

PORTSMOUTH GASEOUS DIFFUSION PLANT, X-230J2 SOUTH
ENVIRONMENTAL SAMPLE STATION
3930 U.S. Route 23 South
Piketon vicinity
Pike County
Ohio

HAER OH-142-M
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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

HISTORIC AMERICAN ENGINEERING RECORD

PORTSMOUTH GASEOUS DIFFUSION PLANT, X-230J2 SOUTH ENVIRONMENTAL SAMPLE STATION

HAER No. OH-142-M

- Location: Portsmouth Gaseous Diffusion Plant (PORTS), 3930 U.S. Route 23 South, Piketon vicinity, Scioto Township, Pike County, Ohio
- The X-230J2 South Environmental Sample Station is located at Ohio State Plane South coordinates at easting 1826764.312376 ft, northing 364845.952173479 ft and at Universal Transverse Mercator Zone 17N easting 326920.3189 m, northing 4318749.48 m. The coordinate represents the approximate center of the X-230J2 South Environmental Sample Station. This coordinate was obtained on June 20, 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: 1968
- Designer/Builder: Goodyear Atomic Corporation
- 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 (DOE) was established, overseeing operations at PORTS.
- Present Use: Environmental sampling
- Significance: The X-230J2 South Environmental Sample Station houses instrumentation for use in the monitoring of the X-230K South Holding Pond effluent for environmental compliance, which requires regular monitoring and sampling of water and air at PORTS. DOE installed the station in 1968 to monitor for compliance with air and water quality standards set forth in new environmental regulations, such as the 1963 Clean Air Act, the 1965 National Emissions Standards Act, and the 1965 Water Quality Act. PORTS 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,

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HAER no. OH-142. This X-230J2 South Environmental Sample Station HAER was completed in 2021.

Part I. Historical Information

In support of this report, there are two appendices: Appendix A and Appendix B, consisting of survey photographs and historical drawings, respectively.

Construction History of the X-230J2 South Environmental Sample Station:

The X-230J2 South Environmental Sample Station was built in 1968, after the initial phase of construction at PORTS. DOE installed the station in order to monitor for compliance with air and water quality standards set forth in new environmental regulations, such as the 1963 Clean Air Act, the 1965 National Emissions Standards Act, and the 1965 Water Quality Act.

The interior of the small building features equipment and instrumentation used to monitor the X-230K South Holding Pond effluent for environmental compliance. The air monitoring and water composite sampling equipment were originally installed in the X-230J2 Environmental Sample Station but were removed in the early 1980s. The station remained empty until the current pH meter and flow monitoring equipment were installed in the early 1990s. Historical drawings of building plans are included in Appendix B (Figures 4 and 5).

Part II. Site Information

Description of the X-230J2 South Environmental Sample Station:

The X-230J2 South Environmental Sample Station is located in the southeast section of PORTS, just south of the X-230K South Holding Pond and east of the X-617 South Holding Pond pH Control Facility. The X-230J2 Station features a poured concrete slab foundation, concrete block bearing walls, no window openings, and a front-gabled wood-frame roof covered with asphalt shingles (Figures 2 and 3). The building's gable ends are clad in vertical wood siding and feature central louvered vents. The main entry consists of a solid door offset on the east façade. The building has a total of approximately 100 square feet of floor space.

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. *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.

Appendix A: Survey Photographs

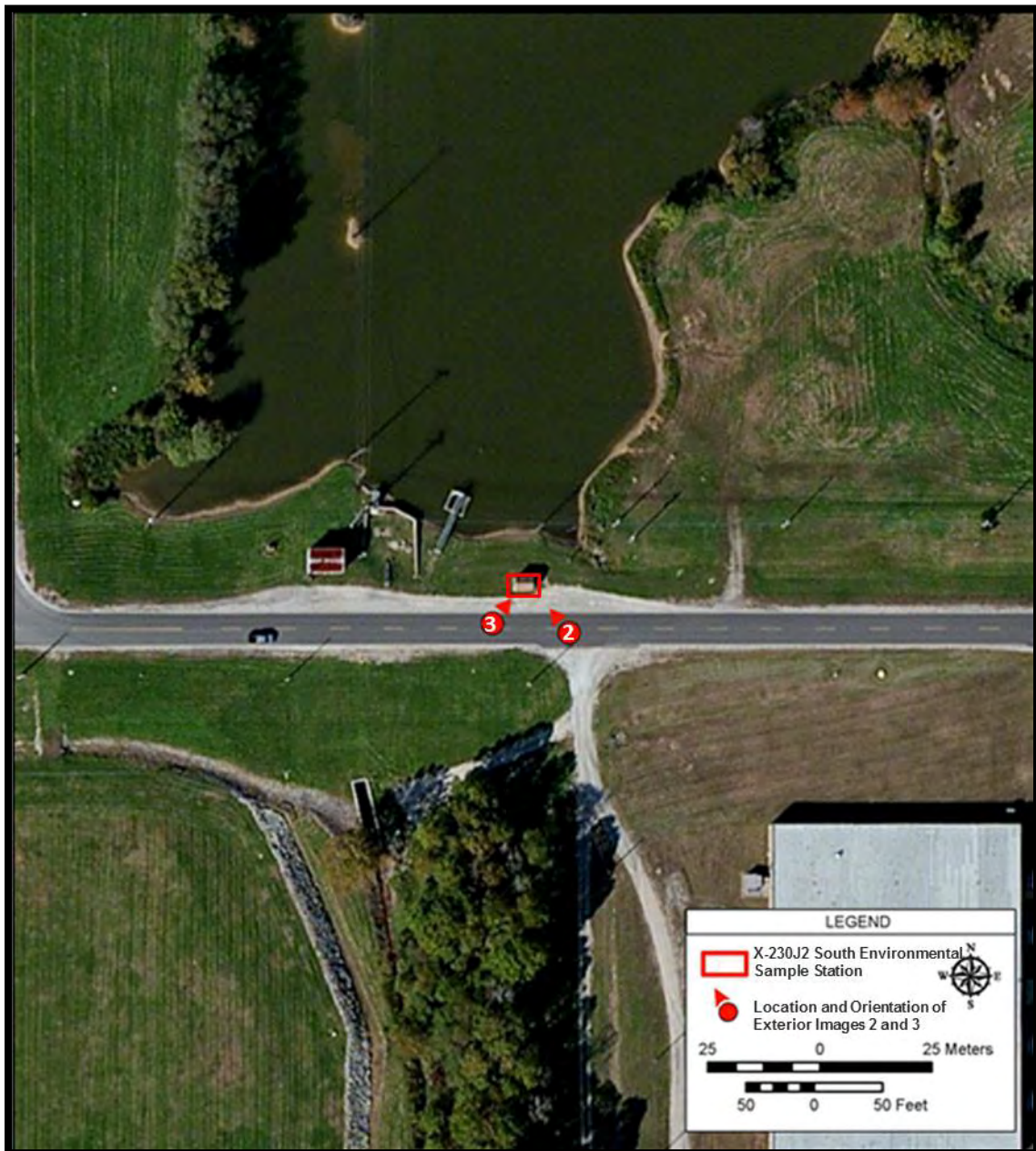


Figure 1: Location and Orientation of Exterior Photographs (A-2 and A-3)



Figure 2: South Side of the X-230J2 South Environmental Sample Station, August 2014, Facing Northwest



Figure 3: South Side of the X-230J2 South Environmental Sample Station, August 2014, Facing Northeast

Appendix B: Historical Drawings

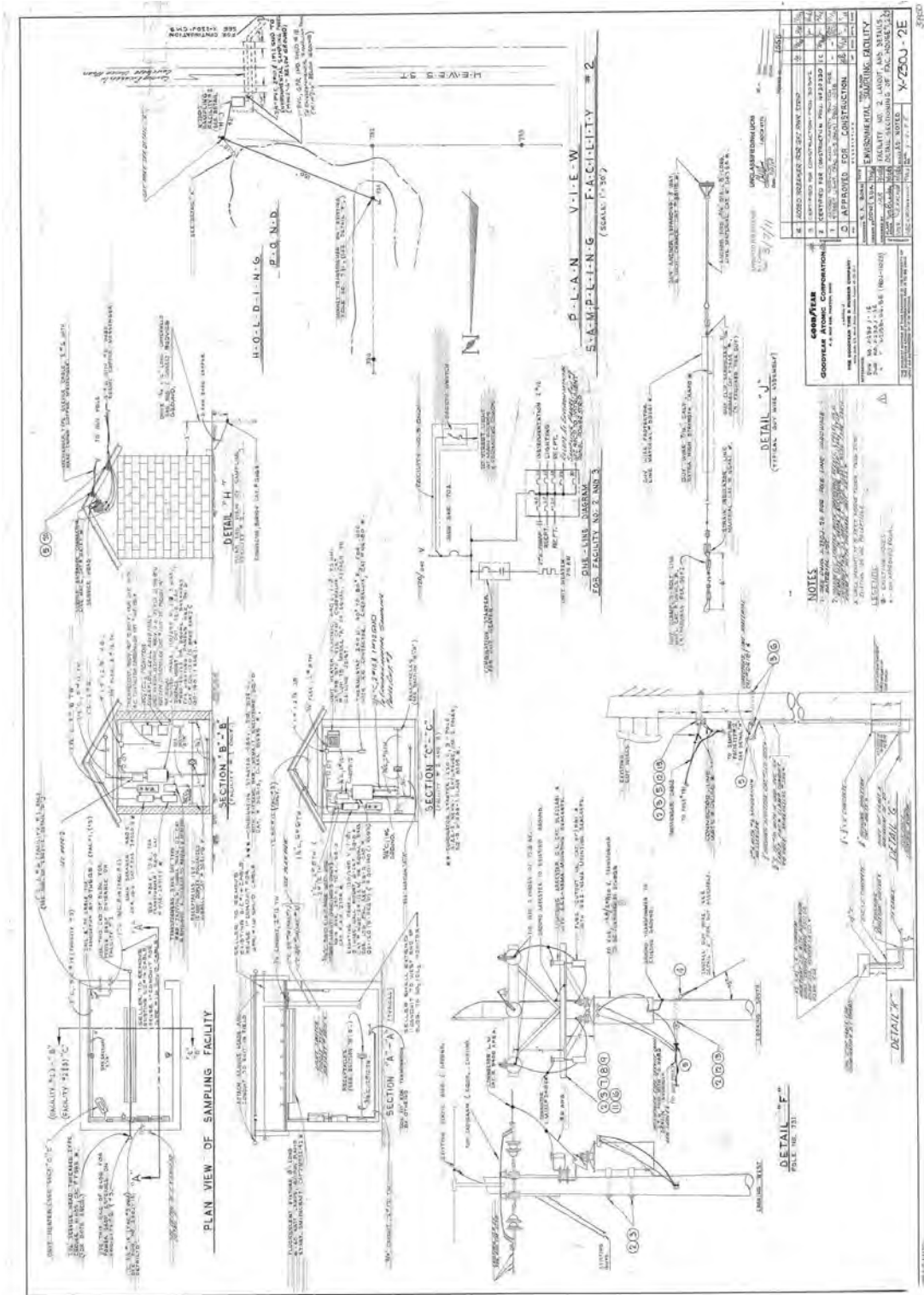


Figure 4: Facility No. 2 Layout and Details

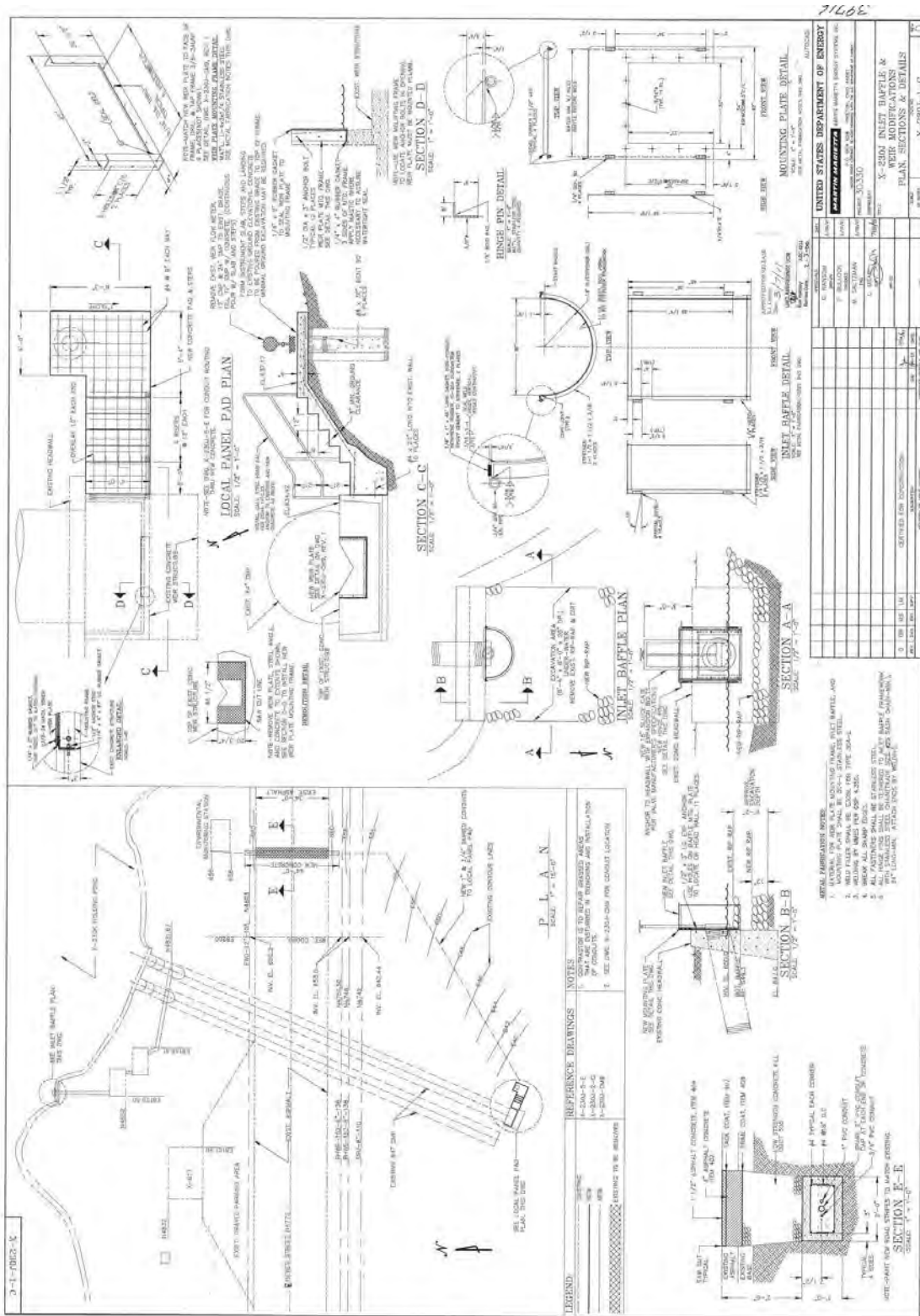


Figure 5: Inlet Baffle and Weir Modifications: Plan, Sections, and Details