THE FINAL DEMISE OF EAST TENNESSEE TECHNOLOGY PARK BUILDING K–33

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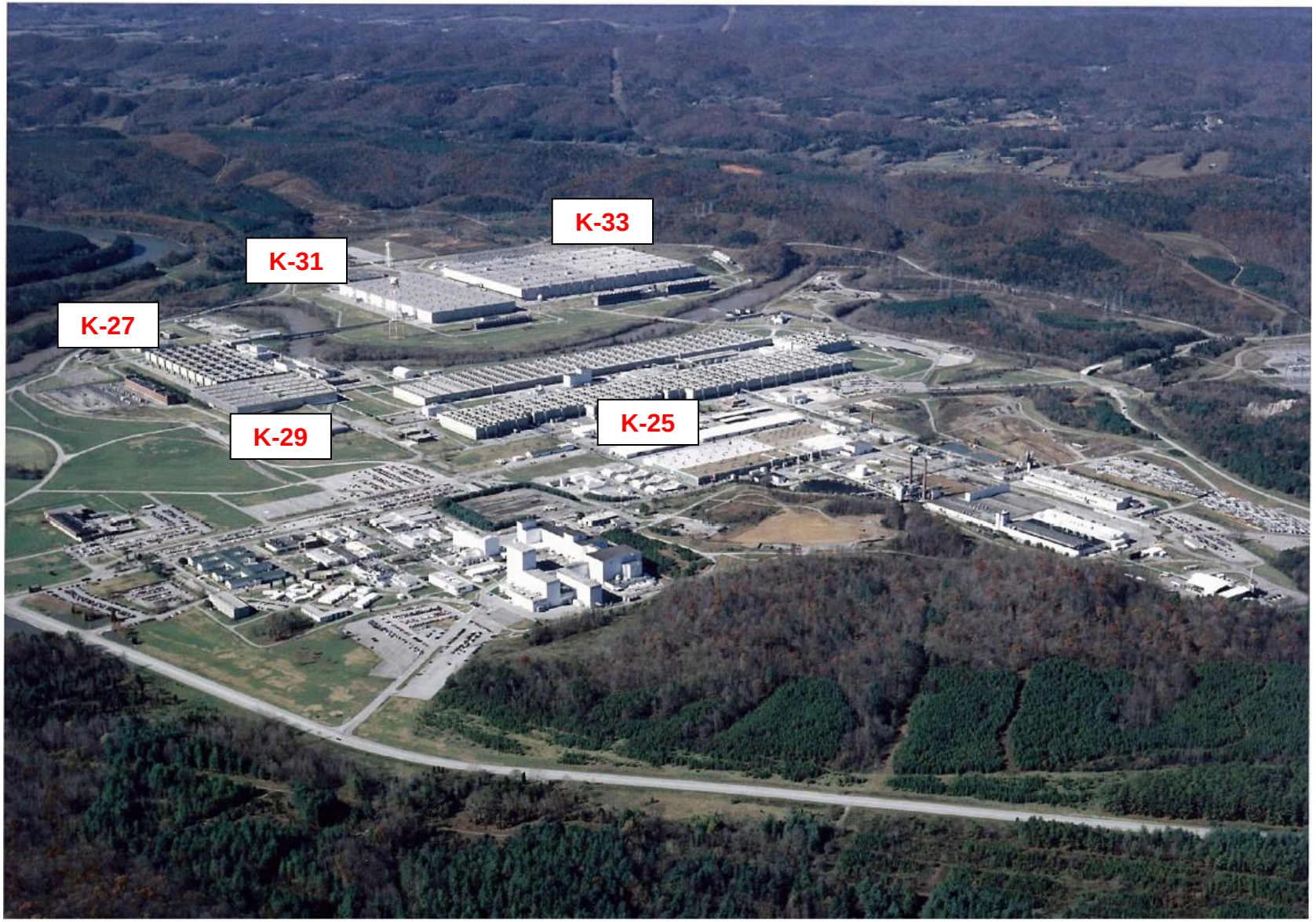
Acknowledgement

- Pictures of demolition operations and volume estimates provided by LATA Sharp.

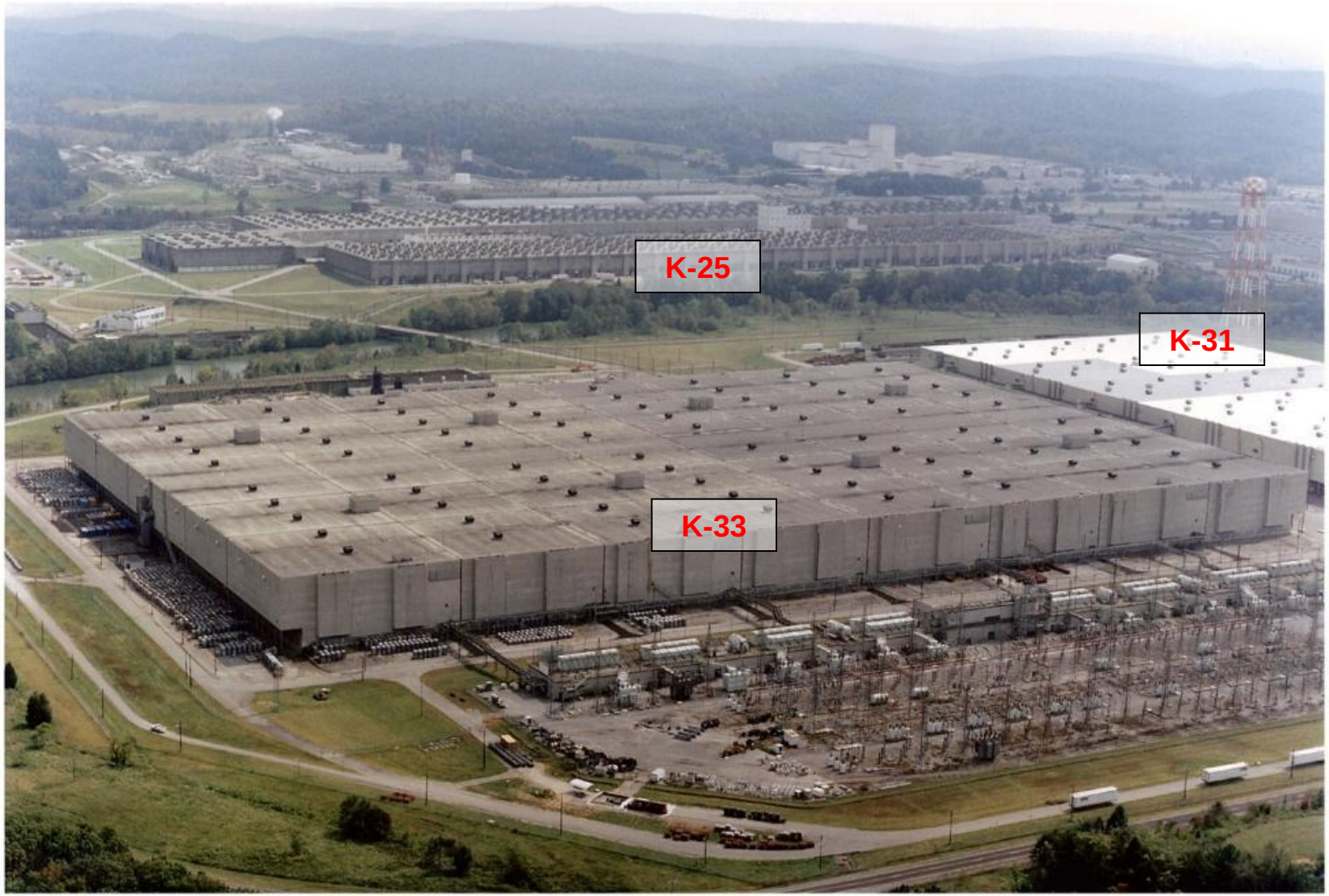
K–33 Operational Background

- Building K-33 was constructed in 1954 as the final section of the five-stage uranium enrichment cascade at the Oak Ridge Gaseous Diffusion Plant (ORGDP).
- The two original building (K-25 and K-27) were used to produce weapons grade highly enriched uranium (HEU).
- Building K-29, K-31, and K-33 were added to produce low enriched uranium (LEU) for nuclear power plant fuel.
- During ORGDP operations K-33 produced a peak enrichment of 2.5%.
- Thousands of tons of reactor tails fed into gaseous diffusion plants in the 1950s and early 1960s introducing some fission products and transuranics.


K-33
K-31
K-27
K-29
K-25

K–33 Description

- Building K-33 was a two-story, 25-meters (82-feet) tall structure with approximately 30 hectare (64 acres) of floor space.
- The Operations (first) Floor contained offices, change houses, feed vaporization rooms, and auxiliary equipment to support enrichment operations.
- The Cell (second) Floor contained the enrichment process equipment and was divided into eight process units (designated K-902-1 through K-902-8). Each unit contained ten cells, and each cell contained eight process stages (diffusers) for a total of 640 enrichment stages.


K-25
K-31
K-33

K–33 Post–Operational

1985: LEU buildings were taken off-line after the anticipated demand for uranium enrichment failed to materialize.

1987: LEU buildings were placed in permanent shutdown. Process equipment were maintained in a shutdown state.

1997: DOE signed an Action Memorandum for equipment removal and decontamination of Buildings K-29, K-31, K-33; BNFL awarded contract to reindustrialize the buildings under the Three Buildings D&D and Recycle Project.

2002: Equipment removal complete and effort shifts to vacuuming, chemical cleaning, scabbling, etc.

The Oak Ridge ADVANTAGE

BUILDING K-33

Heritage Center
East Tennessee Technology Park
Oak Ridge, Tennessee

K-33

LARGE-SCALE MANUFACTURING COMPLEX

IMMENSE OPPORTUNITY TO LEASE ONE OF THE LARGEST INDUSTRIAL BUILDINGS IN NORTH AMERICA

FEATURES

Utilities provided by East Tennessee Technology Park

- *Fully deeded right of ways*
- *13,800 volt 3-phase electric service provided by the City of Oak Ridge*
- *480 volt, 3-phase electric service*
- *Water*
- *Sanitary sewer*

Conveniences

K–33 Post–Operational (cont.)

2005: Decontamination efforts in K-33 cease. Building left with significant ^{99}Tc contamination on metal structures and PCB contamination in concrete. Uranium, transuranics, and fission products also present on building shell.

2009: DOE targets Building K-33 for demolition.

2010: ORAU contracted to characterize Building K-33 for final disposition at the Environmental Management Waste Management Facility (EMWMF) in Oak Ridge. ORAU collected 439 samples from May and June.

LATA Sharp started removing transite panels in September.

2011: LATA Sharp began demolition in January and expects the last waste shipment to EMWMF in September.

Conclusion

- Approximately 237,000 m^3 (310,000 yd^3, bulked) of waste taken to EMWMF in 23,000 truckloads expected by project completion.

QUESTIONS?