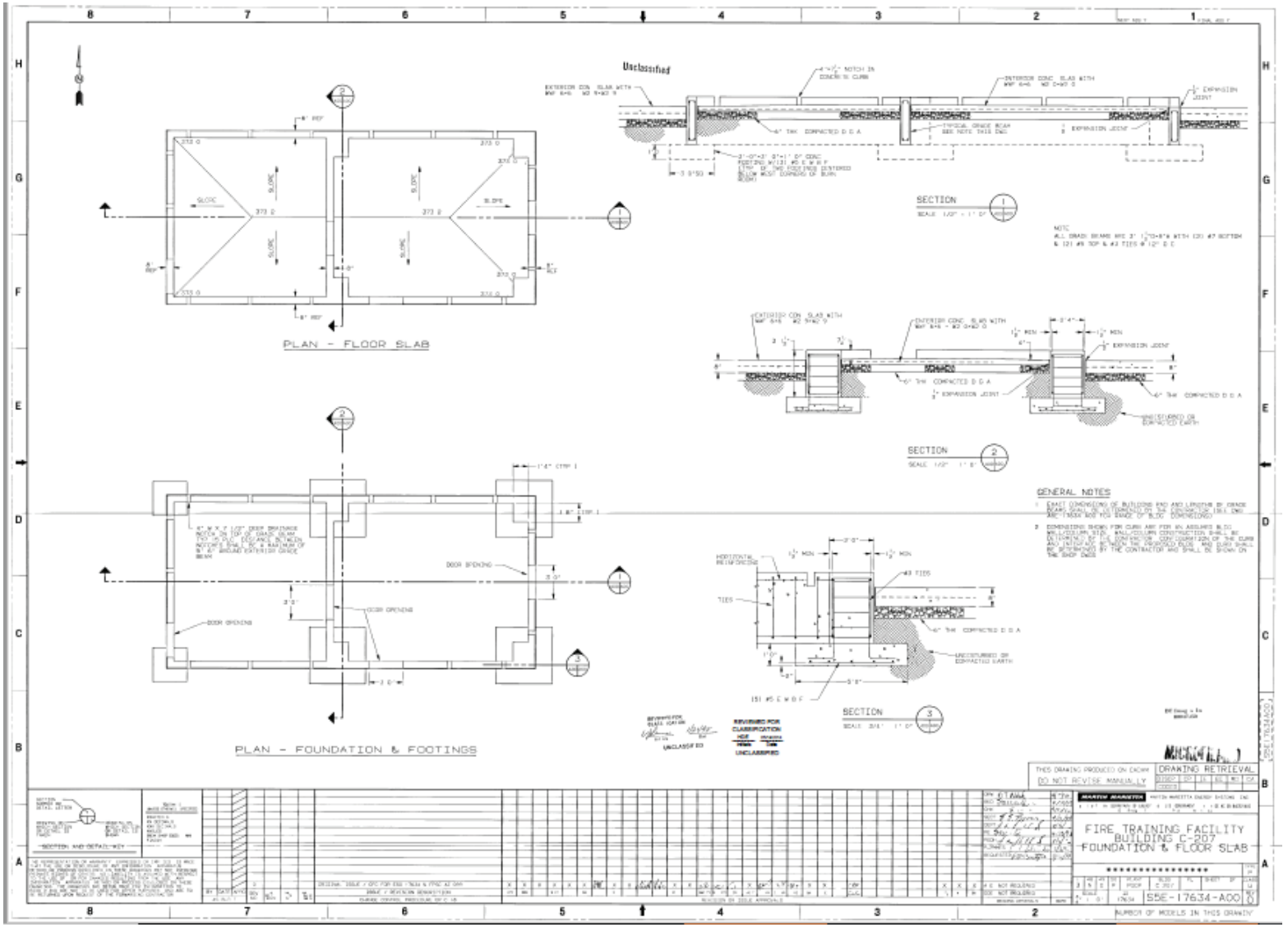
C-207 Engineering Drawing



C-207 Engineering Drawing



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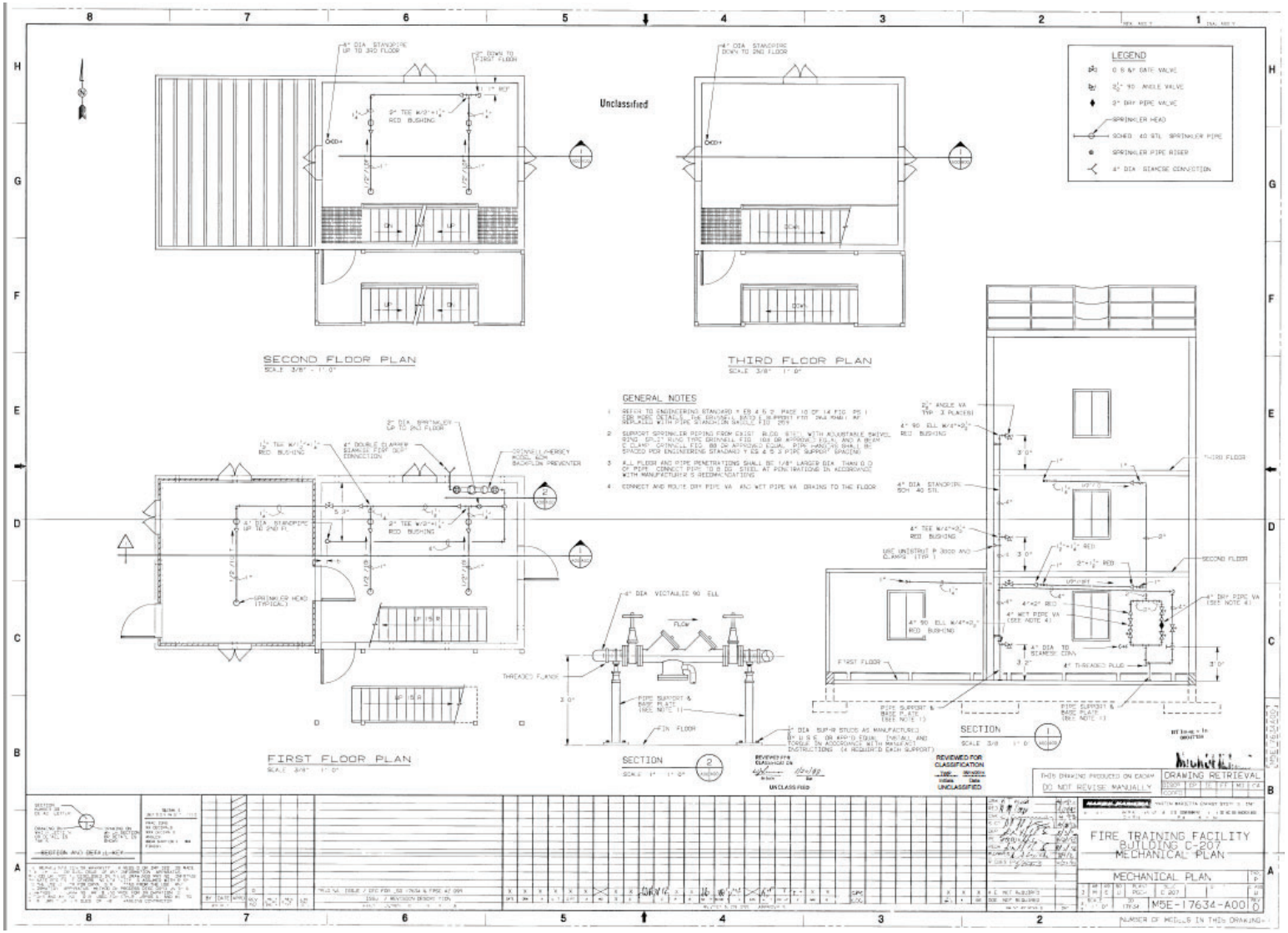
C-207 Engineering Drawing



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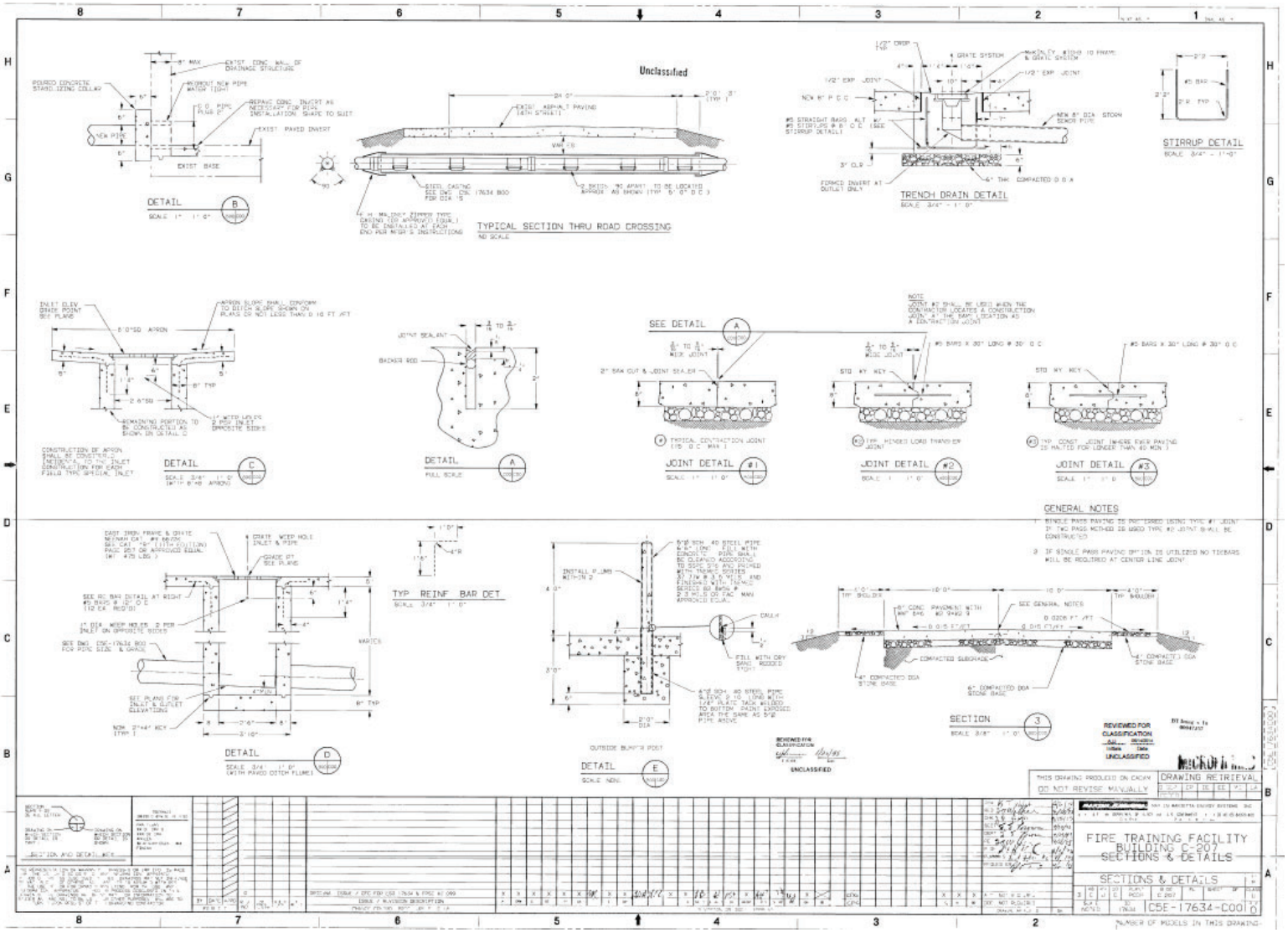
C-207 Engineering Drawing



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C-207 Sources

- Engineering Drawings:
  - Provided in presentation
- Databases:
  - Issues Management System
  - Regulatory Compliance Archive Spill Log (pre-2018)
  - PCB Database (1989 – 2021)
  - Active GSAs and SAAs Master List
- Employee Interviews:
  - Fire Captain/Facility Manager (30 years plant expertise)
  - Compliance Subject Matter Expert (45 years plant expertise)
  - Engineering Subject Matter Expert (16 years plant expertise)
  - Engineering Subject Matter Expert (33 years plant expertise)
- Documents:
  - Report for Environmental Audit Supporting Transition of the Gaseous Diffusion Plants to the United States Enrichment Corporation, DOE/OR/1087&V5, June 1993
  - Paducah Gaseous Diffusion Plant Sitewide Strategy Facility Background Information, FPDP-RPT-0021, May 2016