

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

May 2021



U.S. DEPARTMENT OF
ENERGY

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Contents

Abbreviations.....	iv
1.0 Introduction.....	1
2.0 Period of Review.....	2
3.0 Scope of Assessment.....	2
4.0 CERCLA Remedy Documents.....	7
5.0 Institutional Controls.....	10
5.1 Overview.....	10
5.2 Mound Site ICs.....	10
5.2.1 Sitewide ICs.....	10
5.2.2 Building-Specific ICs.....	11
5.2.3 Areas Exempted from Soil-Removal Restriction IC.....	11
5.3 Mound Site Core Team IC Guidance Documents.....	12
5.3.1 IC Guidance—T Building Special IC Areas.....	12
5.3.2 IC Guidance—General Including Soil Removal.....	13
5.4 Annual IC Assessment Process.....	13
6.0 2021 IC Assessment Results.....	14
6.1 Status of Previous Recommendations.....	14
6.1.1 Annual Assessments (2016–2020).....	14
6.1.2 CERCLA FYRs.....	15
6.1.2.1 2016 Fourth FYR.....	15
6.1.2.2 2021 Fifth FYR.....	15
6.2 Record Reviews.....	15
6.2.1 City of Miamisburg.....	15
6.2.2 MDC.....	16
6.2.3 Montgomery County Auditor Property Records: Platting, Transfers, Sales, and Deeds.....	17
6.2.4 Ohio Department of Natural Resources (ODNR) Well Log Registry.....	17
6.2.5 Core Team—Requests from Property Owners.....	17
6.2.6 IC Compliance Forms—Mound Site Property Owners.....	17
6.3 Physical Inspections (IC and FYR).....	19
6.3.1 Overview.....	19
6.3.2 IC Remedy.....	19
6.3.2.1 Former Resource Conservation and Recovery Act (RCRA) Burn Area.....	19
6.3.2.2 MDC Building Construction at 1100 Vanguard Blvd.	20
6.3.2.3 MDC Soil Staging Area.....	21
6.3.2.4 T Building Special IC Areas.....	22
6.3.2.5 General Site Observations During Physical Inspections.....	26
6.3.2.6 IC Remedy Physical Inspection Results.....	28
6.3.3 Groundwater Remedy Components.....	29
6.3.3.1 OU-1 Area.....	29
6.3.3.2 Groundwater Remedies Physical Inspection Results.....	32
6.4 Communications with Property Owners.....	32
7.0 Conclusions and Recommendations.....	32
8.0 Contact Information.....	33
9.0 References.....	33

Figures

Figure 1.	1998 Mound Plant Property Showing the ROD Parcels	3
Figure 2.	Mound Site Looking North (March 2021)	5
Figure 3.	Mound Site Boundary and Soil-Removal Exception (Exemption) Areas on Mound and Benner Roads	12
Figure 4.	Current Mound Site Property Ownership.....	18
Figure 5.	Sign on Gate Looking West Toward the Former RCRA Burn Area.....	20
Figure 6.	Looking West from Corner of Salt Shed Toward Former RCRA Burn Area	20
Figure 7.	Looking West at Gary Weidenbach, LMS IC Inspector, near Former RCRA Burn Area	20
Figure 8.	Looking Northwest Toward Former RCRA Burn Area	20
Figure 9.	Building Addition Construction Activities Completed	21
Figure 10.	No Evidence of Use of the MDC Soil Staging Area	21
Figure 11.	T Building First Floor Plan with Special IC Areas	23
Figure 12.	Large Bay Area Looking West (from 1C-06 to 1C-10) Toward Red Concrete Cap	24
Figure 13.	Red Concrete Cap (1C-10) Looking Toward Northwest Corner	24
Figure 14.	Edge of Red Concrete Cap (1C-10)	24
Figure 15.	Red Concrete Floor (1C-10) Looking West Toward Rooms T-57 and T-58	24
Figure 16.	Floor in Room T-57 (1C-11)	24
Figure 17.	Floor in Room T-58 (1C-12)	24
Figure 18.	Red Concrete Floor at Northwest Corner of 1C-10 Outside of T-59 (1C-21)	25
Figure 19.	Red Concrete Floor in Room T-59 (1C-21)	25
Figure 20.	Sealed Crack at Edge of Red Concrete	25
Figure 21.	Sealed Crack at Edge of Red Concrete	25
Figure 22.	Access Door from Room 99 to SYS 02-A/B/C Tunnel	25
Figure 23.	Room 99 Sump Outside Door to SYS 02-A/B/C Tunnel.....	25
Figure 24.	T-63 (1C-16).....	26
Figure 25.	T-62 (1C-16).....	26
Figure 26.	T-61 (1C-15).....	26
Figure 27.	T-16 (1S-10)	26
Figure 28.	T Building West Tower Repaired After Vandalism.....	27
Figure 29.	Building 45 Unoccupied.....	27
Figure 30.	Building 100 Unoccupied.....	27
Figure 31.	Sign near MDC/City Pond	28
Figure 32.	Additional Text Added to Sign near MDC/City Pond	28
Figure 33.	Looking South of Trailer Along Vanguard Blvd. that Dissects the OU-1 Area	30
Figure 34.	OU-1 Area Groundwater Monitoring Wells South of Trailer	30
Figure 35.	OU-1 Area East of Trailer	30
Figure 36.	OU-1 Area Northeast of Trailer	30
Figure 37.	OU-1 Area Trailer at 1275 Vanguard Blvd.....	30
Figure 38.	OU-1 Area Trailer Looking West Toward Building 300	30
Figure 39.	OU-1 Area Looking North from Trailer.....	31
Figure 40.	OU-1 Area Looking Northeast Toward Building at 1100 Vanguard Blvd.	31
Figure 41.	OU-1 Area Looking South Along Vanguard Blvd. Toward Trailer	31
Figure 42.	OU-1 Area Looking South Along Vanguard Blvd. Toward Trailer and Building 300	31

Figure 43. Building 300 that Houses the Pump and Treatment System	31
Figure 44. Building 300	31
Figure 45. The Pump and Treatment System Inside Building 300 in Standby Mode	32
Figure 46. Controls for the Pump and Treatment System in Building 300	32

Tables

Table 1. Mound Site ROD and CERCLA 102(h) ES Information	7
Table 2. Summary of RODs, Remedies, ICs, and Legal Instruments	8
Table 3. Status of Issues and Recommendations from 2016 IC Assessment	14

Appendixes

Appendix A	Annual Assessment Checklist with Supporting Documents
Appendix B	Property Information
Appendix C	Information on T Building Special IC Areas
Appendix D	2012 Core Team IC Guidance Form: Request for Regulatory Approval of New Site Activity
Appendix E	Aerial Photo with ROD Parcels, County Parcel, and MDC Lot Boundaries, March 2021

Abbreviations

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
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
OU	Operable Unit
QC	quitclaim
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision

1.0 Introduction

This report documents the U.S. Department of Energy (DOE) Office of Legacy Management (LM) 2021 annual assessment of the effectiveness of sitewide institutional controls (ICs) for the entire Mound, Ohio, Site¹ in Miamisburg for the period from May 1, 2020, to April 30, 2021.

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.

The annual IC site walkdown with the regulators, the City, and MDC, which includes the Technical Building (T Building) special IC areas, was not held in 2021 due to COVID-19 travel and work restrictions. EPA and Ohio EPA agreed that LM should conduct the physical

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.

inspection and present the results, including time-stamped photographs. LM also continually observes site activities and communicates with MDC and the City throughout the period evaluated.

The 2021 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, 2020, to April 30, 2021.

3.0 Scope of Assessment

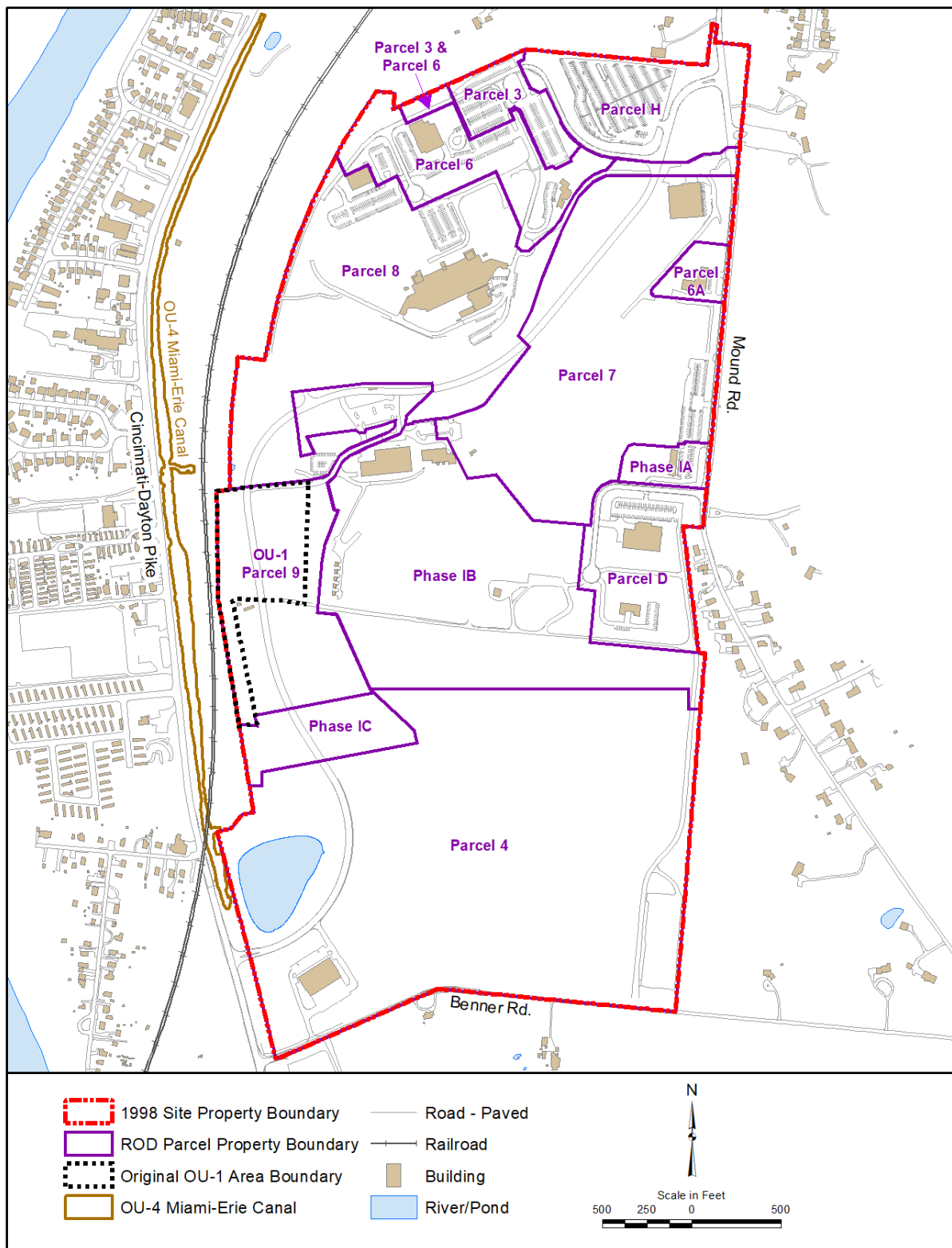
The ICs cover the entire area within the 1998 Mound Plant property boundary outlined in red in Figure 1. The onsite ROD parcels are outlined in purple.

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 E 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

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Figure 2. Mound Site Looking North (March 2021)

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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 https://www.lm.doe.gov/CERCLA_Home.aspx.

The RODs define the CERCLA remedies, including the sitewide ICs. The Parcel 6, 7, and 8 ROD includes special ICs specific to the former 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 2012) (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 2012) 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 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 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 Quitclaim deed 02-146503 , 11-22-2002 Parcel H Quitclaim deed 02-146504 , 11-22-2002 Parcel 3 Quitclaim deed 02-028206 , 10-18-2002 Parcel 4 Quitclaim deed 02-128007 , 10-17-2002 The following quitclaim deed replaced previous deeds listed above for Parcels 3, 4, D, H, and combined them with Phase 1 Parcel Quitclaim 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	2003	ICs and MNA	Prohibit the removal of soil. Prohibit the use of groundwater. Restrict land use to industrial/commercial only.	
6 7 (and 6A)	Parcels 6, 7, and 8	2010	ICs and MNA	Prohibit the removal of soil. Prohibit the use of groundwater.	Quitclaim deeds: 12-00083743 , 12-19-2012 for 995 Mound Road

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 Deeds and Environmental Covenant filed at Montgomery County, Ohio)
8				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.	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 SI) on the Montgomery County recorder's website at

[RISS | Montgomery County, OH \(mcrecorder.org\)](https://riiss.montgomerycountyorhio.com/mcrecorder.org)

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

Abbreviations:

MNA = monitored natural attenuation

OSE = Operational Support East

OSW = Operational Support West

SI = special instrument

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 2012) 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. There are several roadway areas that are exempted from the soil removal IC (Section 5.2.3).
- 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 red 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 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 (see Figure 3). 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.

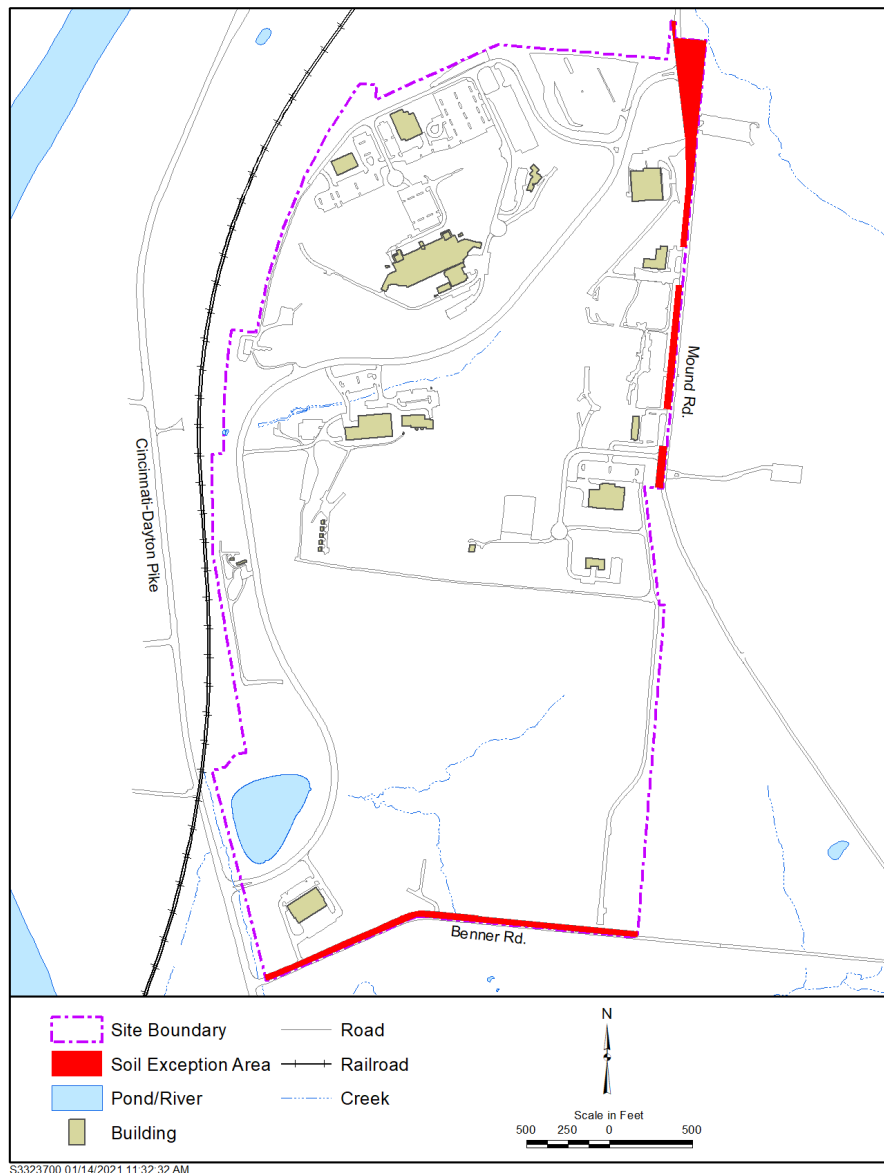


Figure 3. Mound Site Boundary and Soil-Removal Exception (Exemption) Areas on Mound and Benner Roads

5.3 Mound Site 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*, September 12, 2012. This guidance document provides additional detail and clarity to the ICs, and it includes an example form, *Request for Regulatory Approval of New Site Activity*, for new site activities not generally covered by the ICs.

The Core Team is developing a formal process to evaluate these requests from property owners for new site activities. The requests are submitted on the form included in this guidance document.

5.4 Annual IC Assessment Process

To identify and evaluate changes in the site to verify IC compliance or indicate a potential IC violation, the Legacy Management Support (LMS) inspectors followed the usual IC assessment process below. Results of these activities for 2021 are included Section 6.0.

- Review status of previous IC assessment and CERCLA FYR recommendations.
- Conduct records reviews:
 - Request the City to query their permit database for work on the Mound site to identify changed conditions that could affect IC compliance:
 - 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 (form”: Request for Regulatory Approval of New Site Activity).
- Review communications with property owners including discussions of ICs. Distribute and collect signed the *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. The 2021 annual walkdown was waived because of COVID-19 federal and state restrictions.
- Complete and publish the final report:
- Prepare, publish, and distribute the report via email to regulators, MDC, and the City.
- Post the report on the LM Mound site webpage in Site Documents on <https://www.energy.gov/lm/mound-ohio-site>.
- 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 webpage.

6.0 2021 IC Assessment Results

6.1 Status of Previous Recommendations

6.1.1 Annual Assessments (2016–2020)

The 2020 annual assessment, *Annual Assessment of the Effectiveness of Institutional Controls at the Mound, Ohio, Site, Miamisburg, Ohio* (DOE 2020), 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, or the 2020 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 2016a)	Consider issuing a City procedure that will ensure any repairs of the roads or adjacent utility corridors within the right-of-way comply with the ICs.	MDC/City	COMPLETE—City Permits —City has agreed to ask city permit applicants if work will occur on the Mound Business Park, including work to center line of Mound and Benner Road for those properties that border these roads. If applicants answer Yes, the City would provide applicant an LM fact sheet on Mound CERCLA ICs and an LM point of contact.
	Clarify that the two areas to the center line of Mound Road in Phase I (now Mound Cold War Discovery Center) and BOI (now Sharpstone GoKeyless) Tract 2 are exempted from the soil-removal IC.	LM/EPA	IN PROCESS 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. NOTE: Sharpstone GoKeyless transferred their right-of-way parcel (Tract 2) to the City.

6.1.2 CERCLA FYRs

6.1.2.1 2016 Fourth FYR

The *Fourth Five-Year Review for the Mound, Ohio, Site, Miamisburg, Ohio* (DOE 2016b) determined that the IC remedies for Parcels D, H, 3, and 4 and the IC portion of the remedies for Parcels 6, 7, and 8; Phase I (A, B, and C); and Parcel 9 are functioning as intended and are protective of human health and the environment.

This 2016 FYR report also stated that further actions are required regarding evaluation of the potential for complete exposure pathways for both vapor intrusion and per- and poly-fluoroalkyl substances in order for the remedies to be protective in the long term. LM completed the required actions and published the following reports approved by EPA and Ohio EPA:

- *Vapor Intrusion Assessment: Phase I Preliminary Screening and Conceptual Model for the Mound, Ohio, Site* (DOE 2019b)
- *A Summary of the Per- or Polyfluorinated Alkyl Substances Records Search for Indications of Use at the Mound, Ohio, Site* (DOE 2016c).

6.1.2.2 2021 Fifth FYR

LM notified EPA on September 3, 2020, that it was initiating work on the 2021 fifth FYR on October 1, 2020. EPA responded on September 10 with their expectations and included a guidance document for the FYR report format.

The 2021 FYR report must be approved by EPA no later than September 16, 2021. LM will include the results and recommendations of the report in the 2022 Mound annual IC report.

6.2 Record Reviews

6.2.1 City of Miamisburg

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 they had made some wording changes to the MB-1 use list to add clarity.

IC Informational Handout

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 is included in Appendix A.

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/commercial uses only. All oversight and enforcement of ICs remains LM's responsibility. The regulators also have ability to enforce ICs.

Permits

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

For the 2021 IC assessment, LMS inspectors requested that the City of Miamisburg Engineering Department query the City's computer tracking system for permits and any city approvals issued for other activities at the Mound Business park from April 1, 2020, to January 18, 2021. The City reported that there were no permit applications during that period. The 2022 report will cover permits from January 19, 2021 through March 31, 2022.

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.

6.2.2 MDC

MDC staff includes the MDC Mound site 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 Turner Properties to maintain all common areas and properties owned by MDC and the City. 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."

Turner monitors vendors' work and conformance with technical requirements, and the property manager inspects any jobs that are done by a vendor. MDC advised that Turner has not contracted with any new vendors recently that would involve anything related to soil. The current landscaping company is aware of the language, and they do not remove any soil from the property.

MDC's *Comprehensive Reuse Plan Update* (MMCIC 2003) is available in the CERCLA Reading Room and online at <https://www.lm.doe.gov/mound/Sites.aspx>. 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.

MDC and City Property Transfer Agreement

City Ordinance 6393, 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 no transfers between MDC and the City during this review period.

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

There were no platting, property transfers, or property sales during this review period that were reported or found in the Montgomery County auditor’s property records.

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

Appendix B contains tables with current building listings and property details.

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. This table is in an appendix to the LTS&M Plan (DOE 2015b). The table contains all the information that is currently available, but information on some of the older wells could not be located on the ODNR webpage.

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 Core Team—Requests from Property Owners

The Core Team continues to evaluate the Pinnacle Architect request. The Core Team is developing a formal process to evaluate these requests as mentioned in Section 5.3.2. There were no new requests to the Core Team for new Mound Site activities during the review period.

6.2.6 IC Compliance Forms—Mound Site Property Owners

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.

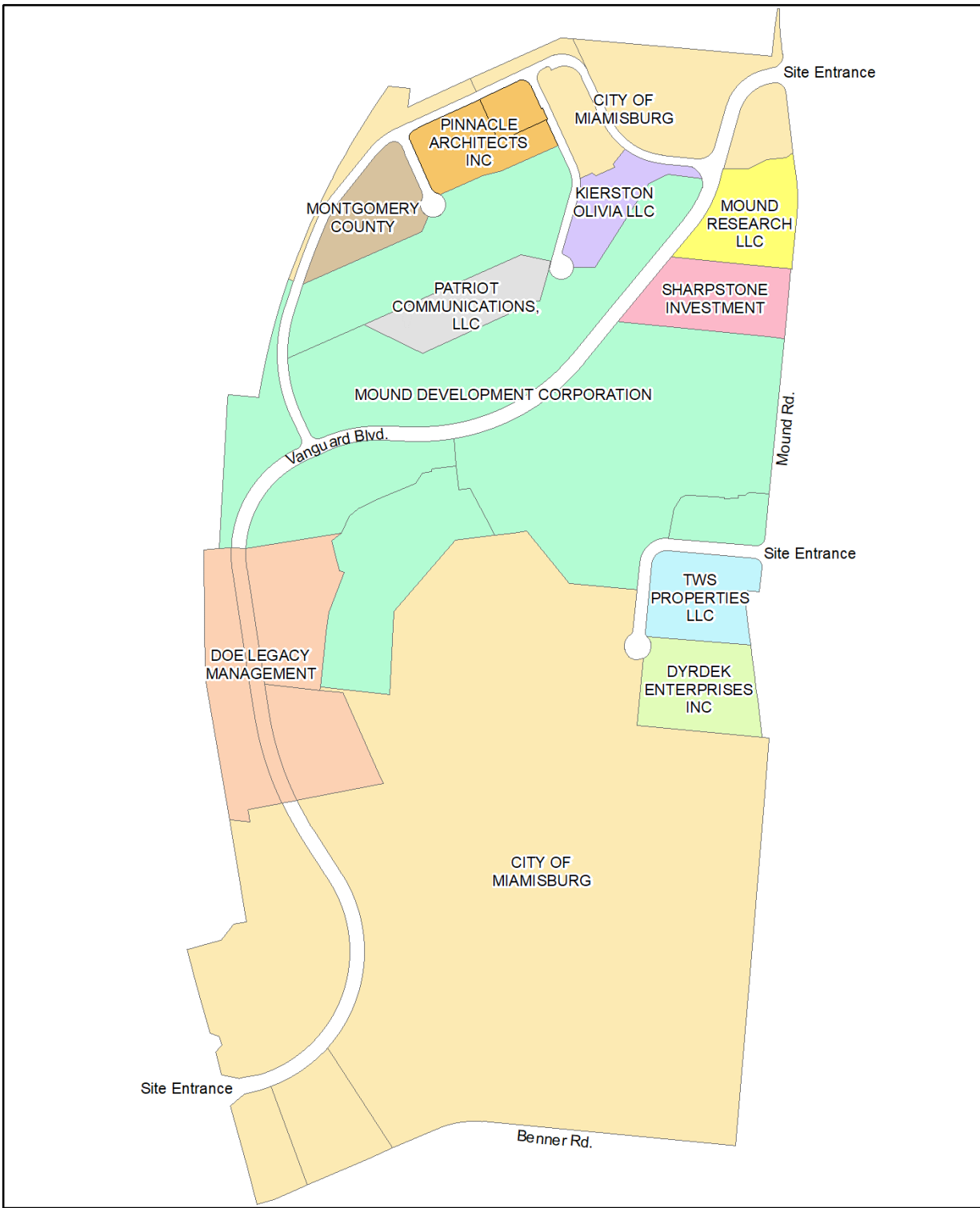


Figure 4. Current Mound Site Property Ownership

Owners are asked to read, sign, and return the IC compliance form. LM received signed forms for all except one unoccupied property. Copies of completed forms are included in Appendix A.

6.3 Physical Inspections (IC and FYR)

6.3.1 Overview

The 2021 physical inspections combined requirements for both the IC assessment and the FYR. LM examined the effectiveness of the IC remedy and the physical components of the groundwater remedies, including the groundwater monitoring wells, seeps, and the pump and treatment system in Building 300. Photos of all of the wells, seeps, and the pump and treatment system are included in the FYR report, *Fifth Five-Year Review for the Mound, Ohio, Site Miamisburg, Ohio* (DOE forthcoming).

As part of general site oversight, LMS 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.

As a result of the COVID-19 restrictions, the regulators waived the usual 2021 site walkdown with EPA, Ohio EPA, ODH, MDC, and the City. LM conducted physical inspections with time-stamped photos and presented the photos and results to EPA, Ohio EPA, MDC, ODH, and the City via videoconference on February 11, 2021.

Qualified LMS contractor personnel conducted physical inspections described below. IC inspectors walked the former RCRA Burn Area, the T Building special IC areas, and the MDC-designated soil staging area. Inspectors also observed areas along Vanguard Boulevard, Enterprise Court, Vantage Point, Innovation Way, and Capstone Drive.

The following sections describe the results of the physical inspections, and Appendix A contains copies of the three presentations (IC, FYR, and inspection photos) given on February 11, 2021.

6.3.2 IC Remedy

6.3.2.1 Former Resource Conservation and Recovery Act (RCRA) Burn Area

Photos taken for the 2021 IC assessment in the former RCRA Burn Area currently owned by the City are shown in Figure 5 through Figure 8.

IC inspectors did not observe any changes or evidence of any new activities within the defined former RCRA Burn Area since the 2020 physical inspection.

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.



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



Figure 6. Looking West from Corner of Salt Shed Toward Former RCRA Burn Area (Salt shed is not within the former RCRA Burn Area boundary.)



Figure 7. Looking West at Gary Weidenbach, LMS IC Inspector, near Former RCRA Burn Area



Figure 8. Looking Northwest Toward Former RCRA Burn Area

6.3.2.2 MDC Building Construction at 1100 Vanguard Blvd.

IC inspectors observed that work had been completed on the two-story building addition at 1100 Vanguard Blvd. on Montgomery County parcel K46 00503 0038 (Figure 9), and the building was occupied. The detention pond was installed, the driveway and improved truck turnaround were paved, and the area was landscaped.



Figure 9. Building Addition Construction Activities Completed at 1100 Vanguard Blvd.

6.3.2.3 MDC Soil Staging Area

Inspectors observed no evidence that the MDC-designated onsite soil staging area west of Vanguard Blvd. was used during the IC assessment review period as shown in Figure 10.



Figure 10. No Evidence of Use of the MDC Soil Staging Area

6.3.2.4 T Building Special IC Areas

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 13. 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.

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 through 2020, inspectors found that the filler appears to continue 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 taken in 2018 and 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 addition of new flooring obscures the concrete floor.

2021 T Building Inspection

LM inspectors conducted the physical inspection of the T Building special IC areas shown in Figure 13 and the sump area in Room 99 outside of the door to SYS-02A/B/C on January 17, 2021, as shown in Figure 12 through Figure 27.

Inspectors were escorted by Steve Edwards, Buckeye Property Services Group, who advised that there were no activities in the special IC areas within T building during the review period.

Inspectors did not observe any violations of the ICs. The cracks remain sealed, and the concrete appears structurally sound.





Figure 12. Large Bay Area Looking West (from 1C-06 to 1C-10) Toward Red Concrete Cap



Figure 13. Red Concrete Cap (1C-10) Looking Toward Northwest Corner



Figure 14. Edge of Red Concrete Cap (1C-10)



Figure 15. Red Concrete Floor (1C-10) Looking West Toward Rooms T-57 and T-58



Figure 16. Floor in Room T-57 (1C-11)



Figure 17. Floor in Room T-58 (1C-12)



Figure 18. Red Concrete Floor at Northwest Corner of 1C-10 Outside of T-59 (1C-21)



Figure 19. Red Concrete Floor in Room T-59 (1C-21)



Figure 20. Sealed Crack at Edge of Red Concrete



Figure 21. Sealed Crack at Edge of Red Concrete



Figure 22. Access Door from Room 99 to SYS 02-A/B/C Tunnel



Figure 23. Room 99 Sump Outside Door to SYS 02-A/B/C Tunnel



Figure 24. T-63 (1C-16)



Figure 25. T-62 (1C-16)



Figure 26. T-61 (1C-15)



Figure 27. T-16 (1S-10)

6.3.2.5 General Site Observations During Physical Inspections

Vandalism of T Building West Tower

IC inspectors observed the results of vandalism to the T Building west tower. The T Building maintenance contractor confirmed that vandals had broken the heavy-duty glass and had entered the building. The contractor had replaced the glass and secured the tower (Figure 28).



Figure 28. T Building West Tower Repaired After Vandalism

Empty Buildings Indicate Potential Ownership Changes

- **Building 45 at 930 Capstone Drive:** Inspectors noted that Building 45 appeared to be unoccupied and has a for sale sign (Figure 29). The property owners did not respond to the LM request to sign and return the IC compliance form.
- **Building 100 at 790 Enterprise Court:** Inspectors noted that Building 100 at 790 Enterprise Court was empty (Figure 30). A representative of the owner signed and returned the IC compliance form and advised that the building was for sale.



Figure 29. Building 45 Unoccupied



Figure 30. Building 100 Unoccupied

Signs Near Pond

Inspectors noted MDC or the City added additional signage to the existing “No Trespassing” signs. The new signage shown in blue in Figure 31 and Figure 32 includes specific wording prohibiting swimming, fishing, and boating. The pond near the southwestern entry to the Mound Business Park retains and detains stormwater runoff.



Figure 31. Sign near MDC/City Pond



Figure 32. Additional Text Added to Sign near MDC/City Pond

The MDC signs are not an IC. However, they inform the public not to trespass. Fishing in the pond is an example of trespass. 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*, September 12, 2012, in Appendix D.

6.3.2.6 IC Remedy 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.

6.3.3 Groundwater Remedy Components

6.3.3.1 OU-1 Area

The CERCLA FYR assesses the continued protectiveness of both Mound site remedies (i.e., ICs and groundwater monitoring) that includes the physical condition of the groundwater remedy components.

With EPA approval, LM combined the physical inspections for the 2021 annual IC assessment and the 2021 CERCLA FYR.

In addition to the IC physical inspections discussed above, LM inspected and photographed all of the groundwater remedy components for Phase 1 (A, B, and C); Parcels 6, 7, and 8; and the OU-1/Parcel 9 area. A sample of the IC and FYR photos of the groundwater remedy components is shown below.

Figure 33 through Figure 42 show the OU-1 area within Parcel 9. Figure 43 through Figure 46 show the Building 300 and the OU-1 remedy pump and treatment system.

The CERCLA FYR report (DOE 2021 forthcoming) Appendix C contains photos of all Mound monitoring wells, seeps, and the OU-1 pump and treatment system.



Figure 33. Looking South of Trailer Along Vanguard Blvd. that Dissects the OU-1 Area



Figure 34. OU-1 Area Groundwater Monitoring Wells South of Trailer



Figure 35. OU-1 Area East of Trailer



Figure 36. OU-1 Area Northeast of Trailer



Figure 37. OU-1 Area Trailer at 1275 Vanguard Blvd.



Figure 38. OU-1 Area Trailer Looking West Toward Building 300



Figure 39. OU-1 Area Looking North from Trailer



Figure 40. OU-1 Area Looking Northeast Toward Building at 1100 Vanguard Blvd.



Figure 41. OU-1 Area Looking South Along Vanguard Blvd. Toward Trailer



Figure 42. OU-1 Area Looking South Along Vanguard Blvd. Toward Trailer and Building 300



Figure 43. Building 300 that Houses the Pump and Treatment System



Figure 44. Building 300



Figure 45. The Pump and Treatment System Inside Building 300 in Standby Mode



Figure 46. Controls for the Pump and Treatment System in Building 300

6.3.3.2 Groundwater Remedies Physical Inspection Results

The 2021 physical inspections determined that the components of the groundwater remedies including the wells, seeps, and OU-1 pump and treatment system appear to be in good physical condition. More details and photos of all components are included in the 2021 CERCLA FYR report (DOE forthcoming).

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, or 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 January 21, 2021, with Brian Zimmerman, LM Mound Site Manager, and Melissa Lutz and Joyce Massie, LMS contractor team, to review the ICs and the property owners' responsibilities.

Nine property owners confirmed compliance by returning signed copies of IC compliance forms. The signed forms are included in Appendix A. The current owners of the former Mound Building 45 did not respond.

7.0 Conclusions and Recommendations

There are no recommendations resulting from the 2021 IC 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:

Brian Zimmerman
LM Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
10995 Hamilton-Cleves Highway
Harrison, OH 45030-9728
(513) 648-3340
Email: brian.zimmerman@lm.doe.gov
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:

David Seely
Remedial Project Manager
U.S. Environmental Protection Agency
77 W. Jackson Boulevard
Chicago, IL 60604-3590
(312) 886-7058
Email: david.seely@epa.gov

Brian Nickel
Supervisor Division of Environmental Response and Revitalization Remedial
Response Section
Ohio Environmental Protection Agency
401 E. Fifth Street
Dayton, OH 45402-2911
(937) 285-6468
Email: brian.nickel@epa.ohio.gov

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Appendix A

Annual Assessment Checklist with Supporting Documents

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Contents

1. IC Assessment Checklist.
2. IC Assessment preliminary inspection presentation given February 11, 2021, teleconference.
3. FYR presentation given during February 11, 2021, teleconference.
4. February 11, 2021, presentation of physical inspection photos, combined IC and CERCLA FYR.
5. Attendance sheet for IC Assessment preliminary inspection presentation.
6. 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.
7. LM IC Information Sheet for handout to City of Miamisburg permit requestors.
8. Mound Site Landowners IC Compliance Forms:
 - a. City of Miamisburg
 - b. The Robert S. Dyrdek Living Trust by Denise Lunsford
 - c. Montgomery County Board of County Commissioners
 - d. Mound Development Corporation
 - e. Mound Research LLC (Advance Service Technologies)
 - f. Patriot Communications LLC
 - g. Pinnacle Architects LLC
 - h. Sharpstone (Go Keyless)
 - i. TWS Properties LLC – The Woodworking Shop LLC

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Mound, Ohio, Site (Mound Site)
2021 LM Institutional Controls (ICs) Compliance Assessment Checklist
This checklist summarizes information from all inspections

IC Assessment began in January 2021. Physical inspections conducted in January and February 2021.

Physical inspection walkdown with regulators: None. Replaced with presentation of photos taken in January and February by qualified LMS inspectors. Waiver of walkdown was approved by regulators because of COVID 19 restrictions

Review of preliminary inspection results: via video teleconference on February 11, 2021

Review presented by Brian Zimmerman, Mound LM site manager

Participants in review teleconference: [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 2021
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, and 2020 Annual IC Assessments	None identified	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?)

The building addition at 1100 Vanguard Blvd. was completed and occupied. The driveway to the building had been asphalted.

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 January 21 to review the ICs.

Attendees:

- Captain Jay Wheeler, Montgomery County Sheriff for Regional Dispatch Center (OSW)
- Mark Sands, The Woodworking Shop (TWS Properties LLC)
- Lorrie Huber, Administrative Services Manager, MDC
- Dick Church, MDC
- Brian Zimmerman, DOE-LM
- Melissa Lutz and Joyce Massie, LMS contractors

LM received no responses to the emails or form reviews from ISS Unlimited (960 Capstone, Building 45), and the building appeared to be unoccupied.).

Melissa Lutz, LMS contractor, provided managerial and logistics support, participated in records reviews, participated in the IC review meeting on February 11, and reviewed/edited draft report.

Joyce Massie, LMS contractor, conducted physical inspections, took photos, reviewed records, compiled and analyzed the inspection information, assembled the February 11 presentation, wrote and coordinated technical editing of the IC Report, and coordinated report reviews.

Gary Weidenbach, LMS contractor, conducted physical inspections, took photos, and furnished information about activities observed during the review period (May 1, 2020 thru April 30, 2021).

Leslie Karacia and Sharon Long, Engineering Department, City of Miamisburg, responded to inquiries on the City permits.

Attendees to the IC preliminary results presentation on February 11, 2021 are listed on the attendance sheet.

<p align="center">Mound, Ohio, Site (Mound Site)</p> <p align="center">2021 LM Institutional Controls (ICs) Compliance Assessment Checklist</p> <p align="center">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>No new requests.</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>No City permits were reported No new wells were found on the ODNR well log web page. No changes in ownership were found on the property records on Montgomery County Auditor's website, http://www.mcrealestate.org/Main/Home.aspx.</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 Business Park footprint 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>No</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>No property changes were found on the Montgomery County auditor's webpages.</p>
<p>If property ownership changed, were the requirements for IC compliance included in the legal documents (deeds, etc.) filed with Montgomery County?</p> <p>For parcels covered by Parcel 9 environmental covenant, was Ohio EPA notified of the property transfers?</p> <p>n/a.</p>
<p>Provide detail on any other issues identified during this assessment.</p> <p>No other issues specifically relating to ICs were identified.</p>
<p>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?</p> <p>No.</p>
<p>Observations during physical inspections:</p>
<p>Evidence of unauthorized soil removal?</p> <p>No.</p>
<p>Evidence of unauthorized groundwater use?</p> <p>No.</p>
<p>Evidence of land use other than "industrial" (e.g., residential)?</p> <p>No</p>
<p>T Building only - areas with additional institutional controls. Have ICs been followed?</p> <p>Inspectors did not observe any IC violations in the special areas of T Building during the physical inspection. Did observe vandalism and repairs to T west tower.</p>
<p>Based on physical inspections, records reviews, questionnaires, and interviews, was there evidence of IC noncompliance?</p> <p>No</p>
<p>Recommendations from 2020 IC inspections or records reviews:</p> <p>No 2020 IC-related recommendations.</p>
<p>Recommendations from participants in the February 11, 2021, IC review :</p> <p>LM received no recommendations regarding the IC assessment presentation or the presentation of physical inspection photos.</p>

Mound, Ohio, Site (Mound Site)
2021 LM Institutional Controls (ICs) Compliance Assessment Checklist
This checklist summarizes information from all inspections

Conclusion/comments:

This IC assessment did not find any instances of IC noncompliance.

2021 Annual Assessment of Institutional Controls at the Mound, Ohio, Site

Preliminary Inspection Results

Brian Zimmerman
Mound Site Manager
U.S. Department of Energy (DOE)
Office of Legacy Management (LM)
February 11, 2021

1

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.



2

2

Mound Site Institutional Controls

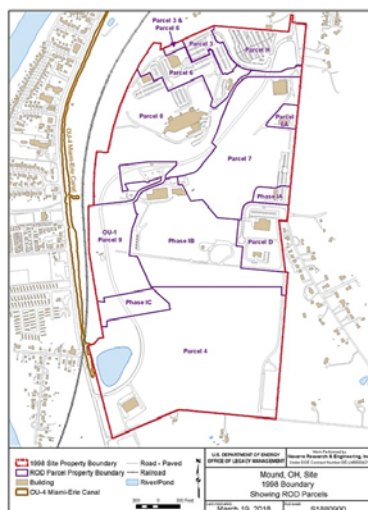
- Apply to the original 306 acres of the Mound site.
- Implemented under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).
- Defined as part of the remedy in CERCLA Records of Decision (RODs).
- Run with the land in the form of activity and use 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.



3

3

Mound Site Institutional Controls (continued)



- Apply to RODs within the site boundary (red).
- ROD Parcels (purple).
 - Parcel 3
 - Parcel 4
 - Parcel D
 - Parcel H
 - Phase I Parcel (A, B, C)
 - Parcels 6, 7, and 8
 - Parcel 9

**Do not apply to off-site ROD (gold) OU-4 former Miami Erie Canal Area was a no-action ROD; no use restrictions or ICs



4

4

Activity or Use Restrictions

- Mound site institutional controls are in the form of activity or use restrictions.
 - Limit land use to industrial/commercial only.
 - Prohibit extraction, consumption, exposure, or use of the groundwater underlying the premises.*
 - Prohibit soil removal from original Mound property.*
 - Allow site access to federal and state agencies to monitor performance of all CERCLA remedies.

**Unless prior written approval from U.S. Environmental Protection Agency (EPA), Ohio EPA, and Ohio Department of Health (ODH) has been obtained.*

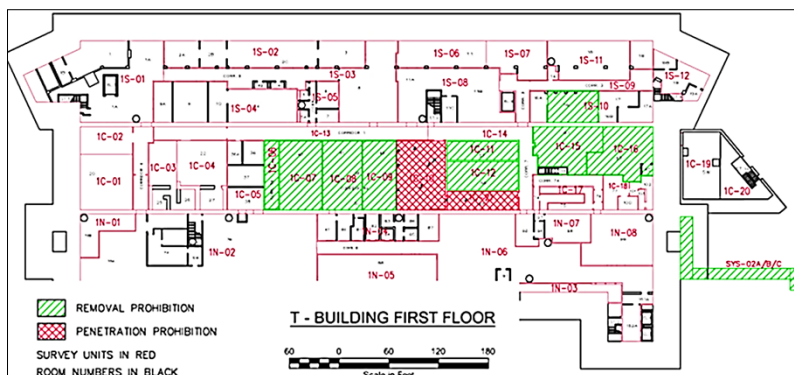


5

5

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.*



6

6

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.



7

7

Annual IC Assessment Process

- Review status of previous findings or recommendations.
- Conduct preliminary 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.



8

8

Some Assessment Steps Were Modified in 2021

- Changed from face-to-face meetings to teleconferences because of COVID-19 travel restrictions.
 - Met with Mound Development Corporation (MDC), the City of Miamisburg, and other site property owners to review ICs and verify compliance with ICs.
 - Meeting with EPA, Ohio EPA, Ohio Department of Health, MDC, and the city of Miamisburg to present preliminary IC assessment results.
- Replaced the physical walkdown with virtual walkdown consisting of photographs taken by qualified LM contractor personnel.*
- No change required for activities normally conducted remotely.
 - Reviewed applicable state and local records.
 - Requested site property owners to review ICs and sign compliance form.
 - Publish IC assessment report by June 13.

* per EPA/Ohio EPA agreement



9

9

Virtual Walkdown – Presentation Will Follow

Areas were photographed for IC assessment and five-year review:

- Changed conditions, including Excelitas area.
- Resource Conservation and Recovery Act area near salt shed.
- T-Building special IC areas/red concrete.
- Signs at pond.
- Buildings, roadways, etc., to capture how the site looks in general.
- Bldg. 300 / Pump and Treat System.
- Monitoring wells and seep locations.



10

10

Previous IC Assessment Recommendations

Source	Recommendation	Status in 2021
2016	<p>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.</p> <p>Note: Quitclaim deeds for all other parcels along Mound and Benner roads contain the exemption wording.</p>	<p>IN PROCESS</p> <p>Quitclaim deeds did not include the soil exemption language for those two areas (exemption should apply).</p> <p>LM, EPA, Ohio EPA, and ODH are working to resolve.</p> <p>Note: Go Keyless (Sharpstone) transferred the Tract 2 area to city of Miamisburg for road right of way in August 2019.</p>



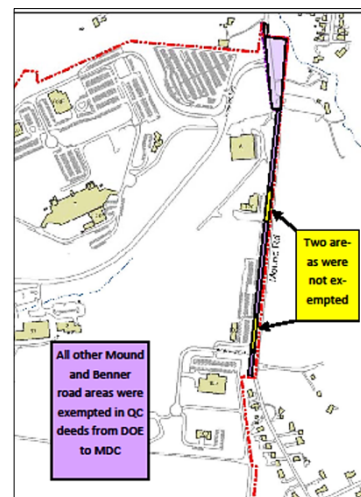
11

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 to City of Miamisburg
 - Mound Cold War Discovery Center.

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



12

12

2021 IC Compliance Observations

- No prohibited land use was observed.
- No unauthorized groundwater wells were observed or noted on the ODNR well log internet site.
- No evidence of soil removal from the original footprint of the Mound site was observed.
- No evidence of violation of special ICs in T-Building.
- No property ownership changes since last assessment.



13

13

Summary of Observations

- Based upon information since the last annual assessment inspection and the review of records for the 2021 annual IC assessment reporting period, there have been no observed IC violations.



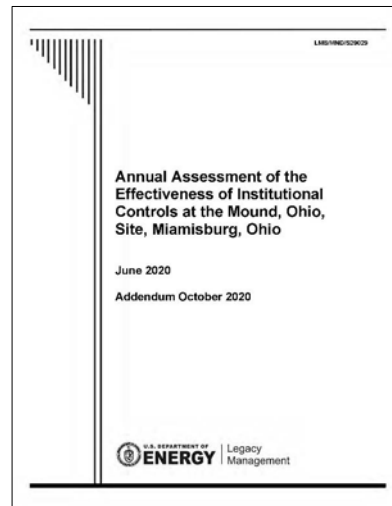
14

14

Annual IC Assessment Report

▪ Report will:

- Detail all assessment results.
- Document changes since 2020 annual IC assessment.
- Address recommendations from previous reports.
- Contain checklist of observations.
- Contain photos.
- Be published and distributed by June 13, 2021.
- Be uploaded to Mound site webpage at <https://www.lm.doe.gov/mound/Sites.aspx>.



15

15

Questions?



Brian Zimmerman
Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340



16

16



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

2021 Fifth CERCLA Five-Year Review at the Mound, Ohio, Site

Summary of Review

Brian Zimmerman
Mound Site Manager
U.S. Department of Energy (DOE)
Office of Legacy Management (LM)
February 11, 2021

1

LM Is Conducting the 2021 CERCLA Five-Year Review

▪ Why

- As required by Section 121 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA).
- SARA requires that remedial actions that result in any hazardous substances, pollutants, or contaminants remaining on site at levels that do not allow for unlimited use and unrestricted exposure be subject to a five-year review (FYR).

▪ Schedule

- Began FYR process with U.S. Environmental Protection Agency (EPA) concurrence in September 2020.
- Continue FYR process and send draft report to EPA and Ohio EPA for review.
- Obtain EPA concurrence and publish final report by Sep. 16, 2021.



2

2

LM Continually Monitors Remedies

- Periodic groundwater monitoring verifies that:
 - Residual contamination is not impacting the Buried Valley Aquifer.
 - Contaminant concentrations in the source areas are decreasing to levels below the Maximum Contaminant Level.
- Annual IC assessments monitor the effectiveness of the ICs.
- Monitoring results are analyzed and presented periodically in:
 - Monthly reports (Environmental Restoration (ER) Monthly Report).
 - Annual reports (IC Assessment and Sitewide Groundwater).
 - Five-year reviews (FYR Report).



5

5

LM Continues the CERCLA FYR Process

- Reviewing previous FYR recommendations.
- Assessing each remedy to ensure it is functioning as intended.
 - Groundwater: review data analysis from periodic groundwater sampling.
 - IC compliance: conduct annual IC assessments to determine if ICs remain effective.
- Involving stakeholders and requesting feedback.
- Conducting physical inspections of site by LM contractor in 2021. (Photos follow this summary presentation)
- Obtaining a high-resolution aerial photo of site.
- Determining if the risk assessment assumptions and cleanup standards are still valid.
- Verifying remedy is still protective of human health and the environment.
- Evaluating opportunities for optimization of the remedies.
- Recommending remedy modifications, if necessary.
- Preparing report with FYR results.
- Obtaining EPA approval of final report due Sep. 16, 2021.



6

6

2016 CERCLA FYR Recommendations Complete

- Vapor Intrusion
 - Evaluate for potential risk from vapor intrusion
 - Propose additional actions if needed.
 - **Completed.** Published the *Vapor Intrusion Assessment: Phase I Preliminary Screening and Conceptual Model for the Mound, Ohio, Site* in May 2017.
 - Phase II sitewide vapor intrusion assessment is ongoing
- Polyfluorinated Alkyl Substances (PFAS) Assessment
 - Conduct PFAS research on any PFAS use at Mound.
 - Present results to Core Team
 - **Completed.** A *Summary of the Per- and Polyfluorinated Alkyl Substance Records Search for Indication of Use at the Mound, Ohio, Site* in December 2016. The results indicated that no PFAS were used at the Mound site, and no further action is required
 - **No PFAS were used on the Mound site,**



7

Status of FYR

- Stakeholder/Public Participation
 - Published public notices in *Dayton Daily News*.
 - Placed FYR information and public survey on LM Mound public website.
 - Invited stakeholders via email to visit website and complete the survey.
 - Received and responded to 2 stakeholder comments.
- Physical inspections of site
 - Completed.
 - Photos will be shown after this presentation.
- Other FYR steps in process: document reviews, interviews, data analysis, aerial photography.
- Report
 - Draft report in process.
 - Regulators will review and provide comments.
 - LM and regulators will resolve comments.
 - EPA approval of final report due by September 16, 2021.



8

8

Questions?

- Questions on process and/or schedule?
- Next presentation includes pictures of site physical inspections.



9

2021 IC Assessment and Five-Year Review at the Mound, Ohio, Site

Physical Inspection Photos

Brian Zimmerman
Mound Site Manager
U.S. Department of Energy (DOE)
Office of Legacy Management (LM)
February 11, 2021

1

Mound Site Photographs Taken During January 2021 Site Physical Inspections

- U.S. Environmental Protection Agency (EPA) and Ohio EPA agreed to accept photographs of Mound site areas instead of participating in the usual combined institutional control (IC) assessment/Five-Year Review (FYR) site walkdown.
- Qualified LM Support contractor personnel conducted these physical inspections.



2

IC Assessment Physical Inspection Emphasis

- IC assessment inspection considered changed conditions relating to the effectiveness of the IC remedy:
 - Buildings, roads, and other areas to observe general site appearance, potential property ownership changes, etc.
 - Changed conditions, including Excelitas area.
 - Resource Conservation and Recovery Act (RCRA) area near salt shed
 - T-Building special areas/red concrete.
 - Signs at pond.



3

FYR Physical Inspection Emphasis

- In addition to the IC inspection items, the FYR also considered the physical conditions of the components of the groundwater monitoring remedies.
 - Building 300 Pump and Treat (P&T) System.
 - Monitoring wells and seep locations



4

LM trailer in OU-1 area in Parcel 9.



5

LM trailer, Building 300, and OU-1 area north of trailer.



6

Building 300 outside and P&T system inside.



7

OU-1 area and Building 300.



8

**OU-1/Parcel 9 area east of LM trailer.
LMS contractors taking groundwater samples.**



9

OU-1/Parcel 9 area east and northeast of trailer.



10

New Excelitas building north of OU-1/Parcel 9.



11

Mound Development Corporation (MDC) designated soil staging area west of Vanguard. No observed evidence of soil staging.



12

Entry gate to RCRA Burn Area located north and west of salt shed.



13

No evidence of any activity observed in RCRA area.



14

Building 100 (bunker) remains empty and for sale.



15

Mound Cold War Discover Center (Building 102) and Woodworking Shop (Building 105).



16

OSE Building.



17

Building 45 remains unused and for sale.



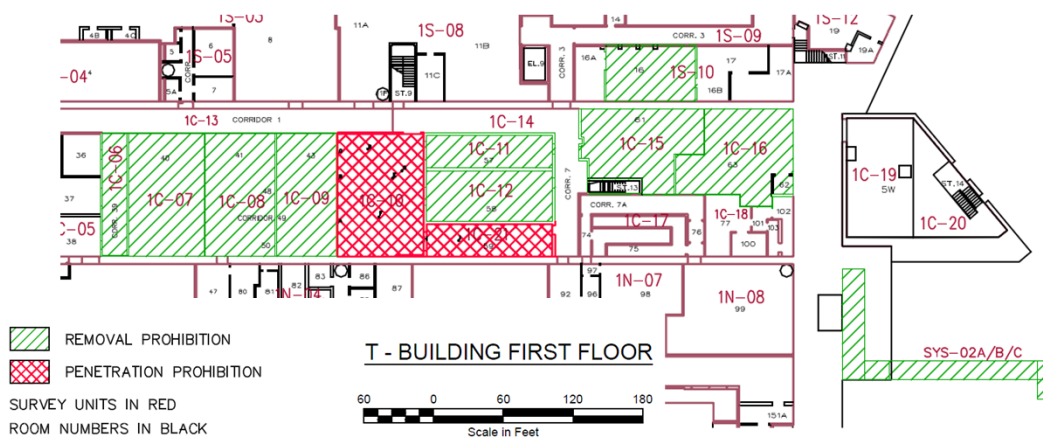
18

OSW Building (MC 911 Center) and COS Building (offices and labs).



19

T-Building special IC areas on first floor.



20

T-Building 1st floor large bay special IC area containing the red concrete area. No signs of use of T-Building special IC areas.



21

T-Building special IC rooms 57 and 58. No signs of use.



22

**Red concrete areas in T-Building special IC areas.
Room 59 and large bay area. No signs of use.**



23

Cracks in red concrete remain sealed.



24

**Opening to special IC area shaft (SYS02 ABC) to fan house and nearby sump pump in Room 99.
Observed drain lines from the shaft into the sump.**



25

**T-Building special IC area Rooms 63 and 62.
No signs of use.**



26

**T-Building special IC Rooms 61 and 16.
No signs of use.**



27

**T-Building east and west tower.
T-Building maintenance contractor reported that west tower had been damaged by vandals and repaired.**



28

**Notice added to existing No Trespassing sign at pond.
Contains specific prohibitions.**



ATTENDANCE SHEET
Mound Site FFA and Core Team Meetings
IC Assessment and FYR Presentations and Physical Inspection Photos
February 11, 2020

INITIAL		NAME	ORGANIZATION	TELEPHONE
FFA	Core			
X	X	Cato, Becky	Navarro	636-300-2638
X		Church, Dick	MDC	
X	X	Dahlke, Emily	Ohio EPA (groundwater)	
X	X	Dettmer, Shannon	Ohio Department of Health	614-995-0761
X		Chris Fine	City of Miamisburg	
X	X	Friedman, Chuck	Navarro	937-572-3969 cell
X		Homs, Ryan	City of Miamisburg	937-847-6536
X		Huber, Lorrie	Mound Development Corporation (MDC)	973-865-4438
X	X	Lutz, Melissa	Navarro	636-300-2639 314-954-6660 cell
X	X	Massie, Joyce	Navarro LMS Team	937-287-1333 cell
X	X	Nickel, Brian	Ohio EPA	937-285-6468
X	X	Powers, Mike	EPA support, Tech Law	
X	X	Seely, David	U.S. EPA, Region V	312-886-7058
X		Stanifer, Ellen	City of Miamisburg	937-847-6636
X	X	Zimmerman, Brian	DOE LM	513-648-3340
X		Wei, Ann	Navarro	



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 'R. G. Kirkland', 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:**

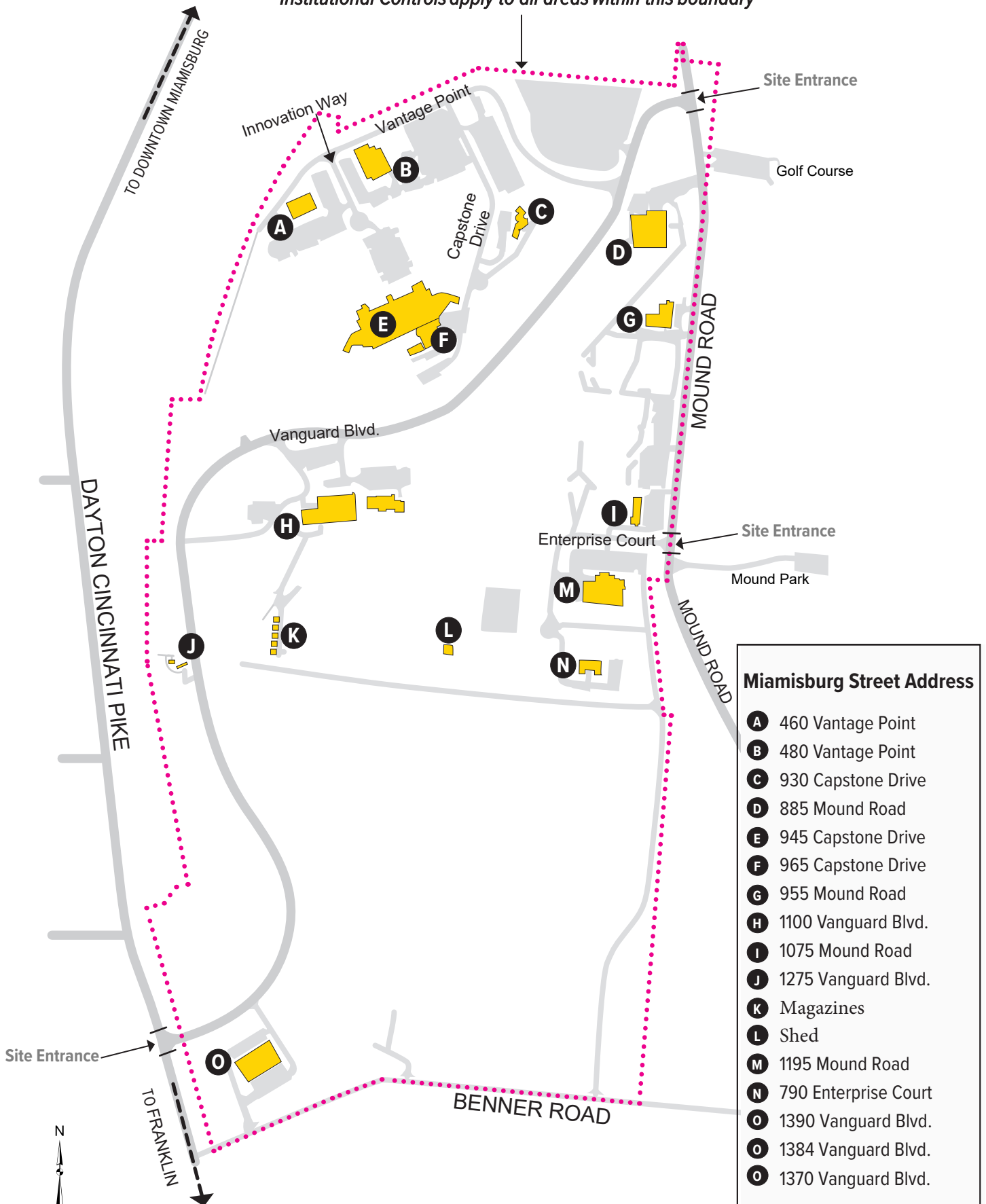
- Limit site activities to industrial or commercial use (e.g., no recreational, residential, or agricultural use).
- Prohibit the removal of soil from the original DOE site footprint without written approval from EPA, Ohio EPA, and Ohio Department of Health (ODH).
- Prohibit use of groundwater for any 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 - 2021

The United States Department of Energy (DOE) remediated the Mound Site Property to the Environmental Protection Agency's (EPA's) risk-based standards for **industrial/commercial use only**. Because the site is not approved for unlimited use, the CERCLA remedy includes 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 for adherence to the ICs to assure compliance.

Please acknowledge below that you understand and comply with the following ICs for the period of April 1, 2020 to January 31, 2021. 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.
- 6) **Allow site access** to federal and state agencies and their contractors for sampling and monitoring.

Mound Site Landowners – Institutional Controls Compliance Form - 2021

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

KEITH JOHNSON [Signature] 7-21-21
Printed Name Signature Date

CITY MANAGER CITY OF MAHARAJA
Title Company

10 N. FIRST STREET, MAHARAJA, OH 43240
Property Address

Please return the signed form within 15 days via email to: jamassie@lm.doe.gov

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

Brian Zimmerman
Acting Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340

Mound Site Landowners – Institutional Controls Compliance Form - 2021

The United States Department of Energy (DOE) remediated the Mound Site Property to the Environmental Protection Agency's (EPA's) risk-based standards for **industrial/commercial use only**. Because the site is not approved for unlimited use, the CERCLA remedy includes institutional controls (ICs) in the form of use restrictions imposed by DOE quitclaim deeds and an Environmental Covenant.

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

Mound Site Landowners – Institutional Controls Compliance Form - 2021

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

Denise Lunsford Denise Lunsford 1/21/21
Printed Name Signature Date

Sister / Real Estate Agent Key Realty
Title Company

790 Enterprise Ct.
Property Address

Please return the signed form within 15 days via email to: jamassie@lm.doe.gov

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

Brian Zimmerman
Acting Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340

Mound Site Landowners – Institutional Controls Compliance Form - 2021

The United States Department of Energy (DOE) remediated the Mound Site Property to the Environmental Protection Agency's (EPA's) risk-based standards for **industrial/commercial use only**. Because the site is not approved for unlimited use, the CERCLA remedy includes 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 for adherence to the ICs to assure compliance.

Please acknowledge below that you understand and comply with the following ICs for the period of April 1, 2020 to January 31, 2021. 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.
- 6) **Allow site access** to federal and state agencies and their contractors for sampling and monitoring.

Mound Site Landowners – Institutional Controls Compliance Form - 2021

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

CAPTAIN JAY C. WHEELER [Signature] 1.8.2021
Printed Name Signature Date

CAPTAIN MONTGOMERY COUNTY SHERIFF'S OFFICE
Title Company

460 VANTAGE PT. MIAMI, FL 33142
Property Address

Please return the signed form within 15 days via email to: jamassie@lm.doe.gov

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

Brian Zimmerman
Acting Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340

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Mound Site Landowners – Institutional Controls Compliance Form - 2021

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

Lorrie Huber Lorrie Huber 1/21/2021
Printed Name Signature Date

Mound Site Manager Mound Development Corporation
Title Company

965 Capstone Drive, Suite 252, Miamisburg, OH 45342
Property Address

Please return the signed form within 15 days via email to: jamassie@lm.doe.gov

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

Brian Zimmerman
Acting Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340

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Mound Site Landowners – Institutional Controls Compliance Form - 2021

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

Jerry L Abner [Signature] Jan-8, 2021
Printed Name Signature Date

Owner Mound Research LLC.
Title Company

885 Mound Road, Miamisburg, OH 45342
Property Address

Please return the signed form within 15 days via email to: jamassie@lm.doe.gov

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

Brian Zimmerman
Acting Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340

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Mound Site Landowners – Institutional Controls Compliance Form - 2021

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

SCOTT M. TLOWAE [Signature] 03.10.2021
Printed Name Signature Date

OWNER Patriot Communications
Title Company

945 Capstone Drive
Property Address

Please return the signed form within 15 days via email to: joyce.massie@lm.doe.gov

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

Brian Zimmerman
Acting Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340

Mound Site Landowners – Institutional Controls

Compliance Form - 2021

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Mound Site Landowners – Institutional Controls Compliance Form - 2021

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

FERD FOUNAKA [Signature] 2/19/21
Printed Name Signature Date

PRESIDENT Pinnacle Architects, INC
Title Company

480 VANTAGE POINT
Property Address

Please return the signed form within 15 days via email to: joyce.massie@lm.doe.gov

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

Brian Zimmerman
Acting Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340

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Mound Site Landowners – Institutional Controls Compliance Form - 2021

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

JOSHUA STAMPS [Signature] 3/16/2021
Printed Name Signature Date

MANAGING PARTNER 21st Century Solutions GoKeyless ^{DBA}
Title Company

955 MOUND RD.
Property Address

Please return the signed form within 15 days via email to: joyce.massie@lm.doe.gov

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

Brian Zimmerman
Acting Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340

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Mound Site Landowners – Institutional Controls Compliance Form - 2021

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

Mark Sams Mark Sams 1-11-21
Printed Name Signature Date

Managing Member The Woodworking Shop LLC
Title Company

1195 Mound Rd. Mississauga OH 45342
Property Address

Please return the signed form within 15 days via email to: jamassie@lm.doe.gov

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

Brian Zimmerman
Acting Mound Site Manager
U.S. Department of Energy
Office of Legacy Management
Brian.zimmerman@lm.doe.gov
(513) 648-3340

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Appendix B

Property Information

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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—March 30, 2021
4. Table B-4. Acreage Reconciliations
5. Table B-5. Property Records Montgomery County Auditor’s Web Page

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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	Unoccupied	790 Enterprise Court	D	Robert Dyrdek Trust	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	MDC	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	K46 01507 0039
16	Trailer	LM area in Parcel 9 OU-1 area	1275 Vanguard Blvd.	9	LM	K46 01109 0001
300	Building					

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
n/a	MDC Flex Building	Secure Cyber Defense	1390 Vanguard Blvd.	4	City	K46 01507 0040
			1388 Vanguard Blvd. (lighting)	4	City	K46 01507 0040
		Beam Dental	1384 Vanguard Blvd.	4	City	K46 01507 0040
			1380 Vanguard Blvd.	4	City	K46 01507 0040
			1374 Vanguard Blvd.	4	City	K46 01507 0040
		Barge Design Solutions, Inc.	1370 Vanguard Blvd.	4	City	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:

PST = Power Systems Technologies

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—March 30, 2021

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
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	Parcel 6, 7, 8
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	Left of main entrance	Parcel H minus road
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 minus road
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 minus road
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 minus road
City	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 of Miamisburg	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 and Miamisburg Mound Community Improvement Corp	Corner Benner and Rt. 25. Note: Includes 0.9776 acres of former Canal City Lot 4782 to Rt. 25 Added during MATC Plat Section 1 and 1-A	Parcel 4 minus road

Table B-3. Mound Site Property Details – March 30, 2021 (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
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 Rt. 25 added during MATC Plat Section 1-A	Parcel 4 minus road
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 minus road
City	Former K46 00501 0018 No parcel # now	0.00	QC 12-00083743 0.2710 acres Now in Mound Road Shown in Section 5 plat	MDC to BOI 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
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
MDC	K46 00503 0034	11.8801	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552	Mound Development Corporation	Western main hill area.	Parcel 678
MDC	K46 00503 0035	17.5691	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552	Mound Development Corporation	North of Vanguard COS Building 965 Capstone	Parcel 678 Parcel 9 Plus Environmental Covenant

Table B-3. Mound Site Property Details – March 30, 2021 (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
MDC	K46 00503 0036	29.1291	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552	Mound Development Corporation	East of Vanguard	Parcel 678
MDC	K46 00503 0037	4.0117	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552	Mound Development Corporation	West of Vanguard	Parcel 678 Parcel 9 Plus Environmental Covenant
MDC	K46 00503 0038	6.3717	QC 19-00061640	Created in MATC Section 5 Plat 19-00058552	Mound Development Corporation	South of Vanguard 1100 Vanguard Blvd. parking area	Parcel 678 Parcel 9 Plus Environmental Covenant
	Total MDC	228.8316					
Sharpstone Investment Properties LLC	K46 00501 0017	5.3500	QC 12-00083743	BOI 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
Robert S. Dyrdek Living Trust	K46 01507 0031	5.5191	QC 09-00011643	MATC Section 1 Plat 13-00087203 Plat 13-00057208 MDC to Dyrdek 14 00069587 Dyrdek to Robert S. Dyrdek Living Trust 20-00054058	Deed: Robert S. Dyrdek Living Trust 3130 Wilshire Blvd Ste 600 Santa Monica, CA 90403	Parcel D minus road Building 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

Table B-3. Mound Site Property Details – March 30, 2021 (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
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
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

Table B-3. Mound Site Property Details – March 30, 2021 (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
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
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					
LM	K46 00503 0039 Lot 8071	5.9521	None	MATC Section 5 Plat 19-00058552 No deed	LM but parcel is not listed on County auditor's website	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 but parcel is not listed on County auditor's website	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 but parcel is not listed on County auditor's website	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 but parcel is not listed on County auditor's website	OU-1 roadway	Parcel 9 – OU-1 ROD and Amendment
Per MATC Section 5 plat	LM total	18.5498		New property boundaries are shown on County GIS site			

Notes:

Access information on county parcels on Montgomery County auditor's website at <https://www.mcrealestate.org/search/commonsearch.aspx?mode=address>.
Access copies of deeds, MATC Section plats, instrument number (QC) on the Montgomery County recorder's website at <http://public.mcrcorder.org/external/User/Login.aspx?ReturnUrl=%2fexternal>. Use 4 digits for year.

Abbreviations:

MATC = Mound Advanced Technology Center; OSE = Operational Support East, OSW = Operational Support West

Table B-4. Acreage Reconciliations

Acreage Reconciliation			
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
			307.3514
Minus acreage of 2 canal City lots merged with Mound lots. Not in original boundary			2.1660
Final total			305.1854
Previous acreages:			
1998 Mound Plant Property 305.116 acres	2005 Beal Survey 305.063 acres	2017 BWSC reconciliation 305.0618 acres	

Table B-5. Property Records Montgomery County Auditor's Web Page

Property records as currently listed on Montgomery County Auditor's Web Page						
OLD DOE Property			Old property outlines NOT shown on county GIS site			
	Parcel ID as shown on Montgomery County Auditor site until 2019		Deed as shown on auditor site	Owner still shown on auditor site	Location	ROD
	K46 00501 0002	5.063 minus plats	01214P00017	United States %	Most of Parcel 6	Parcels 6, 7, and 8
	K46 00501 0016	36.9990 minus plats	2012-00082087	United States Address unknown	Approximately Parcel 7	Parcels 6, 7, and 8
	K46 00503 0013	64.257 minus plats	01258P00056	United States %	Combo parts of Parcels 6, 8, and 9	Parcels 6, 7, and 8; Parcel 9
	K46 00503 0030	1.922	2012 0082087	United States	Part of Parcel 7	Parcels 6, 7, and 8
	K46 01109 0001	10.2040	1981-00376A001	Harry Hill Area Manager Dept of Energy Dayton Area PO Box 66 Miamisburg, OH 45343 0066	OU1 area	Parcel 9
	K46 01109 0003	1.6000	01258P00074	United States PO Box 271 Wilmington, OH 45177-0271	Former road west of OU1 area	Parcel 9

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Appendix C

Information on T Building Special IC Areas

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Contents

1. T Building first floor figure
2. 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

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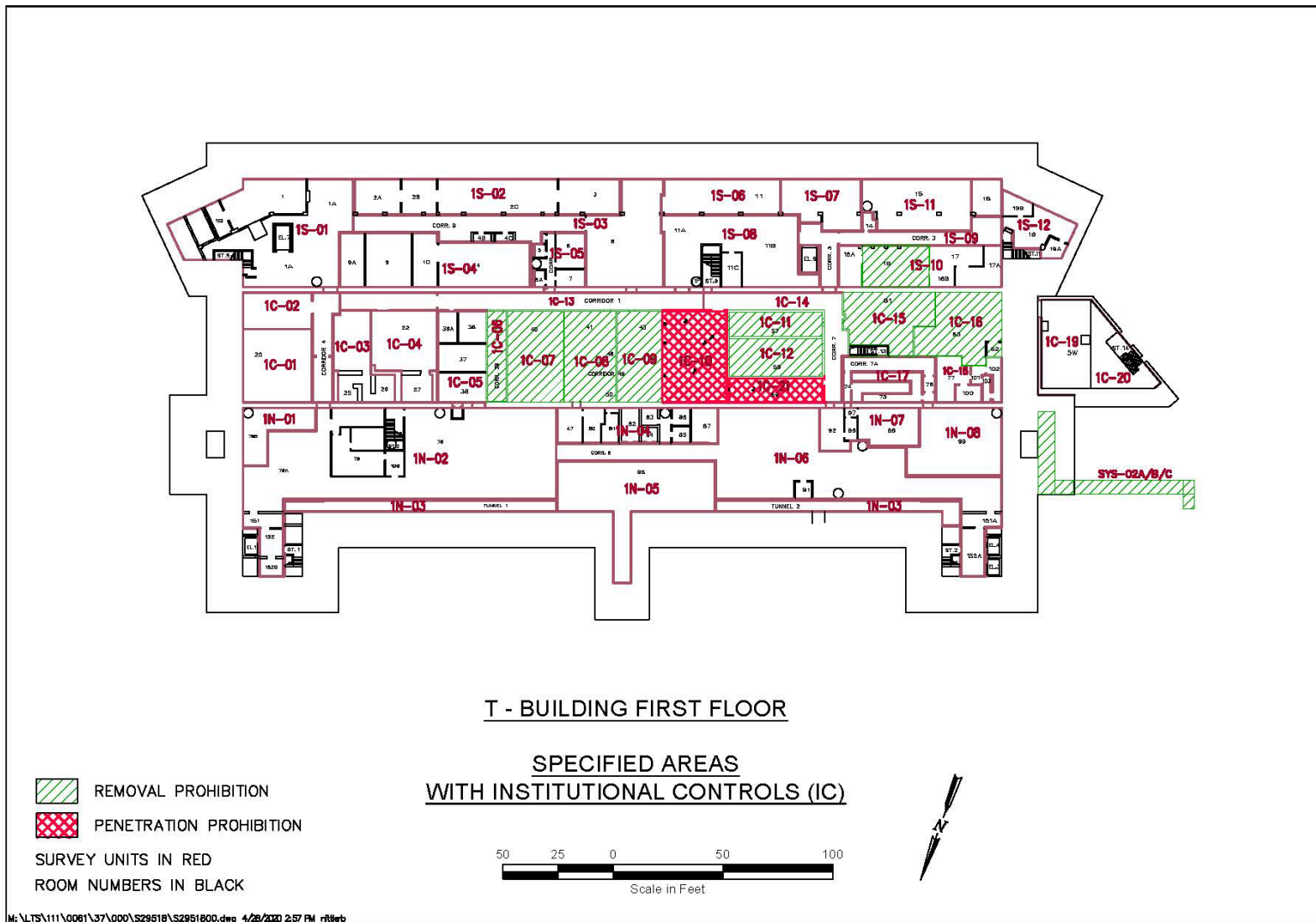


Figure C-1. T Building Rooms with Special ICs

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.

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.

2010 Baseline Photos of Each Room with Special ICs

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

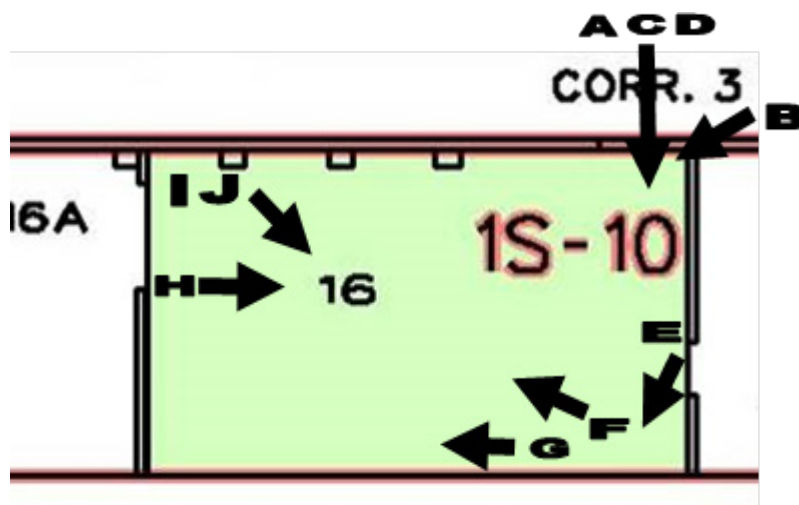


Figure C-2. T Building Room 16 View A



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 floorplan to the right shows the camera angles for Figures C-12 through C-19.)

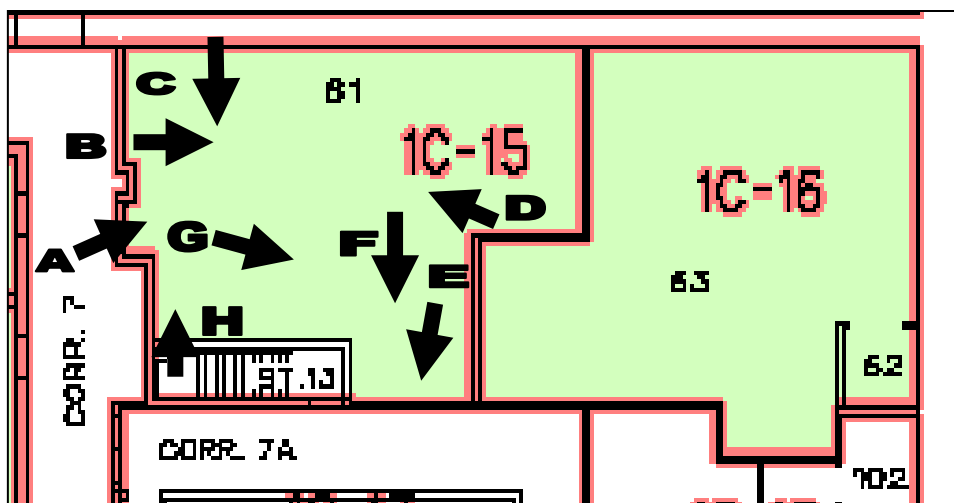


Figure C-12. T Building Room 61 View A



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 floorplan to the right shows the camera angles for Figures C-20 through C-31.)

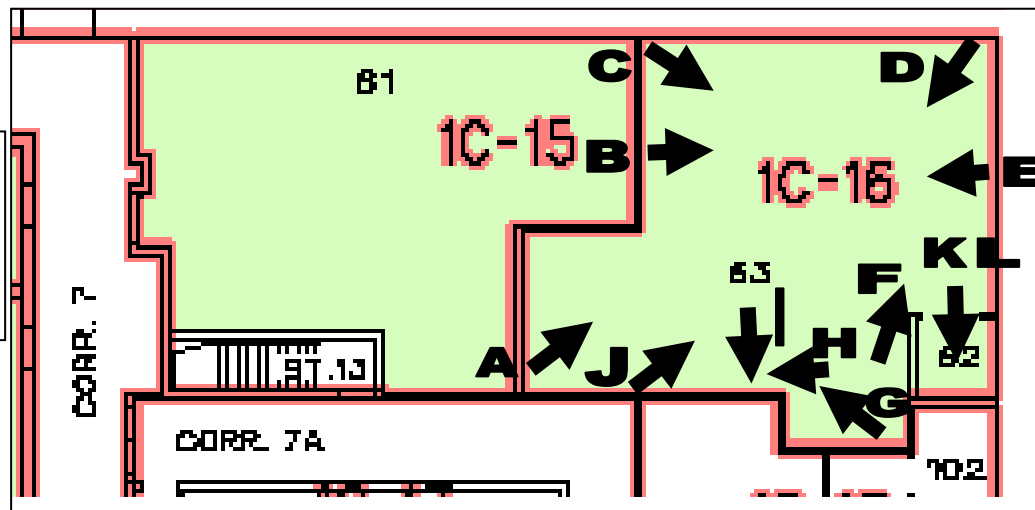


Figure C-20. T Building Room 63 View A



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 floorplan to the right shows the camera angles for Figures C-32 through C-37.)

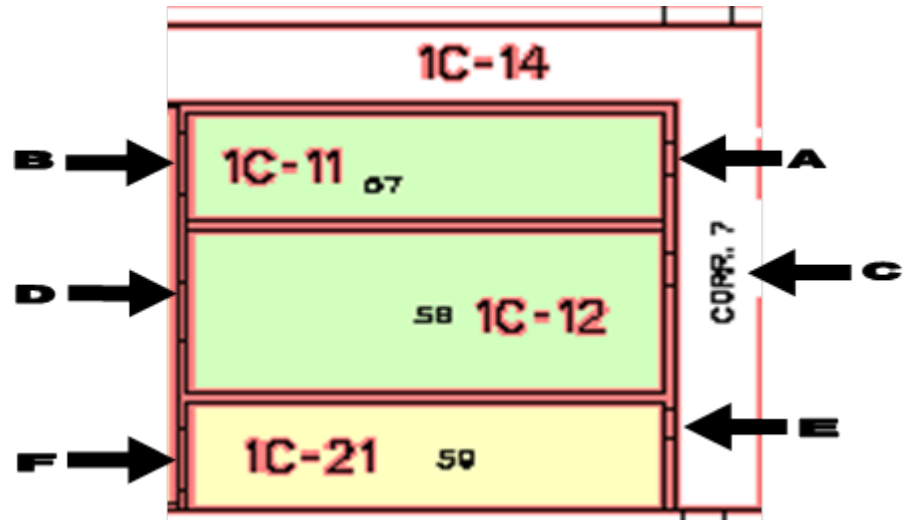


Figure C-32. T Building Room 57 View A



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

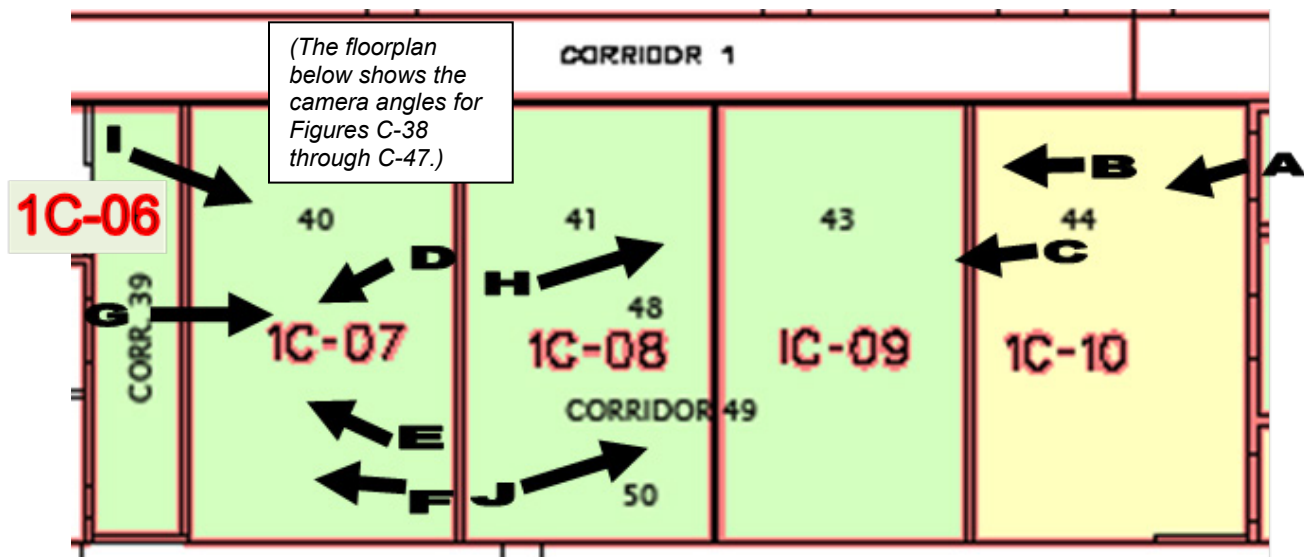


Figure C-38. T Building Rooms 39-44 and 48-50
View A



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

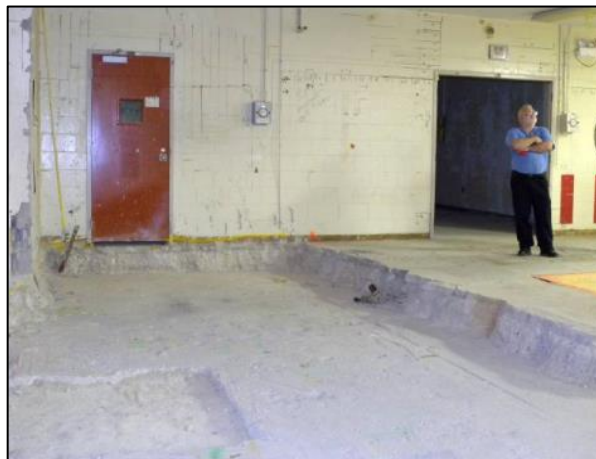


Figure C-43. T Building Rooms 39-44 and 48-50
View F



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

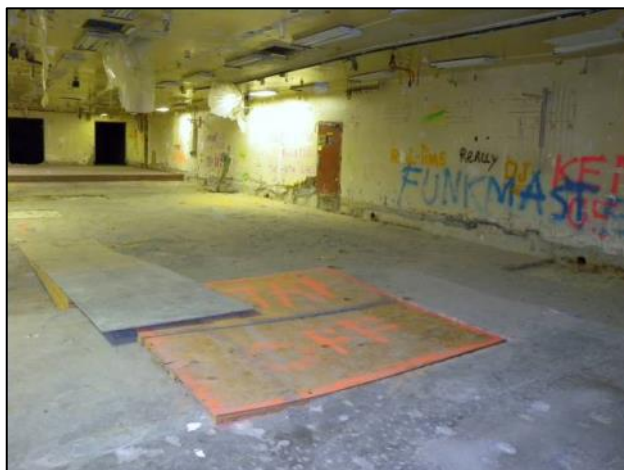


Figure C-46. T Building Rooms 39-44 and 48-50
View I



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.

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



Monitoring Point A



Monitoring Point B



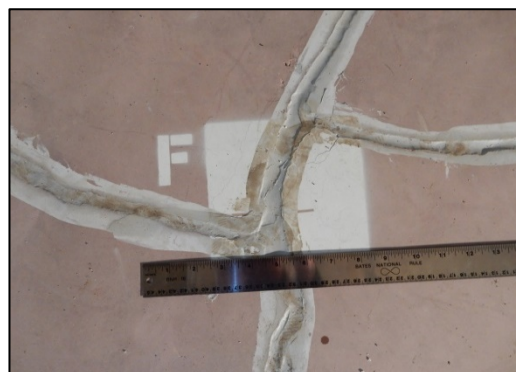
Monitoring Point C



Monitoring Point D



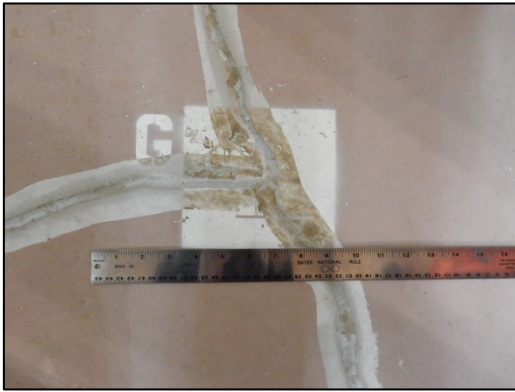
Monitoring Point E



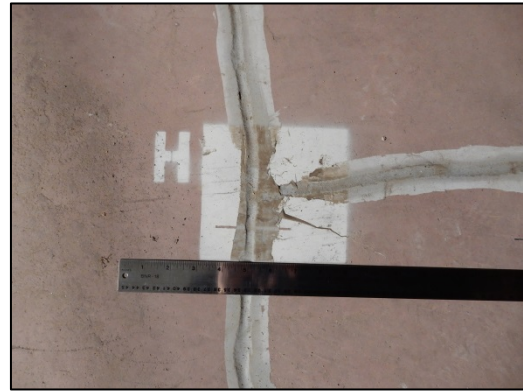
Monitoring Point F

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)

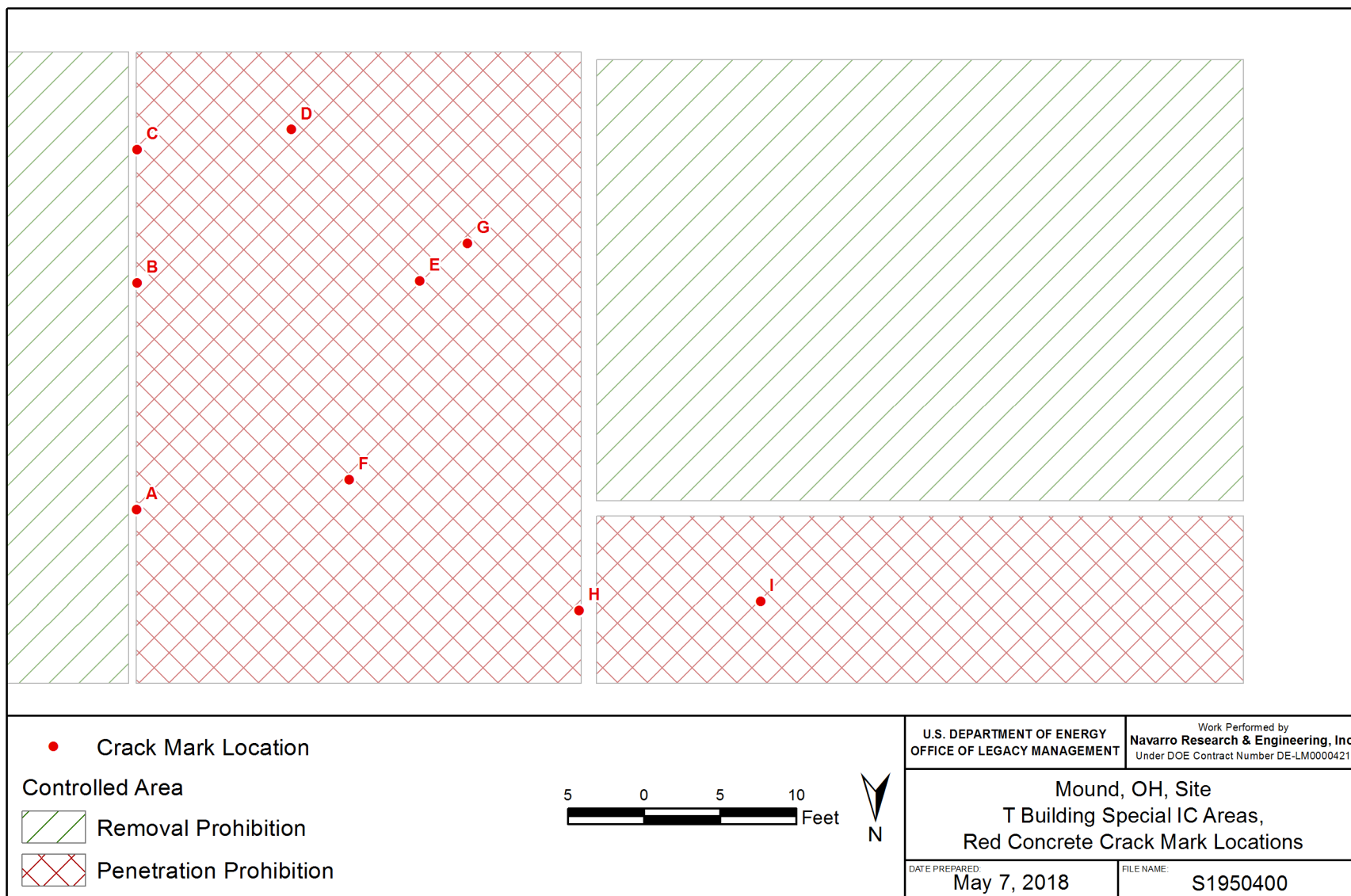


Figure C-49. T Building Special IC Areas, Red Concrete Crack Mark Locations

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 ^o -100 ^o F
Temperature resistance	-4 ^o -190 ^o 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 re-cleaned. 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.

Gaulking:

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

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Appendix D

2012 Core Team IC Guidance Form: Request for Regulatory Approval of New Site Activity

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Contents

1. 2012 Core Team IC Guidance
2. Example Form: Request for Regulatory Approval of New Site Activity

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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

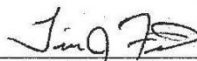
DOE:

**Gwen N
Hooten**

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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
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Brian K. Nickel, Project Manager

Example Form: Request for Regulatory Approval of New Site Activity

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

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

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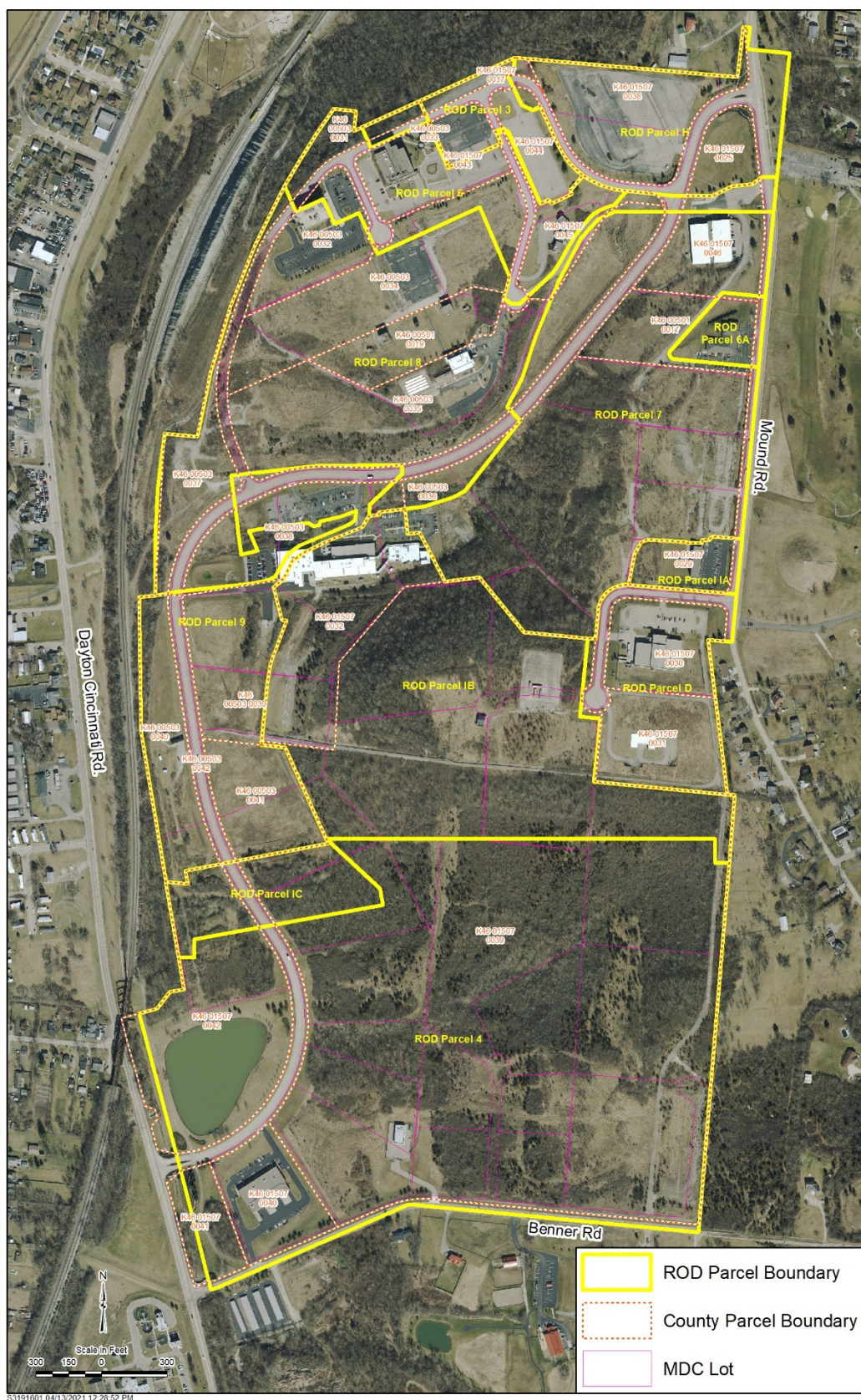


Figure E-1. Mound Site 2021 Aerial Photo Showing ROD Parcel, County Parcel, and MDC Lot Boundaries

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