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**Annual Assessment of the  
Effectiveness of  
Site-Wide Institutional Controls  
Applied to the Former  
DOE Mound Site Property**

**June 2010**



U.S. DEPARTMENT OF  
**ENERGY**

Legacy  
Management

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LMS/MND/S06401

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Appendix D	Photos of T Building Rooms with Special ICs

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## 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
IC	institutional control
LM	Office of Legacy Management
MMCIC	Miamisburg Mound Community Improvement Corporation
MNA	monitored natural attenuation
NESHAPs	National Emission Standards for Hazardous Air Pollutants
O&M	Operations and Maintenance
ODH	Ohio Department of Health
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
OU	Operable Unit
ROD	record of decision
TCE	trichloroethylene

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## 1.0 Introduction

This report documents the U.S. Department of Energy (DOE) Office of Legacy Management (LM) 2010 annual assessment of the effectiveness of site-wide institutional controls (ICs) for the Mound Site<sup>1</sup> in Miamisburg, Ohio, for the period from April 14, 2009, to April 13, 2010. This annual assessment covers parcels that have completed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 120(h) requirements for property transfer. The ICs, which are legal and administrative tools in the form of deed restrictions, are defined in the record of decision (ROD) for each parcel (DOE 1999a, 1999b, 2001a, 2001b, 2003, and 2009b) are described in the *Operation and Maintenance (O&M) Plan for the Implementation of Institutional Controls at the 1998 Mound Plant Property, Phase I Parcel* (DOE 2004a) (O&M Plan).

This annual assessment covers Parcels D, H, 3, 4, 6, 7, and 8 and the Phase I parcel (comprising sub-parcels A, B, and C) of the Mound Site. The Miamisburg Mound Community Improvement Corporation (MMCIC) owns all of these parcels except Parcels 6, 7, and 8. This annual assessment does not cover Parcel 9, which has not completed the CERCLA process.

The ICs are developed and presented in the ROD process, which includes input from the public, the City of Miamisburg, the regulators, and MMCIC. RODs require that DOE perform an annual assessment to document the effectiveness of the ICs (in the form of deed restrictions) and to confirm that all site changes comply with them. Section 3.0 describes the ICs in detail.

Each annual assessment includes a physical inspection of land parcels; discussions with the property owners; a review of all applicable records, including (but not limited to) construction, street opening, occupancy, and other permits; zoning modification requests; and well drilling logs.

Although not an IC, groundwater monitoring is required by CERCLA remedies for some parcels. This inspection includes the physical conditions of wells and seeps associated with these remedies.

DOE contacted the U.S. Environmental Protection Agency (EPA), the Ohio Environmental Protection Agency (OEPA), and the Ohio Department of Health (ODH) 30 days before the visual inspection. DOE must submit the draft annual assessment report to EPA and OEPA no later than June 13 of each year.

## 2.0 Overview of Parcel Transfer Process

In January 1998, DOE executed the original sales agreement with MMCIC. The agreement called for the transfer of discrete land parcels to MMCIC, via a series of quitclaim deeds, after the parcels were declared excess to DOE's needs and after all requirements of CERCLA 120(h) for property transfer were met. As MMCIC acquired a parcel, it became part of the Mound Advanced Technology Center, which is a light industrial/technology park operated by MMCIC. The same parcel transfer process was continued in the revised sales agreement, *Sales Contract by*

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<sup>1</sup> The Mound Site was also formerly identified as the Mound Laboratory and the Mound Plant.

and between the United States Department of Energy and the Miamisburg Mound Community Improvement Corporation, August 28, 2008. (DOE 2008c)

The O&M Plan for site-wide ICs applies to parcels that have completed the CERCLA 120(h) process for property transfer, whether or not title to those parcels has been transferred to MMCIC. The O&M plan is currently being updated to include Parcel 6, 7, and 8 and will be finalized when the Parcel 9 record of decision is issued.

This annual assessment covers Parcels D, H, 3, 4, 6, 7, and 8 and the Phase I parcels. All of these parcels, when taken together, represent 92 percent of the estimated total 306 acres of the former DOE Mound Site Property. Table 1 provides details of parcel sizes, transfer dates, and status.

Table 1. Mound Site Parcel Information

Parcel	Former ID	Acres	Number of Structures	DOE Building Names/Numbers (See Table 4 for current street addresses)	Completed CERCLA 120(h) Process?	Date Transferred	Owner
D	Release Block D	12.43	2	100, 105	Yes	March 1999	MMCIC
H	Release Block H	14.29	0		Yes	August 1999	MMCIC
3		5.581	2	Guard House (GH), Guard Post (GP)-1 (MMCIC demolished GP-1)	Yes	August 2002	MMCIC
4		94.838	0	MMCIC built Flex Bldg.	Yes	April 2001	MMCIC
Phase I	A	2.542	8	87, 3 Magazines 80-84 Salt storage shed	Yes	February 2009	MMCIC
	B	42.882					
	C	6.568					
6 <sup>1</sup>		13.636	3	Office Space East (OSE), 28, 45	Yes		EM
7		42.307	3	2, 61, 63	Yes		EM
8		45.247	3	Central Office Space (COS), Office Space West (OSW), T	Yes		EM
9		23.148	4	300, 301, Trailers 1 and 16	In process		EM
6A	Within Parcel 7	2.352	1	126	Not applicable		EM
Totals		305.821	26				

<sup>1</sup> Parcels 6, 7, and 8 are combined into one ROD.  
EM = DOE Office of Environmental Management

Figure 1 shows the original boundaries of the former DOE Mound Site Property divided into parcels.

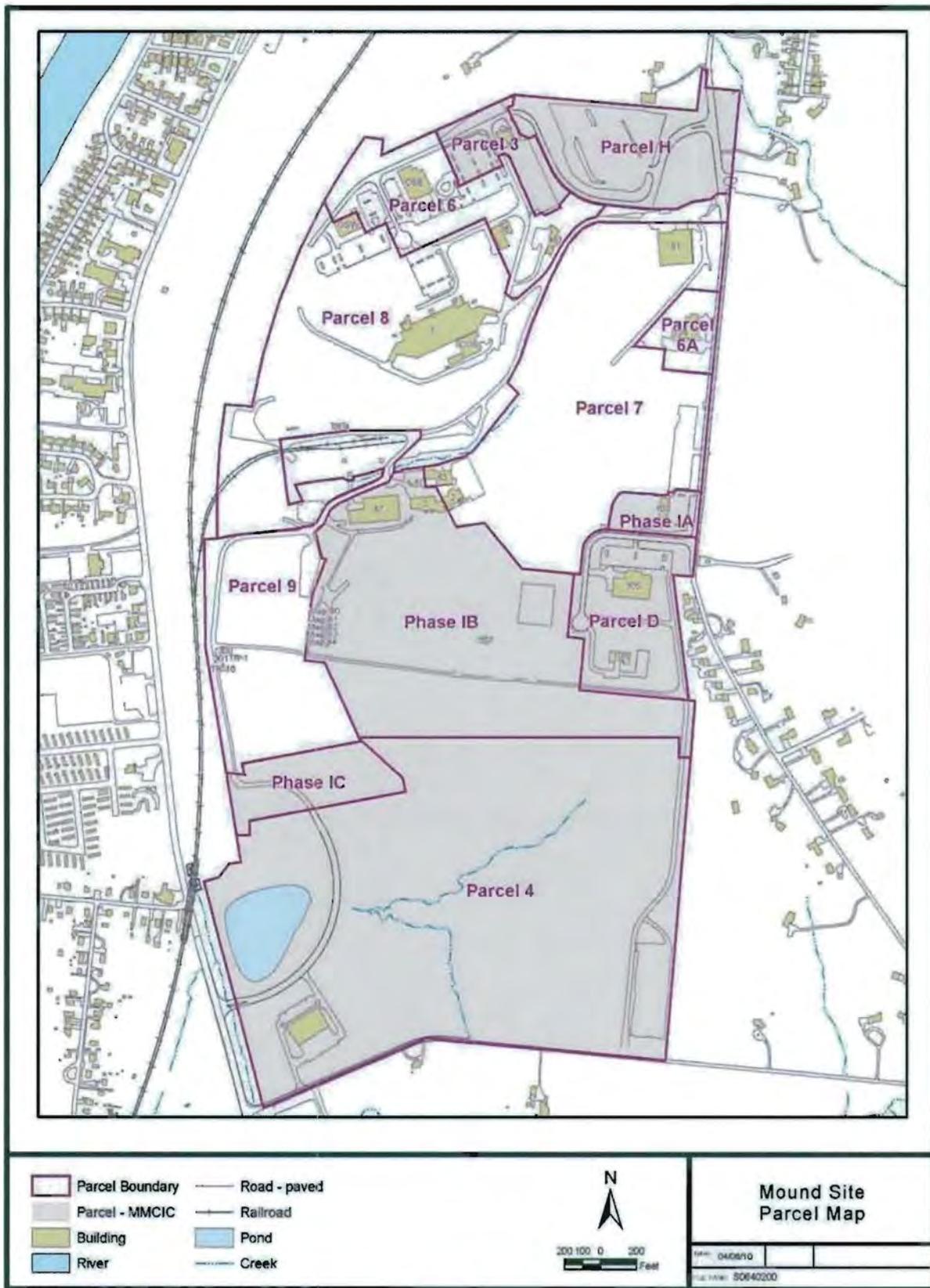


Figure 1. Parcel Map of the Former DOE Mound Site Property, Miamisburg, Ohio

### 3.0 Overview of Institutional Controls (ICs)

ICs are legal and administrative tools for protecting human health and the environment (Appendix B) defined in each ROD and described in the O&M Plan. The Mound Site ICs, which were imposed as part of the CERCLA remedy, were developed with input from the public, the City of Miamisburg, the regulators, and MMCIC.

DOE remediated the former DOE Mound Site Property to EPA's risk-based standards for industrial/commercial use only.

Each ROD contains the deed-restriction language to be embedded in the quitclaim deed and the *CERCLA 120(h) Summary Notice of Hazardous Substances* for the parcel it covers. The quitclaim deed and the CERCLA summary notice are recorded with Montgomery County, Ohio, so that all future property owners will know about the deed restrictions.

The deed restrictions are designed to:

1. **Prohibit the removal of soil** from the original DOE Mound Site Property boundaries, unless prior written approval from OEPA and 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 OEPA has been obtained.
3. **Limit land use to industrial/commercial only.** Each parcel ROD 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 under 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 (Figure 18) to off-site locations without prior approval from USEPA, OEPA, and ODH.
5. **Prohibit the penetration of concrete floors** in specified rooms of T Building (Figure 18) without prior approval from USEPA, OEPA, and ODH.
6. **Allow site access for federal and state agencies** for sampling and monitoring.

The preceding deed restriction language is a summary only. The RODs contain the parcel-specific deed-restriction language. RODs and other CERCLA documents are available in the CERCLA Public Reading Room, 955 Mound Road, Miamisburg, Ohio 45342, and electronically on the LM Mound website, <http://www.lm.doe.gov/land/sites/oh/mound/mound.htm>.

Some parcel remedies have monitoring requirements in addition to ICs. The Phase I parcels and Parcels 6, 7, and 8 have groundwater monitoring requirements. These wells and seeps were inspected during the physical inspection and are included in this report.

#### **4.0 Period of Review**

This annual assessment covers the period from April 14, 2009, to April 13, 2010.

Each annual assessment identifies new information, such as new construction, demolition, or excavation; lot-splits or the sale of parcels to new landowners; and permit applications filed by property owners or their agents since the last reporting period. Previous annual assessments are available in the CERCLA Public Reading Room or online at the LM Mound website (<http://www.lm.doe.gov/land/sites/oh/mound/mound.htm>) by clicking the "CERCLA Administrative Record" link.

#### **5.0 Aerial View of the Mound Site Property**

Figure 2 and the following individual parcel figures are from an April 2006 aerial photograph of the Mound Site. The actual photographs were taken at low altitude, using a nominal negative scale of 1:4800, and were developed using 1"=100' scale planimetric mapping (the scale sizes of figures in this assessment vary). Photographic-controls points were Horizontal Datum: NAD83, Vertical Datum: NAVD88, U.S. Survey Feet, and State Plane – Ohio South Zone.

#### **6.0 Summary of Previous Year's Annual Assessment**

The *2009 Annual Assessment of the Effectiveness of Site-Wide Institutional Controls Applied to the Former DOE Mound Site Property* (DOE 2009a) (2009 annual assessment) concluded that the ICs functioned as designed, adequate oversight mechanisms appeared to be in place to identify possible violations, and adequate resources were available to correct or mitigate any problems if a violation were to occur.

The 2009 annual assessment made two new recommendations:

1. Confirm that the aRc well was abandoned correctly and removed from the Ohio Department of Natural Resources (ODNR) website.
2. Improve drainage in the area north of Well 0353

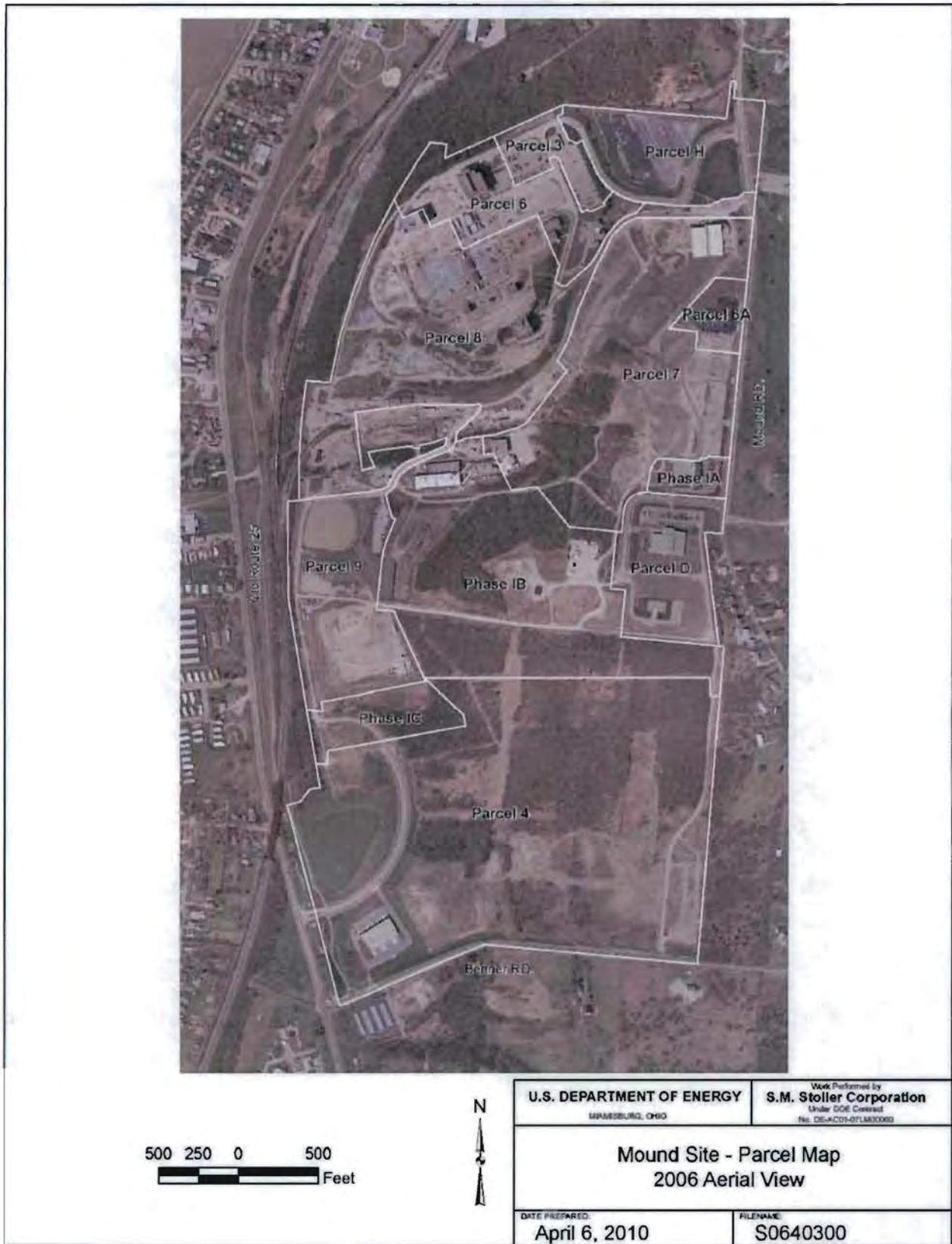


Figure 2. April 2006 Aerial View of Mound Plant Showing Parcel Boundaries

## 7.0 Summary of Physical Inspections Performed

S.M. Stoller Corporation (Stoller) personnel conducted preliminary physical inspections during March and April 2010, and photographed wells, seeps, buildings, and other items of interest.

The annual physical inspection walkaround with the regulators and stakeholders occurred on April 13, 2010. Art Kleinrath, LM, led the walkaround, and participants included:

- Paul Lucas, DOE Office of Environmental Management (EM).
- Tim Fisher, EPA.
- Brian Nickel, OEPA.
- Jeff Smith, OEPA.
- Joe Crombie, ODH.
- Frank Bullock, MMCIC.
- Ellen Stanifer, City of Miamisburg.
- Gary Weidenbach, Stoller.
- Joyce Massie, Stoller.

Kleinrath gave a presentation defining the scope of the annual assessment and observations from the preliminary physical inspections, including photographs of the wells, seeps, and buildings. Parcels 6, 7, and 8 were included for the first time. Participants were given a copy of the presentation and a checklist for the walkaround.

The following sections summarize the results of the physical inspection of each parcel. A copy of the physical inspection checklist is included as Appendix A.

## 7.1 Parcel D

In Parcel D (Figure 3), there were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation or soil removal from the original boundaries of the DOE Mound Site Property.



Figure 3. Parcel D 2006 Aerial View

## 7.2 Parcel H

Figure 5 was formerly called Release Block H. There were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation or soil removal within the original boundaries of the DOE Mound Site Property.

Although air monitoring is not part of the CERCLA remedy for any parcel covered by this assessment, DOE continues to use site air monitoring stations. One station is on the northeast corner of Parcel H (Figure 4). DOE will continue to operate its Mound Site air monitoring stations until the National Emission Standards for Hazardous Air Pollutants (NESHAPs) requirements are met after Operable Unit (OU)-1 work is completed.



*Figure 4. Parcel H DOE Air Monitor*



Figure 5. Parcel H 2006 Aerial View

One area of Parcel H is exempt from the soil removal restriction (Figure 6). Modifications to the entry and the rerouting of Mound Road isolated this area from the original Mound property.

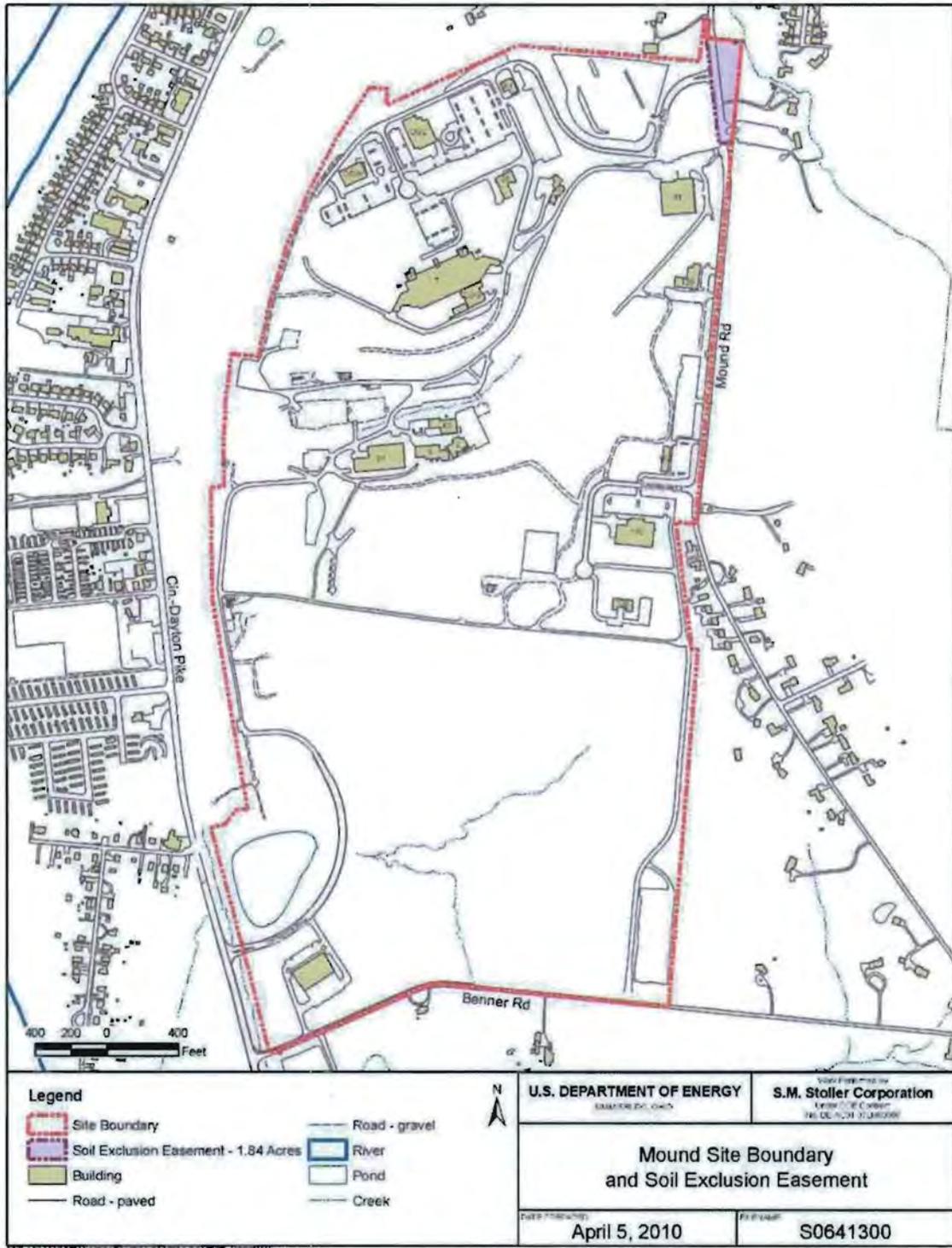


Figure 6. Parcel H Soil Removal Exclusion Area

### 7.3 Parcel 3

In Parcel 3 (Figure 7), there were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation or soil removal within the original boundaries of the DOE Mound Site Property. There are no groundwater monitoring wells in Parcel 3.



Figure 7. Parcel 3 2006 Aerial View

Figure 8 shows the Mound Museum Association building in Parcel 3. The building, formerly known as GH Building, is at 500 Vantage Point.



*Figure 8. Parcel 3 View from Parking Lot South toward Mound Museum Building*

#### **7.4 Parcel 4**

In Parcel 4 (Figure 9), there were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation or soil removal within the original boundaries of the DOE Mound Site Property.

The Flex Building in the southwest corner of Parcel 4 (Figure 10) at 1390 Vanguard Boulevard is leased to a single tenant. The tenant's line of business is consistent with the City of Miamisburg's I-2 General Industrial District Zoning ordinance. A sidewalk installed along Benner Road still prohibits unauthorized vehicular access to the old southeast construction road. Fencing and a locked gate block the northern entrance to this road.



*Figure 9. Parcel 4 MMCIC Flex Building in Southwest Corner of Parcel 4, Looking West from Old Construction Road Entrance in Parcel 4*



Figure 10. Parcel 4 2006 Aerial View

There is a pond for retaining and detaining storm-water runoff in the southwest part of Parcel 4 (Figure 11). One sign, which states, "Recreational Use Prohibited," was observed. These signs were damaged and replaced before each of the 2008, 2009, and 2010 annual inspections.



*Figure 11. Parcel 4 Retention Pond and Flex Building with Bike Path at Right*

A log was still lying across a damaged fence along the northern boundary of Parcel 4 near well 0444. The fencing is not part of the IC for that parcel.

## **7.5 Parcels 6, 7, and 8**

Parcels 6, 7, and 8 completed the CERCLA process, and the ROD was dated August 2009.

In Parcels 6, 7, and 8, there were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation or soil removal within the original boundaries of the DOE Mound Site Property.

### **7.5.1 Parcel 6, 7, and 8 Aerial Views**

Figure 12, Figure 13, and Figure 14 show aerial views of Parcels 6, 7, and 8.



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Figure 12. Parcel 6 2006 Aerial View



Figure 13. Parcel 7 2006 Aerial View

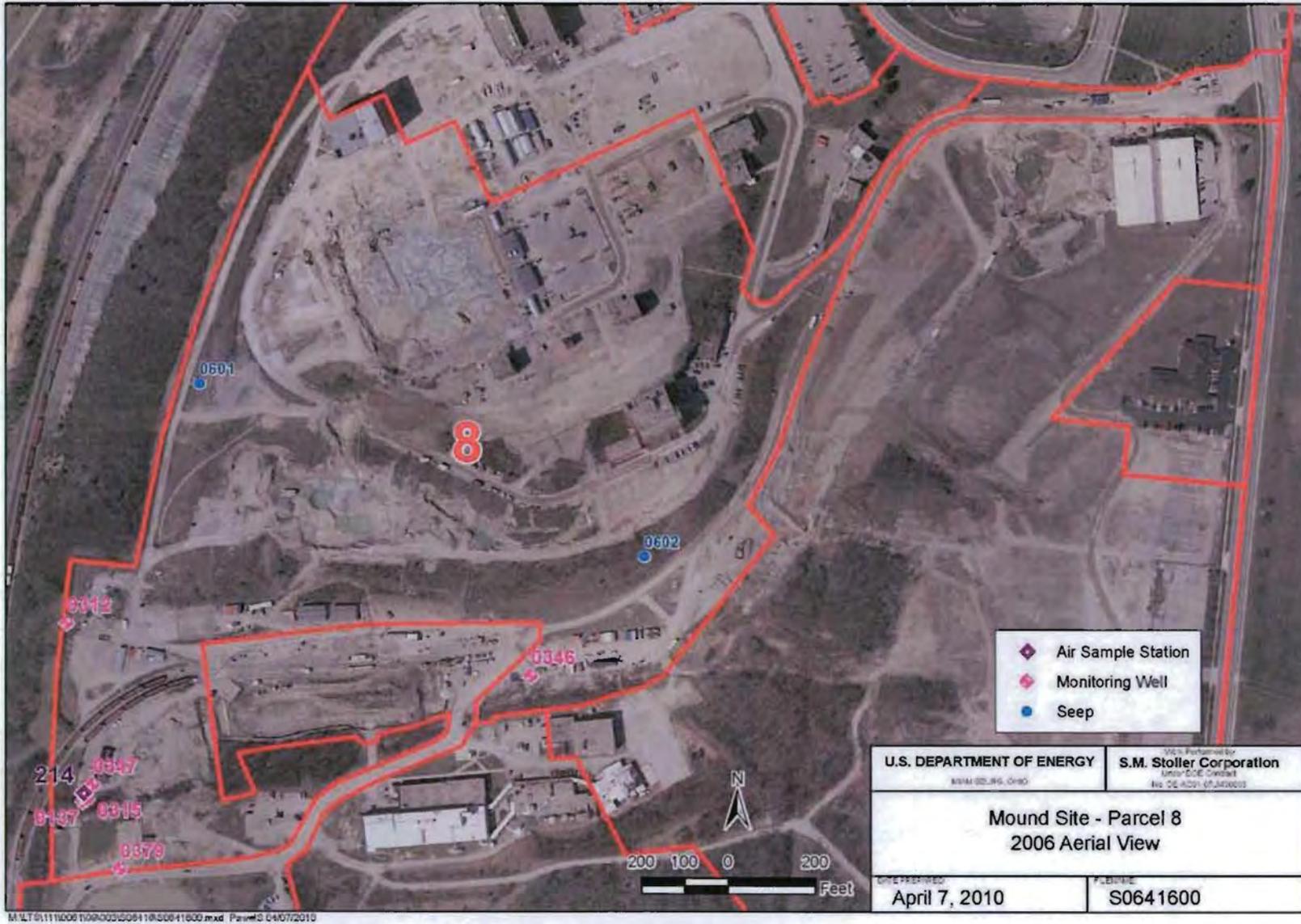


Figure 14. Parcel 8 2006 Aerial View

## 7.5.2 Parcel 6, 7, and 8 Inspection

The physical inspection included property and buildings and the areas within T Building with special ICs (Figure 15, Figure 16, and Figure 17). These ICs prohibit penetration in some areas, and removal of concrete flooring in others, without prior approval by the regulators. Figure 18 indicates these areas. Photos of each room are included in Appendix D.



*Figure 15. Bob Ransbottom, Paul Lucas, Tim Fischer, Jeff Smith, Brian Nickel, Joe Crombie, and Art Kleinrath Inspecting T Building Red Concrete Area*



*Figure 16. Looking West Toward One of the T Building Areas Where Removal of Concrete Floor is Prohibited without Prior Approval*



*Figure 17. Looking East Toward Inspection Participants Standing on T Building Red Concrete Where Penetration is Prohibited without Prior Approval*

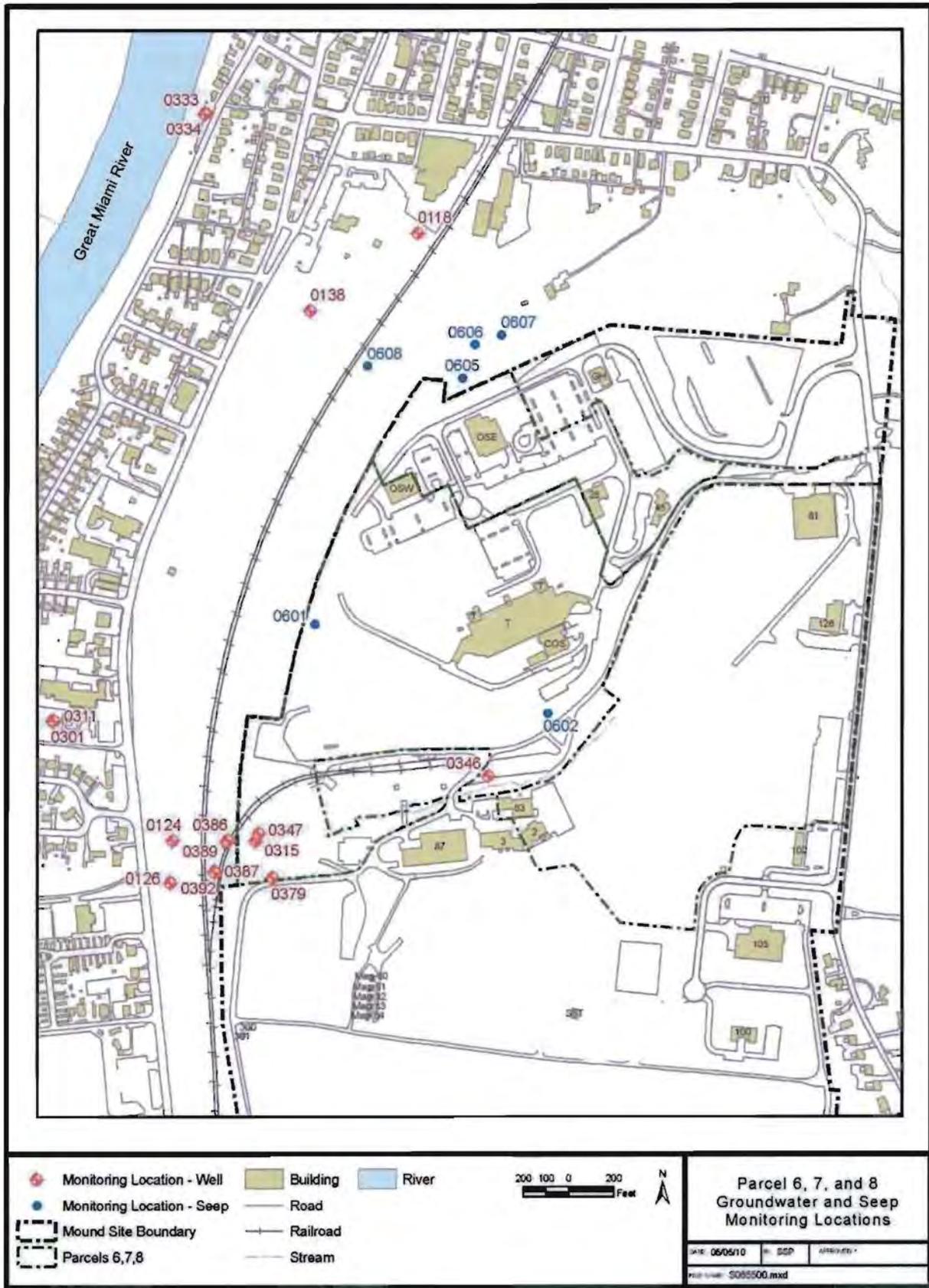


Figure 19. Parcel 6, 7, and 8 Groundwater and Seep Monitoring Locations

Several things were observed during the physical inspection of Parcel 6, 7, and 8 wells and seeps. First, Well 0124 was rusty and needed painting (Figure 20). Second, the seeps were marked with unsubstantial pink plastic flags with faded numbers (Figure 21). It is recommended that a sturdier marker be used.



*Figure 20. Well 0124.*



*Figure 21. Pink Plastic Marker at Seep 0608*

Third, the old sampler over Seep 0607 was no longer functional (Figure 22). It is recommended that the sampler and the surrounding fencing be removed and the area be returned to its original state.



*Figure 22. Old Sampler over Seep 0607 (No Longer in Use)*

Photos of wells and seeps are shown in Figure 23 to Figure 40. All were locked and in good condition.



*Figure 23. Well 0118, Off Site*



*Figure 24. Well 0124, Off Site*



*Figure 25. Well 0126, Off Site*



*Figure 26. Well 0138, Off Site*



*Figure 27. Wells 0301 and 0311, Off Site*



*Figure 28. Wells 0333 and 0334, Off Site*



Figure 29. Wells 0386 and 0389, Off Site



Figure 30. Wells 0387 and 0392, Off Site



Figure 31. Well 0315



Figure 32. Well 0346



Figure 33. Well 0347



Figure 34. Well 0379



*Figure 35. Seep 0601, On Site*



*Figure 36. Seep 0602, On Site, On Hillside*



*Figure 37. Roy Mowen Verifying GPS Location at Off-Site Seep 0605*



*Figure 38. Roy Mowen Verifying GPS Location at Off-Site Seep 0606*



*Figure 39. Seep 0607, Off Site*



*Figure 40. Seep 0608, Off Site, On Hillside*

#### 7.5.4 Parcel 6, 7, 8 Buildings

Photos of the buildings on Parcels 6, 7, and 8 are shown in Figure 41 to Figure 51.

##### Parcel 6 Buildings



*Figure 41. Building 28 or 925 Capstone Drive*



*Figure 42. Building 45 or 930 Capstone Drive*



*Figure 43. OSE Building or 480 Vantage Point*

Parcel 7 Buildings



Figure 44. Building 2 (No Address)



Figure 45. Building 63 or 1070 Vanguard Boulevard



Figure 46. Building 61 or 885 Mound Road



Figure 47. Building 126 or 955 Mound Road (DOE and Stoller) Located in Parcel 6A

Parcel 8 Buildings



Figure 48. OSW Building or 460 Vantage Point



Figure 49. COS Building or 965 Capstone Drive



Figure 50. T Building East and West Towers (Back of COS Building Shown)



Figure 51. T Building West and East Tunnel Entrances (Front of COS Building Shown)

## 7.6 Parcel Phase I

The Phase I parcel consists of three noncontiguous sub-parcels (A, B, and C), which were transferred to MMCIC in February 2009. The remedy for the Phase I parcel includes ICs for the land and MNA to address TCE-impacted groundwater.

In the Phase I parcel, there were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation or soil removal within the original boundaries of the DOE Mound Site Property.

A well drilled by the OU-1 excavation contractor for dust suppression in Parcel 9 near the northwest boundary of Parcel IC was removed, but the well was still shown on the ODNR website. It was determined that the well sealing report was filed with ODNR, and that the well information remains on their website.

### 7.6.1 Parcel Phase I Aerial Views

Figure 52 through Figure 54 show aerial views of Parcel Phase I.

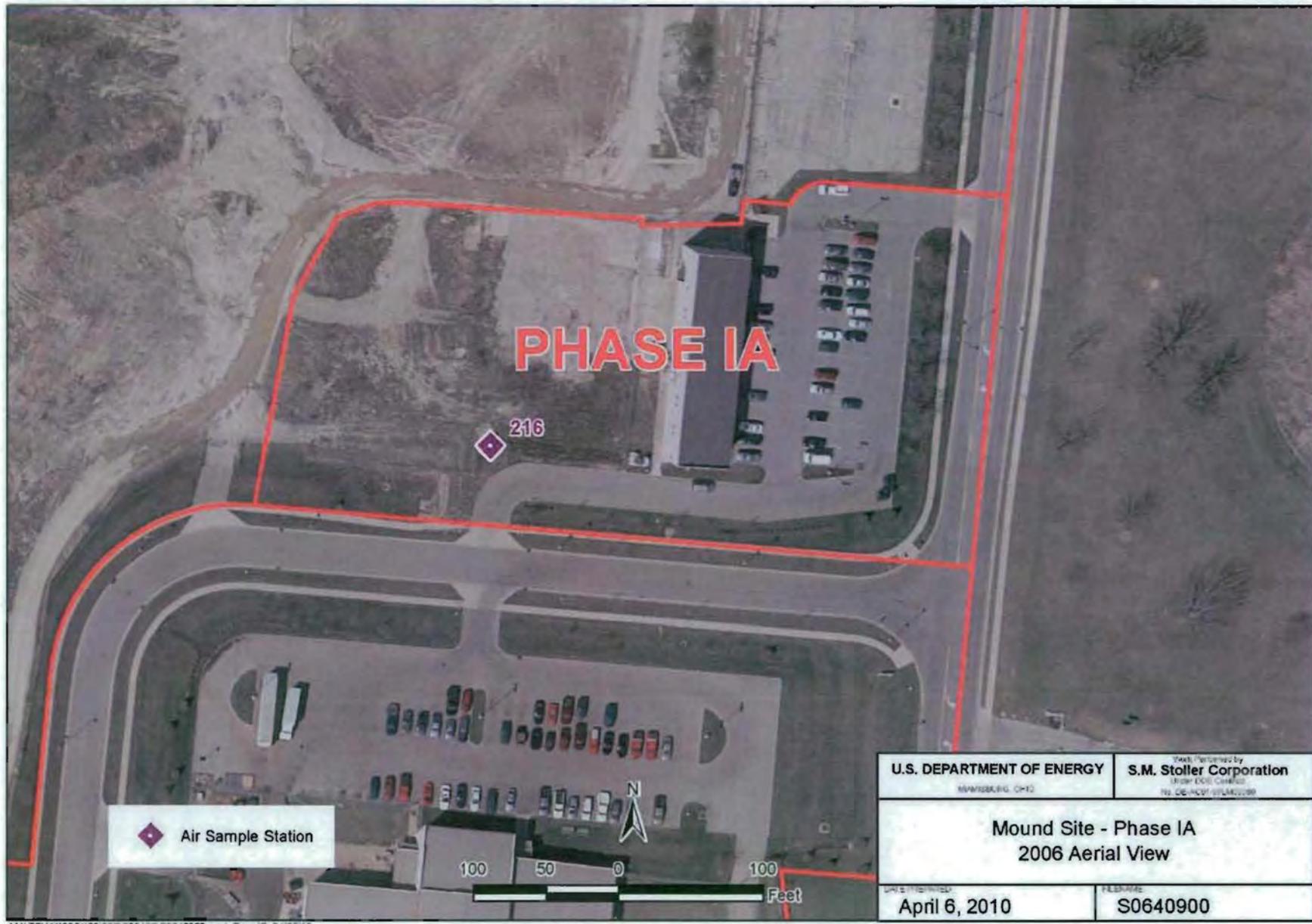


Figure 52. Parcel Phase IA 2006 Aerial View



Figure 53. Parcel Phase IB 2006 Aerial View



Figure 54. Parcel Phase IC 2006 Aerial View

### 7.6.2 Parcel Phase I Inspection

The salt storage shed shown in Figure 55 and the concrete pad in Parcel IB remain empty.



Figure 55. Jeff Smith and Brian Nickel, OEPA, and Art Kleinrath, LM, at the Phase IB Empty Salt Storage Shed

Jeff Smith and Brian Nickel, OEPA, and Art Kleinrath, LM, walked over the area northwest of the shed where the Old Burn Area was remediated.

### 7.6.3 Parcel Phase I Groundwater Monitoring Wells and Seep

Table 3 and Figure 56 give the requirements and locations of the 10 wells and one seep monitored in the Phase I parcel, as described in the *Phase I Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan, Final* (DOE 2004b). DOE monitors TCE and its degradation products under the MNA remedy to verify that concentrations are decreasing. DOE also conducts sampling to confirm the behavior of barium, radium, nickel, and chromium in Phase I groundwater, as listed in the “Confirmatory” column in Table 3, even though doing so is not part of the remedy.

Figure 57 through Figure 67 are photos of the wells and seep. All wells were locked, had permanent markers, and were in good condition.

Table 3. Monitoring Wells and Seeps in Parcels Inspected or Part of Phase I Remedy

Monitoring Requirement		Well/Seep #	Located in Parcel				
Remedy (MNA)	Confirmatory		4	IA	IB	IC	9
X	X	Well P033				X	
	X	Well 0319				X	
X		Well 0353					X
X	X	Well 0400				X	
X	X	Well 0402					X
X		Well 0411			X		
	X	Well 0442			X		
X	X	Well 0443			X		
X		Well 0444	X				
X	X	Well 0445				X	
X		Seep 0617			X		

This annual assessment report documents the effectiveness of the ICs' remedy applied to the Phase I parcel and Parcels D, H, 3, 4, 6, 7, and 8. This does not include a determination of the effectiveness of the various groundwater remedies, including the MNA remedy associated with the Phase I parcel. All monitoring wells are in operable condition. The *Phase I Groundwater Monitoring Report Calendar Year 2009* can be found in the CERCLA Public Reading Room at 955 Mound Road, Miamisburg, Ohio 45342.

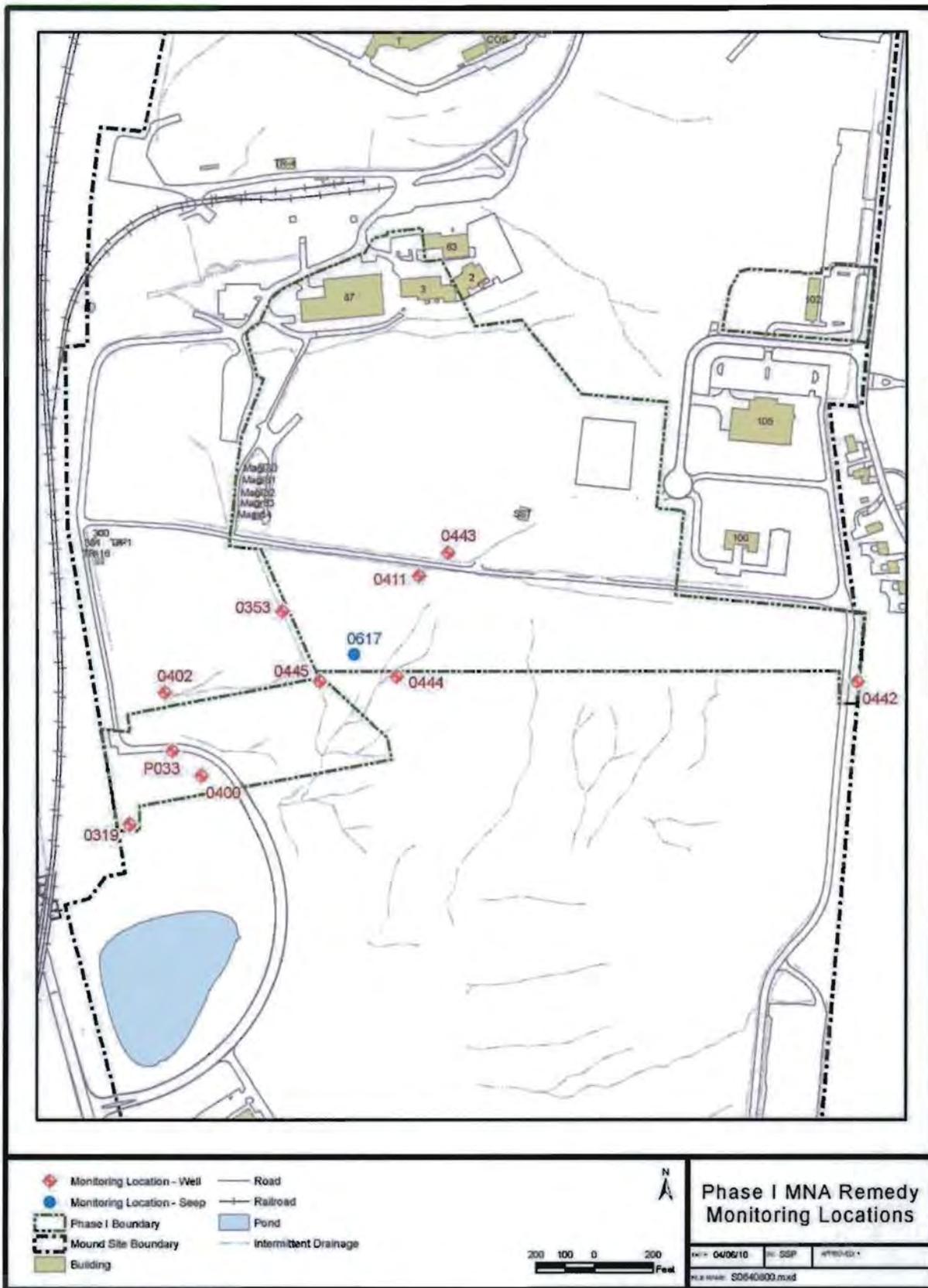


Figure 56. Phase I MNA Remedy Monitoring Well Locations

Phase I Monitoring Wells and Seep



Figure 57. Well 0411



Figure 58. Well 0442



Figure 59. Well 0443



Figure 60. Well 0444



Figure 61. Groundwater Seep 0617



Figure 62. Well 0445



Figure 63. Well 0400



Figure 64. Well 0319



Figure 65. Well P033



Figure 66. Well 0353, Which Still Has Drainage Problems



Figure 67. Well 0402

### 7.6.4 Parcel Phase I Buildings

Photos of the buildings on Parcel I are shown in Figure 68 to Figure 73.

#### Phase I Buildings



*Figure 68. Building 3 or 1100 Vanguard Boulevard*



*Figure 69. Building 87 or 1100 Vanguard Boulevard*



*Figure 70. Building 100 or 790 Enterprise Court*



*Figure 71. Building 102 or 1075 Mound Road*



Figure 72. Building 105 or 1075 Mound Road



Figure 73. Flex Building or 1390 Vanguard Boulevard

## 8.0 Interviews and Records Reviews

### 8.1 Interviews with City Personnel and Review of City or MMCIC Records

In addition to conducting the physical inspections for the annual assessment, DOE reviews documents from local governments to ensure that ICs are being followed. These may include construction, street opening, occupancy, or other permits; zoning modification requests; City Planning Commission requests; and well logs issued for land parcels that have completed the CERCLA 120[h] process for property transfer. Documents may be at the City of Miamisburg, at Miami Township, at Montgomery County, or in ODNR's well log files.

LM and Stoller personnel visited the City of Miamisburg Engineering and City Planning departments on March 24, 2010, and reviewed permits maintained by those departments for work performed by MMCIC and its tenants or subcontractors.

The following tables do not repeat information on permits included in previous years' DOE assessment reports on the effectiveness of the site-wide ICs. Furthermore, each year's report does not necessarily list permits filed by MMCIC or its tenants or subcontractors for work performed on DOE-owned, MMCIC-leased property. Instead, the following tables are typically limited to permits filed after a ROD has been executed for a particular parcel, since DOE is responsible for the O&M of the site-wide ICs remedy (regardless of whether DOE has conveyed title of that parcel, in whole or in part, to MMCIC).

Although the property is not subject to City of Miamisburg permitting requirements until DOE conveys the land parcel to MMCIC, the City-permitting process familiarizes the City with the Mound Site. This can reduce the time it takes for MMCIC to receive City approval (e.g., for a building occupancy permit) in the future. City files are maintained by street address. DOE has performed spot-checks of permits in the City Engineering files since May 2001 to confirm that the permits are maintained under configuration control. The City of Miamisburg does not maintain files on buildings that MMCIC plans to demolish. City files do exist on buildings that have been demolished; however, those files are now considered obsolete.

Table 4 shows the DOE building identification and the Miamisburg street addresses for each building. Seven buildings (3, 87, 100, 102, 105, Flex, and GH), five magazines (80 through 84), and a salt storage shed are in land parcels transferred to MMCIC. Figure 74 shows the location of site buildings.

Since City permits are filed by address, MMCIC must inform DOE of changes to the street names or building addresses.

Table 4. Crosswalk of Street Addresses to DOE Building Identifications

DOE Building ID	Former Address	Current Miamisburg Street Address	Parcel
2		To be demolished	7
28		925 Capstone Drive	6
45		930 Capstone Drive	6
61		885 Mound Road	7
63		1070 Vanguard Boulevard	7
87 and 3		1100 Vanguard Boulevard	IB <sup>a</sup>
100		790 Enterprise Court	D <sup>a</sup>
102		1075 Mound Road	IA <sup>a</sup>
105		1195 Mound Road	D <sup>a</sup>
126		955 Mound Road	6A
COS		965 Capstone Drive	8
GH	500 Capstone Circle	500 Vantage Point	3 <sup>a</sup>
OSE	480 Capstone Circle	480 Vantage Point	6
OSW	460 Capstone Circle	460 Vantage Point	8
T		945 Capstone Drive	8
Magazines 80-84	None	None	IB <sup>a</sup>
(New) Flex Building		1390 Vanguard Boulevard	4 <sup>a</sup>

<sup>a</sup> Parcel has been transferred to MMCIC.

Table 5 details all permits on file for the site. The City of Miamisburg Building Inspection Department provided the records for review on March 24, 2010.

Table 5. City of Miamisburg Permit Files for Mound Site (March 24, 2009, to March 24, 2010)

Location of Work	Permit Number	Date of Permit Application	Submitted By	Nature of Work	Work Performed By
Flex Building 1390 Vanguard Blvd.	20090145B	10/09/09	Megan	Alteration	Megen Construction
Flex Building 1390 Vanguard Blvd.	20090204E	11/18/09	Not on record	Electric	Mutual Electric
Flex Building 1390 Vanguard Blvd.	20090175H	11/16/09	Not on record	Heating, Ventilation, and Air-Conditioning	Perfection Mechanical
OSW Building 460 Vantage Point	2009 0037B	03/10/09	Not on record	Occupancy	not on record

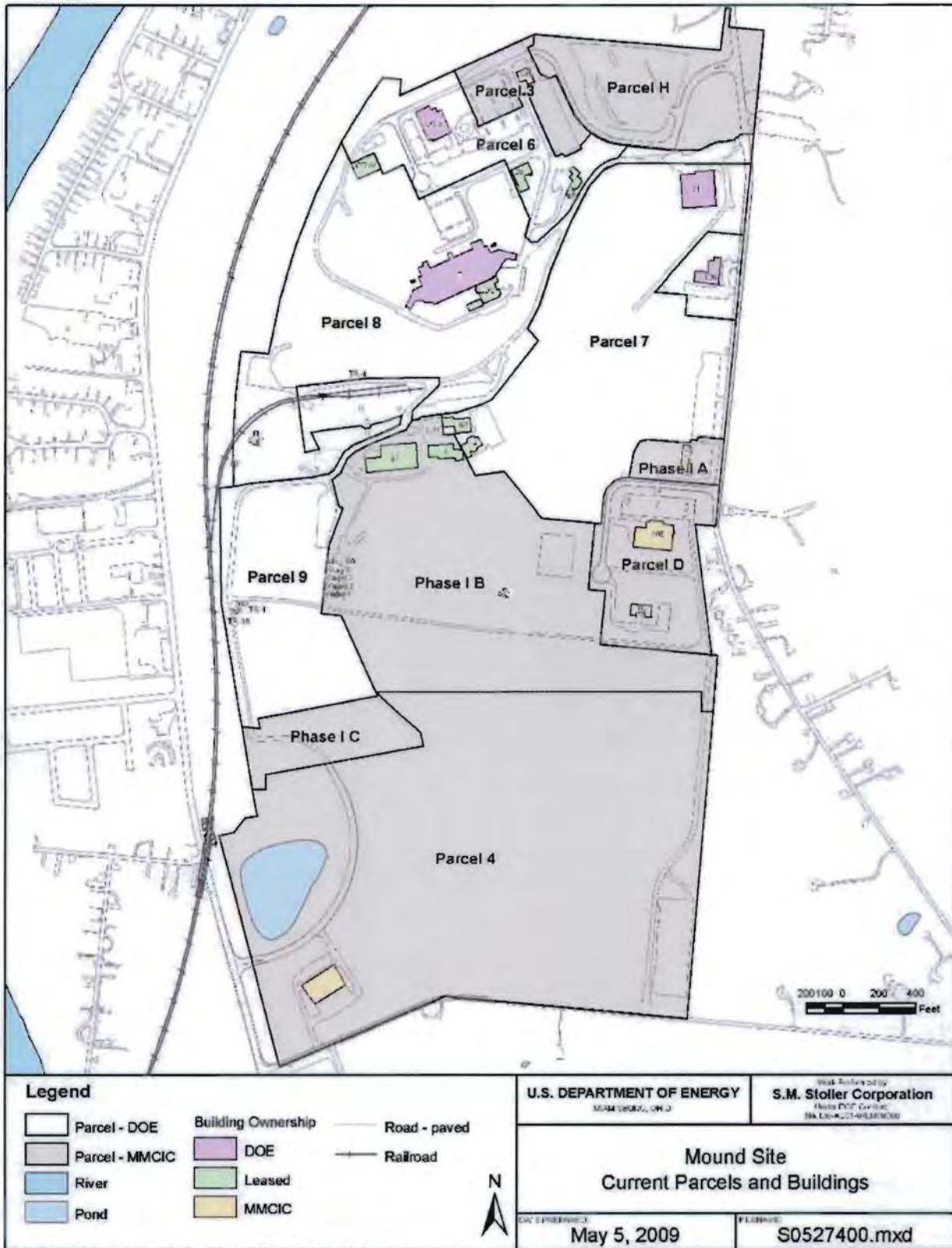


Figure 74. Mound Site Buildings and Parcels

Table 6 lists work requests that did not require a City permit but did require review by the City Planning Commission. These requests included excavation or paving activities.

Table 6. City of Miamisburg Files – Planning Commission Reviews

Location of Work	ID Number	Date of Application	Submitted By	Nature of Work	Parcel/ Building	Status
No Commission reviews were performed during this period.						

All work performed by MMCIC or other parties (e.g., contractors to MMCIC) on the former DOE Mound Site Property that Art Kleinrath (LM) and Frank Bullock (MMCIC) were aware of during the 12-month reporting period appeared to be adequately covered by permits submitted to, and approved by, the City of Miamisburg.

In 2003, the City of Miamisburg implemented a database that allows permits to be searched by keyword (e.g., permit number, date, location, nature of work). Permits issued before the database was implemented (i.e., permits documented in DOE’s annual reports dating back to 2001) may not be in the City’s database. However, the City retains hard copies of all permits in accordance with a records-retention plan that meets all State of Ohio requirements.

Permits filed with the City of Miamisburg do not have an expiration date. Therefore, DOE and the property owner (at present, MMCIC) should remain knowledgeable of permits filed with the City of Miamisburg, where work covered by that permit may have been postponed. This will provide a checks-and-balances system to ensure that the appropriate City officials approve work that requires a permit and has been performed since the last DOE annual assessment.

In general, the permit-review process demonstrated that the City of Miamisburg’s recordkeeping system is adequate.

## 8.2 Records, Other Than Permits, Issued by the City of Miamisburg

MMCIC and all future property owners must comply with the ICs associated with the former DOE Mound Site Property to maintain the CERCLA remedy. MMCIC currently ensures that contractors performing work for MMCIC (e.g., landscaping, utility work involving excavation, construction) are aware of and comply with the ICs. MMCIC 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 MMCIC property. Soils from excavation shall be placed at an on-site location, as directed by MMCIC.*

The MMCIC project manager, who oversees site work, monitors the vendor’s work and conformance to technical requirements in the work order. MMCIC provides the vendor with a real estate easement in addition to the technical requirements. This easement is recorded with Montgomery County as a matter of public record. An example of a real estate easement used for utility work on MMCIC property is included as Appendix B. Note that Section 2 of the easement gives the utility provider/vendor detailed information on the ICs associated with MMCIC’s property. This requires compliance with restrictions, which are the ICs.

Continuing public education is an important component of DOE's post-closure responsibilities. Appendix C is an EPA document with information concerning ICs. Educating all future property owners about their responsibility to comply with the ICs will be an important element of DOE's public-education campaign. It is also important to educate the general public on the importance of adhering to the site-wide ICs. Therefore, postings (such as warning signs near the MMCIC pond, which state that recreational use is prohibited) are an important part of teaching the public to comply with ICs.

Prior to initiating construction on any land parcel, MMCIC will provide the builder with a pre-construction package that includes a description of the ICs associated with that particular parcel. This is how MMCIC ensures that the builder is aware of applicable ICs. In a new-construction scenario, probably the most important IC to educate builders about is the prohibition against removing any soils from the original boundaries of the approximately 306 acres that constitute the former DOE Mound Site Property.

As recommended in the 2008 annual assessment, DOE will examine these documents during the annual IC assessments after the site has been transferred. This will ensure that the necessary wording continues to be included in contracts or easements after site transfer.

MMCIC's *Comprehensive Reuse Plan Update* (MMCIC 2003) (CRP) identifies each building at the Mound Advanced Technology Center with its own lot. A copy of the CRP is available in the CERCLA Reading Room.

Eventually, MMCIC plans to plat the entire former DOE Mound Site Property. In order to receive financing (i.e., for new construction) on land parcels that make up the original DOE Mound Site Property, MMCIC will record a lot-split with the Montgomery County Recorder's Office. If MMCIC does not require financing for property improvements within a parcel, MMCIC does not have to immediately record a Miamisburg Planning Commission-approved lot-split with the County. However, if MMCIC decides to sell the property, MMCIC has to record the lot-split with the County at that time. The recorded real estate documentation would include the original quitclaim deed that DOE issued to MMCIC for the parcel, as a whole, as well as the CERCLA 120(h) *Summary Notice of Hazardous Substances* associated with the original parcel. This will ensure that future property owners of individual lot-splits know of the site-wide ICs imposed on acreage that lies within the boundaries of the parcels as originally conveyed by DOE to MMCIC.

The property owner's adherence to the ICs imposed on a land parcel is vital to the effective maintenance of those ICs. MMCIC currently coordinates the movement of soil and site grading, and DOE oversees completion of the OU-1 Project in Parcel 9. After DOE's environmental management mission is complete, managing the movement of soil throughout the site should be an effective way for the property owners to ensure that soil is not being removed from the site as a whole. To accomplish this task, MMCIC's CRP establishes locations where future construction and property improvements will occur on the former DOE Mound Site Property. The CRP also includes a site-wide soil-grading plan. The CRP was adopted by the City of Miamisburg, and it was incorporated into the City's comprehensive plan. The City's comprehensive plan is the basis for the zoning of properties that fall within the city limits. If MMCIC subdivides the former DOE Mound Site Property and sells portions (or all) of the property, the new property owners would be required to comply with the CRP and the City's comprehensive plan.

## 9.0 Conclusions

The ICs for Parcels D, H, 3, 4, 6, 7, and 8 and the Phase I land parcel continue to function as designed. Adequate oversight mechanisms appear to be in place to identify possible violations of ICs, and adequate resources are available to correct or mitigate any problems if violations occur.

## 10.0 Recommendations

Table 7 and Table 8 list previous inspections' recommendations for improving ICs (DOE 2006a; DOE 2009a), the status of those recommendations, and new recommendations from this year's inspection.

*Table 7. Outstanding Recommendations from Previous Annual or 5-Year CERCLA Inspections of ICs*

	Origin	Issue/ Recommendation	Status 2009 Report	Corrected?	Current Status 2010 Report
1	2007 Annual	Determine when OEPA removes air monitoring station in Parcel H.	OEPA was working with EM to dispose of their air monitoring stations on site.	Yes	Removed on May 28, 2009
2	2008 Annual	Landowner or management organization will notify LM when there are changes of address or street names on site. Building permits are filed by street addresses.	No process	No	No process
3	2009 Annual	Confirm that the aRc well was abandoned correctly and removed from the ODNR website.	New	Yes	Obtained written confirmation that the well was properly abandoned, and the <i>Water Well Sealing Report</i> was submitted to ODNR. ODNR keeps wells on its website.
4	2009 Annual	Improve drainage in the area north of Well 0353	New	No	Will revisit this issue when the OU-1 excavation has been completed in the area of the well.

*Table 8. Recommendations from 2010 Annual Inspection for ICs*

Number	Issue/Recommendation	Responsible
1	Improve marking labels at seeps.	Stoller
2	Paint Well 0124 in old canal area.	Stoller
3	Remove water sampling station and fencing over Seep 0607, and return area to its original condition.	Stoller
4	Insure that that signs by pond in Parcel 4 are present at all times.	MMCIC

## 11.0 For Further Information

For further information on the content of this annual report or the former DOE Mound Site Property in general, contact:

Mr. Paul Lucas  
Remedial Project Manager  
DOE Office of Environmental Management  
955 Mound Road  
Miamisburg, Ohio 45342  
(937) 847-8350 X301

or

Mr. Art Kleinrath  
Site Manager  
DOE Office of Legacy Management  
955 Mound Road  
Miamisburg, Ohio 45342  
(937) 847-8350 X318

For further information on the regulatory guidelines governing the CERCLA 120(h) process for property transfer at the former DOE Mound Site Property, contact:

Mr. Tim Fischer  
Remedial Project Manager  
U.S. Environmental Protection Agency  
77 W. Jackson Blvd.  
Chicago, Illinois 60604-3590  
(312) 886-7058

or

Mr. Brian Nickel  
Remedial Project Manager  
Ohio Environmental Protection Agency  
401 E. Fifth St.  
Dayton, Ohio 45402-2911  
(937) 285-6468

## 12.0 References

- DOE (U.S. Department of Energy), 1999a. *Record of Decision for Release Block D*, Final, February.
- DOE (U.S. Department of Energy), 1999b. *Record of Decision for Release Block H*, Final, June.
- DOE (U.S. Department of Energy), 2001a. *Parcel 3 Record of Decision*, Final, August.
- DOE (U.S. Department of Energy), 2001b. *Parcel 4 Record of Decision*, Final, February.
- DOE (U.S. Department of Energy), 2003. *Phase I Record of Decision*, Final, July.
- DOE (U.S. Department of Energy), 2004a. *Operation and Maintenance (O&M) Plan for the Implementation of Institutional Controls at the 1998 Mound Plant Property, Phase I Parcel*, update, Rev. 1, February.
- DOE (U.S. Department of Energy), 2004b. *Phase I Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan*, Final, September.
- DOE (U.S. Department of Energy), 2006a. *Second Five-Year Review for the Mound, Ohio, Site, Miamisburg, Ohio*, September.
- DOE (U.S. Department of Energy), 2006b. *Parcel 6, 7, and 8 Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan, Final*, December.
- DOE (U.S. Department of Energy), 2008c. *Sales Contract by and between the United States Department of Energy and the Miamisburg Mound Community Improvement Corporation, August 28, 2008*, August.
- DOE (U.S. Department of Energy), 2009a. *Annual Assessment of the Effectiveness of Site-Wide Institutional Controls Applied to the Former Mound Site Property*, June.
- DOE (U.S. Department of Energy), 2009b. *Parcels 6, 7, 8 Record of Decision*, August.
- DOE (U.S. Department of Energy) 2010a. *Phase I Groundwater Monitoring Report Calendar Year 2009*, March.
- DOE (U.S. Department of Energy) 2010b. *Parcel 6, 7, 8 Groundwater Monitoring Report Calendar Year 2009*, March.
- MMCIC (Miamisburg Mound Community Improvement Corporation), 2003. *Comprehensive Reuse Plan Update*, December.

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**Appendix A**

**Annual Assessment Checklists For  
Parcels D, H, 4, and 3 and Phase I Land Parcel**

**(Physical Walkover Conducted on April 14, 2009)**

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**CHECKLIST WORKSHEET – COMBINED – ALL PARCELS**  
**Review of Effectiveness of Institutional Controls**

Parcels reviewed: D, H, 3, 4, 6, 7, 8, and Phase I (A, B, and C)

Preliminary inspections performed on: March 17, 29, 30, 31

Physical Inspection Walkaround on: April 13, 2010

Review led by: Art Kleinrath, LM Phone #: 937-847-8350 X318

Participants in Physical Inspection Walkaround on April 13, 2010:

Brian Nickel, OEPA  
 Jeff Smith, OEPA  
 Tim Fischer, EPA  
 Joe Crombie, ODH  
 Art Kleinrath, LM  
 Paul Lucas, EM

Frank Bullock, MMCIC  
 Ellen Stanifer, City of Miamisburg  
 Gary Weidenbach, Stoller  
 Bob Ransbottom, Stoller  
 Joyce Massie, Stoller/JGMS

**Summary of property improvements since DOE's sale of parcel or since the previous review (whichever is most recent). For example, have buildings been demolished or erected? Has surface water flow been modified? Has landscaping been done?**

No evidence of exterior property improvements in any parcel covered by this inspection. Verified with City of Miamisburg building permit and City Planning Commission review.

**Evidence of soil removal from the "1998 Mound Plant Property"?** Yes ( ) No ( X )

No evidence of soil removal in any parcel.

There is extensive excavation work and low-level waste soil removal in the OU-1 area in Parcel 9. DOE, EPA, OEPA, and ODH are overseeing all of this work. Soils are being shipped via railcar to Envirocare.

**Evidence of unauthorized groundwater use?** Yes ( ) No ( X )

No record of new wells on ODNR website.

Phase 1C Well log number 2009362 at upper left corner near road was located in Parcel 9. Used by aRc during OU-1 excavation for construction use. Well was removed but is still listed on the ODNR website. (As of April 1, 2010: Checking with aRc for copy of abandonment paperwork.)

**Evidence of land use other than "Industrial" (e.g., residential)?** Yes ( ) No ( X )

None observed.

**Signage/Markers in good repair (if applicable)?** N/A ( ) Yes ( ) No ( X )

Two of the three signs around pond in Parcel 4 were broken during preliminary inspections. MMCIC was notified. One sign was observed during the April 13, 2010, physical inspection.

Several signs near the pond were missing and were replaced before each of the IC walkdowns in 2008, 2009, and 2010.

**Fencing in good repair (if applicable)?** N/A ( X ) Yes ( ) No ( )

Fencing is not an IC for any parcel covered by this inspection.

**Groundwater monitoring wells maintained properly?** Yes ( X ) No ( )

Groundwater monitoring is part of the remedies for the Phase I parcel and Parcels 6, 7, and 8.

All wells were marked, locked, and in good condition. Well 0124 in the old canal area was rusty.

Seeps were marked with plastic flags, and some markings were illegible. Seep 0606 had no flag and was located with GPS. The GPS coordinates for Seep 0607 were found to be incorrect in the DOE well database.

The water sampling station, within a locked, fenced area over Seep 0607, was abandoned.

**Air monitoring stations maintained properly (if applicable)?** N/A ( X ) Yes ( ) No ( )

**CHECKLIST WORKSHEET – COMBINED – ALL PARCELS**  
**Review of Effectiveness of Institutional Controls**

Air monitoring is not an IC for any parcel covered by this inspection.  
However, DOE will maintain air monitoring stations on and off site as required by NESHAPs until the monitoring requirements are satisfied following the work in Parcel 9 on the OU-1 excavation.  
OEPA removed the air monitoring station at the northeast corner of the parking lot in Parcel H.

**Containment system(s) in good repair (if applicable)?** N/A (  ) Yes ( ) No ( )

Containment systems are not an IC for any parcel covered by this inspection.

**Site surveillance equipment in good repair (if applicable)?** N/A (  ) Yes ( ) No ( )

Site surveillance equipment is not an IC for any parcel covered by this inspection.

**Other equipment associated with the maintenance of the ICs in good repair (if applicable)?** N/A (  ) Yes ( ) No ( )

No other equipment is applicable.

**T BUILDING ONLY - Areas with additional ICs** Yes (  ) No ( )

T Building is currently locked, and DOE controls all entry.

The red concrete cap over one of the two areas in T Building was cracked in several places in the large bay area, former Room 44.

The Parcel 6, 7, 8 ROD contains floor layout drawings for the areas or rooms in T Building which have additional ICs.

The room numbers for the large bay area are not clearly marked in the building or on the existing drawing.

**CHECKLIST WORKSHEET – COMBINED – ALL PARCELS**  
**Review of Effectiveness of Institutional Controls**

**Summary and status of open issues or recommendations from previous reviews**

**Dates of previous reviews:** 5-year review (2006) and annual reports (2007, 2008, 2009)

	Origin	Issue/Recommendation	Status 2008 Report	Corrected?	Current status 2010 Report
1	2007 Annual	Determine when OEPA will remove air monitoring station in Parcel H.	OEPA is working with EM to dispose of their air monitoring stations on site.	Yes	OEPA removed the air monitoring station in Parcel H.
2	2008 Annual	Landowner or management organization will notify LM when there are changes of address or street names on site. Building permits are filed by street addresses.	New	Pending	
3	2008 Annual	Add landowner or management organization (MMCIC) contracts and easement documents to those reviewed for the annual IC assessment.	New	Yes	Paul Lucas or the LM contractor (Stoller) currently reviews all MMCIC contracts.
4	2009 Annual	Confirm that the aRc well was abandoned correctly and removed from the ODNR website.	New	Yes	The well sealing log was submitted to ODNR. All wells remain on the ODNR website.
5	2009 Annual	Improve drainage in the area north of Well 0353.	New	Pending	Pending OU-1 work completion.

**CHECKLIST WORKSHEET – COMBINED – ALL PARCELS**  
**Review of Effectiveness of Institutional Controls**

**Personnel interviewed during the physical walkover of parcel, or during review of documentation associated with the parcel:**

The City of Miamisburg Engineering Department, 937-847-6532, provided access to the City building permits. No permits related to the parcels covered by this IC inspection.

There were no City Planning Commission reviews of any parking lot or landscaping for the Mound Site.

Frank Bullock, MMCIC, provided information.

Stoller personnel (Steve Pawel, Roy Mowen, Randy Brewer, Gary Weidenbach, and Bob Ransbottom) provided information and assisted with inspections of wells, seeps, and the interior of T Building. Frank Miller, SAIC, assisted with well information. Steve Pawel also provided the necessary site drawings to include Parcels 6, 7, and 8 and T Building floor layouts.

**List of documents reviewed (e.g., street opening permits or construction permits approved by the City of Miamisburg, engineering drawings for improvements to property, aerial photographs, maps, City Planning Commission requests, ODNR well logs):**

Stoller personnel reviewed City of Miamisburg building permits on March 25, 2010, and cross-checked the hard copies with the printout from the City of Miamisburg electronic permit system. The information matched.

There were no City Planning Commission requests for the Mound Site during the period covered by this IC inspection.

Stoller personnel reviewed the ODNR well logs on the ODNR website. There were no new wells listed.

**Based on the review of the documents listed above, were property improvements covered by the appropriate approvals (e.g., construction permit approved by the City)?**

Yes (  ) No (  )

There were four permits for buildings on site: three for 1390 Vanguard Boulevard and one for 460 Vantage Point.

MMCIC advised they had conducted grading, drainage repairs, and sidewalk restoration on the upper-level entry into COS Building in September and October 2009. This work apparently did not require a City permit or approval from the City Planning Commission.

**During the walkover, was there physical evidence of movement of soil off site or use of groundwater that was not approved by the regulators? Yes (  ) No (  )**

In Parcel 8, on top of the main hill south of OSW, there was evidence of excavation work performed since the last inspection. This work corrected erosion problems in that area. Stoller conducted the work, and no soil was removed. The OU-1 excavation contractor, aRc, disposed of several small pieces of sump equipment properly.

**Miscellaneous items noted during review or physical walkaround:**

The water sampling station, which is contained within a locked, fenced area over Seep 0607, was abandoned.

**Recommendations from preliminary physical walkarounds:**

Paint Well 0124.

**CHECKLIST WORKSHEET – COMBINED – ALL PARCELS**  
**Review of Effectiveness of Institutional Controls**

Improve identification marking at seep locations.

Remove water sampling station and fencing over Seep 0607 and return area to its original condition.

Insure that that signs by pond in Parcel 4 are present at all times.

Create improved drawing of T Building special IC areas for IC report to be used during this inspection.

**Recommendations from April 13, 2010, physical walkaround:**

None.

**Conclusion/comments from physical walkaround:**

The participants submitted no comments.

The ICs continue to function as designed.

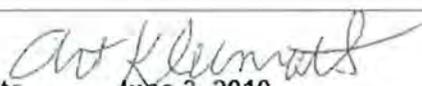
April 13, 2010, physical walkaround comments were submitted by: None.

Checklist approved by DOE

---

Art Kleinrath, LM Site Manager

Date

  
June 3, 2010

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**Appendix B**

**Real Estate Easement for Utility Work  
Performed on MMCIC Property**

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**SUPPLEMENTARY DECLARATION OF EASEMENT TO  
REAL ESTATE EASEMENT NO. 99-OH-00011**

THIS SUPPLEMENTARY DECLARATION OF EASEMENT TO REAL ESTATE EASEMENT NO. 99-OH-00011 ("Supplementary Declaration of Easement") is made on this 18<sup>th</sup> day of March, 2003, by MIAMISBURG MOUND COMMUNITY IMPROVEMENT CORPORATION, an Ohio non-profit corporation ("Declarant") under the terms and conditions set forth below.

**RECITALS:**

A. By virtue of Real Estate Easement No. 99-OH-00011 executed on September 22, 1999, and recorded at Microfiche No. 99-0702D09 (the "Original Easement"), The United States of America, acting by and through the Department of Energy ("DOE"), granted to AMERITECH an easement for the installation of communication lines over the area depicted in the Original Easement (the "Original Easement Area"), described in Exhibit A, attached hereto and incorporated herein by reference.

B. By virtue of a Quitclaim Deed dated August 4, 1999, and recorded at Microfiche No. 99-0852B11 of the Montgomery County, Ohio Recorder's office, and by virtue of a Quitclaim Deed dated November 19, 1999, and recorded at Microfiche No. 99-0852B05 of such Recorder's office, The United States of America, acting by and through the Secretary of the DOE, conveyed to Declarant the real property described on Exhibit B, attached hereto and incorporated herein by reference ("Declarant's Property"), which property is burdened by the Original Easement.

C. Declarant now desires to expand the Original Easement Area on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the recitals set forth above and the terms and conditions set forth below, Declarant hereby declares as follows:

1. Grant. Declarant hereby grants to AMERITECH, its successors and assigns, a permanent, non-exclusive easement upon, over and under the area of the Declarant's Property described in Exhibit C, attached hereto and incorporated herein by reference ("Expanded Easement Area"). By making use of the Expanded Easement Area, AMERITECH shall be deemed to have agreed to be bound by the terms and conditions of this Declaration.

2. Compliance With Restrictions. AMERITECH shall have reviewed the restrictions and covenants set forth in the Deeds by which DOE conveyed to Declarant the Declarant's Property prior to the construction or installation of any of AMERITECH's equipment. AMERITECH agrees that, as set forth in the Deeds, its use of the Expanded Easement Area is subject to the terms thereof, and further agrees to be bound to comply with the restrictions and covenants set forth therein, including without limitation, the following:

2.1 Excepting those soils in an area approximately 40 feet wide and 218.17 feet long, bounded on the east by the centerline of Mound Road as described above, Grantee covenants that any soil from the Premises shall not be placed on any property outside the boundaries of that described in instruments recorded at Deed Book 1214, pages 10, 12, 15, 17 and 248; Deed Book 1215, page 347; Deed Book 1246,

198.00 03/20/ 3:12:27  
EASE-03-039151 0023  
Montgomery County  
Judy Dodge Recorder

page 45; Deed Book 1258, pages 56 and 74; Deed; Deed Book 1256, page 179; Micro-Fiche 81-376A01; and Micro-Fiche 81-323A11 of the Deed Records of Montgomery County, Ohio (and as illustrated in the CERCLA 120(h) Summary, Notices of Hazardous Substances Release Block D, Mound Plant, Miamisburg, Ohio dated January, 1999) without prior written approval from the Ohio Department of Health (ODH), or a successor agency. AMERITECH warrants that it will make its officers, agents, contractors, employees, and others for whom it is responsible aware of the restriction on soil removal and contractually obligate agents and contractors to abide by this restriction.

2.2. Each utility provider covenants not to use, or allow the use of, the Declarant's Property for any residential or farming activities, or any other activities that could result in the chronic exposure of children under eighteen years of age to soil or groundwater from the Declarant's Property. Restricted uses shall include, but not be limited to:

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

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

2.3 AMERITECH covenants not to extract, consume, expose, or use in any way the groundwater underlying the Declarant's Property without the prior written approval of the United States Environmental Protection Agency (Region V) and the OEPA.

If there is any conflict between the terms of the Deeds and this Supplementary Declaration of Easement, the terms of the Deeds shall control.

3. Incorporation of Original Easement. This Supplementary Declaration of Easement incorporates by reference all of the terms, conditions and covenants of the Original Easement Agreement. By its acceptance of the easement granted in this Supplementary Declaration of Easement, AMERITECH hereby covenants to comply with and observe the terms, conditions and covenants of the Original Easement for the benefit of Declarant, its successors and assigns forever, and agrees that Declarant, its successors and assigns forever, shall have the right to enforce such terms, covenants and conditions. As used in the Original Easement, the term "premises" shall mean Declarant's real property, whether or not burdened by the easements granted herein or in the Original Easement, and all surrounding Government-owned real property. All notices required to be provided to the DOE under the Original Easement shall be provided to Declarant at 720 Mound Road, COS Bldg., Suite 480, Miamisburg, Ohio 45342-6714, Attn: Planning Manager, or such other address as provided by Grantor.

4. Reservation. Declarant reserves for itself, its successors and assigns forever, the right to use the Expanded Easement Area for any purpose not inconsistent with the rights conveyed to AMERITECH herein; provided however, that Declarant shall not use the Expanded Easement Area in a manner that will prevent or hinder its use by AMERITECH for the purposes provided herein.

5. Covenants Run with the Land. All covenants, agreements and conditions contained in this Supplementary Declaration of Easement shall be considered as running with the land.

IN WITNESS WHEREOF, the undersigned has executed this Supplementary Declaration of Easement on behalf of Declarant as of the day and year first set forth above.

DECLARANT:

MIAMISBURG MOUND COMMUNITY  
IMPROVEMENT CORPORATION

By: Michael J. Graunke

Printed Name: Michael J. Graunke

Title: President

STATE OF OHIO, COUNTY OF MONTGOMERY, SS:

The foregoing instrument was acknowledged before me this 18<sup>th</sup> day of March, 2003, by Michael J. Graunke the President of MIAMISBURG MOUND COMMUNITY IMPROVEMENT CORPORATION, an Ohio non-profit corporation, on behalf of said corporation.

Joan Wysong  
NOTARY PUBLIC

Joan Wysong, Notary Public  
in and for the State of Ohio  
My Commission Expires June 23, 2004

This instrument prepared by:  
Shannon L. Costello, Esq.  
Coolidge Wall Womiskey & Lombard Co., L.P.A.  
33 W. First Street, Suite 600  
Dayton, Ohio 45402

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**Appendix C**

**Institutional Controls: A Citizen's Guide to Understanding  
Institutional Controls at  
Superfund, Brownfields, Federal Facilities, Underground Storage  
Tank, and Resource Conservation and Recovery Act Cleanups**

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## Institutional Controls:

A Citizen's Guide to Understanding Institutional Controls at Superfund, Brownfields, Federal Facilities, Underground Storage Tank, and Resource Conservation and Recovery Act Cleanups

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Terms that appear in **bold** can be found in a glossary at the end of the document. Many of these terms describe some types of ICs.

### PURPOSE

The purpose of this guide is to provide community members with general information about the role of *institutional controls* (ICs) in Superfund, Brownfields, Federal Facilities, Underground Storage Tanks (UST) and Resource Conservation and Recovery Act (RCRA) cleanups occurring in their neighborhoods. This guide will also discuss the community's role in providing input for the selection of ICs and helping to monitor them to ensure that human health and the environment remain protected in the future.

### Key Points

- ICs are legal and administrative tools used to maintain protection of human health and the environment at sites.
- ICs are often an important part of the overall cleanup at a site.
- ICs can be used for many reasons and come in different types. These include restricting site use, modifying behavior, and providing information to people.
- There are 4 general types of ICs: *governmental, proprietary, enforcement, and informational.*

- ICs are designed to lower the potential for people and the environment to be exposed to contamination.
- ICs are usually most effective when layered and used in series to improve protectiveness.
- ICs should fit the needs of the specific site and community.
- The community can play an important role in identifying potential future uses of the site.
- A cooperative relationship should be established early between government, the entity doing the cleanup and the community.
- Seeking community input and involvement can maximize the effectiveness of ICs.
- Communities can play a vital role as "eyes and ears" for monitoring ICs.
- Federal, state, tribal, and local governments and parties responsible for the cleanup should keep the public informed of cleanup decisions that may affect them.

### What Are Institutional Controls?

ICs are generally administrative and legal tools that do not involve construction or physically changing the site. ICs are generally divided into four categories:

1) **Government Controls**- include local laws or permits (e.g., county zoning, building permits, and Base Master Plans at military facilities);

- 2) **Proprietary Controls**- include property use restrictions based on private property law (e.g., *easements* and covenants);
- 3) **Enforcement Tools**- include documents that require individuals or companies to conduct or prohibit specific actions (e.g., environmental cleanup *consent decrees, unilateral orders*, or permits); and,
- 4) **Informational Devices**- include *deed notices* or public advisories that alert and educate people about a site.

In many site cleanups, ICs help reduce the possibility that people will come in contact with contamination and may also protect expensive cleanup equipment from damage. The use of ICs is not a way "around" treatment, but rather part of a balanced, practical approach to site cleanup that relies on both engineered and non-engineered remedies.

### When Are ICs Used?

ICs are normally used when waste is left onsite and when there is a limit to the activities that can safely take place at the site (i.e., the site cannot support unlimited use and unrestricted exposure) and/or when cleanup equipment remains onsite. ICs are often used throughout a site cleanup, including when:

- contamination is first discovered (i.e., to protect people from coming in contact with potentially harmful materials while the contamination is being investigated)
- cleanup work is ongoing (in some cases it may take many years to complete cleanup)
- some amount of contamination remains on-site as part of a cleanup remedy.

ICs can play an important role when a cleanup is conducted and when it is too difficult or too costly

to remove all contamination from a site. ICs are rarely used alone to deal with contamination at a site. Typically, ICs are part of a larger cleanup solution and serve as a non-engineered layer of protection. ICs are designed to keep people from using the site in a way that is not safe and/or from doing things that could damage the cleanup equipment, thus, potentially jeopardizing protection of people and the environment. For example, an IC may be necessary at a former landfill to notify the community and guard against excavators digging through a clay barrier that is meant to stop rain water from entering the landfill.

It is also important to remember that ICs are frequently used to protect cleanup equipment while the cleanup is being conducted. For example, sites may require complex technologies that remove, treat, and discharge groundwater. Operation of these systems may be needed for a long time in order to reach the cleanup goals.

Most cleanups will need to use a combination of engineered remedies and ICs. ICs provide an additional level of safety and help to make sure the remedy remains securely in place. Also, it is important to understand that a cleanup is not finished until all necessary action has been taken to protect people and the environment from contamination at the site.

#### **Why Can't All The Contamination Be Removed?**

Removing all traces of contamination from a site is often not possible or practicable because of the types and location of contamination. However, the presence of some residual contamination does not mean that a site can't be used safely.

Use of a site with residual contamination is considered safe if exposure to contamination is prevented. ICs can help a site be reused. A common example of a site reuse is when a surface barrier layer is installed over contaminated soil and the area is used for athletic fields, a golf course, or a park because ICs are in place to prevent disturbance of the barrier layer.

#### **Are ICs Reliable?**

All ICs have strengths and weaknesses. With this understanding, it is important to choose the best combination of ICs that will be protective of human health and the environment. One key challenge is that ICs are often implemented, monitored, and enforced by various levels of federal, state, tribal, or local governments. Therefore, it is critical to make sure there are enough IC safeguards and overlaps so no significant risk to human health or the environment or damage to the remedy occur.

EPA guidance encourages the use of ICs in "layers" and/or in "series" to enhance overall protectiveness. Layering ICs means using more than one IC at the same time, all with the same goal (e.g., a consent decree, deed notice, and covenant stopping the use of drinking water wells). Using ICs in series uses different ICs over time when site circumstances or IC processes change. For example, restrictions can gradually be reduced as progress is made toward cleanup goals. Used in such overlapping ways ICs can be more securely relied upon to provide an important measure of safety. Thus, usually more than one kind of IC is put in place at a single site.

### **How Many ICs Are Required?**

The decisions about how many and what types of ICs are needed are usually very site-specific. There are many important factors to consider when deciding how many ICs are required at a site. A few common considerations include:

- the level of experience and resource capacities of the party doing the cleanup
- who the intended ICs will affect and how
- the type of enforcement mechanism used (consent decree, order, permit, ordinance)
- who will enforce the mechanism (i.e., EPA, another federal agency at sites it owns, the State, a local agency)
- the likelihood of future redevelopment and/or reuse of the site
- the degree of cooperation exhibited by the different levels of government and community involved in the cleanup.

### **Who Is Responsible For Making Sure ICs Work As Intended?**

The responsibility for making sure that ICs work depends largely on the type of IC and who is conducting the cleanup. Overlapping responsibilities sometimes make it difficult to identify the person or entity responsible for the IC. For example, zoning is often the responsibility of a local zoning board, easements are based on state law, and permits or orders can occur at the federal, state, tribal and local level. It is also common for several entities to have some overlapping responsibility for an IC. For example, an agency that approves a cleanup frequently has some responsibility for making sure that the ICs work. However, the actual implementation steps may be completed by the cleanup party and/or another agency (i.e., local zoning board). Exceptions are active military facilities; the

authority for regulating and enforcing ICs typically lies with the commanding officer.

Regardless of who is responsible, ICs should be regularly monitored to make sure all the requirements are still in place and the ICs continue to work effectively. Because federal, state, and tribal government officials are not always located in the neighborhood of the site, local governments and community members can contribute to ensure that ICs work properly. One way to improve the use of ICs is to make sure that roles and responsibilities are clearly stated early in the process of choosing the ICs.

### **Will ICs Hinder The Reuse of the Site?**

In many ways, ICs can help return a site to a safe and productive reuse. ICs can identify possible uses for a site and communicate use limitations to present and future users. For example, a site may be fit for industrial reuse, but not for residential development. To determine the appropriate types of ICs, it is important to make sure that the preferred future use of the land is taken into account. It is important to recognize that ICs can affect future development at a site. For this reason, the appropriate mix of ICs is key. The objective is not to have as many ICs as possible, but to strike a balance that gives reasonable assurance that the site remedy will remain protective over time while being consistent with the site's future use. In most cases, the ICs can help shape the reuse of the site to one that is suitable, safe, and positive for the community.

Communities should be proactive in communicating with appropriate decision-makers about the types of land use they think will be best for their community. Because each community has a different history and different development

needs, it is critical that these needs are effectively communicated to elected officials and the cleanup agency so they can be taken into consideration during selection of the cleanup method and reuse plan for the site. Opportunities for involvement include attending public meetings, commenting on documents which state potential cleanup methods, and participating in local groups.

#### **How And When Can The Community Get Involved?**

Community input can be essential to selecting, using, and monitoring ICs that are the best fit for the community and the protectiveness of the remedy. The cleanup agency or private party and other stakeholders should develop a working relationship with the community early in the cleanup process. Mutual respect, trust, and open and timely communication can greatly enhance the ability of all involved to ensure that the most effective ICs are used at the site.

The first time the community can get involved is during master planning meetings, zoning hearings, land use planning meetings to name a few. The community can also be involved in the site investigation and remedy selection process. Federal, state, tribal, and local authorities should make information available to the public so community members can provide informed input into the remedy selection process. EPA, States, Tribes, local governments and cleanup parties should evaluate ICs as thoroughly and rigorously as all remedy components. This analysis will help to identify potential strengths and weaknesses and to develop the appropriate balance of ICs and ultimately increase the long-term viability of the remedy. Because ICs are remedy components, they should be presented to the community in documents and at meetings. This is especially

important for ICs that may impose land use restrictions on property(ies) next to the site. The potential impacts of the ICs should be presented in a manner that can be understood by the local community.

The second way in which the community can be of great benefit is in assisting with monitoring ICs. Individual residents and business owners are the eyes and ears of a community. They are often the first to notice uses or excavation that appear inconsistent with the site's future use or remedy restrictions. By contacting the appropriate party, an important series of checks and balances can be developed. Cleanup parties should work with the community to establish an effective and user-friendly system for reporting and monitoring information about the site and ICs.

#### **CONCLUSION**

The institutional controls discussed in this guide can be essential components of environmental cleanups. It is important for citizens to understand ICs and have the opportunity to take an active role in their selection, use, and monitoring. Because institutional controls are often in place long after physical cleanup is finished, community knowledge and input can be important in assuring that the ICs remain protective of human health and the environment. Working relationships between governments, stakeholders and communities are vital ingredients in the successful application of cleanups, especially the IC components.

For additional information about ICs, refer to the EPA web page at:

<http://www.epa.gov/superfund/action/ic/index.htm>  
For site specific information contact the Office of Superfund Remediation and Technology Innovation (OSRTI), the Federal Facilities Restoration and Reuse Office (FFRRO), the Office of Solid Waste

(OSW or RCRA), the Office of Brownfields Cleanup and Redevelopment (OBCR), or the Office of Underground Storage Tanks (OUST) and/or the respective state or local agency. Information about EPA program offices can be found online at <http://www.epa.gov/oswer/>.

This document provides guidance to EPA Regions and States involved in Superfund, Brownfields, Federal Facilities, Underground Storage Tanks, and RCRA corrective action cleanups. It also provides guidance to the public and the regulated community on how EPA intends to evaluate and implement ICs as part of a cleanup decision. The guidance is designed to implement national policy on these issues. The document does not, however, substitute for CERCLA, RCRA or EPA's regulations, nor is it a regulation itself. Thus, it does not impose legally-binding requirements on EPA, States, or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA and State decision-makers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate. Any decisions regarding a particular facility will be made based on the applicable statutes and regulations. Therefore, interested parties are free to raise questions and objections about the appropriateness of the application of this guidance to a particular situation, and EPA will consider whether or not the recommendations or interpretations in the guidance are appropriate in that situation. EPA may change this guidance in the future.

Office of Solid Waste and Emergency Response (5202G)  
OSWER 9355.0-98  
EPA-540-R-04-003  
<http://www.epa.gov/superfund/action/ic/guide/index.htm>  
February 2005

## GLOSSARY

**Consent Decree:** Legal document approved by a judge that formalizes an agreement reached between EPA and companies, governments, or individuals associated with contamination at the sites (potentially responsible parties (PRPs)) through which PRPs will take certain actions to resolve the contamination at a Superfund site.

**Deed Notice:** Non-enforceable, informational document filed in land records to alert the public to important information pertaining to a land parcel.

**Easement:** Property right conveyed by the land owner to another party, giving the second party certain rights to the land.

**Enforcement Tools:** Types of institutional controls that include orders compelling a party to limit certain site activities as well as ensure the performance of affirmative obligations (e.g., consent decree, RCRA permit, unilateral administrative order).

**Governmental Controls:** Types of institutional controls that impose land or resource restrictions using the authority of an existing unit of government (e.g., state legislation, local ordinance, well drilling permit, etc.).

**Informational Devices:** Type of institutional controls that provide information or notification to the public of contamination remaining in place.

**Institutional Controls:** Non-engineered instruments, such as administrative and/or legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use (e.g., easement, fish advisory, local permit).

**Proprietary Control:** Type of legal instrument that has its basis in real property law and is unique in that it generally creates legal property interests placed in the chain of title of a site property (e.g., easement, restrictive covenant).

**Unilateral Administrative Order:** Legal document signed by EPA directing a responsible party to take corrective action or refrain from an activity; it may describe the violations and actions to be taken, and can be enforced in court.

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**Appendix D**

**Photos of T Building Rooms with Special ICs**

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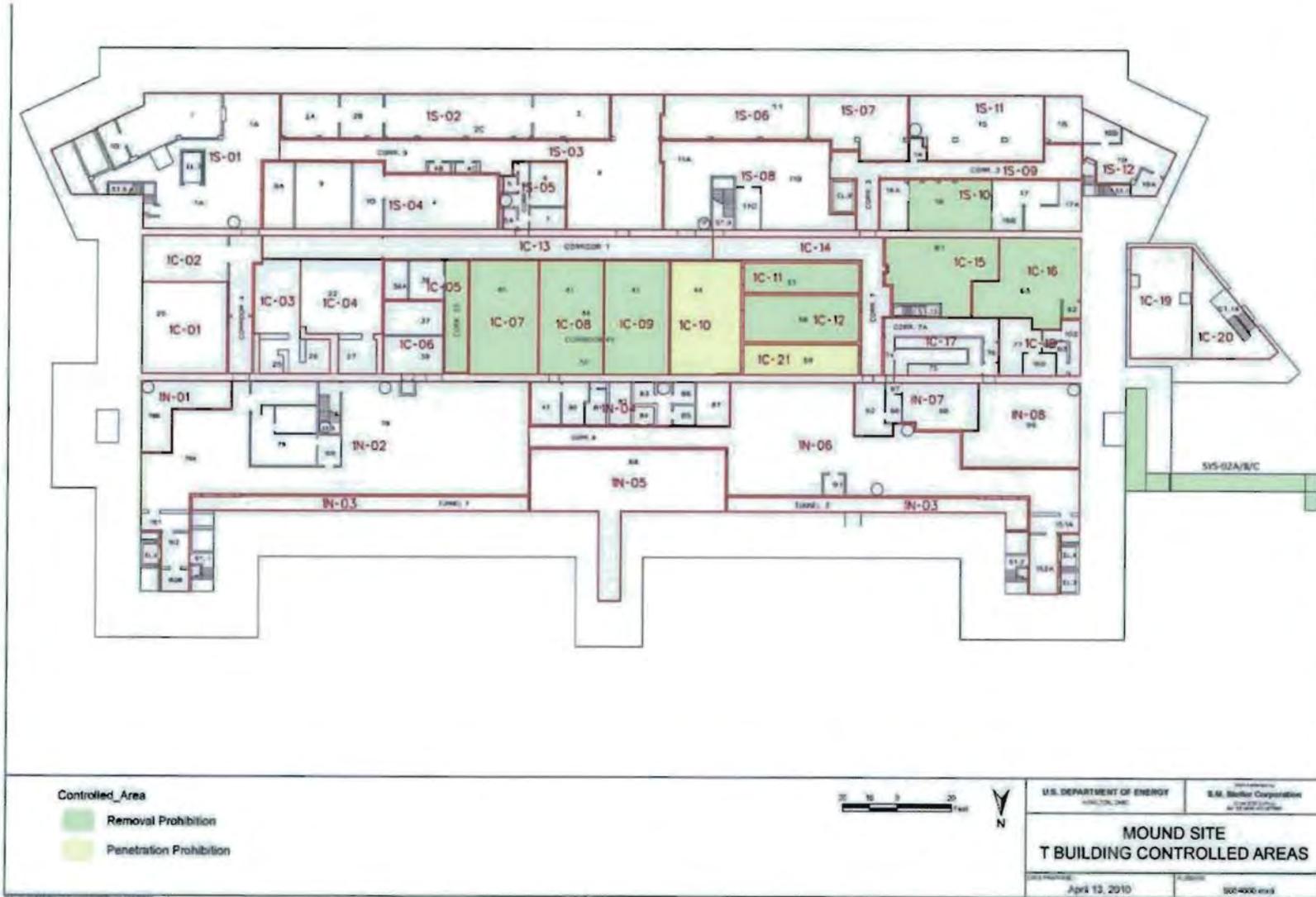


Figure D-1. T Building Rooms with Special ICs

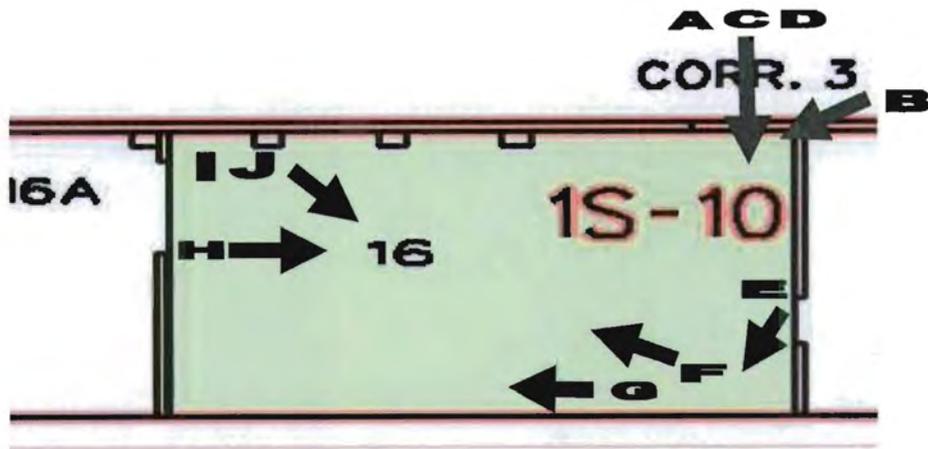


Figure D-2. T Bldg. Room 16 View A



Figure D-3. T Bldg. Room 16 View B



Figure D-4. T Bldg. Room 16 View C



Figure D-5. T Bldg. Room 16 View D



Figure D-6. T Bldg. Room 16 View E



Figure D-7. T Bldg. Room 16 View F



Figure D-8. T Bldg. Room 16 View G



Figure D-9. Room 16 View H



Figure D-10. T Bldg. Room 16 View I



Figure D-11. T Bldg. Room 16 View J

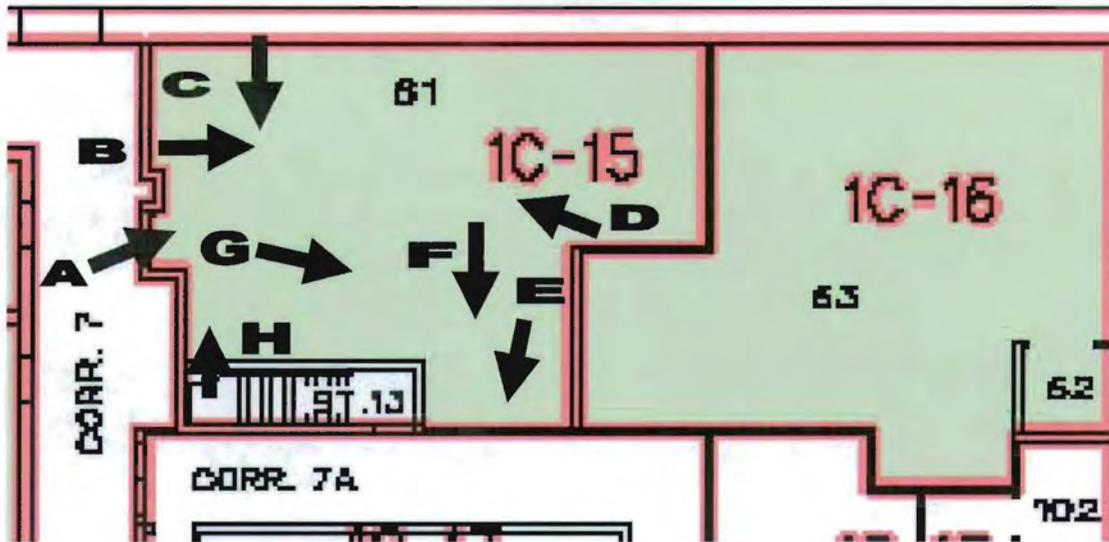


Figure D-12. T Bldg. Room 61 View A



Figure D-13. T Bldg. Room 61 View B



Figure D-14. T Bldg. Room 61 View C



Figure D-15. T Bldg. Room 61 View D



*Figure D-16. T Bldg. Room 61 View E*



*Figure D-17. T Bldg. Room 61 View F*



*Figure D-18. T Bldg. Room 61 View G*



*Figure D-19. T Bldg. Room 61 View H*

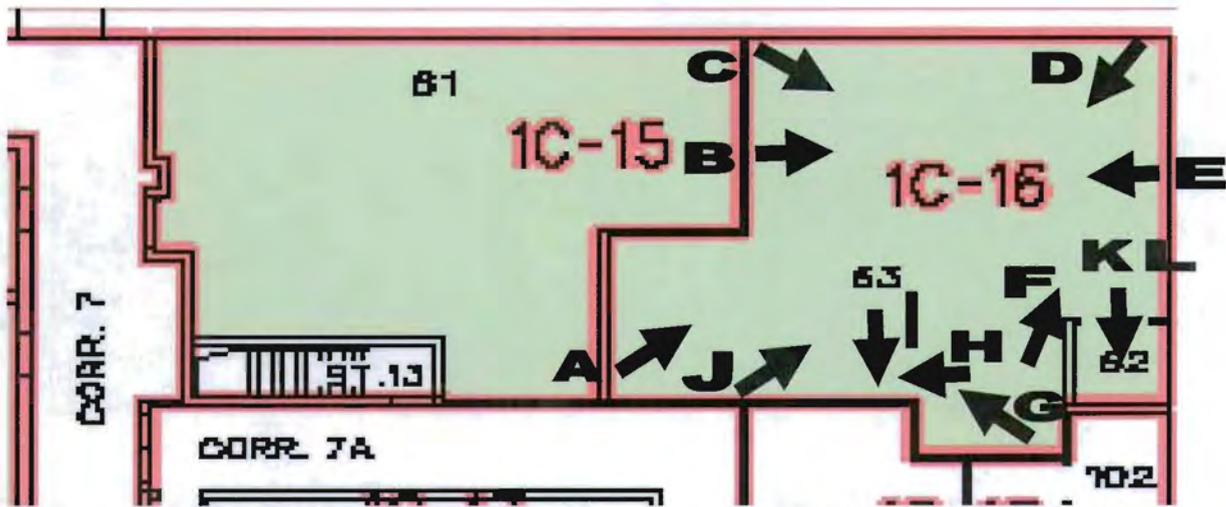


Figure D-20. T Bldg. Room 63 View A



Figure D-21. T Bldg. Room 63 View B



Figure D-22. T Bldg. Room 63 View C



Figure D-23. T Bldg. Room 63 View D



Figure D-24. T Bldg. Room 63 View E



Figure D-25. T Bldg. Room 63 View F



Figure D-26. T Bldg. Room 63 View G



Figure D-27. T Bldg. Room 63 View H



Figure D-28. T Bldg. Room 63 View I



Figure D-29. T Bldg. Room 63 View J



Figure D-30. T Bldg. Room 62 View L



Figure D-31. T Bldg. Room 62 View M

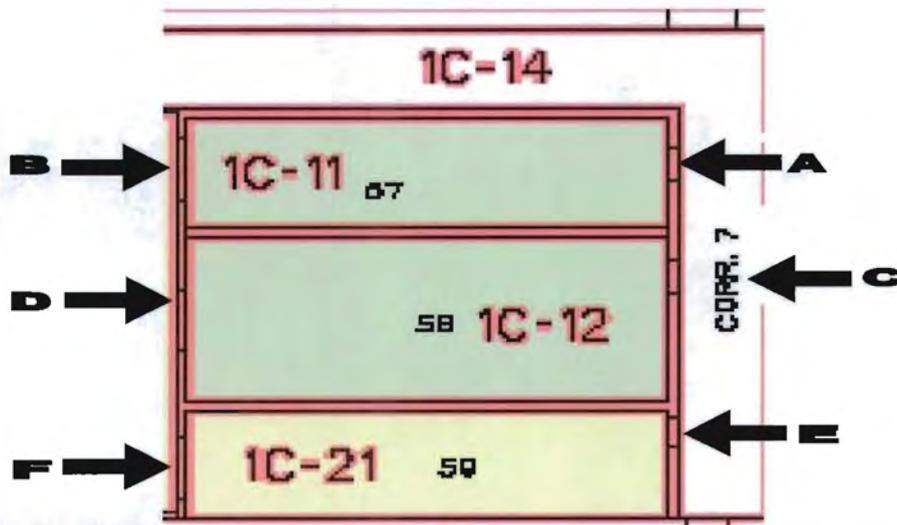


Figure D-32. T Bldg. Room 57 View A



Figure D-33. T Bldg. Room 57 View B



*Figure D-34. T Bldg. Room 58 View C*



*Figure D-35. T Bldg. Room 58 View D*



*Figure D-36. T Bldg. Room 59 View E*



*Figure D-37. T Bldg. Room 59 View F*

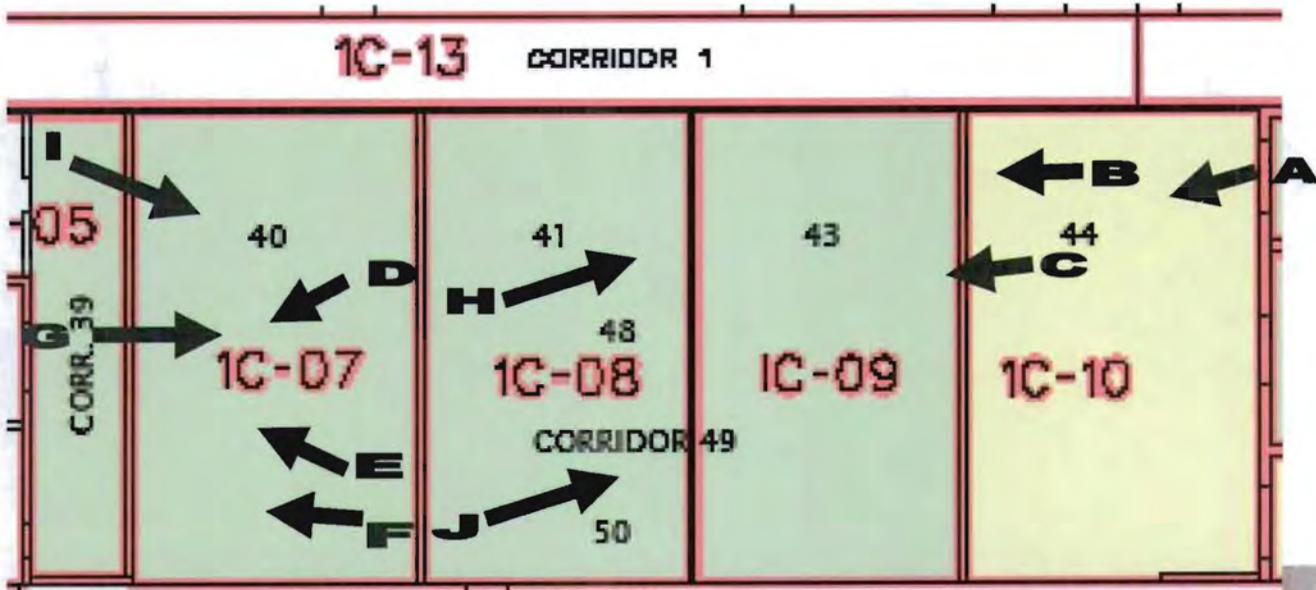


Figure D-38. T Bldg. Rooms 39-44, 48-50 View A



Figure D-39. T Bldg. Rooms 39-44, 48-50 View B



Figure D-40. T Bldg. Rooms 39-44, 48-50 View C



Figure D-41. T Bldg. Rooms 39-44, 48-50 View D



Figure D-42. T Bldg. Rooms 39-44, 48-50 View E



Figure D-43. T Bldg. Rooms 39-44, 48-50 View F



Figure D-44. T Bldg. Rooms 39-44, 48-50 View G



Figure D-45. T Bldg. Rooms 39-44, 48-50 View H



Figure D-46. T Bldg. Rooms 39-44, 48-50 View K



Figure D-47. T Bldg. Rooms 39-44, 48-50 View L

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