

Annual Assessment of the Effectiveness of Institutional Controls at the Mound, Ohio, Site, Miamisburg, Ohio

June 2022



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

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Abbreviations

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COS Building	Central Operational Support Building
CRP	Comprehensive Reuse Plan
DOE	U.S. Department of Energy
EM	Office of Environmental Management
EPA	U.S. Environmental Protection Agency
ES	Environmental Summary
FYR	Five-Year Review
IC	institutional control
LM	Office of Legacy Management
LMS	Legacy Management Support
LTS&M Plan	Long-Term Surveillance and Maintenance Plan
MATC	Mound Advanced Technology Center
MDC	Mound Development Corporation (formerly MMCIC)
MMCIC	Miamisburg Mound Community Improvement Corporation
NPL	National Priorities List
ODH	Ohio Department of Health
ODNR	Ohio Department of Natural Resources
Ohio EPA	Ohio Environmental Protection Agency
OSE Building	Operational Support East Building
OU	Operable Unit
QC	quitclaim
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
T Building	Technical Building
VI	vapor intrusion

1.0 Introduction

This report documents the U.S. Department of Energy (DOE) Office of Legacy Management (LM) 2022 annual assessment of the effectiveness of sitewide institutional controls (ICs) for the entire Mound, Ohio, Site¹ in Miamisburg from May 1, 2021, to April 30, 2022.

ICs, which are part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedies for the site, are nonengineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination, protect the integrity of the remedy, or both.

After the site was placed on the National Priorities List (NPL), the DOE Office of Environmental Management (EM) remediated the site according to CERCLA Section 120(h) requirements for property transfer as an industrial or commercial use site. LM is responsible for long-term surveillance and maintenance. The annual IC assessment process and this IC assessment report follow requirements in three LM documents that make up the Long-Term Stewardship Plan for the Mound site:

- *Operations and Maintenance Plan for the U.S. Department of Energy Mound, Ohio, Site* (DOE 2015c)
- *Long-Term Surveillance and Maintenance Plan for the U.S. Department of Energy Mound, Ohio, Site* (DOE 2015b), hereafter referred to as the Long-Term Surveillance and Maintenance Plan (LTS&M Plan)
- *Community Involvement Plan for the U.S. Department of Energy Mound, Ohio, Site* (DOE 2015a)

The Mound site ICs are defined in the Records of Decision (RODs) and the CERCLA 120(h) Summary Notice of Hazardous Substances Environmental Summaries (ESs) described in Section 4.0 of this report. The ICs were developed by EM with input from the public; the city of Miamisburg, Ohio (city); the U.S. Environmental Protection Agency (EPA); the Ohio Environmental Protection Agency (Ohio EPA); the Ohio Department of Health (ODH); and the Mound Development Corporation (MDC) (formerly named the Miamisburg Mound Community Improvement Corporation [MMCIC]).

Although not an IC, groundwater monitoring is required by CERCLA remedies for some land parcels. The groundwater monitoring information for the Phase I (A, B, and C) Parcel and Parcels 6, 7, and 8 is presented in an annual groundwater monitoring report due June 13 of each year. The groundwater monitoring information for Operable Unit 1 (OU-1) in Parcel 9 is included in LM Environmental Restoration monthly reports.

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.

The 2022 annual IC assessment determined that the ICs continue to function as designed, adequate oversight mechanisms are in place to identify possible violations of ICs, and adequate resources are available to correct or mitigate any problems if violations occur. There were no recommendations from this assessment.

2.0 Period of Review

This annual assessment covers the period from May 1, 2021, to April 30, 2022.

3.0 Scope of Assessment

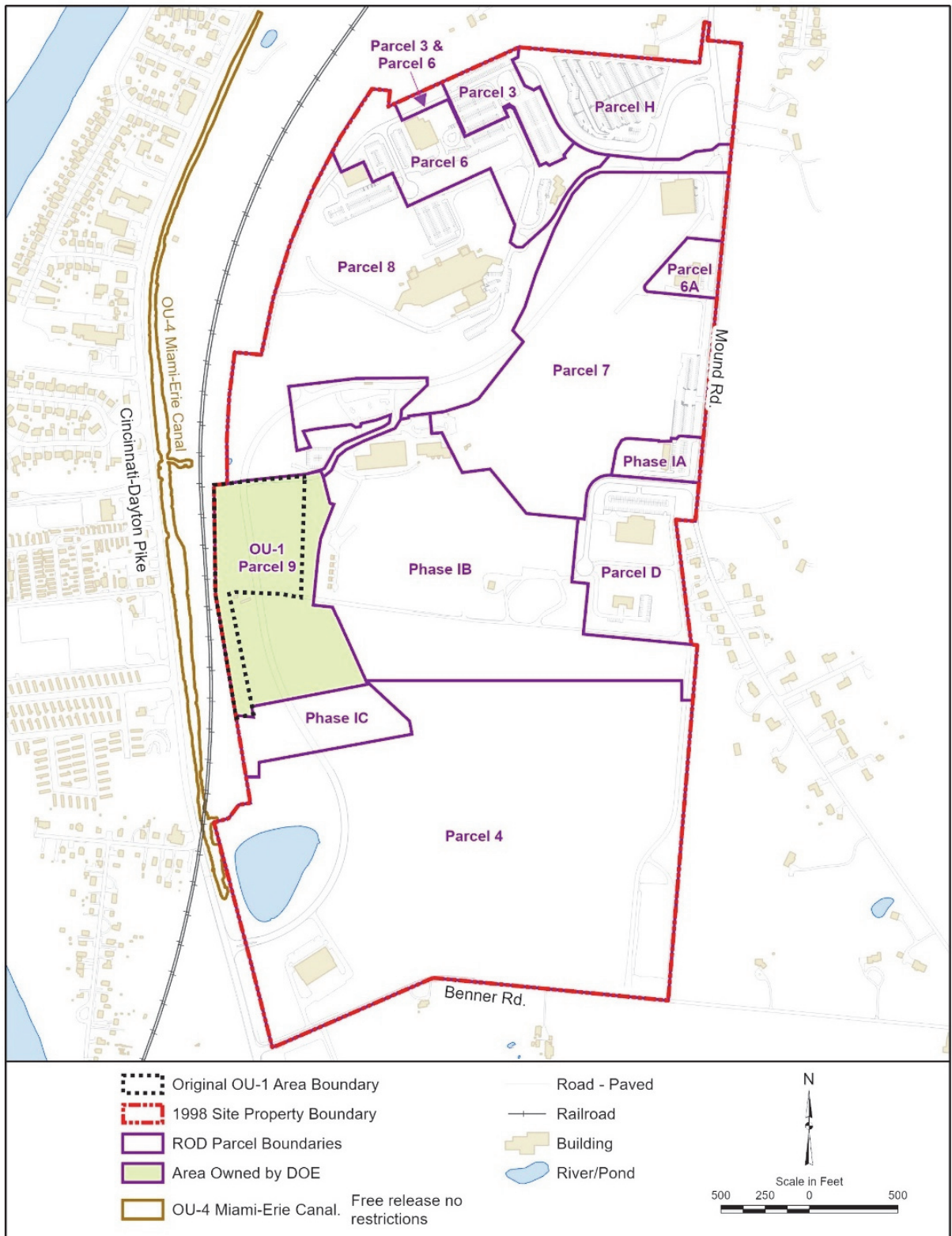
The ICs cover the entire area within the 1998 Mound Plant property boundary outlined in red in Figure 1. The onsite ROD parcels are outlined in purple.

The former burn area that was remediated under the Resource Conservation and Recovery Act (RCRA) is within the Mound Plant property boundary. In April 2016, Ohio EPA's RCRA organization recorded its decision to not continue a separate Ohio EPA IC inspection of the former burn area at the Mound site, as documented in the letter in Appendix A. This letter advised LM that Ohio EPA will rely on the LM annual IC assessment to verify compliance with the RCRA ICs, which are the same as the CERCLA ICs for that area of the Mound site. LM includes the Ohio EPA RCRA program supervisor in the distribution list for this annual CERCLA IC assessment report.

The Mound NPL site comprises eight ROD parcels, one of which (former Miami-Erie Canal, known as OU-4) was not on DOE-owned property. The annual IC assessments do not include this offsite OU-4 area west of the site, outlined in gold in Figure 1, because this area was remediated and free released with no use restrictions or ICs.

Figure 2 is a 2021 oblique aerial photo showing the entire site looking north. Appendix F contains a March 2021 aerial photo showing the ROD parcel, county parcel, and MDC planned lot boundaries. Aerial photos are taken during each CERCLA Five-Year Review (FYR).

LM submits the annual IC assessment report to EPA and Ohio EPA no later than June 13 of each year. All annual assessment reports are available on the LM Mound webpage (<https://www.energy.gov/lm/mound-ohio-site>).



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Figure 1. 1998 Mound Plant Property Showing the ROD Parcels



Figure 2. Mound Site Looking North (March 2021)

4.0 CERCLA Remedy Documents

Table 1 lists the eight Mound NPL site RODs with the ROD and ES titles and their approval dates. All of these documents are available online at [the CERCLA Mound Site webpage](#).

The RODs define the CERCLA remedies, including the sitewide ICs. The Parcel 6, 7, and 8 ROD includes special ICs specific to the former Technical Building (T Building).

The ESs document that the parcel meets the requirements of CERCLA 120(h) for property transfer. The offsite OU-4 area was remediated and free released with no use restrictions or ICs and, therefore, did not require an ES.

Table 1. Mound Site ROD and CERCLA 102(h) ES Information

ROD Parcel ID	Document	Approval Date
D	<i>Record of Decision for Release Block D, Mound Plant, Miamisburg, Ohio, Final (DOE 1999c)</i>	February 1999
	<i>CERCLA 120(h) Summary Notice of Hazardous Substances, Release Block D, Mound Plant, Miamisburg, Ohio, Final (DOE 1999a)</i>	February 1999
H	<i>Record of Decision for Release Block H, Mound Plant, Miamisburg, Ohio, Final (DOE 1999d)</i>	June 1999
	<i>CERCLA 120(h) Summary Notice of Hazardous Substances, Release Block H, Mound Plant, Miamisburg, Ohio, Final (DOE 1999b)</i>	July 1999
3	<i>Parcel 3 Record of Decision, Mound Plant, Miamisburg, Ohio, Final (DOE 2001b)</i>	September 2001
	<i>Parcel 3 Environmental Summary, CERCLA 120(h) Summary Notice of Hazardous Substances, Mound Plant, Miamisburg, Ohio, Final (DOE 2001a)</i>	September 2001
4	<i>Parcel 4 Record of Decision, Mound Plant, Miamisburg, Ohio, Final (DOE 2001d)</i>	February 2001
	<i>Parcel 4 Environmental Summary, CERCLA 120(h) Summary Notice of Hazardous Substances, Mound Plant, Miamisburg, Ohio, Final (DOE 2001c)</i>	March 2001
6, 7, 8 (includes former Parcel 6A)	<i>Parcels 6, 7, and 8 Record of Decision, Miamisburg Closure Project, Miamisburg, Ohio, Final (DOE 2009a)</i>	August 2009
	<i>Parcels 6, 7, and 8 Environmental Summary, CERCLA 120(h) Summary Notice of Hazardous Substances, Final (DOE 2010)</i>	August 2010
9 (OU-1 and expanded area)	<i>Operable Unit 1 Record of Decision, Final (DOE 1995)</i>	June 1995
	<i>Parcel 9 Environmental Summary, CERCLA 120(h) Summary Notice of Hazardous Substances, Final (DOE 2011b)</i>	August 2011
	<i>Amendment of the Operable Unit 1 Record of Decision, U.S. Department of Energy, Mound Closure Project, Final (DOE 2011a)</i>	August 2011
	<i>Environmental Covenant, Parcel 9 (DOE 2012a) (Recorded as Special Instrument Deed 2012-00004722 with Montgomery County, Ohio)</i>	January 2012
Phase I (A, B, C)	<i>Phase I Record of Decision, Miamisburg Closure Project, Final (DOE 2003b)</i>	July 2003
	<i>Phase I Environmental Summary, CERCLA 120(h) Summary Notice of Hazardous Substances, Miamisburg Closure Project, Final (DOE 2003a)</i>	December 2003
OU-4	<i>Miami-Erie Canal Record of Decision, Miamisburg Closure Project, Final, Revision 0 (DOE 2004)</i>	September 2004
	OU-4, located on city of Miamisburg property was remediated to an unlimited use end state. No ES was required or issued.	

As the former Mound site property transferred from DOE to MDC for commercial or industrial reuse, MDC platted the site into Mound Advanced Technology Center (MATC) Sections 1 through 5 with new real estate lots and Montgomery county parcel identification numbers (parcel IDs). The county parcel boundaries are different than the CERCLA ROD parcel boundaries. Each ROD parcel area on Figure 1 is covered by a specific ROD that documents the remedy of that area regardless of the county parcel IDs.

The Mound site ICs run with the land in the form of: (1) restrictions and covenants in the quitclaim (QC) deeds or (2) activity and use limitations in the Parcel 9 Environmental Covenant (DOE 2012a) filed with Montgomery County, Ohio, so that all future property owners will know about the deed restrictions. Table 2 summarizes the final ROD parcel identifications (i.e., ID numbers, dates, remedies, legal instruments, and IC objectives).

Section 6.2.3 and Appendix B provide details from the Montgomery County auditor's property records, county parcel IDs, property ownership status, and other agreements relating to property ownership.

Table 2. Summary of RODs, Remedies, ICs, and Legal Instruments

ROD Parcel	Former ID or Other Names	ROD Date	CERCLA Remedy	Objectives of ICs	Legal Instruments DOE to MDC (Quitclaim(QC) Deeds and Environmental Covenant filed at Montgomery County, Ohio)
D	Release Block D	1999	ICs	Prohibit the removal of soil. Prohibit the use of groundwater. Restrict land use to industrial/commercial only.	Parcel D QC deed 02-146503 , 11-22-2002 Parcel H QC deed 02-146504 , 11-22-2002 Parcel 3 QC deed 02-028206 , 10-18-2002 Parcel 4 QC deed 02-128007 , 10-17-2002 The following QC deed replaced previous deeds listed above for Parcels 3, 4, D, H, and combined them with Phase 1 Parcel QC deed 09-011643 , 02-24-2009
H	Release Block H	1999	ICs	Prohibit the removal of soil. Prohibit the use of groundwater. Restrict land use to industrial/commercial only.	
3	None	2001	ICs	Prohibit the removal of soil. Prohibit the use of groundwater. Restrict land use to industrial/commercial only.	
4	South Property ^a	2001	ICs	Prohibit the removal of soil. Prohibit the use of groundwater. Restrict land use to industrial/commercial only.	
Phase I (A, B, C)	None	2003	ICs and MNA	Prohibit the removal of soil. Prohibit the use of groundwater. Restrict land use to industrial/commercial only.	

Table 2. Summary of RODs, Remedies, ICs, and Legal Instruments (continued)

ROD Parcel	Former ID or Other Names	ROD Date	CERCLA Remedy	Objectives of ICs	Legal Instruments DOE to MDC (Quitclaim(QC) Deeds and Environmental Covenant filed at Montgomery County, Ohio)
6 7 (and 6A) 8	Parcels 6, 7, and 8	2010	ICs and MNA	Prohibit the removal of soil. Prohibit the use of groundwater. Restrict land use to industrial/commercial only. Prohibit the removal of concrete floor material in specified rooms of T Building. Prohibit the penetration of concrete floor material in specified rooms of T Building.	QC deeds: 12-00083743 , 12-19-2012 for 995 Mound Road 17-00055321 , 09-19-2017 for 885 Mound Road 17-00045599 , 08-04-2017 for 930 Capstone Drive 18-00006246 , 01-31-2018 for 460 and 480 Vantage Point and lot on north hillside 18-00064591 , 11-01-2018 for 945 Capstone Drive 19-00061640 , 11-05-2019 for remainder of Parcels 6, 7, and 8 plus a part of Parcel 9 <i>Environmental Covenant</i> approved 12-22-11 Filed as a Special Instrument (Deed) 12-00004722 , 01-24-2012 (LM currently retains four parcels within Parcel 9)
9	OU-1	1995 and 2011 amend.	ICs; hydraulic containment; surface water controls; long-term groundwater monitoring	Prohibit the removal of soil. Prohibit the use of groundwater. Restrict land use to industrial/commercial only.	
OU-4	Miami-Erie Canal	2004	No action	Not applicable.	None required.

Notes:

Legal instruments are filed by instrument number (QC or special instrument) on the Montgomery County recorder's website at [Recorder's Information Search System, Montgomery County, Ohio](#).

MATC sections 1–5 plat numbers are shown in Table B-3 in Appendix B.

Abbreviation:

MNA = monitored natural attenuation

5.0 Institutional Controls

5.1 Overview

ICs are an important component of the CERCLA remedies selected for the Mound site. EPA defines ICs as nonengineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination, protect the integrity of the remedy, or both.

DOE remediated the Mound site property to EPA's risk-based standards for industrial or commercial use. Because the site is not approved for unlimited use, ICs were imposed as part of the CERCLA remedy defined in each ROD listed in Table 1. OU-4 has no ICs or use restrictions. The Mound ICs were developed using the CERCLA process that included input from the public, the city, regulators, and MDC.

The Mound site ICs run with the land in the form of (1) restrictions and covenants in the QC deeds or (2) activity and use limitations in the Parcel 9 Environmental Covenant (DOE 2012a) filed with Montgomery County, Ohio, so that all future property owners will know about the deed restrictions.

Additional information on ICs can be found in the EPA publication *Institutional Controls: A Citizen's Guide to Understanding Institutional Controls at Superfund, Brownfields, Federal Facilities, Underground Storage Tanks, and Resource Conservation and Recovery Act Cleanups* (EPA 2005).

5.2 Mound Site ICs

There are four sitewide ICs and two building-specific ICs.

5.2.1 Sitewide ICs

- Prohibit the removal of soil from within the original DOE Mound site property boundaries without prior written approval from EPA, Ohio EPA, and ODH. See Section 5.2.3 for exceptions.
- Prohibit the extraction or consumption of, exposure to, or the use in any way of the groundwater underlying the site without prior written approval from EPA and Ohio EPA.
- Maintain industrial or commercial land use and prohibit residential land use. Each parcel ROD identifies the land uses that will not be permitted, but the list is not all-inclusive. For example, parcels may not be used for any residential or farming activities or for any activities that could result in the chronic exposure of children less than 18 years of age to soil or groundwater from the premises. Restricted uses include:
 - Single- or multi-family dwellings or rental units.
 - Daycare facilities.

- Schools or other educational facilities for children less than 18 years of age.
- Community centers, playgrounds, or other recreational or religious facilities for children less than 18 years of age.
- Allow site access for federal and state agencies for the purpose of sampling and monitoring.

5.2.2 Building-Specific ICs

The following two ICs apply only to T Building as detailed in the Parcels 6, 7, and 8 ROD.

1. Prohibit the removal of concrete floor material from specified rooms of T Building to offsite locations without prior written approval from EPA, Ohio EPA, and ODH (see Appendix C and Section 5.3.1).
2. Prohibit the penetration of concrete floors in specified rooms of T Building without prior written approval from EPA, Ohio EPA, and ODH (see Appendix C and Section 5.3.1).

5.2.3 Areas Exempted from Soil-Removal Restriction IC

The QC deeds transferring property from DOE to MDC contained parcel-specific deed restriction language. The areas shown in green on Figure 3 were exempted from the soil removal IC restriction in the QC deeds because the original Mound Plant boundary along Mound and Benner Roads extended to the center lines of those roads. In the figure and in the QC deeds, the term “excepted” is a synonym of “exempted.”

The QC deeds for two areas shown in yellow in Figure 3 along Mound Road did not include the soil removal IC exemption language for areas to the center line of the road. This was noted in the 2016 annual inspection report and is being addressed by LM. Unless soil removal IC exemption language is added to the real property record for those two properties, the entire property is subject to that restriction, including work performed to the center line of Mound Road. The city manages all public roads and is aware of the CERCLA soil removal IC that pertains to these two areas along Mound Road.

It is important to note that all onsite roadways are still subject to all of the Mound site ICs.

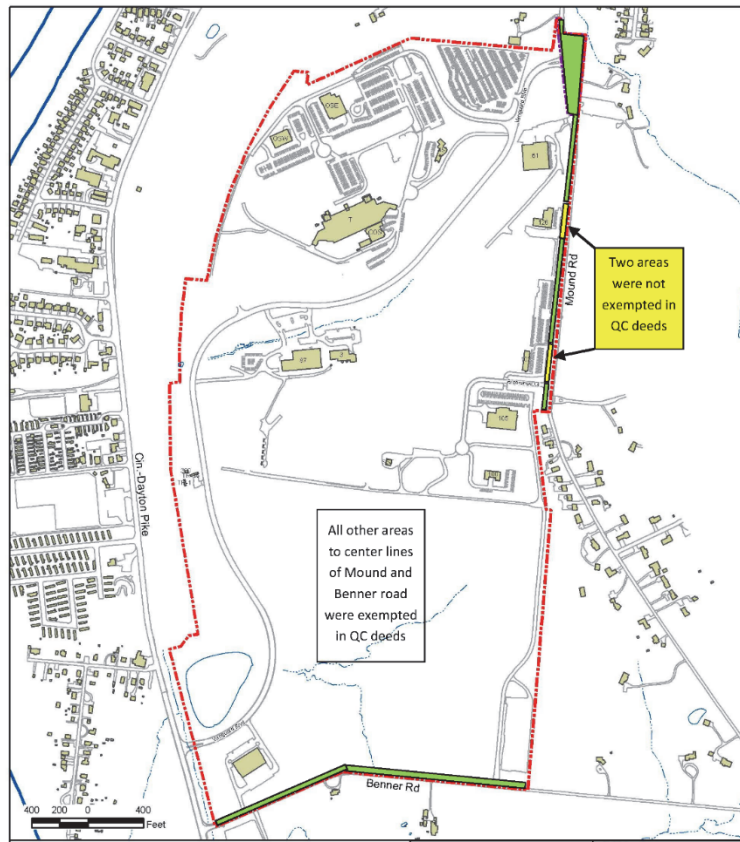


Figure 3. Mound Site Boundary and Soil-Removal Exception (Exemption) Areas on Mound and Benner Roads

5.3 Mound Core Team IC Guidance Documents

The Mound Core Team has issued two guidance documents that provide more detail on IC compliance.

5.3.1 IC Guidance—T Building Special IC Areas

Appendix C of this report provides information on the T Building special IC areas, a floor plan (Figure C-1) showing the special IC areas, and the *T Building Special IC Areas Core Team Agreement and Position Paper* (DOE 2009b). Appendix C also includes the 2010 baseline photos of each room covered by the special ICs.

5.3.2 IC Guidance—General Including Soil Removal

Appendix D of this IC assessment report contains the *Core Team IC Guidance Including Soil Removal* (DOE 2012b). This guidance document provides additional detail and clarity to the ICs and includes an example form, *Request for Regulatory Approval of New Site Activity*, for new site activities not generally covered by the ICs.

5.3.3 IC Guidance—Process to Evaluate Mound Business Park Property Owner Requests for Land Uses Not Specifically Addressed Under CERCLA RODs

Appendix E of this IC assessment report contains the Core Team’s formal process to evaluate these requests from property owners for new site activities that are not specifically prohibited or permitted in the IC wording. The requests are submitted on the form included in this guidance document. Appendix E also includes all of the approved requests evaluated by the Core Team. See Section 6.2.6 for details on the requests reviewed.

The requests and all decisions on these requests will be included in annual IC assessment reports.

5.4 Annual IC Assessment Process

To identify and evaluate changes in the site to verify IC compliance or indicate a potential IC violation, Legacy Management Support (LMS) inspectors followed the usual IC assessment process below. Results of these activities for 2022 are included in Section 6.0.

- Review status of previous IC assessment and CERCLA FYR recommendations.
- Conduct records reviews:
 - Request the city to query its permit database for work on the Mound site to identify changed conditions that could affect IC compliance including the following:
 - Permits, including building, street opening, and occupancy
 - Planning commission records
 - Zoning modification requests
 - Requests for approvals of parking lots and other changes that do not require city permits
 - MDC oversight process
- Search Montgomery County, Ohio, property records to find property ownership changes.
- Search the Ohio Department of Natural Resources (ODNR) website and the posted well drilling information to find unauthorized wells drilled onsite.
- Review Mound Core Team notes for requests to regulators for:
 - IC exemptions for soil removal, use of groundwater, or penetration or removal of concrete in T Building.
 - New site activities (reference the *Request for Regulatory Approval of New Site Activity* form).
 - Mound Core Team approvals or disapprovals of requests for regulatory approval of new site activity.
- Communicate with property owners to review ICs.
- Distribute and collect the signed *Mound Site Landowners - Institutional Control Compliance Form*, hereafter referred to as the IC compliance form.

- Conduct physical inspections:
 - Conduct physical inspections of the site and document conditions in time-stamped photos. Look for any evidence of activities potentially related to ICs (e.g., soil excavation, new construction).
 - Conduct a site walkdown with representatives from EPA, Ohio EPA, ODH, MDC, and the city.
- Complete the final report.
- Publish and distribute the report via email to regulators, MDC, and the city.
- Post the report on the LM Mound site public webpage in Site Documents at the [“Key Documents” LM Mound Site webpage](#).
- Add the report to the Mound, Ohio, Site information repository at the [“Administrative Record Index” LM Mound Site webpage](#).
- Advise the property owners that the report is complete and available.
- Post a public notice in the *Dayton Daily News* that describes the ICs, summarizes results of the annual assessment, and advises that the report is available on the LM public webpage.

6.0 2022 IC Assessment Results

6.1 Status of Previous Recommendations

6.1.1 Annual Assessments (2016–2021)

The 2021 annual assessment, *Annual Assessment of the Effectiveness of Institutional Controls at the Mound, Ohio, Site, Miamisburg, Ohio* (DOE 2021a), concluded that the Mound site ICs functioned as designed, adequate oversight mechanisms were in place to identify possible violations, and adequate resources were available to correct or mitigate any problems if a violation were to occur.

There were no recommendations from the 2017, 2018, 2019, 2020, or the 2021 annual assessments. Only one recommendation from previous IC assessments from the 2016 annual assessment is still open (Table 3).

Table 3. Status of Issues and Recommendations from 2016 IC Assessment

Origin	Issue/ Recommendation	Responsible	Status
2016 Annual IC Assessment Report (DOE 2016)	Clarify that the two areas to the center line of Mound Road in Phase I (now Mound Cold War Discovery Center) and BOI Solutions, Inc. now owned by Sharpstone GoKeyless) Tract 2 are exempted from the soil-removal IC.	LM/EPA	<p><u>IN PROCESS</u></p> <p>LM provided a draft release form to regulators that would add the soil-removal IC exception language to the real property record at Montgomery County, Ohio. If regulators concur, LM would record release with the county.</p> <p>NOTE: After this issue identified, Sharpstone GoKeyless transferred its right-of-way parcel (Tract 2) to the city.</p>

6.1.2 CERCLA 2021 Fifth FYR

The 2021 FYR report (DOE 2021b) that was approved by EPA on September 16, 2021, determined that the IC remedies are currently protective of human health and the environment because the ICs that impose restrictions on land and groundwater use and prohibitions on soil removal are functioning as intended. The 2021 FYR contained no actions or recommendations relating to ICs.

However, for all of the remedies, including groundwater, to be protective in the long term, the report detailed specific actions that need to be taken to ensure protectiveness. Those actions are summarized below:

- Complete the determination on complete exposure pathways for vapor intrusion (VI)
- Evaluate potential historical use of three emerging contaminants (per- and polyfluorinated alkyl substances (PFASs), perchlorate, and 1,4-dioxane)
- Attain groundwater cleanup standards in Phase 1 (A, B, C) and Parcel 6, 7, and 8
- Update the Parcel 9/OU-1 CERCLA remedy, including addressing the VI exposure pathway to future building occupants, and attain groundwater cleanup standards

6.2 Reviews of Records and IC Oversight Mechanisms

The following sections present the IC assessment review of the status of the formal and informal mechanisms that provide additional IC oversight of the site.

6.2.1 City of Miamisburg

6.2.1.1 Zoning

The Mound Business Park special zoning district (MB-1) that was implemented through a codified city ordinance on December 19, 2019, limits the types of businesses allowed at the Mound Business Park and mentions the CERCLA ICs. The text of MB-1 is at Part Twelve – Planning and Zoning Code, Title Six – Zoning, Chapter 1271 – MB-1 Mound Business Park at

the webpage: https://codelibrary.amlegal.com/codes/miamisburg/latest/miamisburg_oh/0-0-0-24521. The city advised it had made the following minor wording changes in 2021 (Ord. 6869) to the MB-1:

- Clarified the list of permitted uses No. 6 and No. 7 to include the term “fabrication”
- Added “Light Sheet Metal Products Fabrication” as a permitted use
- Removed “Data Processing and Computer Centers” and “Computer Equipment Service Establishments” from the list of permitted uses

The city’s implementation of MB-1 zoning district for the Mound Business Park adds another layer of protection for IC compliance and demonstrates the city’s commitment to industrial and commercial uses only.

6.2.1.2 Permits

LM reviews city permits to identify work on the Mound site that could involve compliance with Mound site ICs.

For the 2022 IC assessment, the LMS inspector requested that the city of Miamisburg Engineering Department query its computer tracking system for permits and any city approvals issued for other activities at the Mound Business Park from January 18, 2022, to April 1, 2022. The city reported one permit application for COAX cable at 945 Vantage Point (former T Building) during that period.

In general, the permit review process demonstrated that the city’s recordkeeping system is adequate for LM to identify site activities that could affect IC compliance.

6.2.1.3 LM IC Informational Handout with Permit Applications

The city has agreed to provide an LM handout that describes the IC restrictions to contractors applying for work permits on the Mound site. A copy of the sheet handout is included in Appendix A.

The city planner advised that the permit office is providing this handout.

6.2.2 MDC

6.2.2.1 Oversight of Mound Business Park

MDC staff includes the MDC Mound property manager and the Mound administrator. The Miamisburg city development director has signature authority for MDC (e.g., can sign leases and property deeds).

MDC contracts with the Turner Property Services Group, Inc. (Turner) to maintain all common areas and properties owned by MDC and the city. Turner monitors vendors’ work and conformance with technical requirements, and its property manager inspects jobs completed by a vendor. The Turner property manager confirmed that the current landscaping company has been notified of the requirements listed below at the Mound site involving the soil.

MDC or Turner provides a prework package to vendors that includes a description of the CERCLA ICs. MDC includes the following language in the “Technical Requirements” section of

its requests for proposal and subsequent work orders: “Excavated soils must be managed and remain on MDC property. Soils from excavation shall be placed at an onsite location, as directed by MDC.”

MDC’s *Comprehensive Reuse Plan Update* (MMCIC 2003) is available in the CERCLA Reading Room and online at the “[Administrative Record Index](#)” [LM Mound Site webpage](#). To coordinate the movement of soil within the boundaries of the Mound site, the MDC Comprehensive Reuse Plan (CRP) included a sitewide soil-grading plan. The CRP was incorporated into the city’s comprehensive plan, which is the basis for property zoning within Miamisburg city limits.

6.2.2.2 MDC and City Property Transfer Agreement

City Ordinance 6393, enacted on April 16, 2013, included a transfer agreement that authorized the city manager to enter into a property transfer agreement between the city and MDC. The agreement stated, “The City and MDC will each have the right to access the property as necessary for their own interests, but the City agrees to adopt rules as needed to prohibit the use of the property by the public generally.”

There were two transfers between MDC and the city during this review period. See Section 6.2.3 for details.

6.2.3 Montgomery County Auditor Property Records: Platting, Transfers, Sales, and Deeds

There was one property sale during this review period that was reported or found in the Montgomery County auditor’s property records.

Robert S. Dyrdek, Trustee under the Robert S. Dyrdek Living Trust, sold parcel K46-01507-0031 to Oscar Lopez. This was the former DOE Building 100 at 790 Enterprise Court.

There were two property transfers between MDC and the city during this review period.

- The city transferred Parcel K46 01507 0040, to MDC. This was the Flex Building at 1390 Vanguard Blvd.
- MDC transferred the following parcels to the city:
 - K46 00503 0034-Lot 8066
 - K46 00503 0035 Lot 8067, containing the Central Operational Support Building (COS Building) at 965 Capstone Drive
 - K46 00503 0036-Lot 8068
 - K46 00503 0037 Lot 8069
 - K46 00503 0038-Lot 8070, containing part of Excelitas Building at 1100 Vanguard Blvd.

Figure 4 provides the current property ownership for the Mound site recorded to date.

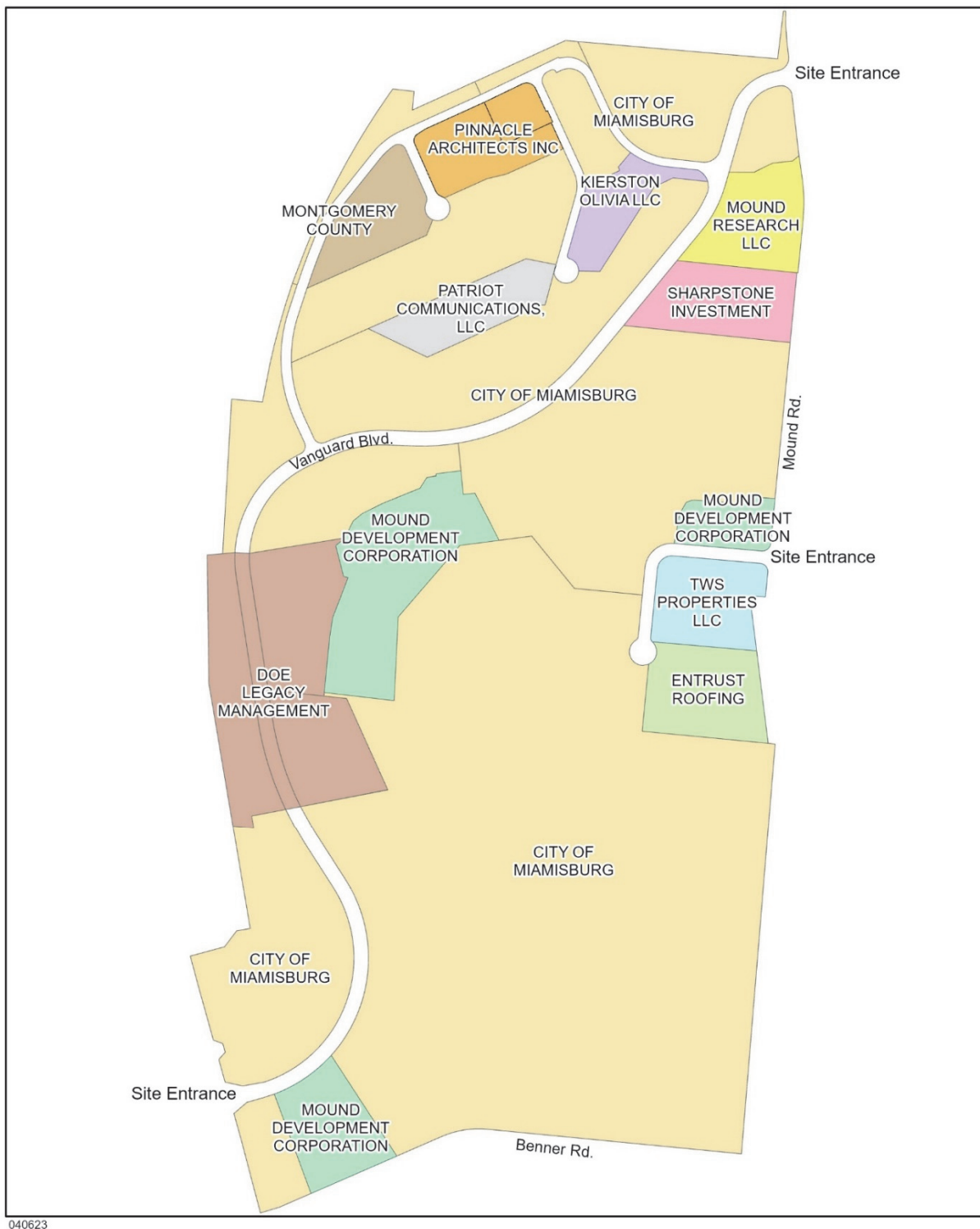


Figure 4. Current Mound Site Property Ownership

Appendix B contains four tables detailing building and property ownership: Table B-1, “Mound Site Building Identifications, Street Addresses, Ownership, County Parcels”; Table B-2, “Mound Site Buildings Demolished by MDC”; Table B-3, “Mound Site Property Details—April 30, 2022”; and Table B-4, “Acreage Reconciliations.”

6.2.4 Ohio Department of Natural Resources (ODNR) Well Log Registry

Because ICs prohibit the use of groundwater, LM reviews the ODNR webpage to identify any new wells onsite not related to LM groundwater monitoring. This effort will be more useful in the future when ownership of the entire site has been transferred or sold. LM maintains a crosswalk of LM well numbers and the corresponding ODNR identification numbers for future well verifications.

Based on review of the ODNR log registry, LM did not identify any new wells on the Mound site during the review period.

6.2.5 Mound Core Team Records—Requests from Property Owners

During a previous IC review period, Pinnacle Architects, the owner of the former Operational Support East Building (OSE Building), requested that the following uses be allowed on the property:

- Conference center - special event venue with catered food and drink
- Restaurant - sale of food to the public with cafeteria and dining room
- Medical office - physician offices for routine medical services

The Mound Core Team evaluated and responded to the request using the new Core Team process as mentioned in Section 5.3.3. The complete LM response to Pinnacle, included in Appendix E stated:

“The Mound Site Core Team approved this request. LM, in consultation with EPA and Ohio EPA, concluded the proposed activity uses along with the proposed bounding conditions provided in the Pinnacle request (and if followed by property owner, tenants, or visitors) would not result in unsafe exposures for either employees over the age of 16 years or adult or child visitors.

It is important to understand this approval only applies to the activities specified in the above referenced request proposed in the former OSE Building. Additionally, this approval does not state nor imply a blanket approval for other new activities in the OSE Building or any other buildings within the former Mound Site’s boundaries.

This decision has been made in accordance with CERCLA requirements only and is independent of any state or local ordinances or zoning actions, as the U.S. government has no control over such activities.”

Appendix E contains the Core Team process developed to evaluate these requests and its evaluation and response to Pinnacle.

There were no new requests to the Core Team for new Mound site activities during the review period.

6.2.6 LM Records—Property Owners’ IC Compliance Forms

All current and future property owners are responsible for activities on their property and must ensure that contractors performing work understand and comply with the Mound site ICs.

LM asks owners to read, sign, and return the IC compliance form. LM received signed forms for five of the 10 property owners. Copies of completed forms are included in Appendix A.

6.3 Physical Inspections

6.3.1 Overview

The 2022 physical inspections examined the effectiveness of the IC remedy and the pump-and- treatment system in Building 300 that is one of the physical components of the groundwater remedies. All of the wells and seeps were inspected and photographed in 2021 and documented in the 2021 FYR (DOE 2021b).

As part of general site oversight, LMS contractor personnel periodically observed site activities throughout the review period for changed conditions that could indicate violations of ICs. These include soil removal, groundwater well installation, or land use other than industrial or commercial.

Qualified LMS contractor personnel conducted physical inspections of the site. Inspectors observed the former RCRA burn area, areas east of OU-1, and areas along Vanguard Boulevard, Enterprise Court, Vantage Point, Innovation Way, and Capstone Drive.

The following sections describe the results of the physical inspections, including the IC walkdown on May 10, 2022.

6.3.2 Former RCRA Burn Area

Photos taken during the LMS IC inspectors’ April physical inspections for the 2022 IC assessment in the city-owned, former RCRA burn area are shown in Figure 5 through Figure 10.

The LMS IC inspectors did not observe any changes or evidence of any new activities within the defined former RCRA burn area since the 2021 physical inspection.

The May 10, 2022, walkdown participants were unable to enter the former burn area because of a locked gate. The LMS inspector emailed Anthony Campbell of the Ohio EPA to ascertain whether it would be appropriate to use copies of the photos taken during the April physical inspection. Campbell emailed back and agreed that this satisfied the Ohio EPA requirement for an annual inspection. This email correspondence is included in Attachment A.



Figure 5. Sign on Gate Looking West Toward the Former RCRA Burn Area



Figure 6. Looking West from Gate Toward the Former RCRA Burn Area

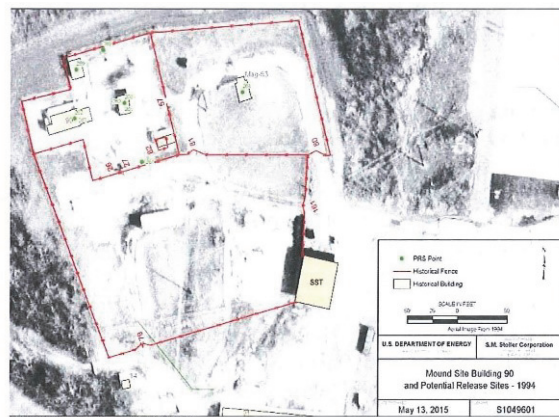


Figure 7. Diagram of RCRA Burn Area Boundary (Salt shed is not within the boundary.)



Figure 8. Looking West toward Salt Shed at Boundary of Former RCRA Burn Area (Salt shed is not within the boundary.)



Figure 9. Looking West from Corner of Salt Shed Toward Former RCRA Burn Area (Salt shed is not within the boundary.)



Figure 10. Looking West at Gary Weidenbach, LMS IC Inspector, near Former RCRA Burn Area

A sign on the entrance gate shown in Figure 5 indicates that the Miami Valley Fire District uses the area adjoining the former RCRA burn area for training. Several large storage containers are on the large concrete pad.

6.3.3 MDC Soil Staging Area

Inspectors observed no evidence that the MDC-designated onsite soil staging area west of Vanguard Boulevard was used during the IC assessment review period as shown in Figure 11.



Figure 11. No Evidence of Use of the MDC Soil Staging Area (Looking Southwest from Turnaround on Vanguard Boulevard)

6.3.4 T Building Special IC Areas

6.3.4.1 Background

The IC assessment inspections only cover the designated areas within T Building to which special ICs apply (i.e., survey units 1C-06, 1C-07, 1C-08, 1C-09, 1C-10, 1C-11, 1C-12, 1C-15, 1C-16, 1C-21, 1S-10, and SYS-02A/B/C), as shown in Figure 12. Survey units are shown in red

lettering, and room numbers are shown in black lettering. The red crosshatched areas are those covered with red concrete.

The special ICs for T Building prohibit (1) the penetration of concrete in the areas covered with red concrete (1C-10 and 1C-21) and (2) the removal of concrete in the other areas without prior approval from EPA, Ohio EPA, and ODH.

6.3.4.2 Red Concrete Cracks

After the Parcels 6, 7, and 8 ROD was approved, LM added those parcels to the 2010 annual IC assessment. During that physical inspection, inspectors noted small cracks in the red concrete in the special IC areas 1C-10 and 1C-21 of T Building. LM added closeup photographs of nine representative areas containing cracks in the 2012 annual IC assessment.

As detailed in the 2014 annual IC assessment report (DOE 2014), LM conducted extensive document and records reviews and interviews with individuals with historical knowledge of the T Building cleanup and installation of the red concrete cap. LM concluded that the cracks in the concrete were not a safety and health issue as long as the concrete remained structurally sound.

As a best management practice as the building owner at that time, LM filled the cracks in February 2015 with ATC 100, which is a single-component, elastomeric sealant without free isocyanates or solvents (i.e., volatile organic compounds). During the IC assessments for 2015–2022, inspectors found that the filler appears to be still sealing the cracks.

LM discontinued taking example closeup photographs of the cracks in areas A through I in the red concrete after the building transferred to private ownership in 2018. Appendix C contains the final LM closeup photographs of the sealed cracks in those example areas A through I that were taken in 2018. It also includes the product specification sheet for the ATC 100 filler. The T Building property owner is aware that the annual LM assessment of ICs will include a physical inspection of the special IC areas, regardless of whether the addition of new flooring obscures the concrete floor.

6.3.4.3 2022 T Building Inspection During IC Walkdown

LMS inspectors conducted a physical inspection of the T Building special IC areas shown in Figure 12 and the sump area in Room 99 outside of the door to SYS-02A/B/C on May 10, 2022, as shown in Figure 13 through Figure 22.

Inspectors were escorted by Steve Edwards of Buckeye Property Services Group. He advised that there had been no activities in the special IC areas within T building during the review period. The area was poorly lit, so inspectors used flashlights.

Inspectors observed some standing water in the special IC areas. The cracks appeared to remain sealed, and the red concrete cap appeared to be structurally sound.

Inspectors did not observe any violations of the ICs.

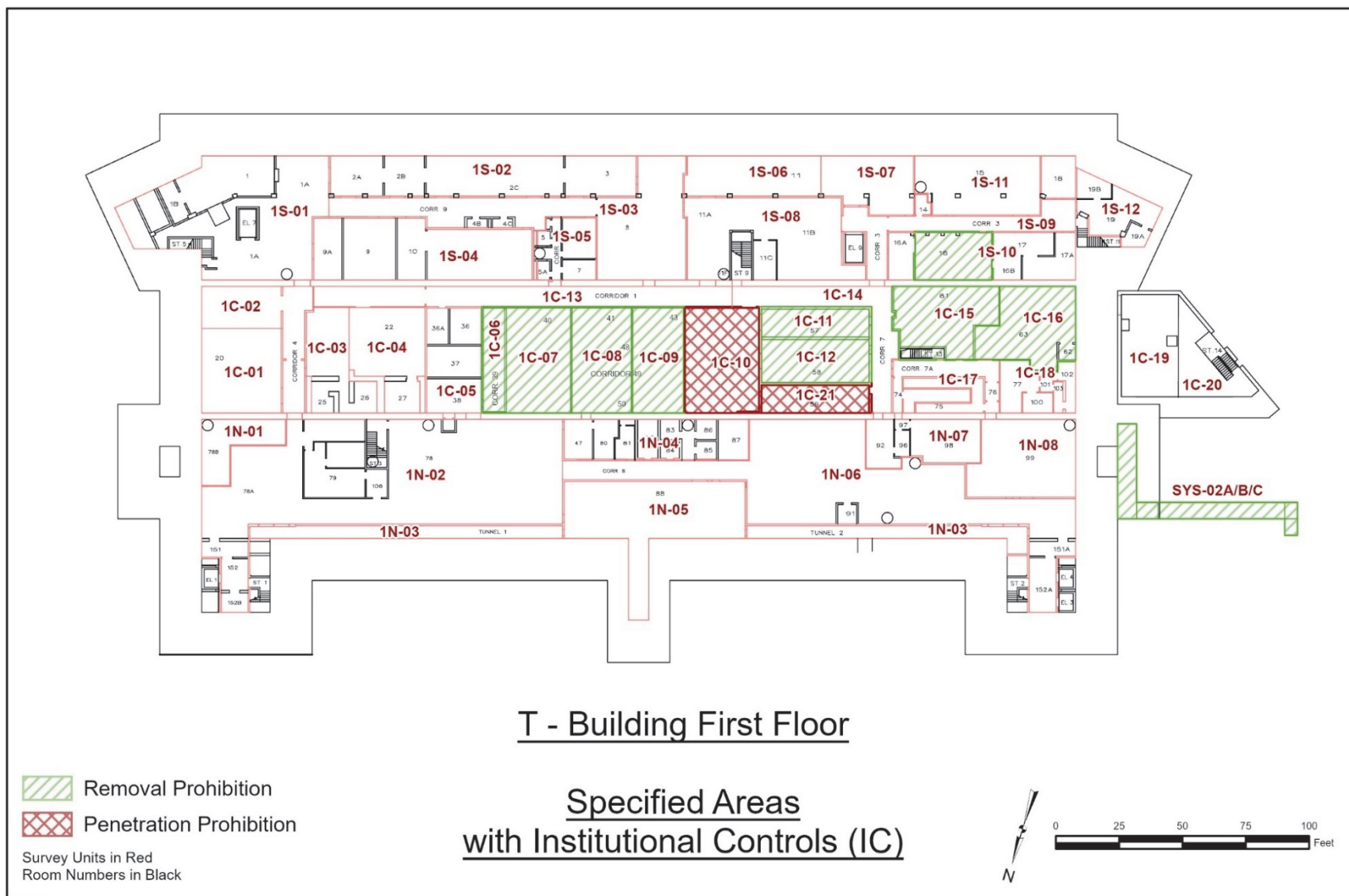


Figure 12. T Building First Floor Plan with Special IC Areas



Figure 13. May 10, 2022, IC Walkdown Group Entering T Building Tunnel



Figure 14. From Red Concrete Cap (1C-10) Looking East Toward Large Bay Area (1C-06 through 1C-09)



Figure 15. Walkdown Tour Group Inspecting Red Concrete Cap (1C-10)



Figure 16. Close up of Sealed Crack in the Red Concrete (1C-10)



Figure 17. Floor in Room T-57 (1C-11)



Figure 18. Sealed Cracks in Red Concrete Floor at 1C-10 Outside of T-57 (1C-11)



Figure 19. Floor in Room T-58 (1C-12)



Figure 20. Sealed Crack in Room 59 (1C-21)



*Figure 21. Access Door from Room 99 to
SYS 02-A/B/C Tunnel*



*Figure 22. Room 99 Sump Outside Door to
SYS 02-A/B/C Tunnel*

6.3.5 General Site Observations During Physical Inspections

6.3.5.1 Unused or Uninhabited Buildings

- **930 Capstone Drive Former Building 45:** Inspectors noted this building was empty and has a for sale or lease sign (Figure 23).
- **885 Mound Road Former Building 61:** Inspectors noted this building appeared to be unoccupied and has a for sale or lease sign (Figure 24).
- **955 Mound Road Former Building 126:** Inspectors noted that this building appeared to be unoccupied (Figure 25). Inspectors talked with GoKeyless personnel and learned that a leaking pipe had caused building damage, and the company was temporarily located in 965 Capstone Drive (former COS Building).
- **480 Vantage Point Former OSE Building:** Inspectors noted that this building appeared to be minimally occupied with only a few cars in the parking lot (Figure 26).



Figure 23. 930 Capstone Drive (former Building 45) Unoccupied



Figure 24. 885 Mound Road (former Building 61) Unoccupied



Figure 25. 955 Mound Road (former Building 126) Temporarily Unoccupied



Figure 26. 480 Vantage Point (former OSE Building)

6.3.5.2 Signs Near Pond

Inspectors observed “No Trespassing” and “NOTICE: Keep out of pond, No swimming, No fishing, No boating” signs around the pond near the southwest site entrance (Figure 27 and Figure 28). The pond near the southwestern entry to the Mound Business Park retains stormwater runoff.

Participants in the May 10, 2022, walkdown observed several people fishing in the pond and notified MDC and the city.



Figure 27. Sign near MDC/City Pond near SW Site Entrance



Figure 28. Sign East of MDC/City Pond Visible from Vanguard Blvd.

The MDC/City signs are not an IC. However, they inform the public not to trespass. Fishing in the pond is an example of trespassing. Such land use would not be consistent with the ICs; recreational use is in the list of specifically restricted land uses. The Core Team agreed in 2011 on the following position regarding signage at the pond:

The Second Five-Year Review for the DOE Mound site recommended that the issue of adequate signage around the Parcel 4 retention basin be addressed by DOE, EPA, and Ohio EPA. Signs placed around the basin to inform area visitors that recreational use around the basin is prohibited have been damaged and removed on several occasions by members of the public.

After reconsidering the exposure assumptions that were used to develop the industrial commercial cleanup standards for the Mound site, DOE, EPA, and Ohio EPA have reached the conclusion that occasional visits to the retention pond by area residents will not result in an unacceptable risk to the visitors. Even so, DOE and the MDC will continue to monitor and discourage these unauthorized uses of the Parcel 4 retention basin area. No further action is required to assure protectiveness of human health or the environment.

Additional discussion on the signage near the pond is included in the *Core Team IC Guidance Including Soil Removal*, (DOE 2012b), in Appendix D.

6.3.5.3 OU-1 Area in Parcel 9

The May 10, 2022, walkdown included a stop at the OU-1 area and Building 300. This was the first site visit for all of the new Mound Core Team members and new staff at MDC, Ohio EPA, and the LMS contractor.

Although not an IC, LMS inspectors confirmed that the OU-1 pump-and-treatment system that is a physical component of the groundwater remedy appeared to be in good physical condition. Photographs of the pump-and-treatment equipment in Building 300 is in standby mode until the final OU-1 groundwater remedy is complete.

Figure 29 through Figure 35 show the OU-1 area within Parcel 9. Figure 36 through Figure 38 show Building 300 and the OU-1 remedy pump-and-treatment system.



Figure 29. Walkdown Tour in the OU-1 Area Parking Lot



Figure 30. OU-1 Area East of Trailer



Figure 31. OU-1 Area Trailer at 1275 Vanguard Blvd.



Figure 32. OU-1 Area Trailer Looking West Toward Building 300



Figure 33. OU-1 Area Looking North from Trailer



Figure 34. OU-1 Area Looking Northeast Toward Building at 1100 Vanguard Blvd.



Figure 35. IC Walkdown Tour Inspecting Building 300 that Houses the Pump and Treatment System



Figure 36. Building 300



Figure 37. The Pump and Treatment System Inside Building 300 in Standby Mode



Figure 38. Controls for the Pump and Treatment System in Building 300

6.3.6 Physical Inspection Results

There were no observations of noncompliance with the ICs in any ROD parcel for the Mound site. In particular, there was no evidence of unauthorized groundwater well installation, soil removal, or site activities inconsistent with industrial or commercial use within any ROD parcel.

6.4 Communications with Property Owners

LM provides information on the Mound site ICs to all property owners each year during the IC assessment via a combination of email, phone, and face-to-face meetings. LM reviews the purpose and legal requirements for the ICs to emphasize their importance and to maintain institutional awareness of all ICs. LM gives each owner the IC compliance form to complete and return.

LM invited all property owners to a teleconference on April 26, 2022, with Tiffany Drake, LM Mound site manager, to review the ICs and the property owners' responsibilities.

7.0 Conclusions and Recommendations

The 2022 annual IC assessment determined that the ICs continue to function as designed, adequate oversight mechanisms are in place to identify possible violations of ICs, and adequate resources are available to correct or mitigate any problems if violations occur. There were no recommendations from this assessment.

8.0 Contact Information

For further information on the content of this annual IC assessment report or the DOE Mound site property in general, contact:

Tiffany Drake
Mound Site Manager
US. Department of Energy
Office of Legacy Management
7295 Highway 94 South
St. Charles, MO 63304
tiffany.drake@lm.doe.gov
(636) 485-0036 – cell
Alternate email: mound@lm.doe.gov

For further information on the regulatory guidelines that govern the CERCLA 120(h) process for property transfer of DOE Mound site property, contact either or both of the following people:

Syed Quadri, PMP
Remedial Project Manager
United States Environmental Protection Agency
Remedial Response Section # 5
77 West Jackson Blvd, Mail Code SR-6J
Chicago, IL 60604-3507
quadri.syed@epa.gov
Telephone: (312) 886-5736
Fax: (312) 353-8426

Scott Glum
Site Coordinator
Ohio Environmental Protection Agency
Southwest District Office
Division of Environmental Response and Revitalization
401 East Fifth Street, Dayton, OH 45402-2911
(937) 285-6065 (office); (937) 285-6404 (fax)
scott.glum@epa.ohio.gov

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Appendix A

Annual Assessment Checklist with Supporting Documents

Contents

1. IC Assessment Checklist.
2. IC Assessment preliminary inspection presentation given May 10, 2022.
3. Attendance sheet for IC Assessment preliminary inspection presentation.
4. Anthony Campbell, Ohio EPA, response to LMS IC inspector's email detailing LMS contractor's April 2022 inspection of Mound RCRA burn area. Response advised that the April 2022 RCRA area inspection was sufficient to meet the RCRA IC inspection requirements.
5. Ohio EPA letter, April 19, 2016, "U.S. DOE Mound Plant Burn Area Closure and Annual RCRA Institutional Control Inspection," advised that LM's IC Assessment satisfies Ohio EPA's RCRA annual IC reporting requirement. LM will include this letter in all future IC reports.
6. LM IC information sheet for handout to city of Miamisburg permit requestors.
7. Mound Site landowners IC compliance forms:
 - a. City of Miamisburg
 - b. Montgomery County Board of County Commissioners
 - c. Mound Development Corporation
 - d. Patriot Communications, LLC.
 - e. TWS Properties LLC – The Woodworking Shop LLC

Mound, Ohio, Site (Mound Site)
2022 LM Institutional Controls (ICs) Compliance Assessment Checklist
This checklist summarizes information from all inspections

IC Assessment began in March 2022.

Physical inspection walkdown with regulators and review of preliminary inspection results:

May 10, 2022

Review presented by Tiffany Drake, Mound LM site manager

Participants at walkdown: [See attached attendance sheet](#)

Status of any outstanding IC issues or recommendations from previous annual IC assessment reports, follow-up inspections, five-year reviews, etc.:

Origin	Issue/ Recommendation	Status 2022
2016 Annual IC Assessment	Clarify that the two areas in Phase I and BOI (Now GoKeyless) Tract 2 to the center line of Mound Road are exempted from the soil-removal IC.	IN PROCESS EM LM provided draft Release Document to EPA and Ohio EPA on 2/26/2017. Graphic to ODH on 3/21 and to Ohio EPA 4/13/17. Requires signature of current property owners Sharpstone (GoKeyless) transferred this area to City of Miamisburg for Mound Road right of way.
2017, 2018, 2019, 2020, and 2021 Annual IC Assessments	None identified	n/a
2021 Five-Year Review	None identified relating to IC remedies	n/a

Describe major physical property changes since the previous IC assessment. (Buildings demolished or erected, extensive landscaping, roads or parking lots constructed or modified, and so on?)

Inspectors did not observe, nor were made aware of, any construction activities or soil disturbance on the Mound site in which soil was removed from the site.

List individuals involved with the records or document reviews, discussions with property owners, and those interviewed as property owners.

LM/LMS contractor emailed the *Mound Site Landowners - Institutional Control Compliance Form* to each landowner of record to complete, sign, and return.

LM also invited representatives of property owners to a teleconference on April 26, 2022, to review the ICs.

Attendees:

- April Hauser, Property Manager, MDC
- Andrew Rodney, City of Miamisburg
- Marine Blank, Entrust Roofing
- Tiffany Drake, DOE-LM
- Greg Lupton, Joyce Massie, Jodi Keller, and Erin Coates, LMS contractors

LM received no responses to the emails or form reviews from ISS Unlimited (960 Capstone, Building 45), and the building was unoccupied.). No response from Pinnacle (OSE), Sharpstone (GoKeyless) (126), Entrust roofing (100), Mound Research (Jerry Abner Bldg. 61),

Greg Lupton, LMS contractor, provided managerial support.

Joyce Massie, LMS contractor, conducted physical inspections including walkdown, took photos, reviewed records, compiled and analyzed the inspection information, assembled the May 10 presentation, wrote, and coordinated technical editing of the IC Report, and coordinated report reviews.

Jodi Keller, LMS contractor, supported physical inspections including walkdown, took photos, conducted research, reviewed and edited report.

Gary Weidenbach, LMS contractor, supported physical inspections, took photos, and furnished information about activities observed during the review period (May 1, 2021 thru April 30, 2022).

Leslie Karacia and Sharon Long, Engineering Department, City of Miamisburg, responded to inquiries on the City permits. April Hauser, Jerry Green, and Andrew Rodney provided information on MDeC, Turner, and City information added to the IC report.

<p style="text-align: center;">Mound, Ohio, Site (Mound Site) 2022 LM Institutional Controls (ICs) Compliance Assessment Checklist This checklist summarizes information from all inspections</p>
<p>List site use requests for site activities not covered by industrial/commercial use. Include copies of requests and regulators' responses in IC report.</p> <p>The Core Team evaluated and approved of the Pinnacle Architects request for new site activities with specific bounding condition.</p> <ul style="list-style-type: none"> Conference center - special event venue with catered food and drink Restaurant - sale of food to the public with cafeteria and dining room Medical office <p>The approval (details and letter in IC report) only applied to the Pinnacle property. The owner also has to get approval for variance to all City and MDC restrictions and requirements .</p>
<p>List the city, township, county, and state records reviewed for the period of the review. e.g., street opening permits or construction permits, engineering drawings for improvements to property, aerial photographs, maps, City Planning Commission requests, and Ohio Department of Natural Resources (ODNR) well logs.</p> <p>One City permit was reported</p> <p>No new wells were found on the ODNR well log web page.</p>
<p>On the basis of the review of documents and interviews, were property improvements covered by the appropriate approvals? (For example, were construction permits approved by the City of Miamisburg?)</p> <p>IC inspector found no evidence of work performed within Mound site boundary in manner that was not compliant with the ICs</p>
<p>Based on the review of MDC Reuse Plan Update, Miamisburg Zoning Map, and Miamisburg Land Use Plan, were any changes made to those documents that affect IC compliance?</p> <p>Minor changes to the MB-1 zoning regulations were made in 2021 (Ord. 6869).</p> <p>A summary of the changes consisted of the following:</p> <ul style="list-style-type: none"> • Clarified the List of Permitted Uses #6 and #7 to include the term "fabrication." • Added "Light Sheet Metal Products Fabrication" as a Permitted Use. • Removed "Data Processing and Computer Centers" and "Computer Equipment Service Establishments" from the list of Permitted Uses. <p>Mr. Andrew E. Rodney, AICP, City Planner with the City of Miamisburg stated all new permittees in the MB-1 district are provided an IC Info Sheet with their permits.</p>
<p>List the property ownership changes. List the legal property documents reviewed to determine if ownership had changed (e.g., quitclaim deeds, environmental covenants, county property records).</p> <p>Three deeds changing ownership for seven Mound site parcels were found on the Montgomery County Auditor's website, Montgomery County (mcraestate.org). The ownership changes were also found on the Montgomery County Recorder's website, RISS Montgomery County, OH (mcrcorder.org)</p> <ul style="list-style-type: none"> • 6-22-21 Deed 021-00047140 MDC to City, Parcels that DOE transferred to MDC in 2019 <ul style="list-style-type: none"> K46 00503 0034-Lot 8066 K46 00503 0035 Lot 8067, containing COS Building at 965 Capstone Drive K46 00503 0036-Lot 8068 K46 00503 0037 Lot 8069 K46 00503 0038-Lot 8070, containing part of Excelitas Building at 1100 Vanguard Blvd. • 7-6-21 Deed 21-00050359 City transferred to MDC, Parcel K46 01507 0040 – Flex Bldg. • 12-9-21 Deed 21- 00092524 Robert S. Dyrdek Living Trust to Oscar Lopez, Parcel K46 01507 003 - Bldg. 100
<p>If property ownership changed, were the requirements for IC compliance included in the legal documents (deeds, etc.) filed with Montgomery County?</p> <p>All three deeds referenced previous deeds. None of the deeds specifically referenced the ICs.</p> <p>Written notice to Ohio EPA was not completed for transfer of areas of Parcel 9 as required by the Environmental Covenant (EC) requirement. This MDC deed did not reference the EC or the required wording.</p> <p>For parcels covered by Parcel 9 environmental covenant, was Ohio EPA notified of the property transfers?</p> <p>No.</p>

Mound, Ohio, Site (Mound Site) 2022 LM Institutional Controls (ICs) Compliance Assessment Checklist This checklist summarizes information from all inspections
Provide detail on any other issues identified during this assessment. No other issues specifically relating to ICs were identified.
Were there any reported issues relating to access by DOE, EPA, Ohio EPA, ODH, their agents, contractors, or employees to property to implement or enforce the ICs? None reported
Observations during physical inspections:
Evidence of unauthorized soil removal? No.
Evidence of unauthorized groundwater use? No.
Evidence of land use other than “industrial” (e.g., residential)? No
T Building only - areas with additional institutional controls. Have ICs been followed? No evidence of penetration or removal of concrete in special IC areas. Observed wet areas in the bay area and Rooms 57 and 58. Insufficient lighting was a factor during the walkdown.
Based on physical inspections, records reviews, questionnaires, and interviews, was there evidence of IC noncompliance? No
Recommendations from 2021 IC inspections or records reviews: None
Recommendations from participants in the May 10, 2022, IC walkdown : None
Conclusion/comments:

2022 Annual Assessment of Institutional Controls at the Mound, Ohio, Site

Preliminary Inspection Results

Tiffany Drake
Mound Site Manager
U.S. Department of Energy (DOE)
Office of Legacy Management (LM)
May 10, 2022

1

Agenda – Mound Site IC Assessment Walkdown

- 9:00 Welcome and Introductions
- 9:05 – 10:05 LM presentation, discussions, safety briefing
- 10:10 – 11:45 Walking and driving tour (personal cars)
 - T Building 1st floor (next door to MDC)
 - Main hill area and on-site roadways
 - RCRA Burn Area
 - OU-1
 - Drive to any other areas as requested.
 - Return to MDC conference room for any Q&A
- 12:00 – 1:45 Lunch– all welcome at local restaurant



2

2

Institutional Controls

- Institutional controls (ICs) are:
 - Important part of CERCLA remedy.
 - Used as legal and administrative tools.
 - Designed to protect human health and the environment.



3

3

Mound Site Institutional Controls

- Implemented under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).
- Defined as part of the remedy in CERCLA Records of Decision (RODs).
- Run with the land in the form of activity and use limitations.
- Incorporated into DOE quitclaim deed restrictions and/or the Parcel 9 Environmental Covenant recorded with Montgomery County.
- Apply to all future land and groundwater uses, including removal of soil from footprint of original DOE Mound Plant boundary.

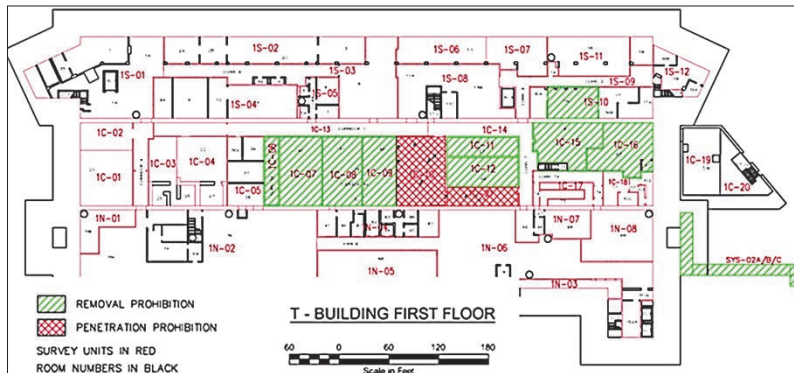


4

4

Special ICs Apply to Certain Areas in T-Building

- Prohibit penetration of red concrete floors (**red areas**).*
- Prohibit removal of concrete floor material (**green areas**).*



*Without prior approval from the EPA, Ohio EPA, and ODH.



7

7

Purpose of Annual IC Assessments

- Determine whether:
 - ICs continue to function as designed.
 - Adequate oversight mechanisms are in place to identify possible violations of ICs.
 - Sufficient resources are available to correct or mitigate any problems if violations occur.
- Examine changes that could indicate an IC violation, such as:
 - Land use other than for industrial or commercial.
 - Unapproved use of groundwater.
 - Unapproved removal of soil from original 306-acre site footprint.
 - Unapproved penetration or removal of concrete from special IC areas on T-Building first floor.



8

8

Annual IC Assessment Process

- Review status of previous findings or recommendations.
- Review site information
- Conduct preliminary physical inspections.
 - Identify any non-compliance with ICs.
 - Identify other changed site conditions (e.g., construction).
 - Document observations or information gathered throughout the assessment period.
- Review applicable local and state records, including but not limited to:
 - Montgomery County property records.
 - City of Miamisburg permits.
 - Construction, street opening, building occupancy, etc.
 - Zoning modification requests.
 - Ohio Department of Natural Resources (ODNR) website for well drilling and abandonments.



9

9

Annual IC Assessment Process (continued)

- Host a teleconference with site property owners to review ICs and discuss any issues
- Request site property owners to review ICs and sign compliance form.
- Conduct a site walk down with regulators, MDC, and the City of Miamisburg
- Publish IC assessment report by June 13 of each year *



10

* per EPA/Ohio EPA agreement

10

Previous IC Assessment Recommendations

Source	Recommendation	Status in 2022
2016	Clarify that the two areas (Phase I and GoKeyless Tract 2 to the center line of Mound Road) are exempted from the soil-removal IC. Note: Quitclaim deeds for all other parcels along Mound and Benner roads contain the exemption wording.	IN PROCESS Quitclaim deeds did not include the soil exemption language for those two areas (exemption should apply). LM, EPA, Ohio EPA, and ODH are working to resolve. Note: Go Keyless (Sharpstone) transferred the Tract 2 area to city of Miamisburg for road right of way in August 2019.



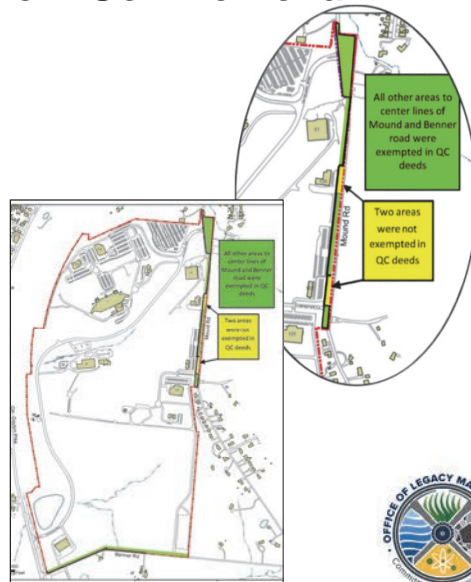
11

11

Off-site Roadway Exemptions from Soil Removal Restrictions

- Original site boundary extended to the center lines of Mound and Benner Roads.
- No site activities occurred in those areas.
- DOE exempted all areas along Benner Road from soil removal IC in the quitclaim deeds.
- DOE exempted *most* areas along Mound Road from the soil removal IC in the quitclaim deeds.
- Two areas to center line of Mound Road *were not exempted* from soil removal IC in those quitclaim deeds or in subsequent property transfers:
 - Go Keyless (transferred to City of Miamisburg as roadway)
 - MDC - Mound Cold War Discovery Center.

****Note** All ICs apply to all on-site roadways.**



12

12

Summary of Observations to Date

- Based upon information since the last annual assessment inspection and the review of records for the 2022 annual IC assessment reporting period, there have been no observed IC violations.
- Today's site walkdown completes the physical inspections including T Building Special IC areas.
- All results will be documented in the annual IC assessment report.

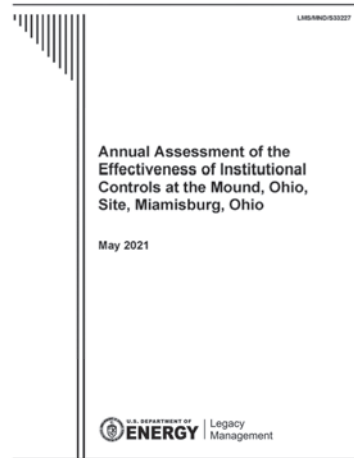


15

15

Annual IC Assessment Report

- Details all assessment results.
- Documents changes since 2021 annual IC assessment.
- Addresses recommendations from previous reports.
- Contains checklist of observations.
- Contains photos.
- Published and distributed by email by June 13, 2022.
- Uploaded to Mound site webpage at [cercla \(doe.gov\)](https://cercla.doe.gov)



16

16

Questions?



Tiffany Drake
Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Tiffany.drake@lm.doe.gov



17

17

Request for New Site Activity

- Pinnacle Architects requested approval for new activities in OSE Building:
 - Conference center - special event venue with catered food and drink
 - Restaurant - sale of food to the public with cafeteria and dining room
 - Medical office - physician offices for routine medical services



18

18

Core Team Approved the Request

- The Core Team (LM, EPA, and Ohio EPA) evaluated the request and concluded the proposed activity uses along with the proposed bounding conditions provided in the Pinnacle request (and if followed by property owner, tenants, or visitors) would not result in unsafe exposures for either employees over the age of 16 years, or adult or child visitors.
- Approval only applies to the activities specified in the former OSE Building. Not a blanket site approval.
- Approval is independent of any state or local ordinances or zoning requirements.
- Applicant is responsible for any other state, or local business requirements.



19

19

Site Walkdown Today

- Safety briefing, review and sign job safety analysis
- Walking tour of T Building first floor
- Tour in personal vehicles with an LM/RSI representative in each
 - Drive around all site areas
 - Stop at the RCRA Burn Area, walk
 - Stop at OU-1 area parking lot
 - Add stops as requested by participants
- Return any comments on checklist at the end of tour
- Return to MDC conference room for wrap up



20

20

Job Safety Analysis (JSA)

Descriptive title: COVID-19 Office and Field JSA

JSA number: LMS-005

I have reviewed, understand the hazards present at the worksite, and will comply with the Integrated Work Control Process document to perform work, as acknowledged by my signature below. I understand the JSA does not authorize work.




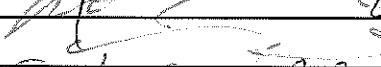


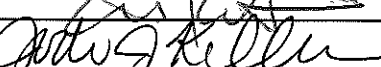
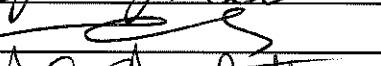
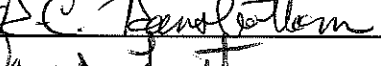

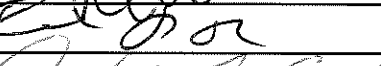




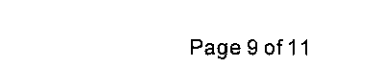


Print Name	Signature	Company	Date
JODI J. KELLER	Jodi J. Keller	RSI	5.10.22
John Hosen	John Hosen	RSI	5.10.22
R.C. Dausbottom	R.C. DAUSBOTTOM	RSI	5/10/22
JOYCE MASSIE	Joyce Massie	RSI	5/10/22
GREG LUPTON	Greg Lupton	RSI	5/10/22
Syed M. Quadri	Syed M. Quadri	USEPA	5/10/22
Tiffany Drake	Tiffany Drake	DOE	5/10/22
Anthony J. Campbell	Anthony J. Campbell	OHIO EPA	5/10/2022
Scott Glum	Scott Glum	Ohio EPA	5/10/2022
Salvatore Marchese	Salvatore Marchese	Ohio EPA	5/10/2022
Melissa Langton	Melissa Langton	OHIO EPA	5/10/2022
Shannon DeStimor	Shannon DeStimor	ODH	5/10/22
Dick Church	DICK CHURCH	MDL	5/10/22
Ellen Stanifer	Ellen Stanifer	City of Miamisburg	5-10-22
April Hauser	April Hauser	MDC	5/10/22

Job Safety Analysis (JSA)

Descriptive title: Site and Building Tours and Inspections

JSA number: MND-004

I have reviewed, understand the hazards present at the worksite, and will comply with the Integrated Work Control Process document to perform work, as acknowledged by my signature below. I understand the JSA does not authorize work.

Print Name	Signature	Company	Date
JEFF BACE		RSI	1-20-2022
Jeff Lynn		Amentum	1/20/22
Yvonne Deyo		RSI	01/20/2022
Lisa Sankar		RSI	2/8/22
3rd Scholain		DOE	2/8/22
Jodi J. Keller		RSI	4/6/22
JOYCE MASSIE		RSI Center	4-6-22
Evan Kirk		RSI	5-10-22
Jodi J. Keller		RSI	5-10-22
Don Horan		RSI	5-10-22
P.C. BAUSBOTTOM		RSI	5/10/22
GREG LUTON		RSI	5/10/22
Syed M. Quadri		USEPA	5/10/22
Tiffany Dral		DOE	5/10/22
Anthony T. Campbell		OHIO EPA	5/10/2022
Scott Gilum		Ohio EPA	5/10/2022
Salvatore Marchese		Ohio EPA	5/10/2022
Melissa Langton		OHIO EPA	5/10/2022

Shannon Dettmer

Dick Church

Ellen Stanifer

April Hauser

~~Shannon Dettmer~~
Dick Church

Ellen Stauffer

JP HH

5/10/22

5/10/22

5/10/22

5/10/22

From: anthony.campbell@epa.ohio.gov
To: Drake, Tiffany; Massie, Joyce (CONTR); scott.glum@epa.ohio.gov
Cc: [Lupton, Gregory \(CONTR\)](mailto:Lupton, Gregory (CONTR)@lm.doe.gov); [Keller, Jodi \(CONTR\)](mailto:Keller, Jodi (CONTR)@lm.doe.gov); [April Hauser MDC](mailto:April Hauser MDC@lm.doe.gov); [Weidenbach, Gary \(CONTR\)](mailto:Weidenbach, Gary (CONTR)@lm.doe.gov); [Homer, John \(CONTR\)](mailto:Homer, John (CONTR)@lm.doe.gov); randall.kirkland@epa.ohio.gov
Subject: [EXTERNAL] RE: Pictures Mound site RCRA area 4-5-22
Date: Thursday, May 12, 2022 8:07:33 AM
Attachments: [image001.png](#)
[image002.png](#)

****This message originated from OUTSIDE of the Legacy Management email system.****
Use extra caution if this message contains attachments, links, or requests for information.

Hello Tiffany,

It was a pleasure meeting you on Tuesday. I hope that you and your family are doing well. After talking with Scott and Randy Kirkland (Manager/RCRA C Hazardous Waste Program/DERR-SWDO), the photos of the RCRA burn areas taken on April 5, 2022, will be sufficient in meeting the requirements of the inspection. Thank you for your time and patience.

Sincerely,

Anthony T. Campbell, Environmental Specialist II-Site Coordinator
Division of Environmental Response and Revitalization
Remedial Response Section
401 East Fifth Street, Dayton, Ohio 45402
Ph: 937-285-6069
Business Mobile: 937-789-8265
Fax: 937-285-6404
Anthony.Campbell@epa.ohio.gov



From: Drake, Tiffany <tiffany.drake@lm.doe.gov>
Sent: Wednesday, May 11, 2022 4:58 PM
To: Massie, Joyce (CONTR) <Joyce.Massie@lm.doe.gov>; Campbell, Anthony <anthony.campbell@epa.ohio.gov>; Glum, Scott <scott.glum@epa.ohio.gov>
Cc: Lupton, Gregory (CONTR) <Gregory.Lupton@lm.doe.gov>; Keller, Jodi (CONTR) <jodi.keller@lm.doe.gov>; April Hauser MDC <Aprilh@mound.com>; Weidenbach, Gary (CONTR) <Gary.Weidenbach@lm.doe.gov>; Homer, John (CONTR) <John.Homer@lm.doe.gov>
Subject: RE: Pictures Mound site RCRA area 4-5-22

Anthony,

I would also like to extend my appreciate of your understanding yesterday with regards to the locks

on the gate for access to the RCRA burn areas.

As we discussed yesterday, Gary will be more than happy to show you (and Scott, if he is also interested) the RCRA burn area in the coming weeks.

I appreciated the opportunity to meet you in person yesterday.

VR,

Tiffany Drake, PE

Site Manager

US. Department of Energy – Office of Legacy Management

7295 Highway 94 South

St. Charles, MO 63304

tiffany.drake@lm.doe.gov

636-485-0036 – cell

From: Massie, Joyce (CONTR) <Joyce.Massie@lm.doe.gov>

Sent: Wednesday, May 11, 2022 11:48 AM

To: Anthony Campbell Ohio EPA <anthony.campbell@epa.ohio.gov>; Scott Glum Ohio EPA <scott.glum@epa.ohio.gov>

Cc: Drake, Tiffany <tiffany.drake@lm.doe.gov>; Lupton, Gregory (CONTR) <Gregory.Lupton@lm.doe.gov>; Keller, Jodi (CONTR) <jodi.keller@lm.doe.gov>; April Hauser MDC <Aprilh@mound.com>; Weidenbach, Gary (CONTR) <Gary.Weidenbach@lm.doe.gov>; Homer, John (CONTR) <John.Homer@lm.doe.gov>

Subject: Pictures Mound site RCRA area 4-5-22

Anthony,

Attaching April 5, 2022 photos taken of the RCRA Burn Area on the Mound site when Gary Weidenbach, Jodi Keller, and I walked the area for the IC assessment inspection.

We saw no evidence of any activities within the Burn Area boundary since the 2021 physical inspection.

This information will be included in the Mound site 2022 IC assessment report. Each annual IC report states:

“The former Burn Area that was remediated under the Resource Conservation and Recovery Act (RCRA) is within the Mound Plant property boundary. In April 2016, Ohio EPA’s RCRA organization recorded its decision to not continue a separate Ohio EPA IC inspection of the former Burn Area at the Mound site, as documented in the letter in Appendix A. This letter advised LM that Ohio EPA will rely on the LM annual IC assessment to verify compliance with the RCRA ICs, which are the same as the CERCLA ICs for that area of the Mound site. LM includes the Ohio EPA RCRA program supervisor in the distribution list for this annual CERCLA IC assessment report.”

Also attaching: RCRA Burn Area outline and the 2016 Ohio EPA letter..

We will arrange a physical inspection for you when you wish some time after May 23.

Thanks, be well.

Joyce Massie | Technical Support

Mound, Ohio, Site

Joyce.massie@lm.doe.gov
937-287-1333 mobile



U.S. Department of Energy Office of Legacy Management Support Contractor

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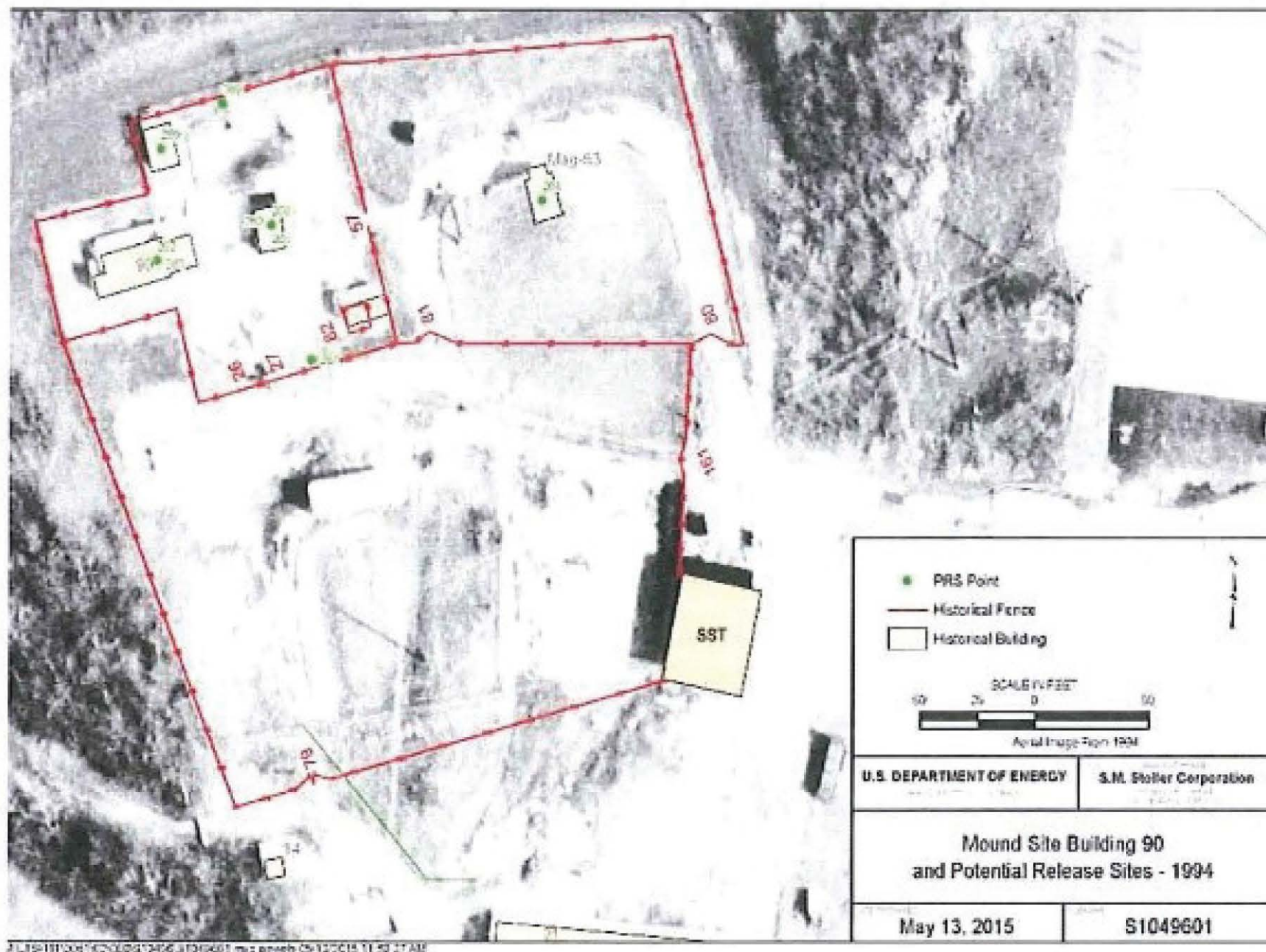


Figure 1 Burn Area



4. 5. 2022



4. 5. 2022



4. 5. 2022



4. 5. 2022



4. 5. 2022



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

April 19, 2016

Ms. Gwendolyn Hooten
U.S. Department of Energy
Office of Legacy Management
11025 Dover Street, Suite 1000
Westminster, Colorado 80021

Re: US DOE Mound Fac, Miamisburg
Remediation Response
Correspondence
RCRA C - Hazardous Waste
Montgomery County
OH6890008984

**Subject: U.S. DOE Mound Plant Burn Area Closure and Annual RCRA
Institutional Control Inspection**

Dear Ms. Hooten:

The purpose of this memo is to memorialize Ohio EPA's Resource Conservation and Recovery Act (RCRA) decision to not continue a separate institutional control inspection at the United States Department of Energy (U.S. DOE) Mound site.

On August 16th, 1996, Ohio EPA approved a closure plan for the burn area (consisting of 6 regulated units) at the U.S. DOE Mound site located in Miamisburg, Ohio (Mound Site). This closure plan was to be a closure by removal. Work was completed per the approved closure plan, however, confirmatory soil samples exceeded the closure performance standard for Antimony. As a result of this, U.S. DOE decided to amend the approved closure plan to include a risk assessment to close out the site soils. This amendment was received on February 9, 1998. This amendment also included the closure certification report for the other areas within the burn area that had met the closure performance standard. The closure certification did not come under separate cover as is typical and was included in the February 1998 closure plan amendment. Ohio EPA can't document approval of this plan amendment or acceptance of the closure certification report. On June 28, 1999, U.S. DOE again amended the closure plan to include an industrial re-use deed restriction on the burn area property. Approval of this plan was granted by Ohio EPA on July 26, 1999. It must be assumed that with this July 1999 approval of the amended plan, which contained the previously submitted risk assessment and closure certification, that Ohio EPA deemed the closure performance standard to have been met. A secondary review of this document, completed prior to the crafting of this letter concurs with the findings.

There are five RCRA/CERCLA Institutional Controls (IC's) at the Mound Site. These include:

1. Maintenance of industrial/commercial land use
2. Prohibition against residential use
3. Prohibition against use of ground water
4. Site access for federal and state agencies for environmental monitoring
5. Prohibition of removal of Phase 1 CERCLA soils without approval

As a result of the final Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) cleanup of the entire Mound Site, the U.S. DOE in conjunction with U.S. EPA, Ohio EPA, Ohio Department of Health, Mound Development Corporation and the city of Miamisburg perform annual inspections of the IC's. A report is generated from this annual inspection documenting findings and any corrective measures needed to maintain the IC's. The burn area is a part of this annual inspection as there were nine additional potential release sites remediated in the burn area which had not been covered under the RCRA closure. Ohio EPA conducts a separate annual inspection of the burn area to verify that the industrial reuse scenario is being followed and the area maintained as described in the approved closure plan, with inspection correspondence being sent to the land owner. This inspection is not required by rule, but is done as a matter of internal policy within Ohio EPA. Based upon that fact that two identical, yet programmatically separate inspections are occurring at the burn area, Ohio EPA recommends eliminating the separate RCRA inspection and will rely on the CERCLA inspection to verify compliance with the IC's. A copy of the CERCLA inspection report must be sent to Ohio EPA's current RCRA program supervisor to ensure we are able to document compliance with the recommended RCRA inspection schedule. However, if at any time in the future, the CERCLA inspection is discontinued, Ohio EPA will require the RCRA inspection be conducted on an annual basis consistent with the procedures established prior to the issuance of this letter.

Ms. Gwendolyn Hooten
U.S. DOE Mound, Miamisburg, Burn Area Annual RCRA IC Inspection
April 19, 2016
Page 3 of 3

If there are any questions, please contact me at (937) 285-6035.

Sincerely,

A handwritten signature in black ink, appearing to read 'RGK', with a stylized flourish at the end.

Randall G. Kirkland
Environmental Supervisor
Division of Environmental Response and Revitalization

cc: Brian Nickel, Ohio EPA, DERR
Anthony Campbell, Ohio EPA, DERR
Erik Hagen, Ohio EPA, DERR
Robyn Winstead, Ohio EPA, DERR
David Seely, U.S. EPA, RPM
Larry Kelly, EM Consolidated Business Center
Chris Fine, City of Miamisburg
Eric Cluxton, Mound Development Corporation

RGK/bp



Information Sheet for City of Miamisburg Permit Applicants Conducting Work at the Mound Business Park

The Mound Business Park was formerly the U.S Department of Energy (DOE) Mound Plant site that operated from 1948 to 2003 in support of the U.S. weapons and energy programs. DOE conducted a \$1 billion cleanup of the site under the Comprehensive Environmental Response, Compensation, and Liability Act that was overseen by the U.S. Environmental Protection Agency (EPA) and Ohio EPA.

The Mound Business Park is approved for industrial or commercial use, with certain restrictions known as institutional controls (ICs) that ensure conditions at the site remain protective of human health and the environment. DOE Office of Legacy Management is responsible for monitoring and enforcing the ICs.



Any work conducted within the boundary of the Mound Business Park (shown as a pink dotted outline on the attached map), **must comply with the following ICs:**

- Limit site activities to industrial or commercial use (e.g., no recreational, residential, or agricultural use).
- Prohibit the removal of soil from the original DOE site footprint without written approval from EPA, Ohio EPA, and Ohio Department of Health (ODH).
- Prohibit use of groundwater for any purpose without written approval from EPA and Ohio EPA.
- Allow site access for federal and state agencies for sampling and monitoring.
- Prohibit the removal of concrete floor materials to off-site locations and/or the penetration of floor materials in specified rooms of the former DOE Technical Building (located at 945 Capstone Drive), without written approval from EPA, Ohio EPA, and ODH.

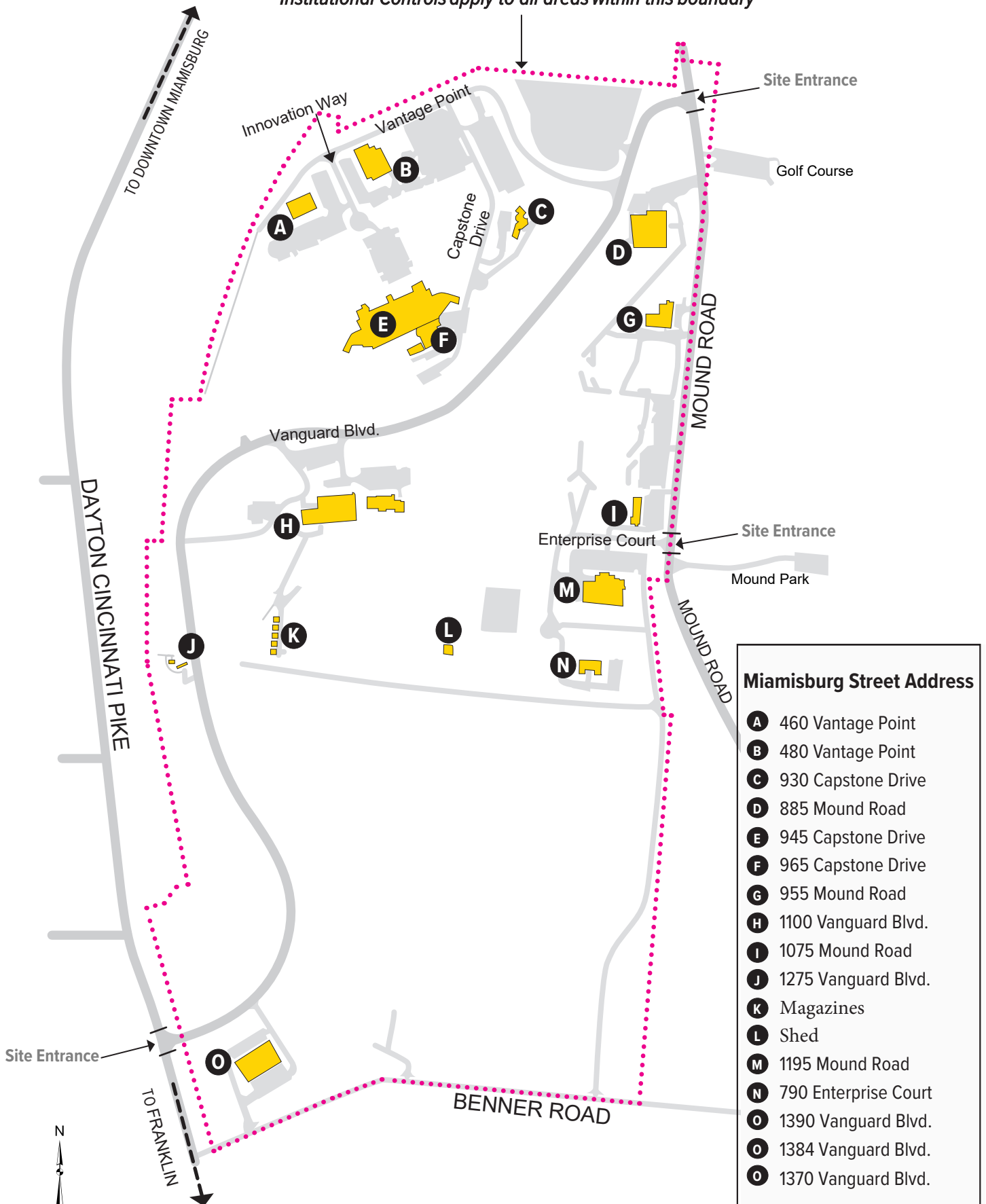
Any work involving excavation along portions of Mound and Benner roads that border the former DOE Mound Plant site may also be subject to above soil-removal IC. If such work is proposed, please provide specific details in the permit application (e.g., clearly define the section of road where excavation may be required, including the approximate distance of the excavation or soil-staging activities that may extend onto business park property).

Additional information on the Mound site cleanup and current site conditions can be found at <https://www.lm.doe.gov/mound/Sites.aspx>. If you need additional information or have questions, please contact the DOE Office of Legacy Management at (513) 648-5051 or by emailing mound@lm.doe.gov.



MOUND BUSINESS PARK

Institutional Controls apply to all areas within this boundary



Mound Site Landowners – Institutional Controls Compliance Form - 2022

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Because the Mound Site is not approved for unlimited use, the CERCLA remedies include institutional controls (ICs) in the form of use restrictions imposed by DOE quitclaim deeds and an environmental covenant. ICs are administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the CERCLA remedy. ICs apply to all property on the Mound site. The DOE Office of Legacy Management (LM) is required to monitor the site for adherence to the ICs to assure compliance.

LM conducts an annual assessment each year to assure that the ICs at Mound remain effective and that the Mound site continues to remain protective of human health and the environment. This form reminds the property owners of the IC requirements.

Please acknowledge below that you understand and comply with the following ICs for the period of February 1, 2021, to April 15, 2022. The Mound Site ICs are designed to:

- 1) **Prohibit the removal of soil** from the original DOE Mound Plant Property boundaries, unless prior written approval from EPA, Ohio EPA, and Ohio Department of Health (ODH) has been obtained.
- 2) **Prohibit the extraction or consumption of, exposure to, or the use in any way of the groundwater** underlying the premises, unless prior written approval from EPA and Ohio EPA has been obtained.
- 3) **Limit land use to industrial/commercial use only.** The Record of Decision for each parcel identifies land uses that will not be permitted, but the list is not all-inclusive. Parcels may not be used for any residential or farming activities, or any activities that could result in the chronic exposure of children less than 18 years of age to soil or groundwater from the premises. Restricted uses include, but are not limited to:
 - Single or multi-family dwellings or rental units.
 - Daycare facilities.
 - Schools or other educational facilities for children less than 18 years of age.
 - Community centers, playgrounds, or other recreational or religious facilities for children less than 18 years of age.
- 4) **Prohibit the removal of concrete floor material in specified rooms of T Building** to off-site locations without prior approval from EPA, Ohio EPA, and ODH.
- 5) **Prohibit the penetration of concrete floors in specified rooms of T Building** without prior approval from EPA, Ohio EPA, and ODH.

Mound Site Landowners – Institutional Controls Compliance Form - 2022

- 6) **Allow site access** to federal and state agencies and their contractors for sampling and monitoring.

As a property owner or company representative, I understand and comply with these ICs.

Keith Johnson  4/21/22
Printed Name Signature Date

City Manager City of Miamisburg
Title Company

Various vacant land
Property Address

Please return the signed form within 10 days via email to: Mound@lm.doe.gov

If you have any questions about the ICs, please contact:

Tiffany Drake
Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
tiffany.drake@lm.doe.gov

Mound Site Landowners – Institutional Controls Compliance Form - 2022

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 - Daycare facilities.
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Mound Site Landowners – Institutional Controls Compliance Form - 2022

- 6) **Allow site access** to federal and state agencies and their contractors for sampling and monitoring.

As a property owner or company representative, I understand and comply with these ICs.

JAY L. WHEELER  4.19.2022
Printed Name Signature Date

CAPTAIN MONTGOMERY COUNTY SHERIFF
Title Company

460 VANTAGE PT. MIAMSBURG, OH 45342
Property Address

Please return the signed form within 10 days via email to: Mound@lm.doe.gov

If you have any questions about the ICs, please contact:

Tiffany Drake
Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
tiffany.drake@lm.doe.gov

Mound Site Landowners – Institutional Controls Compliance Form - 2022

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Mound Site Landowners – Institutional Controls Compliance Form - 2022

- 6) **Allow site access** to federal and state agencies and their contractors for sampling and monitoring.

As a property owner or company representative, I understand and comply with these ICs.

Richard Church Jr. Richard Church Jr. 4-25-2022
Printed Name Signature Date

Administrator Mound Development Corp.
Title Company

965 Capstone Dr. Ste 252 Miamisburg, OH
Property Address 45342

Please return the signed form within 10 days via email to: Mound@lm.doe.gov

If you have any questions about the ICs, please contact:

Tiffany Drake
Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
tiffany.drake@lm.doe.gov

Mound Site Landowners – Institutional Controls Compliance Form - 2022

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Mound Site Landowners – Institutional Controls Compliance Form - 2022

- 6) Allow site access to federal and state agencies and their contractors for sampling and monitoring.

As a property owner or company representative, I understand and comply with these ICs.

SCOTT THOMAS [Signature] 05.12.2022
Printed Name Signature Date

OWNER PATRIOT COMMUNICATIONS
Title Company

945 CAPSTONE DRIVE
Property Address

Please return the signed form within 10 days via email to: Mound@lm.doc.gov

If you have any questions about the ICs, please contact:

Tiffany Drake
Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
tiffany.drake@lm.doc.gov

Mound Site Landowners – Institutional Controls Compliance Form - 2022

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Mound Site Landowners – Institutional Controls Compliance Form - 2022

- 6) **Allow site access** to federal and state agencies and their contractors for sampling and monitoring.

As a property owner or company representative, I understand and comply with these ICs.

Mark Sam Mark Sam 4/18/22
Printed Name Signature Date

Owner TWS Properties LLC
Title Company

1195 Mound Rd Miamisburg OH 45342
Property Address

Please return the signed form within 10 days via email to: Mound@lm.doe.gov

If you have any questions about the ICs, please contact:

Tiffany Drake
Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
tiffany.drake@lm.doe.gov

Appendix B

Property Ownership, Sales, and Building Information

Contents

1. Table B-1. Mound Site Building Identifications, Street Addresses, Ownership, County Parcels
2. Table B-2. Mound Site Buildings Demolished by MDC
3. Table B-3. Mound Site Property Details—April 30, 2022
4. Table B-4. Acreage Reconciliations

Table B-1. Mound Site Building Identifications, Street Addresses, Ownership, County Parcels

DOE Building ID	Former DOE Building Descriptions	Current Building Occupant	Current Miamisburg Street Address	DOE ROD Parcel ID	Property Owner	County Parcel ID
45	Health Physics Calibration Facility	Unoccupied	930 Capstone Drive	6	Kierston Olivia LLC	K46 01507 0045
61	Logistical Support Warehouse	Advanced Service Technologies	885 Mound Road	7 & 8	Mound Research LLC	K46 01507 0046
3	TF Area Destructive and Environmental Testing Laboratory	Excelitas Technologies Corp.	1100 Vanguard Blvd.	IB	MDC	K46 01507 0032
87	Explosive Testing Building					
100	Training and Offices	Entrust Roofing, Inc.	790 Enterprise Court	D	Oscar Lopez	K46 01507 0031
102	Offices, Process Support Building	Mound Cold War Discovery Center	1075 Mound Road	IA	MDC	K46 01507 0029
105	Parts Machining	The Woodworking Shop, LLC	1195 Mound Road	D	TWS Properties, LLC	K46 01507 0030
126	PST Administrative Building	Sharpstone (GoKeyless)	955 Mound Road	(6A & 7) Tract 1	Sharpstone Investment Properties, LLC	K46 00501 0017
126	Road Frontage 40 ft to C/L of Mound Road	Dedicated right-of-way	955 Mound Road	Tract 2	City of Miamisburg	K46 00501 0018 No longer a parcel
COS	Central Operational Support	MDC, Mound Technical Solutions, Precision Joining Technologies, Inorganic Specialists, West Rock, Technology Group, LLC	965 Capstone Drive	8	City of Miamisburg	K46 00503 0013
OSE	Operational Support East	Pinnacle Architects, Inc.	480 Vantage Point	3 & 6	Pinnacle Architects, Inc.	K46 00503 0033 K46 01507 0043
OSW	Operational Support West	Montgomery County Consolidated Dispatch Center (911 Center)	460 Vantage Point	6 & 8	Montgomery County Board of County Commissioners	K46 00503 0031
T	Technical Building	Patriot Communications, LLC	945 Capstone Drive	8	Patriot Communications, LLC	K46 00501 0019
80–84	Magazines	Used by Excelitas, east of OU-1	None	IB	MDC	K46 01507 0032
SST	Salt Storage Structure South and East of Former RCRA Burn Area	Empty	None	IB	City of Miamisburg	K46 01507 0039
16	Trailer		1275 Vanguard Blvd.	9	LM	K46 01109 0001

Table B-1. Mound Site Building Identifications, Street Addresses, Ownership, County Parcels (continued)

DOE Building ID	Former DOE Building Descriptions	Current Building Occupant	Current Miamisburg Street Address	DOE ROD Parcel ID	Property Owner	County Parcel ID
300	Building	LM area in Parcel 9 OU-1 area				
n/a	MDC Flex Building	Secure Cyber Defense	1390 Vanguard Blvd.	4	MDC	K46 01507 0040
			1388 Vanguard Blvd. (lighting)	4	MDC	K46 01507 0040
		Beam Dental	1384 Vanguard Blvd.	4	MDC	K46 01507 0040
			1380 Vanguard Blvd.	4	MDC	K46 01507 0040
			1374 Vanguard Blvd.	4	MDC	K46 01507 0040
		Barge Design Solutions, Inc.	1370 Vanguard Blvd.	4	MDC	K46 01507 0040
	Pond at SW Entrance of Vanguard Blvd.	Pond area Includes an area not within original Mound site boundary. MDC combined with two offsite parcels during MATC Section 1 plats	n/a	4	City	K46 01507 0042
	SW Corner of Site	Includes an area not within original Mound site boundary. MDC combined with two offsite parcels during MATC Section 1 plats Business Park sign	n/a	4	City	K46 01507 0041

Abbreviations:

C/L = center line of roadway

n/a = not applicable

PST = Power Systems Technologies

SW = southwest

TF = Test Fire

Table B-2 lists the buildings demolished by MDC. This information is documented here because these buildings were demolished after the CERCLA remediations were completed, and there are no closeout documents for these demolitions.

Table B-2. Mound Site Buildings Demolished by MDC

DOE Building ID	DOE Building Descriptions	Building Identifier	Date Demolished	DOE ROD Parcel ID
2	Energetic Materials Destructive Testing Facility	In TF area	2011	7
28	Ceramic Production Plastics Development	Former ceramics lab on main hill area	2013	6
63 and 63W	Surveillance Facility	In TF area	2011	7
GP1	Guard Post-1	Security personnel training, office facility, and firing range; on main hill area	2006	3
GH	Guard House	Original building, Old Visitor Control, Placement Center, and Mound Museum; on main hill area	2013	3

Abbreviation:
TF = Test Fire

Table B-3. Mound Site Property Details—April 30, 2022

Owner	County Parcel ID	Acres	DOE QC Deed to MDC with ICs	MATC Plats and Subsequent Deeds	Owner	General Location Building Addresses	Applicable ROD
City	Former K46 00501 0018 No parcel number now	0.00	QC 12-00083743 0.2710 acres Now in Mound Road Shown in Section 5 plat	MDC to BOI Solutions, Inc. BOI to MDC MDC to Sharpstone 16-00071750 Sharpstone to City 19-00045569	City of Miamisburg road right-of-way	Part of 6A road front	Parcels 6, 7, and 8
City	K46 00503 0031	2.197	QC 18-00076268	1 of 3 lots created in MATC Section 3 Plat 18-00004495	City of Miamisburg	Lot on hillside north of OSW	Parcels 6, 7, and 8
City	K46 00503 0034	11.8801	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552 Transferred to City with QC Deed 21-00047140	City of Miamisburg	Western main hill area	Parcels 6, 7, and 8
City	K46 00503 0035	17.5691	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552 Transferred to City with QC Deed 21-00047140	City of Miamisburg	North of Vanguard COS Building 965 Capstone	Parcels 6, 7, and 8 Parcel 9 Plus Environmental Covenant
City	K46 00503 0036	29.1291	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552 Transferred to City with QC Deed 21-00047140	City of Miamisburg	East of Vanguard Boulevard	Parcels 6, 7, and 8
City	K46 00503 0037	4.0117	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552 Transferred to City with QC Deed 21-00047140	City of Miamisburg	West of Vanguard Boulevard	Parcels 6, 7, and 8 Parcel 9 Plus Environmental Covenant
City	K46 00503 0038	6.3717	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552 Transferred to City with QC Deed 21-00047140	City of Miamisburg	South of Vanguard 1100 Vanguard Blvd. Corner of Excelitas Building and parking area	Parcels 6, 7, and 8 Parcel 9 Plus Environmental Covenant
City	K46 01507 0025	2.1941	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 Then mod MATC Section 1-A Plat 15-00008913	City of Miamisburg	South of main entrance on Mound Road	Parcel H

Table B-3. Mound Site Property Details – April 30, 2022 (continued)

Owner	County Parcel ID	Acres	DOE QC Deed to MDC with ICs	MATC Plats and Subsequent Deeds	Owner	General Location Building Addresses	Applicable ROD
MDC	K46 01507 0029	2.3279	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 City to MDC QC 16-00049911	Mound Development Corporation	Bldg. 102 1075 Mound Road Mound Cold War Discovery Center	Phase IA
MDC	K46 01507 0032	10.0802	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 MATC Section 1-A Plat 15-00008913 City to MDC QC 19-00020278	Mound Development Corporation	Excelitas Old Test Fire area Buildings 3 and 87 1100 Vanguard Blvd.	Phase IB
City	K46 01507 0037	0.8456	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 Then mod MATC Section 1-A Plat 15-00008913	City of Miamisburg	Parking lot on right top of hill	Parcel 3
City	K46 01507 0038	7.8502	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 Then mod MATC Section 1-A Plat 15-00008913	City of Miamisburg	Large parking lot	Parcel H
City	K46 01507 0039	109.4752	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 Then mod MATC Section 1-A Plat 15-00008913	City of Miamisburg	Large area with Parcel 4 and Phase I parts	Parcel 4, Phase IB, IC

Table B-3. Mound Site Property Details – April 30, 2022 (continued)

Owner	County Parcel ID	Acres	DOE QC Deed to MDC with ICs	MATC Plats and Subsequent Deeds	Owner	General Location Building Addresses	Applicable ROD
MDC	K46 01507 0040	4.6975	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 Then mod MATC Section 1-A Plat 15-00008913 City to MDC QC 21-00050359	MDC	Flex Building near Benner and SR 25 SW entrance to site 1370-1390 Vanguard Blvd.	Parcel 4
City	K46 01507 0041	2.7833	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 Then mod MATC Section 1-A Plat 15-00008913	City of Miamisburg	Corner Benner and Route 25. Note: Includes 0.9776 acres of former Canal City Lot 4782 to Route 25 Added during MATC Plat Section 1 and 1-A	Parcel 4
City	K46 01507 0042	14.8489	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 Then mod MATC Section 1-A Plat 15-00008913	City of Miamisburg	Pond area Note: Includes 1.1884 acres from former Canal city lot 4781 to Route 25 added during MATC Plat Section 1-A	Parcel 4
City	K46 01507 0044	2.570	QC 09-00011643	MDC to City QC 13-00079430 with MATC Section 1 Plat 13-00057208 Then mod MATC Section 1-A Plat 15-00008913 Then mod in MATC Section 2 Plat 17-00036642	City of Miamisburg	Guard house (GH) parking lot	Parcel 3
Total MDC		228.8316					

Table B-3. Mound Site Property Details – April 30, 2022 (continued)

Owner	County Parcel ID	Acres	DOE QC Deed to MDC with ICs	MATC Plats and Subsequent Deeds	Owner and Mailing Address	General Location Building addresses	Applicable ROD
Entrust Roofing, Inc.	K46 01507 0031	5.5191	QC 09-00011643	MATC Section 1: Plat 13-00057208 City to MDC 14-00069586 MDC to Dyrdek Group, Inc. 14- 00069587 Dyrdek Group to Dyrdek Enterprises 15-00026231 Dyrdek Enterprises to DYRDEK ROBERT S 20-00054057 Dyrdek Robert S to DYRDEK ROBERT S TR 20-00054058 Dyrdek Robert S TR to LOPEZ OSCAR 21-00092524	Oscar Lopez 790 Enterprise Court Miamisburg, OH 45342 (937) 559-8505 (937) 299-9993 Oscar@entrustroofing.com	Bldg. 100 790 Enterprise Court	Parcel D
Kierston Olivia, LLC	K46 01507 0045	3.2975	QC 17-00045599	Created in MATC Section 2 Plat 17-00036642 LW 17 00045600	Deed: KIERSTON OLIVIA LIMITED LIABILITY COMPANY (holding company for ISS Unlimited) Clarence R. McGill, Jr. 930 Capstone Drive, Miamisburg, OH 45342	Bldg. 45 930 Capstone Drive	Parcel 6 & 7
Mound Research, LLC	K46 01507 0046	4.9537	QC 17 00055321	Lot created in MATC Section 2 Plat 17-00036642 LW 17 00055322	Deed: Advanced Service Technologies) County records lists mailing address as Mound Research LLC 885 Mounddr Dr (spelled as shown) Miamisburg OH 45343	Bldg. 61 885 Mound Road	Parcel D minus road
Montgomery County, Ohio	K46 01503 0031	4.50	QC 18 0006246	1 of 3 lots created in MATC Section 3 Plat 18-00004495 MDC to Jen Skyline LW 18 0009417 Jen Skyline to Montgomery County LW 19-00070585	Montgomery County Consolidated Dispatch Center	OSW Bldg. 460 Vantage Point	Parcel 6, 7, 8

Table B-3. Mound Site Property Details – April 30, 2022 (continued)

Owner	County Parcel ID	Acres	DOE QC Deed to MDC with ICs	MATC Plats and Subsequent Deeds	Owner and Mailing Address	General Location Building addresses	Applicable ROD
Pinnacle Architects	K46 00503 0033	3.833	QC 18-00006246	1 of 3 lots created in MATC Section 3 Plat 18-00004495 LW 18-00045894	Pinnacle Architects Inc 480 Vantage Point Miamisburg, Ohio 45342	OSE Building 480 Vantage Point	Parcel 6, 7, 8
Pinnacle Architects	K46 01507 0043	1.3035	DOE to MDC 2 QC deeds for Parcel 3 contained this area original QC 02-00128206 replaced by QC 09-00011643	MDC to City Deed 13-00079430 Created in MATC Section 1 Plat 13-00057208 Modified in MATC Section 2 Plat 17-00036642 City to MDC 18-00045893 MDC to Pinnacle 18-00045894	Pinnacle Architects	OSE Bldg. parking lot	Parcel 3 minus road
Patriot Communications, LLC	K46 00501 0019	4.26	DOE to MDC QC 18-00064591 Rerecorded as QC 19-00028127	New lot created in MATC Section 4 Plat 18-00052009 MDC to Pinnacle LW 18-00064592	Patriot Communications, LLC.	T Building 945 Capstone Drive	Parcel 6, 7, 8
Sharpstone Investment Properties, LLC	K46 00501 0017	5.3500	QC 12-00083743	BOI Solutions to Sharpstone GW 16 00071750	Sharpstone Investment Properties, LLC. (GoKeyless)	Most of former 6A plus parts of Parcel 7 Building 126 955 Mound Road	Parcels 6, 7, and 8
TWS Properties LLC	K46 01507 0030	4.8008	DOE to MDC QC 09-00011643	MATC Sect 1 Plat-13-00087203 City owned City to MDC QC 15-00023825 MDC to TWS LW 19-00015160 Refiled LW 19-00030809	TWS Properties, LLC. (The Woodworking Shop)	Bldg. 105 1195 Mound Road	Parcel D minus road
	Other Owners' total	37.8176					

Table B-3. Mound Site Property Details – April 30, 2022 (continued)

Owner	County Parcel ID	Acres	DOE QC Deed to MDC with ICs	MATC Plats and Subsequent Deeds	Owner and Mailing Address	General Location Building Addresses	Applicable ROD
LM	K46 00503 0039 Lot 8071	5.9521	None	MATC Section 5 Plat 19-00058552 No deed	LM	OU-1 area	Parcel 9 – OU-1 ROD and Amendment
LM	K46 00503 0040 Lot 8072	5.7021	None	MATC Section 5 Plat 19-00058552 No deed	LM	OU-1 area	Parcel 9 – OU-1 ROD and Amendment
LM	K46 00503 0041 Lot 8073	4.8771	None	MATC Section 5 Plat 19-00058552 . No deed	LM	OU-1 area	Parcel 9 – OU-1 ROD and Amendment
LM	K46 00503 0042 Lot 8074	2.0185	None	MATC Section 5 Plat 19-00058552 No deed	LM	OU-1 roadway	Parcel 9 – OU-1 ROD and Amendment
Per MATC Section 5 plat	LM total	18.5498		New parcel boundaries are shown on County GIS site			

Notes:

Access information on county parcels on the [Montgomery County Auditors' website](#). Access copies of deeds, MATC Section plats, instrument number (QC) on the Montgomery County recorder's website at [Recorder's Information Search System, Montgomery County, Ohio](#). Use four digits for year.

Abbreviation:

OSW = Operational Support West

Table B-4. Acreage Reconciliations

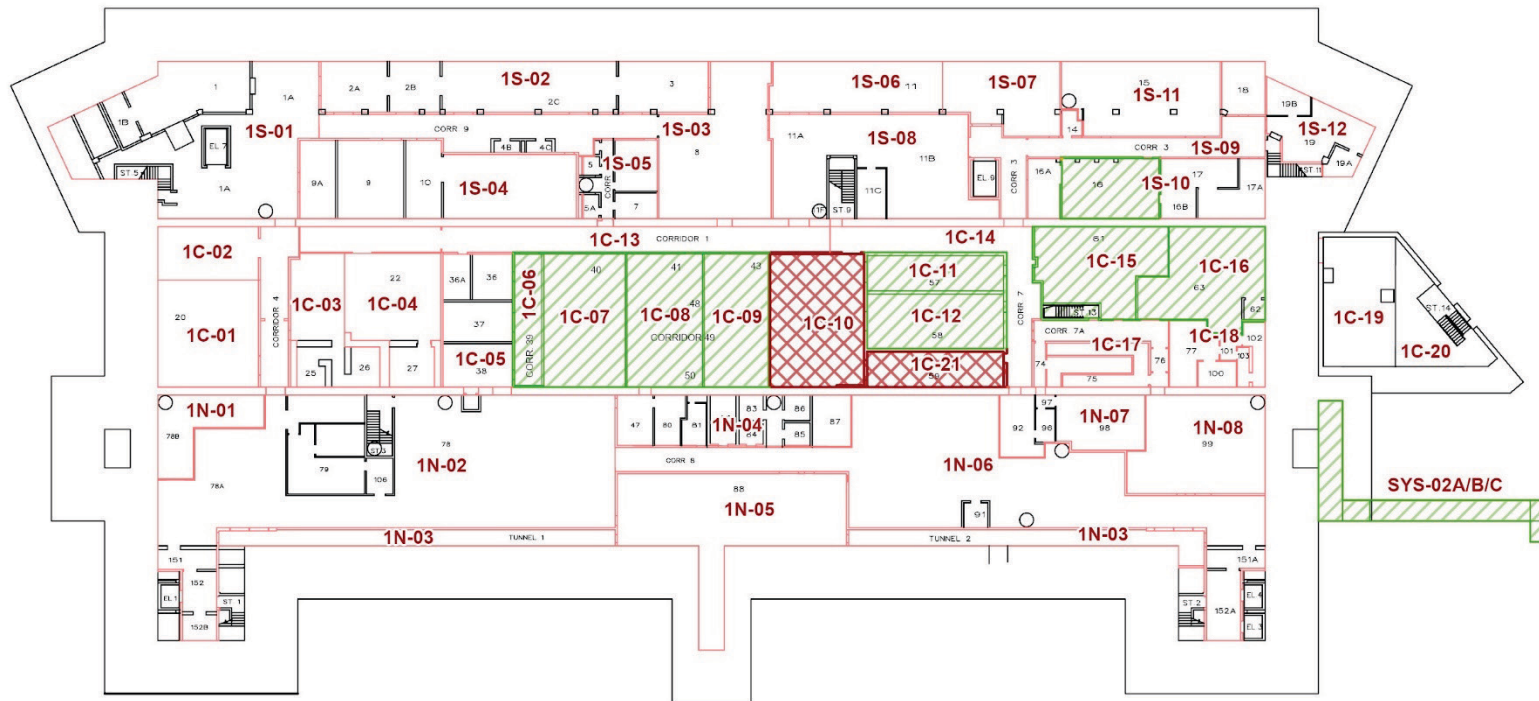
Acreage Reconciliation		Acres
Total county property records all owners. Lots created in MATC Section plats 1–5		285.1990
Plus acreage of streets per MATC Section plats 1–5		22.1524
Subtotal of all MATC parcels and roadways		307.3514
(Minus acreage of two canal city lots merged with Mound lots; that were not in the original boundary)		2.1660
Total of area within Mound Plant Boundary		305.1854
Previous acreages:		
1998 Mound Plant Property 305.116 acres	2005 Beal Survey 305.063 acres	2017 BWSC reconciliation 305.0618 acres

Appendix C

Information on T Building Special IC Areas Including 2009 Special ICs Core Team Agreement and Position Paper

Contents

1. Figure C-1: T Building First Floor Figure Showing Specified Areas with ICs.
2. 2009 T Building Special ICs Core Team Agreement and Position Paper.
3. 2010 Baseline Photos of Each Room with Special ICs.
4. 2018 Final LM Closeup Photos of Red Concrete Cracks.
5. ATC 100 Fact Sheet for Crack Filler Product Used by LM to Seal Cracks.



T - Building First Floor

Specified Areas with Institutional Controls (IC)

- Removal Prohibition
- Penetration Prohibition

Survey Units in Red
Room Numbers in Black

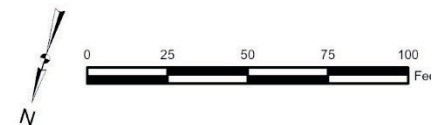


Figure C-1. T Building Rooms with Special ICs

T Building Special ICs Core Team Agreement and Position Paper

7806XXXXXX-1105260001



The Mound Core Team
P.O. Box 66
Miamisburg, Ohio 45343-0066

6/29/09

As you know, The Proposed Plan for Parcels 6, 7 and 8 contains a restriction on the use of T Building which prohibits the penetration of concrete floors in rooms 50, 57 and 59 of T Building without prior approval from USEPA, OEPA, and ODH. The Miamisburg Mound Community Improvement Corporation (MMCIC) has asked the Core Team for a "blanket" approval to conduct limited activities in these rooms that should not result in an unacceptable risk to workers in the building.

The Core Team has evaluated this request and hereby grants approval for these activities provided they are conducted in accordance with the following policy guidelines:

1. Any driven penetration (e.g. concrete nails or explosive driven nails) of up to four inches in depth can be conducted without approval. As notification, the Core Team shall be provided a description of the activity, drawing of the room, and location of the proposed penetrations two weeks prior to physical activity.
2. Penetrations that involve removal of concrete shall be filled with concrete or steel. They shall not exceed four inches depth without approval of the Core Team. All penetrations of four inches or less requiring removal of concrete (drilling etc.) will require the submittal of a description of the activity, drawing of the room, and location of the proposed penetrations to the Core Team two weeks prior to the physical activity for notification purposes.
3. Any actions which remove or damage the concrete (including "driven penetrations") shall be filled within 120 days of completion.
4. Routine T Building occupants should be excluded from the area of activity for the duration of the renovation.

For your information, the Core Team has prepared the attached Position Paper which the Core Team used in its evaluation. MMCIC can use this Position Paper and these policy guidelines in determining which future activities may be acceptable to the Core Team in rooms 50, 57 and 59 of T Building. In any event, MMCIC must request approval for any activity not on this approved list.

DOE/MEMP: Paul C. Lucas 7/14/09
Paul C. Lucas, Remedial Project Manager

USEPA: Timothy J. Fischer
Timothy J. Fischer, Remedial Project Manager

OEPA: Brian K. Nickel 7/14/09
Brian K. Nickel, Project Manager

Position Paper T Building Cap Areas Renovation Guidelines

Background: T Building (Technical Building) is a massively constructed building on the Mound site with ten foot thick heavily reinforced concrete floors and similarly robust ceilings and walls. During the remediation of the T Building, the contractor encountered bulk contamination of the floor and footings in certain areas. Attempts to complete remediation of the contaminated floor and footer in the west end of room 50 and east end of rooms 57 and 59 were technically and economically difficult to justify. Following an assessment of the risks involved to the building's structural integrity if removal of contaminated concrete continued (attached), a decision was made to leave the contaminated concrete sub floor and footer in place, and to add a cap of color coded (red) concrete to provide a margin of safety from the residual contamination. The Department of Energy (DOE) currently owns the facility and wishes to transfer ownership to the Miamisburg Mound Community Improvement Corporation (MMCIC) for future development. To ensure the health and safety of future workers and occupants of T Building, a deed restriction will be placed on T Building limiting the disturbance of concrete in those areas with residual contamination. This paper outlines some of the technical basis allowing latitude in the disturbance of the concrete cap.

As stated above, the DOE and its contractors evaluated the residual contamination to ensure that future worker safety was protected. Specifically future worker doses were modeled to ensure that they would not reasonably be expected to receive an additional 15 mrem of equivalent dose due to occupation in T Building. Samples of the residual contamination were taken. As a conservative measure, the average of the five highest areas of contamination was used as input for the entire area. This data was input into the RESRAD Build dose evaluation code. This code is jointly developed by the DOE and the Nuclear Regulatory Commission (NRC) for just this type of situation.

Under this scenario, two types of workers were evaluated. The first type was an office worker who occupies the building for an entire year. Doses for this type of worker were previously calculated and found to fall within the 15 mrem per year guidelines. The calculations for this type of worker assume that no renovation is occurring while that worker occupies the area, i.e. the concrete cap is intact. A second worker, the renovation worker, was originally modeled using similar physical characteristics of the building, but differing inputs commensurate with the type of work. For example, the breathing rates and occupancy rates for the renovation worker differ from that of an office worker. The original calculations for the renovation worker in T Building were 1.86 mrem. Of that dose, 0.17 mrem is due to direct radiation from the residual contamination under the protective cap. The remainder is from low level residual contamination throughout T Building.

A review of the Final Status Surveys for T Building indicates that the thickness of the cap is nominally 11 inches. It was placed at this thickness to bring the floor elevation level with the adjoining hallway floor surfaces. Based on the very low dose rates cited above (0.17 mrem) for external exposure, there is excess concrete serving as a shielding material for the bulk contamination below. This would allow for temporary removal or penetration of some portion of this concrete to allow for anchoring of equipment and walls of future tenants. It should be noted,

that in order to maintain the integrity of the calculations for the office worker, any floor penetration should be repaired or steel anchors inserted (steel being a better shield than concrete).

Calculations: As implied, records for the original calculations were retrieved from storage. Although it was generally known that excess concrete was placed, there was no known calculation of how much excess existed and none was found during the review of the records. The RESRAD Build calculations that were found used all 11 inches of concrete as shielding to arrive at the 0.17 mrem cited earlier. In addition, due to the presence of the cap, it was assumed that none of the contamination contained in the subsurface concrete and footers becomes airborne.

RESRAD Build continues to be maintained and updated by Argonne National Laboratory. The current version is slightly modified from the version originally used to model these doses. In order to ensure continuity, a baseline calculation was performed using the parameters from the original calculations. With only slight variations, they agreed. The original calculations indicated 1.70 mrem due to other building residual contamination. The new version calculated this same component to be 1.69 mrem. The total for both the cap area and the remainder of the building was 1.86 mrem for both versions, indicating strong agreement between the two.

In order to establish a margin of safety another calculation used the same input parameters except that the thickness of the cap was reduced by seven inches (to a nominal four inches total thickness). This further reduced thickness yielded an exposure to the renovation worker of 5.93 mrem. This remains protective of the renovation worker.

Recommendation: If the core team decides to allow penetration of the "red" concrete cap, it would be prudent to allow for some margin of safety to preclude accidental penetration to depths greater than currently analyzed. Note that the cap penetrations should be restored or replaced with anchors that provide similar or greater shielding capabilities. Recall also that one of the major assumptions is that the cap prevents the contamination below it from becoming airborne, so that the integrity of the cap must be maintained. Consideration must be given to the ability to ensure that recommendations are followed (i.e. penetrations are not greater than depth specified etc.). Also note that additional work could be carried out safely but may require additional analysis.

Policy Guidelines: As discussed, some guidelines should be established to administer penetration of the concrete in these areas. Such guidelines could be as follows:

1. Any driven penetration (e.g. concrete nails or explosive driven nails) of up to four inches in depth can be conducted without approval. As notification, the Core Team should be provided a description of the activity, drawing of the room, and location of the proposed penetrations two weeks prior to physical activity.
2. Penetrations that involve removal of concrete shall be filled with concrete or steel. They shall not exceed four inches depth without approval of the Core Team. All penetrations of four inches or less requiring removal of concrete (drilling etc.) will require the submittal of a description of the activity, drawing of the room, and location of the proposed penetrations to the Core Team two weeks prior to the physical activity for notification purposes.
3. Any actions which remove or damage the concrete (including "driven penetrations") shall be filled within 120 days of completion.
4. Routine T Building occupants should be excluded from the area of activity for the duration of the renovation.

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2010 Baseline Photos of Each Room with Special ICs

(The floor plan to the right shows the camera angles for Figures C-2 through C-11.)

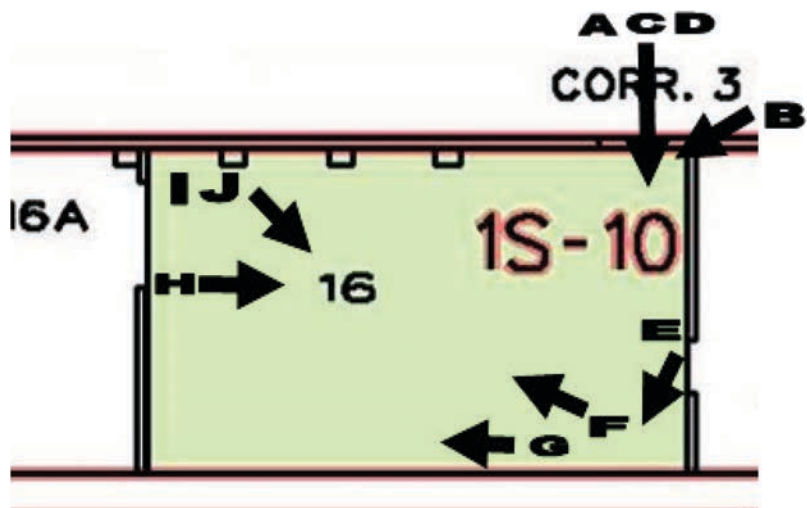


Figure C-2. T Building Room 16 View A



Figure C-3. T Building Room 16 View B



Figure C-4. T Building Room 16 View C



Figure C-5. T Building Room 16 View D



Figure C-6. T Building Room 16 View E



Figure C-7. T Building Room 16 View F



Figure C-8. T Building Room 16 View G



Figure C-9. T Building Room 16 View H



Figure C-10. Building Room 16 View I



Figure C-11. T Building Room 16 View J

(The floor plan to the right shows the camera angles for Figures C-12 through C-19.)

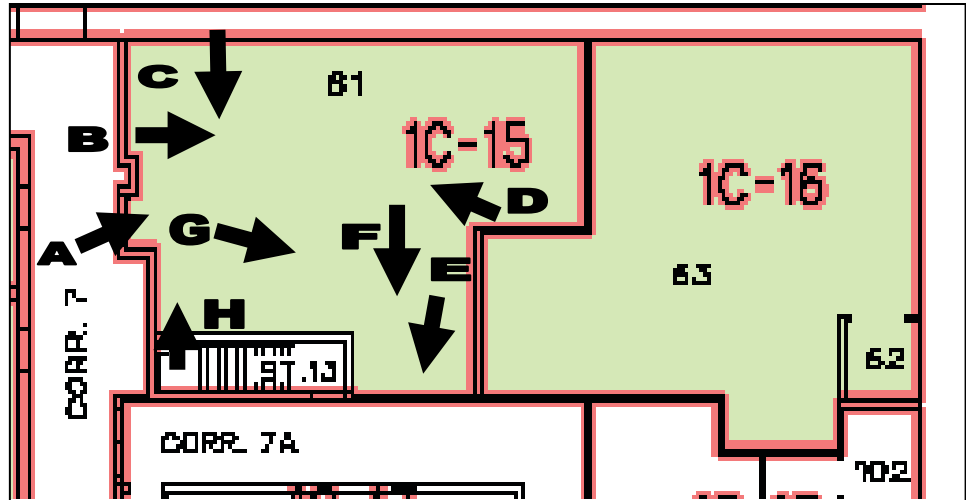


Figure C-12. T Building Room 61 View A



Figure C-13. T Building Room 61 View B



Figure C-14. T Building Room 61 View C



Figure C-15. T Building Room 61 View D



Figure C-16. T Building Room 61 View E



Figure C-17. T Building Room 61 View F



Figure C-18. T Building Room 61 View G



Figure C-19. T Building Room 61 View H

(The floor plan to the right shows the camera angles for Figures C-20 through C-31.)

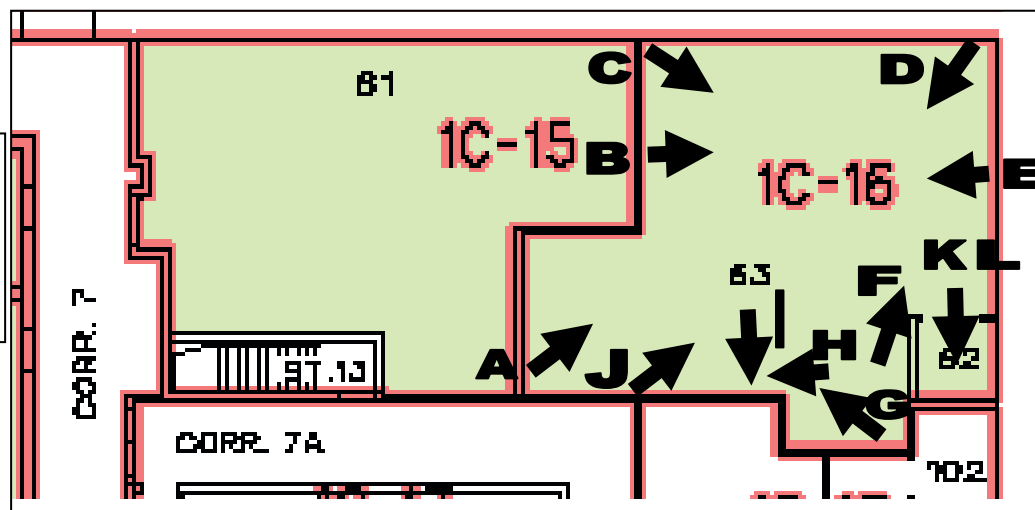


Figure C-20. T Building Room 63 View A



Figure C-21. T Building Room 63 View B



Figure C-22. Building Room 63 View C



Figure C-23. T Building Room 63 View D



Figure C-24. T Building Room 63 View E



Figure C-25. T Building Room 63 View F



Figure C-26. T Building Room 63 View G



Figure C-27. T Building Room 63 View H



Figure C-28. T Building Room 63 View I



Figure C-29. T Building Room 63 View J



Figure C-30. T Building Room 62 View K



Figure C-31. T Building Room 62 View L

(The floor plan to the right shows the camera angles for Figures C-32 through C-37.)

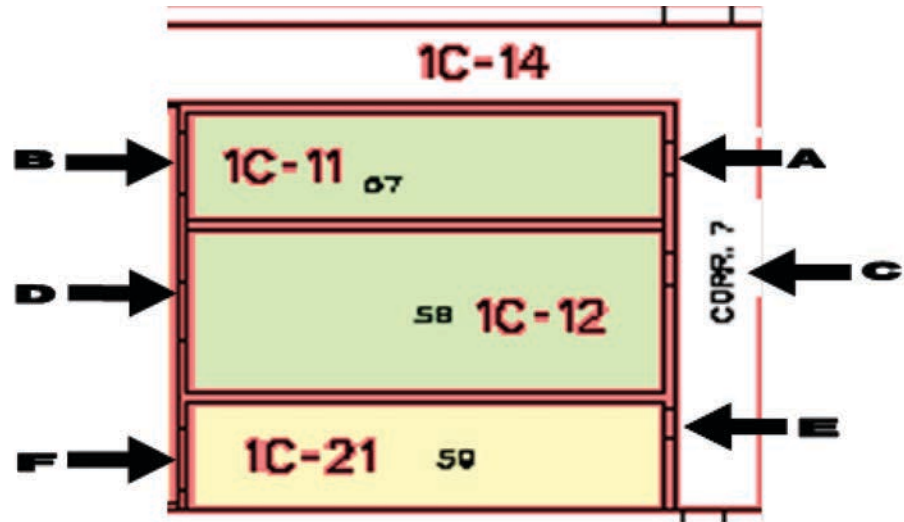


Figure C-32. T Building Room 57 View A



Figure C-33. T Building Room 57 View B



Figure C-34. T Building Room 58 View C



Figure C-35. T Building Room 58 View D



Figure C-36. T Building Room 59 View E



Figure C-37. T Building Room 59 View F

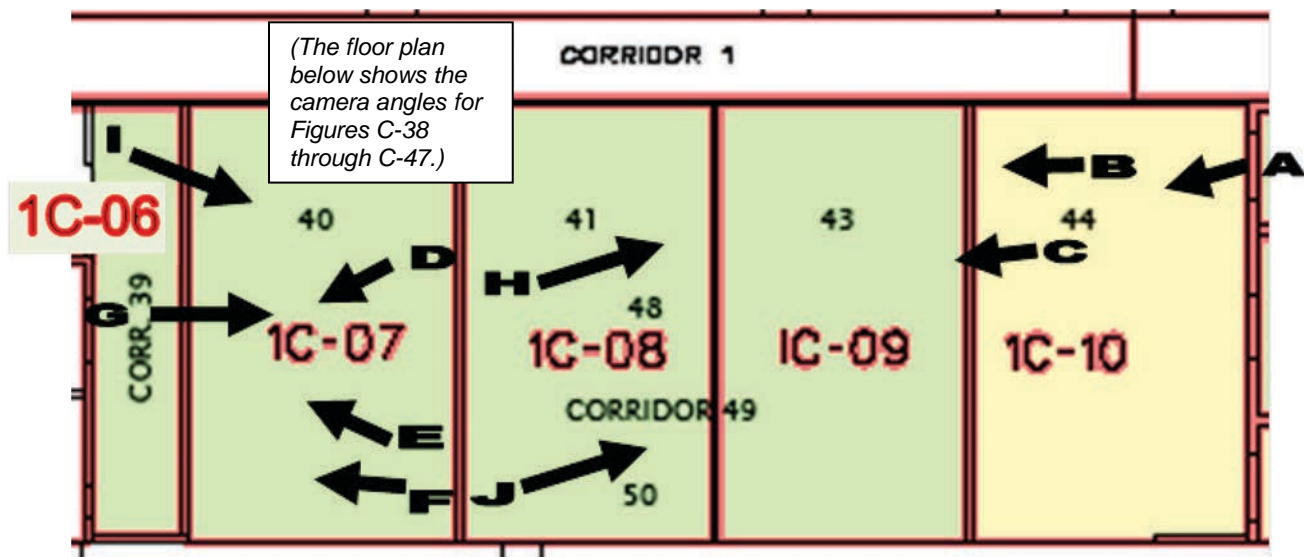


Figure C-38. T Building Rooms 39-44 and 48-50
View A

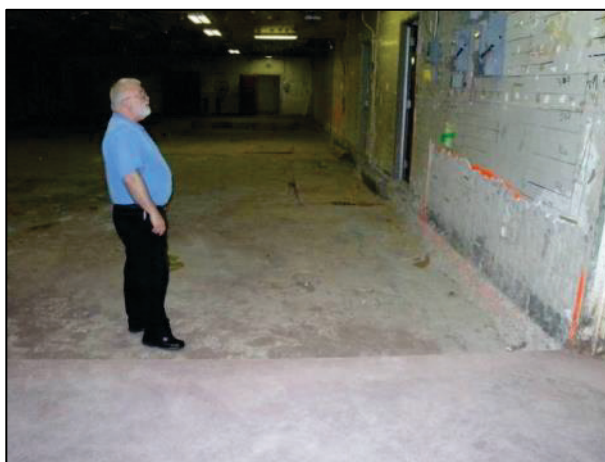


Figure C-39. T Building Rooms 39-44 and 48-50
View B



Figure C-40. T Building Rooms 39-44 and 48-50
View C



Figure C-41. T Building Rooms 39-44 and 48-50
View D



Figure C-42. T Building Rooms 39-44 and 48-50
View E

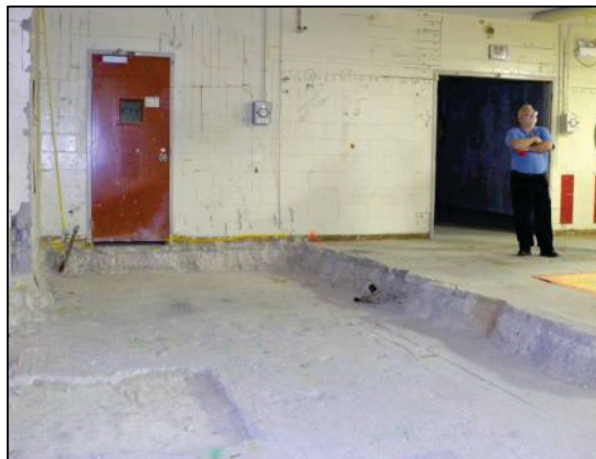


Figure C-43. T Building Rooms 39-44 and 48-50
View F



Figure C-44. T Building Rooms 39-44 and 48-50
View G



Figure C-45. T Building Rooms 39-44 and 48-50
View H

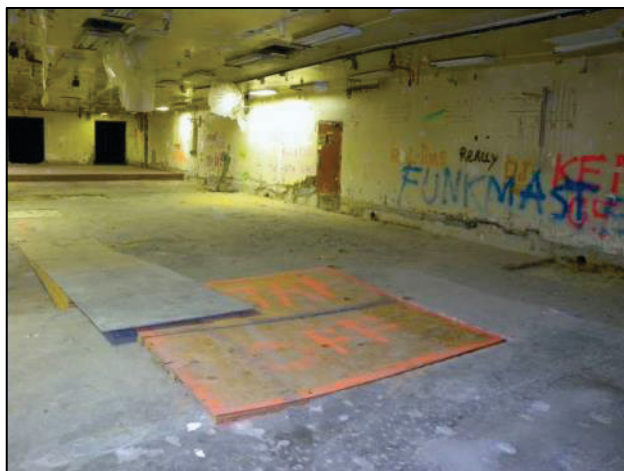


Figure C-46. T Building Rooms 39-44 and 48-50
View I

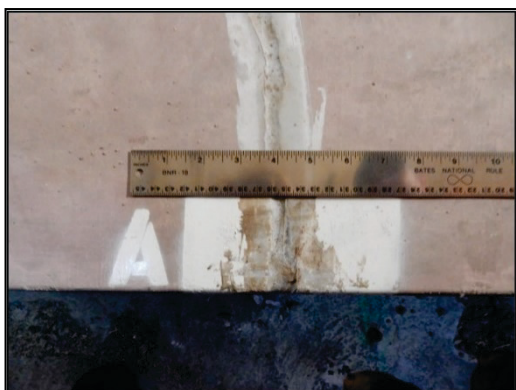


Figure C-47. T Building Rooms 39-44 and 48-50
View J

2018 Final LM Photos of Red Concrete Cracks

The photographs in Figure C-48 were taken on February 13, 2018, for the 2018 Mound site annual IC assessment to document the condition of the filled cracks in the red concrete in specified rooms in the T Building before LM transferred the building to MDC.

The locations of the crack monitoring points are shown in Figure C-48.



Monitoring Point A



Monitoring Point B



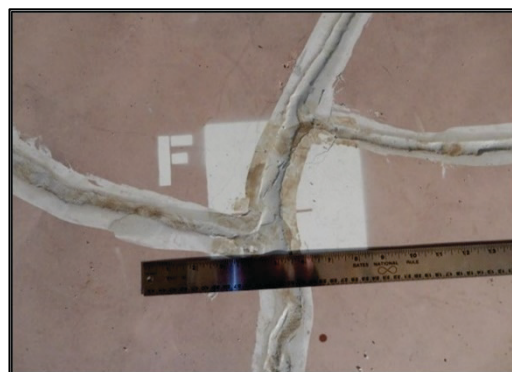
Monitoring Point C



Monitoring Point D



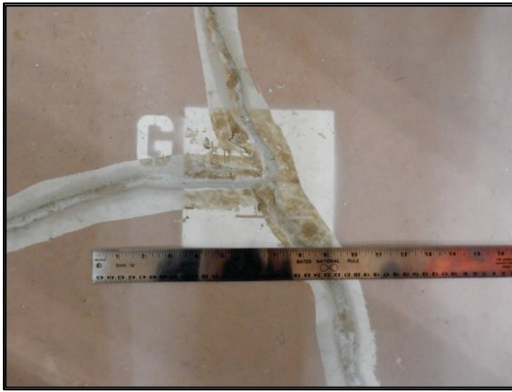
Monitoring Point E



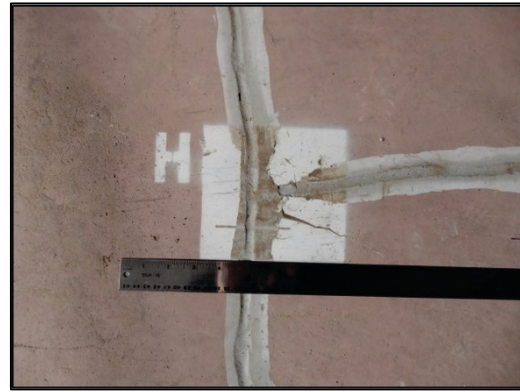
Monitoring Point F

Figure C-48. Condition of the Cracks in the Red Concrete in Specified Rooms in the T Building, February 2018

2018 Photos of Red Concrete Cracks



Monitoring Point G

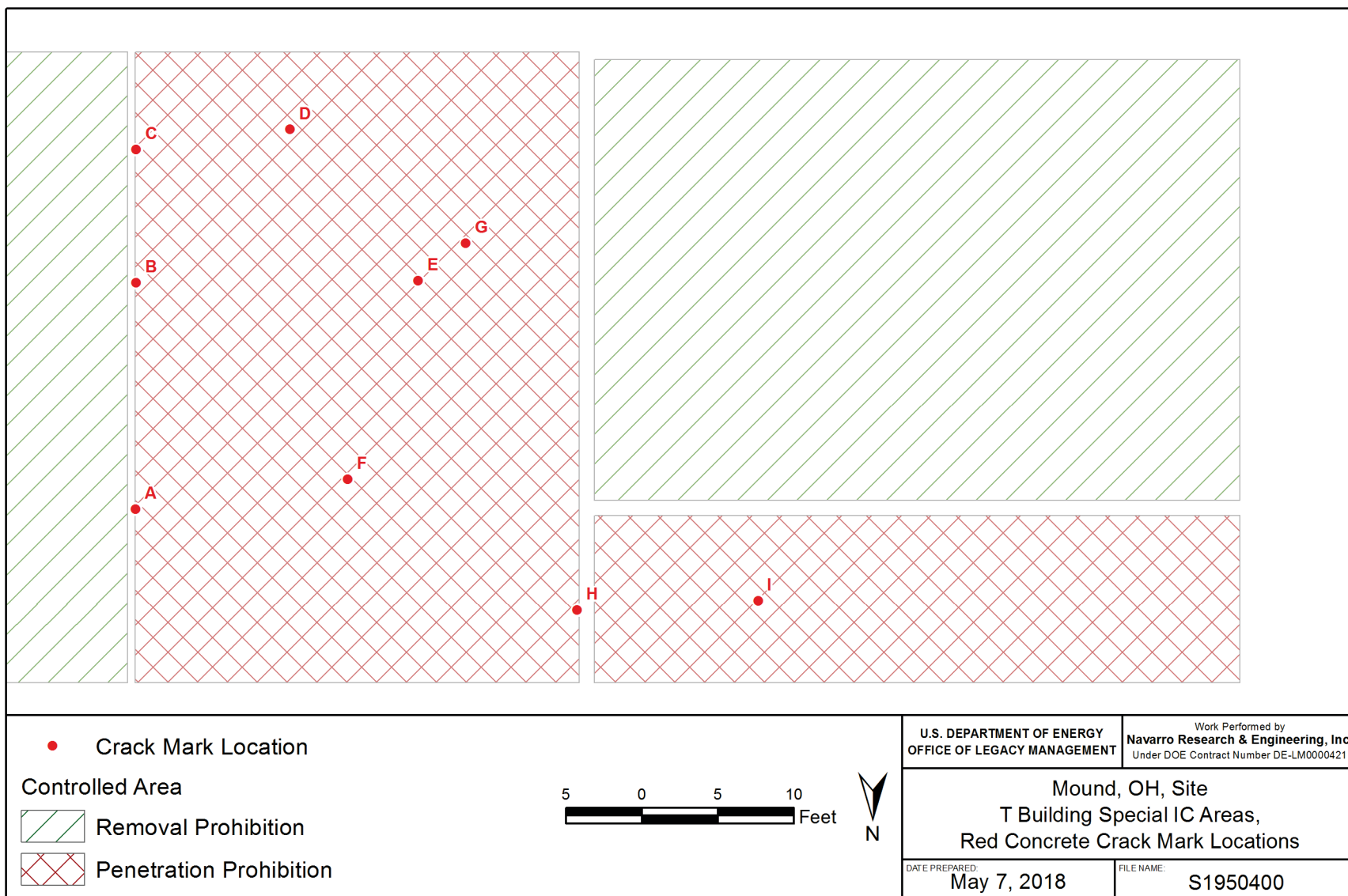


Monitoring Point H



Monitoring Point I

Figure C-48. Condition of the Cracks in the Red Concrete in Specified Rooms in the T Building, February 2018 (continued)



M:\LTS\1111\0061\09\011\S19504\S1950400.mxd coatesc 05/07/2018 9:29:12 AM

Figure C-49. T Building Special IC Areas, Red Concrete Crack Mark Locations

ATC 100 Fact Sheet for Crack Filler Product

ATC 100

Description and Uses

ATC 100 is a single component elastomeric sealant without free isocyanates or solvents (VOCs.) It cures rapidly by drying to form a flexible joint between substrates. It has excellent adhesion to most materials including plywood, plastic, concrete, masonry and metal.

ATC 100 is a hybrid water, vapor, gas and radon resistant sealant polymer, specially designed to adhere to damp or dry surfaces, making it excellent for sealing cove joints and concrete floor cracks against radon, methane, water, water vapor and other soil gasses. ATC 100 is excellent for bonding plastic, concrete and other materials and substrates. ATC 100 is UV resistant and can be used on exterior and interior surfaces. ATC 100 can be painted after curing

Where to Use

- Cove joints
- Concrete floor cracks
- Interior or exterior

Advantages

- No VOCs
- Combines the best qualities of polyurethane and silicone sealant
- Non-yellowing
- Isocyanate free
- High bond strength
- Easy flow

Technical Data

Appearance	Pasty
Color	Grey
Density at 200 C	1.65 +/- 0.05
Sagging (ISO 73900)	No
Application Temperature	40°-100°F
Temperature resistance	-40-190°F
Cure Time @ 750F and 50% HR	50 minutes
Skin Formation time @750F and 50% HR	24-36 Hrs
Final Shore A Hardness (ISO 868-3 sec.)	>30
Modulus at 100% (ISO 8339)	>70 psi
Elongation at Break (ISO 8339)	>140 psi
Resistance to dilute acids and bases	Good
UV Resistance	Excellent
Water and salt spray resistance	Excellent
Compatibility with paints	Yes

Application Instructions

Preparation:

The substrates must be clean, dry free of dust, oil, grease, and any contaminants that could harm bonding. All traces of poorly adhered paint or coatings should be removed beforehand. If the substrates to be cleaned, solvents such as methylethylketone (MEK) or acetone may be used. Check the compatibility of the solvent used with the substrates. It may be necessary to rub down the substrate beforehand. After rubbing down, the surface should be recleaned. Allow the substrate to dry after degreasing. Note: When using solvents, extinguish all sources of ignition and carefully follow the safety and handling instruction given by the manufacturer or supplier.

Caulking:

ATC 100 may be applied by manual or pneumatic gun.

After application, each joint should be tight up to the joint lip and smoothed with a putty knife. This product should be used within 24 hours of opening the cartridge. If stored in cold weather, store the cartridges at 70°F prior to use.

Drying Time

Skin time is 50 minutes. Full cure at 24 hours depending on temperature and humidity.

Clean Up

Tools should be cleaned with MEK or acetone before the sealant has completely cured. After curing, abrasion is necessary.

Storage and Shelf Life

12 months in the original hermetically sealed packaging between 40-75°F.

Packaging

10.4 oz cartridges

Safety

Not classified as hazardous. Read the MSDS before use.

Warranty

Recommendations concerning the performance or use of this product are based upon independent test reports believed to be reliable. If the product is proven to be defective, at the option of the Manufacturer, it will be either replaced or the purchase price refunded. The Manufacturer will not be liable in excess of the purchase price. The user will be responsible for deciding if the product is suitable for his application and will assume all risk associated with the use of the product. This warranty is in lieu of any other warranty expressed or implied, including but not limited to an implied warranty of merchantability or an implied warranty of fitness for a particular use.

THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF AN OTHER WARRANTY, EXPRESS OR IMPLIED INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE AND PURPOSE AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OR DEALING, CUSTOM, TRADE OR OTHERWISE

applied
technologies llc

P. O. Box 18476 Fairfield, OH 45018
1-877-277-5948 (513) 939-3767
www.appliedtechnologies.com

07/07

Appendix D

2012 Core Team IC Guidance

Contents

1. 2012 Core Team IC Guidance, September 12, 2012

2012 Core Team IC Guidance



The Mound Core Team
250 East Fifth Street, Suite 500
Cincinnati, Ohio 45202

9/12/12 Update

Purpose

The Core Team has prepared the following guidance for assisting with compliance with the existing Mound Site Institutional Controls (ICs). Mound Development Corporation (MDC), or any other future owners of Mound Site property, can use the following guidance and best management practices to maintain compliance with Mound Site ICs when conducting future site activities. It is important to note that this guidance is not intended to be all inclusive, and requirements, including this document, could be subject to change or updating based on site activities, future remedy changes or changes to existing environmental laws.

Background Summary

The former Mound Site Property was remediated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) with associated Records of Decision (RODs) requiring adherence to enforceable Institutional Controls (IC's).

Records of Decision

The following are the approved RODs for the Mound Site:

1. *Operable Unit 1 Record of Decision, Final, June 1995 (amended in 2011)*
2. *Record of Decision for Release Block D, Final February 1999*
3. *Record of Decision for Release Block H, Final June 1999*
4. *Parcel 3 Record of Decision, Final, August 2001*
5. *Parcel 4 Record of Decision, Final, February 2001*
6. *Phase 1 Record of Decision, Final, July 2003*
7. *Miami-Erie Canal, Record of Decision, Final September 2004 (OU-4)*
8. *Parcels 6, 7, and 8 Record of Decision, August 2009*
9. *Amendment of the Operable Unit 1 Record of Decision, August 2011*

Institutional Controls (ICs)

The Mound Site RODs, except for the OU4 Miami Erie Canal area, require ICs in the form of deed restrictions or an environmental covenant. The U.S. Department of Energy (DOE) is the lead agency with the responsibility to monitor, maintain and enforce the ICs. The U.S. Environmental Protection Agency (EPA), the Ohio Environmental Protection Agency (Ohio EPA), and the Ohio Department of Health (ODH) provide independent oversight and authority to approve requests regarding IC compliance. The ICs are designed to ensure:

- Maintenance of industrial or commercial land use and prohibition of residential land use.
- Prohibition against the use of groundwater without prior approval by EPA and Ohio EPA.
- Prohibition against the removal of soils from the Mound Site boundary (as of 1998) to offsite locations without prior approval. by EPA, Ohio EPA, and ODH.
- Allowing site access for federal and state agencies for the purpose of taking response actions, including sampling and monitoring.

The Parcels 6, 7 and 8 ROD includes the following additional institutional control requirements:

- Prohibition against the penetration of concrete floors in specified rooms in T Building without prior approval by EPA, Ohio EPA, and ODH.
- Prohibition against the removal of concrete floor material in specified rooms in T Building to offsite locations without prior approval by EPA, Ohio EPA, and ODH.

Details on the ICs listed above are included in the *Mound Site Operations and Maintenance Plan*, (O&M), Section 3, IC Management and Land Use Control. Additional information regarding each parcel and the associated ICs is included in the individual ROD for the specific parcel(s). These RODs are available on the DOE Office of Legacy Management (LM) website http://www.lm.doe.gov/CERCLA_Home.aspx.

Implementation – Best Management Practice

Implementation of the above IC language in contract and work planning documents may be accomplished as follows:

IC #1 - Maintenance of industrial or commercial land use and prohibition of residential land use.

Continue regular observation of site activities for signs of use other than industrial.

Allow no single or multi-family dwellings or rental units; day care facilities; schools or other educational facilities for children under 18 years of age; and no community centers, playgrounds or other recreational or religious facilities for children under 18 years of age are permitted on the property.



Fishing is considered recreational use and is prohibited. The photo above shows two individuals observed fishing in a Mound facility pond in Parcel 4. Note the “Recreational Use Prohibited” sign in the foreground. DOE, EPA, and Ohio EPA considered the exposure assumptions used to develop the industrial/commercial cleanup standards for the Mound site and concluded that occasional visits to the retention pond by area residents will not result in an unacceptable risk to the visitors.

However, if recreational activities are observed, MDC and future property owners will continue to monitor and discourage these unauthorized uses. Continued fishing or other recreational activities may result in more rigorous enforcement of ICs

IC#2 - Prohibition against the use of groundwater without prior approval from EPA and Ohio EPA.

No new wells may be installed on the Mound Site without prior approval from EPA and Ohio EPA. Groundwater use is prohibited.

IC#3 - Prohibition against the removal of soils from the Mound Site boundary (as of 1998) to offsite locations without prior approval. by EPA, Ohio EPA, and ODH.

One small area at the northeast corner of the site along Mound Road is excepted from this prohibition as described in the O&M Plan.

On typical plans that involve excavation, the following are examples of what should be considered for compliance with ICs:

- Earthwork/Demolition -- Due to deed restrictions, no soil shall be removed from the Mound Site without EPA and Ohio EPA approval. Excavated material may be used as fill in other areas on the project within the former Mound Site boundary. Spoil areas on the Mound Site shall be coordinated with the landowner. All materials removed from the site must be hauled per state and federal regulations.
- Soil -- No soil is allowed to leave the Mound Site without written approval of the EPA, Ohio EPA, and ODH. All excavated soil materials may be transported within the area of the Mound Site to an area or areas on site designated by the landowner.
- Concrete/Asphalt and Other Large Miscellaneous Debris – Prior to removal from the Mound Site, turn debris over and remove excess soils. *The following photo shows concrete removed during the construction of the Vanguard Blvd. extension. The removal of residual soil material on the concrete is viewed as being adequate for off site disposal.*



Trees – Prior to removal from the Mound Site, remove the majority of dirt from the root ball.

The photo below from the Vanguard Project shows a tree that was removed and cleared of excess soil for off property disposal.



IC#4 - Provide site access for federal and state agencies for the purpose of taking response actions, including sampling and monitoring:

All future work planned at the former Mound site should include a provision allowing for federal and state agency access to the site.

IC#5 - The ROD for Parcels 6, 7 and 8 includes the following additional institutional control requirements:

- Prohibition against the penetration of concrete floors in specified rooms in T Building without prior approval by EPA, Ohio EPA, and ODH.
- Prohibition against the removal of concrete floor material in specified rooms in T Building to offsite locations without prior approval by EPA, Ohio EPA, and ODH.

In a Position Paper, *T Building Special ICs Core Team Agreement and Position Paper*, dated June 29, 2009, the Core Team previously addressed compliance with restrictions against penetration of the floor in certain areas of T Building. Please refer to Sections 3.6.4 and 3.6.5 and Appendix B of the *Mound Site Operations and Maintenance Plan LMS/MND/S08406-0.0* for further details.

As mentioned above, this guidance is not intended to address every circumstance that may require compliance with ICs. For questions or further information, please contact the DOE Legacy Management at:

Grand Junction 24-Hour Monitored Security Telephone Numbers
(970) 248-6070 or (877) 695-5322
Website: <http://www.lm.doe.gov>

Gwendolyn Hooten, LM Mound Site Manager
U.S. Department of Energy/LM-20.1
10995 Hamilton-Cleves Highway
Harrison, OH 45030-9728
(513) 648-3148
Gwen.Hooten@lm.doe.gov

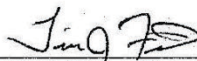
DOE:

**Gwen N
Hooten**

Digitally signed by Gwen N Hooten
DN: cn=us, o=U.S. government,
ou=department of energy,
ou=headquarters, ou=people,
cn=Gwen N Hooten
Date: 2012.09.13 09:52:33 -06'00'

Gwendolyn Hooten, Site Manager

USEPA:

 9/13/12

Timothy J. Fischer, Remedial Project Manager

OEPA:

Brian Nickel

Digitally signed by Brian Nickel
DN: cn=Brian Nickel, o=Ohio EPA,
ou=DERM/SWDO,
email=Brian.Nickel@epa.state.oh.us, c=US
Date: 2012.09.13 14:02:43 -04'00'

Brian K. Nickel, Project Manager

Mound Site, Miamisburg, Ohio
Request for Regulatory approval of new site activity

This is a formal request to the Environmental Protection Agency (EPA) and the Ohio EPA to provide written approval of an activity not generally covered by the institutional controls at the Mound Site. The institutional controls are part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedies established in the Records of Decision for the Mound Site.

The Mound site institutional controls run with the land in the form of restrictions and covenants in quitclaim deeds or activity and use limitations in the Environmental Covenant: See the *Operations and Maintenance (O&M) Plan for the U.S. Department of Energy Mound Site, Miamisburg, Ohio*, for details on records of decision.

- Maintenance of industrial or commercial land use and prohibition against residential land use.
- Prohibition against the use of groundwater without prior written approval from EPA and Ohio EPA.
- Prohibition against the removal of soil from within the site boundary (as of 1998) to offsite locations without prior written approval from EPA, Ohio EPA, and ODH.
- Prohibition against the removal of concrete floor material in specified rooms of T Building to offsite locations without prior written approval from EPA, Ohio EPA, and ODH.
- Prohibition against the penetration of concrete floors in specified rooms of T Building locations without prior written approval from EPA, Ohio EPA, and ODH.
- Allowing site access for federal and state agencies for the purpose of sampling and monitoring.

Submitting Organization: _____

Sponsoring Organization: _____

Date Submitted: _____

1. The proposed activity:
2. Describe the proposed site activity. (Add supplemental documentation to this form if required)
3. Does the proposed activity violate any of the following restricted uses described in quitclaim deeds and the Environmental Covenant? Yes <input type="checkbox"/> No <input type="checkbox"/> <ul style="list-style-type: none">• Will not use, or allow the use of, the Premises for any residential or farming activities, or any other activities which could result in the chronic exposure of children under eighteen years of age to soil or groundwater from the Premises. Restricted uses shall include, but not be limited to:<ul style="list-style-type: none">1) single or multifamily dwellings or rental units;2) day care facilities;3) schools or other educational facilities for children under eighteen years of age;4) community centers, playgrounds, or other recreational or religious facilities for children under eighteen years of age• Will not extract, consume, expose, or use in any way the groundwater underlying the premises without the prior written approval of the EPA and the Ohio EPA.• Will not remove soil from the property except for exempted area in northeast corner Parcel H. without the prior written approval of the EPA and the Ohio EPA.
4. Is this a short-term or permanent activity? If short term, what duration do you anticipate? Specific date(s)?
5. When do you wish to begin this activity?

Mound Site, Miamisburg, Ohio
Request for Regulatory approval of new site activity

6. What ages of individuals would participate in this activity?
7. Estimate an average duration of time on site that these individuals participate in this activity? (hours per day x number of days per year; or hours per month; or total hours per year)
8. Does a risk assessment need to be performed? Attach a copy.

FOR REGULATOR USE ONLY
1. What is the basis for approval/disapproval?
2. What actions, precautions, notifications (if any) are required to mitigate risk?

Approvals:

Print name	Signature	Date
U.S. Environmental Protection Agency Representative		

Print name	Signature	Date
Ohio Environmental Protection Agency Representative		

Concurrence:

Print name	Signature	Date
U.S. Department of Energy Representative		

Request for Regulatory approval of Mound Site activity

12/30/2013

Appendix E

2021 Core Team Memorandum – Process for Evaluating Requests for New Site Activities, Property Owner Requests, Core Team Reviews, and Determinations

Contents

1. Mound Site Core Team Memorandum: Mound Core Team process to evaluate Mound Business Park property owner requests for land uses not specifically addressed under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Records of Decision (RODs), December 10, 2021
2. U.S. Department of Energy Response to Pinnacle Architects *Request for Regulatory Approval of New Site Activity* Form, April 20, 2022, with two attachments:
 - a. Pinnacle Request, “Mound Site, Miamisburg, Ohio Request for Regulatory Approval of New Site Activity”
 - b. Core Team Evaluation, “Mound Core Team Evaluation of Proposed New Site Uses Pinnacle Architects (Former OSE Building)”



Mound Site Core Team Memorandum

Mound Core Team process to evaluate Mound Business Park property owner requests for land uses not specifically addressed under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Records of Decision (RODs)

Background

After the U.S. Department of Energy (DOE) and Miamisburg Mound Community Improvement Corporation/City of Miamisburg agreed to industrial use as the future land use for the site, a process was developed to focus the cleanup approach on that end use and make property available for release and reuse. The property was divided into release blocks or parcels and evaluated per the *Work Plan for Environmental Restoration of the DOE Mound Site, The Mound 2000 Approach*, February 1999. A figure showing the site boundary and parcels is contained as Attachment A. After each parcel was cleaned up and evaluated, a CERCLA ROD was developed. The CERCLA RODs dictate permitted land uses via institutional controls (ICs) at the Mound Site. The CERCLA ICs, bulletized below, run with the land in the form of restrictions and covenants in Quit Claim Deeds (QCDs), or activity and use limitations in the Environmental Covenant (EC) (parcel 9 only):

- Maintenance of industrial or commercial land use and prohibition against residential land use.
- Prohibition against the use of groundwater without prior written approval from U.S. Environmental Protection Agency (EPA) and Ohio EPA.
- Prohibition against the removal of soil from within the site boundary (as of 1998) to offsite locations without prior written approval from U.S. EPA, Ohio EPA, and Ohio Department of Health (ODH).
- Prohibition against the removal of concrete floor material in specified rooms of T Building to offsite locations without prior written approval from U.S. EPA, Ohio EPA, and ODH.
- Prohibition against the penetration of concrete floors in specified rooms of T Building locations without prior written approval from U.S. EPA, Ohio EPA, and ODH.
- Allowing site access for federal and state agencies for the purpose of sampling and monitoring.

The RODs detail specific land uses that will not be permitted onsite, but the list in the RODs is not all-inclusive. Land parcels may not be used for any residential or farming activities, or for any other activities that could result in the chronic exposure of children less than 18 years of age to soil or groundwater from the premises. Prohibited land uses listed in the RODs include, but are not limited to, single or multifamily dwellings or rental units, schools, and childcare facilities.

Upon conclusion of remediation activities at the Mound site (excluding groundwater) in 2006, much of the site had been transferred to the Mound Development Corporation (MDC), a non-profit associated with the City of Miamisburg, to manage the site's economic redevelopment as an industrial park (i.e. Mound Business Park).

In anticipation of future growth and development of the Mound Business Park, on January 15, 2019, the City of Miamisburg passed Ordinance 6758 titled MB-1 Mound Business District that applies to all lands within the boundaries of the Mound Business Park. MB-1 was designed to promote orderly growth of Mound Business Park; identify that CERCLA institutional controls have been imposed upon parcels within Mound Business Park; identify both permitted and prohibited uses; and establish basic standards for structures, landscaping and other improvements on the properties within Mound Business Park.

Until 2019, requests for regulatory approval of site uses not specifically prohibited by the CERCLA RODs were limited to short duration activities (science fair competition) or one-time events ("Turkey Trot" Thanksgiving Day footrace). In response to those requests, the Core Team created the "Request for Regulatory Approval of New Site Activity" form that the requestor would complete, providing details that will be used to assist with the evaluation of the activity. Examples of the type of information needed include timeframe and duration of event, ages of participants, and amount of time spent on site. The "Request for Regulatory Approval of New Site Activity" form is contained in Attachment B.

Purpose

The purpose of this document is to outline a process for evaluating property owner or lessee requests for land uses that are not specifically addressed in the CERCLA RODs and ICs. Any lessee requests would come through the property owner. This process will allow for a more consistent approach for review of future requests. This document does not change or modify the existing ICs identified in the RODs, QCDs, or Parcel 9 EC. Land uses prohibited under the existing ICs will not be considered or evaluated.

Property Owner Request Process

The proposed process is as follows:

Activity Requestor (land owner, lessee, etc.) shall fill out the "Request for Regulatory Approval of New Site Activity" form (Attachment B) and submit to DOE Legacy Management (LM) as the lead agency under CERCLA for evaluation. DOE LM shall notify the Core Team and share the request.

DOE LM will then evaluate the request by doing the following:

- Engage directly with the property owner, should clarification of the request be needed.
- Review of existing information such as historical land uses, previous requests, and available site information (e.g. RODs, QCDs, Mound Land Use Controls Uncertainty Analysis, Parcel 9 EC).
- Engage legal counsel, other subject matter experts, and the Core Team as necessary.

- Evaluate the requested activity and bounding conditions against the exposure conditions in the specific parcel Residual Risk Evaluation.
- Perform a risk assessment if deemed necessary by the Core Team.

After completing the request evaluation, DOE-LM will prepare and present a recommendation to the Mound Core Team. The Core Team, in coordination with agency legal counsel when appropriate, will issue a decision on the request and notify the property owner.

Should a request be denied by the Core Team, the property owner will be given the opportunity to request a meeting with LM to discuss.

All new site activity requests and the Core Team's decision to approve/or deny the request will be included in LM's next annual report on effectiveness of ICs. This would ensure all such requests and approvals/disapprovals are archived in a single, publicly available document. For requests that are still pending, those will not be recorded in the annual IC report.

Any decision acted upon by the Core Team will be made in accordance with CERCLA requirements only and will be independent of any state or local ordinances or zoning actions, since the U.S. government has no control over such activities. Should the regulators agree that a requested land use is protective of human health and environment as defined in approved CERCLA documents, LM would notify the affected parties such as the property owner, MDC (manages Mound Business Park), and City of Miamisburg (implements and enforces zoning requirements).

The Core Team will not rely upon local government ordinances or zoning restrictions to be the primary means of IC enforcement; however, when properly coordinated with the appropriate local governing entity, zoning and other ordinances could provide an additional layer of protectiveness for ensuring property owners are aware of CERCLA ICs.

Monitoring Process

DOE will monitor compliance of any new site activities that are approved by the Core Team in the same manner that DOE monitors compliance with Mound sitewide and T Building specific ICs. In the event DOE determined a property owner was not complying with the regulator-approved new site activity/land use (e.g., was using property inconsistent with the originally proposed bounding conditions the Core Team evaluated, upon which the regulators based their final decision), DOE would take the lead in resolving the issue with the property owner. Resolution could include dialogue with the property owner to use the land only in accordance with the stated bounding conditions and regulator-approved land use, or suggestion that the property owner submit an additional new site activity request for Mound Core Team's consideration. Both DOE and the regulators would have the authority to enforce compliance with regulator-approved new site activity/land uses.

Any new DOE monitoring requirements associated with regulator-approved new site activities would be captured in the Mound Long-Term Surveillance and Maintenance plan/Operations and Maintenance plan as appropriate.

Enforcement Actions

This process was developed to offer clarification on land uses that are not specifically identified in the RODs and subsequent execution instruments (QCDs, ECs, etc.). This is not to change or erode property use restrictions. As the grantor who created the original restrictive Covenants and ICs, the United States would likely take the lead in their enforcement, probably through the Department of Justice or the local US Attorney's office (Reference: Tormey memo 2/17/1999 and included in Attachment C).

Attachments:

Attachment A – Mound, Ohio, Site Boundary and Parcel Figure

Attachment B – Request for Regulatory Approval of New Site Activity Form

Attachment C – Randy Tormey Memo dated February 17, 1999

DOE:

Signed electronically on 6-14-21.

Brian Zimmerman, DOE-LM Mound Site Manager

USEPA:

Signed electronically on 12-16-21.

David Seely, EPA Region 5, Remedial Project Manager

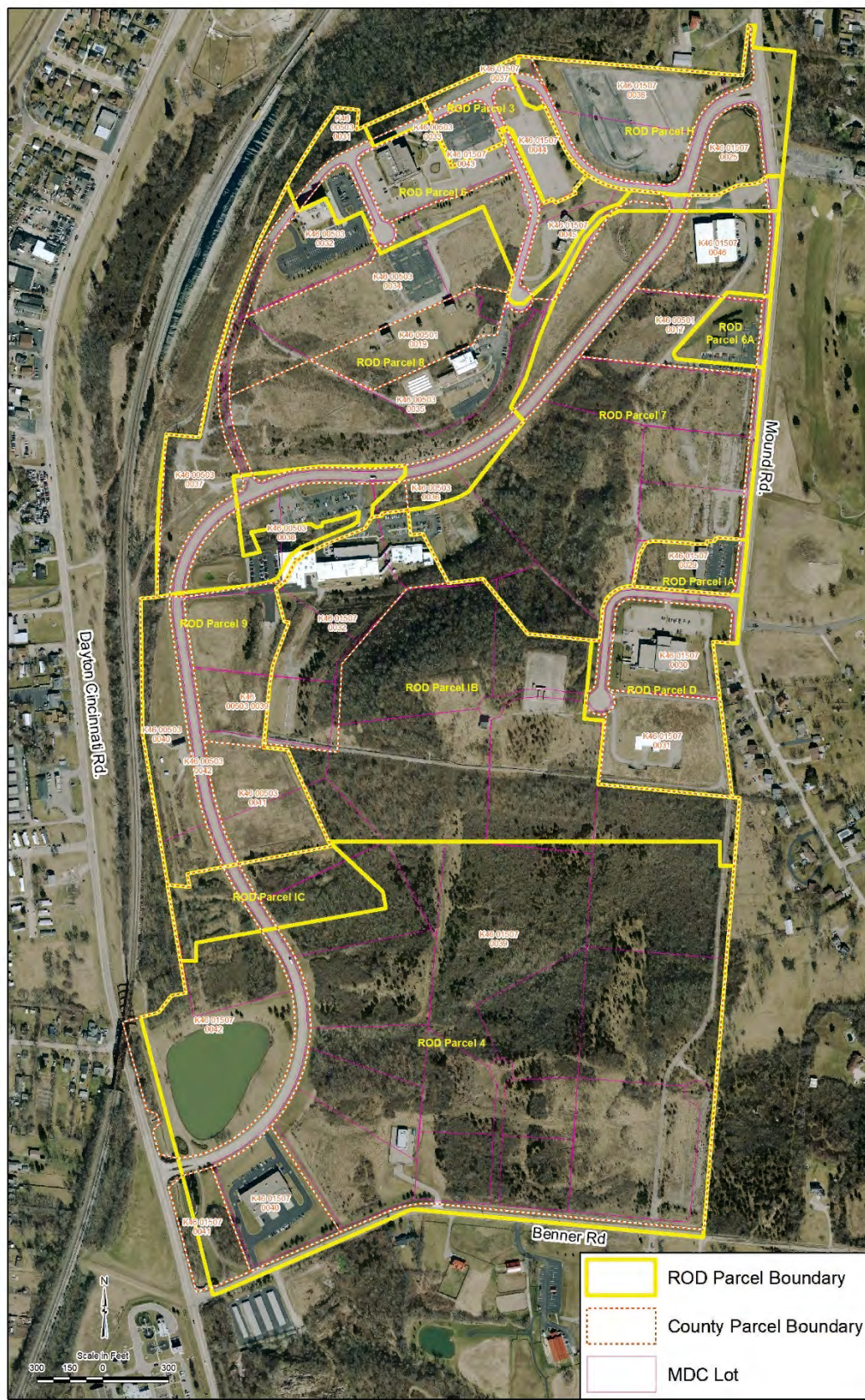
OEPA:

Signed electronically on 6-22-21.

Brian Nickel, Ohio EPA, Remedial Project Manager

Attachment A

Mound, Ohio, Site Boundary and Parcel Figure



Attachment B

Request for Regulatory Approval of New Site Activity Form

Mound Site, Miamisburg, Ohio Request for Regulatory Approval of New Site Activity

This is a formal request to the U.S. Department of Energy (DOE), the Environmental Protection Agency (EPA) and the Ohio EPA to provide written approval of an activity not generally covered by the institutional controls at the Mound Site. The institutional controls are part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedies established in the Records of Decision for the Mound Site.

The Mound site institutional controls run with the land in the form of restrictions and covenants in quitclaim deeds or activity and use limitations in the Environmental Covenant: See the *Operations and Maintenance (O&M) Plan for the U.S. Department of Energy Mound Site, Miamisburg, Ohio*, for details on records of decision.

- Maintenance of industrial or commercial land use and prohibition against residential land use.
- Prohibition against the use of groundwater without prior written approval from EPA and Ohio EPA.
- Prohibition against the removal of soil from within the site boundary (as of 1998) to offsite locations without prior written approval from EPA, Ohio EPA, and ODH.
- Prohibition against the removal of concrete floor material in specified rooms of T Building to offsite locations without prior written approval from EPA, Ohio EPA, and ODH.
- Prohibition against the penetration of concrete floors in specified rooms of T Building locations without prior written approval from EPA, Ohio EPA, and ODH.
- Allowing site access for federal and state agencies for the purpose of sampling and monitoring.

Submitting Organization: _____
Sponsoring Organization: _____
Date Submitted: _____

1. The proposed activity:
2. Describe the proposed site activity. (Add supplemental documentation to this form if required)
3. Does the proposed activity violate any of the following restricted uses described in quitclaim deeds and the Environmental Covenant? (Note: Environmental Covenant is applicable only to Parcel 9 – see attached figure) Yes <input type="checkbox"/> No <input type="checkbox"/> <ul style="list-style-type: none"> • Will not use, or allow the use of, the Premises for any residential or farming activities, or any other activities which could result in the chronic exposure of children under eighteen years of age to soil or groundwater from the Premises. Restricted uses shall include, but not be limited to: <ul style="list-style-type: none"> 1) single or multifamily dwellings or rental units; 2) day care facilities; 3) schools or other educational facilities for children under eighteen years of age; 4) community centers, playgrounds, or other recreational or religious facilities for children under eighteen years of age • Will not extract, consume, expose, or use in any way the groundwater underlying the premises without the prior written approval of the EPA and the Ohio EPA. • Will not remove soil from the property except for exempted area in northeast corner Parcel H. without the prior written approval of the EPA and the Ohio EPA.
4. Is this a short-term or permanent activity? If short term, what duration do you anticipate? Specific date(s)?

5. When do you wish to begin this activity?
6. What ages of individuals would participate in this activity?
7. Estimate an average duration of time on site that these individuals participate in this activity? (hours per day x number of days per year; or hours per month; or total hours per year)

FOR REGULATOR USE ONLY
1. What is the basis for approval/disapproval?
2. What actions, precautions, notifications (if any) are required to mitigate risk?
3. Does a risk assessment need to be performed by DOE? Attach a copy.

Approvals:

Print name	Signature	Date
U.S. Environmental Protection Agency Representative		

Print name	Signature	Date
Ohio Environmental Protection Agency Representative		

Concurrence:

Print name	Signature	Date
U.S. Department of Energy Representative		

Attachment C

Randy Tormey Memo dated February 17, 1999

MEMORANDUM

Date: 2/17/99

To: File

From: Randolph Tormey, Deputy Chief Counsel, Ohio Field Office, US DOE

Subject: Institutional Controls, Mound Facility, Miamisburg, Ohio

A question has arisen as to the validity and method of enforcement of restrictive covenants ("institutional controls") in deeds of conveyance for real property at the DOE Mound Facility, Miamisburg, Ohio. Currently in question are restrictive covenants to be placed upon a portion of the real property known as "Parcel D" as follows:

"The parties hereto intend the following restrictions and covenants to run with the land and to be binding upon the Grantee and its successors, transferees, and assigns or any other person acquiring an interest in the Premises, for the benefit of Grantor, USEPA and the State of Ohio, acting by and through the Director of the Ohio EPA or ODH, their successors and assigns.

Grantee covenants that any soil from the Premises shall not be placed on any property outside the boundaries of that described in instruments recorded at Deed Book 1214, pages 10, 12, 15, 17 and 248; Deed Book 1215, page 347; Deed Book 1246, page 45; Deed Book 1258, pages 56 and 74; Deed Book 1256, page 179; Micro-Fiche 81-376A01; and Micro-Fiche 81-323A11 of the Deed Records of Montgomery County, Ohio (and as illustrated in the CERCLA 120(h) Summary, Notices of Hazardous Substances Release Block D, Mound Plant, Miamisburg, Ohio dated January, 1999) without prior written approval from the Ohio Department of Health (ODH), or a successor agency.

Grantee covenants not to use, or allow the use of, the Premises for any residential or farming activities, or any other activities which could result in the chronic exposure of children under eighteen years of age to soil or groundwater from the Premises. Restricted uses shall include, but not be limited to:

- (1) single or multifamily dwellings or rental units;
- (2) day care facilities;
- (3) schools or other educational facilities for children under eighteen years of age; and
- (4) community centers, playgrounds, or other recreational or religious facilities for children under eighteen years of age.

Grantor shall be contacted to resolve any questions which may arise as to whether a particular activity would be considered a restricted use.

Grantee covenants not to extract, consume, expose, or use in any way the groundwater underlying the premises without the prior written approval of the United States Environmental Protection Agency (Region V) and the Ohio Environmental Protection Agency."

Under Ohio law there is no uniform or standard manner to encumber property since there are as many valid reasons for restricting the use of property as there are means to effect those purposes. Recordation of the

restrictions with the county recorder for the county in which the land is situated is generally required for the restrictions to be enforced so as to provide knowledge of their existence. While all courts disfavor restrictions upon the free use of land, Ohio law provides that "courts must enforce a restriction where it is clearly and unambiguously found in a covenant." Brooks v. Orshoski, 1998 WL 484560 (Oh App. 6 Dist.) In general, the court will "construe the language of the restriction by giving it its common and ordinary meaning, and read the restrictive covenants as a whole to ascertain the intent of the creator." Id. This states the basic rule followed by courts in Ohio. It also seems that restrictive covenants are viewed more favorably when they serve some public purpose. The above covenants seem to be of this nature. Based upon the case law in Ohio, the above-stated restrictive covenants are in a form that is acceptable in Ohio and should be enforced by the courts in this state.

Ohio Revised Code (ORC) § 5301.25(A) provides "All ... instruments of writing properly executed for the conveyance or encumbrance of lands ... shall be recorded in the office of the county recorder of the county in which the premises are situated..." Further, Note 2 under this section mentions that "Proper recording of instrument serves as constructive notice of interest or encumbrance to all who claim through or under grantor by whom such deed was executed," citing Thames v. Asia's Janitorial Service, Inc., (Lucas 1992) 81 Oh App. 3d 579, 611 N.E. 2d 948, motion overruled 65 Ohio State 3d 1458. Furthermore, under ORC § 5301.48 to have "marketable record title" a landowner must have an unbroken chain of title of record for forty years or more. This places upon the buyer of property the need to search the record title for at least the past 40 years, which typically reveals any "cloud" on the title. Of course, the above-mentioned covenants would be such a cloud and would be noted by the subsequent buyer. In a subsequent sale that buyer would then place the covenants in the following deed thereby perpetuating this notice. It should be noted that the lack of a cloud for the forty-year period would normally eliminate the restriction, except under ORC § 5301.53(G) any right, title or interest of the United States may not be extinguished in this manner. This indicates that the restrictive covenants will run with the land and will be enforced against any property owner who takes the property through a deed in the chain of title from DOE.

Enforcement of the restrictive covenants would be through an injunctive action which could be brought by any party for whose benefit the restrictions were put in place. Brooks v. Orshoski, 1998 WL 484560 (Ohio App. 6 Dist.), Meisse v. Family Recreation Club, Inc., 1998 WL 70503 (Ohio App. 2 Dist.). Obviously the governmental agencies mentioned in the draft deed for Parcel D would be such a party, however it is also conceivable that any other party intended as the beneficiary of the restrictive covenants could likewise bring an action for enforcement. In view of the public purposes served by the above-mentioned covenants this class of persons could be quite large. As the grantor creating the restrictive covenants, the United States would likely take the lead in their enforcement, probably through the Department of Justice or the local US Attorney's office.

Based upon the foregoing, I conclude that restrictive covenants (institutional controls) are enforced by the courts of Ohio, particularly when they serve a public purpose. The covenants suggested would run with the land and recordation would assure notice of their existence. They are typically enforced through an injunctive action by any party intended to be a beneficiary of the restrictions. In this case, most likely by the United States.

Randy Torrey



Department of Energy

Washington, DC 20585

April 20, 2022

Mr. Ferdinand Ejinaka
Pinnacle Architects
480 Vantage Point
Miamisburg, OH 45342

Subject: U.S. Department of Energy Response to Pinnacle Architects *Request for Regulatory Approval of New Site Activity Form*

Dear Mr. Ejinaka:

This letter is in response to Pinnacle Architects *Request for Regulatory Approval of New Site Activity* form (Pinnacle request) for new proposed activities (conference center, restaurant, and medical office) located at 480 Vantage Point, Miamisburg, Ohio 45342 (formerly known as the OSE Building) within the boundaries of the former Mound Site in Miamisburg, Ohio. In accordance with the site's Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) documents and following a review of the proposed uses in comparison to previous residual risk evaluations, the Mound Site Core Team, consisting of members of the U.S. Department of Energy Office of Legacy Management (LM), Environmental Protection Agency (EPA) and Ohio Environmental Protection Agency (Ohio EPA), have completed review of the Pinnacle Request.

The Mound Site Core Team approves this request. LM, in consultation with EPA and Ohio EPA, concluded the proposed activity uses along with the proposed bounding conditions provided in the Pinnacle request (and if followed by property owner, tenants, or visitors) would not result in unsafe exposures for either employees over the age of 16 years or adult or child visitors.

It is important to understand this approval only applies to the activities specified in the above referenced request proposed in the former OSE Building. Additionally, this approval does not state nor imply a blanket approval for other new activities in the OSE Building or any other buildings within the former Mound Site's boundaries.

This decision has been made in accordance with CERCLA requirements only and is independent of any state or local ordinances or zoning actions, as the U.S. government has no control over such activities. The requestor is responsible for any other state, or local business requirements. The regulators have agreed this requested land use is protective of human health and environment as defined in approved CERCLA documents, however, it should be noted that some land uses proposed by the Pinnacle Architects request are not approved by the city under the current MB-1 zoning ordinances.

This letter and its enclosures serve as notification to the affected parties including the property owner, Mound Development Corporation, and the City of Miamisburg. Property owners are responsible for notifying their tenants.


Please contact me at (636) 485-0036 or Tiffany.Drake@lm.doe.gov if you have any questions. Please send any correspondence to:

U.S. Department of Energy
Office of Legacy Management
7295 Highway 94 South
St. Charles, MO 63304

Sincerely,

**Tiffany L.
Drake**

Tiffany Drake
Mound Site Manager

 Digitally signed by Tiffany
L. Drake
Date: 2022.04.20 13:48:50
-05'00'

Enclosures

cc w/enclosures via email:

Syed Quadri, EPA
Scott Glum, Ohio EPA
Shannon Dettmer, Ohio DHS
Chris Fine, City of Miamisburg
Andrew Rodney, City of Miamisburg
Ellen Stanifer, City of Miamisburg
Dick Church, MDC
April Hauser, MDC
Cliff Carpenter, DOE-LM
Becky Cato, RSI
Chuck Friedman, RSI
Greg Lupton, RSI
Joyce Massie, RSI
DOE Read File
File: E/19/584 F/20/205

Mound Site, Miamisburg, Ohio
Request for Regulatory approval of new site activity

This is a formal request to the Environmental Protection Agency (EPA) and the Ohio EPA to provide written approval of an activity not generally covered by the institutional controls at the Mound Site. The institutional controls are part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedies established in the Records of Decision for the Mound Site.

The Mound site institutional controls run with the land in the form of restrictions and covenants in quitclaim deeds or activity and use limitations in the Environmental Covenant: See the *Operations and Maintenance (O&M) Plan for the U.S. Department of Energy Mound Site, Miamisburg, Ohio*, for details on records of decision.

- Maintenance of industrial or commercial land use and prohibition against residential land use.
- Prohibition against the use of groundwater without prior written approval from EPA and Ohio EPA.
- Prohibition against the removal of soil from within the site boundary (as of 1998) to offsite locations without prior written approval from EPA, Ohio EPA, and ODH.
- Prohibition against the removal of concrete floor material in specified rooms of T Building to offsite locations without prior written approval from EPA, Ohio EPA, and ODH.
- Prohibition against the penetration of concrete floors in specified rooms of T Building locations without prior written approval from EPA, Ohio EPA, and ODH.
- Allowing site access for federal and state agencies for the purpose of sampling and monitoring.

Submitting Organization: PINNACLE ARCHITECTS - 480 VANTAGE PROPERTY OWNER
Sponsoring Organization: _____
Date Submitted: 11/14/19

1. The proposed activity:	<u>CONFERENCE CENTER, EATING ESTABLISHMENTS RESTAURANT & MEDICAL OFFICE</u>
2. Describe the proposed site activity. (Add supplemental documentation to this form if required)	<u>CONF. CENTER: SPECIAL EVENTS VENUE w/ CATERED FOOD FOR A WHOLE VARIETY OF FUNCTIONS. RESTAURANT: SALE OF FOOD TO THE PUBLIC. OUR FACILITY USED TO HOUSE A CAFETERIA & SERVING LINE & DINING ROOMS FOR THE MOUND CAMPUS. THIS IS A SIMILAR USE, EXCEPT FOR THE PUBLIC. MEDICAL OFFICE: PHYSICIAN OFFICES FOR EXAM - NOT AMBULATORY CARE OR HOSPITAL FUNCTIONS</u>
3. Does the proposed activity violate any of the following restricted uses described in quitclaim deeds and the Environmental Covenant? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<ul style="list-style-type: none">• Will not use, or allow the use of, the Premises for any residential or farming activities, or any other activities which could result in the chronic exposure of children under eighteen years of age to soil or groundwater from the Premises. Restricted uses shall include, but not be limited to:<ul style="list-style-type: none">1) single or multifamily dwellings or rental units;2) day care facilities;3) schools or other educational facilities for children under eighteen years of age;4) community centers, playgrounds, or other recreational or religious facilities for children under eighteen years of age• Will not extract, consume, expose, or use in any way the groundwater underlying the premises without the prior written approval of the EPA and the Ohio EPA.• Will not remove soil from the property except for exempted area in northeast corner Parcel H. without the prior written approval of the EPA and the Ohio EPA.
4. Is this a short-term or permanent activity? If short term, what duration do you anticipate? Specific date(s)?	<u>PERMANENT ACTIVITY.</u>
5. When do you wish to begin this activity?	<u>AS SOON AS WE WOULD FIND TENANTS FOR USES DESCRIBED. COULD BE WITHIN A FEW MONTHS.</u>

Mound Site, Miamisburg, Ohio
Request for Regulatory approval of new site activity

6.	What ages of individuals would participate in this activity?	TYPICALLY ADULTS, THE RESTAURANT & CONFERENCE CENTER MAY HAVE CHILDREN BUT THIS WOULD BE FOR SHORT PERIODS OF TIME ON A LIMITED BASIS. NOT A 'CHRONIC EXPOSURE'.
7.	Estimate an average duration of time on site that these individuals participate in this activity? (hours per day x number of days per year; or hours per month; or total hours per year)	CONF. CENTER: 3-4 HRS. PER DAY (TYPICALLY 1 TIME EVENT) RESTAURANT: 1-2 HRS MAY BE 6 TIMES PER YEAR. MEDICAL OFFICE WOULD BE SIMILAR TO RESTAURANT.
8.	Does a risk assessment need to be performed? Attach a copy.	NOT REQUIRED BY OUR COMPANY.

FOR REGULATOR USE ONLY	
1.	What is the basis for approval/disapproval?
2.	What actions, precautions, notifications (if any) are required to mitigate risk?

Approvals:

Syed Quadri	SYED QUADRI	3/28/22
Print name	Signature	Date
U.S. Environmental Protection Agency Representative		

Scott Glum	Scott Glum	3/16/22
Print name	Signature	Date
Ohio Environmental Protection Agency Representative		

Concurrence:

Tiffany Drake	Tiffany L. Drake	3/16/22
Print name	Signature	Date
U.S. Department of Energy Representative		

Mound Core Team Evaluation of Proposed New Site Uses Pinnacle Architects (Former OSE Building)

Pinnacle Architects, the owner of the former OSE Building, requested that the following uses be allowed on the property:

- Conference center – special event venue with catered food and drink
- Restaurant – sale of food to the public with cafeteria and dining room
- Medical office – physician offices for routine medical services

The property owner completed the required “*Request for Regulatory Approval of New Site Activity*” form for the Core Team to review. The property owner included the required information that identified typical ages of visitors and employees and time that would be spent at the location (i.e., duration of potential exposure). The form is included as Attachment A.

For the evaluation of the Pinnacle Architects request, LM reviewed a risk evaluation that was performed in 2014 for applicability to the Pinnacle Architects request. The previous use requests that received approval in 2014 were for specific, limited activities that included the following:

- science fair (middle school to adult, annual event),
- outdoor summer worker (high school to adult, seasonal exposure), and
- walker/jogger (toddler to adult, exposure throughout the year)

The 2014 evaluation did not include a new risk assessment; rather the exposure assumptions from the Parcels 6, 7 & 8 Residual Risk Evaluation (RRE) were used as a starting point to evaluate the exposure for the proposed activities or uses. The two exposure scenarios defined under the Mound 2000 approach of office worker and construction worker were used to build the activity-based risk scenarios. The office worker and construction worker scenarios are based on adult exposures, where an adult is defined as older than 18 years, during reasonably expected work conditions of a 40-hour work week. Under the Mound 2000 approach, no consideration was given to exposures for children under the age of 18. The 2014 evaluations extrapolated the RRE exposure assumptions to include child exposure scenarios for the activities listed above. The analysis determined that the proposed activities did not exceed the permitted exposure limits and did not result in unsafe exposures to participants. The Mound Core Team approved these 3 uses and a summary of the 2014 risk evaluation is included as Attachment B.

For the Pinnacle Architects request, the office worker and construction worker scenarios were again used as starting point. The LM Contractor risk assessment SME involved in the 2014 evaluation also evaluated the Pinnacle Architect’s request and determined that the proposed land uses along with the proposed bounding conditions (if followed by property owner, tenants, or visitors) would not result in unsafe exposures for either visitors or employees under either scenario. It was decided that the employees at the proposed facilities match the office worker scenario, noting that this scenario was based on a 40-hour work week. If an employee of 16 or

17 years old was hired, per EPA guidance there is no age adjustment factor for a child 16 years old or over; therefore, exposure would be same as an adult employee.

Visitors for any of these businesses include both adults and children. The estimated duration for visits to these businesses was estimated to be 12 hours per year on site, which is conservative when using the estimated durations provided by Pinnacle Architects. The 2014 science fair scenario or walker-jogger scenarios, which assumed 16 hours/year and 175 hours/year, respectively, where both only a small fraction of the permitted exposure. Therefore, it was concluded that visitors to these proposed businesses, would be well below the permitted exposures.

The evaluation of the Pinnacle Architects request concludes that the proposed activity uses along with the proposed bounding conditions provided in the request (and if followed by property owner, tenants, or visitors) would not result in unsafe exposures for either employees over the age of 16 years or adult or child visitors.

Appendix F

**Aerial Photo with ROD Parcels, County Parcel, and MDC Lot
Boundaries, March 2021**

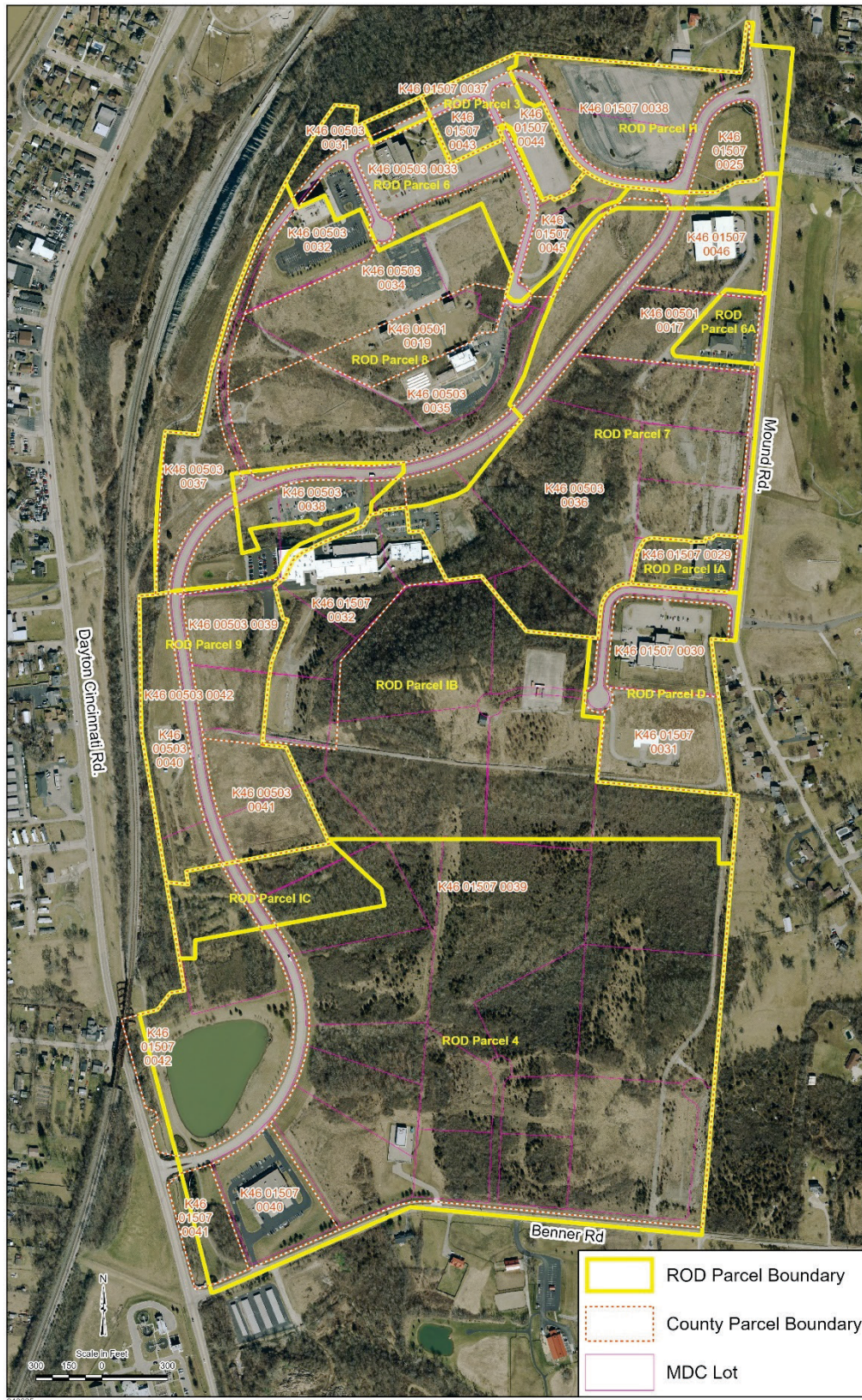


Figure F-1. Mound Site 2021 Aerial Photo Showing ROD Parcel, County Parcel, and MDC Lot Boundaries