U.S. DEPARTMENT OF ENERGY | Legacy Management

Fact Sheet

CERCLA/RCRA

Mound, Ohio, Site

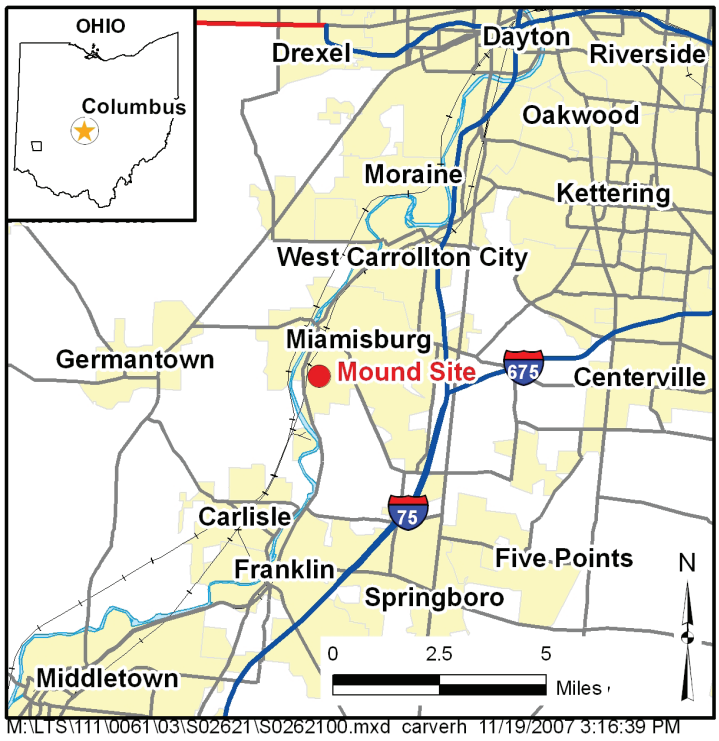
This fact sheet provides information about the Mound, Ohio, Site.
These sites are managed by the U.S. Department of Energy Office of Legacy Management under the Comprehensive Environmental Response, Compensation, and Liability Act and the Resource Conservation and Recovery Act.

Site Description and History

The Mound site[1] 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 area, small communities, and light industry. Many residential developments, five schools, the Miamisburg downtown area, and six city parks are located within a mile of the site.

Much of the site sits atop an elevated area overlooking the city of Miamisburg, the Great Miami River, and the river plain area to the west. Site elevations vary from 700 to 900 feet above sea level.

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's Manhattan Project work on polonium-beryllium initiators used in early atomic weapons. The site 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 radiology; 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.



Location of the Mound, Ohio, Site

The site grew from the original 182 acres into 305 acres in 1983 when DOE purchased an undeveloped area south of the original property. At its peak, the facility encompassed 116 buildings and employed more than 2,500 highly skilled workers.

[1] The Mound site has also been called the Mound Laboratory, Mound Laboratories, the Mound Plant (EPA ID OH6890008984), the USDOE Mound Plant, the Mound Facility, the USDOE Mound Facility, the Miamisburg Environmental Management Project (MEMP), and the Miamisburg Closure Project (MCP). Currently, LM uses "Mound, Ohio, Site" as the formal name of the site.

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

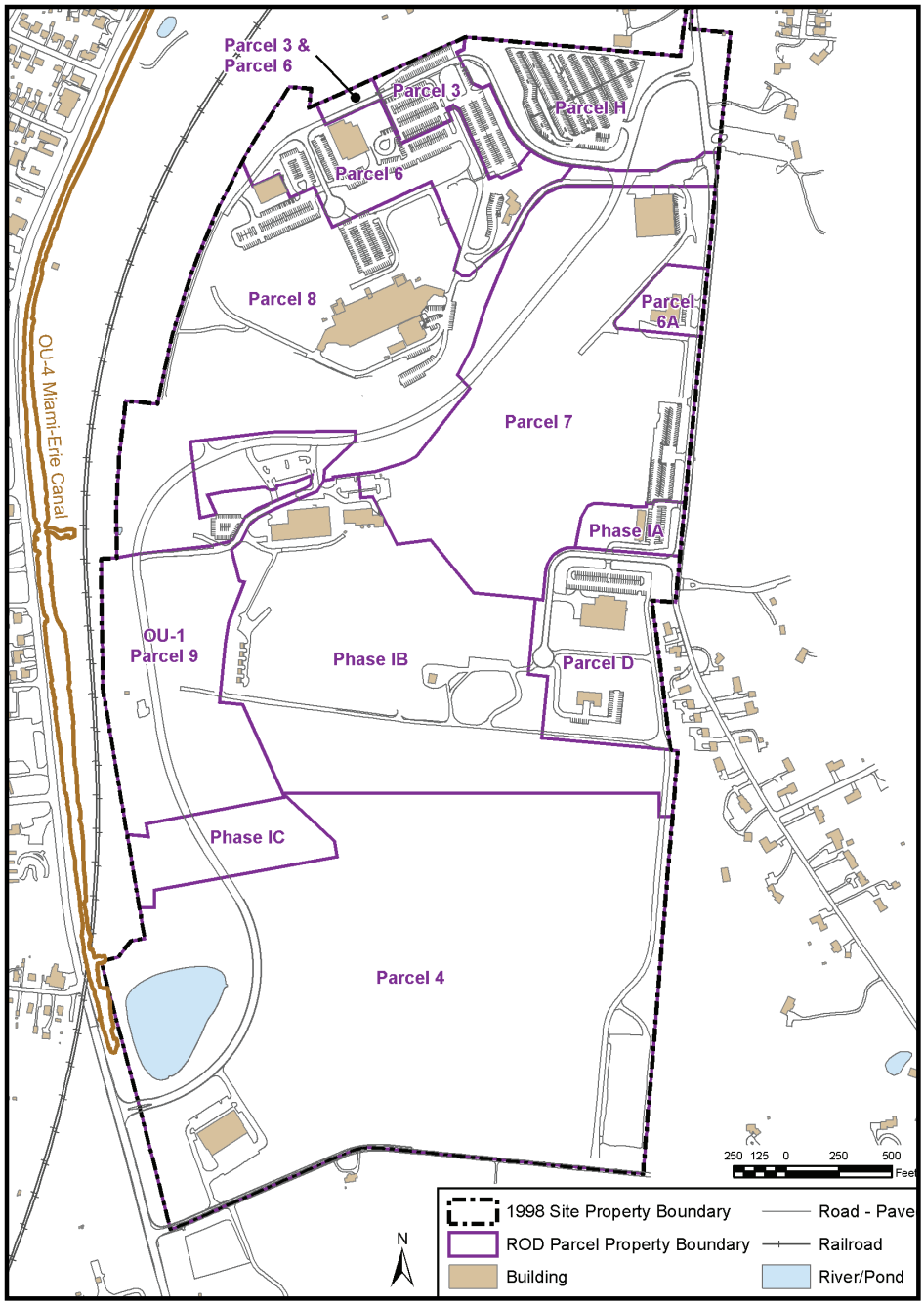
In 1995, DOE and its regulators developed the MOUND 2000 process that expedited cleanup while satisfying CERCLA requirements. The core team of DOE, EPA, and Ohio EPA used the MOUND 2000 process to review historical and current assessment data for each building and 400 potential release sites, and to determine a path forward for each. The core team oversaw all of the remediation activities and continues to oversee site post-closure activities.

In order to hasten transfer to private use, the DOE Office of Environmental Management (EM) divided the site into discrete land parcels, which were remediated to an industrial use end state in accordance with CERCLA regulations. Records of decision for these parcels defined the 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. DOE supported the economic development efforts with grants and matching funds.

DOE established a sales contract with MDC to convey discrete parcels after completion of the CERCLA process. Land-use restrictions were conveyed with the property to ensure that it would always remain protective of human health and the environment. To date, approximately 60 percent of the site has been conveyed to MDC, and the remaining 40 percent is leased to them until 2017. The City of Miamisburg has accepted temporary ownership of some MDC-owned portions of the site until MDC leases or sells them.



Land Parcels at the Mound Site

Site Status

The site has been remediated to an industrial use–only end state. All nuclear material has been removed, facilities have been demolished or readied for transition, and all remediation activities are complete. All wastes were shipped offsite and disposed of in accordance with applicable regulatory requirements.

CERCLA remedies detailed in the site's records of decision include institutional controls (ICs) in the form of deed restrictions on future land and groundwater use, monitored natural attenuation with groundwater monitoring, and operation of a pump and treatment system. ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for exposure to contamination and/or protect the integrity of a response action. The ICs run with the land in the form of restrictions and covenants in quitclaim deeds or activity- and use-limitations in the environmental covenant. The Mound site ICs prohibit non-industrial use of the site, removal of soil, removal or use of groundwater, and removal or penetration of concrete flooring in a few of the rooms in the Technical Building, without prior approval from the regulators.

Roles and Responsibilities

EM has landlord responsibility for the leased portion of the site and is responsible for the transfer of all remaining property to MDC through the site sales agreement.

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 so that conditions at the site remain protective of human health and the environment.

MDC is responsible for maintaining all of the buildings and grounds onsite, including those leased from DOE.

All landowners of former Mound site property are legally responsible for adhering to the ICs or activity- and use-limitations in the environmental covenant and lease agreement.

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. LM follows three Mound 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*, which are available electronically at http://www.lm.doe.gov/Mound/Documents.aspx and at the CERCLA Public Reading Room.

LM monitors site groundwater, maintains the pump and treatment system, conducts periodic IC assessments, and prepares reports. Since these efforts no longer require an onsite office, the oversight office is located at the Fernald Preserve site near Harrison, Ohio.

CERCLA Administrative Record paper copies are available in the Mound Public Reading Room, now located at the Mound Science and Energy Museum, 1075 Mound Road, Miamisburg, Ohio 45342. The museum is open from 9 a.m. to noon on Saturday. Stakeholders may contact the museum at msem475@gmail.com to make an appointment to use the reading room at other times.

Community Involvement

DOE continues to keep local community groups informed about site activities.

Contacts

Important site and administrative record documents are available on the LM website at www.lm.doe.gov/mound/Sites.aspx.

For more information about the Mound site, contact:

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