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

Prepared by the
U.S. Department of Energy
Miamisburg Closure Project

July 22, 2005

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INTRODUCTION

In accordance with the "Operation and Maintenance (O&M) Plan for the Implementation of Institutional Controls at the *1998 Mound Plant Property,* Phase I Parcel update, Rev. 0," the U.S. Department of Energy (DOE) Miamisburg Closure Project (MCP) is required to perform an annual assessment of the effectiveness of "site-wide" institutional controls (IC) defined in Records of Decision (ROD) covering specific geographic areas of the original ~306-acre former DOE Mound Site Property. The annual review is documented in a draft 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. This year the draft report is to be submitted to USEPA and OEPA, no later than July 31, due to a request by USEPA to delay the physical walk-over portion of the review.

DOE's annual review includes a physical walk-over of each land parcel that has completed the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 120(h) requirements for property transfer. The USEPA, OEPA and the Ohio Department of Health (ODH) must be contacted 30 days in advance (or as otherwise agreed to) of DOE's visual inspection of each property. The DOE's annual review also consists of discussions with the property owner(s), and a review of any records maintained by DOE, the property owner(s), and the City of Miamisburg Engineering and Planning Departments. During the physical walkover, the DOE (or its agent) determines if new facilities have been constructed on the property, if obvious improvements have been made to the property, and/or if property usage has changed. The previous year's inspection provides the basis for determining the nature and extent of property improvements. If there have been changes since the last DOE review & reporting period, DOE must determine if those changes are consistent with the site-wide ICs.

Discussions with local government offices and records reviews will include, at a minimum,

contacting the offices of the City of Miamisburg Engineering and Planning Departments to obtain information regarding construction, street opening, occupancy or other permits, as well as requests for zoning modifications, issued for land parcels that comprise the former DOE Mound Site Property (specifically, those land parcels which have completed the CERCLA 120[h] process for property transfer).

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 discrete land parcels to the Miamisburg Mound Community Improvement Corporation (MMCIC), via a series of quitclaim deeds, once those parcels have been declared excess to DOE's needs and all requirements of CERCLA 120(h) have been met for property transfer. Once the MMCIC acquires ownership of individual land parcels, the parcel becomes part of the Mound Advanced Technology Center (MATC), a light industrial/technology park operated by the MMCIC. In March 1999, the first land parcel (Parcel D) was transferred to the MMCIC. Parcel D contained approximately 12.5 acres of land and two buildings. 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 approximately 95 acres of undeveloped land. In August 2002, a fourth parcel (Parcel 3) was transferred to the MMCIC. Parcel 3 contained approximately 5 acres of land and Buildings GH and GP-1. On July 31, 2003, the Record of Decision (ROD) for a fifth parcel (Phase I parcel) was executed, and on December 11, 2003, the U.S. EPA approved transfer of the parcel to the MMCIC. The Phase I parcel contains approximately 52 acres of land and several buildings. At this point in time, the DOE has yet to offer, for conveyance via quit claim deed, the Phase I parcel to the MMCIC.

Since the O&M Plan for site-wide ICs applies to land parcels that have undergone the CERCLA 120(h) process for property transfer, whether or not title to those parcels is actually transferred (i.e., after DOE's receipt of USEPA's approval to transfer) to the MMCIC, Phase I land parcel is included, even though it has not been transferred to the MMCIC. Therefore the scope of this review includes Parcels D, H, 4, 3 and Phase I. These five land parcels represent approximately 58% of the total acreage that comprised the original ~306-acre former Mound Site Property. At the time this annual report was written, the remaining acreage still subject to completion of the CERCLA 120(h) requirements had been divided into three parcels (Parcels 6, 7 and 8), and the DOE was still in the process of preparing the various documents necessary to complete the CERCLA 120(h) requirements for Parcels 6, 7 and 8. Refer to Figure 1 for a map of the original boundaries of the former DOE Mound Site Property (DOE acreage totaling approximately 306 acres). Land parcels that have been color-coded grey correspond to the five parcels that have completed the CERCLA 120(h) process to-date. Land parcels that have yet to complete the CERCLA 120(h) process (i.e., Parcels 6, 7 and 8) are color-coded yellow.

OVERVIEW OF INSTITUTIONAL CONTROLS

The Mound Site Property is being remediated to achieve USEPA's risk-based industrial/commercial use standards. Once remediation is complete, the DOE mission will be limited to operation and maintenance (O&M) of the CERCLA remedies, including institutional controls and any engineering controls, associated with land parcels that were originally owned by the DOE. Consistent with the definition of "site" in the CERCLA statute, any privately-owned properties that have been impacted by DOE operations, and for which a Record of Decision has been executed, may also be subject to O&M requirements including, but not limited to, institutional controls. This annual report on the effectiveness of "site-wide" ICs includes only those ICs that are defined in RODs covering land parcels that were associated with the original ~306-acre former DOE Mound Site Property.

The RODs, for all parcels that have completed the CERCLA 120(h) process to-date, include the requirement for DOE to perform this annual review of the effectiveness of ICs, which are in the form of deed restrictions. The ROD for each parcel includes the deed restriction language embedded in the quitclaim deed for the parcel. The deed restrictions are communicated to the landowner via the quitclaim deed. The quitclaim deed includes the "CERCLA 120(h) Summary Notice of Hazardous Substances" for the parcel, and the quitclaim deed is recorded with Montgomery County as a matter of public record. By recording both the quitclaim deed and the CERCLA Summary document with the County, all future property owners will be cognizant of the deed restrictions imposed by the CERCLA remedy on their property.

For the five parcels that have completed the CERCLA 120(h) process to-date, there are three deed restrictions. These three deed restrictions will also be included in the ROD that covers the remaining three land parcels (i.e., Parcels 6, 7, 8) of the former DOE Mound Site Property. The first deed restriction prohibits the removal of soil from the original Mound Site Property boundaries, unless prior written approval from the OEPA and ODH has been obtained. The second deed restriction prohibits the extraction, consumption, exposure or use in any way of the groundwater underlying the premises, unless prior written approval from the USEPA and the OEPA has been obtained. The third deed restriction limits land use to industrial/commercial only. Each parcel ROD identifies land uses that 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 preceding language on the deed restrictions applied to all land parcels that have completed the CERCLA 120(h) process to-date is a summary only. Readers are encouraged to consult the ROD for individual land parcels in order to better-understand the parcel-specific deed restriction language. RODs for parcels, as well as other parcel-specific CERCLA documents, are available in the CERCLA Public Reading Room located at 955 Mound Road, 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 120(h) process for property transfer, including a determination of whether or not a particular IC has been violated on a discrete land parcel.

PERIOD OF REVIEW

This annual report covers Parcel D, since its ROD was issued on March 15, 1999; Parcel H, since its ROD was issued on July 22, 1999; Parcel 4, since its ROD was issued on March 12, 2001; Parcel 3, since its ROD was issued on August 28, 2001; and the Phase I parcel, since its ROD was issued on July 31, 2003. The MMCIC is the property owner of Parcels D, H, 4 and 3, however, the DOE still owns the Phase I parcel. Refer to Figure 1 for a map of the original boundaries of the former DOE Mound Site Property, and the boundaries of the first five land parcels that have completed the CERCLA 120(h) process. Each annual report will identify new information, such as new construction, demolition or excavation, lot-splits or sale of parcels to new landowners, and permit applications filed with the City of Miamisburg by property owners or their agents since the last reporting period. Previous annual reports are available in the CERCLA Public Reading Room, and are also included in the official CERCLA Administrative Record for the former Mound Site Property.

AERIAL VIEW OF THE FORMER MOUND SITE PROPERTY

Figures 2 and 3 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 had already 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 a physical inspection of each parcel. The aerial photos also complement photographs taken at ground-level in each parcel during the physical inspections.

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 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. Parcel 4 is at the top of Figure 2; the parcel is bounded to the west by Old State Route 25. The Great Miami River lies to the west of Old State Route 25. Parcel 4 is bounded to the south by Benner Road. Parcel 3 is at the center-bottom of Figure 2. Parcel 3 is bounded to the north by the escarpment dropping down to the Great Miami

River. The Phase I parcel is comprised of three sub-parcels -- the Phase I.A sub-parcel is to the immediate north of Parcel D and contains one building; the Phase I.B sub-parcel is to the west of Parcel D, directly north of Parcel 4, and contains several buildings; and the Phase I.C sub-parcel is at the northwest corner of Parcel 4 and contains no buildings.

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) and the three sub-parcels that comprise the Phase I parcel. 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 open green space at the top-right of the photo). Parcel 3 is at center left in Figure 3; this view gives the reader an idea of how close the original Mound Site Property is to residential areas and downtown Miamisburg.

Figure 4 is a digitized aerial photo (taken in April 2004) of the original boundaries of the Mound Site Property. Figures 5 through 11 are digitized aerial photos of Parcels D, H, 4, 3, and the three sub-parcels that comprise Phase I, respectively, and are provided for comparison purposes to Figure 1 (parcel map).

SUMMARY OF PREVIOUS YEAR'S INSPECTION

Based upon the results of a physical inspection, document review and personnel interview process performed in June 2004 for Parcels D, H, 4, 3 and Phase I, the DOE and its regulators agreed that the three site-wide ICs were operating as designed, adequate oversight mechanisms were in place to identify possible violations of those controls, and adequate resources were available to correct or mitigate any problems in the event that a violation were to occur. There were two recommendations in the June 2004 annual report; these recommendations were based on best management practices for the DOE groundwater monitoring network. These recommendations were <u>not</u> related to the effectiveness of the CERCLA remedy for "site-wide" ICs on Parcels D, H, 4, 3 and Phase I, and were simply included in the June 2004 report because the annual physical walk-over of each land parcel provides DOE and its regulators with a convenient means to inspect general site conditions (e.g., preventive maintenance program for monitoring wells) that are not necessarily associated with the purpose of the walk-over that day (which is, assessing the effectiveness of the site-wide ICs on all land parcels that have completed the CERCLA 120[h] process for property transfer).

SUMMARY OF INSPECTION PERFORMED IN JUNE 2005

On June 15, 2005, the following personnel performed a visual inspection of Parcels D, H, 4, 3 and Phase I: Paul Lucas (DOE Remedial Project Manager), Tim Fischer (USEPA Remedial

Project Manager), Chris White (DOE-EM/MCP), Becky Cato (DOE-LM), Art Kleinrath (DOE-LM), Ed Pietsch (SM Stoller), Ron Staubly (DOE-LM), Jane Tomcisin (OEPA), Beth Moore (City of Miamisburg), Frank Bullock (MMCIC), and Monte Williams (CH2M Hill Mound, Inc.). The results of the visual inspection for each parcel are summarized in the following paragraphs.

Parcel D:

In Parcel D, there were no observations of non-compliance with the ICs, including no evidence of unauthorized well installation or soil removal from the original boundaries of the Mound Site Property. There were two piles of staged sand in the southeast corner of the parcel. These piles were fill material that MMCIC imported to the site, and the piles have remained un-changed since they were described in the 2003 annual report. Groundwater monitoring well # 351 on Parcel D has been abandoned (Figures 12 and 13). The former Salt Storage Shed (now empty), located in the Phase I parcel, is visible in the background of Figure 12.

Parcel H:

In Parcel H, there were no observations of non-compliance with the ICs, including no evidence of unauthorized well installation or soil removal from the original boundaries of the Mound Site Property. Groundwater monitoring well # 332 (located in a parking lot) has been abandoned (Figure 14). There are DOE and OEPA air monitoring stations located on the southeast corner of Parcel H. Air monitoring is not part of the CERCLA remedy for Parcel H.

Parcel 4:

In Parcel 4, there were no observations of non-compliance with the ICs during the walkover. However an IC violation was observed on June 23, 2005, when teenagers were observed fishing in the MMCIC pond. There was no evidence of unauthorized well installation or soil removal from the original boundaries of the Mound Site Property. The year old "Flex" building (Figure 15) is leased to a single tenant. The tenant's line of business is consistent with the City of Miamisburg's I-2 General Industrial District Zoning ordinance.

There are three groundwater monitoring wells on Parcel 4. Well # 158 (Figure 16) is located near the intersection of Benner Road and Old State Route 25. Well # 354, located near the northern boundary of Parcel 4, has been abandoned (Figure 17). Well # 444 is located on the northern boundary of Parcel 4, near the boundary of the Phase I parcel (Figure 18). Well # 444 was padlocked and in good repair. However, Well # 444 is not identified by a monument. A United States Geological Service (USGS) marker is also located on Parcel 4, near the intersection of Benner and Mound Roads.

There is a storm water run-off retention pond located on Parcel 4 (Figures 19 to 23). This pond has been posted "Recreational Use Prohibited". There are four signs around the pond. The signs were placed around the pond after people were observed fishing in the pond during June 2004. The signs do not appear to be working since two children were observed fishing at the retention

pond on June 23, 2005 (Figures 24 and 25). Both adults and children have been observed fishing in the retention pond multiple times. Fishing in the retention pond is a violation of the Institutional Controls and is not just a one time occurrence. Exhibit 2 is an EPA document on the role of Institutional Controls.

Improvements have been made by MMCIC to the southern boundary of Parcel 4 (Figures 26 and 27). The sidewalk cut off access to the old construction entrance to the Mound Facility. Soil piles have also been staged by the MMCIC near the southern boundary of Parcel 4 (Figures 28 and 29). The MMCIC construction spoils area is shown on Figures 30 and 31.

Parcel 3:

In Parcel 3, there were no observations of non-compliance with the ICs, including no evidence of unauthorized well installation or soil removal from the original boundaries of the Mound Site Property. No groundwater monitoring wells are located on Parcel 3. The parcel remains virtually unchanged (i.e., two buildings and three parking lots) since DOE transferred the property to the MMCIC in August 2002. Since last year's annual inspection, a subsidence caused by erosion from a broken storm water line, at the southeastern end of the parcel, was repaired (Figure 32). The sink-hole did not affect any of the IC's associated with Parcel 3, nor did it affect any ongoing environmental restoration on DOE-owned property and/or the CERCLA remedies associated with any other DOE or MMCIC-owned properties associated with the original Mound Plant Site.

Phase I parcel:

In the Phase I parcel, there were no observations of non-compliance with the ICs, including no evidence of unauthorized well installation or soil removal from the original boundaries of the Mound Site Property. As mentioned in an earlier section of this report, the Phase I parcel is divided into three sub-parcels (none of which are contiguous with one another). At this point in time, none of the Phase I sub-parcels have been transferred to the MMCIC. Unlike Parcels D, H, 4 and 3, the Phase I parcel includes <u>both</u> an IC remedy and a Monitored Natural Attenuation (MNA) Remedy. Eight (8) groundwater monitoring wells and one groundwater seep are included in the "Phase I Remedy (Monitored Natural Attenuation) Groundwater Monitoring Plan." Five of the eight wells (Well #'s 400, 411, 443, 445, and P033), and the seep (Seep # 617), are located in the Phase I parcel. One of the eight wells (Well # 444 shown in Figure 18) is located in Parcel 4, and the remaining two wells (Well #'s 353 and 402) are located on proposed Parcel 8, DOE-owned property to the north of the Phase I.C sub-parcel. This annual report documents the effectiveness of the Institutional Controls remedy applied to the Phase I parcel (and Parcels D, H, 4 and 3); this report does not include a determination of the effectiveness of the MNA remedy associated with the Phase I parcel. (The annual Phase 1 Groundwater Monitoring Report is in the process of being finalized, as of October 12, 2005. Once it is finalized, this report will be placed in the CERCLA Public Reading Room at 955 Mound Road, Miamisburg, OH 45342.) However, since well #'s 353 and 402 fall outside the boundaries of the Phase I parcel, but are included in the Phase I MNA remedy/groundwater monitoring plan, these

two wells are mentioned briefly in this report. Figure 33 shows well # 353, which is located in the old spoils area. Well # 353 was unlocked, peeling paint, and the inside cover was missing. On June 27, Chris White (DOE-MCP) verified that the well was properly locked and that a new cover had been placed on the casing inside the cover pipe. Figure 34 shows Well # 402 on DOE property. Well # 402 was padlocked and in good repair.

There are five wells located in the Phase I parcel, which are subject to the monitoring requirements in the Phase I MNA remedy/groundwater monitoring plan. Well #'s P033 (Figure 35) and 400 (Figure 36), located in the Phase I.C sub-parcel, are screened in the Buried Valley Aquifer (BVA), well # 445 (Figure 37) is a bedrock well that is also located in the Phase I.C sub-parcel, and Well #'s 411 (Figure 38) and 443 (Figure 39) are bedrock sources located in the Phase I.B sub-parcel. Seep # 617 (Figure 40) is also located in the Phase 1.B sub-parcel. There are three other monitoring wells located in the Phase I parcel, Well # 399 (Figure 41) was abandoned during the past year. Well #'s 399 (Figure 41) and 442 (Figure 42) in the Phase I.B sub-parcel, and well #'s 344 and 319 in the Phase I.C sub-parcel. However, none of these four wells are subject to the Phase I MNA remedy/groundwater monitoring plan.

INTERVIEWS WITH CITY PERSONNEL AND REVIEW OF CITY OR MMCIC RECORDS

In addition to the visual inspection of Parcels D, H, 4, 3 and Phase I performed on June 15, 2005, representatives from the DOE (Ms. Sue Smiley) and the MMCIC (Mr. Frank Bullock) visited the City of Miamisburg Engineering and City Planning Departments on May 11, 2005, and reviewed permits maintained by those departments for all work performed by MMCIC and/or its tenants or subcontractors, on Parcels D, H, 4, 3 and Phase I. Of all permits reviewed, twelve (12) permits pertained to work performed on, or that had the potential to impact, Parcels D, H, 4, 3 and Phase I, since the date of DOE's last inspection of Parcels D, H, 4, 3 and Phase I (i.e, June 2004). Those 12 permits are detailed in the six (6) tables on the following pages. Any work under an approved permit that included excavation is highlighted in bold text.

In general, the permit review process that was jointly conducted by DOE and the MMCIC on May 11, 2005 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., contractors to the MMCIC) on the former Mound Site Property, that Ms. Smiley and Mr. Bullock were cognizant of during the 12-month reporting period, appeared to be adequately covered by permits submitted to, and approved by, the City of Miamisburg. As noted in DOE's 2004 annual report on the effectiveness of site wide ICs, in 2003, the City of Miamisburg implemented an electronic permits database, which allows permits to be queried via key word searches (e.g., permit number, date, location, nature of work). Permits issued by the City prior to implementation of the City's new database (e.g., permits documented in DOE's annual reports dating back to 2001) may not be input in the City's database, however, paper copies of all permits are retained by the City in accordance with a Records Retention Plan that meets all State of Ohio requirements.

Given that permits filed with the City of Miamisburg do not have a set expiration date, DOE and the property owner (at present, the MMCIC) should remain cognizant of permits filed with the City of Miamisburg, where work covered by that permit may have been postponed for performance at a later date. Maintaining this cognizance will provide a checks-and-balance that work requiring a permit (e.g., installation of underground utility service in a public right-of-way), and which was performed since the date of the last DOE inspection was, indeed, approved by the appropriate City officials.

> **NOTE:** The six tables on the following pages, deliberately, do not repeat information on permits included in previous year's DOE reports on the effectiveness of the site-wide ICs. Nor will each year's report necessarily list permits filed by the MMCIC and/or its tenants or subcontractors for work performed on DOE-owned/MMCIC-leased property. Instead, the following tables are typically limited to permits filed after a Record of Decision (ROD) has been executed for a particular parcel, since DOE is responsible for operation and maintenance (O&M) of the site-wide ICs remedy (regardless of whether or not DOE has conveyed title of that parcel, in whole or in part, to the MMCIC).

Until DOE conveys a land parcel to the MMCIC, in whole or in part, the property is not subject to City of Miamisburg permitting requirements. In some cases (such as all of the permits listed in the following tables for buildings located in the Phase I parcel), DOE has elected to list some "pre-ROD" permits in this annual report, because some of that work involved excavation and subsequent movement of excess soil to MMCIC-owned property that lies within the ~306-acre footprint of the former Mound Site Property. An example of a "pre-ROD" permit is the MMCIC's façade and side-walk improvement project for the former DOE buildings OSE, OSW and COS (refer to the following section of this annual report for information on the individual Permits issued by the City of Miamisburg for this MMCIC-performed work on DOE-owned property). The MMCIC has proactively used the City-permitting process in order to familiarize the City with the properties that will eventually belong to the MMCIC. This familiarity can greatly reduce the amount of time it takes for the MMCIC to receive City approval (e.g., for a Building Occupancy Permit), once the MMCIC acquires title of that property from the DOE. Since DOE first began performing annual inspections of City records in May 2001, the DOE has performed spot-checks of all permits located within a particular City file (City files are maintained by street address) in order to confirm that the entire set of permits is maintained in chronological order (most-recent at front of file). These spot-checks have consistently shown that the City maintains its permit files under configuration control. The below list provides a "cross-walk" of the former DOE Building names/numbers, and the corresponding new Miamisburg street addresses. Not all of the below-listed former DOE buildings reside in a land parcel that DOE has conveyed, in whole or in part, to the MMCIC via quitclaim deed. The list provides an accurate listing of the Miamisburg street addresses associated with each building.

Former DOE Building	New Miamisburg street address
28	330 Capstone Circle
45	935 Vanguard Blvd.
61	885 Mound Rd.

63	1070 Vanguard Blvd.
87	1100 Vanguard Blvd.
100	790 Enterprise Court
102	1075 Mound Rd.
105	1195 Mound Rd.
126	955 Mound Rd.
COS	360 Capstone Circle
GH	500 Capstone Circle
OSE	480 Capstone Circle
OSW	460 Capstone Circle
T	350 Capstone Circle

The following six tables, and "Note" at the end of the tables, correspond to the City of Miamisburg's filing system, which provides each former DOE building name or number with a street address, except for those former DOE buildings that the MMCIC plans to demolish.

Table 1. City of Miamisburg's file on "360 Capstone Circle" (former DOE building COS).

Permit No.	Date of Permit Request	Permit Submitted by	Nature of Work	Location of Work	Work Performed by
050221	3/16/05	Gebhart Electric	Electrical Permit (COS façade project)	Building COS, Parcel 8	Gebhart Electric
050006	1/6/05	Ferguson Construction	Building Permit (COS [same permit also covers façade work for former DOE buildings OSE & OSW] façade project, include **excavation** & grading for sidewalks)	Building COS, Parcel 8	Ferguson Construction
040037	1/12/04	James W. Fischer, III	Electrical Permit (adding circuits)	Building COS, Parcel 8	James W. Fischer, III

Table 2. City of Miamisburg's file on "480 Capstone Circle" (former DOE building OSE).

Permit No.	Date of Permit Request	Permit Submitted by	Nature of Work	Location of Work	Work Performed by
050005	1/6/05	Frye Mechanical, Inc.	HVAC Perrmit (installation of boiler/chiller unit)	Building OSE, Parcel 6	Frye Mechanical, Inc.

Table 3. City of Miamisburg's file on "330 Capstone Circle" (former DOE building 28).

Permit No.	Date of Permit Request	Permit Submitted by	Nature of Work	Location of Work	Work Performed by
040030	1/8/04	Chapel Electric	Electrical Permit (over-head work)	Building 28, Parcel 6	Chapel Electric

Table 4. City of Miamisburg's file on "955 Mound Road" (former DOE building 126).

Permit No.	Date of Permit Request	Permit Submitted by	Nature of Work	Location of Work	Work Performed by
040948	10/11/04	Frye Mechanical, Inc.	HVAC Permit (new boiler)	Building 126, Parcel 6A	Frye Mechnical, Inc.

Table 5. City of Miamisburg's file on "1100 Vanguard Boulevard" (former DOE building 87).

Permit No.	Date of Permit Request	Permit Submitted by	Nature of Work	Location of Work	Work Performed by
050201	3/14/05	Larry Stein Construction	Building Permit (install foundation for storage building [**excavation** required])	Building 87, Phase 1	Larry Stein Construction
050258	3/30/05	Larkin Electric	Electrical Permit (electrical work for new storage building)	Building 87, Phase 1	Larkin Electric

Table 6. City of Miamisburg's file on "1388, 1390, 1392, 1394, 1396 and 1398 Vanguard Boulevard" (currently treated as "1390 "Vanguard Boulevard [i.e., MMCIC's newly-constructed "Flex" building on Parcel 4]. Note that street address "1388" is actually the address for the Dayton Power & Light [DP&L] "house" meter. The five other street addresses correspond to the work-spaces that could have housed five different tenants; however, the entire building is currently inhabited by a single tenant).

Permit No.	Date of Permit Request	Permit Submitted by	Nature of Work	Location of Work	Work Performed by
040581	6/23/04	Ohio Valley Fire Protection	Building Permit (sprinkler modifications)	Flex Building, Parcel 4	Ohio Valley Fire Protection
040469	6/2/04	Ferguson Construction	HVAC Permit (install furnace & air conditioning for single tenant build-out)	Flex Building, Parcel 4	Ferguson Construction
040468	6/2/04	Ferguson Construction	Electrical Permit (electrical work for single tenant build-out)	Flex Building, Parcel 4	Ferguson Construction
040412	5/18/04	Ferguson Construction	Building Permit (office fit-up)	Flex Building, Parcel 4	Ferguson Construction

NOTE: The following additional City files were reviewed by DOE and MMCIC on May 11, 2005, however, none of these files contained permits that had not already been identified in previous DOE annual reports on the effectiveness of site-wide ICs. The City of Miamisburg does not maintain files on buildings that the MMCIC plans to demolish (e.g., GP-1 Building in Parcel 3; and Buildings 3, 63, the explosives magazines and Salt Storage Shed in the Phase I parcel). City files do exist on buildings that have already been demolished (e.g., former DOE buildings 49 and 60), however, those files are now considered obsolete.

City of Miamisburg's file on "500 Capstone Circle" (former DOE building GH): No permits filed since permits were first identified in previous DOE annual reports on effectiveness of site-wide Institutional Controls.

City of Miamisburg's file on "790 Enterprise Court" (previously listed as "1199 Mound Road" [former DOE building 100]): No permits filed since permits were first identified in previous DOE annual reports on effectiveness of site-wide Institutional Controls.

City of Miamisburg's file on "1195 Mound Road" (former DOE building 105): No permits filed since permits were first identified in previous DOE annual reports on effectiveness of site-wide Institutional Controls. .

City of Miamisburg's file on "1075 Mound Road" (former DOE building 102): No permits filed since permits were first identified in previous DOE annual reports on effectiveness of site-wide Institutional Controls.

City of Miamisburg's file on "1070 Vanguard Boulevard" (former DOE building 63): No permits filed since permits were first identified in previous DOE annual reports on effectiveness of site-wide Institutional Controls.

City of Miamisburg's file on "885 Mound Road" (former DOE building 61): No permits filed since permits were first identified in previous DOE annual reports on effectiveness of site-wide Institutional Controls.

City of Miamisburg's file on "720 Mound Road" (AKA "All Mound Buildings"): No permits filed for this catch-all category, since various building-specific permits were first identified in previous DOE annual reports on effectiveness of site-wide Institutional Controls.

Records, other than Permits, issued by the City of Miamisburg:

The property-owner's adherence to the site-wide ICs imposed on a land parcel is critical to DOE's effective maintenance of the CERCLA Remedy. The MMCIC, including all future property owners, are required to comply with the institutional controls associated with parcels at the former DOE Mound Site Property. To facilitate compliance, the MMCIC ensures that all parties performing work on behalf of the MMCIC (e.g., landscaping, utility work involving excavation, construction) are aware of, and subject to compliance with, the institutional controls. The MMCIC accomplishes this consistently embedding the following language in the Technical Requirements section of all Requests for Proposal (RFP) and subsequent Work Orders:

> *Excavated soils must be managed and remain on MMCIC property. Soils from excavation shall be placed at an on-site location, as directed by MMCIC.*

The MMCIC Project Manager who oversees work performed on-site also monitors the vendor's work and conformance to all Technical Requirements in the Work Order. In addition to the Technical Requirement requiring compliance with the institutional controls, the MMCIC provides a real estate easement to the vendor, and this easement is recorded with Montgomery County as a matter of public record. A copy of the real estate easement used for utility work on MMCIC property in included as Exhibit 1. Note that section 2 of the easement provides detailed information to the utility provider/vendor on the institutional controls associated with the MMCIC's property. This requires compliance with restrictions, which are the institutional controls.

Continuing public education is an important component of DOE's post-closure responsibilities. Exhibit 2 is a document produced by the EPA to provide information concerning institutional controls to citizens. Educating all future property owners on their responsibility to comply with the institutional controls will be an important element of the DOE's public education campaign. It is more difficult, for DOE and the property-owner (currently, the MMCIC), to educate the general public on the importance of adhering to the site-wide ICs. Therefore, postings such as warning signs near the MMCIC pond that recreational use is prohibited is important to properly educate the public regarding required compliance with institutional controls. However, as noted elsewhere in this report, these signs do not appear to be working since several people have been observed fishing in the retention pond.

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

MMCIC's Comprehensive Reuse Plan (last updated in December 2003) identifies each building at the Mound Advanced Technology Center with its own lot. Eventually, the MMCIC plans to plat the entire former DOE Mound Site Property. In order for the MMCIC to receive financing (e.g., for new construction) on land parcels that comprise the original Mound Site Property, the MMCIC records a lot split with the Montgomery County Recorder's Office. If the MMCIC does not require financing for property improvements it conducts within a parcel, the MMCIC does not have to immediately record a Miamisburg Planning Commission-approved lot split with the County. However, if the MMCIC decides to sell the property, the MMCIC has to record the lot split with the County at that time. The recorded real estate documentation would include the original quitclaim deed that DOE issued to the MMCIC for the parcel, as a whole, as well as the "CERCLA 120(h) Summary Notice of Hazardous Substances" associated with the original parcel. This will ensure that future property-owners, of individual lot splits, remain aware of the site-wide ICs imposed on acreage that lies within the boundaries of the parcels as originally-conveyed by the DOE to the MMCIC.

The property-owner's adherence to the IC's imposed on a land parcel is vital to the effective maintenance of those IC's. MMCIC currently coordinates the movement of soil and site grading, as the DOE completes remediation of individual soil contamination sites. Once the DOE-EM mission is complete, managing the movement of soil throughout the site should be an effective way for the property owner(s) to ensure that soil is not being removed from the site, as a whole. To accomplish this task, the MMCIC's Comprehensive Reuse Plan (CRP) establishes locations where future construction/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 incorporated in the City's Comprehensive Plan. The City's Comprehensive Plan is the basis for zoning of properties that fall within the city limits. If the MMCIC decides to subdivide the property and sell portions (or all) of the former DOE Mound Site Property, the new

property owners would be required to comply with the requirements stipulated in the CRP and the City's Comprehensive Plan.

CONCLUSIONS

The institutional controls for Parcels D, H, 3 and Phase I 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. However, the institutional control for Parcel 4, prohibiting recreational use of the MMCIC pond, does not appear to be effective. Teenagers were observed fishing in the MMCIC pond (Figures 24 and 25).

RECOMMENDATIONS

MMCIC needs to develop and place signs, with more warnings to the public, to prevent recreational use of the MMCIC pond in Parcel 4. The current sign does not effectively keep people from fishing in the MMCIC pond.

FOR FURTHER INFORMATION

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

Mr. Paul Lucas
Remedial Project Manager
DOE-MCP
175 Tri County Parkway
Springdale, OH 45246
(513) 246-0071

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

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

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

EXHIBIT 1

Real Estate Easement for Utility Work

Performed on MMCIC Property

NO TRANSFER
08:01aa MARCH 20, 2003
KARL L. KEITH, COUNTY AUDITOR

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 17th 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,

$90.00 03/20/ 3:12:27
EASE-03-036151 0023
Montgomery County
Judy Dodge Recorder

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

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

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

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

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

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

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

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

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

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

DECLARANT:

MIAMISBURG MOUND COMMUNITY
IMPROVEMENT CORPORATION

By: _____

Printed Name: Michael J. Gruenbacher

Title: President

STATE OF OHIO, COUNTY OF MONTGOMERY, SS:

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

_____
NOTARY PUBLIC

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

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

EXHIBIT 2

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

Performed on MMCIC Property

United States
Environmental Protection
Agency

OSWER 9255.0-98
EPA-540-R-04-004
February 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

Table of Contents

PURPOSE 1

WHAT ARE INSTITUTIONAL CONTROLS? 2

WHEN ARE ICs USED? 2

WHY CAN'T ALL THE CONTAMINATION BE REMOVED?..... 3

ARE ICs RELIABLE?..... 3

HOW MANY ICs ARE REQUIRED? 3

WHO IS RESPONSIBLE FOR MAKING SURE ICs WORK AS INTENDED? 4

WILL ICs HINDER THE USE OF THE SITE? 4

HOW AND WHEN CAN THE COMMUNITY GET INVOLVED? 5

CONCLUSION 5

GLOSSARY..... 6

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

PURPOSE

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

Key Points

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

- ICs are designed to lower the potential for people and the environment to be exposed to contamination.

- ICs are usually most effective when layered and used in series to improve protectiveness.

- ICs should fit the needs of the specific site and community.

- The community can play an important role in identifying potential future uses of the site.

- A cooperative relationship should be established early between government, the entity doing the cleanup and the community.

- Seeking community input and involvement can maximize the effectiveness of ICs.

- Communities can play a vital role as "eyes and ears" for monitoring ICs.

- Federal, state, tribal, and local governments and parties responsible for the cleanup should keep the public informed of cleanup decisions that may affect them.

What Are Institutional Controls?

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

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

2) **Proprietary Controls-** include property use restrictions based on private property law (e.g., ***easements*** and covenants);

3) **Enforcement Tools-** include documents that require individuals or companies to conduct or prohibit specific actions (e.g., environmental cleanup ***consent decrees, unilateral orders,*** or permits); and,

4) **Informational Devices-** include ***deed notices*** or public advisories that alert and educate people about a site.

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

When Are ICs Used?

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

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

ICs can play an important role when a cleanup is conducted and when it is too difficult or too costly to remove all contamination from a site. ICs are rarely used alone to deal with contamination at a site. Typically, ICs are part

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

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

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

Why Can't All The Contamination Be Removed?

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

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

Are ICs Reliable?

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

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

How Many ICs Are Required?

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

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

Who Is Responsible For Making Sure ICs Work As Intended?

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

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

Will ICs Hinder The Reuse of the Site?

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

Communities should be proactive in communicating with appropriate decision-makers about the types of land use they think will be best for their community. Because each community has a different history and different development needs, it is critical that these needs are effectively communicated to elected officials and the cleanup agency so they can be taken into consideration during selection of the cleanup method and reuse plan for the site. Opportunities for involvement include attending public meetings, commenting on

documents which state potential cleanup methods, and participating in local groups.

How And When Can The Community Get Involved?

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

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

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

CONCLUSION

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

For additional information about ICs, refer to the EPA web page at: www.epa.gov/superfund/action/ic/index.htm. For site specific information contact the Office of Superfund Remediation and Technology Innovation (OSRTI), the Federal Facilities Restoration and Reuse Office (FFRRO), the Office of Solid Waste (OSW or RCRA), the Office of Brownfields Cleanup and Redevelopment (OBCR), or the Office of Underground Storage Tanks (OUST) and/or the respective state or local agency. Information about EPA program offices can be found online at http://www.epa.gov/oswer/.

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

GLOSSARY

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

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

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

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

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

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

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

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

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

LIST OF FIGURES

Figure 1: Parcel map, as of May 2004, for the DOE Mound Site Property.
Figure 2: Aerial photo of original DOE Mound Site Property, as a whole, looking due south. Photo taken April 2002.
Figure 3: Aerial photo of original DOE Mound Site Property, as a whole, looking north/northeast. Photo taken April 2002.
Figure 4: Digitized aerial photo of original DOE Mound Site Property, as a whole. Photo taken April 2004.
Figure 5: Digitized aerial photo of Parcel D taken April 2004.
Figure 6: Digitized aerial photo of Parcel H taken April 2004.
Figure 7: Digitized aerial photo of Parcel 4 taken April 2004.
Figure 8: Digitized aerial photo of Parcel 3 taken April 2004.
Figure 9: Digitized aerial photo of Phase 1.A Sub-parcel taken April 2004.
Figure 10: Digitized aerial photo of Phase 1.B Sub-parcel taken April 2004.
Figure 11: Digitized aerial photo of Phase 1.C Sub-parcel taken April 2004.
Figure 12: Groundwater well #351 (abandoned) located in Parcel D, with open building previously used for salt storage in background.
Figure 13: Groundwater well #351 shown abandoned with permanent identification tag on concrete pad (located in Parcel D).
Figure 14: Groundwater well (flush mount) #332 shown abandoned in northeast corner of Parcel H.
Figure 15: MMCIC Flex building located in southeast corner of Parcel 4. View from backside entrance off of Benner Road.
Figure 16: Groundwater well #158 located in the southwest corner of Parcel 4, near the intersection (in background) of Benner Road and Old State Route 25.
Figure 17: Groundwater well #354 (shown abandoned) on northern boundary of Parcel 4. MMCIC's storm water retention pond and fountain visible in background.
Figure 18: Groundwater well #444 on northern boundary of Parcel 4.
Figure 19: MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and MMCIC flex building in background.
Figure 20: MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and entrance to Vanguard Blvd in background.
Figure 21: MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and MMCIC flex building in background.
Figure 22: MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and rail trestle over SR 25 in background.
Figure 23: MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and Mound Plant in background.
Figure 24: MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and boys fishing in background.
Figure 25: MMCIC Pond located in southwest corner of Parcel 4 showing a boy with a fishing pole.

LIST OF FIGURES (continued)

Figure 26: View looking west along Benner Road with MMCIC flex building in background showing improvements made by MMCIC to southern boundary of Parcel 4.

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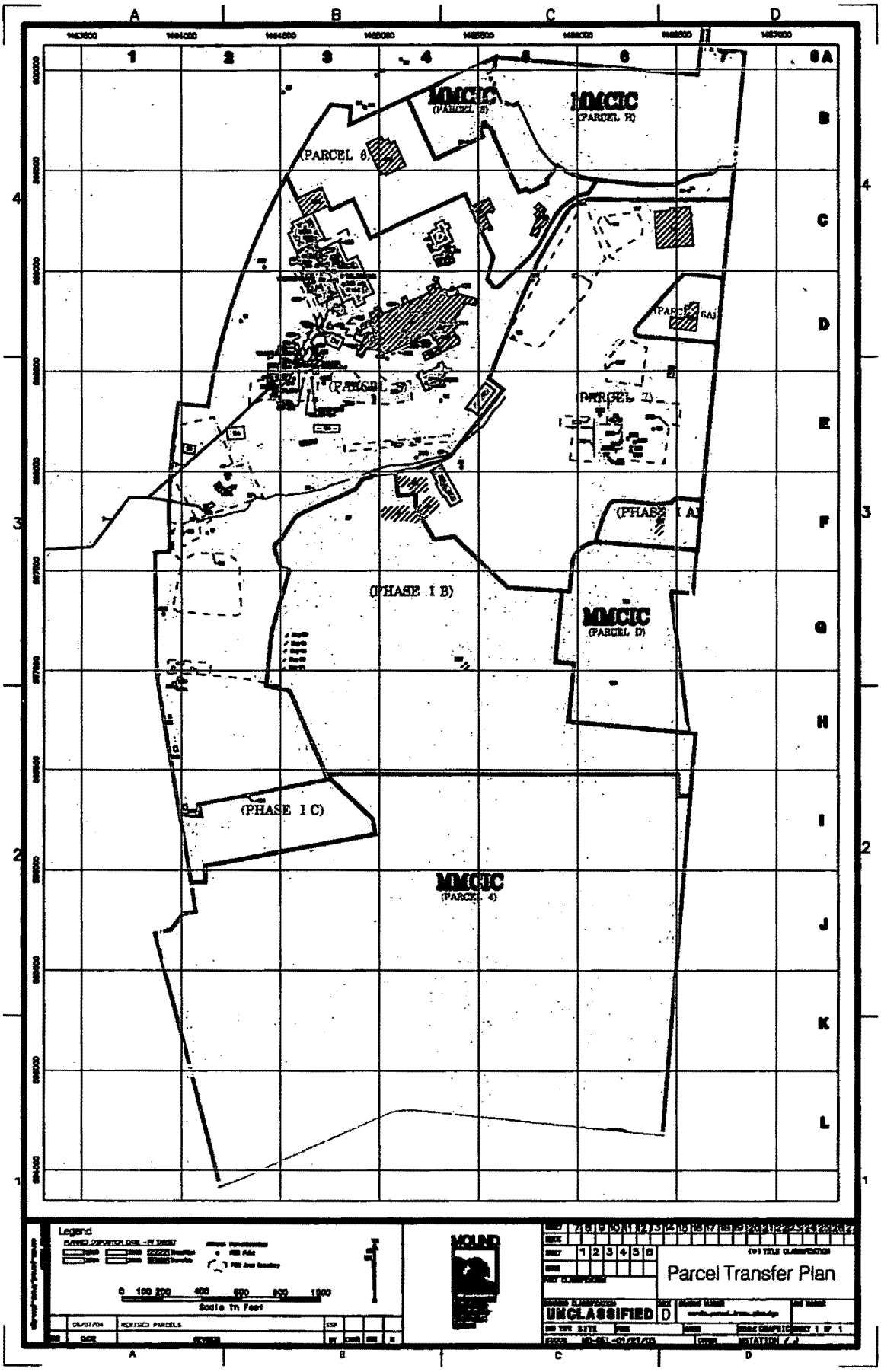


Figure 1. Parcel map, as of May 2004, for the DOE Mound Site Property.

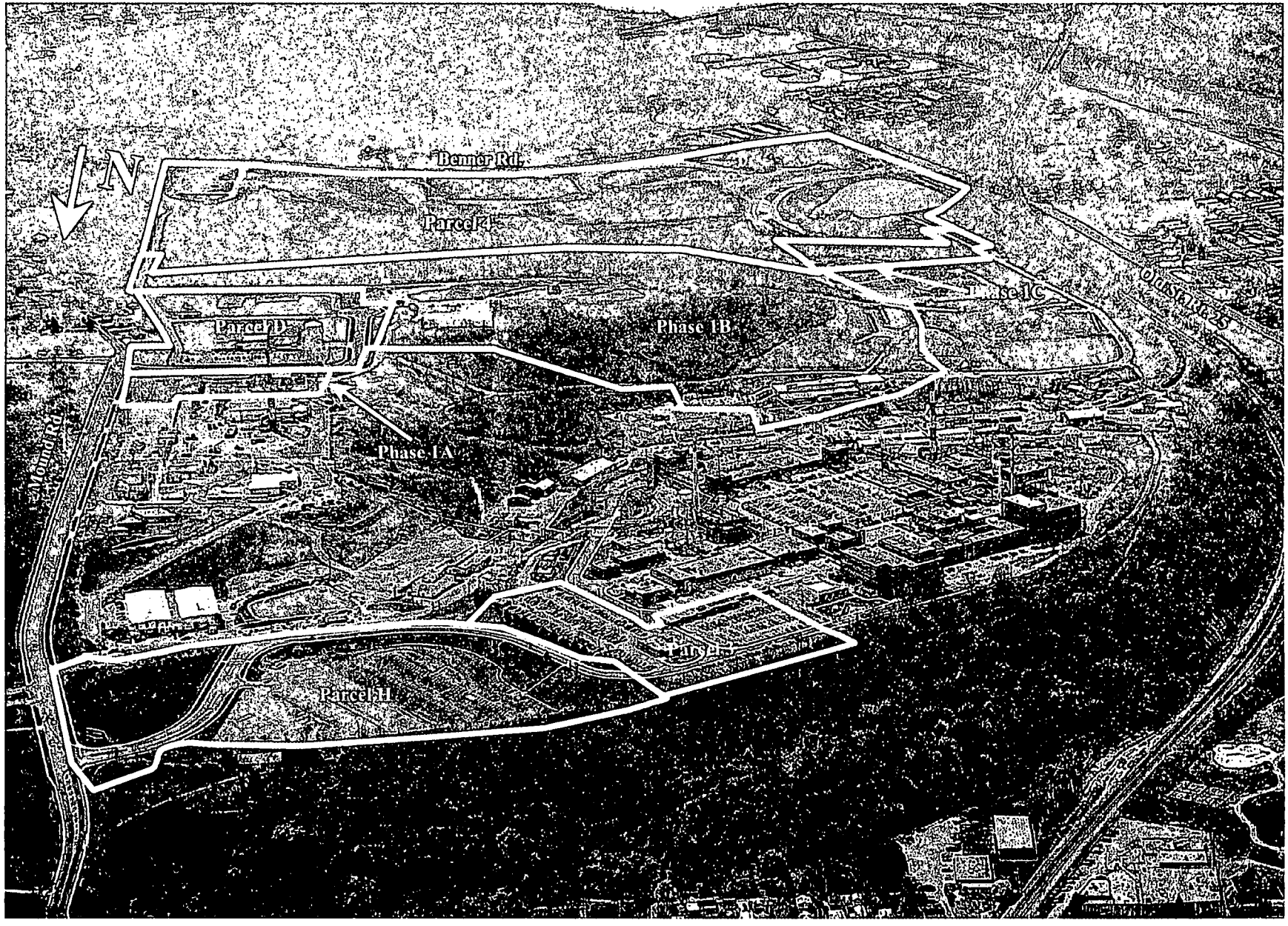


Figure 2. Aerial photo of original DOE Mound Site Property, as a whole, looking due south. Photo taken April 2002.

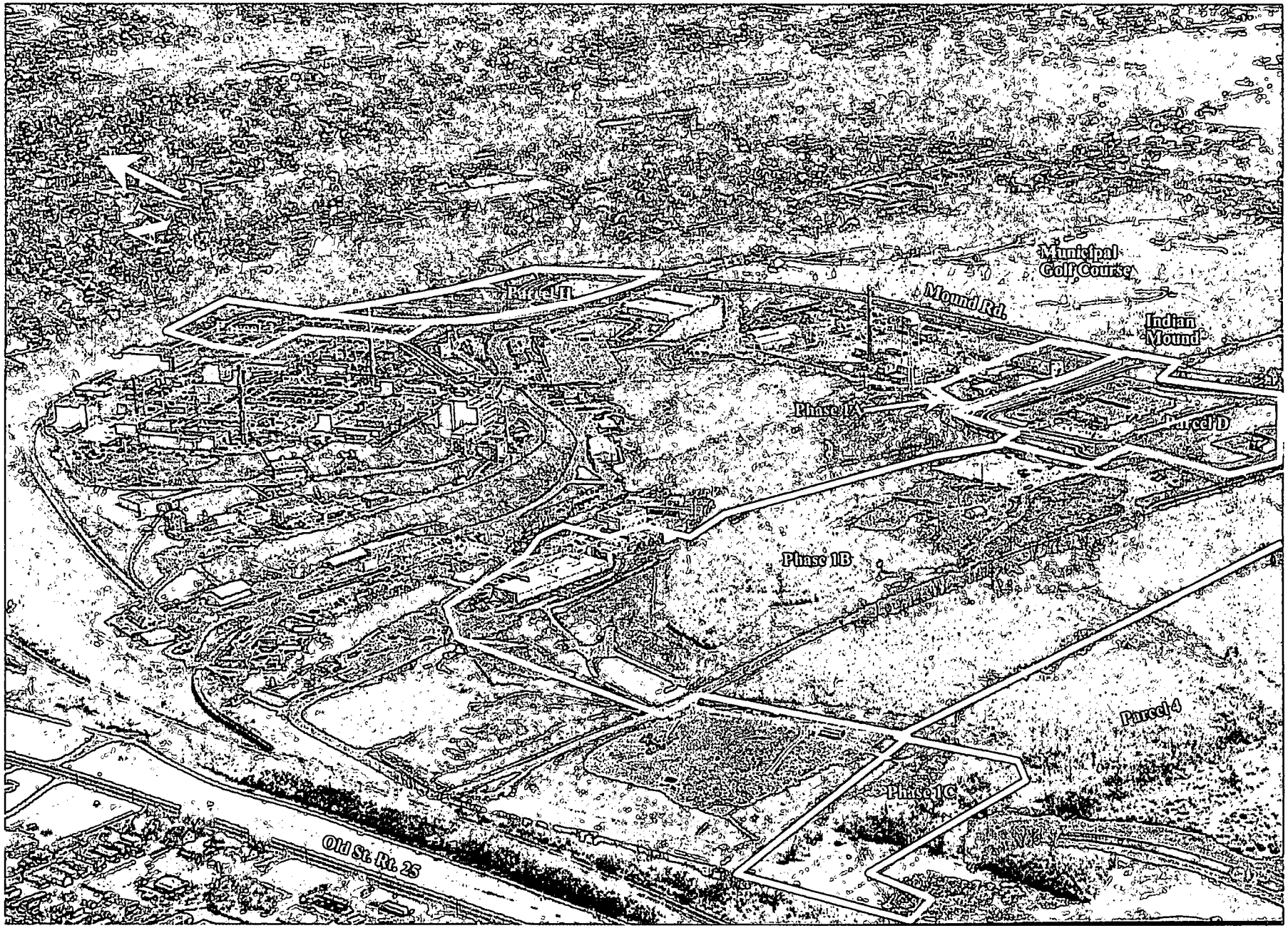


Figure 3. Aerial photo of original DOE Mound Site Property, as a whole, looking north/northeast. Photo taken April 2002.

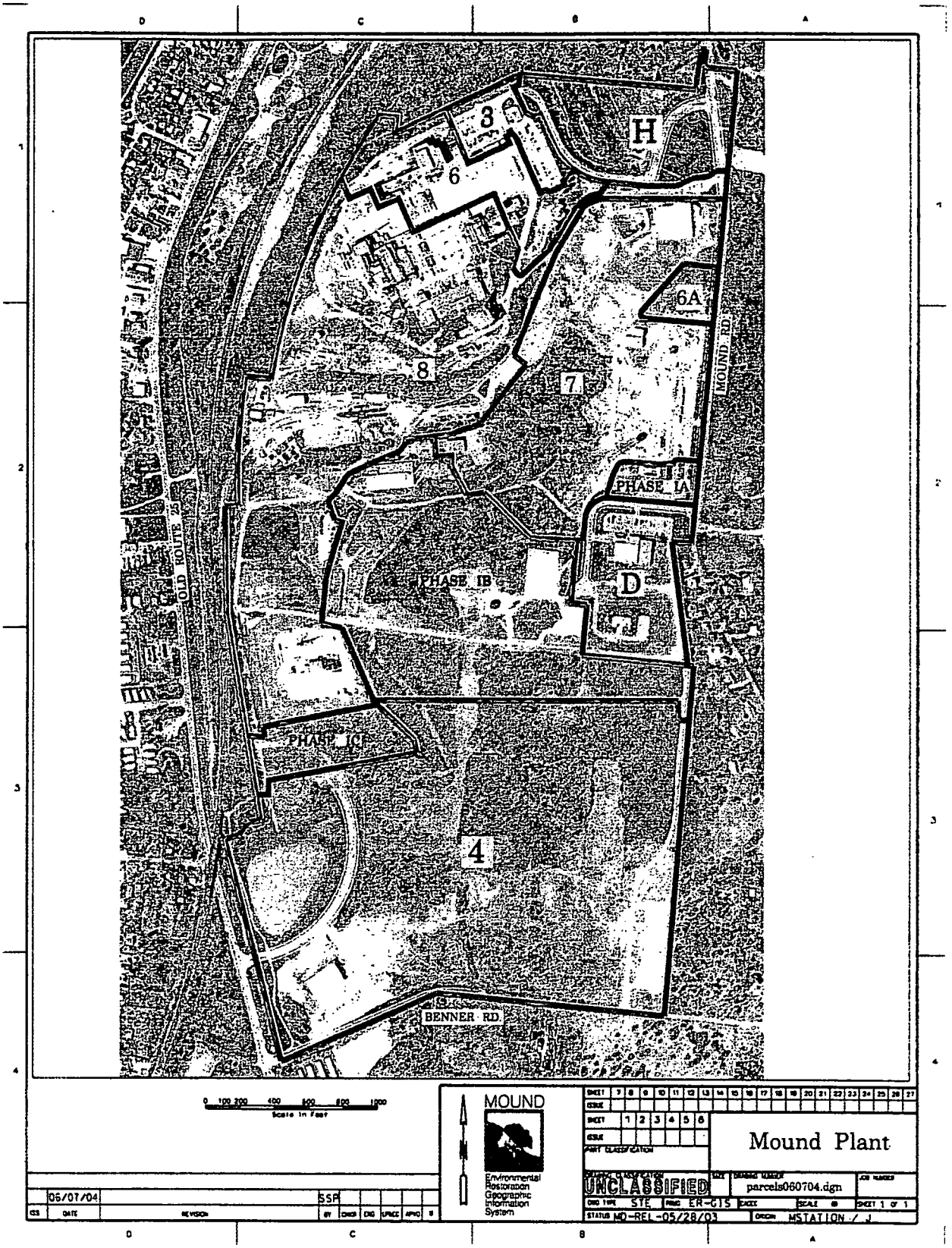


Figure 4. Digitized aerial photo of original DOE Mound Site Property, as a whole. Photo taken April 2004.

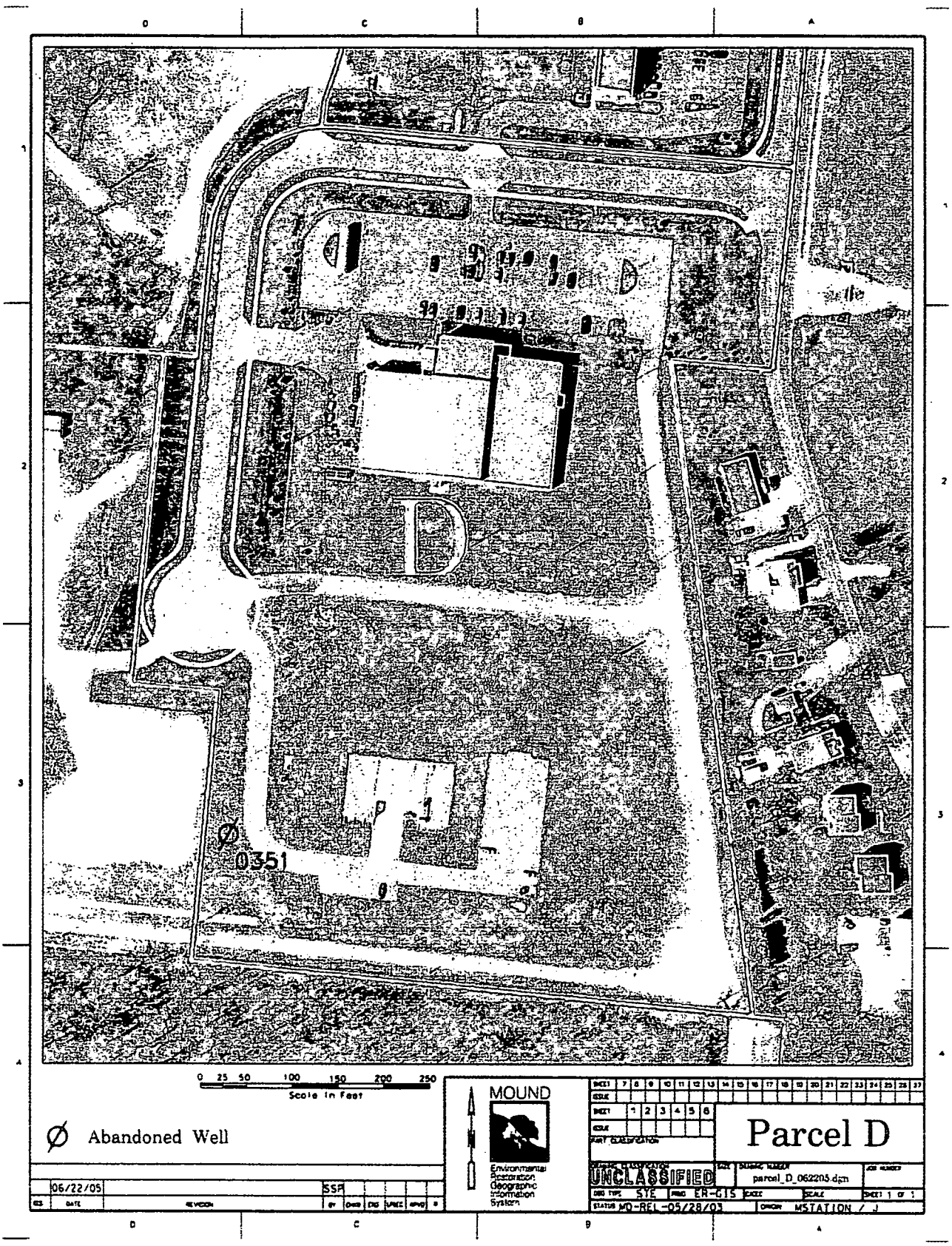


Figure 5. Digitized aerial photo of Parcel D taken April 2004.

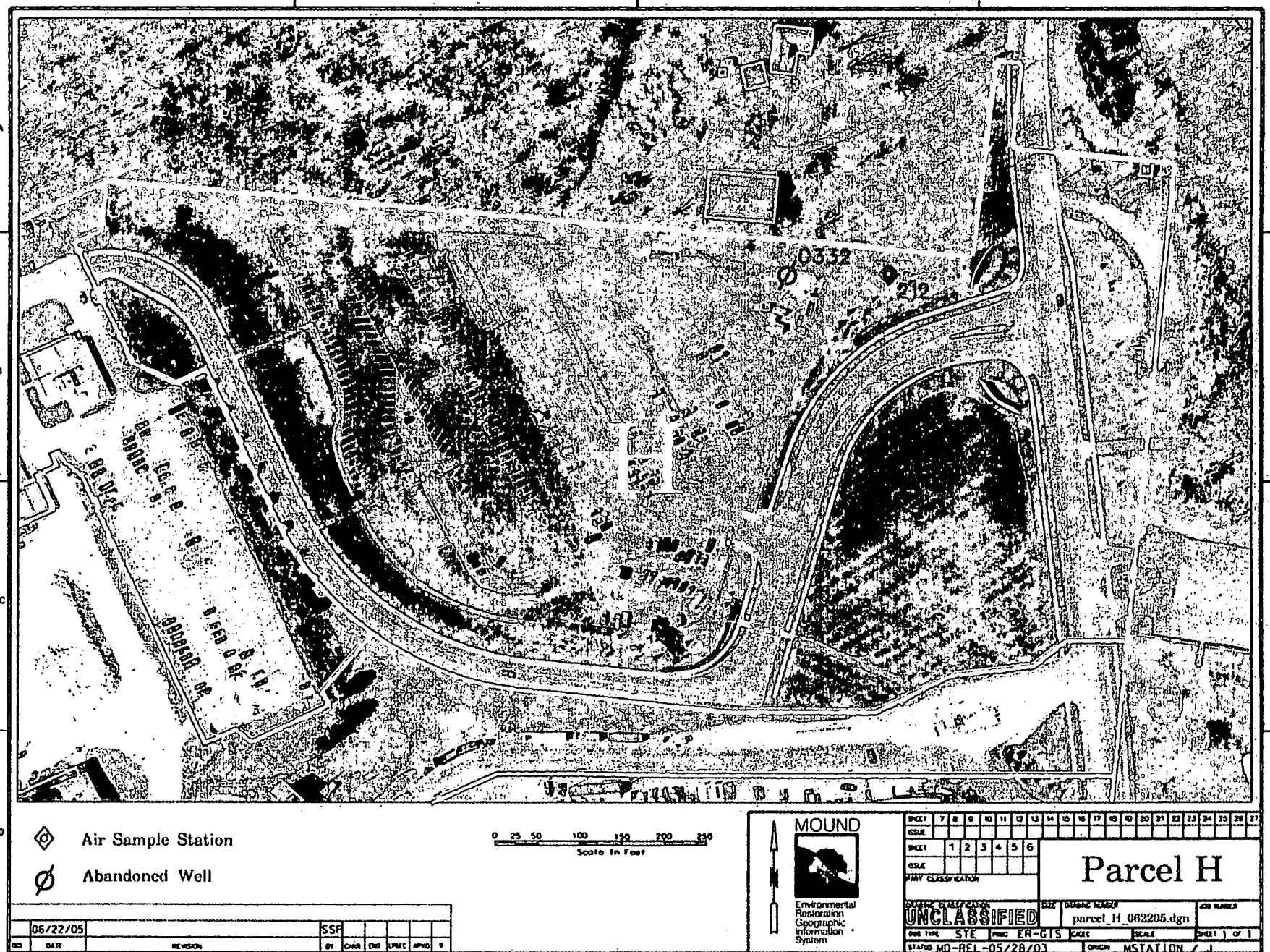


Figure 6. Digitized aerial photo of Parcel H taken April 2004

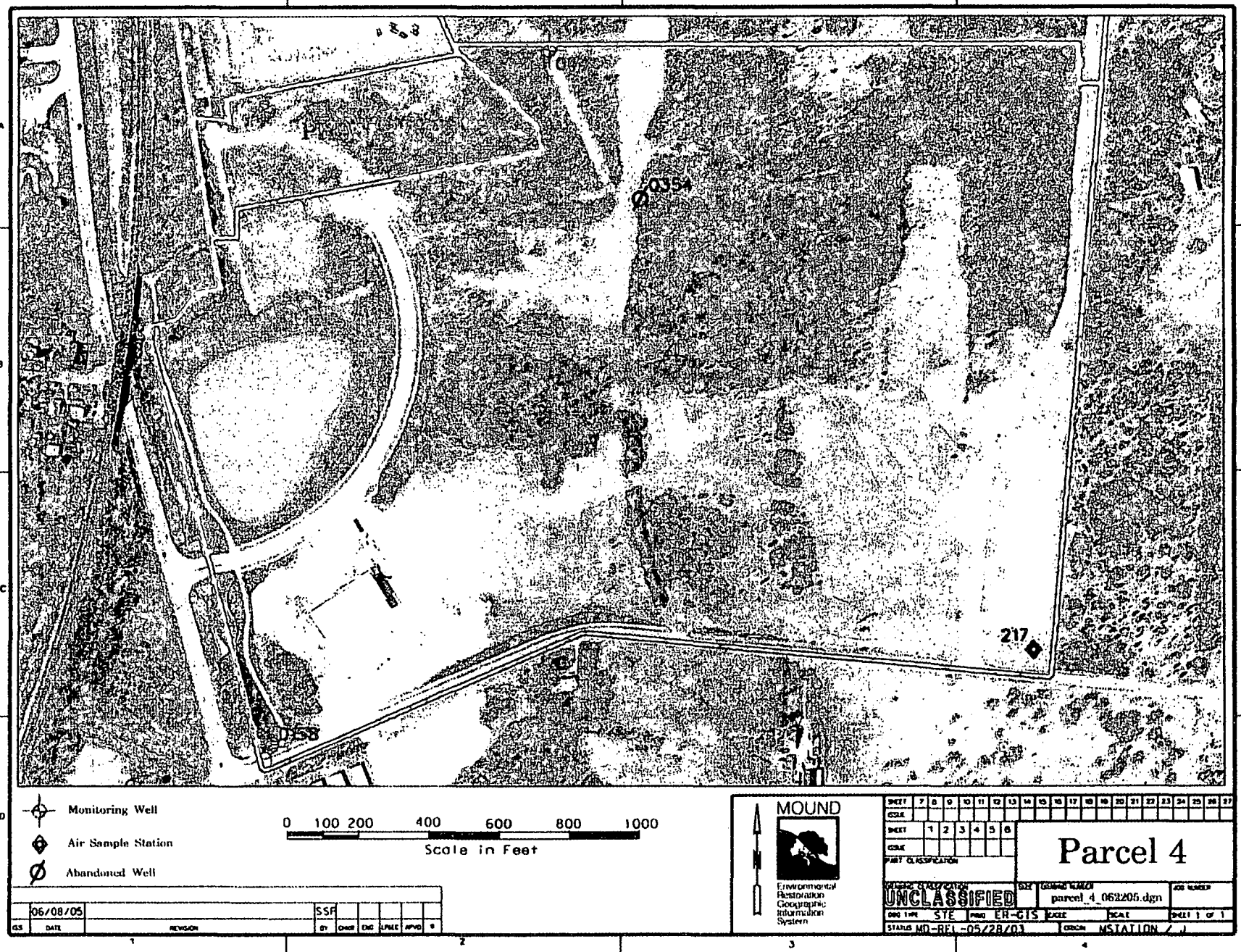


Figure 7. Digitized aerial photo of Parcel 4 taken April 2004

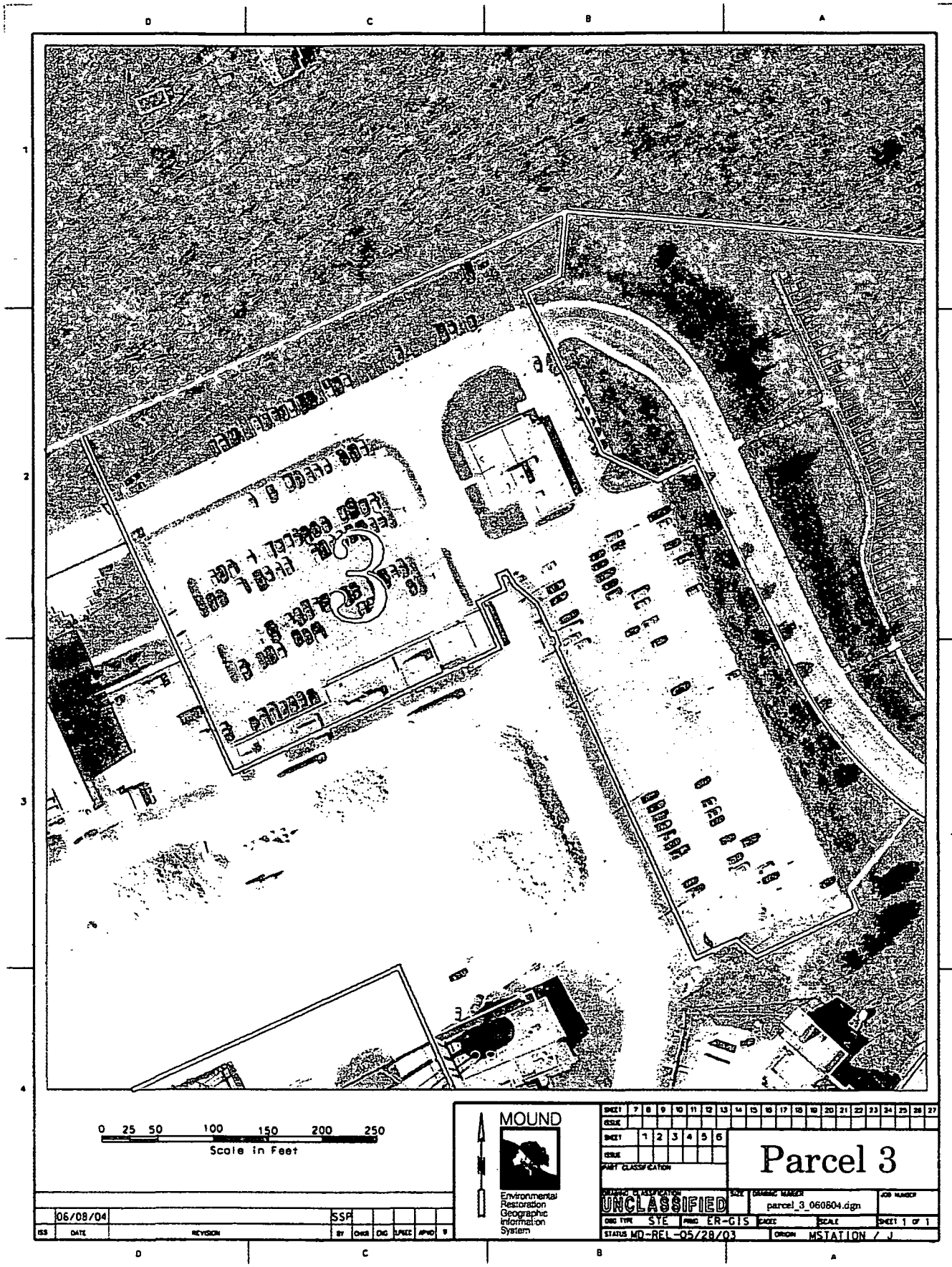


Figure 8. Digitized aerial photo of Parcel 3 taken April 2004.

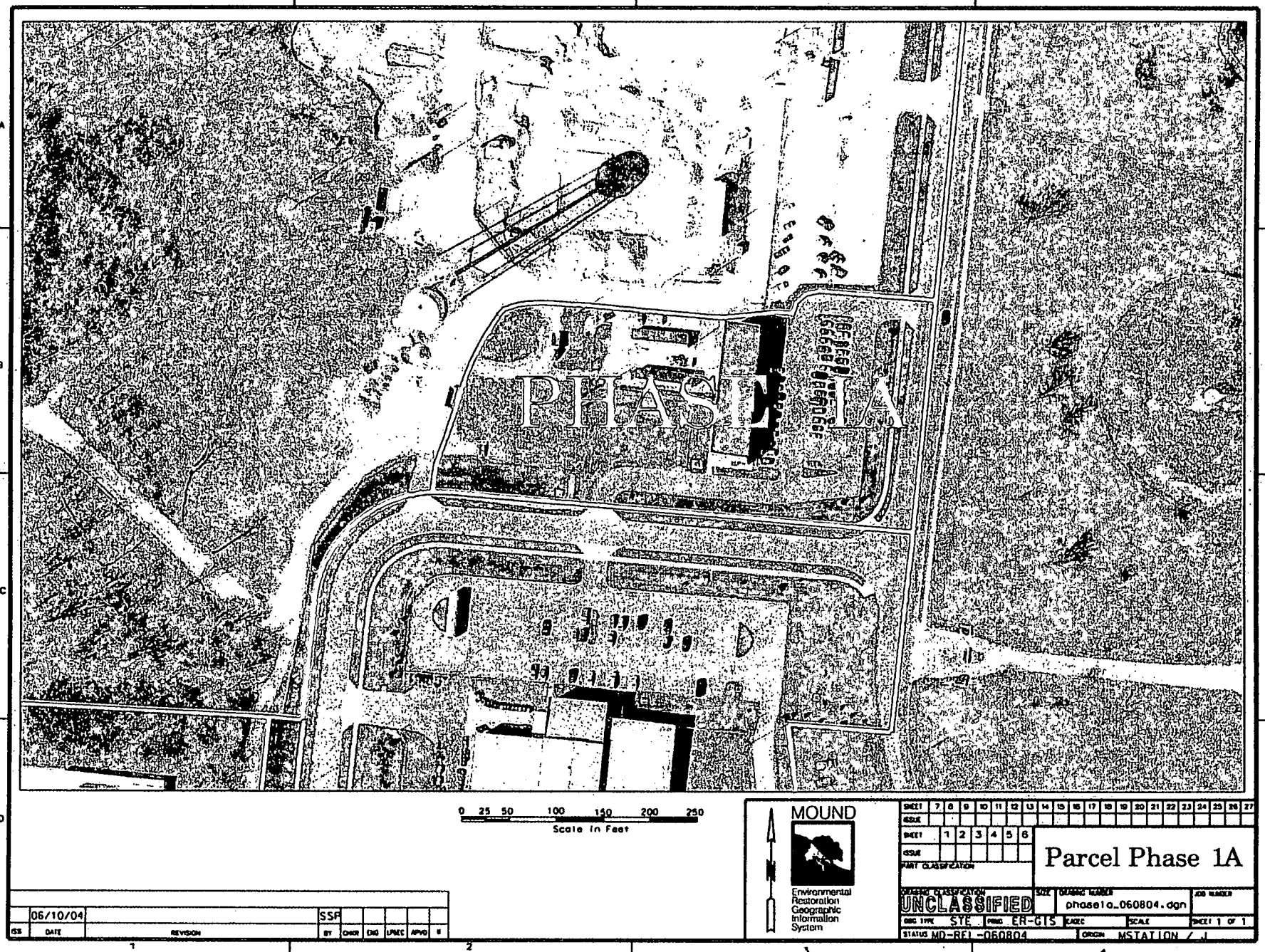


Figure 9. Digitized aerial photo of Phase I.A Sub-Parcel taken April 2004

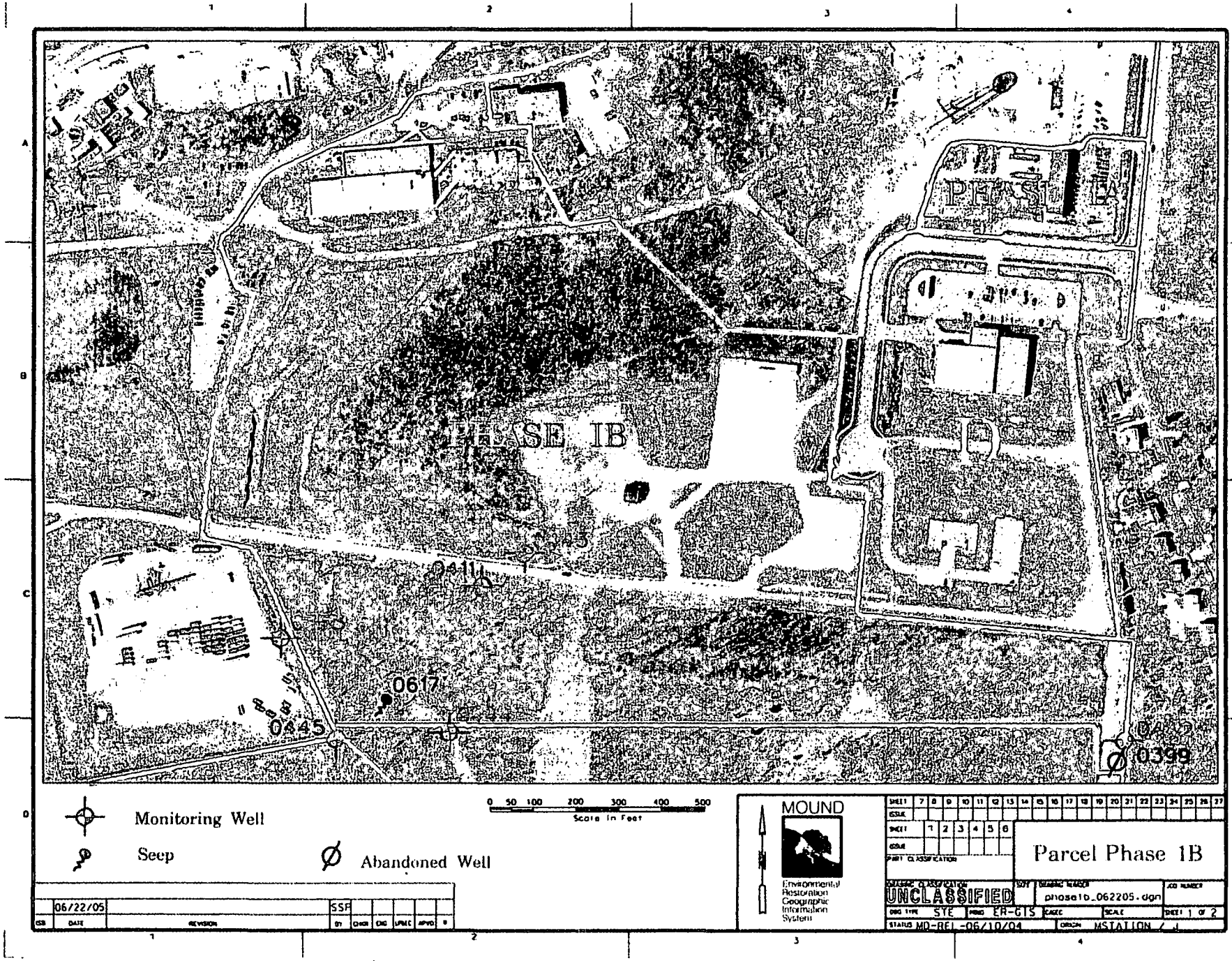


Figure 10. Digitized aerial photo of Phase I.B Sub-Parcel taken April 2004.

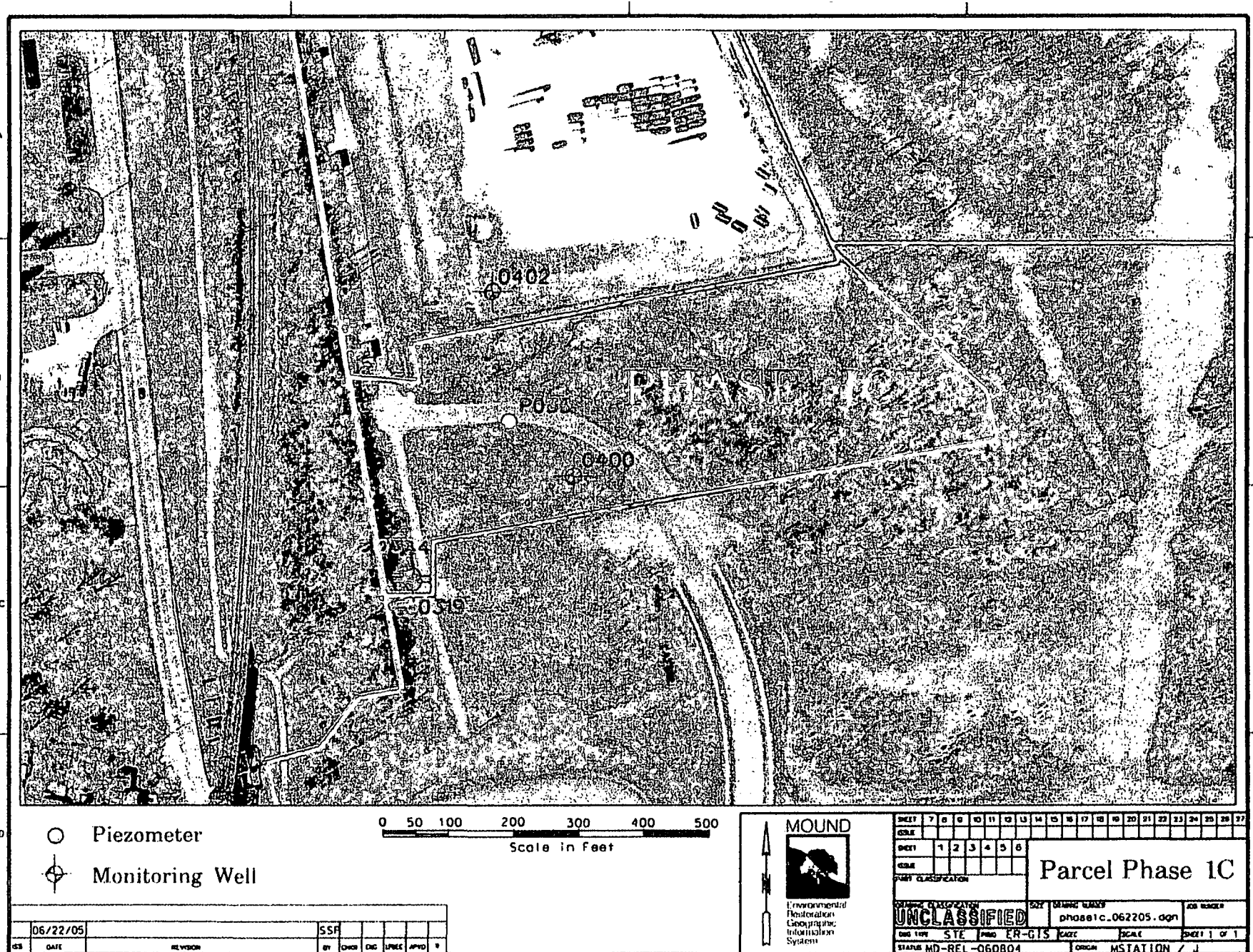


Figure 11. Digitized aerial photo of Phase I.C Sub-Parcel taken April 2004

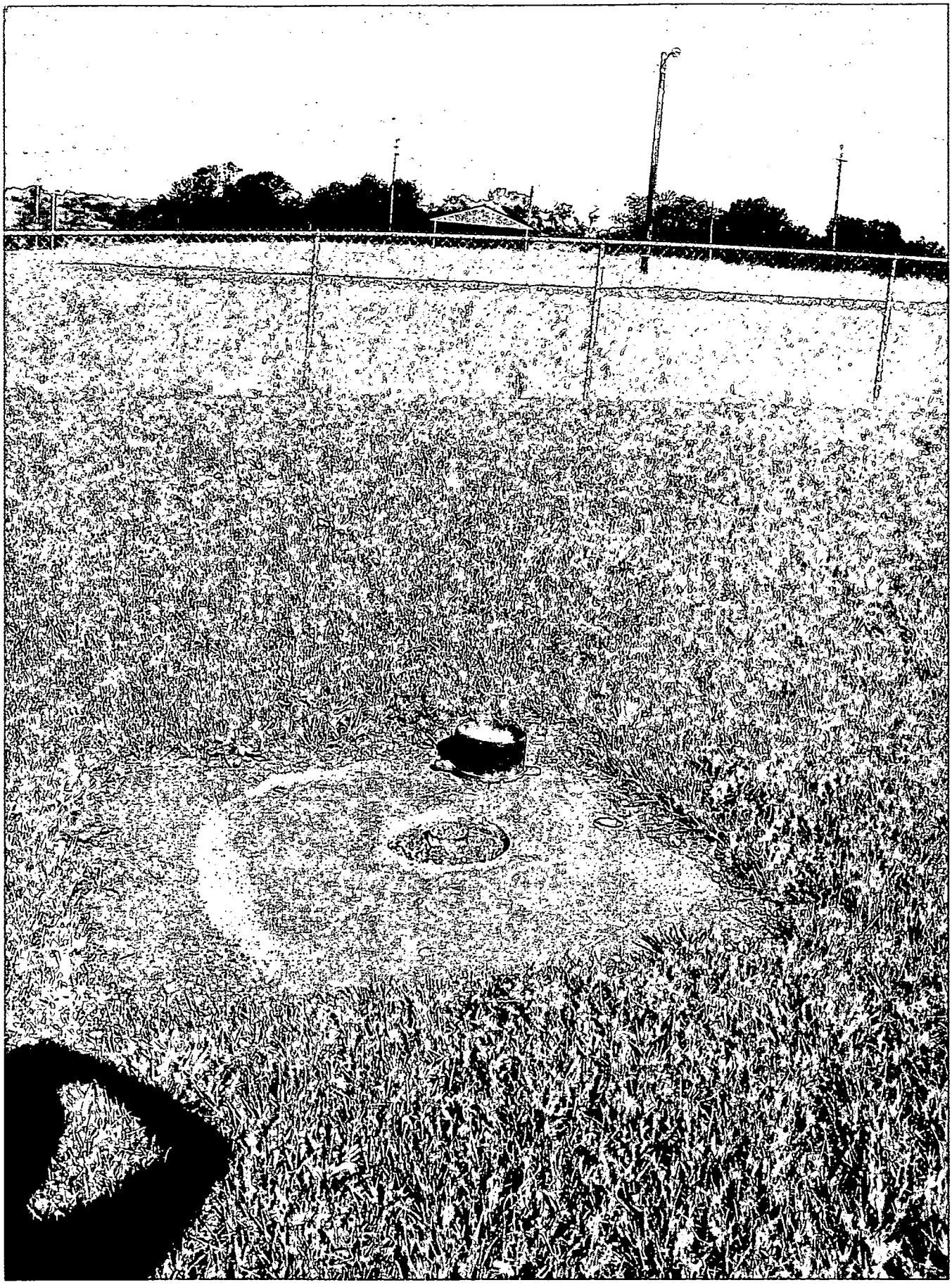


Figure 12. Groundwater well #351 (abandoned) located in Parcel D, with open building previously used for salt storage in background.

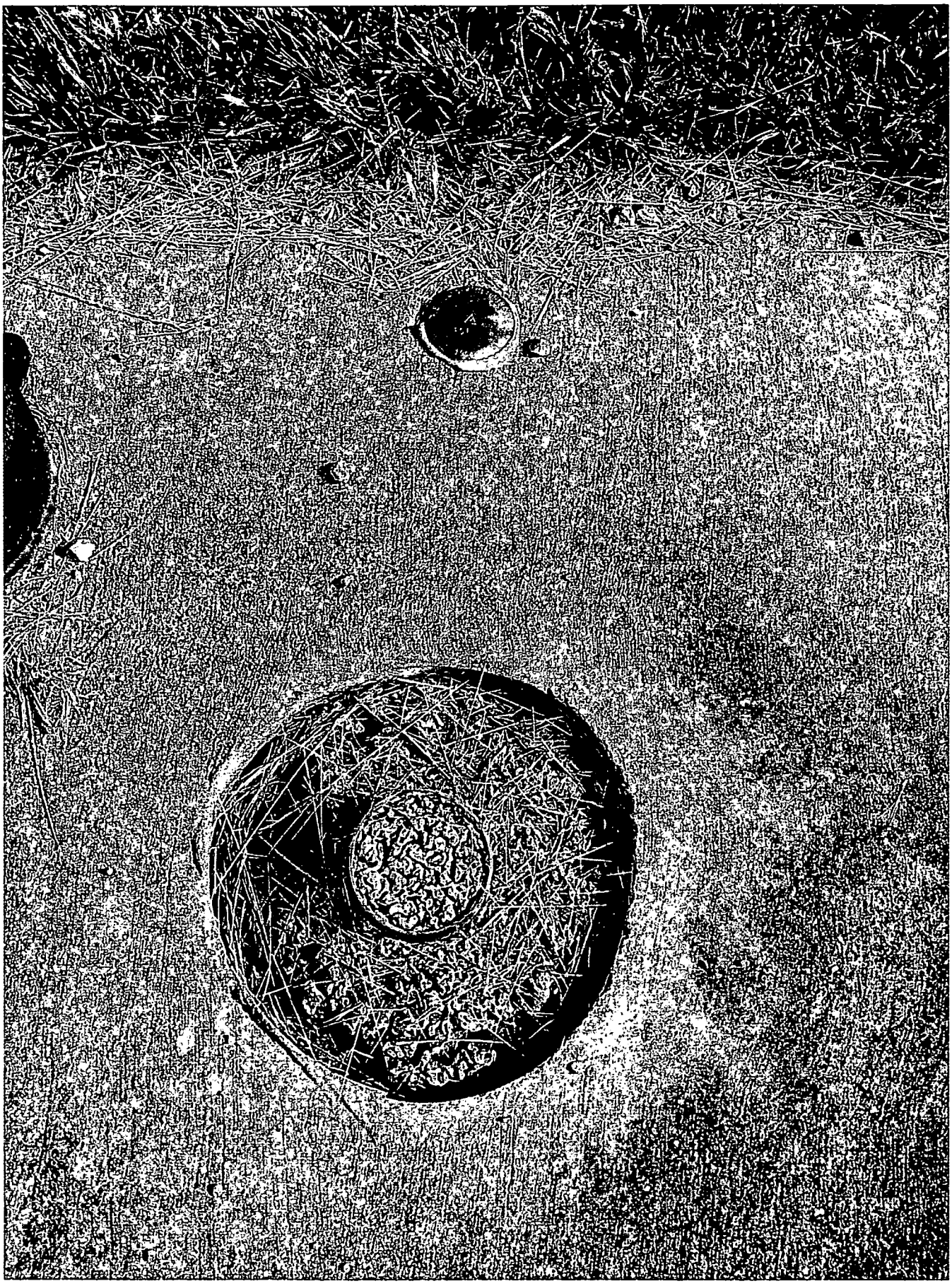


Figure 13. Groundwater well #351 shown abandoned with permanent identification tag on concrete pad (located in Parcel D).

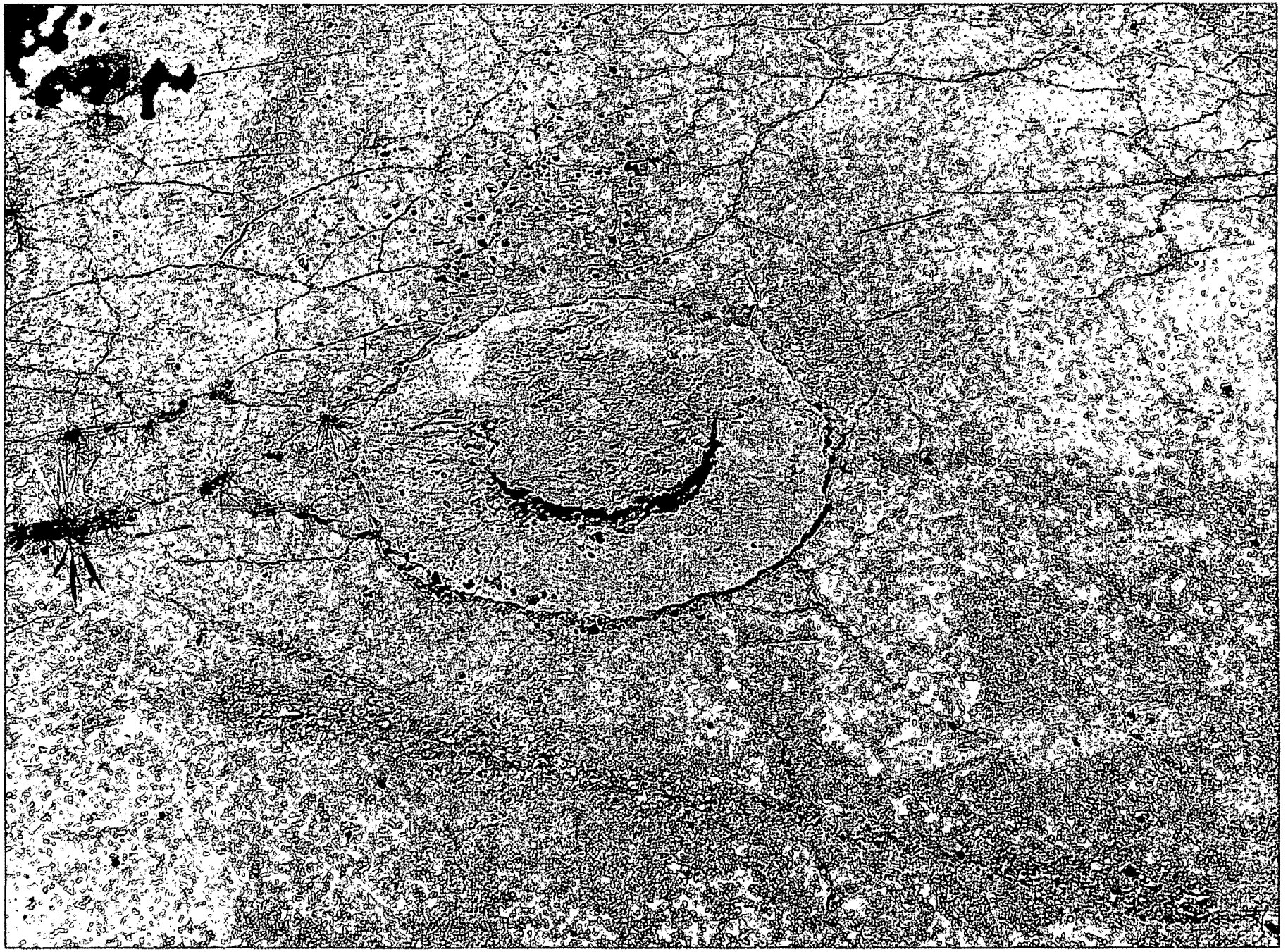


Figure 14. Groundwater well (flush mount) #332 shown abandoned in northeast corner of Parcel H.

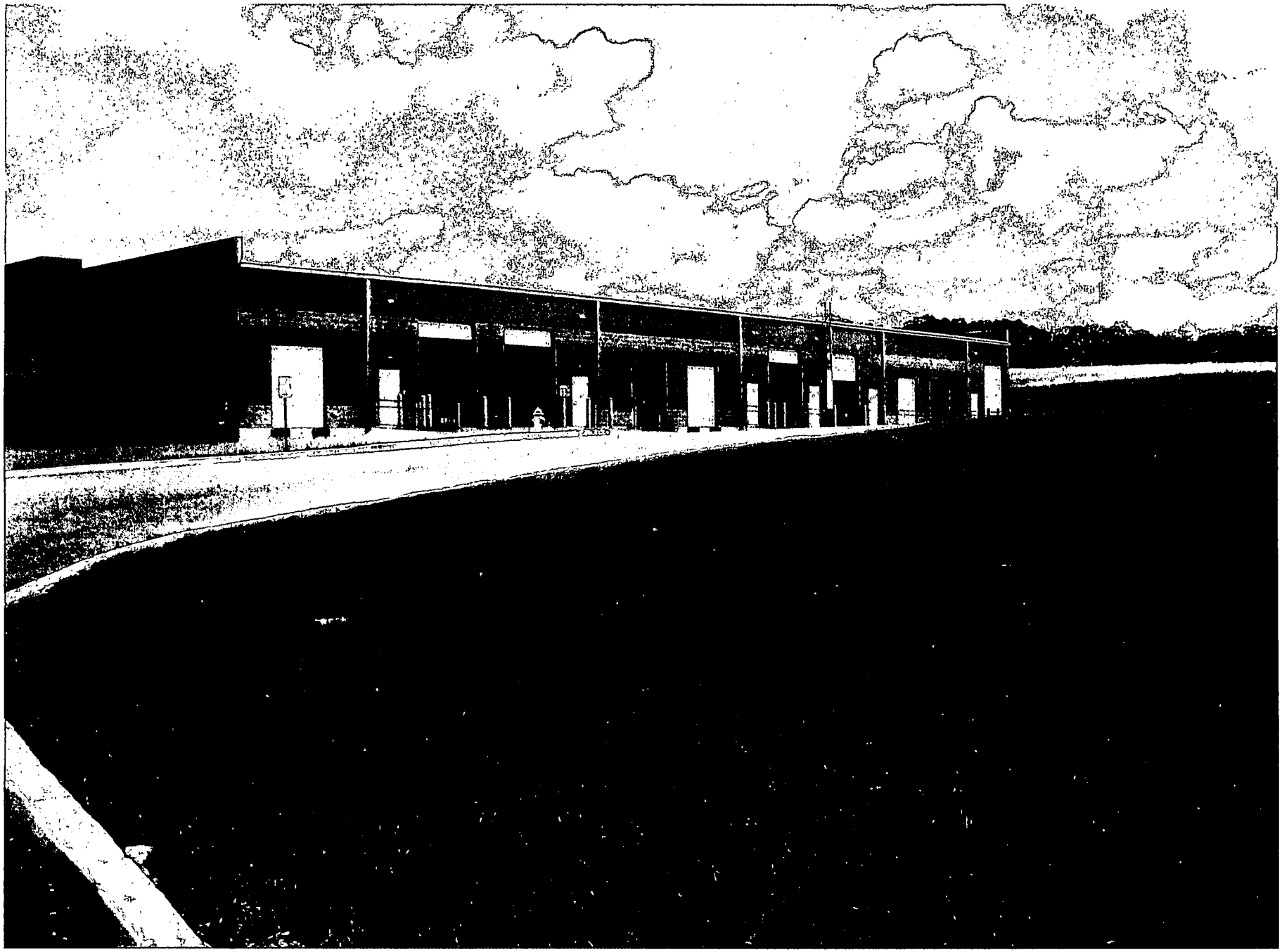


Figure 15. MMCIC Flex building located in southwest corner of Parcel 4. View from backside entrance off of Benner Road

Figure 16. Groundwater well #158 located in the southwest corner of Parcel 4, near the intersection (in background) of Benner Road and Old State Route 25

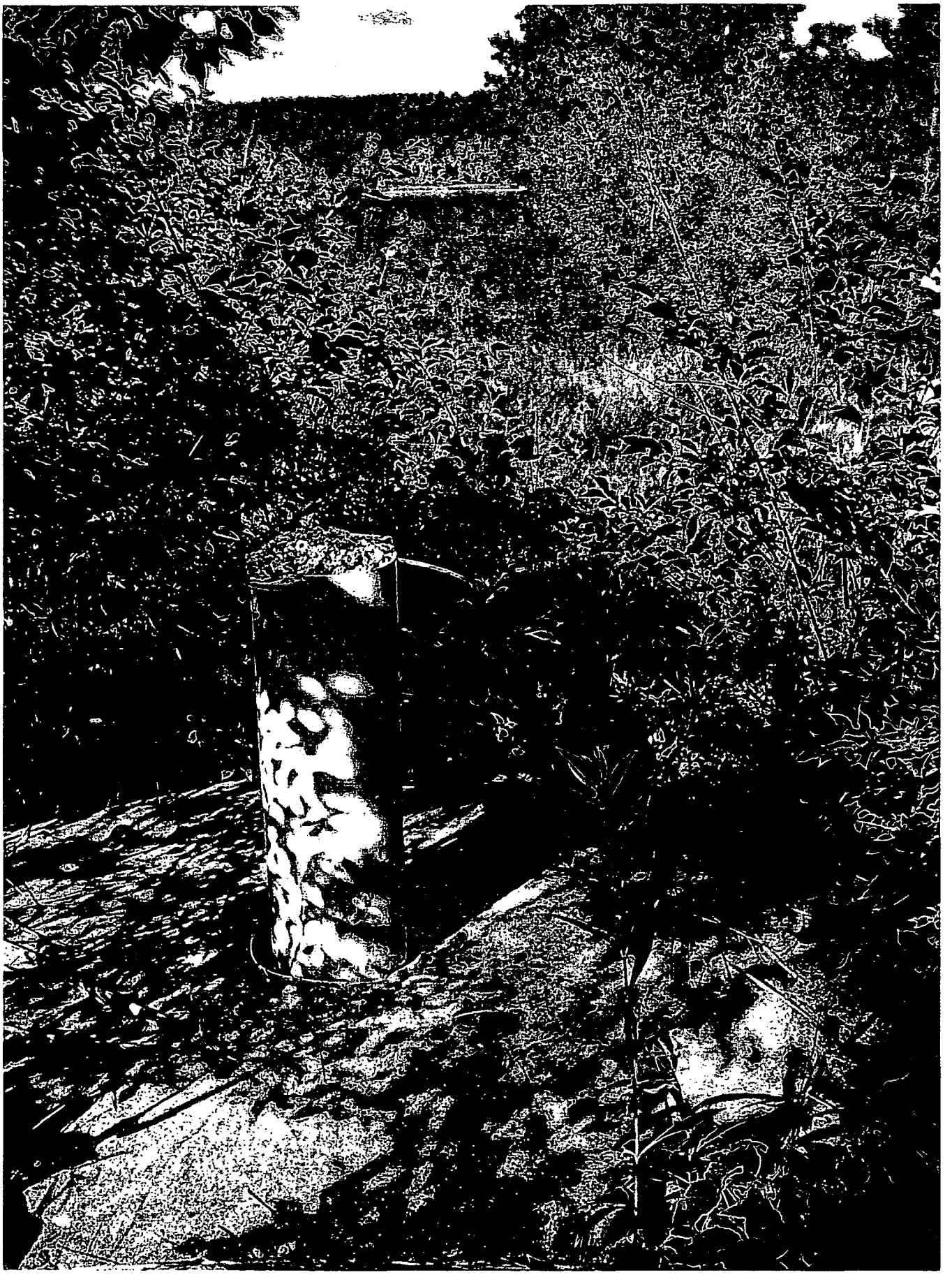


Figure 17. Groundwater well #354 (shown abandoned) on northern boundary of Parcel 4. MMCIC's storm water retention pond and fountain visible in background.

Figure 18. Groundwater well #444 on northern boundary of Parcel 4.

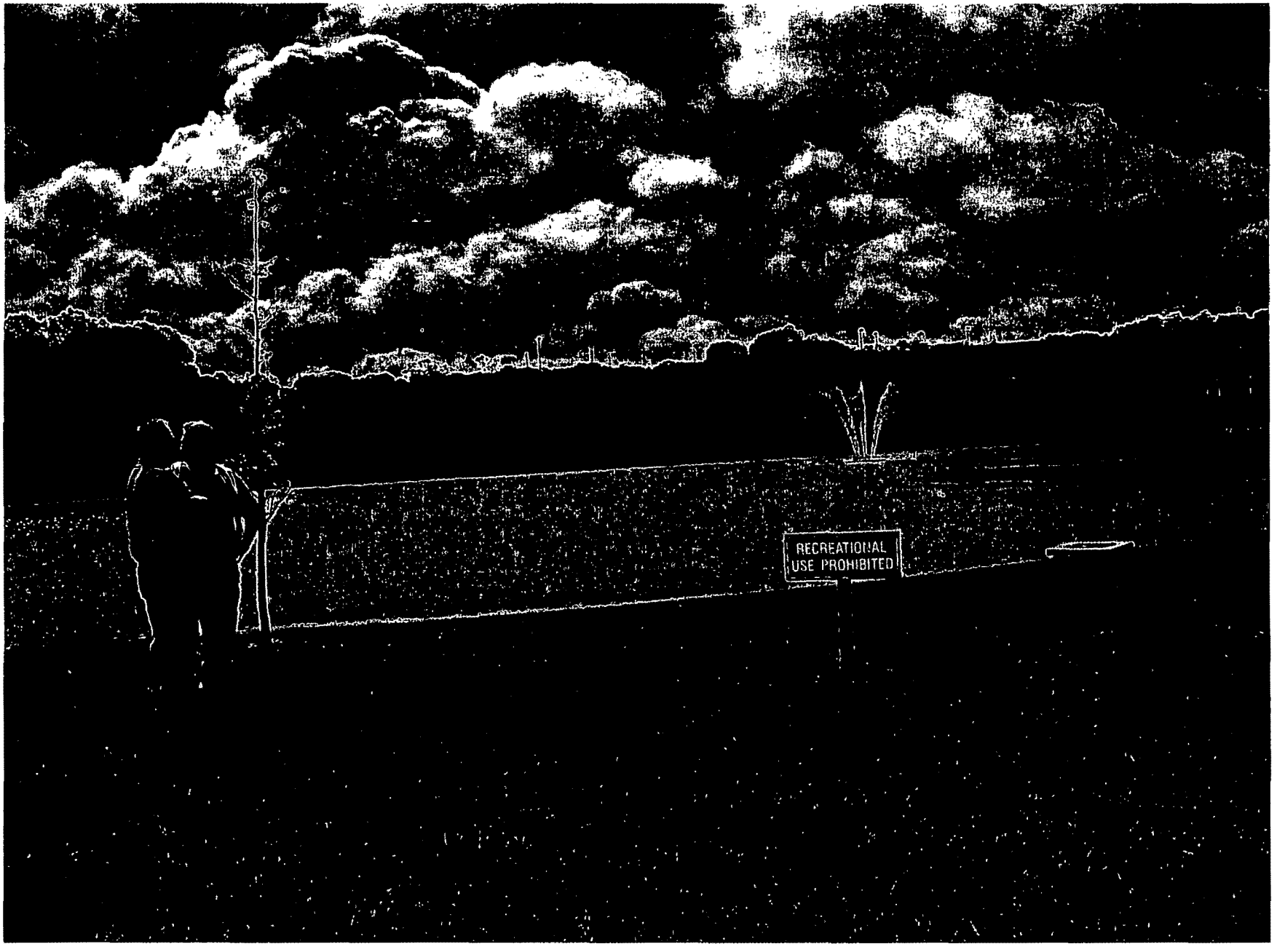


Figure 19. MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and MMCIC flex building in background

Figure 20. MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and entrance to Vanguard Blvd in background

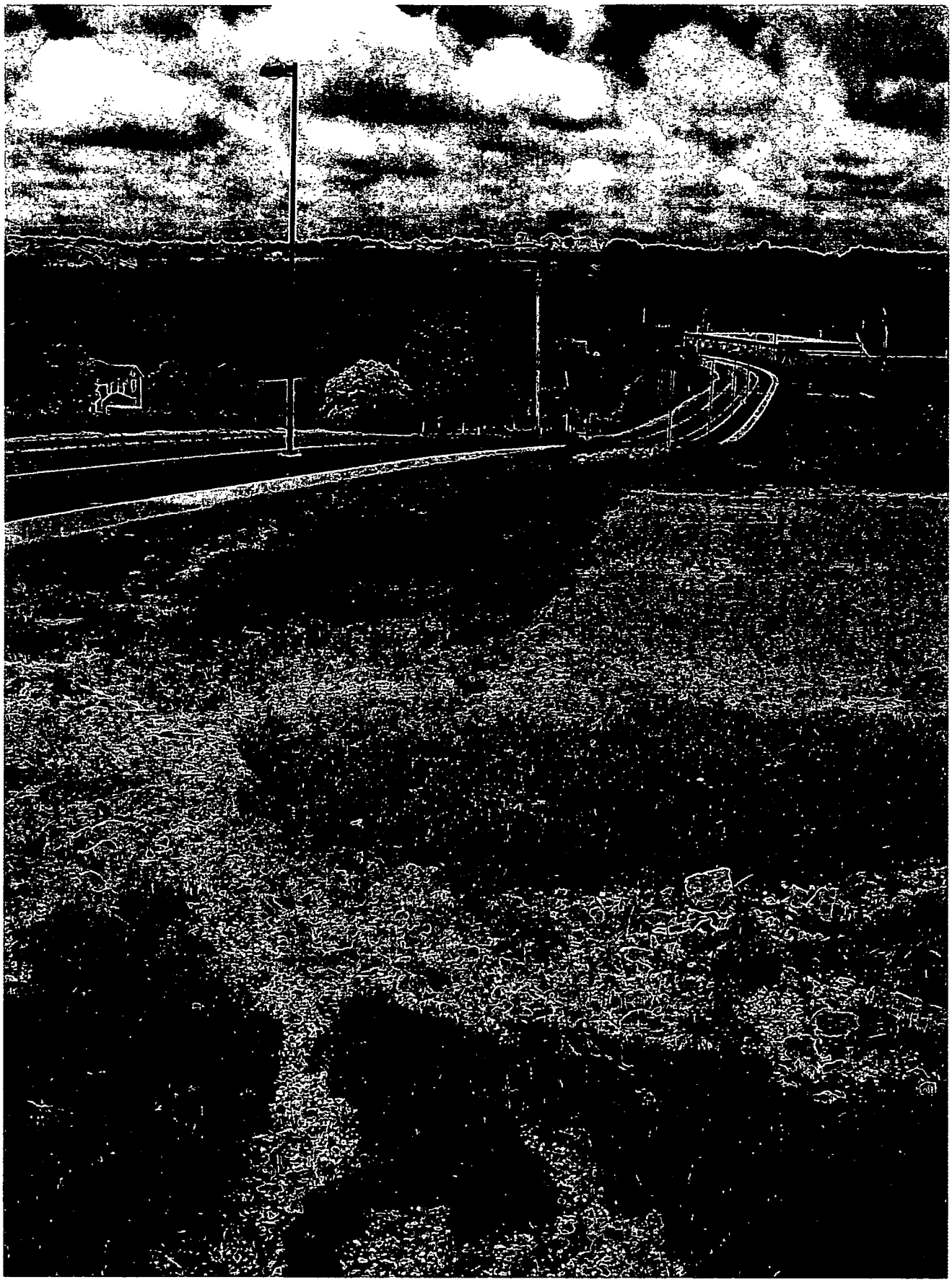
Figure 21. MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and entrance to Vanguard Blvd in background

Figure 22. MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground rail trestle over SR 25 in background

Figure 23. MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and Mound Plant in background

Figure 24. MMCIC Pond located in southwest corner of Parcel 4 with signage in foreground and boys fishing in background.

Figure 25. MMCIC Pond located in southwest corner of Parcel 4 showing a boy with a fishing pole.



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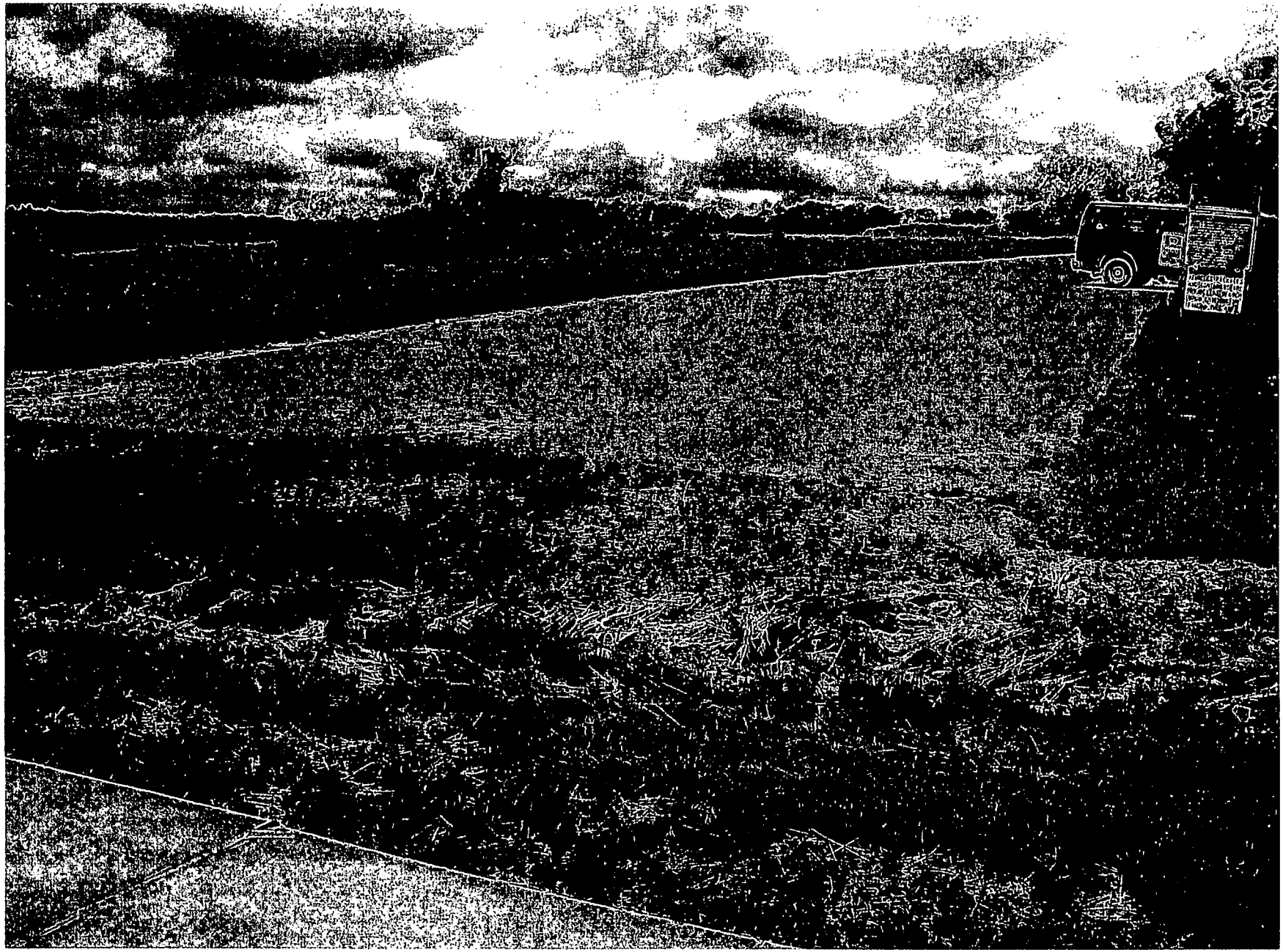

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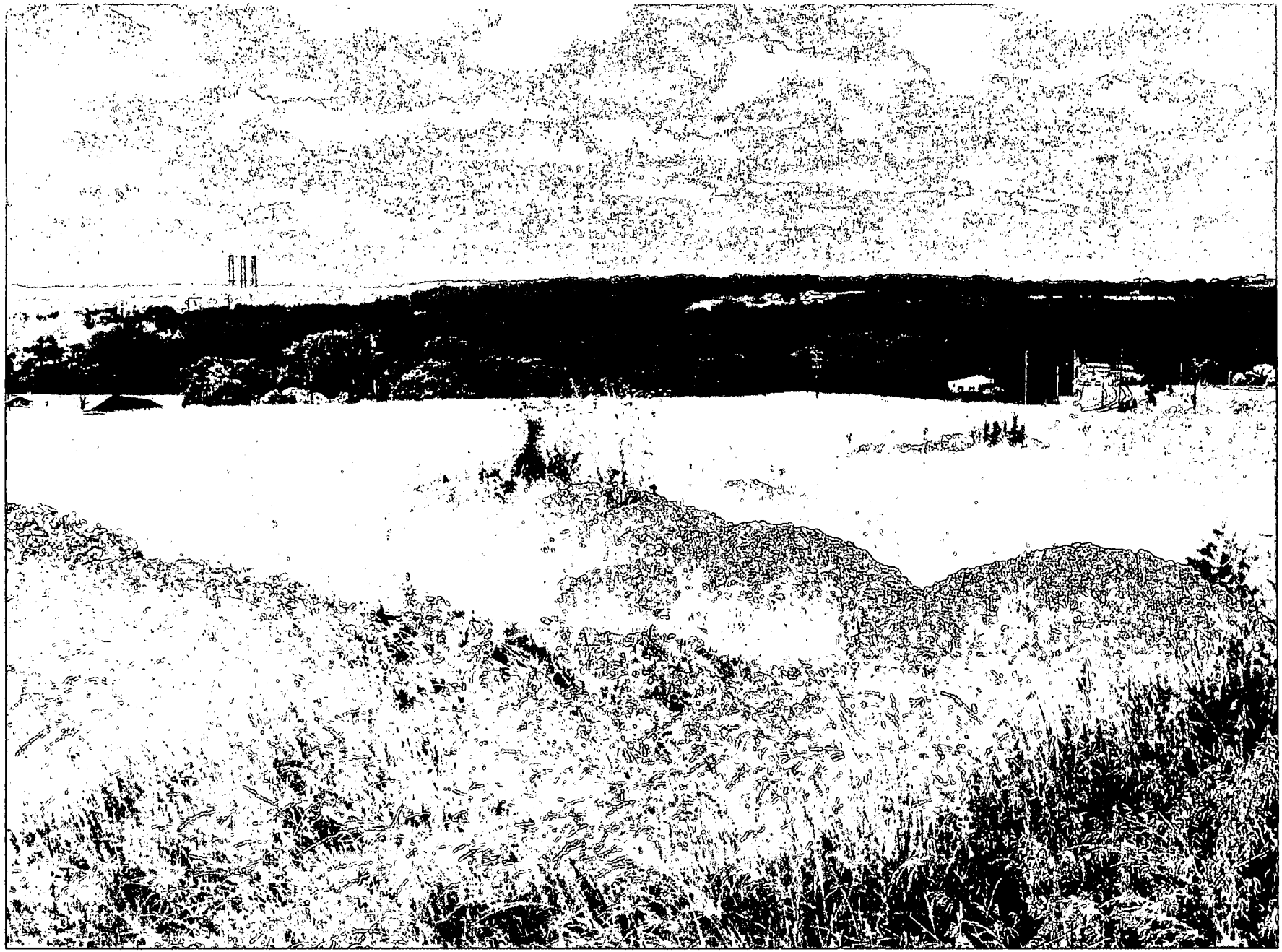

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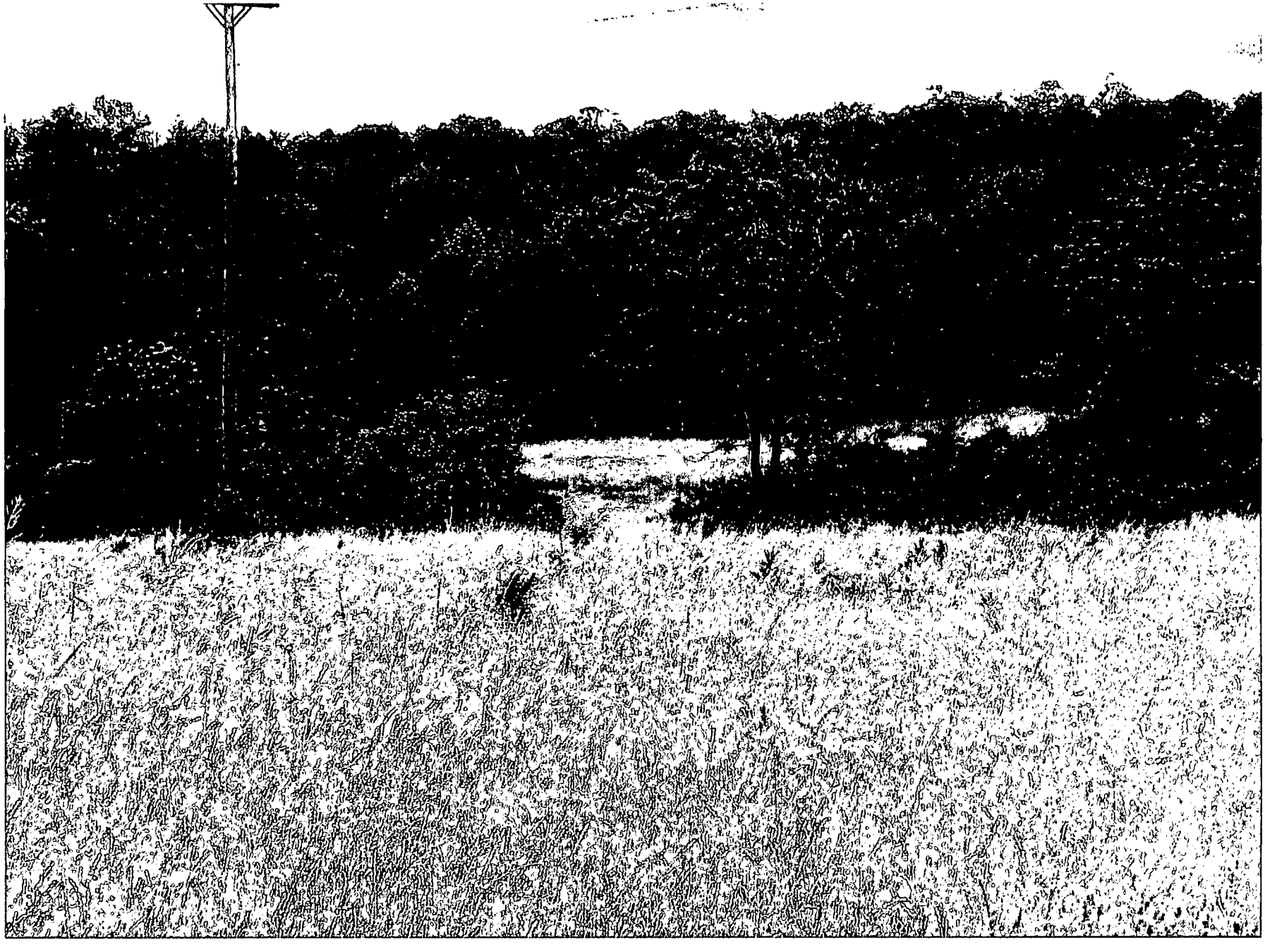

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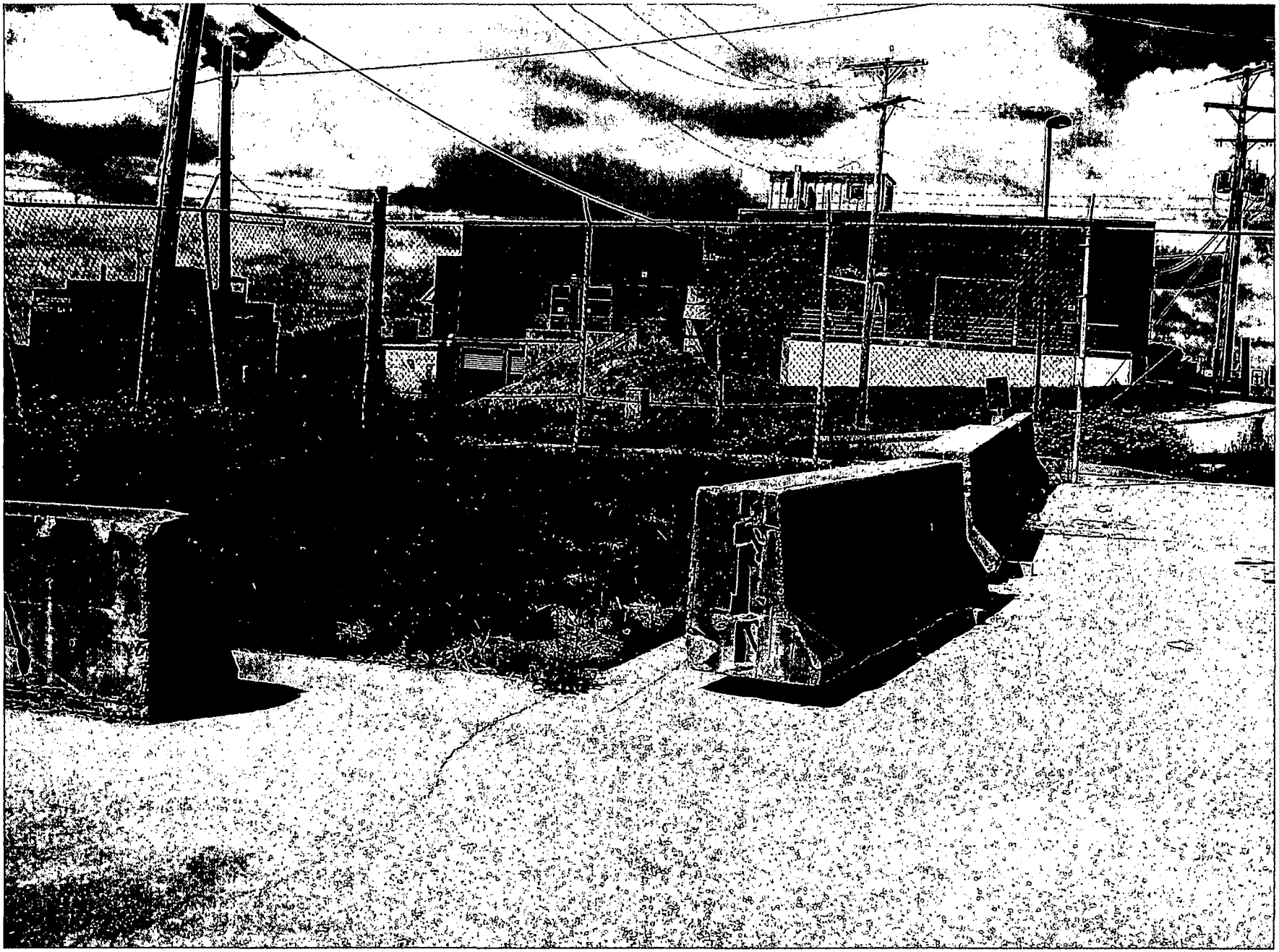

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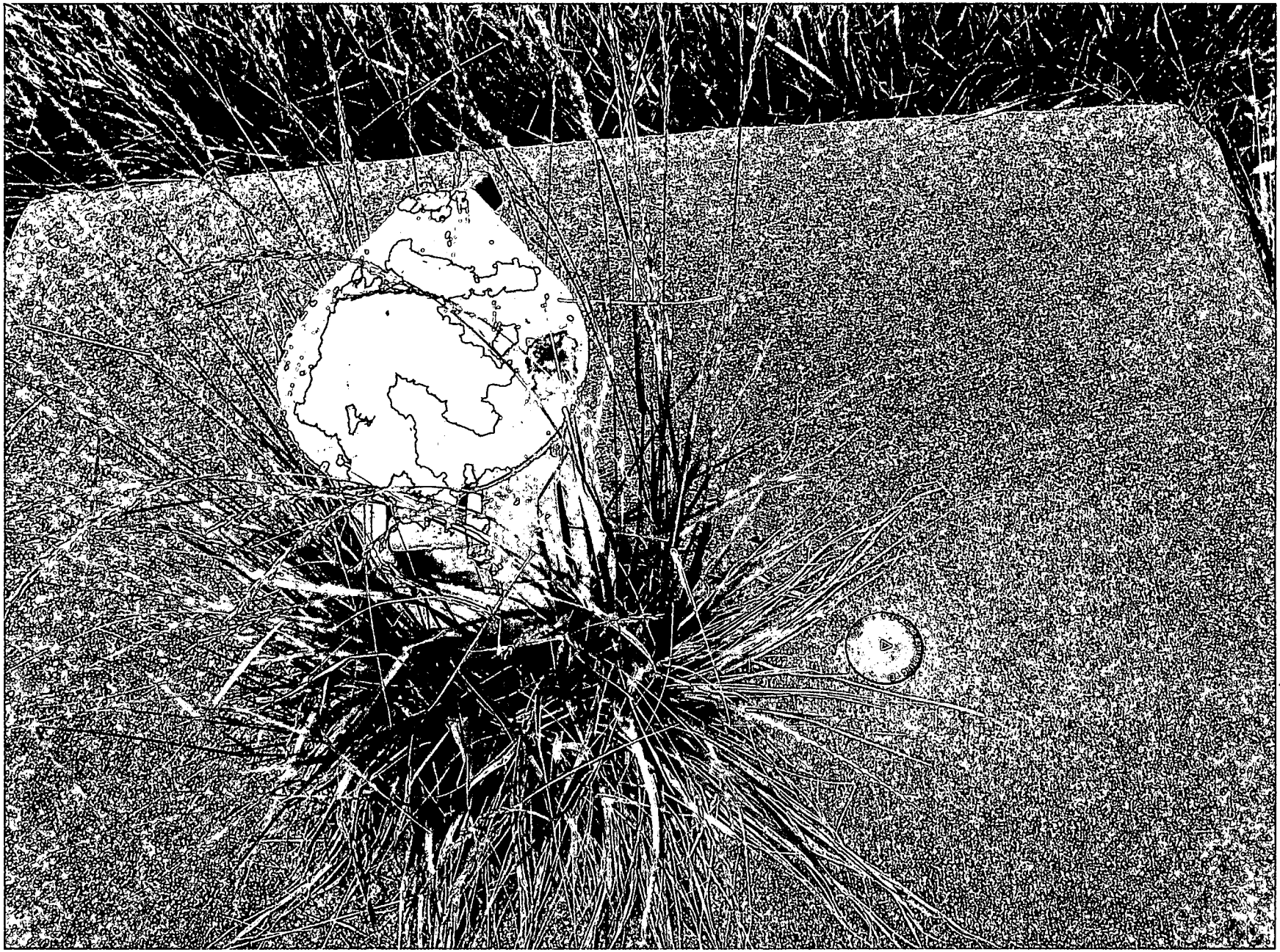

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Figure 34. Groundwater well #402 located on DOE property to the north of Phase I.C Sub-Parcel. Well not located in Phase I. but is monitored as a part of the Phase I parcel MNA remedv

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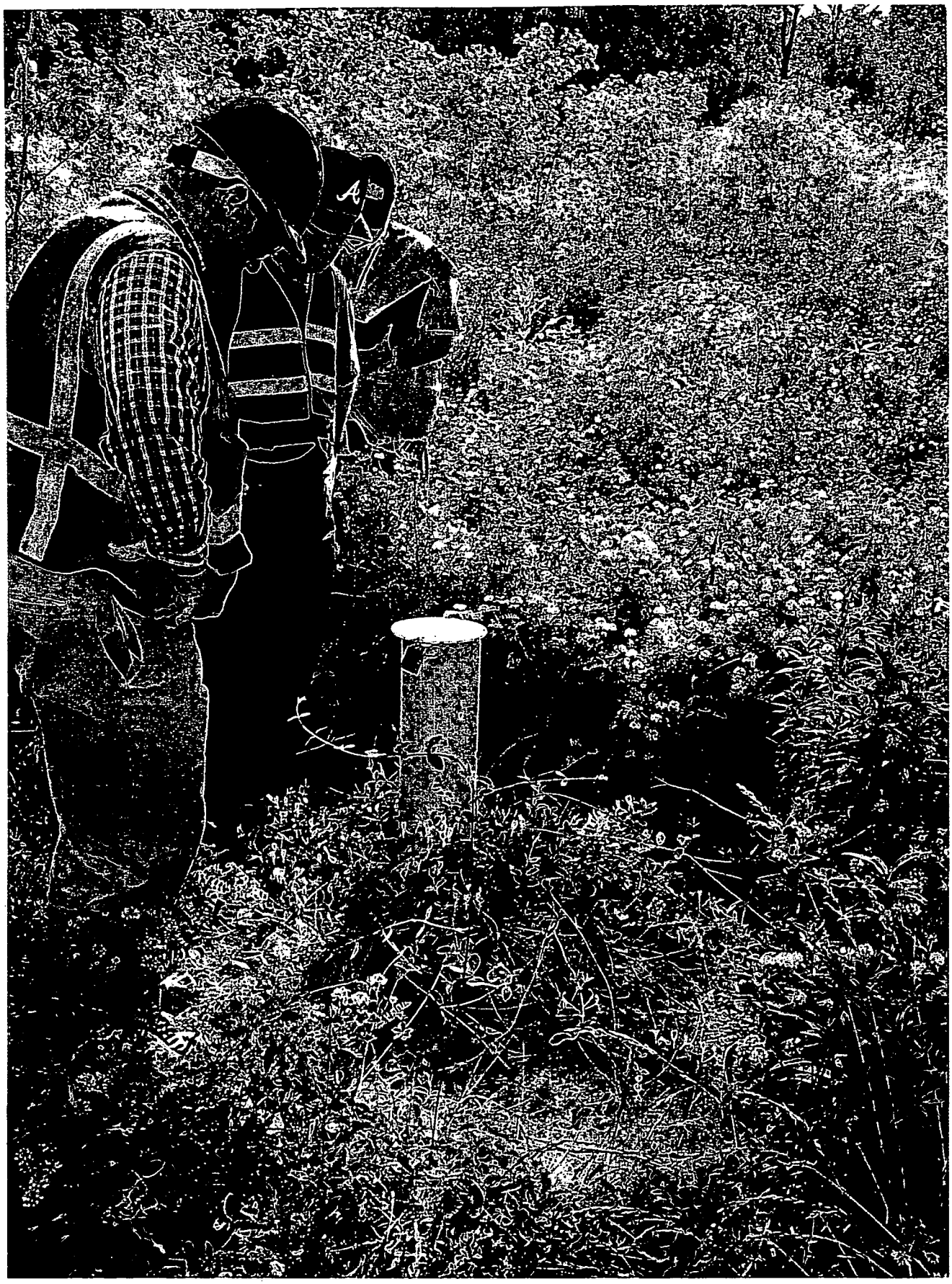

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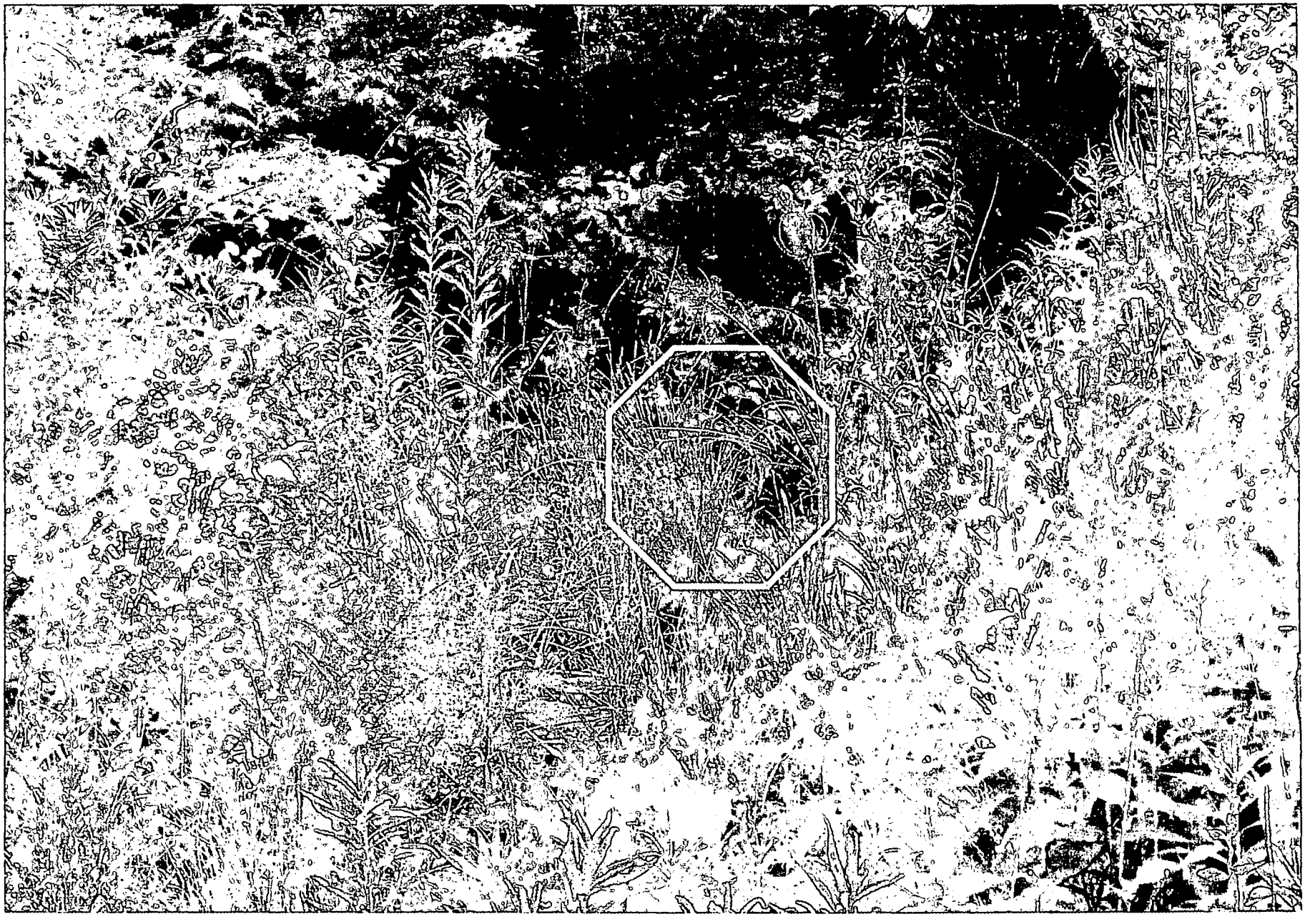

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Figure 41. Permanent identification marker in concrete pad for groundwater well #399 (shown abandoned) located on eastern boundary of Phase I.B Sub-Parcel.

Figure 42. Groundwater well #442 in foreground, located on eastern edge of Phase I.B ub-Parcel.