ANNUAL ASSESSMENT
of the
EFFECTIVENESS OF INSTITUTIONAL CONTROLS
applied to the former
MOUND SITE PROPERTY

prepared by the
U.S. Department of Energy
Miamisburg Environmental Management Project

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INTRODUCTION

In accordance with the *Mound Plant Operation and Maintenance* [O&M] *Plan for the Implementation of Institutional Controls* (8/13/99), the U.S. Department of Energy (DOE) Miamisburg Environmental Management Project (MEMP) is required to perform an annual assessment of the effectiveness of institutional controls (IC) applied to the former Mound Site property. The annual review shall be documented in a report submitted to the U.S. Environmental Protection Agency (USEPA) and the Ohio Environmental Protection Agency (OEPA) no later than June 13th of each year. The O&M Plan states that DOE may petition to change the frequency of the review after the Environmental Management (EM) mission is complete at the MEMP. The DOE may also conduct a review of the IC's, at any time, if there is reason to believe a degradation of the controls has occurred.

The annual review shall consist of a visual inspection of the property, discussions with local government offices, and a records review. During the visual inspection, the DOE (or its agent) will determine if new facilities have been constructed, if obvious improvements have been made to the property, and/or if property usage may have changed. The USEPA, OEPA and the Ohio Department of Health (ODH) must be contacted 30 days in advance (or as otherwise agreed to) of the onsite inspection. The previous year's inspection will provide the basis for determining the nature and extent of property improvements. At a minimum, the visual inspection will include a physical walk-over of former Mound Site land parcels. Discussions with local government offices and records review will include, at a minimum, contacting the offices of the City of Miamisburg Engineering and Planning Departments to obtain information regarding construction or building permits, or exemptions from zoning ordinances, issued for properties that comprise the former DOE Mound Site.

OVERVIEW OF PARCEL TRANSFER PROCESS

In January 1998, the DOE executed a sales agreement with the DOE-designated Community Reuse Organization (CRO). The agreement calls for transfer of land parcels to the Miamisburg Mound Community Improvement Corporation (MMCIC), via a series of quit claim deeds, upon completing all requirements of the Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA). The sales agreement excludes real property associated with DOE's continuing Nuclear Energy (NE) mission. The MMCIC plans to use transferred parcels (i.e., buildings, land) to establish a light industrial/technology park at the former Mound Site. In March 1999, the first land parcel (Parcel D) was transferred to the MMCIC. Parcel D contained approximately 12.5 acres of land and Buildings 100 and 105. In August 1999, Parcel H was transferred to the MMCIC. Parcel H contained approximately 14.3 acres of land, a large parking lot, and a site access road. In April 2001, a third parcel (Parcel 4) was transferred to the MMCIC. Parcel 4 contained 94.8 acres of undeveloped land. In September 2001, the CERCLA requirements for land transfer were completed for a fourth parcel (Parcel 3). Parcel 3 contains approximately 5.6 acres of land and Buildings GH and GP-1. However, as a result of national security events since September 11, 2001 (and the proximity of Parcel 3 to DOE's secure perimeter), the DOE has yet to transfer title of Parcel 3 to the MMCIC. When the DOE is ready to transfer title of Parcel 3 to the MMCIC (tentatively scheduled for the Summer of 2002), the parcel acreage will be slightly less than the acreage covered in the CERCLA documents for Parcel 3 (i.e., property transferred will be approximately 4.8 acres).

Since the O&M Plan applies to land parcels that have undergone the CERCLA process for land-transfer, whether or not title to those parcels has actually transferred to the MMCIC is irrelevant. This particular annual report includes Parcels D, H and 4, and next year's annual report will include Parcel 3. These four land parcels represent approximately 43% of the total acreage available for transfer to the MMCIC. At the time this annual report was written, the available property remaining for transfer to the MMCIC (upon DOE's completion of the CERCLA process) had been divided into three parcels. These parcels were named Phase I, II and III, and the DOE is currently in the process of preparing the CERCLA documents for transfer of the Phase I parcel. The geographic boundaries and schedules for the CERCLA and land-transfer processes for all future land parcels at the former DOE Mound Site are subject to change. Refer to Figure 1 [immediately following Exhibit A at the end of this report] for a map of the original boundaries of the former DOE Mound Site Property (DOE acreage totaling slightly more than 305 acres; approximately 8.5 acres of which will be retained by the DOE for continuing mission work).

OVERVIEW OF INSTITUTIONAL CONTROLS

The Mound Site is being remediated to achieve USEPA's risk-based Industrial Use Standards. After that, the remaining DOE (EM) mission will be limited to implementing and assessing the effectiveness of Institutional Controls (IC) in the form of deed restrictions. The Record of Decision (ROD) for each parcel explains the deed restrictions in detail via the quit claim deed.

The deed restrictions are communicated to the landowner via the quit claim deed. The deed restrictions remain attached to the land through subsequent changes in land ownership.

For land parcels transferred to-date to the MMCIC, there are three deed restrictions. The first deed restriction prohibits the removal of soil from the original 1998 Mound Site boundaries without prior written approval from the State of Ohio. The second deed restriction limits land use to industrial/commercial only. Each parcel ROD singles out land uses which will not be permitted onsite, but the list is not meant to be 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 under 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;
- day care facilities;
- schools or other educational facilities for children under 18 years of age; and
- community centers, playgrounds, or other recreational or religious facilities for children under 18 years of age.

The third deed restriction prohibits the extraction, consumption, exposure or use in any way of the groundwater underlying the premises, without prior written approval from the USEPA and the OEPA. This deed restriction does not apply to groundwater produced from any of the three (3) DOE production wells. The DOE Mound Property site is a non-municipal public drinking water supply, and as such, Mound's potable water meets all regulatory requirements for consumption/exposure/use.

It is important to note that the preceding language on the deed restrictions applied to land parcels that DOE has transferred to-date to the MMCIC is meant to be a summary only. There have been subtle differences in the quit claim deeds for each successive land parcel. Accordingly, readers are encouraged to consult the ROD for individual land parcels if they are interested in parcel-specific deed restriction language. The RODs, as well as other CERCLA documents, are available in the CERCLA Public Reading Room located at 305 Central Avenue, Miamisburg, Ohio 45342. The primary purpose of this annual report is to document the effectiveness of the ICs that have been applied to parcels that have completed the CERCLA process for land-transfer, including a determination of whether or not a particular IC has been violated.

PERIOD OF REVIEW

This annual report covers Parcel D, since its transfer to the MMCIC in March 1999; Parcel H, since its transfer to the MMCIC in August 1999; and Parcel 4, since its transfer to the MMCIC in April 2001. Refer to Figure 1 for a map of the original boundaries of the former DOE Mound Site Property, and the boundaries of the first three land parcels transferred to the MMCIC. Parcel 3 (tentatively scheduled for transfer in the Summer of 2002) is not included in this annual report, however, it will be included in the annual report prepared in late-Spring 2003. An annual

report was not submitted to the USEPA and OEPA in June 2000, however, a physical inspection of Parcels D and H was performed by the DOE-MEMP, USEPA and OEPA in April 2000. The U.S. EPA and OEPA agreed to allow DOE to include the results of the 2000 inspection in the report for the 2001 inspection of Parcels D and H. DOE provided a report to the regulators on June 13, 2001, that covered both the 2000 and 2001 inspections of Parcels D and H, and the USEPA and OEPA provided comments to DOE on the 2001 report.

In lieu of issuing a revised 2001 report and/or producing a formal comment/response document, in May 2002 the regulators agreed with DOE's recommendation that the 2002 report would resolve concerns offered by the regulators on the report from the preceding year. Accordingly, this report actually covers three reporting periods (June 2000, June 2001, and June 2002). Future annual reports will not repeat this multi-year approach to reporting. All future annual reports will cover parcels whose RODs were signed at least six months before the scheduled date of the walk-over/physical inspection (e.g., if a ROD for a particular parcel was signed four months before the scheduled walk-over, then that parcel will not be included in the walk-over/annual report). Data contained within each annual report will not be duplicative of data contained in reports from previous years. In other words, each annual report will identify "new" information, such as new construction, demolition or excavation, lot-splits or sale of parcels to new landowners, permits filed with the City of Miamisburg by landowners during the past 12 months, etc.

AERIAL VIEW OF THE FORMER MOUND SITE PROPERTY

Figures 2 and 3 [attached at the end of this report, after Exhibit A] are aerial photographs taken in April 2002 of the original DOE Mound Site Property, as a whole (i.e., including property still owned by the DOE, as well as land parcels that the DOE has transferred to the MMCIC). These aerial photos give the reader a better understanding of each parcel's relationship to the site, as a whole, as well as the proximity of the site to downtown Miamisburg, Ohio, and surrounding residential and recreational areas. Figures 2 and 3 also give the reader a sense of orientation upon reading later sections of this annual report, which document the results of physical inspections of each parcel. The aerial photos also complement photographs taken at ground-level in each parcel during the physical inspections [ground-level photos also attached at the end of this report, after Exhibit A].

Figure 2 is a photograph of the original DOE Mound Site Property, looking due south. Parcel H is in the foreground (a large parking lot and MMCIC's first new entrance to the site, off of Mound Road), and Parcel D is in the upper left corner of the photo (two buildings only). Parcels D and H are both bounded to the east by Mound Road, which is the road seen along the left edge of Figure 2. Parcel 4 is at the top of Figure 2; the parcel is bounded to the west by Old State Route 25, which is the road running diagonally across the upper right corner of the photo. The Great Miami River lies to the west of Old State Route 25, and the river can also be seen in the upper right corner of Figure 2. MMCIC's [second] new site entrance comes off of Old State Route 25 and curves to the north around a newly-constructed stormwater retention pond. Parcel

4 is bounded to the south by Benner Road, which is the road (barely discernible) running along the top edge of Figure 2.

Figure 3 is a photograph of the original DOE Mound Site Property, looking north/northeast. In this photo, it is easier to discern Parcel 4 (although the photo does not show the extreme southern and eastern boundaries of the parcel). In the foreground, towards the right of the photo, is a small part of the newly-constructed stormwater retention pond. Also visible is the curved portion of Vanguard Boulevard, ending in a [temporary] cul-de-sac (until such time as the DOE transfers additional property to the MMCIC and the MMCIC is able to connect the two portions of the Spine Road, thus "linking" the two new site entrances). Figure 3 shows the proximity of Parcel 4 to Parcel D; Parcel D includes the two buildings at the center-right edge of the photo. Figure 3 also shows the clear-cut area beneath the overhead utility lines running north-south across Parcel 4 (the clear-cut area runs diagonally up across the photo, beginning at the lower right corner of the photo). The clear-cut area provides a useful reference point/land-mark within Parcel 4. Parcel H is at the center-top of Figure 3, and the photo also shows how close Parcels H and D are to the Mound Municipal Golf Course and the Indian Mound (both of which can be seen in the green space at the top-right of the photo).

REVIEW OF INSPECTION PERFORMED IN APRIL 2000

In April 2000, the following personnel performed a visual inspection of Parcels D and H: Art Kleinrath (DOE-MEMP), Tim Fischer (USEPA) and Brian Nickel (OEPA). No photographs were taken during the inspection, nor were local government officials interviewed or City of Miamisburg records reviewed. The results of the visual inspection are summarized for each parcel in the following paragraphs.

In Parcel D, there were no observations of non-compliance with the IC's, including no evidence of unauthorized well installation or soil movement. Groundwater monitoring well # 0351 was locked and in good repair. The DOE air monitoring station (# 216) that used to reside in Parcel D, prior to the parcel's transfer to the MMCIC, had already been moved to nearby DOE property by the time of the April 2000 visual inspection. Security fencing between Parcel D and the neighboring DOE property was in good repair.

In Parcel H, there were no observations of non-compliance with the IC's, including no evidence of unauthorized well installation or soil movement. Groundwater monitoring well # 0332 was locked and in good repair. Air monitoring station # 212 was undisturbed and operating. Security fencing between Parcel H and the neighboring DOE property was in good repair.

REVIEW OF INSPECTION PERFORMED IN MAY 2001

On May 29, 2001, the following personnel performed a visual inspection of Parcels D and H: Sue Smiley (DOE-MEMP), Brian Nickel (OEPA), Celeste Lipp (ODH), Dann Bird (MMCIC),

and Donna Gallaher (BWXTO). Mr. Tim Fischer (USEPA, Region 5) was unable to participate in the inspection, however, he agreed to abstain from the inspection (in lieu of postponing it to a later date). A BWXTO photographer accompanied the above five personnel during the inspection. The results of the visual inspection are summarized for each parcel in the following paragraphs.

In Parcel D, there were no observations of non-compliance with the IC's, including no evidence of unauthorized well installation or soil movement. The single biggest change to Parcel D since it was transferred to the MMCIC was the installation of a new cul-de-sac road and associated sidewalks and landscaping. The road connects Parcel D to Mound Road, slightly north of the entrance to Mound Park (see Figure 4). The cul-de-sac road includes a parking lot for Building 105 (see Figure 5) and Building 100 (see Figure 6). Groundwater monitoring well # 0351 was locked and in good repair, however, the annulus was showing signs of wear (see Figures 7 and 8). Since it is poor wellhead practice to allow standing water to accumulate around the wellhead (i.e., could result in infiltration of contaminated water down along the borehole and into the aquifer), the DOE representative on the inspection item took the action to see if repair/replacement of the annulus was warranted. As stated previously, the DOE air monitoring station (# 216) that used to reside on Parcel D was moved to nearby DOE property soon after the parcel was transferred to the MMCIC in 1999. The MMCIC placed a temporary construction trailer where air monitoring station # 216 used to be (see Figure 9). Security fencing between Parcel D and the neighboring DOE property was in good repair. The perimeter fencing between Parcel D and the neighboring private property still had yellow DOE "No Trespassing"signs attached to it, and DOE took the action item to remove the signs from MMCIC's fenceline. Two Dayton Power & Light (DP&L) transformers had been installed on Parcel D. One transformer serves Building 100 and is located near the sewer lift station (see Figure 10). The second transformer serves Building 105 (see Figure 11). DP&L had also installed a switch cabinet in Parcel D, at the end of the cul-de-sac (see Figure 12). Inspectors noted a small pile of dirt that had been staged near Building 105 (see Figure 11 again); however, the MMCIC advised the inspection team that the staged soil in Parcel D was soil excavated from Parcel D, and that excavated soil had remained within the borders of the former Mound Site Property, as a whole. The MMCIC was in the midst of a landscaping project throughout Parcel D and along Mound Road, and stakes had been placed in the ground to show where trees/shrubs were going to be planted (see Figure 13).

In Parcel H, there were no observations of non-compliance with the IC's, including no evidence of unauthorized well installation or soil movement. However, inspectors were unable to locate groundwater monitoring well # 0332 (using maps that showed the location of the well, relative to other landmarks). The team suspected that the wellhead was covered by a small pile of sand that had been temporarily staged by the MMCIC in the northeast corner of the lower parking lot (see Figure 14). Immediately following the walk-over, BWXTO used a global positioning system (GPS) to confirm the location of the well #0332, and the bulk of the staged material was carefully removed by the MMCIC . Well # 0332 (a flush-mount well, in the parking lot, near the curb) appeared to be in good repair and the cover plate was secured (see Figure 15). Well # 0332 was installed in April 1993 and has been sampled by DOE sporadically since. This well

continues to remain accessible for sampling, and has not been abandoned by the DOE. DOE air monitoring station # 212 (co-located with a State of Ohio air sampler), located in the northeast corner of Parcel H, was undisturbed and operating (see Figure 16).

Inspectors toured the northern boundary of Parcel H, where a "T-1" telephone line had been installed. The work was performed at the request of DOE, and involved the installation of a T-1 line along the northern boundary of Parcel H and onto DOE property in front of the OSE/A/OSW building complex. Installation of the T-1 line required excavation and burial of the line (see Figure 17). DOE Headquarters required the T-1 line to support the complex-wide "DOE Net" project. According to the DOE Ohio Field Office Information Management (IM) Team Leader, the DOE Mound Site did not pay for the materials or labor to install the T-1 line, however, BWXTO personnel were present during installation of the line (e.g., Radiation Technicians monitored the excavation work). Sprint subcontracted the job to Ameritech, who subcontracted the work to a third party. It is important to note that a permit to install the T-1 line was <u>not</u> submitted to the City of Miamisburg, because the work was entirely performed within an existing utility easement. Furthermore, the job did not affect utility lines within the City's right-of-way (if it had, a permit would have been required). Since institutional controls prohibit the removal of soil from the original Mound Site Property boundaries, DOE coordinated with the MMCIC on procedures (i.e., other than a City permit) to educate site workers about the deed restrictions associated with a given land parcel. In the case of the T-1 line on Parcel D, the DOE granted a real estate easement to Ameritech (and its successors and assigns) on September 22, 1999, and the easement was subsequently recorded by the Montgomery County Auditor on October 13, 1999. The easement covered work performed under the MMCIC's "East Boundary Improvement Project." Provision 12, Grantee Responsibility, of the subject easement reads, in part: " . . . Grantee . . . shall ensure that any soil within the area identified . . . as a 'soil removal restriction area' shall not be placed on property outside the boundaries of that described in [the deeds for Parcels D and H] . . ." Provision 12 further states, in part: " . . . Grantee warrants that it will make its agents, contractors, employees, etc. aware of the restriction on soil removal and contractually obligate agents and contractors to abide by this restriction . . . "

Security fencing between Parcel H and the neighboring DOE property was in good repair. As with Parcel D, perimeter fencing between Parcel H and the neighboring private property still had yellow DOE "No Trespassing" signs attached to it, and DOE took the action to remove those signs from MMCIC's fenceline. Ameritech had installed a "light span," high-speed telephone line and associated power source on the southern edge of Parcel H (see Figure 18). These fixtures were required to support Internet connectivity for industrial park tenants. DP&L had installed a transformer and switch cabinet near the Ameritech fixtures (see Figure 18 again). Three piles of dirt had been staged in Parcel H; two were along the northern border of the parcel (see Figure 19) and the third pile (which, according to the MMCIC, was topsoil that had been imported to the Mound Site) was along the southern border (see Figure 20). The MMCIC advised the inspection team that the staged soil in Parcel H was soil excavated from Parcel H (excluding the purchased topsoil shown in Figure 20), and that soil excavated from Parcel H would remain within the borders of the former Mound Site Property, as a whole. All staged soil and miscellaneous construction equipment in the lower parking lot was associated with

MMCIC's landscaping project at the new site entrance (see Figure 21); the new entrance was the single biggest change to Parcel H since its transfer to the MMCIC.

INSPECTION PERFORMED IN MAY 2002

On May 21, 2002, the following personnel performed a visual inspection of Parcels D, H and 4: Sue Smiley (DOE-MEMP), Tim Fischer (USEPA, Region 5), Brian Nickel (OEPA), Elizabeth Moore (City of Miamisburg), Dann Bird (MMCIC), Donna Gallaher (BWXTO), Mark Gilliat (BWXTO) and Richard Neff (Sierra Lobo). A BWXTO photographer accompanied the above eight personnel during the inspection. The results of the visual inspection are summarized for each parcel in the following paragraphs; the below text is meant to be additive to (i.e., not duplicative of) the information summarized in the 2001 Inspection section of this report.

In Parcel D, there were no observations of non-compliance with the IC's, including no evidence of unauthorized well installation or soil movement. The only "new" work in Parcel D that had been performed by the MMCIC, since the May 2001 inspection, included the installation of an underground telecommunication conduit at the cul-de-sac (see Figures 22 and 23). Excavation was in-progress during the inspection, and re-grading and seeding will occur upon completing installation of the conduit. The MMCIC advised the inspection team that soil excavated from Parcel D during installation of the conduit would remain within the borders of the former Mound Site Property, as a whole. The landscaping project along Mound Road that was still in-progress on Parcel D during the May 2001 inspection has since been completed by the MMCIC. Groundwater monitoring well # 0351 was padlocked and in good repair. The inspection team confirmed that the DOE "No Trespassing" signs at the Parcel D/private property had been removed. Security fencing between Parcel D and the neighboring DOE property was in good repair.

In Parcel H, there were no observations of non-compliance with the IC's, including no evidence of unauthorized well installation or soil movement. The only "new" work in Parcel H that had been performed by the MMCIC, since the May 2001 inspection, included the installation of a new asphalt berm and metal/concrete bumpers around the two Ameritech fixtures installed the previous Spring (see Figure 24). The inspection team confirmed that the DOE "No Trespassing" signs along the northern boundary of Parcel H had been removed. Security fencing between Parcel H and the neighboring DOE property was in good repair. Groundwater monitoring well # 0332 was clearly visible and in good repair/secure (see Figure 25). A small amount of sand remains staged in the vicinity of the wellhead, however, this sand does not impact DOE's ability to access the well for sampling. Air monitoring station # 212 was undisturbed and operating. The majority of the construction debris and equipment that had been staged in Parcel H during the MMCIC's East Boundary Improvement Project had been removed, and the landscaping around the site entrance was fully seeded and thriving (see Figure 26). The inspection team also toured Seep # 603 on the western boundary of Parcel H, and found no evidence of tampering or visits by children under the age of 18. There was no evidence of soil excavation in Parcel H, nor had the MMCIC undertaken any projects in Parcel H since the May 2001 walk-over.

In Parcel 4 (which was not inspected in May 2001, but was included in the inspection performed in May 2002), there were no observations of non-compliance with the IC's, including no evidence of unauthorized well installation or soil movement. The inspection team noted many changes to the topography and access to the (previously-undeveloped) property that comprises Parcel 4. The MMCIC built a stormwater retention pond on the southwest side of the parcel, and areas surrounding the pond were fully seeded and thriving (see Figure 27). Ameritech had installed a utility cabinet over-looking the retention pond. The MMCIC also installed a new entrance and bridge to access Parcel 4 directly from Old State Route 25 (see Figure 28). A new concrete entrance sign (a "wave wall") was still in the process of being built (see Figures 29 and 30). The Parcel 4 property is still in the midst of a major landscaping project, and soil surrounding the new entrance sign and large portions of Vanguard Boulevard have yet to be seeded/landscaped (see Figures 31 and 32). The excavation portion of this project is nearing completion, however, sidewalks and communication lines still need to be installed/completed. There is also a manhole (associated with the sanitary sewer) that needs be graded up to cover. Although Parcel 4 is an active construction site, it is still clearly evident that soils excavated during this project have been transported throughout the parcel using internal haul roads, including a major haul road running almost parallel to Benner Road in an easterly direction towards higher elevations in Parcel 4 (see Figures 33 through 37). By using the internal haul roads, the MMCIC did not have to transport soils via public roadways (which would have required prior approval from the State of Ohio). Some soil and construction debris (e.g., slabs of asphalt) have been temporarily staged by the MMCIC at the top of the internal haul road on Parcel 4 (see Figure 38). The inspection team toured the length of Vanguard Boulevard, ending in a gravel cul-de-sac at the northwestern corner of Parcel 4 (see Figure 39). As the DOE transfers additional property to the MMCIC, Vanguard Boulevard will be extended and will eventually join the new entrance coming off of Mound Rd through Parcel H.

There are three groundwater monitoring wells on Parcel 4. Two of these wells have been in existence for quite some time, and the third well was installed in the Spring of 2002. Well # 0158 is located between the new entrance to Parcel 4 and Benner Road, near the Benner Road bridge (see Figure 40). The inspection team noted that the well was padlocked, but it was not protected by a concrete pad or stanchions (e.g., to protect it, if a vehicle backed into it). DOE took the action to evaluate whether this well needs additional protective measures. Well # 0354 is located near the northern boundary of Parcel 4, and is accessible via a clear-cut area beneath overhead utility lines running north-to-south across the parcel (see Figure 41). Well # 0354 was padlocked and protected by a concrete pad (see Figure 42). The inspection team also visited DOE's newly-installed groundwater monitoring well (# 0444), which is also located on the northern boundary of Parcel 4, right at the DOE/MMCIC property interface (see Figure 43). This well was installed by the DOE in the Spring of 2002 to determine if Trichloroethylene (TCE) contamination in an up-gradient well (i.e., Well # 0411) is migrating down-gradient. Well # 0444 was not padlocked, nor was the wellhead protected by a concrete pad or stanchions; DOE took the action to ensure this new well is appropriately secured/protected. There is one air monitoring station on Parcel 4, station # 217, located near the intersection of Benner and Mound Roads (see Figure 44); the station was undisturbed and operating at the time of the inspection. Security fencing between Parcel 4 and the neighboring DOE property was in good repair.

INTERVIEWS WITH CITY PERSONNEL AND REVIEW OF CITY RECORDS

In addition to the visual inspection of Parcels D and H performed on May 29, 2001, Ms. Smiley and Mr. Bird interviewed the following City of Miamisburg personnel on May 3, 2001: Jane Hansel (Secretary, Engineering Dept.), Sue Baker (Secretary, Planning Dept.), John Creech (City Planner) and Bob Strome (Building/Electrical Inspector, Engineering Department). On May 8, 2002, Ms. Smiley and Mr. Bird interviewed Ms. Baker once again. In addition to the above interviews, on both May 29, 2001 and May 8, 2002, Ms. Smiley and Mr. Bird reviewed permits maintained by the City Engineering and City Planning Departments. Tables 1 through 4 of this report summarize the Planning Department's permits for: 720 Mound Road (which is the DOE Mound site, as a whole), 9999 Dayton-Cincinnati Pike (a "dummy" address the City Planning Department applied to the MMCIC's new site entrance off of Old State Route 25), 1199 Mound Road (i.e., Building 100), and 1195 Mound Road (i.e., Building 105). Table 5 of this report summarizes the Engineering Department's permits for property associated with the former DOE Mound Site Property.

In general, the permit review process demonstrated that the City of Miamisburg's record-keeping system is adequate. All permits that were expected to be on file with the City were, indeed, on file. Furthermore, all work performed by the MMCIC or other parties (e.g., local utility providers) on former Mound Site property that Ms. Smiley and Mr. Bird were cognizant of during the reporting period appeared to be covered by permits submitted to the City. During the past year, DOE was pleased to see that the City of Miamisburg has initiated an electronic permitting process, which allows permits to be queried via key word searches (e.g., permit #, application date, contractor, location). All future permits will be input in the database; this should make future DOE reviews of City permit records much easier. Older permits (such as the ones summarized in Tables 1 through 5 of this report) may not be input in the City's database, however, paper copies of permits are retained by the City in accordance with a Records Retention Plan that meets all State of Ohio requirements.

Table 1. City of Miamisburg PLANNING Department's file entitled "All Mound buildings (720 Mound Rd.) - General Information"

Permit No.	Date	Submitted by	Nature of Work *	Location of Work	Work Performed by
010335	4/18/01	Chapel Electric	Electrical work. Install underground feeder conduits. Excavation of soil required.	GH Building (Parcel 3) ~	Chapel Electric
001600	12/12/00	Ameritech	Electrical work. Install digitizer	Lower parking lot (Parcel H) +	Ameritech
001591	12/7/00	Rieck Mechanic/ Electrical	HVAC work for GH Building. Installation of new (natural gas) furnace.	GH Building (Parcel 3) ~	Rieck Mechanic/ Electrical
000993	7/19/00	MMCIC	Electrical work. Install lighting for new MATC entrance.	Lower parking lot (Parcel H)	Reese Electric Co.
SC-000895	6/27/00	MMCIC	Sign installation.	Lower parking lot (Parcel H)	At time permit submitted, MMCIC had yet to select contractor.
000604	5/24/00	Kastle Electric	Electrical Work. Install 120-volt feed to boiler. Some excavation required.	GH Building (Parcel 3) ~	Kastle Electric

000327	3/29/00	Rieck Mechanic/ Electrical	HVAC work for GH Building. Installation of furnace adaptable to either propane or natural gas, and new hot water heater.	GH Building (Parcel 3) ~	Rieck Mechanic/ Electrical
991409	12/3/99	MMCIC	Electrical Work. Install 500 amp service for chiller/boiler	Building 105 (Parcel D)	Kastle Electric
990828	8/3/99	MMCIC	Install EDA sign ("Jobs for the Community") at entrance to site. Excavation required to sink sign posts.	Lower parking lot (Parcel H)	Larry Stein Realty Co.
ARC Project # 97032 (City did not assign Permit #)	10/1/97 #	Care Now	Prepare Building 100 for occupancy. ADA upgrades to men's restroom	Building 100 (Parcel D)	Architectural Resources Corporation
City did not assign Permit #	9/4/96 #	Larry Stein Realty Co.	Interior work/ADA upgrades to Building 105. Upgrades also done to leased buildings.	Building 105 (Parcel D)	Larry Stein Reality Co.
SC-104494	10/27/94 #	Kap Signs, Inc.	Install new MATC sign at site entrance (sign subsequently replaced in 2000). Part of East Boundary improvement Project; regrading/ excavation required.	Lower parking Lot (Parcel H)	Kap Signs, Inc.

* Unless otherwise noted, permitted work did not involve excavation of soil.
+ Permit did not include location of work. Interview with City Building/Electrical Inspector confirmed location was Parcel H/lower parking lot.
# Permitted work performed prior to DOE's transfer of parcel to the MMCIC.
~ Work performed by MMCIC in Parcel 3; Parcel 3 not included in scope of this annual report.

NOTE: The Planning Department's "Building COS" file was also reviewed for possible work performed by the MMCIC prior to its receipt of title to Parcels D and H. No permits related to Parcels D or H were found in the COS Building file (nor were any expected).

Table 2. City of Miamisburg PLANNING Department's file entitled "9999 Dayton-Cincinnati Pike" (a "dummy" address for the MMCIC's new site entrance off of Old State Route 25).

Permit No.	Date	Submitted by	Nature of Work *	Location of Work	Work Performed by
020360	4/26/02	Elex, Inc.	Electrical work. Street lights along Benner Rd. and Old State Route 25, and MMCIC's South Spine Road. Involved excavation/installation of underground electrical lines.	Parcel 4	Elex, Inc.
020214	3/25/02	Ameritron	Building permit application for installation of 200 lineal feet entry sign ("wave wall").	Parcel 4	Ameritron

* Unless otherwise noted, permitted work did not involve excavation of soil.

Table 3. City of Miamisburg PLANNING Department's file entitled "Building 100 (1199 Mound Rd.)"

Permit No.	Date	Submitted by	Nature of Work *	Location of Work	Work Performed by
991113	9/28/99	Care Now	Electrical work; some excavation required. Re-feed Bldg 100 from new DP&L transformer	Building 100 (Parcel D)	Kastle Electric
Certificate #1887	1/16/98 #	Care Now	Zoning Permit. Certificate of occupancy for Building 100 tenant (Care Now).	Building 100 (Parcel D)	N/A
BC-1102-97 EC-1129-97 HC-1197-97 BC-1246-97	11/5/97 #	Care Now	Four permits, combined. All for interior work, including HVAC, electrical, and sprinkler system.	Building 100 (Parcel D)	Applied Mechanica l Systems

* Unless otherwise noted, permitted work did not involve excavation of soil.
# Permitted work performed prior to DOE's transfer of parcel to the MMCIC.

Table 4. City of Miamisburg PLANNING Department's file entitled "Building 105 (1195 Mound Rd.)"

Permit No.	Date	Submitted by	Nature of Work *	Location of Work	Work Performed by
001159	8/28/00	Thaler Machine Co.	Interior work only. Upgrades to fire alarm system.	Building 105 (Parcel D)	Kastle Electric
000156	2/17/00	Thaler Machine Co.	HVAC work. Install furnace/boiler.	Building 105 (Parcel D)	Superior Mechanica l Services
000090	1/26/00	Thaler Machine Co.	Install gas piping in building's interior	Building 105 (Parcel D)	Superior Mechanica l Services
991114	9/28/99	Thaler Machine Co.	Electrical work; some excavation required. Re-feed Building 105 from new DP&L transformer.	Building 105 (Parcel D)	Kastle Electric
Certificate #1801	11/25/96 #	Thaler Machine Co.	Zoning Permit. Certificate of Occupancy issued to Building 105 tenant (Thaler Machine Co.)	Building 105 (Parcel D)	N/A
SC-919-95	10/13/95 #	Thaler Machine Co.	Sign installation	Building 105 (Parcel D)	Kap Signs, Inc.
BC-164-95 EC-165-95	3/22/95 #	MMCIC	Two permits, combined. All for interior work, including walls, wiring.	Building 105 (Parcel D)	Larry Stein Realty Co.

BC-164-95 EC-165-95	2/14/95 #	MMCIC	Two permits, combined. All interior work, including modifications to bring Building 105 up to code for tenants' occupancy	Building 105 (Parcel D)	Technical Quality Services

* Unless otherwise noted, permitted work did not involve excavation of soil.
# Permitted work performed prior to DOE's transfer of parcel to the MMCIC.

Table 5. City of Miamisburg ENGINEERING Department's file.

Permit No.	Date	Submitted by	Nature of Work*	Location of Work	Work Performed by
011293	12/10/01	Vectren	Street Opening Permit. Involved installation of gas lines along Vanguard Boulevard, including 50 ft. bore beneath the new South Spine Road.	Parcel 4	Vectren
010378	4/26/01	MMCIC	Street Opening Permit. Involved installation of sidewalk, curb, gas lines, phone lines, storm sewer, sanitary sewer, and potable water lines along Vanguard Boulevard. Some excavation required.	Parcel 4	At time permit submitted, MMCIC had yet to select contractor.
Street Opening Permit # 002466-99	4/7/99	MMCIC	East Boundary Improvement Project, including upgrades along Mound Rd. and construction of cul-de-sac road on Parcel D (sidewalk, curbs, gas, telephone, sewer, water). Permit allowed excavation of soil within the street right-of-way at Mound Road.	Parcel D	Jergens Bales Contractors, Inc.

* Unless otherwise noted, permitted work did not involve excavation of soil.

CONCLUSIONS

The institutional controls for Parcels D, H and 4 continue to function as designed, adequate oversight mechanisms appear to be in place to identify possible violations of those controls, and adequate resources are available to correct or mitigate any problems in the event that a violation were to occur.

RECOMMENDATIONS

(1) For future annual assessments, use a pre-prepared check-list of items during the visual inspection, personnel interviews and permits review. Exhibit A to this report includes a sample check-list. Consistent with guidance offered by the OEPA immediately following this year's inspection and an opportunity for the regulators to review a draft of this annual report, DOE plans to used a modified version of the check-list in Exhibit A for the annual assessment performed in 2003. The modified check-list will be in a tabular form that includes a column indicating whether or not work performed on land parcels required a City permit, and if a permit was required, was it actually obtained (and complied with). Additional columns on the check-list will indicate whether removal of soil or use of groundwater was first approved by the regulators. DOE may continue to modify these check-lists over time or for individual land parcels. The completed check-lists (one for each parcel) would then form the basis for the annual report, and would be in lieu of the detailed narrative style used in this report (for period ending May 2002). If necessary, use photographs or other graphics to illustrate points made in the assessment report/check-list, however, do not include graphics that are duplicative of those used in previous years' reports.

(2) Use aerial photographs, to the extent practical, to document baseline conditions at the time of parcel transfer and to document land use since transfer. The DOE does not need to take aerial photographs every time a parcel is transferred, however, aerial photos may need to be taken on an annual basis for some period of time. This frequency corresponds to the requirement in the O&M Plan (dated 8/13/99), which states [in part]: " . . . an annual assessment of the effectiveness of the institutional controls applied to the former Mound Site property will be conducted . . . culminating in a report to the U.S. and Ohio EPAs . . . this inspection shall be conducted by utilizing a site inspection supported with aerial photographs . . ." As stated previously, the O&M Plan allows DOE to petition the regulators to decrease the frequency of the physical inspections. When, and if, DOE elects to submit such a petition, it would be logical to include in that petition a request to decrease the frequency of the aerial photos (or, perhaps, to continue taking photos on an annual basis for some period of time, in order to establish "time lapse" images that would be useful during future physical inspections and reporting of same).

FOR FURTHER INFORMATION

For further information on the content of this Annual Inspection Report or the DOE-MEMP site, in general, contact:

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DOE-MEMP
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Miamisburg, OH 45343-0066
(937) 865-3984
sue.smiley@ohio.doe.gov

For further information on the regulatory processes governing the land transfer process at the former Mound Site, contact:

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77 W. Jackson Blvd.
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(312) 886-5787
fischer.timothy@epa.gov

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EXHIBIT A

[SAMPLE] Check-list
for
Review of Effectiveness
of
Institutional Controls

Date(s) Performed:

Review led by: Phone #:

Participants:

Parcel reviewed:

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?

Evidence of Soil removal from the "1998 Mound Plant Property"? Yes ( ) No ( )

Evidence of (non-DOE) Groundwater use? Yes ( ) No ( )

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

Signage/Markers in good repair (if applicable)? Yes ( ) No ( )

Fencing in good repair (if applicable)? Yes ( ) No ( )

Groundwater Monitoring Wells maintained properly? Yes ( ) No ( )

Air Monitoring Stations maintained properly (if applicable)? Yes ( ) No ( )

Containment system(s) in good repair (if applicable)? Yes ( ) No ( )

Site Surveillance equipment in good repair (if applicable?) Yes ( ) No ( )

Other equipment associated with maintenance of the Institutional Controls in good repair (if applicable)? Yes ( ) No ( )

Summary of items discovered during previous Review (and disposition of same):

Date of previous Review:

Item # 1: Corrected? Yes ( ) No ( )

Item # 2: Corrected? Yes ( ) No ( )

Item # 3: Corrected? Yes ( ) No ( )

Item # 4: Corrected? Yes ( ) No ( )

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

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):

Based upon the review of the above-listed Documents, were property improvements covered by the appropriate approvals (e.g., construction permit approved by City? movement of soil or use of groundwater approved by the regulators?).

Yes ( ) No ( )

Miscellaneous items noted during review:

Recommendations:

Conclusion:

Checklist prepared by:_____ Date: _____

U.S. Department of Energy

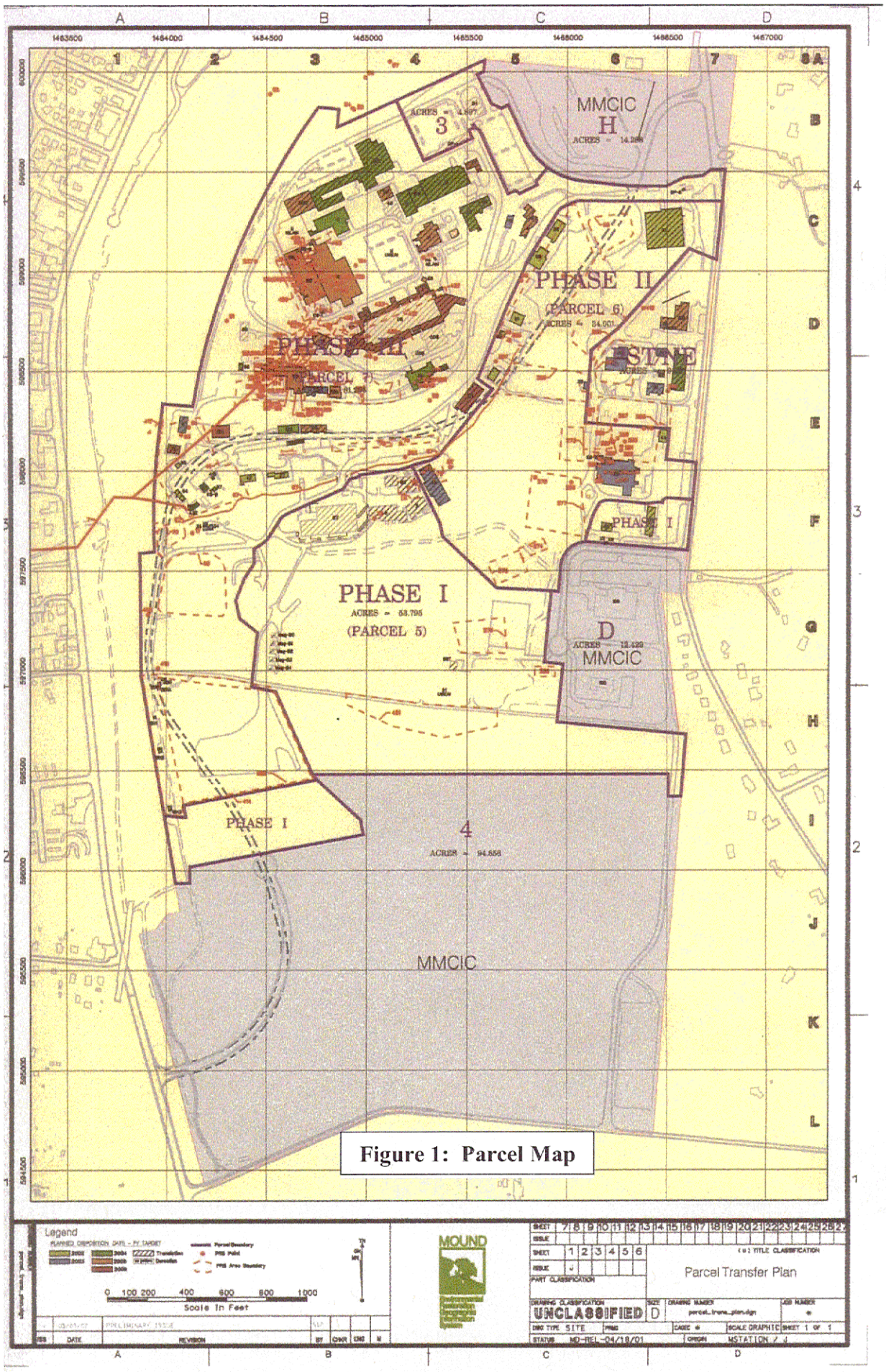

Figure 1: Parcel Map

Figure 2: Aerial photo (April 2002) of original DOE Mound Site Property, as a whole, looking due south.

Figure 3: Aerial photo (April 2002) of original DOE Mound Site Property, as a whole, looking north/northeast.

Figure 4: New cul-de-sac road in Parcel D, looking towards the Indian Mound.

Figure 5: Building 105 parking lot.

Figure 6: Building 100 parking lot.

Figure 7: Groundwater monitoring well # 0351, Parcel D.

Figure 8: Close-up view, Groundwater monitoring well # 0351.

Figure 9: MMCIC's construction trailer, Parcel D.

Figure 10: Building 100 transformer, near the sewer lift station.

Figure 11: Building 105 transformer (against fence) and staged soil for MMCIC landscaping project, Parcel D.

Figure 12: Electrical switch cabinet (center right) at end of cul-de-sac in Parcel D.

Figure 13: MMCIC landscaping project (partially completed), Parcel D/Mound Road interface.

Figure 14: "Before" photo of Groundwater monitoring well # 0332, Parcel H.

Figure 15: "After" photo of Groundwater monitoring well # 0332.

Figure 16: Air monitoring station # 212, Parcel H.

Figure 17: Installation of T-1 telephone line, northern border of Parcel H.

Figure 18: Two DP&L fixtures (foreground), two Ameritech fixtures (background), Parcel H.

Figure 19: Two piles of staged soil in Parcel H.

Figure 20: Topsoil purchased by the MMCIC and temporarily staged in Parcel H for site entrance and landscape project.

Figure 21: New entrance to Mound Advanced Technology Center off of Mound Road.

Figure 22: Excavation work in-progress on Parcel D, for installation of underground telecommunication conduits. When not in use, excavation equipment staged behind Building 105.

Figure 23: Uunderground telecommunication conduits in the process of being installed at the end of cul-de-sac, Parcel D. Groundwater monitoring well # 0351 padlocked and in good repair.

Figure 24: Asphalt berm and metal/concrete bumpers around Ameritech fixtures in Parcel H.

Figure 25: Groundwater monitoring well # 0332 (foreground) and air monitoring station # 212 (background), Parcel H.

Figure 26: New entrance off of Mound Road; landscaping complete.

Figure 27: Stormwater retention pond on Parcel 4. Railroad trestle over Old State Route 25 in background.

Figure 28: New entrance and bridge, off of Old State Route 25, to Parcel 4.

Figure 29: Front view of new "wave wall" at entrance to Parcel 4 off of Old State Route 25.

Figure 30: Rear view of new "wave wall" on Parcel 4. Landscaping still in-progress.

Figure 31: Excavation work along Vanguard Boulevard in Parcel H. Sidewalks newly-poured.

Figure 32: Vanguard Boulevard, near the stormwater retention pond (right of photo). Sidewalks newly-poured.

Figure 33: Internal haul road, running behind the "wave wall" on Parcel 4 to the southwest corner of the parcel (intersection of Benner Road and Old State Route 25).

Figure 34: View from Benner Road bridge, looking east. Internal haul road runs parallel to Benner Road.

Figure 35: Excavated area visible from Benner road. Two of three (DOE) groundwater production wells in background.

Figure 36: Progressing east on Benner Road, to higher elevation. Internal haul roads clearly visible.

Figure 37: View from higher elevation on Parcel 4, looking down internal haul road. Benner Road visible center-left of photo.

Figure 38: Staged soil and slabs of asphalt by (former DOE) "construction gate" entrance to Parcel 4.

Figure 39: View from the temporary cul-de-sac on Parcel 4.
One of three (DOE) groundwater production wells in background.

Figure 40: Groundwater monitoring well # 0158, located near intersection of Benner Road and Old State Route 25. Benner Road bridge in background.

Figure 41: Groundwater monitoring well # 0354 located on edge of clear-cut area for overhead utility lines in Parcel 4. Three smokestacks of coal-fired elctricity plant by Chatauqua bridge visible at skyline.

Figure 42: Groundwater monitoring well # 0354 on Parcel 4.

Figure 43: Newly-installed groundwater monitoring well # 0444 on Parcel 4. (DOE) concrete crusher visible center-right of photo.

Figure 44: Air monitoring station # 217 on Parcel 4 (small structure at center-right of photo). Station located near intersection of Benner and Mound Roads.