Fact Sheet

U.S. DEPARTMENT OF ENERGY | Legacy Management

Mound, Ohio, Site

A CERCLA/RCRA site

This fact sheet provides information about the **Mound, Ohio, Site**. Long-term stewardship responsibilities for this site are managed by the **U.S. Department of Energy Office of Legacy Management** under the **Comprehensive Environmental Response, Compensation, and Liability Act and the Resource Conservation and Recovery Act**.

Site Information and History

The Mound site in Miamisburg, Ohio, named for a nearby Native American burial ground, is located approximately 10 miles southwest of Dayton, Ohio. The Great Miami River flows southwest through the city of Miamisburg and dominates the geography of the region surrounding the site. The region is a mix of farmland, residential areas, small communities, and light industry. Downtown Miamisburg and many neighborhoods, schools, and city parks are located within a mile of the site.

The Mound site, which operated from 1948 to 2003 as part of the U.S. Atomic Energy Commission and later the U.S. Department of Energy (DOE), was built to continue Dayton, Ohio Manhattan Project work on polonium-beryllium initiators used in early atomic weapons. The site later expanded into an integrated research, development, and production facility supporting weapons, energy, and space missions. Weapons and energy operations included: separation and sale of stable isotopes, calorimetry, and neutron radiography; plastics, ceramics, and metallurgy; explosives and pyrotechnics; cable assemblies, detonators, and electronic firing sets; recovery of tritium for reuse; and research on fossil fuels. Space mission support included development of radioisotopic thermoelectric generators that provided electrical power for National Aeronautics and Space Administration space exploration programs, including Voyager I and II, Galileo, and many others.

At its peak, the Mound facility encompassed 116 buildings and employed more than 2,500 highly skilled workers.

Regulatory Setting

DOE established the Environmental Restoration Program at the site in 1984. The program collected and assessed environmental data to evaluate the nature and extent of contamination resulting from site operations, identified potential exposure pathways, and identified potential human and environmental receptors. Comprehensive chemical and radionuclide characterizations identified contamination in soil, groundwater, surface water, and buildings at the site. Most of the contamination was identified as low-level radioactivity in the soil and volatile organic compounds in the groundwater.

In 1989, the site was placed on the U.S. Environmental Protection Agency (EPA) National Priorities List (NPL) because volatile organic compounds were discovered in groundwater that underlies the site, and because of the site's proximity to a sole-source aquifer. NPL is a list of top-priority hazardous waste sites eligible for cleanup under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. DOE, the EPA, and Ohio EPA signed a Federal Facilities Agreement in 1993 that provided a procedural framework, which remains in effect, for accomplishing site cleanup.

In 1995, DOE and its regulators developed the Mound 2000 process to expedite the cleanup while satisfying CERCLA requirements. The Core Team (DOE, EPA, and Ohio EPA) used the Mound 2000 process to review historical and current assessment data for each building and 400 potential release sites, and to determine a path forward for each. The Core Team oversaw all remediation activities and continues to oversee post-closure activities at the site.

To hasten transfer to private use, the DOE Office of Environmental Management divided the site into discrete land parcels, which were remediated to an industrial/commercial use end state in accordance with CERCLA regulations. Records of Decision (RODs) for these parcels defined the environmental remedies.

Mound Development Corporation

The city of Miamisburg chartered the Mound Development Corporation (MDC), formerly the Miamisburg Mound Community Improvement Corporation, to transition the site for reuse as the Mound Business Park. During site cleanup, DOE supported MDC economic development efforts with grants and matching funds.

DOE conveyed discrete parcels to MDC after completion of CERCLA requirements for property transfer. Land use restrictions were conveyed with the property to ensure that land use would always remain protective of human health and the environment. MDC has accepted approximately 94 percent of the 305-acre former Mound site, and DOE retains ownership of the remaining 6 percent.

Current Site Conditions

The site was remediated to an industrial/commercial use end state. DOE completed CERCLA soil and building remediation of the site, demolished or transferred buildings and infrastructure, and implemented the remedies in the RODs. All wastes were shipped off-site and disposed of in accordance with applicable regulatory requirements.

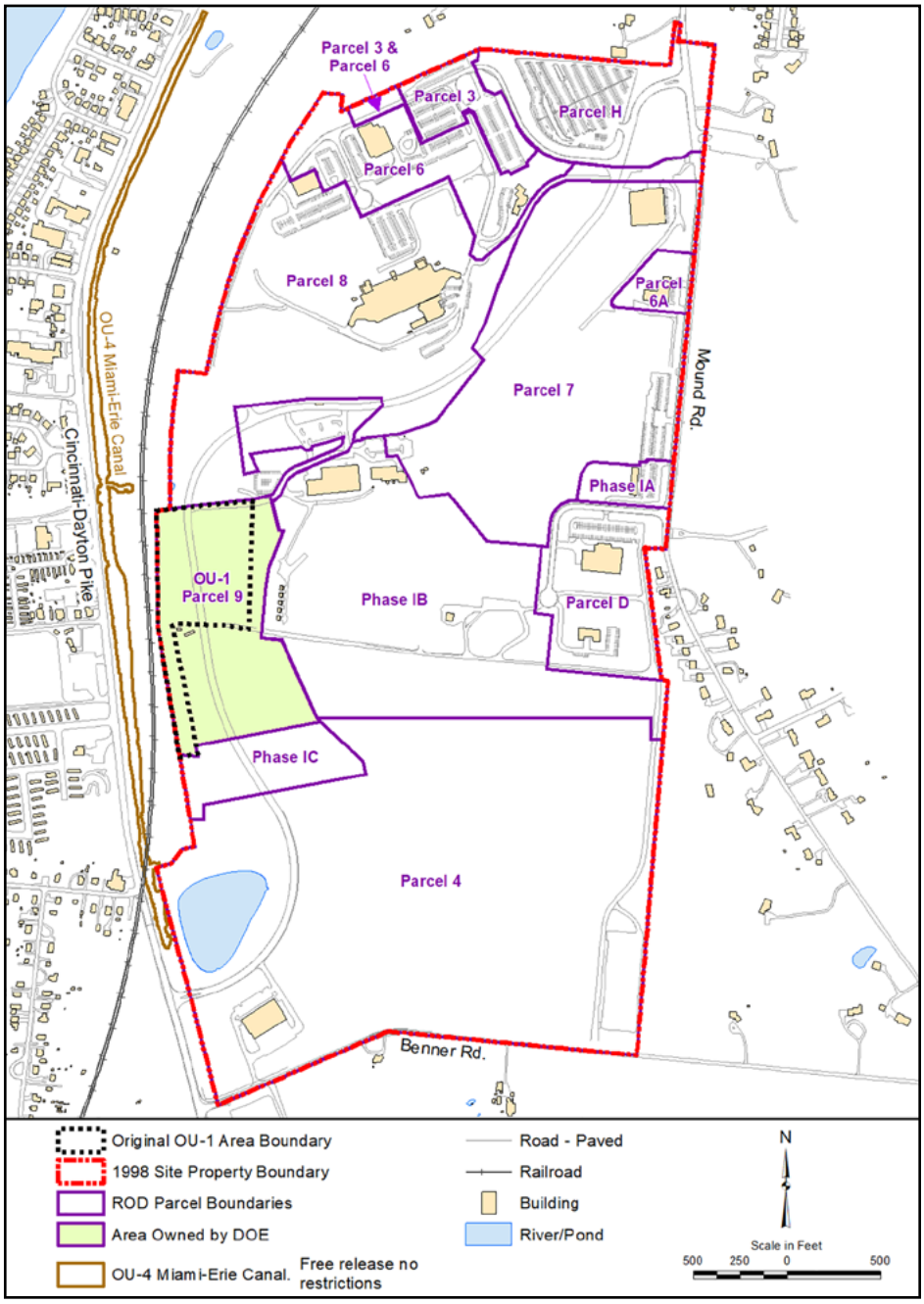
Groundwater remediation continues at several areas of the site.

CERCLA remedies detailed in the site's RODs include monitored natural attenuation of contaminants in groundwater, operation of a pump and treatment system for groundwater, and institutional controls (ICs) in the form of deed restrictions on future land and groundwater use. ICs are nonengineered instruments, such as administrative and legal controls, that help minimize the potential for exposure to contamination and/or protect the integrity of environmental remedies. ICs run with the land in the form of restrictions and covenants in quitclaim deeds or activity and use limitations in an environmental covenant. The Mound site ICs prohibit nonindustrial/commercial use of the site, removal of soil from the original 305-acre site footprint, removal or use of groundwater, and removal or penetration of concrete flooring in a few of the rooms in the former Technical (T) Building, without prior approval from the regulators.

Roles and Responsibilities

The DOE Office of Legacy Management (LM) is responsible for long-term surveillance and maintenance activities to ensure that the selected CERCLA remedies remain functional and effective, and that conditions at the site remain protective of human health and the environment.

The MDC manages the Mound Business Park for industrial/commercial use. All property owners are legally responsible



Land Parcels at the Mound Site.

for adhering to the ICs and activity and use limitations in the quitclaim deeds and environmental covenant. Property owners may further impose those requirements on lessees.

Legacy Management Activities

LM is responsible for the long-term surveillance and maintenance of all DOE remedial action sites, disposal sites, and other sites as assigned, that have no ongoing DOE mission and are not part of a larger DOE facility.

At the Mound site, LM monitors site groundwater, maintains the pump and treatment system, conducts periodic IC assessments, and prepares regulatory reports. LM follows three site documents that describe the activities required to maintain the CERCLA remedies and controls. These are the *Operations and Maintenance Plan, the Long-Term Surveillance and Maintenance Plan*, and the *Community Involvement Plan*. These and other site documents are available electronically at www.lm.doe.gov/Mound/Documents.aspx.

Administrative Record documents for CERCLA and other LM sites across the nation are available on the LM website at www.lm.doe.gov/CERCLA_Home.aspx. If you would like to look at any of these public documents, but don't have access to a computer or the internet, we have a laptop available for you to use in the Mound Public Reading Room at:

Mound Cold War Discovery Center
1075 Mound Road
Miamisburg, Ohio
45342

Mound Cold War Discovery Center

The Mound Cold War Discovery Center is a collaboration between the Mound Science and Energy Museum Association, a non-profit organization that was established to collect, preserve, and make publicly accessible the heritage of the Mound Laboratory and Dayton History, a private non-profit (501c3) organization established to preserve, share, and celebrate the history of the Dayton, Ohio, region. Visitors learn about the top-secret, scientific work of the Mound Laboratory that revolutionized Cold War, Nuclear Age, and Space Race history; the subsequent environmental cleanup; and today's ongoing legacy management.

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 **Mound, Ohio, Site**, are available on the LM website at **www.energy.gov/lm/mound-ohio-site**

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