

PORTSMOUTH GASEOUS DIFFUSION PLANT, X-612 ELEVATED
WATER TANK
3930 U.S. Route 23 South
Piketon vicinity
Pike County
Ohio

HAER OH-142-S
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WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240

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PORTSMOUTH GASEOUS DIFFUSION PLANT, X-612 ELEVATED WATER TANK

HAER No. OH-142-S

- Location: Portsmouth Gaseous Diffusion Plant (PORTS), 3930 U.S. Route 23 South, Piketon vicinity, Scioto Township, Pike County, Ohio
- The X-612 Elevated Water Tank is located at Ohio State Plane South coordinates at easting 1824529.506314 ft, northing 371777.231478027 ft and at Universal Transverse Mercator Zone 17N, easting 326273.9633 m, northing 4320873.078 m. The coordinate represents the approximate center of the X-612 Elevated Water Tank. This coordinate was obtained on June 19, 2019 by plotting its location in EnviroInsite 10.0.0.37. The accuracy of the coordinates is +/- 12 meters. The coordinate datum is North American Datum 1983.
- Date of Construction: 1953
- Designer/Builder: Peter Kiewit Sons' Construction Company
- Previous Owner: N/A
- Present Owner: The Atomic Energy Commission oversaw construction and operation of PORTS until 1974, when the Energy Research and Development Administration (was established with responsibility for research and development duties from 1974-1977. In 1977, the U.S. Department of Energy was established, overseeing operations at PORTS.
- Present Use: Water storage
- Significance: The X-612 Elevated Water Tank is a sanitary water storage and head tank that provides a source of water for the Sanitary Fire Water system which services the plant for all except the process buildings and the X-343 building. The X-612 Elevated Water Tank stands at 170' above a below ground concrete foundation and has a capacity of 250,000 gallons. Due to its height above the surrounding terrain, the X-612 Water Tank is visible for miles around PORTS and has been a visual landmark of the presence of PORTS and its historic mission. This structure is part of PORTS, which was a part of the U.S. Cold War nuclear weapons complex. PORTS' primary Cold War era mission was the production of highly enriched uranium by the gaseous diffusion process for defense/military purposes.
- Project Information: Fluor-BWXT Portsmouth LLC photographed the site in August 2014. Gray & Pape, Inc., Cincinnati, Ohio, served as the primary author of the historical narrative and resource descriptions drawing from numerous historical records and reports, drawings, photographs and plans. For additional contextual information, see Portsmouth Gaseous Diffusion Plant, HAER no. OH-142. This X-612 Elevated Water Tank HAER was completed in 2021.

Part I. Historical Information

Construction History of the X-612 Elevated Water Tank:

Peter Kiewit Sons' Company subcontracted Chicago Bridge and Iron Company of Chicago, Illinois for construction of the X-612 Elevated Water Tank. Peter Kiewit Sons' Construction Company coordinated work at the site. Excavation was undertaken in August and September 1953, with approximately 420 total cubic yards excavated. Foundation work required approximately 175 cubic yards of concrete placed between September and November 1953. The tower and tank used approximately 157 tons of structural steel and were erected from August to October 1953. The final stage of construction involved painting the structure, which occurred between October and November 1953. The X-612 Elevated Water Tank provides high pressure water for the sprinkler systems in the process buildings and the cooling towers.

Part II. Site Information

Description of the X-612 Elevated Water Tank:

The X-612 Elevated Water Tank is located in the north-western section of PORTS, just west of the northern end of the X-330 Process Building. The water tank consists of a cylindrical tank with a domed top and bottom supported 170' above the foundations by six round legs (Appendix A, Figure 2). A central column connects the main tank with the valve pit at the base of the tower. The tank holds approximately 250,000 gallons of water supplied from the sanitary water system. The X-612 Elevated Water Tank is painted alternating bands of red and white.

Part III. Sources of Information

Department of Energy. *The Role of the Portsmouth Gaseous Diffusion Plant in Cold War History*. Piketon, OH: U.S. Department of Energy, 2017.

Department of Energy. *Remedial Investigation and Feasibility Report for the Process Buildings and Complex Facilities Decontamination and Decommissioning Evaluation Project at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio*, DOE/PPPO/03-0245&D3. Piketon, OH: U.S. Department of Energy, 2014.

Department of Energy. *Engineering Evaluation/Cost Analysis for the Plant Support Buildings and Structures at the Portsmouth Gaseous Diffusion Plant, Piketon, Ohio*, DOE/PPPO/03-0207&D4. Piketon, OH: U.S. Department of Energy, October 2011.

Department of Energy. *National Historic Preservation Act Section 110 Survey of Architectural Properties at the Portsmouth Gaseous Diffusion Plant in Scioto and Seal Townships, Piketon, Ohio*, DOE/PPPO/03-0147&D1. Piketon, OH: U.S. Department of Energy, January 2011.

Giffels & Vallet, Inc. *Gaseous Diffusion Plant at Portsmouth, Ohio, Project History and Completion Report* (Redacted). Washington, D.C.: U.S. Atomic Energy Commission, 1957.

Appendix A: Survey Photographs



Figure 1: Location and Orientation of Exterior Photograph (Figure 2), Cylinders in Foreground



Figure 2: Northeast Side of the X-612 Elevated Water Tank, Facing Southwest
(ca. 1980s)