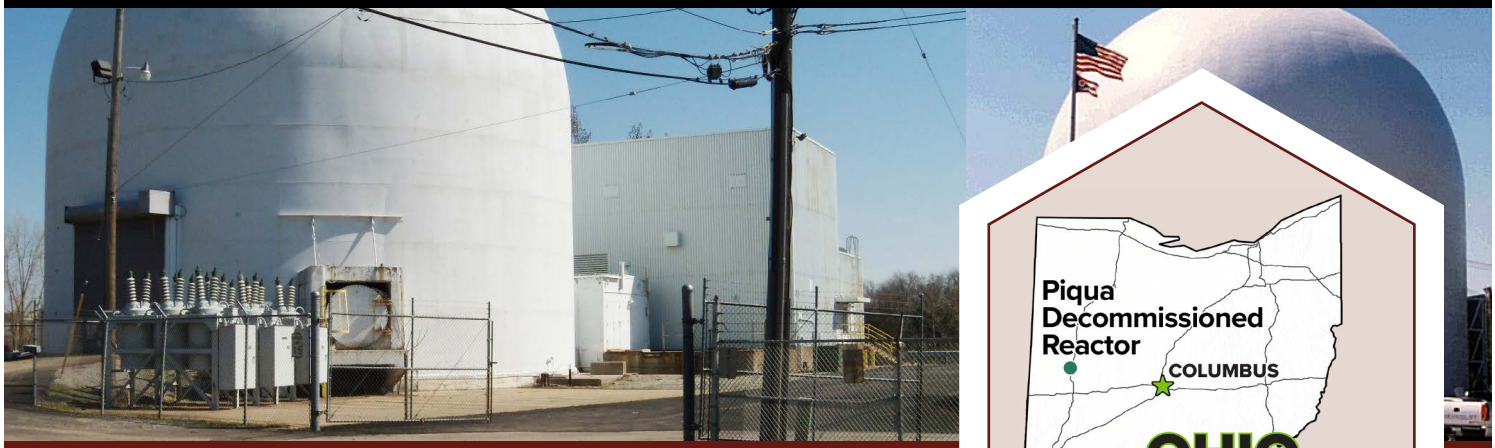
# 2023 Final Update
# Demolition Project Fact Sheet

U.S. DEPARTMENT OF ENERGY | Legacy Management




## Piqua, Ohio, Decommissioned Reactor Site
A Decontamination and Decommissioning Site

RECAP: In May 2022, The U.S. Department of Energy began site-demolition activities at the Piqua, Ohio, Decommissioned Reactor Site. After 18 months of work, DOE demolished the auxiliary building and the decommissioned reactor facility and removed and disposed of all debris at a licensed landfill. DOE left the buried entombed reactor in place. It will remain undisturbed in a safe configuration, keeping human health and the environment protected.

## Background

The site is in western Ohio in the city of Piqua, on the east bank of the Great Miami River, about 30 miles north of Dayton. The site is about 900 feet southeast of the Piqua municipal power station and 150 feet north of the city wastewater-treatment plant. A limestone quarry frames the reactor site's north and east sides. The decommissioned reactor and administrative building used to sit about 120 feet from the Great Miami River.

In December 2021, DOE finalized the decision to demolish the buildings at the site via an Environmental Assessment/Finding of No Significant Impact. A low-level radioactive waste entombment was left on-site belowground in a protected state. DOE started demolition in May 2022 and finished in fall 2023. The city of Piqua will use the property as an industrial and commercial laydown yard consistent with the existing lease and contract with DOE. Institutional controls will remain in place to ensure long-term protectiveness of the entombment, and the DOE Office of Legacy Management will continue long-term site stewardship. DOE continues to work closely with the city of Piqua.

Due to the project's high visibility, DOE frequently updated the public by posting on social media platforms and sharing the regularly updated site fact sheet. DOE also closely collaborated with the city of Piqua's public relations team to help keep the local community informed.

## Demolition Approach

The 18-month project involved fully demolishing the aboveground structures and reconstructing the area. The areas affected during demolition amounted to just under an acre of potential land disturbance.

**The project was broken into six phases:**

COMPLETED

- **Phase 1** included general site-preparation activities, such as procuring equipment and materials and establishing a haul road, temporary office trailers, project fencing, and signage. This phase also includes the conventional demolition of the auxiliary building from the top down as well as demolition of all subgrade utility vaults.

COMPLETED

- **Phase 2** involved abating lead-based paint and selectively demolishing walls and infrastructure in the belowgrade portion of the reactor building.

COMPLETED

- **Phase 3** included encapsulating the existing entombment in specialized waterproof concrete and backfilling the space between the entombment and building walls.

COMPLETED

- **Phase 4** involved demolishing the reactor dome, reactor building, and backfilling.

COMPLETED

- **Phase 5** involved reconstruction activities, such as site grading, paving, and installing the mounded riprap cover and monument.

COMPLETED

- Phase 6 included project closeout, which involved finalizing site acceptance with the city of Piqua and completing as-built record drawings.

## Demolition Update

After 18 months in the field working on the demolition project, DOE successfully completed phases 1 through 6 safely, achieving all milestones and compliance requirements. This included removing and disposing of industrial and hazardous waste from facilities, abating asbestos and lead-based paint, conventionally demolishing the auxiliary building, demolishing the reactor dome and remaining reactor facility structure, and backfilling. Specifically, the project used more than 18,000 tons of backfill and 2,000 cubic yards of concrete.

In addition, reconstruction activities were conducted and accomplished over summer 2023. DOE completed phase 6, known as the project closeout phase, as planned in winter 2023. During the demolition, personnel worked more than 42,000 hours without an injury or safety issue.

Final walk-downs and city acceptance were completed, with demolition project completion declared in November 2023. DOE will permanently continue its stewardship mission at the site to keep the entombment safe and protect human health and the environment.


*Phase 4 required elevated torch cutting the dome's steel skin, then "peeling" it away before demolishing the concrete reactor building from the top down.*


*Phase 4 included a 30-ton crane safely removing the gantry bridge crane from inside the reactor building.*


*Phase 5 reconstruction included framing to add protective waterproof concrete around the top of the undisturbed low-level radiological waste entombment.*


*The entombment sits below grade, fully enclosed in a 10-feet-thick concrete barrier. The surface includes a vegetation barrier and loose stone cover, known as riprap, secured by heavy-duty jersey barriers. The city can use the surrounding parking lot as a laydown area.*

## Historical Significance

DOE, the Ohio State Historic Preservation Office, and the city of Piqua completed the five stipulations laid out in the memorandum of agreement between the three organizations. DOE developed the MOA to document its approach to mitigating the loss of buildings. The stipulations are described below.

COMPLETED

- **Recordation**: After discussions with the National Park Service, it became clear that NPS preferred switching the recordation package from a Historic American Buildings Survey to a Historic American Engineering Record. NPS determined that an HAER would be more appropriate because the Piqua reactor building is an industrial site. In September 2022, DOE successfully completed the *Historic American Engineering Record for the Piqua Nuclear Power Facility* (*Decommissioned Reactor Site* HAER OH-144). DOE sent HAER OH-144 to NPS on Sept. 20, 2022.

COMPLETED

- **Exhibit**: DOE submitted a conceptual design and a final design to the consulting parties in April 2022 and October 2022, respectively. DOE completed exhibit fabrication in May 2023 and delivered the diorama to the library on Sept. 15, 2023 (ahead of schedule).

COMPLETED

- **Architectural salvage**: DOE secured historical objects from the site and gave them to the city of Piqua on Sept. 15, 2023, to accompany the library's diorama display.

COMPLETED

- **Interpretive signage**: DOE worked closely with the consulting parties to design and construct an interpretive sign that will be placed in a publicly accessible area near the site. The approved signage was built, and DOE delivered the sign to the city of Piqua on June 26, 2023. The city plans to install the interpretive sign along the new section of the bike trail in August 2024.

COMPLETED

- **Ohio historical marker**: DOE collaborated with the city and applied for an Ohio historical marker in April 2023. The city will display the marker in a publicly accessible location along the new section of the bike trail across the river from the site. The Ohio historical marker application was approved July 13, 2023, and the city expects to place the historical marker in August 2024.

**For more information, including frequently asked questions and answers, visit the LM Piqua webpage:** www.energy.gov/lm/piqua-ohio-decommissioned-reactor-site.

## CONTACT INFORMATION

**IN CASE OF AN EMERGENCY AT THE SITE, CONTACT 911**

**LM TOLL-FREE EMERGENCY HOTLINE: (877) 695-5322**

Site-specific documents related to the **Piqua, Ohio, Decommissioned Reactor Site** are available on the LM website at **www.energy.gov/lm/piqua-ohio-decommissioned-reactor-site.**

For more information about LM activities at the **Piqua, Ohio, Decommissioned Reactor Site**, contact:

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02/2024