

U.S. Department of Energy

FINDING OF NO SIGNIFICANT IMPACT for the Final Environmental Assessment Proposed Demolition of the Buildings at the Piqua, Ohio, Decommissioned Reactor Site, (DOE/EA-2107)

AGENCY: U.S. Department of Energy, Office of Legacy Management

ACTION: Finding of No Significant Impact

SUMMARY: The U.S. Department of Energy (DOE), Office of Legacy Management (LM) has conducted an environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. The final Environmental Assessment (EA) for the Proposed Demolition of the Buildings at the Piqua, Ohio, Decommissioned Reactor Site addresses environmental impacts associated with an array of alternatives for long-term management of the structures at the site, in the city of Piqua, Ohio.

The final EA evaluated various alternatives that would identify a long-term path forward for the decommissioned reactor site. This path forward would (1) be protective of human health and the environment from risks associated with unoccupied buildings and vacant property that no longer contribute to the active LM mission and (2) reduce long-term stewardship costs associated with the site.

LM evaluated six alternatives, including a Preferred Alternative that would meet the purpose and need for the Proposed Action and would be protective of human health and the environment; a No Action Alternative as required by DOE's National Environmental Policy Act (NEPA) regulations Title 10 *Code of Federal Regulations* Section 1021 (10 CFR Part 1021) and in accordance with Council on Environmental Quality (CEQ) regulations (40 CFR 1502.14[d]); and four other action alternatives which did not align with the purpose and need of this project and were eliminated from further consideration.

Based on analyses in the final EA, LM determined that the Preferred Alternative would not constitute a major federal action significantly affecting the quality of human health and the environment within the meaning of NEPA. Therefore, preparation of an environmental impact statement (EIS) is not required, and LM is issuing this Finding of No Significant Impact (FONSI).

PROPOSED ACTION: The proposed action, LM's Preferred Alternative, includes:

- The full demolition of aboveground structures at the decommissioned nuclear reactor.
- Dome demolition would be accomplished by employing a conventional top-down approach, utilizing a high-reach excavator with a concrete processor.
- The entombment would be protected during this demolition approach with timbers and softening materials. Below-grade embedded beams and floor members would be pulverized with a hydraulic concrete processor. Reinforcing steel and remnant concrete would be sawcut or torch cut and flushed as necessary.

- The entombment would be modified to ensure water could not collect and would then be further encased in waterproof concrete that would be anchored to the existing entombment structure with steel reinforcement rod tie-ins. The void space between the reactor building walls and entombment would be backfilled to grade.
- The auxiliary building and associated utility vaults and utility lines would be removed and backfilled to grade level. Portions of the auxiliary building and utility vault foundations may remain in place for structural stability.
- The surface above the entombment would be protected with a riprap cover, concrete rails, and appropriate signage. The final grading plan would be coordinated with the city of Piqua.
- The remaining footprint of the site would be graded with a paved surface to match the surrounding landscape.
- All waste and debris from the demolition would be disposed of according to applicable federal, state, and local regulations. All construction and demolition waste would be hauled offsite to an approved landfill.
- Vegetation within the area of disturbance would be removed during the demolition and replanted with a native prairie seed mix after demolition.
- LM would work with the city of Piqua to modify the current contract and lease, if necessary, to include restrictions (e.g., no digging) and clarify permitted land uses that would ensure protectiveness of the entombment.

After the demolition is complete, the site would be left in a condition that ensures the protection of the entombment and allows the city of Piqua to use the land for industrial/commercial purposes, such as an equipment laydown area. All waste and debris from the demolition would be disposed of according to applicable federal state, and local regulations.

ALTERNATIVES EVALUATED: In addition to the Preferred Alternative, five alternatives were evaluated. All alternatives are identified in Table 1:

Table 1. Summary of Alternatives

Alternatives	
Alternative Number	Alternative Description
1	LM continues lease with the city of Piqua (No Action Alternative)
2	Full demolition of aboveground structures and protection of the entombment (Preferred Alternative)
Alternatives Eliminated from Further Consideration	
3	Termination of lease agreement with city and lease and/or reuse of property to or by a third party
4	Partial demolition of Piqua structures
5	Turn former reactor site into museum or visitor center
6	Full demolition of all structures including the removal of the entombment

Section 2.0 of the EA discusses alternatives in detail as well as alternative formulation and selection criteria.

ENVIRONMENTAL CONSEQUENCES: For all alternatives, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the Preferred Alternative are listed in Table 2. All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the Preferred Alternative. Best management practices would be implemented, when appropriate, to minimize impacts.

Table 2. Summary of Potential Effects of the Preferred Alternative

Resource Area	Insignificant Effects	Insignificant Effects Due to Mitigation	Resource Unaffected by Action
Aesthetic and Visual Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aquatic Resources/Wetlands	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Invasive Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Terrestrial and Aquatic Organisms	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Threatened and Endangered Species	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Historic Properties	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Archaeological	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Floodplains	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hazardous, Toxic and Radioactive Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Human Health	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hydrology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Land Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Navigation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Noise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transportation, Roadways, and Traffic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Socioeconomics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Environmental justice	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Geology and Soil	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tribal Trust Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Climate Change	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Avoidance and minimization measures taken for environmental resources, including mitigation, are:

- Best management practices for stormwater control will be implemented and a National Pollutant Discharge Elimination System permit will be obtained if the limits of disturbance from construction activities exceed 1 acre.
- Trees with a diameter at breast height greater than three inches will only be cut between October 1 and March 31.
- A building survey prior to demolition was conducted to ensure no listed bats use it for roosting habitat.
- Airborne contamination controls will be implemented to ensure that workers would not receive a total effective radiation dose, or any other emission dose, in excess of the DOE federal limit. These controls may include, but will not be limited to, barriers, high efficiency

particulate air filters, containment structures, dust suppression techniques (e.g., misting), and differential pressures between adjacent areas/rooms, as appropriate.

- Coordination with the city of Piqua to relocate the bike trail during demolition.
- Dust controls will be implemented to reduce fugitive dust, including:
 - Posting and enforcing a site speed limit
 - Watering roadways
 - Control vehicle access
 - Limit loading drop heights
 - Utilize water during demolition as appropriate
- Contract with city of Piqua (or subcontractor) to periodically sweep paved roads

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, LM has determined that the recommended plan will have no effect on federally listed species or their designated critical habitat.

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, LM determined that historic properties may be adversely affected by the Preferred Alternative. LM and the Ohio State Historic Preservation Office (SHPO) entered into a Memorandum of Agreement (MOA), dated November 2, 2021. All terms and conditions resulting from the MOA shall be implemented to minimize adverse impacts to historic properties. To mitigate for unavoidable adverse impacts to the historic property, LM will implement four mitigation measures: recordation, diorama, architectural salvage, and interpretive signage. These are discussed in detail in Appendix D to the EA:

PUBLIC REVIEW AND COMMENT: Public review of the draft EA was completed on September 19, 2021. All comments submitted during the public review period were responded to in the final EA and FONSI. Comments from the public review period did not result in any significant changes to the EA.

DETERMINATION: Based on the information and analysis in the final EA, LM determines that the Proposed Action would not constitute a major federal action significantly affecting the quality of human health or the environment in accordance with DOE's NEPA implementing procedures, 10 CFR Part 1021, and the regulations promulgated by the CEQ for implementing NEPA, 40 CFR 1508.27. Therefore, the preparation of an EIS is not required. LM approves the EA and is issuing this FONSI.

Issued in Westminster, Colorado, this 21st day of December 2021.

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