

Stoller

*established 1959*Task Order LM00-712
Control Number: 11-0714

June 10, 2011

U.S. Department of Energy
Office of Legacy Management
ATTN: Arthur W. Kleinrath
2597 Legacy Way
Grand Junction, CO 81503SUBJECT: Contract No. DE-AM01-07LM00060, S. M. Stoller Corporation (Stoller)
Annual Assessment of the Effectiveness of Site-Wide Institutional Controls
Applied to the Former DOE Mound Site Property, June 2011

Dear Mr. Kleinrath:

Enclosed are fifteen copies of the final report, "Annual Assessment of the Effectiveness of Site-Wide Institutional Controls Applied to the Former Mound Site Property, June 2011."

Copies of the report are available to the public in the Mound Reading Room and a pdf copy will be added to the LM Mound Website under "Site Documents and Links."

The Stoller LMS Team is committed to high-quality customer service and continuous improvement. We would appreciate any feedback you may have on this submittal.

Please contact Joyce Massie at 937-247-2231 if you have any questions.

Sincerely,

Robert C. Ransbottom
Stoller Mound Site Manager

RCR:jp

Attachments

cc: (with attachment)
Paul Lucas, DOE
Jane Powell, DOE
Chuck Friedman, Stoller
Joyce Massie, Stoller
rc-mound
Reading Room
MND 700.05(B)



Department of Energy

Washington, DC 20585

June 13, 2011

Mr. Tim Fischer
U.S. Environmental Protection Agency
77 W. Jackson Blvd.
Chicago, IL 60604

Mr. Brian Nickel
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, OH 45402-2911

Subject: Annual Assessment of the Effectiveness of Site Wide Institutional Controls Applied to the Former DOE Mound Site Property, June 2010

Dear Mr. Fischer and Mr. Nickel:

Enclosed please find the "Annual Assessment of the Effectiveness of Site-Wide Institutional Controls Applied to the Former Mound Site Property," June 2011. This report was prepared in accordance with the "Operation and Maintenance Plan for the Implementation of Institutional Controls at the 1998 Mound Plant Property, Phase I Parcel Update, Rev. O."

The report includes all the results of DOE's physical inspections of the site, and includes the April 12, 2011 inspection with USEPA, OEPA, and ODH. It also includes information obtained during the DOE review of related records from the City of Miamisburg, Mound Development Corporation, and the Ohio Department of Natural Resources well logs.

Copies of the report are available to the public in the Mound Reading Room and a pdf copy will be added to the LM Mound Website under "Site Documents and Links."

Please call me at (970) 248-6034 if you have any questions. Please send any correspondence to:

U.S. Department of Energy
Office of Legacy Management
2597 Legacy Way
Grand Junction, CO 81503

Sincerely,

A handwritten signature in black ink, appearing to read "Arthur W. Kleinrath".

Arthur W. Kleinrath
DOE LM Site Manager

AWK:jp



June 13, 2011

Page 2

Report Distribution:

Paul Lucas, EMCBC

Jane Powell, DOE, Fernald Site

Randy Tormey, EMCBC

Joe Crombie, ODH

Frank Bullock, MDC

Ellen Stanifer, City of Miamisburg

Becky Cato, Stoller

Joyce Massie, Stoller

rc-mound

Reading Room

MND 700.05(B)

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

June 2011



U.S. DEPARTMENT OF

ENERGY

Legacy
Management

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LMS/MND/S07757

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

June 2011

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Abbreviations

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COS	Central Office Space
CRP	Comprehensive Reuse Plan
DOE	U.S. Department of Energy
EM	Office of Environmental Management
EPA	U.S. Environmental Protection Agency
GH	Guard House
GP	Guard Post
IC	institutional control
LM	Office of Legacy Management
MDC	Mound Development Corporation (formerly MMCIC)
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
OEPA	Ohio Environmental Protection Agency
OSE	Office Space East
OSW	Office Space West
OU-1	Operable Unit 1
ROD	record of decision

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1.0 Introduction

This report documents the U.S. Department of Energy (DOE) Office of Legacy Management (LM) 2011 annual assessment of the effectiveness of site-wide institutional controls (ICs) for the Mound Site¹ in Miamisburg, Ohio, for the period from April 14, 2010, to April 30, 2011. 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) and 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 the entire Mound Site. The Mound Development Corporation (MDC), formerly called the Miamisburg Mound Community Improvement Corporation (MMCIC), owns Parcels D, H, 3, and 4 and the Phase I parcel (comprising sub-parcels A, B, and C) as shown in Figure 1. The DOE Office of Environmental Management (EM) owns Parcels 6, 7, 8, and 9. EM is currently processing an amendment to the Operable Unit 1 (OU-1) ROD that expands the footprint to include the former rail loadout area and identifies the area as Parcel 9.

ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. The ICs were developed and presented in the ROD process, which includes input from the public, the City of Miamisburg, the regulators, and MDC. 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 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 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 MDC. The agreement called for the transfer of discrete land parcels to MDC, 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

¹ The Mound Site was also formerly identified as the Mound Laboratory and the Mound Plant.

transfer were met. As MDC acquired a parcel, it became part of the Mound Advanced Technology Center, which is a light industrial/technology park operated by MDC. The same parcel transfer process was continued in the revised sales agreement, *Sales Contract by and between the United States Department of Energy and the Miamisburg Mound Community Improvement Corporation, August 28, 2008* (DOE 2008).

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 MDC. The O&M Plan was updated to include Parcels 6, 7, and 8 and will be finalized when the Parcel 9 ROD amendment is issued.

Table 1 provides details of the sizes, transfer dates, and status of the parcels covered by this annual assessment.

Table 1. Mound Site Parcel Information

Parcel	Former ID	Acres	Number of Structures	DOE Building Names/Numbers (See Table 3 for current street addresses)	Completed CERCLA 120(h) Process?	Date Transferred	Owner
D	Release Block D	12.43	2	100, 105	Yes	March 1999	MDC
H	Release Block H	14.29	0		Yes	August 1999	MDC
3		5.581	2	Guard House (GH), Guard Post (GP)-1 (MDC demolished GP-1)	Yes	August 2002	MDC
4		94.838	0	MDC built Flex Bldg.	Yes	April 2001	MDC
Phase I	A	2.542	8	87, 3 Magazines 80-84 Salt storage shed	Yes	February 2009	MDC
	B	42.882					
	C	6.568					
6 ^a		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				

^a Parcels 6, 7, and 8 are combined into one ROD.

Figure 1 shows the original boundaries of the former DOE Mound Site Property divided into parcels. The shaded areas show the parcels that have been transferred to MDC.

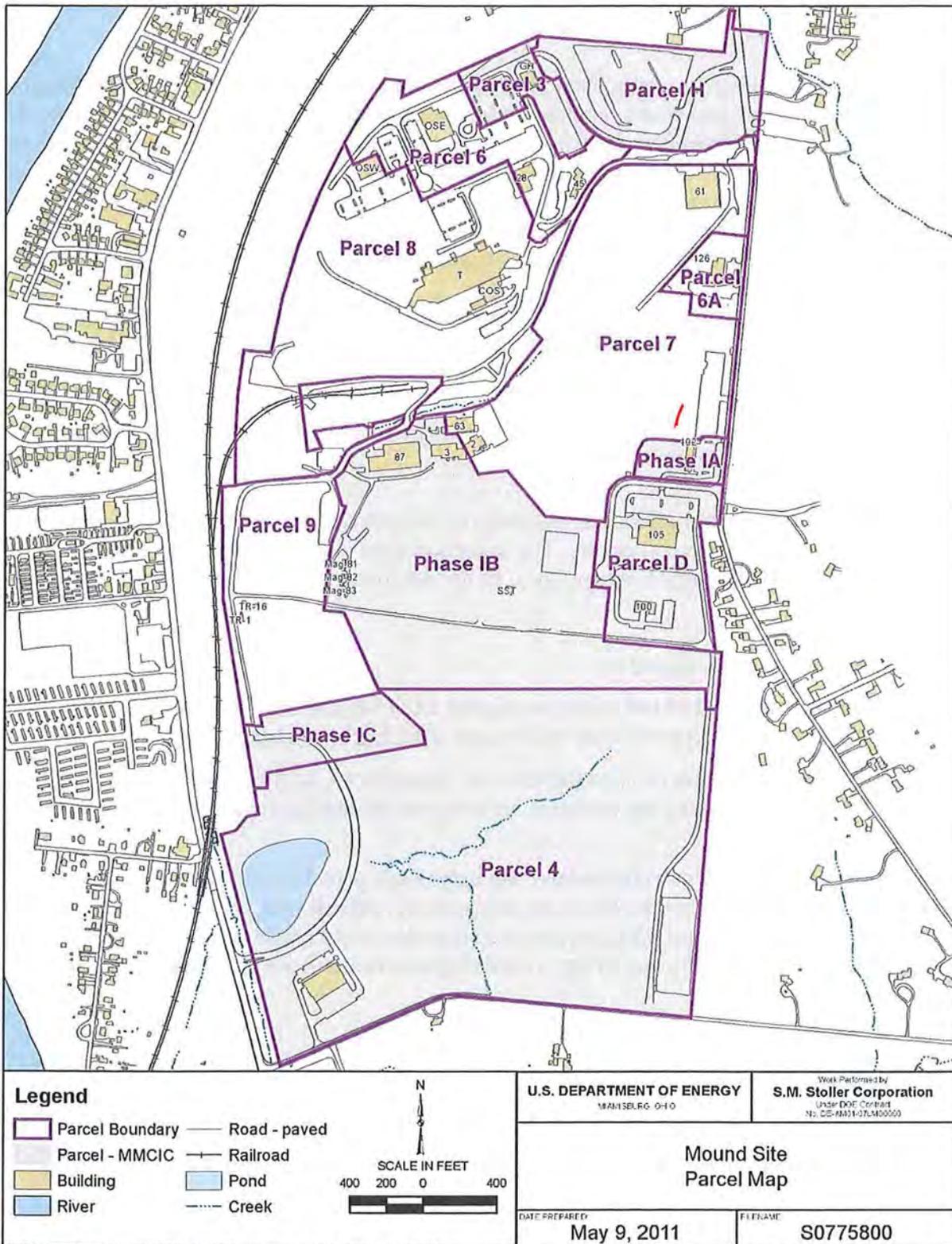


Figure 1. Parcel Map of the Former DOE Mound Site Property, Miamisburg, Ohio

3.0 Overview of Institutional Controls (ICs)

ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. ICs are defined in each ROD and described in the O&M Plan. Additional information on ICs can be found in the February 2005 EPA document, EPA-540-R-04-004, *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*, which is available on the EPA website at http://www.epa.gov/fedfac/pdf/ic_ctzns_guide.pdf.

The Mound Site ICs, which were imposed as part of the CERCLA remedy, are in the form of deed restrictions which were developed with input from the public, the City of Miamisburg, the regulators, and MDC.

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) 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:
 - 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 11) to off-site locations without prior approval from EPA, OEPA, and ODH.
5. **Prohibit the penetration of concrete floors** in specified rooms of T Building (Figure 11) without prior approval from EPA, 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 administrative record documents are available in the CERCLA Public Reading Room and electronically on the LM Mound website, <http://www.lm.doe.gov/land/sites/oh/mound/mound.htm>.

OU-1; the Phase I parcel; and Parcels 6, 7, and 8 have CERCLA remedies that also require groundwater monitoring. The physical conditions of the wells and seeps covered by those remedies were inspected for this assessment and are included in this report.

4.0 Period of Review

This annual assessment covers the period from April 14, 2010, to April 30, 2011.

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>).

5.0 Aerial View of the Mound Site Property

Figure 2 is a photo taken in March 2011 that shows the entire site from the south.

Figure 3 shows the parcel boundaries laid over a March 2011 aerial photograph of the Mound Site. The actual photographs were taken at a 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.



Figure 2. March 2011 photo of Mound Site from the south



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Figure 3. March 2011 Aerial View of Mound Plant Showing Parcel Boundaries

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6.0 Summary of Previous Year's Annual Assessment

The 2010 *Annual Assessment of the Effectiveness of Site-Wide Institutional Controls Applied to the Former DOE Mound Site Property* (DOE 2010) 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 2010 annual assessment made four recommendations for site improvements. These were:

1. Improve marking labels at seeps.
2. Remove the water sampling station and fencing over Seep 0607, and return the area to its original condition.
3. Ensure that the signs by the pond in Parcel 4 are present at all times.
4. Paint well 0124 in the old canal area.

7.0 Summary of 2011 Physical Inspections Performed

S.M. Stoller Corporation (Stoller) personnel conducted thorough physical inspections in March and April 2011 before the annual walkdown with the regulators. Those inspections looked for violations of ICs, such as soil removal, well installation, nonindustrial/noncommercial use, and the physical conditions of wells and seeps.

The annual walkaround with the regulators and stakeholders occurred on April 12, 2011. The physical inspection for the CERCLA Five-Year Review was held concurrently. Art Kleinrath, LM Mound Site Manager, began the walkaround with a presentation that defined the scope of the annual assessment, reviewed the 2010 assessment recommendations, and presented the results of the 2011 preliminary inspections. Participants were given a safety briefing, a copy of the presentation, and the IC checklist for the walkaround.

The annual walkaround consisted of a driving tour of the site and a walkaround inside T Building.

Participants in the annual walkaround included:

- Frank Bullock, MDC.
- Becky Cato, Stoller.
- Joe Crombie, ODH.
- Tim Fisher, EPA.
- Chuck Friedman, Stoller.
- Ken Karp, Stoller.
- Art Kleinrath, LM.
- Joyce Massie, JGMS.

- Brian Nickel, OEPA.
- Jane Powell, LM.
- Bob Ransbottom, Stoller.
- Karen Reed, LM.
- Jeff Smith, OEPA.
- Ellen Stanifer, City of Miamisburg.
- Gary Weidenbach, Stoller.



Figure 4. Art Kleinrath leading discussion at 2011 annual IC assessment walkdown ([L-R] Bob Ransbottom, Anthony Campbell, Joe Crombie, Chuck Friedman, Ellen Stanifer, Jeff Smith, Ken Karp, Karen Reed, Jane Powell, Brian Nickel, Tim Fisher, Frank Bullock)

The following sections summarize the results of the preliminary inspections and the physical walkdown on April 12. Appendix A contains the completed checklist.

7.1 Parcel D

There were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation, soil removal, or site activities inconsistent with industrial/commercial use within this parcel.

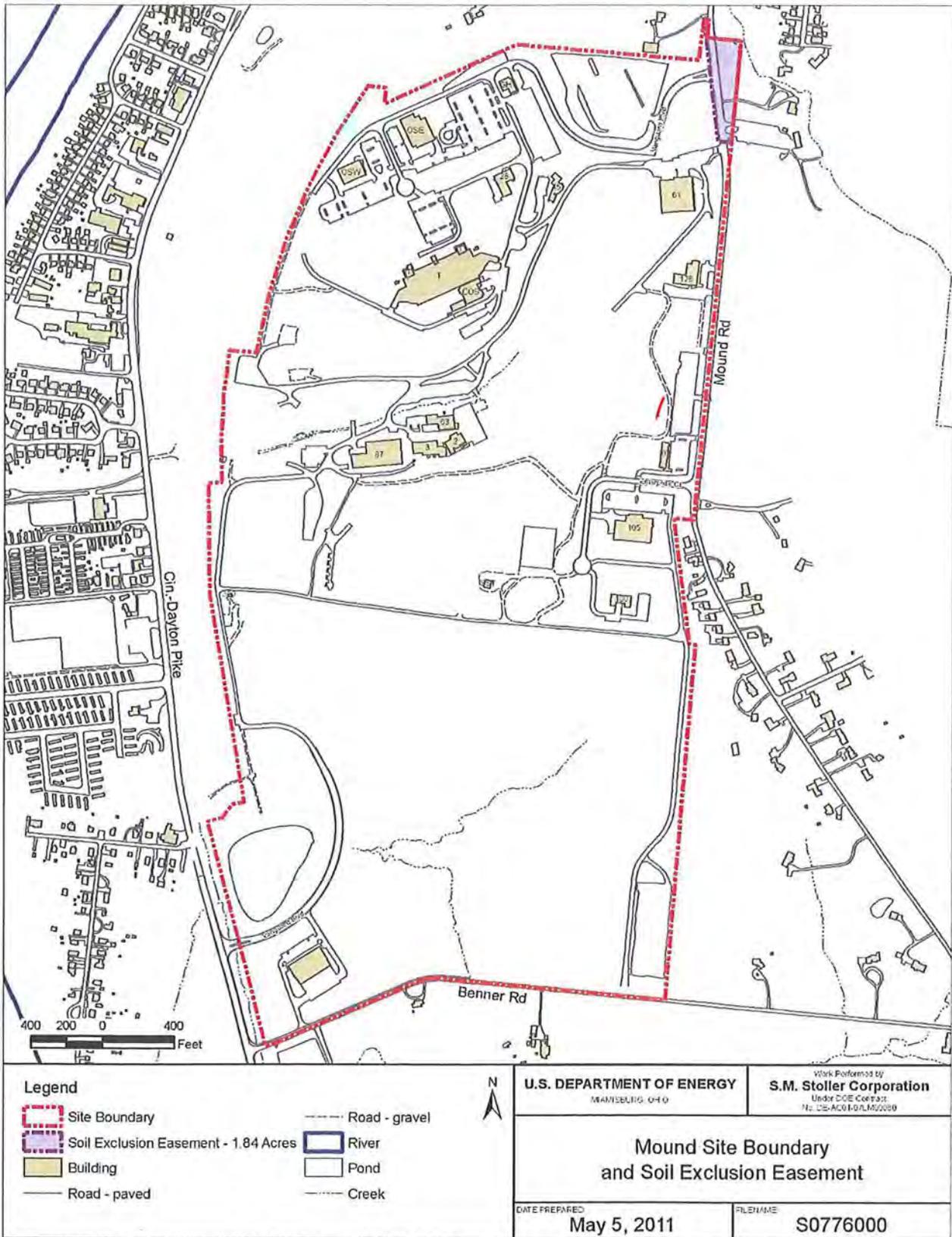
7.2 Parcel H (Formerly Release Block H)

There were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation, soil removal, or site activities inconsistent with industrial/commercial use within this parcel.

One area of Parcel H, shown in purple in Figure 5, is exempt from the soil removal restriction. Modifications to the entry and the rerouting of Mound Road isolated this area from the original Mound property.

7.3 Parcel 3

There were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation, soil removal, or site activities inconsistent with industrial use within this parcel.



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Figure 5. Parcel H Soil Removal Exclusion Area within the Original Mound Site Boundary

7.4 Parcel 4

There was no evidence of unauthorized well installation or soil removal within this parcel.

One sign, which states, "Recreational Use Prohibited," was observed at the pond used for retaining and detaining storm-water runoff in the southwest part of Parcel 4 (Figure 6).



Figure 6. Parcel 4 sign at retention pond, with bike path at left

On April 25, 2011, Stoller personnel observed two individuals fishing at the pond and reported that information to EM. Paul Lucas of EMCBC and Bob Ransbottom of Stoller approached the fishermen and advised them that fishing was not permitted. They also advised them that the site is cleared for industrial reuse, but not for recreational use.

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 OEPA. 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 OEPA 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 Mound Development Corporation 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.



Figure 7. Fishermen observed at pond in Parcel 4 on April 25, 2011

7.5 Parcels 6, 7, and 8

7.5.1 Parcel 6, 7, and 8 Physical Inspection

There were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation, soil removal, or site activities inconsistent with industrial/commercial use within this parcel.

The solar array shown in Figure 8 was installed west of COS Building. This work was covered by City of Miamisburg permits and was overseen by MDC.



Figure 8. Solar array west of COS Building

The physical inspection included the areas within T Building to which special ICs—which prohibit the penetration of concrete in some areas, and the removal of concrete in others, without prior approval—apply.

Figure 9 and Figure 10 are photos taken during the April 12 physical inspection of the building. There are cracks across the red concrete, but these are not of concern to the Core Team at this time. The Figure 11 drawing of the 1st floor of T Building identifies the special IC areas with crosshatching.

Appendix C provides additional information regarding these areas with special ICs. It includes the four-page agreement and position paper, *T Building Special ICs Core Team Agreement and Position Paper, 6-29-09*, which provided policy guidelines. It also includes the 2010 baseline photos of each room covered by these special ICs.

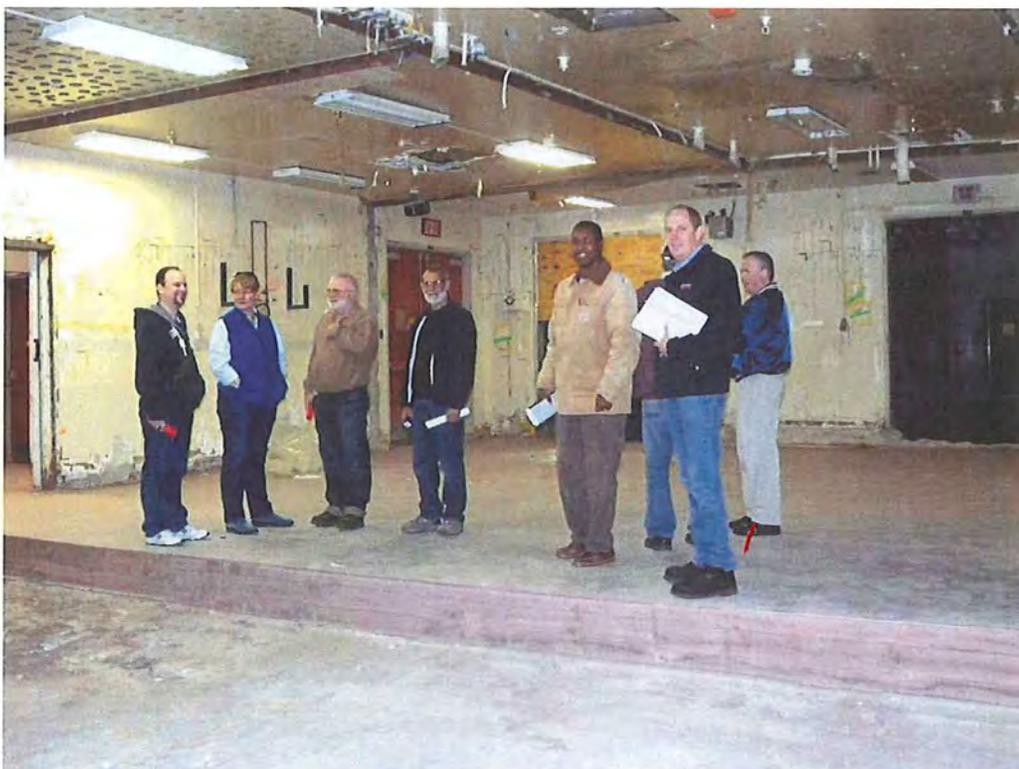


Figure 9. Tim Fischer, Jane Powell, Art Kleinrath, Ken Karp, Anthony Campbell, Jeff Smith, and Frank Bullock inspecting T Building Red Concrete Area where penetration is prohibited without prior approval

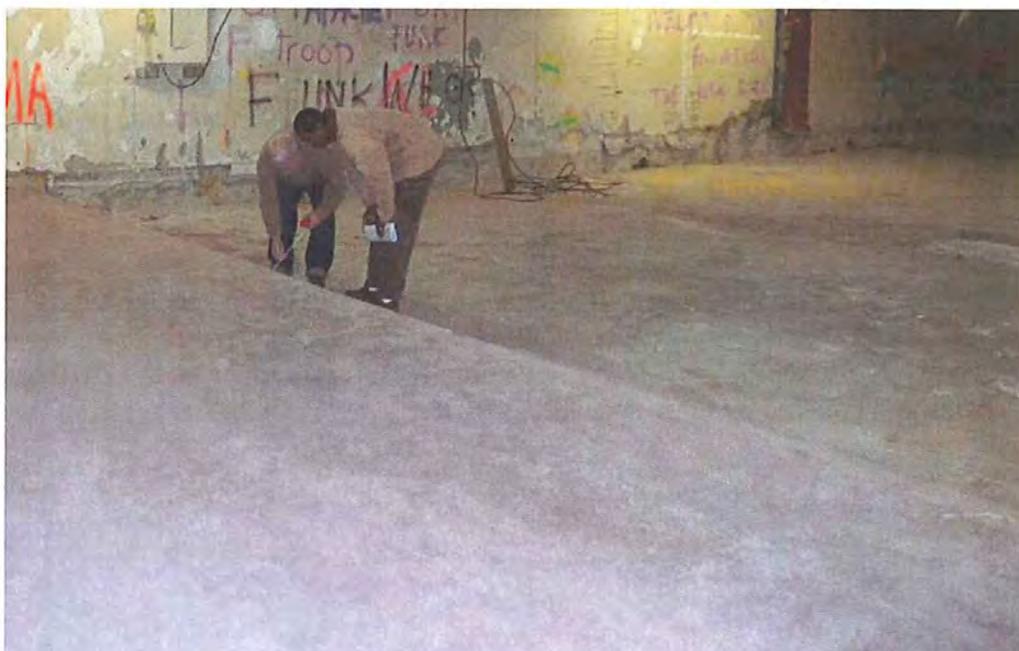


Figure 10. Art Kleinrath and Anthony Campbell examine edge of red concrete slab in T Building areas where penetration of concrete floor is prohibited without prior approval

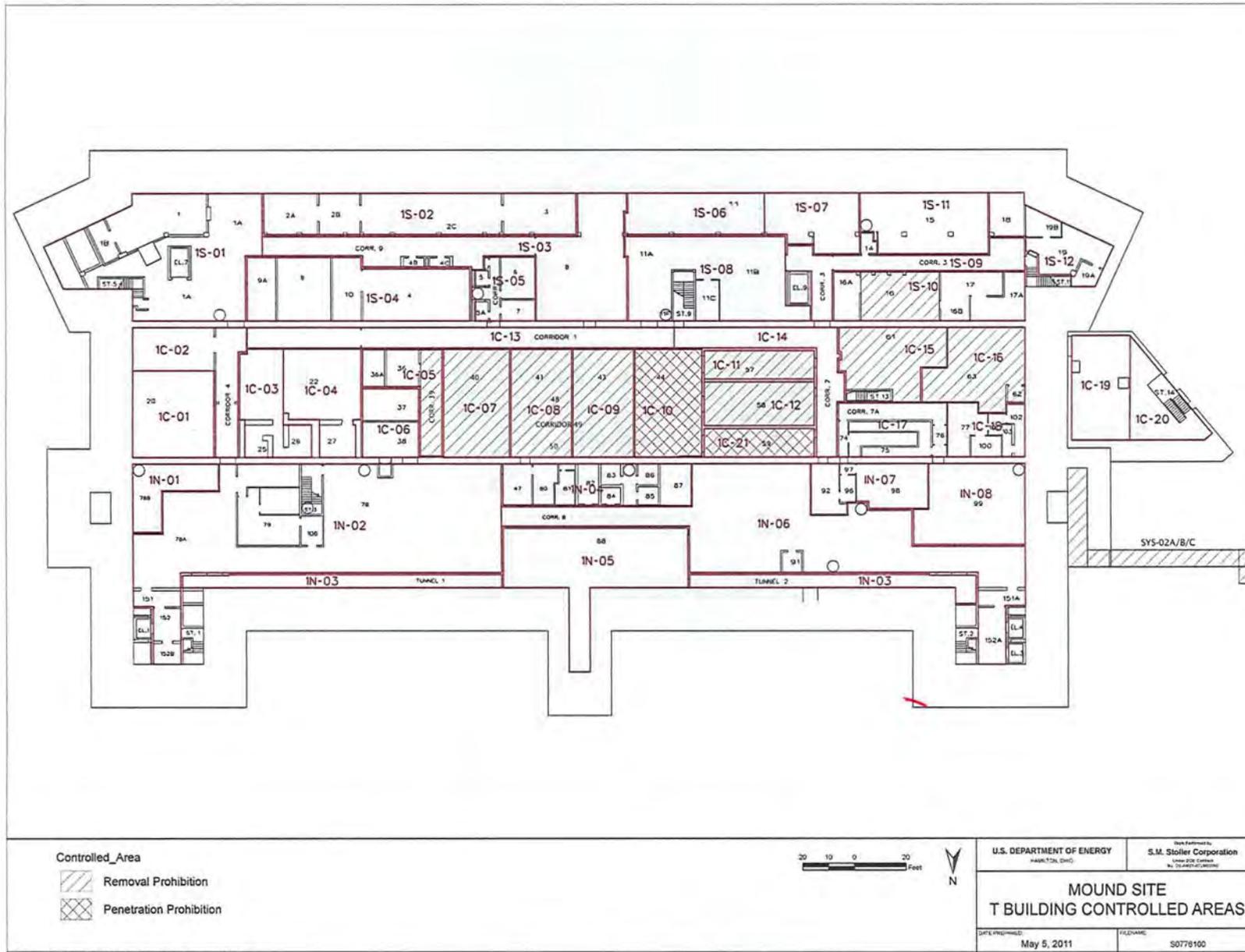


Figure 11. T Building Areas with Additional ICs

7.5.2 Parcel 6, 7, and 8 Wells and Seeps

Appendix D lists the Parcel 6, 7, and 8 groundwater monitoring wells and seeps, maps the locations, and provides photos taken during the physical inspections.

Because the groundwater monitoring is not an IC, the annual IC assessment only verifies the conditions of the wells and seeps, and it does not determine the effectiveness of the monitored natural attenuation (MNA) remedy. The remedy for Parcels 6, 7, and 8 includes ICs for the land and MNA, which include groundwater monitoring requirements described in the *Parcel 6, 7, and 8 Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan, Final* (DOE 2006b). The *Parcel 6, 7, and 8 Groundwater Monitoring Report Calendar Year 2010* (DOE 2011b) includes an analysis of the groundwater monitoring. Both of these documents are available on the LM website at <http://www.lm.doe.gov/mound/Sites.aspx>.

All of the Parcel 6, 7, and 8 wells were locked and in good condition. Well 0124, which was rusty and needed painting last year (Figure 12), was painted and locked in 2011 (Figure 13).



Figure 12. Well 0124 offsite condition during 2010 IC assessment



Figure 13. Well 0124 offsite condition during 2011 IC assessment

The 2010 inspection report recommended that the seeps be marked with a sturdier marker. However, it was decided that adding more visible markers would call unwanted attention to the seep locations. Since the samplers use the GPS locations and sample the seeps often, no further marking would be added at this time.

It was observed in 2010 that the old tritium sampler over Seep 0607 was no longer required or functional (Figure 14). This sampler and the surrounding fence were removed, and the area was returned to its original state (Figure 15).



Figure 14. Unused tritium sampler and fencing at Seep 0607 in 2010



Figure 15. Seep 0607 in 2011 after sampler and fencing were removed and area was restored

7.6 Parcel 9 (Currently OU-1)

The OU-1 area is covered by the *Operable Unit 1 Record of Decision* (DOE 1995) and the selected remedy, which included:

- The collection and treatment of groundwater contaminated with volatile organic compounds, and the disposal of treated water, using the pump-and-treat system.
- The control of surface water in the OU-1 area, and long-term groundwater monitoring.
- ICs to control access to the OU-1 area.

Between 2006 and 2010, EM removed much of the landfill contents with two large excavations funded by Congress and the American Resource and Recovery Act. EM will issue an amended ROD, which will incorporate the physical changes in OU-1, expand the area to include all of Parcel 9, and add the general site ICs described in Section 3.0. EM expects to complete the ROD amendment in 2011.

7.6.1 Parcel 9 Physical Inspection

There were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation, soil removal, or site activities inconsistent with industrial/commercial use within this parcel.

7.6.2 Parcel 9 (OU-1) Wells

Appendix D lists the OU-1 wells, maps their locations, and provides photos taken of them during the physical inspections.

Because the groundwater monitoring is not an IC, the annual IC assessment only verifies the conditions of the wells and seeps, and it does not determine the effectiveness of the remedy. Environmental restoration monthly reports provide data on the OU-1 pump-and-treat system and the results of groundwater monitoring. Historical water quality and water level data for existing

wells can be found at the LM website

http://gems.lm.doe.gov/imf/ext/gems/jsp/launch.jsp?default_site=MND. Photographs, maps, and physical features can also be viewed on this website.

All of the OU-1 wells were locked and in good condition.

7.7 Phase I Parcel

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

There were no observations of noncompliance with the ICs. In particular, there was no evidence of unauthorized well installation, soil removal, or site activities inconsistent with industrial/commercial use within this parcel.

7.7.1 Phase I Parcel Wells and Seep

Appendix D lists the Phase I wells and seep, maps their locations, and provides photos taken of them during the physical inspections.

Because the groundwater monitoring is not an IC, the annual IC assessment only verifies the conditions of the wells and seeps, and it does not determine the effectiveness of the MNA remedy. The Phase I remedy includes ICs and MNA, which include groundwater monitoring requirements describe in the *Phase I Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan* (DOE 2004b). The *Phase I Groundwater Monitoring Report Calendar Year 2010* (DOE 2011a) includes an analysis of the groundwater monitoring. Both of these documents are available on the LM website <http://www.lm.doe.gov/mound/Sites.aspx>.

All wells were locked, had permanent markers, and were in good condition.

One outstanding recommendation from the 2009 annual assessment was to improve the drainage around well 0353. This was completed after the excavation at OU-1, as shown in Figure 16.



Figure 16. Well 0353 in 2009, with drainage problems, and in 2011, with water diverted away from well

8.0 Interviews and Records Reviews

8.1 Interviews with City Personnel and Review of City or MDC 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 the Ohio Department of Natural Resources' well log files.

LM and Stoller personnel requested the City of Miamisburg Engineering Department to query their computer tracking system for permits issued to any addresses, on Capstone Drive, on Vanguard Boulevard, on Enterprise Court, on Vantage Point, on Mound Road (between 885 and 1195), and on Benner Road (between 799 and Dayton Cincinnati Road, odd-numbered side of street). In addition, the Engineering Department checked for other construction work or other activities, such as the creation of parking lots or roads, that require any City Planning approvals.

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 MDC or its tenants or subcontractors for work performed on DOE-owned, MDC-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 MDC).

Although the property is not subject to City of Miamisburg permitting requirements until DOE conveys the land parcel to MDC, the City-permitting process familiarizes the City with the Mound Site. This can reduce the time it takes for MDC 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 Department 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 MDC plans to demolish. City files do exist on buildings that have been demolished; however, those files are now considered obsolete.

Table 2 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 MDC. Figure 17 shows the location of site buildings.

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

Table 2. 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 ^a
100		790 Enterprise Court	D ^a
102		1075 Mound Road	IA ^a
105		1195 Mound Road	D ^a
126		955 Mound Road	6A
COS		965 Capstone Drive	8
GH	500 Capstone Circle	500 Vantage Point	3 ^a
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 ^a
(New) Flex Building		1390 Vanguard Boulevard (main building)	4 ^a
	1390 Vanguard Boulevard	1388 Vanguard Boulevard (lighting)	4 ^a
	1390 Vanguard Boulevard	1384 Vanguard Boulevard	4 ^a
	1390 Vanguard Boulevard	1380 Vanguard Boulevard	4 ^a
	1390 Vanguard Boulevard	1374 Vanguard Boulevard	4 ^a
	1390 Vanguard Boulevard	1370 Vanguard Boulevard	4 ^a

^a Parcel has been transferred to MDC.

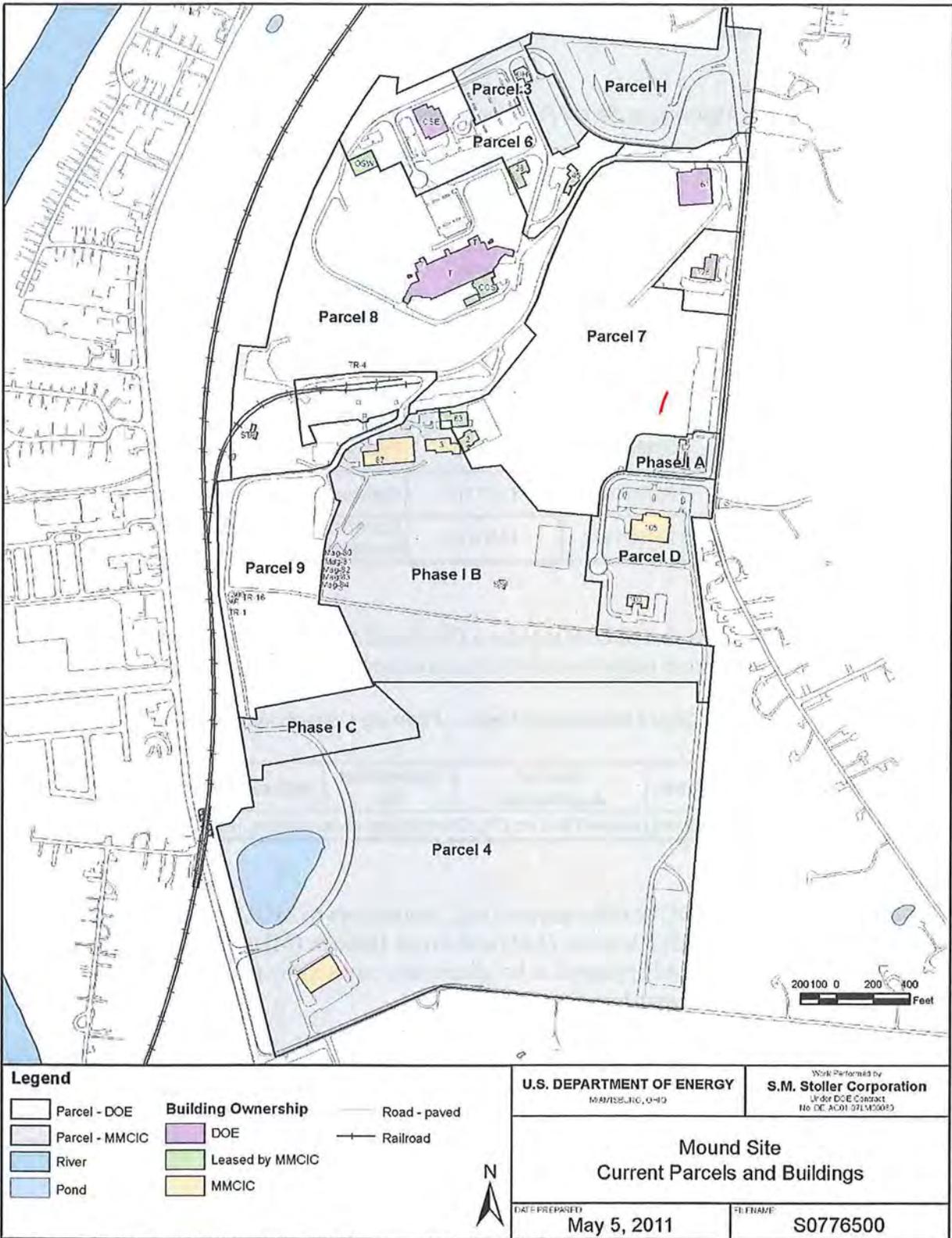


Figure 17. Mound Site Building and Parcel Ownership

Table 3 lists all permits on file that were issued for the site during the period being assessed. The City of Miamisburg Building Inspection Department provided a permit report on April 28, 2011.

Table 3. City of Miamisburg Permit Files for Mound Site (April 1, 2010, to March 31, 2011)

Location of Work	Permit Number	Date of Permit Application	Nature of Work	Work Performed By
Building 3 1100 Vanguard Blvd.	20090175E	5/3/10	Electric	Kastle Electric
Trailer 1275 Vanguard Blvd.	20100044B	5/3/10	Certificate of occupancy	MMCIC (now MDC)
Building 3 1100 Vanguard Blvd.	20100104B	8/20/10	Interior renovation, new roof	MMCIC (now MDC)
Building 3 1100 Vanguard Blvd.	20100159H	8/31/10	Heating, ventilation, and air-conditioning	Mechanical Systems of Dayton
Building 3 1100 Vanguard Blvd.	20100134E	9/13/10	Remodel, electric	Kastle Electric
Building 3 1100 Vanguard Blvd.	20100149B	11/11/10	Fire-alarm update	Kastle Electric
Building 3 1100 Vanguard Blvd.	20100150B	11/11/10	Sprinkler modifications	Dayton Fire Protection

Table 4 lists work requests that did not require a City permit but did require review by the City Planning Commission. These requests included excavation and paving activities.

Table 4. City of Miamisburg Files—Planning Commission Reviews

Location of Work	ID Number	Date of Application	Submitted By	Nature of Work	Parcel/ Building	Status
City Building Inspection Department reported that no City Commission reviews were performed during this period.						

All work performed by MDC or other parties (e.g., contractors to MDC) on the former DOE Mound Site Property that Art Kleinrath (LM) and Frank Bullock (MDC) 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, MDC) 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

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

The MDC project manager, who oversees site work, monitors the vendor's work and conformance to technical requirements in the work order. MDC 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 MDC property is included as Appendix B. Note that Section 2 of the easement gives the utility provider or vendor detailed information on the ICs associated with MDC's property. This requires compliance with restrictions, which are the ICs.

Continuing public education is an important component of DOE's post-closure responsibilities. Educating all future property owners about their responsibility to comply with the ICs is 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 MDC 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, MDC will provide the builder with a pre-construction package that includes a description of the ICs associated with that particular parcel. This is how MDC 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 and online at <http://www.lm.doe.gov/mound/Sites.aspx>.

Eventually, MDC 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, MDC will record a lot-split with the Montgomery County Recorder's Office. If MDC does not require financing for property improvements within a parcel, MDC does not have to immediately record a Miamisburg Planning Commission-approved lot-split with the County.

However, if MDC decides to sell the property, MDC 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 MDC for the parcel, as a whole, as well as the CERCLA Summary Notice 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 MDC.

The property owner's adherence to the ICs imposed on a land parcel is vital to the effective maintenance of those ICs. MDC currently coordinates the movement of soil and site grading, and this 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, MDC'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 MDC subdivides the former DOE Mound Site Property and sells portions (or all) of the property, the new property owners will be required to comply with the CRP and the City's comprehensive plan.

9.0 Conclusions

The ICs for the Mound Site, including Parcels D, H, 3, 4, 6, 7, 8, and 9 and the Phase I 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 5 lists previous inspections' recommendations for improving ICs (DOE 2008, DOE 2009a, DOE 2010), and the status of those recommendations. Table 6 lists new recommendations from this year's inspection. There were no recommendations resulting from the 2011 annual IC assessment.

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

	Origin	Issue/ Recommendation	Status 2010 Report	Corrected?	Current Status 2011 Report
1	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	Yes	No formal process. MDC notified DOE of most recent street address changes
2	2009 Annual	Improve drainage in the area north of well 0353.	Pending OU-1 excavation	Yes	Area around well 0353 now diverts water away from well
3	2010 Annual	Improve marking labels at seeps.	New	No change	Will use GPS to locate
4	2010 Annual	Paint well 0124 in old canal area.	New	Yes	Complete
5	2010 Annual	Remove water sampling station and fencing over Seep 0607, and return area to its original condition.	New	Yes	Complete
6	2010 Annual	Ensure that signs by pond in Parcel 4 are present at all times.	New	Yes	Core Team resolved. See Section 7.4.

Table 6. Recommendations from 2011 Annual Inspection for ICs

Number	Issue/Recommendation	Responsible
	There were no recommendations resulting from the 2011 assessment.	

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) 247-2221

or

Mr. Art Kleinrath
 Site Manager
 DOE Office of Legacy Management
 Office of Legacy Management
 2597 Legacy Way
 Grand Junction, CO 81503
 (970) 248-6034

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 Boulevard
Chicago, Illinois 60604-3590
(312) 886-7058

or

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

12.0 References

- DOE (U.S. Department of Energy), 1995. *Operable Unit 1 Record of Decision (1995)*, Final, June.
- 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), 2008. *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*, LMS/MND/S05263, U.S. Department of Energy Office of Legacy Management, June.

DOE (U.S. Department of Energy), 2009b. *Parcels 6, 7, 8 Record of Decision*, August.

DOE (U.S. Department of Energy), 2010. *Annual Assessment of the Effectiveness of Site-Wide Institutional Controls Applied to the Former Mound Site Property*, LMS/MND/S06401, U.S. Department of Energy Office of Legacy Management, June.

DOE (U.S. Department of Energy) 2011a. *Phase I Groundwater Monitoring Report Calendar Year 2010*, LMS/MND/S07535, U.S. Department of Energy Office of Legacy Management, March.

DOE (U.S. Department of Energy), 2011b. *Parcel 6, 7, 8 Groundwater Monitoring Report Calendar Year 2010*, LMS/MND/S07540, U.S. Department of Energy Office of Legacy Management, March.

EPA (U.S. Environmental Protection Agency) 2005. *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*, OSWER 9255.0-98 EPA-540-R-04-004, February

MMCIC (Miamisburg Mound Community Improvement Corporation), 2003. *Comprehensive Reuse Plan Update*, December.

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Appendix A

Annual IC Assessment Checklist

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

Scope: Entire Mound Site	
Preliminary inspections performed on: April 5 and 7, 2011	
Physical Inspection Walk around on: April 12, 2011	
Review led by: Art Kleinrath, DOE LM	Phone #: 937-227-2237
Participants in Physical Inspection Walk Around on April 12, 2011:	
See attached sign-in sheet.	
Summary of property improvements since the previous Review. For example, have buildings been demolished or erected? Has surface water flow been modified? Has landscaping been done? Yes (X) No ()	
OU-1 excavation completed, rail spur removed, aRc demobilized and removed buildings	
Solar panels west of COS Building	
Evidence of soil removal from the “1998 Mound Plant Property”?	Yes () No (X)
No evidence of soil removal.	
Evidence of unauthorized groundwater use?	Yes () No (X)
No record of new wells on Ohio Department of Natural Resources (ODNR) website	
Evidence of land use other than “Industrial” (e.g., residential)?	Yes () No (X)
Roofing material, plumbing fixture, and brush dumped off of lower roadway	
No non-industrial use observed.	
Signage/Markers in good repair (if applicable)?	Yes (X) No ()
Observed one sign at pond in Parcel 4.	
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 ()
All wells were marked, locked, and in good condition.	
Seeps were marked with plastic flags and some markings were illegible. Seeps 0606 and 0607 had no flags	
Air monitoring stations maintained properly (if applicable)?	N/A (X) Yes () No ()
Air monitoring is not an institutional control for any parcel covered by this inspection.	
Air monitor along Route 25 in Miamisburg destroyed by auto and removed by Stoller vendor on April 5. DOE will maintain air monitoring stations on and off-site as required by NESHAPs until the monitoring requirements are satisfied.	
Containment system(s) in good repair (if applicable)?	N/A (X) Yes () No ()
Containment systems are not an IC for any parcel covered by this inspection	

CHECKLIST WORKSHEET
Review of Effectiveness of Institutional Controls

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 maintenance of the Institutional Controls in good repair (if applicable?) N/A () Yes () No ()

No other equipment is applicable.

T BUILDING Areas with additional institutional controls:

Evidence of noncompliance with institutional controls? Yes () No ()

T Building is currently locked and all entry is controlled by DOE, so no evidence of noncompliance to ICs.

The red concrete cap over one of the two areas in T Building was cracked in several places.

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

Summary and status of open issues or recommendations from previous reviews

Dates of previous reviews:

Five-year review (2006) and Annual reports 2007, 2008, 2009, 2010

	Origin	Issue/Recommendation	Corrected?	Current status 2011 Report
1	2008 Annual	Landowner or management organization will notify DOE-LM when there are changes of address or street names on site. Building permits are filed by street addresses.	Unknown	Pending
2	2009 Annual	Improve drainage in the area north of Well 0353	Yes	Complete
4	2010 Annual	Paint Well 0124	Yes	Complete
5	2010 Annual	Remove water sampling station and fencing over Seep 0607 and return area to its original condition.	Yes	Complete
6	2010 Annual	Insure that signs by pond in Parcel 4 are present at all times	One sign at pond	Core team will discuss and resolve issue.

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

Personnel interviewed during the physical walk-over of parcel, or during review of documentation associated with the parcel:

Jayne Hansel and Leslie Karacia, City of Miamisburg Engineering Department, 937-847-6532,

Stoller personnel provided information and assisted with inspections of wells, seeps, and the interior of T Bldg. These were Roy Mowen, Gary Weidenbach, Frank Miller, and Bob Ransbottom. Steve Pawel and Chuck Brown also provided the necessary site drawings 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, Ohio Department of Natural Resources well logs):

April 28 City of Miamisburg permit report issued by building permits office. Summary of information of City permit database. City personnel advised there were not planning or zoning requests related to the Mound property.

Reviewed the Ohio Department of Natural Resources well logs on the ODNR website. There were no new wells listed.

Based upon the review of the above-listed documents, were property improvements covered by the appropriate approvals (e.g., construction permit approved by City)?
Yes (X) No ()

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 (X)

There was no evidence of unapproved work performed since last inspection. OU-1 excavation was completed and rail spur removed in 2010. Solar array was installed west of COS Building.

Miscellaneous items noted during review or physical walkdown:

All wells included in the groundwater monitoring for Phase I, Parcels 6, 7, and 8, and OU-1 were newly painted and in good condition.

Roofing materials, brush, and plumbing items were dumped beside roadway in parcel 4.

Recommendations from preliminary physical walkdowns:

Resolve the sign requirements at pond.

Remove dumped materials

Recommendations from April 12, 2011 physical walkdown:

None

Conclusion/comments from Physical Walkdown:

None

CHECKLIST WORKSHEET
Review of Effectiveness of Institutional Controls

Checklist prepared by U.S. Department of Energy
Art Kleinrath, LM Site Manager
April 12 Physical Walkdown Comments were submitted by: None
Date: April 12, 2011

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

ATTENDANCE SHEET
Mound Site Annual IC Assessment and CERCLA Five-Year Review
Physical Walkover
DATE April 12, 2011

	INITIAL	NAME	ORGANIZATION	TELEPHONE
1.	FB	Hullock, Frank	MDC	937-865-4462
2.	ATC	Campbell, Anthony	Ohio EPA	
3.	CC	Cromble, Joe	Ohio Department of Health	614-728-5734
4.	JTF	Fischer, Timothy	U.S. EPA, Region V	312-886-5787
5.	CST	Friedman, Chuck	Stoller	937-847-8350 ext 302
6.		Clail, Doug	Stoller	
7.	KK	Karp, Ken	Stoller	970-260-3502
8.	Alan Lowe	Kleinrath, Art	DOE-LM	937-847-8350 ext 318
9.		Lucas, Paul	DOE-MCP	937-847-8350 ext 301
10.	mi	Massie, Joyce	Stoller/IGMS	937-847-8350 ext 312
11.	BT	Nickel, Brian	Ohio EPA	937-285-6468
12.	J	Powell, Jane	DOE LM	513 648 3148
13.	P.C.P.	Ransbottom, Bob	Stoller	937-247-2234
14.	MR	Reed, Karen	DOE LM	8720-880-4348
15.	JLS	Smith, Jeff	Ohio EPA	937 285-6070
16.	EES	Stanifer, Ellen	City of Miamisburg	937-847-6636
17.	GW	Weidenbach, Gary	Stoller	
18.	ACC	Costo, Rebecca	Stoller	656 926 7038
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22.				

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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 18th 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,

12:27
E200
\$58.00 03/20/03 12:27
EASE-03-03B151
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. Gravelman

Printed Name: Michael J. Gravelman

Title: President

STATE OF OHIO, COUNTY OF MONTGOMERY, SS:

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

Jean Wuyong
NOTARY PUBLIC

Jean Wuyong, Notary Public
In and for the State of Ohio
My Commission Expires June 28, 2004

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

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Appendix C

T Building Rooms with Special ICs

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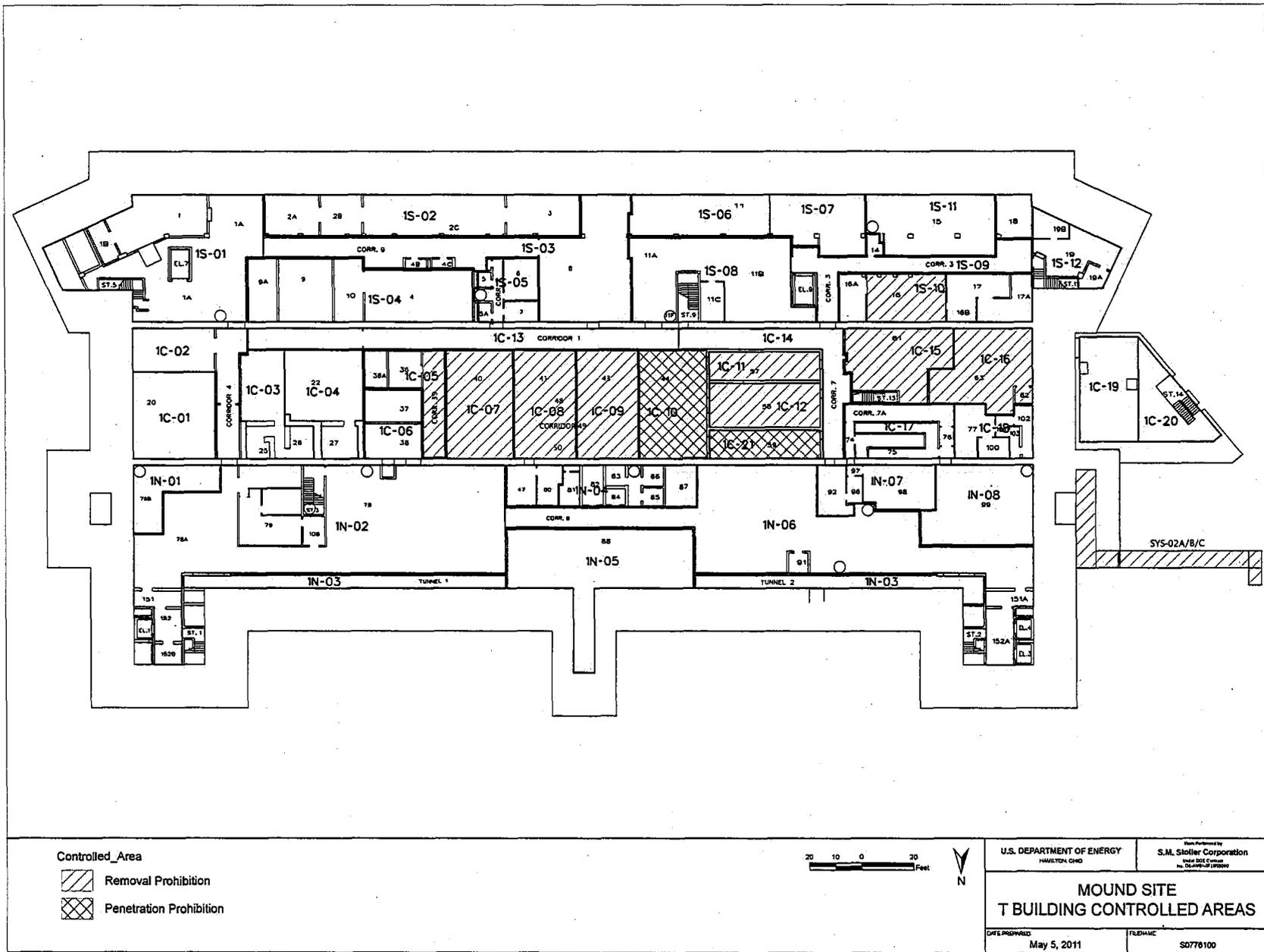


Figure 1. T Building Rooms with Special ICs

T Building Rooms with Special ICs

In addition to the ICs for the entire site, T Building has the following additional IC restrictions as described in the Parcel 6, 7, and 8 Record of Decision.

1. **Prohibit the removal of concrete floor material** in specified rooms of T Building (Figure 1) to off-site locations without prior approval from EPA, OEPA, and ODH.
2. **Prohibit the penetration of concrete floors** in specified rooms of T Building (Figure 1) without prior approval from EPA, OEPA, and ODH.

On June 29, 2009, the Mound Core Team signed an agreement for the position paper which provided policy guidelines for limited activities in these rooms which should not result in unacceptable risk to workers in the building.

The four-page agreement and position paper, *T Building Special ICs Core Team Agreement and Position Paper, 6-29-09*, are included in the CERCLA administrative record, in this Appendix D, and will be included in subsequent annual IC assessment reports.

Photos of T Building Rooms

The photos in this appendix show the baseline conditions of the rooms in April 2010. No changes have occurred since those photos were taken last year.



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.

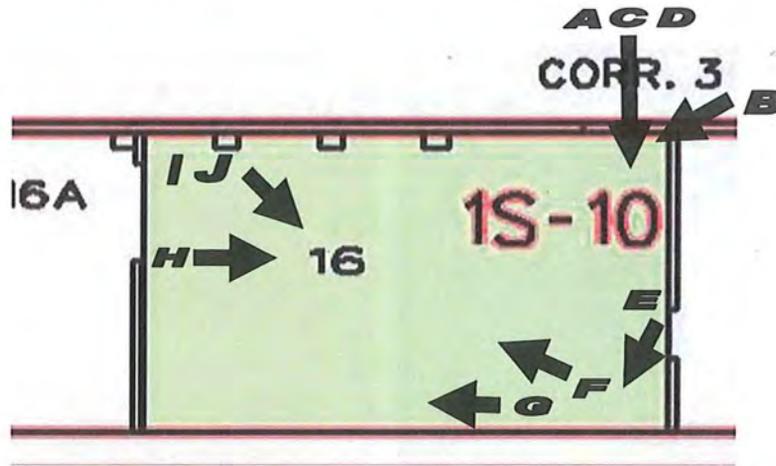
In order to establish a margin of safety another calculation used the same input parameters except that the thickness of the cap was reduced by seven inches (to a nominal four inches total thickness). This further reduced thickness yielded an exposure to the renovation worker of 5.93 mrem. This remains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

Table C-1. T Building Baseline Photos Taken in 2010



T Bldg. Room 16 View A



T Bldg. Room 16 View B



T Bldg. Room 16 View C



T Bldg. Room 16 View D

Table C-1 (continued). T Building Baseline Photos Taken in 2010



T Bldg. Room 16 View E



T Bldg. Room 16 View F



T Bldg. Room 16 View G



T Bldg. Room 16 View H

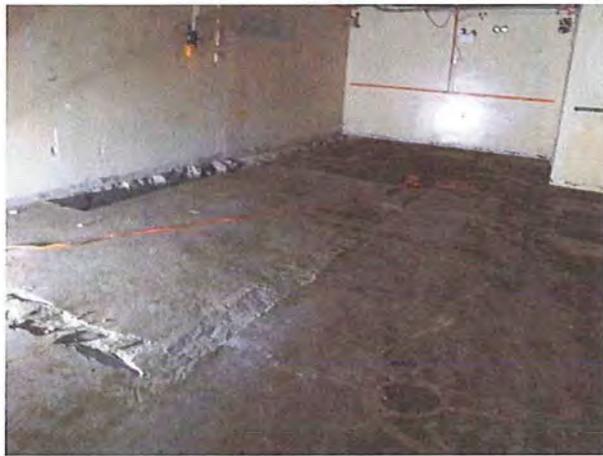
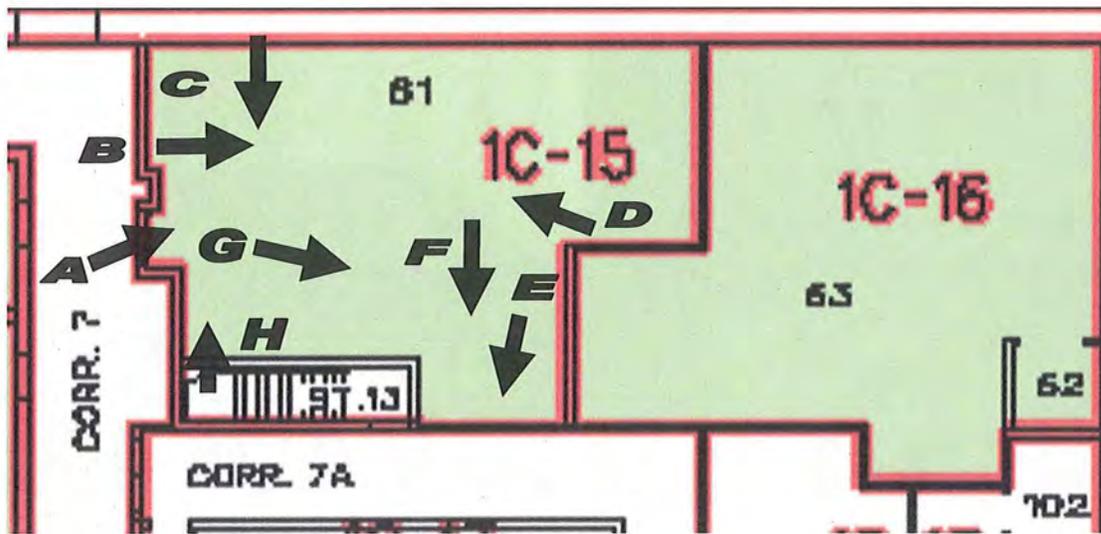


T Bldg. Room 16 View I



T Bldg. Room 16 View J

Table C-1 (continued). T Building Baseline Photos Taken in 2010



T Bldg. Room 61 View A



T Bldg. Room 61 View B



T Bldg. Room 61 View C



T Bldg. Room 61 View D

Table C-1 (continued). T Building Baseline Photos Taken in 2010



T Bldg. Room 61 View E



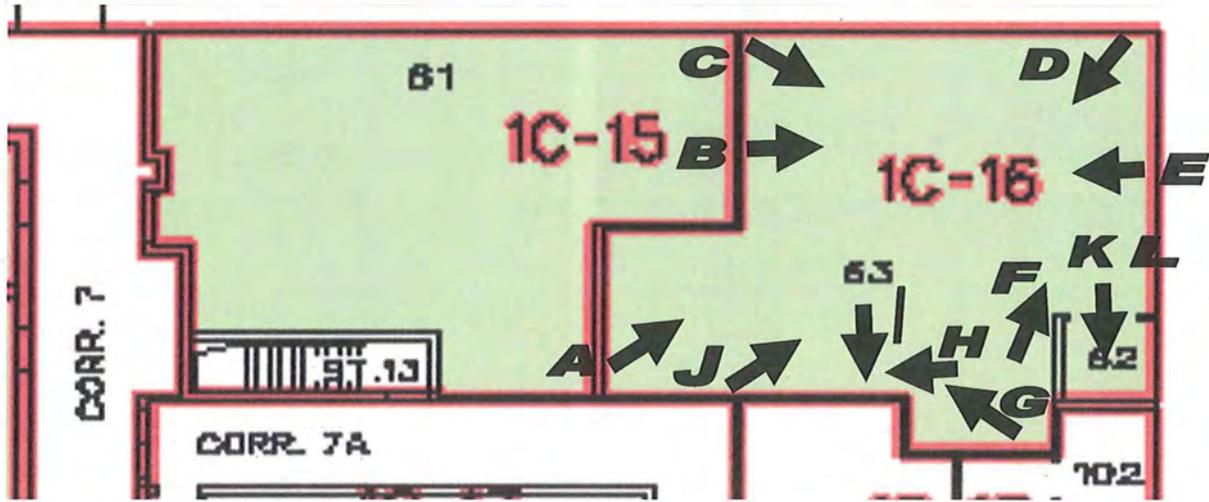
T Bldg. Room 61 View F



T Bldg. Room 61 View G



T Bldg. Room 61 View H



T Bldg. Room 63 View A



T Bldg. Room 63 View B



T Bldg. Room 63 View C



T Bldg. Room 63 View D

Table C-1 (continued). T Building Baseline Photos Taken in 2010



T Bldg. Room 63 View E



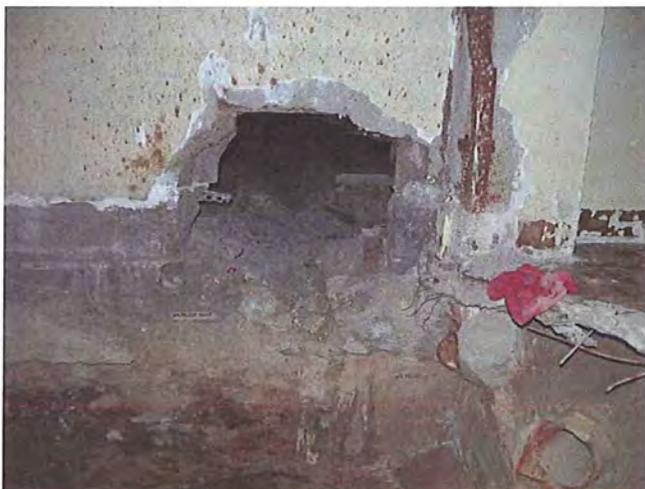
T Bldg. Room 63 View F



T Bldg. Room 63 View G



T Bldg. Room 63 View H



T Bldg. Room 63 View I



T Bldg. Room 63 View J

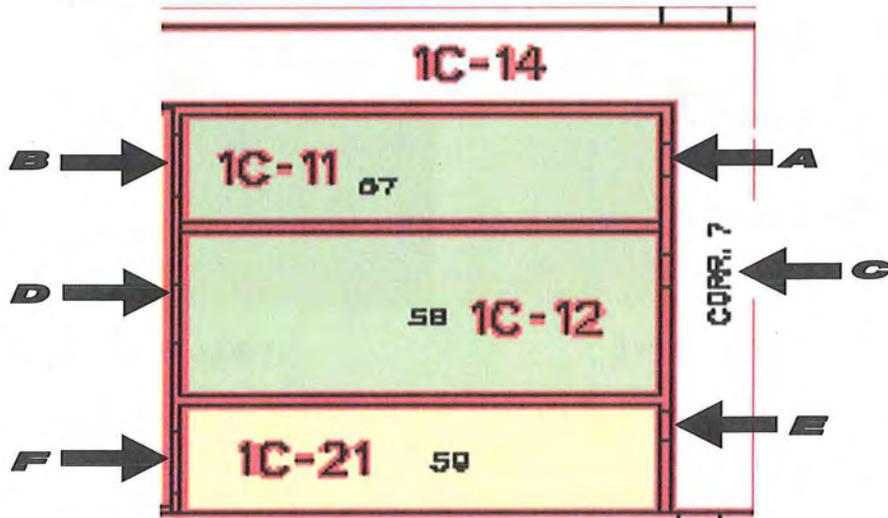
Table C-1 (continued). T Building Baseline Photos Taken in 2010



T Bldg. Room 62 View K



T Bldg. Room 62 View L



T Bldg. Room 57 View A



T Bldg. Room 57 View B

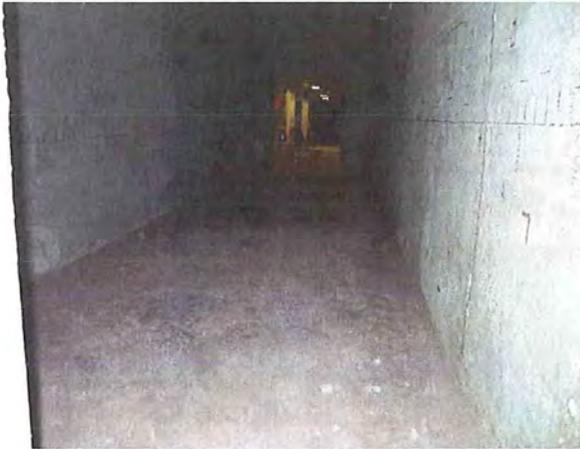
Table C-1 (continued). T Building Baseline Photos Taken in 2010



T Bldg. Room 58 View C



T Bldg. Room 58 View D

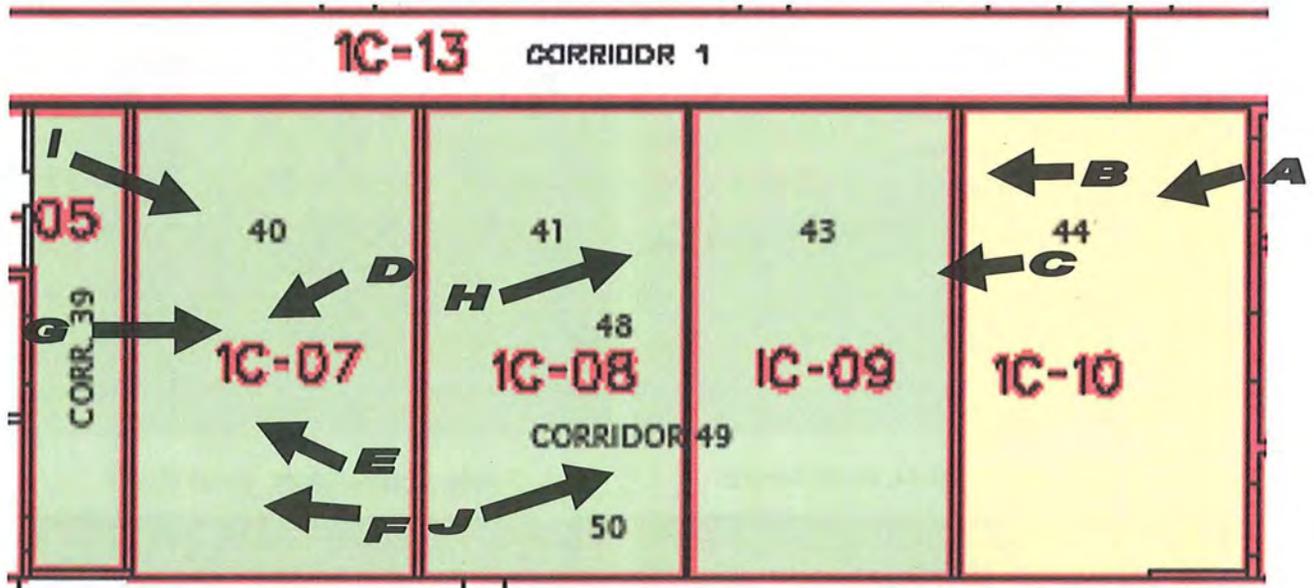


T Bldg. Room 59 View E

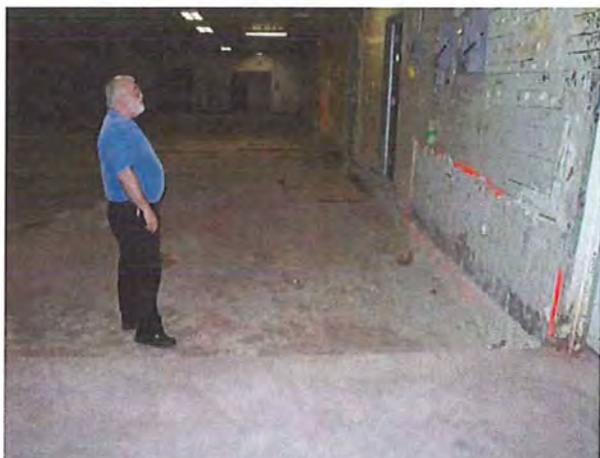


T Bldg. Room 59 View F

Table C-1 (continued). T Building Baseline Photos Taken in 2010



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



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



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



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

Table C-1 (continued). T Building Baseline Photos Taken in 2010



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



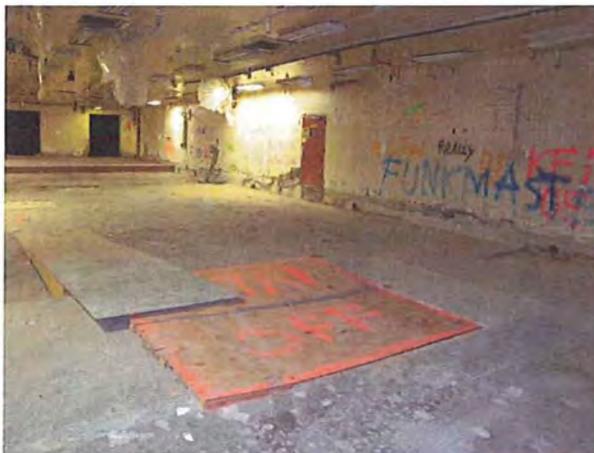
T Bldg. Rooms 39-44, 48-50 View F



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



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

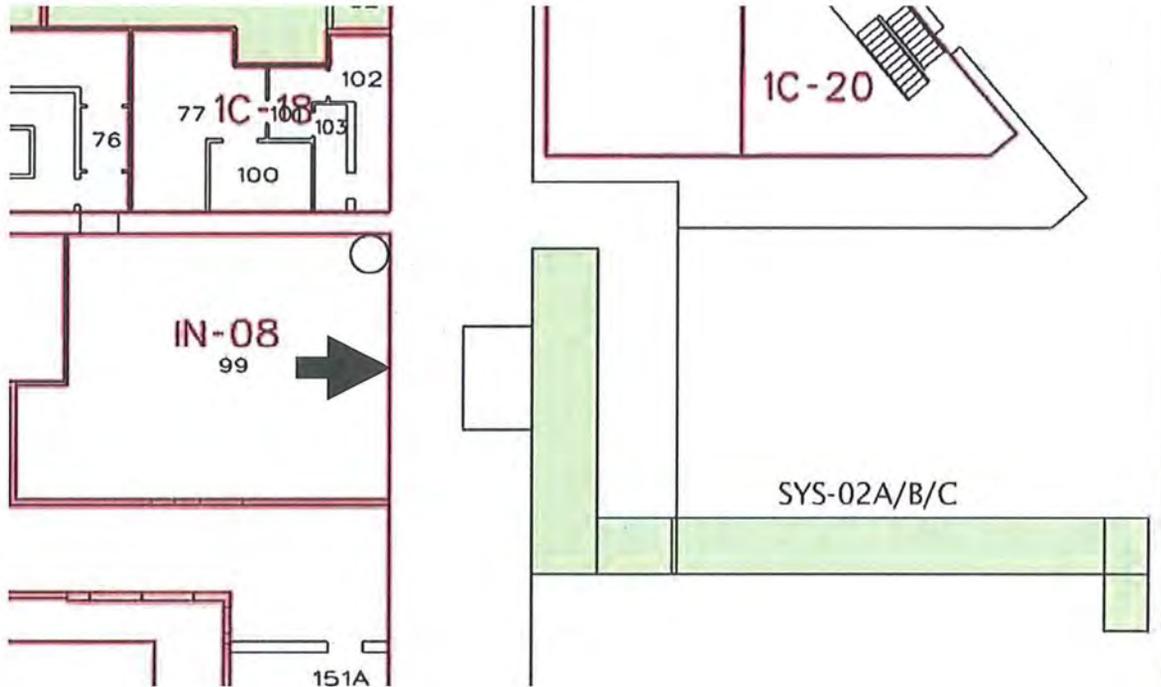


T Bldg. Rooms 39-44, 48-50 View I



T Bldg. Rooms 39-44, 48-50 View J

Table C-1 (continued). T Building Baseline Photos Taken in 2010



T Bldg. Room 99 - Access door to airshaft with special ICs leading to west head house

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Appendix D

Listings and Photos of Monitoring Wells and Seeps

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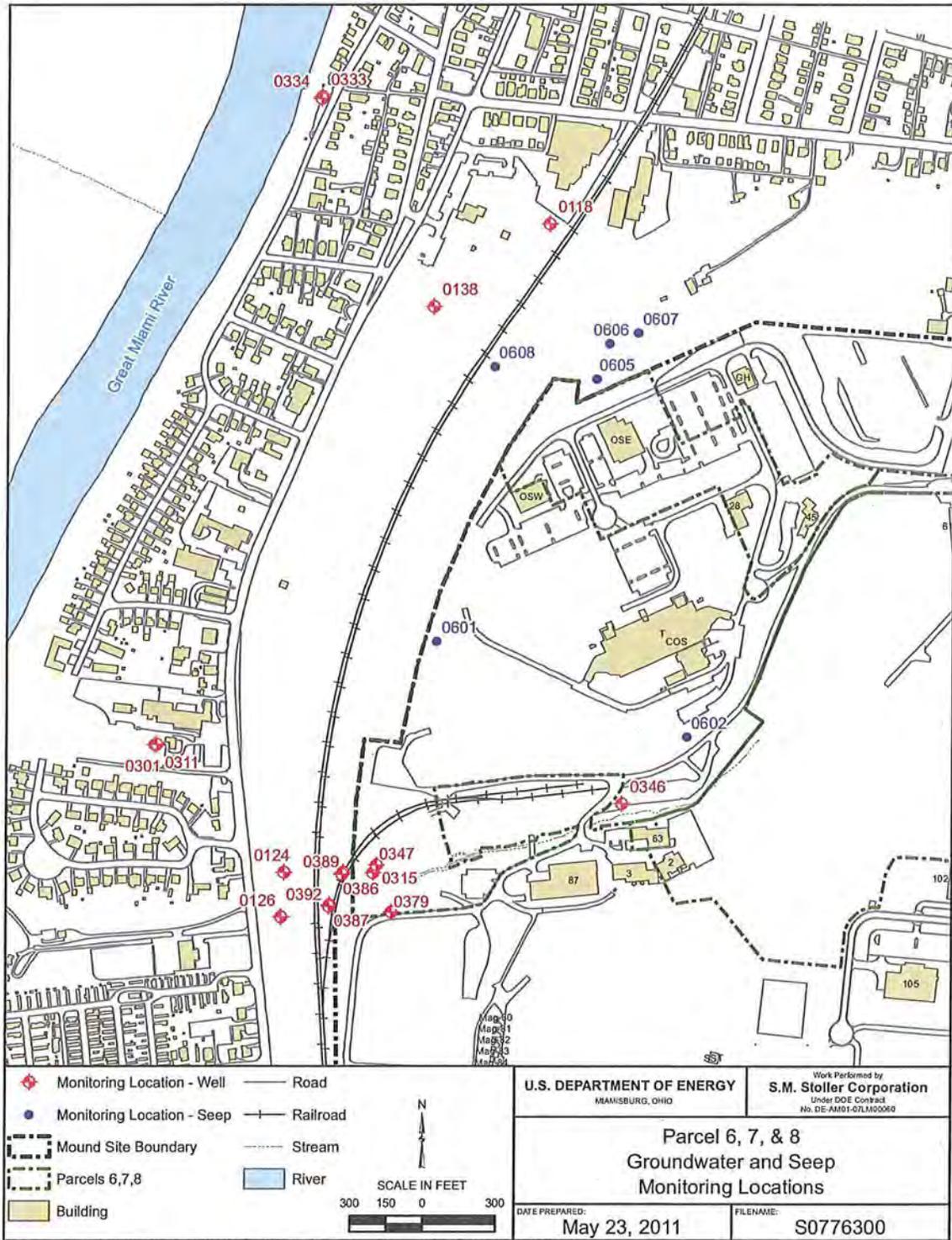
1.0 Parcel 6, 7, and 8 Remedy Wells and Seeps

Table 1 and Figure 1 show the Parcel 6, 7, and 8 groundwater monitoring wells and seep locations. Table 2 contains photos of all wells and seeps. All of the Parcel 6, 7, and 8 wells were locked and in good condition.

Because the groundwater monitoring is not an IC, the annual IC assessment only verifies the conditions of the wells and seeps, and it does not determine the effectiveness of the MNA remedy. The remedy for the Parcels 6, 7, and 8 includes ICs for the land and MNA which includes groundwater monitoring requirements described in the *Parcel 6, 7, and 8 Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan, Final* (DOE 2006b). The *Parcel 6, 7, and 8 Groundwater Monitoring Report Calendar Year 2010* (DOE 2010) includes an analysis of the groundwater monitoring. Both of these documents are available on the LM website at <http://www.lm.doe.gov/mound/Sites.aspx>.

Table 1. Parcel 6, 7, and 8 Monitoring Wells and Seeps

Well/Seep ID	Located in Parcel 8	Off-site
0118		X
0124		X
0126		X
0138		X
0301		X
0311		X
0315	X	
0333		X inactive
0334		X inactive
0346	X	
0347	X	
0379	X	
0386		X
0387		X
0389		X
0392		X
Seep 0601	X	
Seep 0602	X	
Seep 0605		X
Seep 0606		X
Seep 0607		X
Seep 0608		X



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Figure 1. Parcel 6, 7, and 8 Groundwater and Seep Monitoring Locations

Table 2. Photos of Parcel 6, 7, and 8 Wells and Seeps



Well 0118, Off Site



Well 0124, Off Site



Well 0126, Off Site



Well 0138, Off Site



Wells 0301 and 0311, Off Site



Wells 0333 and 0334, Off Site (removed from active monitoring program in 2009)



Wells 0386 and 0389, Off Site



Wells 0387 and 0392, Off Site



Well 0315



Well 0346



Well 0347



Well 0379



Seep 0601, On Site



Seep 0602, On Site



Seep 0605 Off-Site



Seep 0606 Off-Site



Seep 0607, Off Site



Seep 0608, Off Site, On Hillside

2.0 OU-1 (Parcel 9) Wells

Table 3 and Figure 2 list and show the locations of the OU-1 monitoring wells. Table 4 contains photos of all wells. All wells were locked and in good condition.

Because the groundwater monitoring is not an IC, the annual IC assessment only verifies the conditions of the wells and seeps, and it does not determine the effectiveness of the remedy. The ER Monthly Report provides data on the OU-1 pump and treat system and the results of groundwater monitoring. Historical water quality and water level data for existing wells can be found on the U.S. Department of Energy Office of Legacy Management website: http://gems.lm.doe.gov/imf/ext/gems/jsp/launch.jsp?default_site=MND. Photographs, maps, and physical features can also be viewed on this website.

Table 3. OU-1 Wells

Well ID
P015
P027
P031
P053
P054
P056
0305
0410
0416
0417
0418
0419
0422
0423
0424
0425
0449 – extraction well
0450 – extraction well

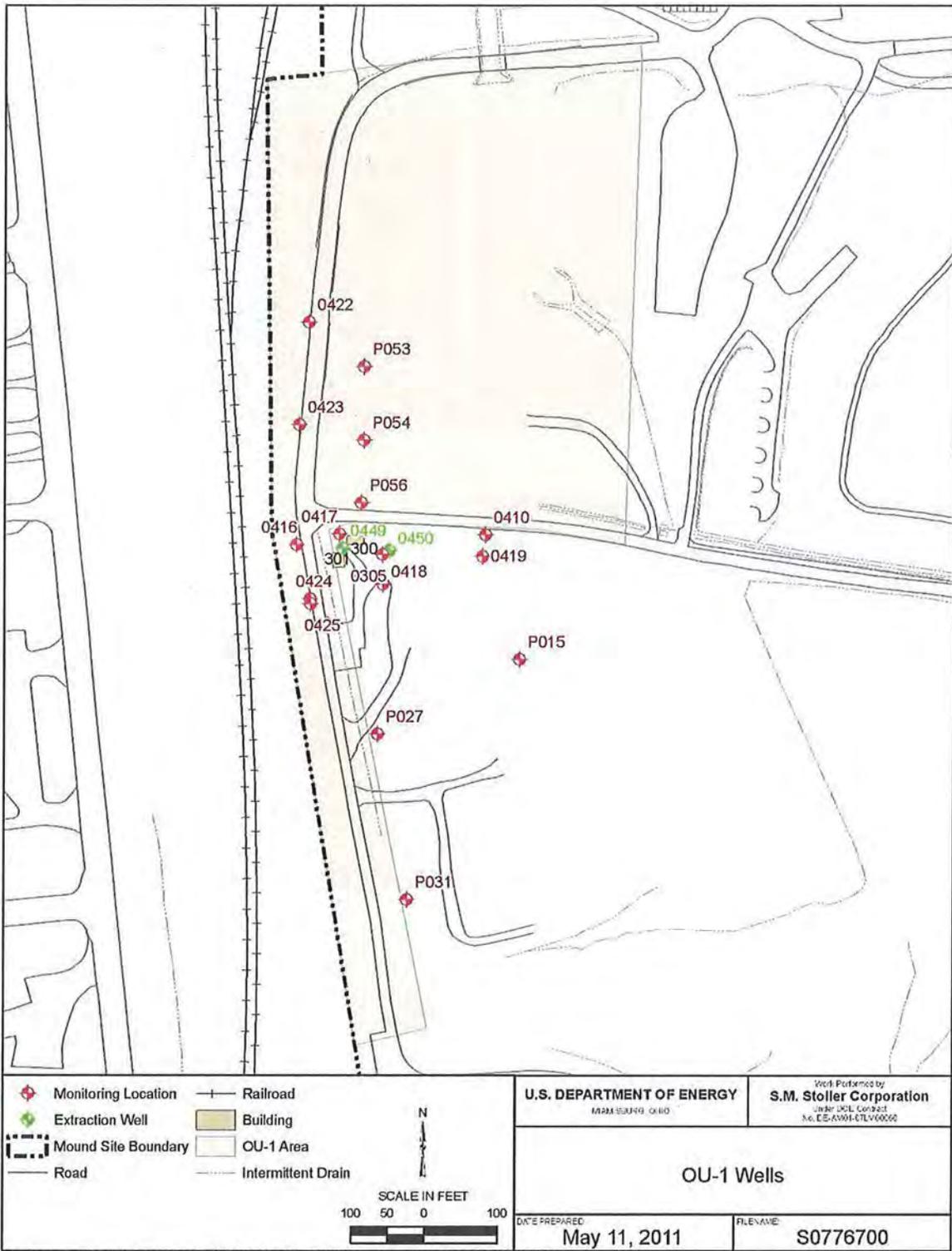


Figure 2. OU-1 wells

Table 4. Photos of OU-1 Wells



Well P015



Well P027



Well P031



Wells P053, P054, P056



Well 0305



Well 0410



Well 0416



Well 0417



Well 0418



Well 0419



Well 0422



Well 0423



Wells 0424 and 0425



Extraction Well 0449



Extraction Well 0550

3.0 Phase I Remedy Wells and Seeps

The Phase I remedy includes ICs and MNA which includes groundwater monitoring requirements.

Table 5 and Figure 3 give the locations of the 10 wells and one seep monitored for the Phase I parcel. The *Phase I Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan, Final* (DOE 2004b) can be found on the Mound website at <http://www.lm.doe.gov/mound/Sites.aspx>.

Because the groundwater monitoring is not an IC, the annual IC assessment only verifies the conditions of the wells and seeps, and it does not determine the effectiveness of the MNA remedy. The Phase I remedy includes ICs and MNA which includes groundwater monitoring requirements describe in the *Phase I Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan, Final* (DOE 2004b) The *Phase I Groundwater Monitoring Report Calendar Year 2010* (2010) includes an analysis of the groundwater monitoring. Both of these documents are available on the LM website at <http://www.lm.doe.gov/mound/Sites.aspx>.

Table 5. Monitoring Wells and Seeps Included in Phase I Remedy

Well/Seep #	Located in Parcel				
	4	IA	IB	IC	9
Well P033				X	
Well 0319				X inactive	
Well 0353					X
Well 0400				X	
Well 0402					X
Well 0411			X		
Well 0442			X inactive		
Well 0443			X		
Well 0444	X				
Well 0445				X	
Seep 0617			X		

All wells were locked, had permanent markers, and were in good condition.

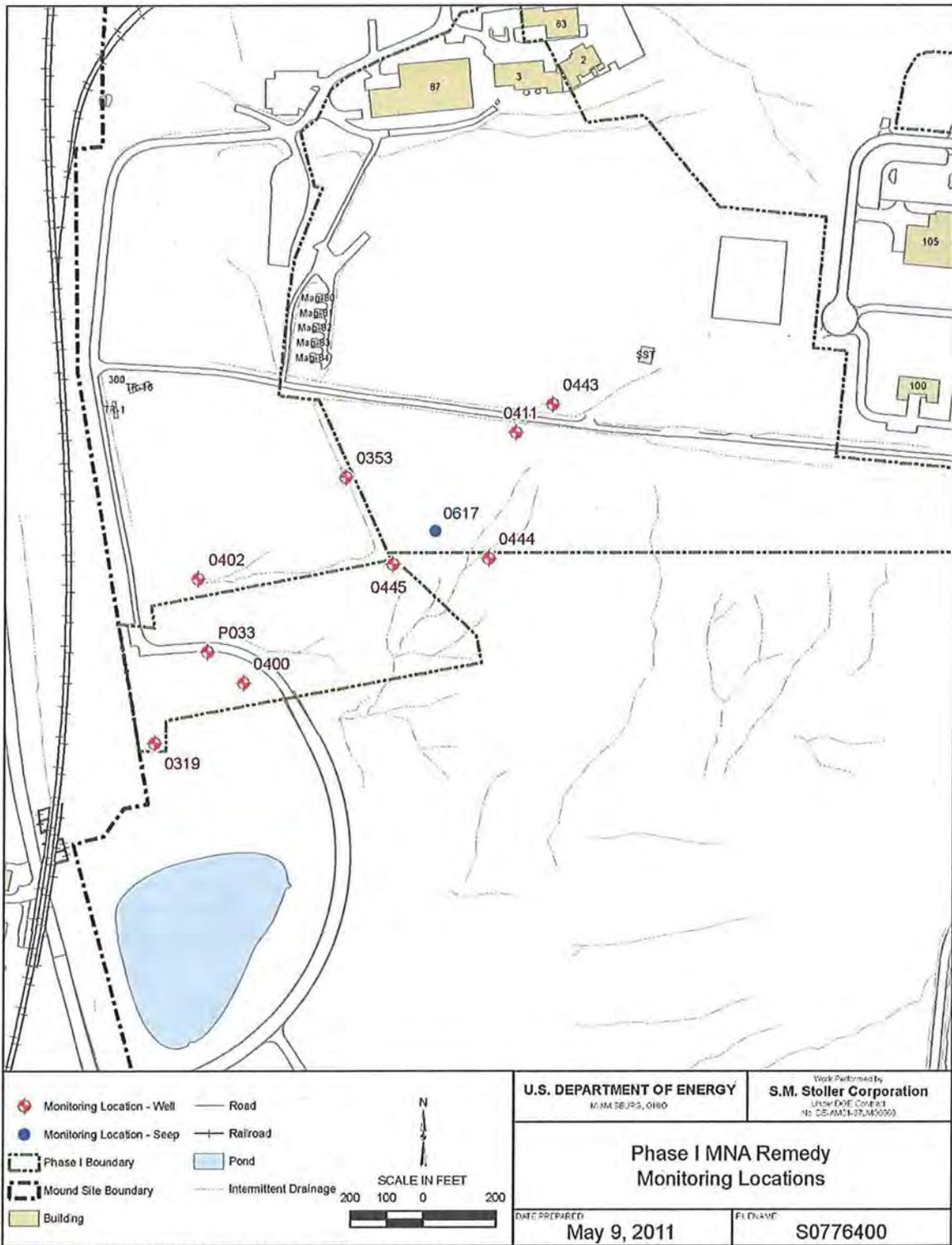


Figure 3. Phase I MNA Remedy Monitoring Well Location

Table 6. Photos of Phase I Parcel Wells and Seeps



Well P033



Well 0319 (inactive)



Well 0353



Well 0400



Well 0402



Well 0411



Well 0442 (inactive)



Well 0443



Seep 0617