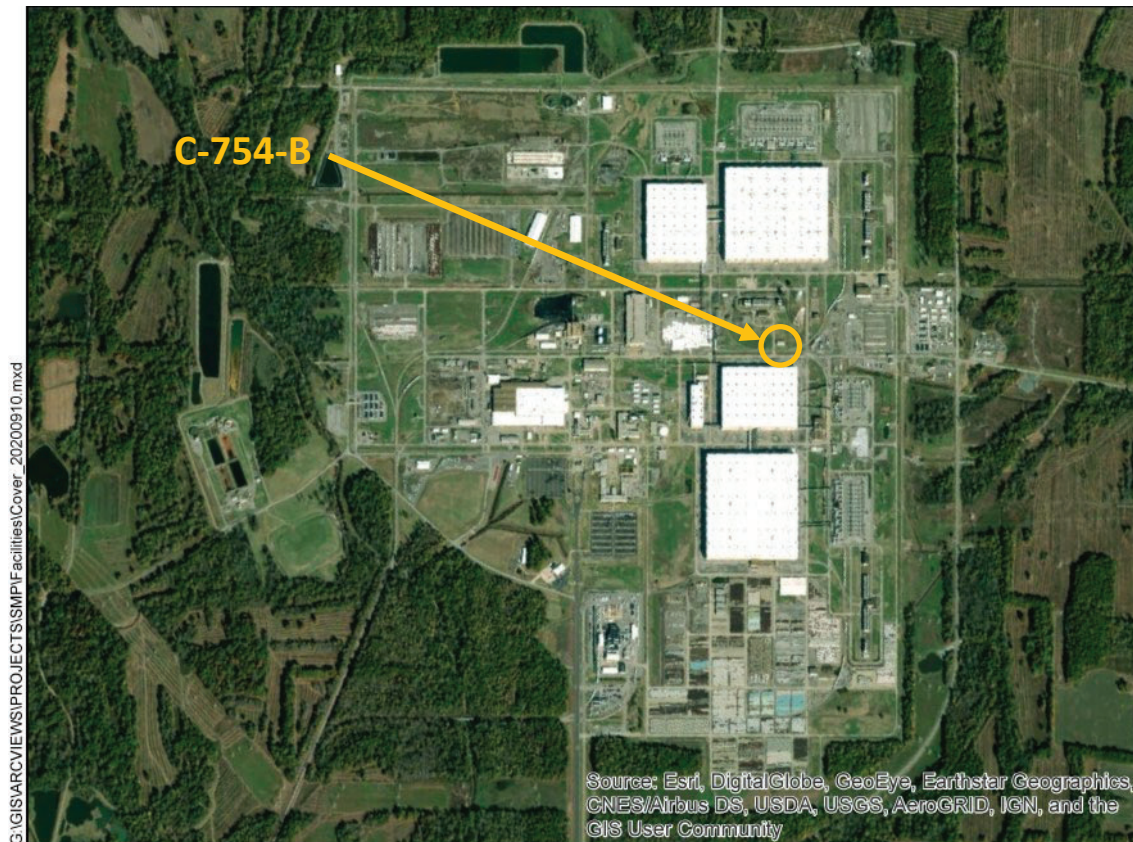


C-754-B Low Level Waste Storage



Facility Overview Briefing

November 9, 2021

Reflects consultation with EPA and Kentucky in accordance with the Site Management Plan that occurred on October 25, 2021.

Purpose

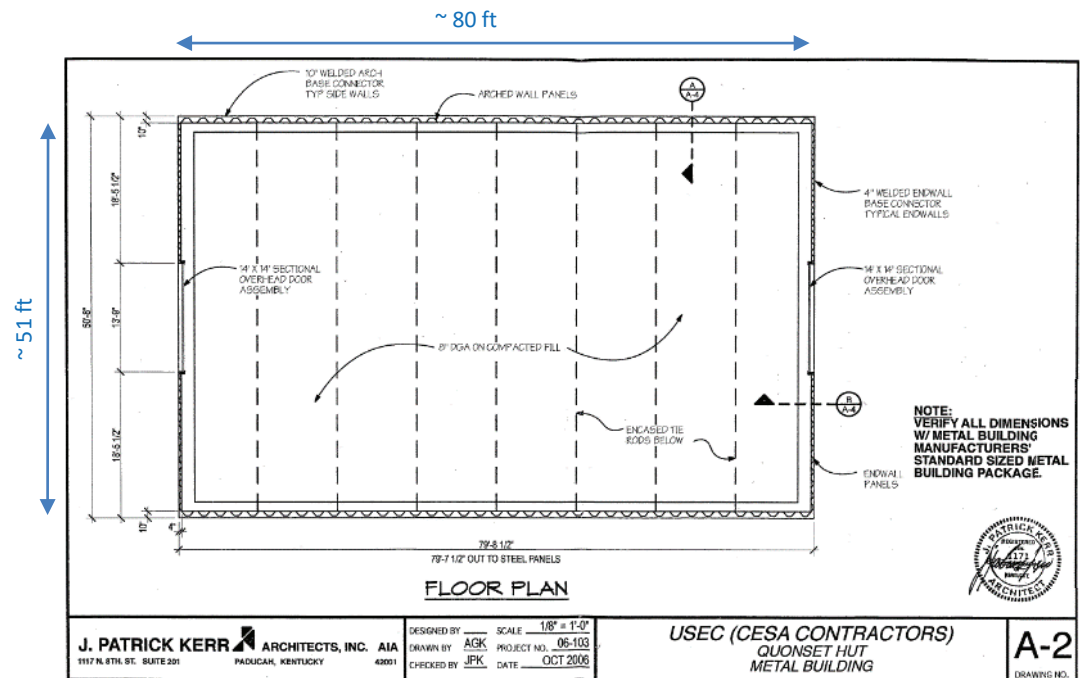
- The C-754-B Low Level Waste Storage is a candidate for future demolition and disposal, contingent upon funding priorities.
- Listed in Appendix 6 of the Site Management Plan (SMP); requires consultation with EPA and Kentucky for CERCLA screening prior to demolition.
- This presentation is intended 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) 16.



C-754-B Facility Photo: 7/2021

Construction History

- C-754-B is located within the Paducah Site security fence, north of the C-331 process building and east of C-410.
- The facility was constructed in 2006.
- The facility is a prefabricated metal building with an arch style roof.
 - ❑ The facility was built on a 8-inch dense-grade aggregate (DGA) base with concrete encased reinforcing bars spaced and running the width of the facility to a concrete grade beam.
 - ❑ The facility walls sit on the concrete grade beam.
 - ❑ The floor is gravel.
 - ❑ The facility has pedestrian doors on the east and west end and an overhead roll-up door on the west end.
- The facility is approximately 4,080 ft².
 - ❑ Measuring ~ 51 ft x ~ 80 ft.



Floor Plan View: Excerpt from Vendor Drawing: Quonset Hut A-2, J. Patrick Kerr Architects, Inc., dated 2006

Operational History

- C-754-B was constructed in 2006 to support waste operations activities and operated as a low level waste storage facility.
 - ❑ Used to process, store, and handle nuclear criticality safety (NCS)-exempt low level waste in containers that included drums, roll-off bins, ST90 boxes, etc.
 - ❑ Mainly used as an ancillary waste staging facility for processing of low level (NCS-exempt) radiological equipment (e.g., compactor bailer, forklift tow motors, etc.) for disposal.
 - ❑ Generator staging areas (GSAs) and satellite accumulation areas (SAAs) were established for staging waste prior to shipment.
 - ❑ Secondary containment was used when draining fluids from pieces of equipment targeted for disposal.
 - ❑ Not used for storage of liquids.
 - ❑ Use of the facility was limited since the facility was not heated and other waste storage facilities were available.
- C-754-B was emptied and GSAs/SAAs removed prior to transition from USEC to DOE in 2014.
- C-754-B remained empty and was not in use from 2014–2018.
- In 2018, C-754-B was converted to a training facility for the Protective Forces organization.
 - ❑ The facility was upgraded to include power, lighting, and a HVAC system.
 - ❑ Facility flooring was not upgraded to concrete; new gravel was added.
 - ❑ Interchangeable walls and doors and 55-gallon poly drums were purchased for use as mock-up areas/barriers for training purposes.
 - ❑ Lockers and cabinets were installed for the storage of training gear.



2014 Historical Photo
C-754-B Low Level Waste Storage Facility



Training Materials
(Including Empty
Poly Drums)



Power Controls



HVAC System

Current Status

- C-754-B remains operational, serving as a training facility for the Protective Forces organization.
- Walkdown inspection conducted in August 2021 and employee interviews confirmed no unusual conditions.
 - ❑ No sumps or pits are present.
 - ❑ No known chemical spills or releases have occurred within the facility.
 - Secondary containment was used when draining liquids from equipment targeted for disposal.
 - Minor historical leaks of hydraulic oil consistent with mobile equipment (e.g., forklifts) that were immediately addressed.
 - ❑ No visible signs of staining on the gravel floor; however, new gravel was added in 2018.
 - Ammunition (e.g., organic biodegradable bb's) used for airsoft weapons are allowed to discharge to the gravel floor.
 - ❑ No known asbestos-containing material (ACM) or lead-based paint used for construction.
 - ❑ No GSAs or SAAs are currently present; historical GSAs and SAAs were removed prior to transition of the facility from USEC to DOE in 2014.
 - ❑ Flammable cabinet stores compressed gas used for airsoft weapons that is stored in small quantities and in accordance with regulatory requirements and site procedures.
 - ❑ Lockers and cabinets used for storage of training PPE and associated equipment.
 - ❑ Interchangeable walls and doors and 55-gallon poly drums are used as mock-up areas/barriers for training purposes.



Locker



Flammable Cabinet and Storage Cabinets

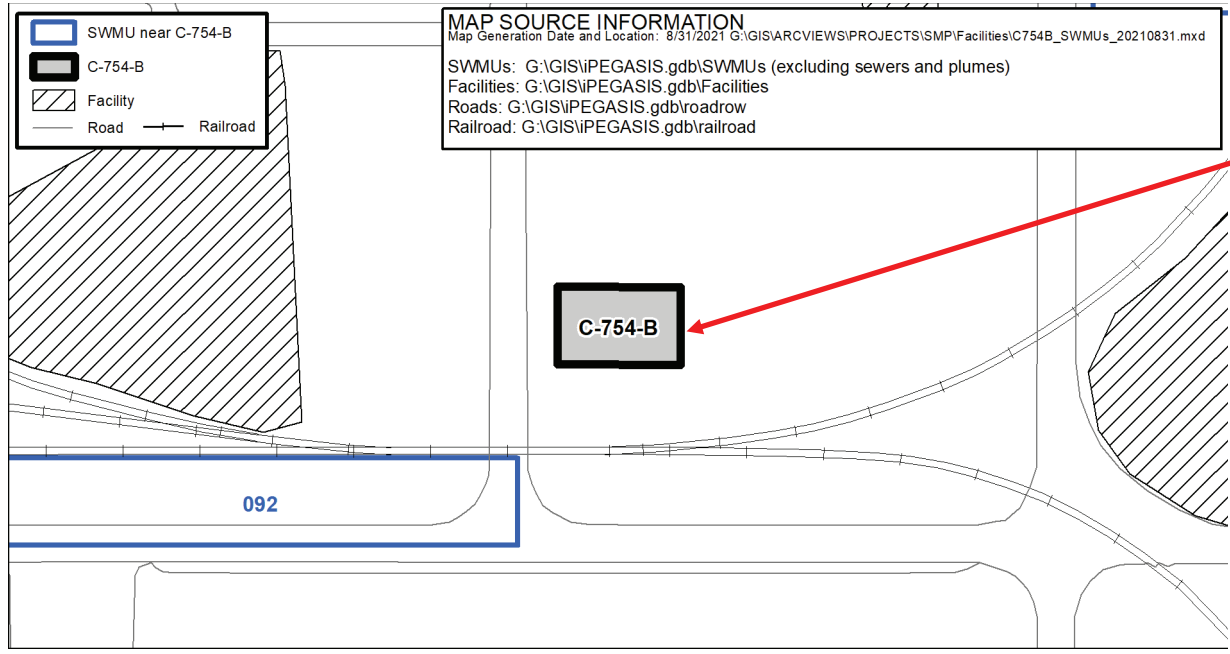


Example of Mock Training Area



Video Training Area

Environmental Impacts (Solid Waste Management Units)



- The C-754-B Low Level Waste Storage is not designated as a SWMU/AOC.

SWMU No.	Facility Name	Current Status
092	Fill Area for Dirt from the C-420 PCB Spill Site	SWOU

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-754-B operated to support waste operations activities as a low level waste storage facility from its construction in 2006 to 2014; C-754-B became inactive and was not used from 2014 – 2018; C-754-B was converted to a training facility and has been used by the Protective Forces organization for training purposes from 2018 to present.
 - ❑ Building materials used for construction do not contain lead-based paints or ACM; however, should their presence be verified during a predemolition inspection, they can be properly managed using standard demolition and waste management practices.
 - ❑ No history or records of chemical use or spills that would pose environmental release threat.
 - Secondary containment was used when draining liquids from equipment targeted for disposal.
 - Minor historical leaks of oil consistent with mobile equipment (e.g., forklifts) that were immediately addressed.
 - Ammunitions (e.g., bb's) used for airsoft weapons are made up of organic ingredients that are biodegradable.

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-754-B 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.

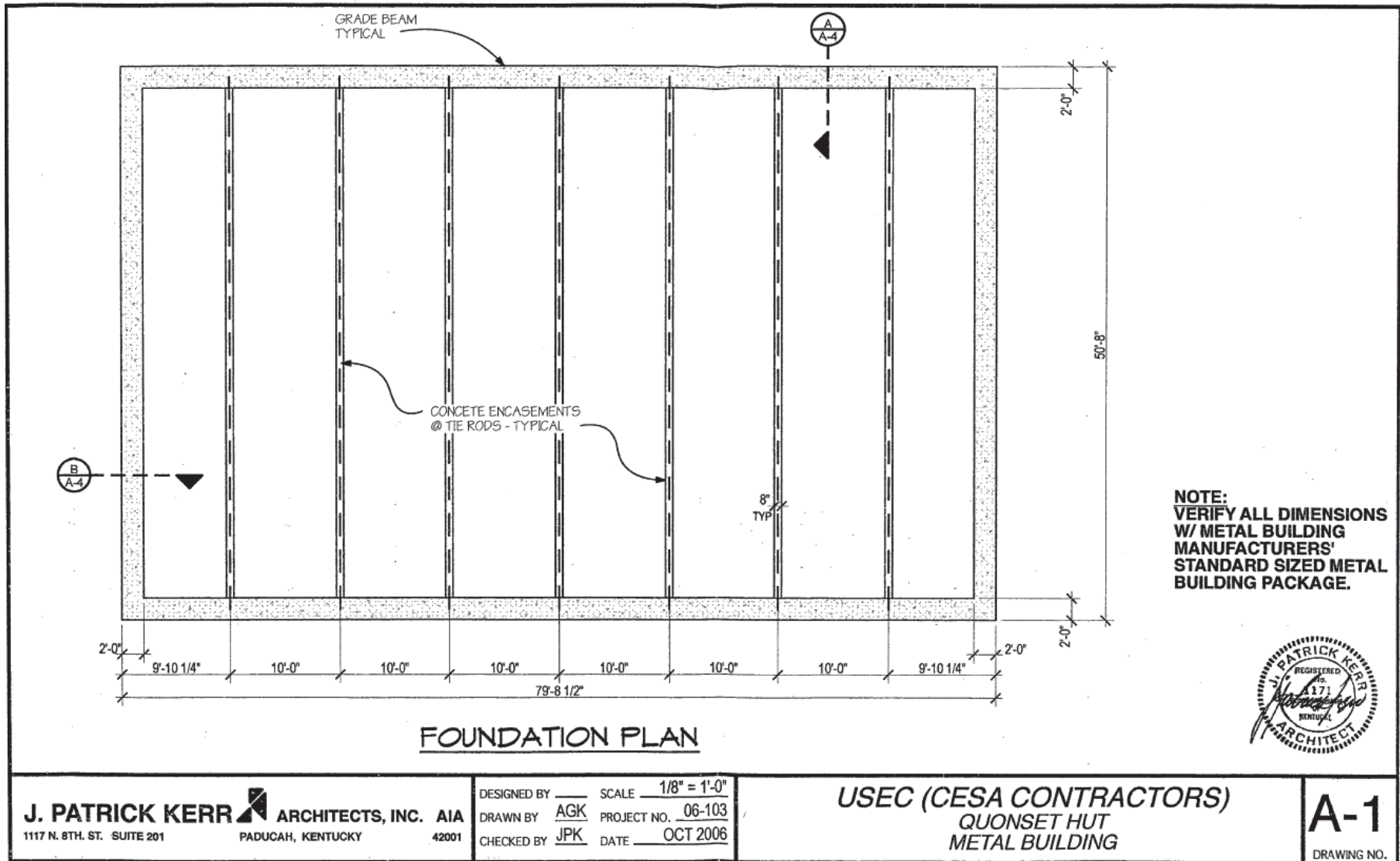
Conclusion and Recommendations

- 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)].
- Removal of the C-754-B facility will be documented in the appropriate annual SMP revision.
- The future evaluation conducted for GA 16 will further evaluate the potential threat of release associated with the slab/soils from the C-754-B facility.

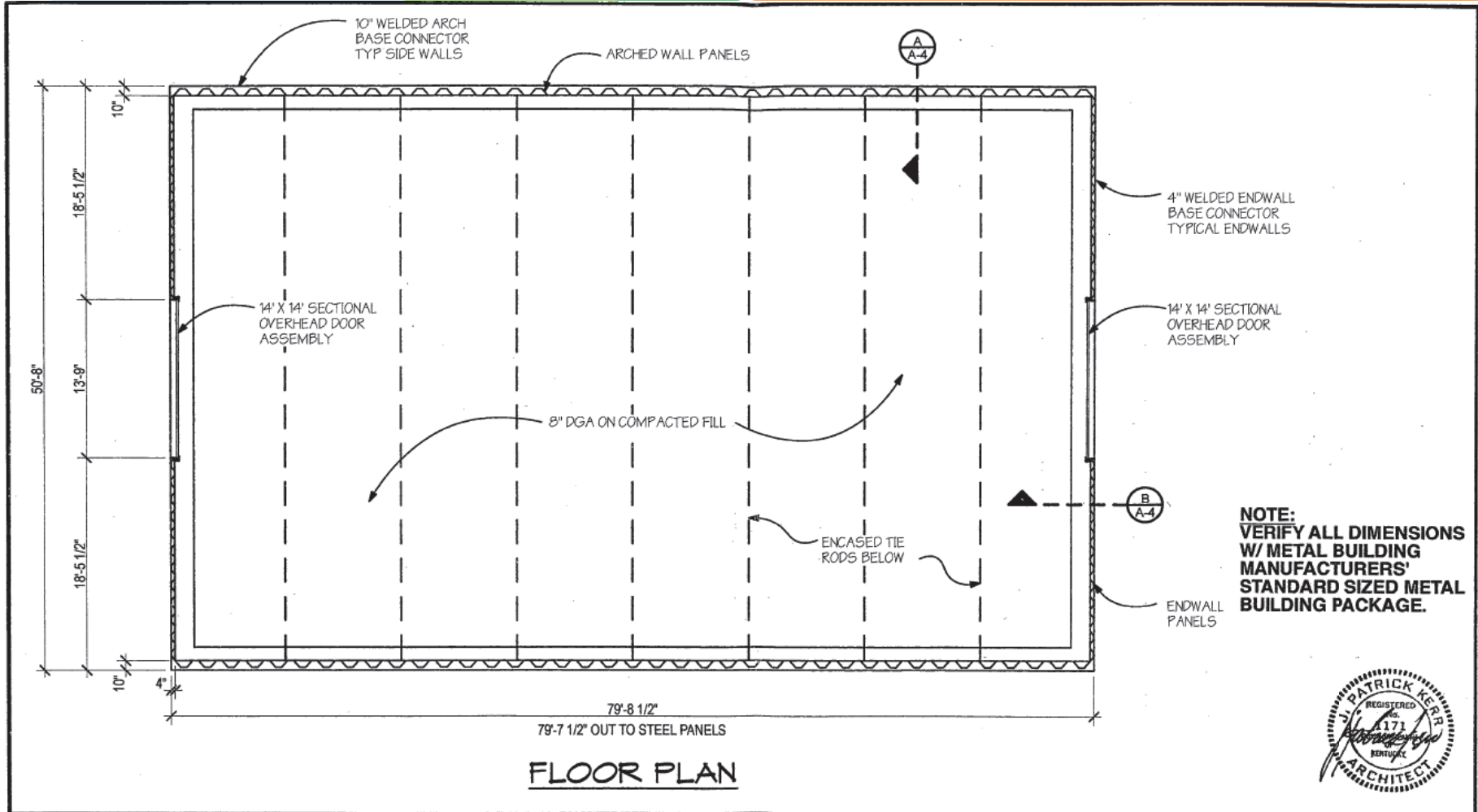
C-754-B Low Level Waste Storage

BACKUP INFORMATION

C-754-B Engineering Drawings

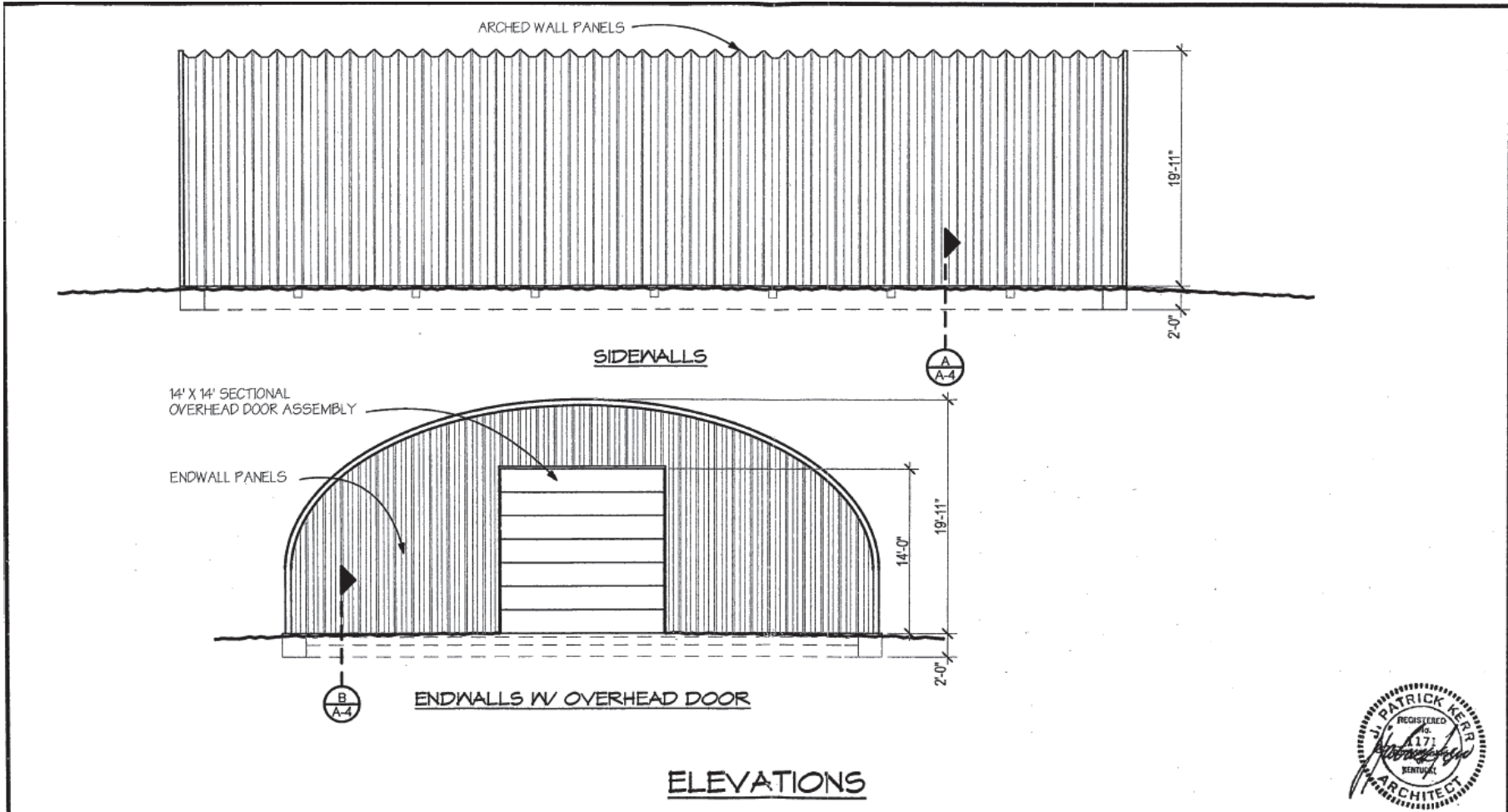


C-754-B Engineering Drawings



J. PATRICK KERR ARCHITECTS, INC. AIA 1117 N. 8TH. ST. SUITE 201 PADUCAH, KENTUCKY 42001	DESIGNED BY _____ SCALE $1/8" = 1'-0"$	USEC (CESA CONTRACTORS) QUONSET HUT METAL BUILDING	A-2 DRAWING NO.
	DRAWN BY <u>AGK</u> PROJECT NO. <u>06-103</u> CHECKED BY <u>JPK</u> DATE <u>OCT 2006</u>		

C-754-B Engineering Drawings



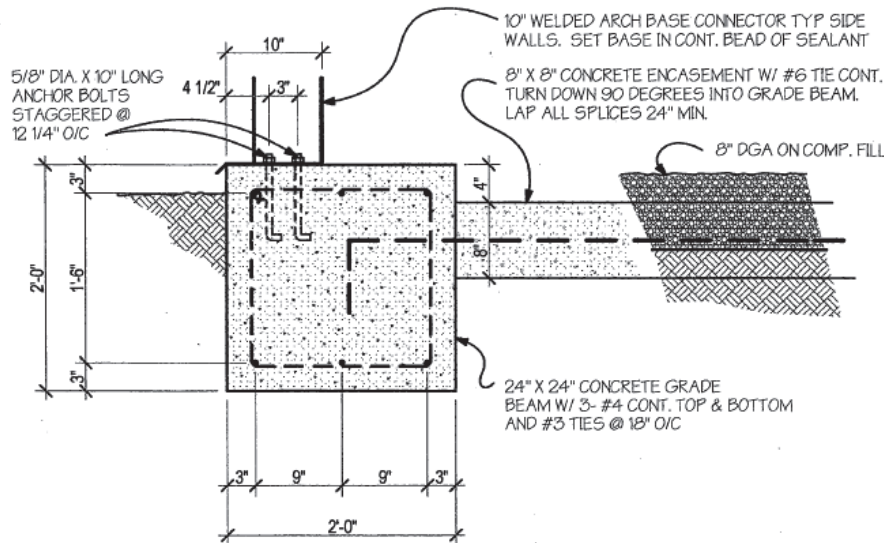
J. PATRICK KERR ARCHITECTS, INC. AIA
 1117 N. 8TH. ST. SUITE 201 PADUCAH, KENTUCKY 42001

DESIGNED BY _____ SCALE $1/8" = 1'-0"$
 DRAWN BY AGK PROJECT NO. 06-103
 CHECKED BY JPK DATE OCT 2006

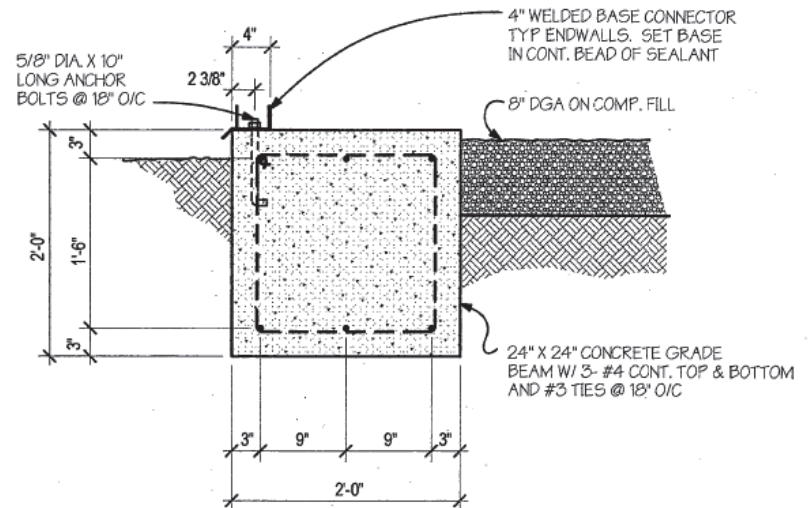
USEC (CESA CONTRACTORS)
 QUONSET HUT
 METAL BUILDING

A-3
 DRAWING NO.

C-754-B Engineering Drawings



A
A-4 FOUNDATION DETAIL (SIDEWALL)



B
A-4 FOUNDATION DETAIL (ENDWALL)

NOTE:
VERIFY ALL DIMENSIONS
W/ METAL BUILDING
MANUFACTURERS'
STANDARD SIZED METAL
BUILDING PACKAGE.



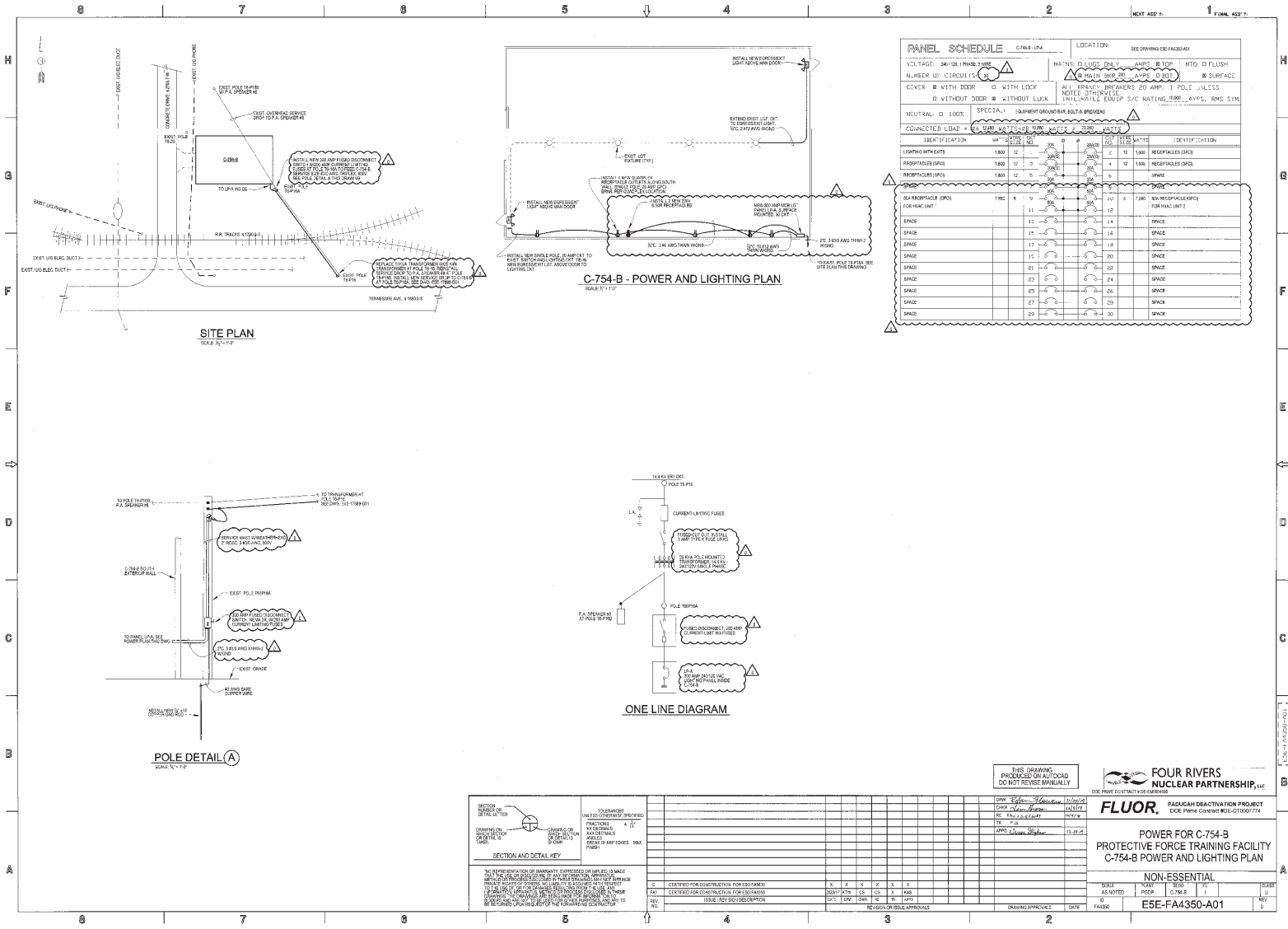
J. PATRICK KERR ARCHITECTS, INC. AIA
1117 N. 8TH. ST. SUITE 201 PADUCAH, KENTUCKY 42001

DESIGNED BY _____ SCALE 1" = 1'-0"
DRAWN BY AGK PROJECT NO. 06-103
CHECKED BY JPK DATE OCT 2006

USEC (CESA CONTRACTORS)
QUONSET HUT
METAL BUILDING

A-4
DRAWING NO.

C-754-B Engineering Drawings



E5E-FA4350-A01 R0 Power & Lighting Plan

C-754-B 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 (4 years expertise)
 - Waste Management Subject Matter Experts (31 years plant expertise; 32 years plant expertise)
 - Waste Management/Compliance Subject Matter Expert (27 years plant expertise)
 - Compliance Subject Matter Expert (45 years plant expertise)
- Documents:
 - Paducah Gaseous Diffusion Plant Sitewide Strategy Facility Background Information, FPDP-RPT-0021, May 2016
 - Fluor Federal Services, Inc., Paducah Deactivation Project Comprehensive Environmental Compliance Due Diligence Review, CP5-ES-0101
 - Safety Analysis Report, United States Enrichment Corporation, SAR-PGDP, Revision 8, April 15, 1997