

# MOUND



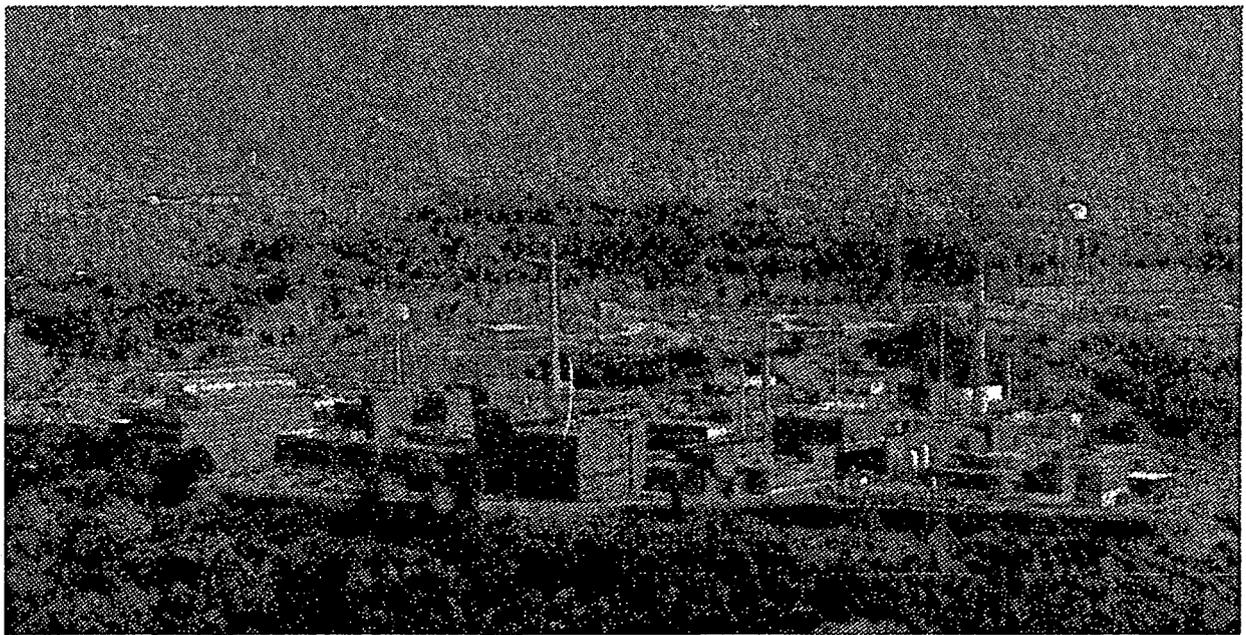
**Environmental  
Restoration  
Program**



# MOUND PLANT

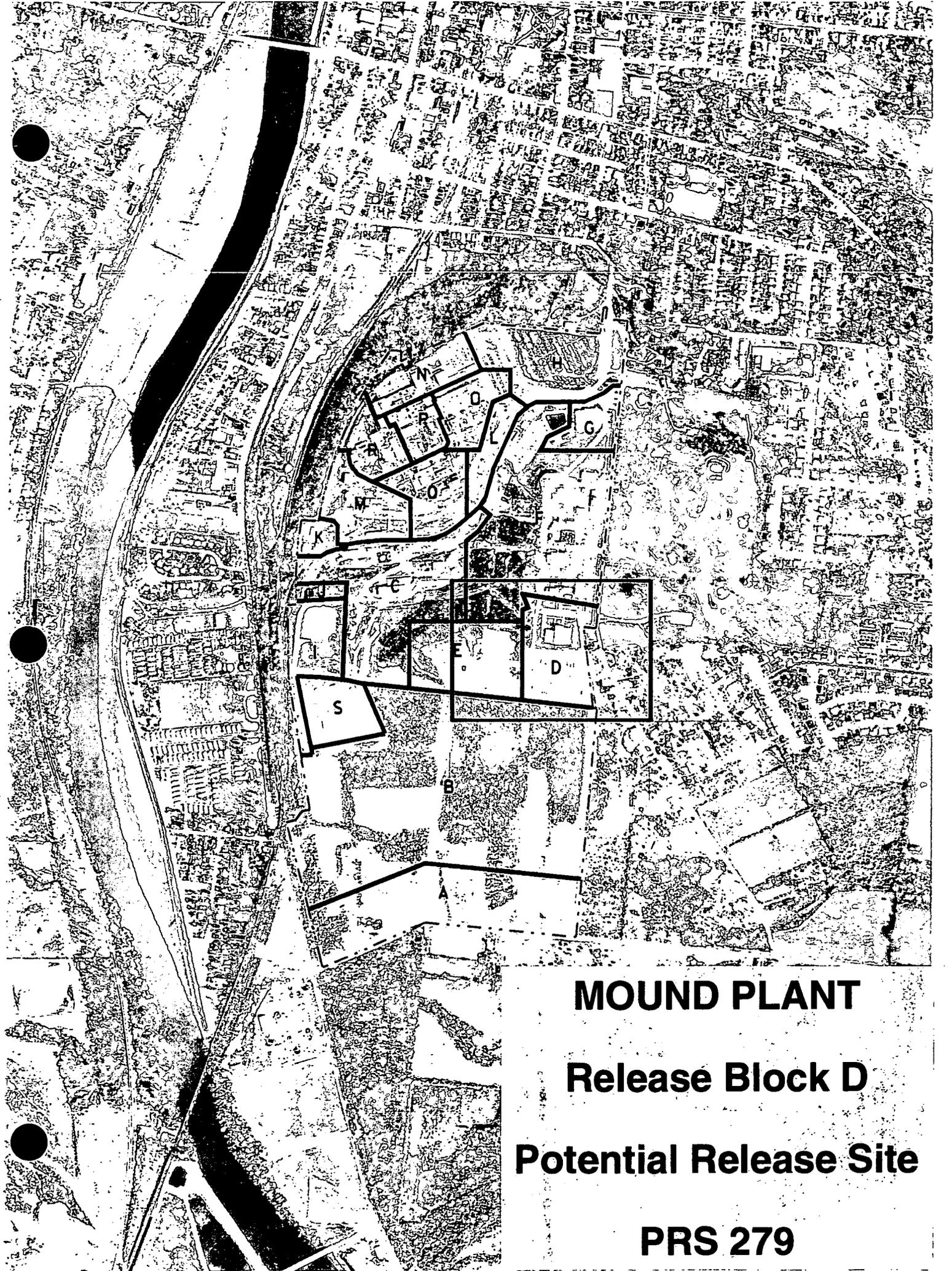
## Potential Release Site Package

### PRS # 279

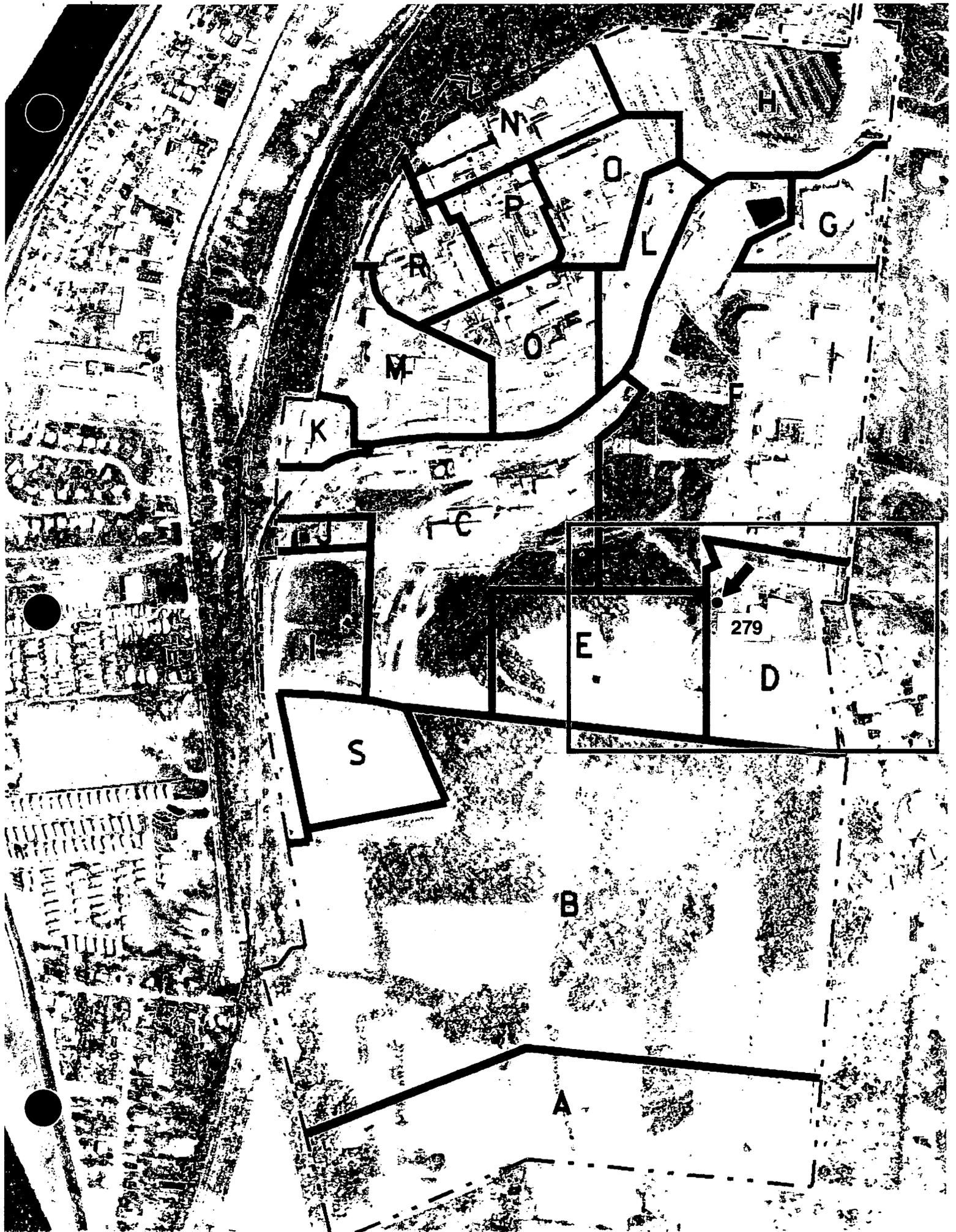


PRS 279

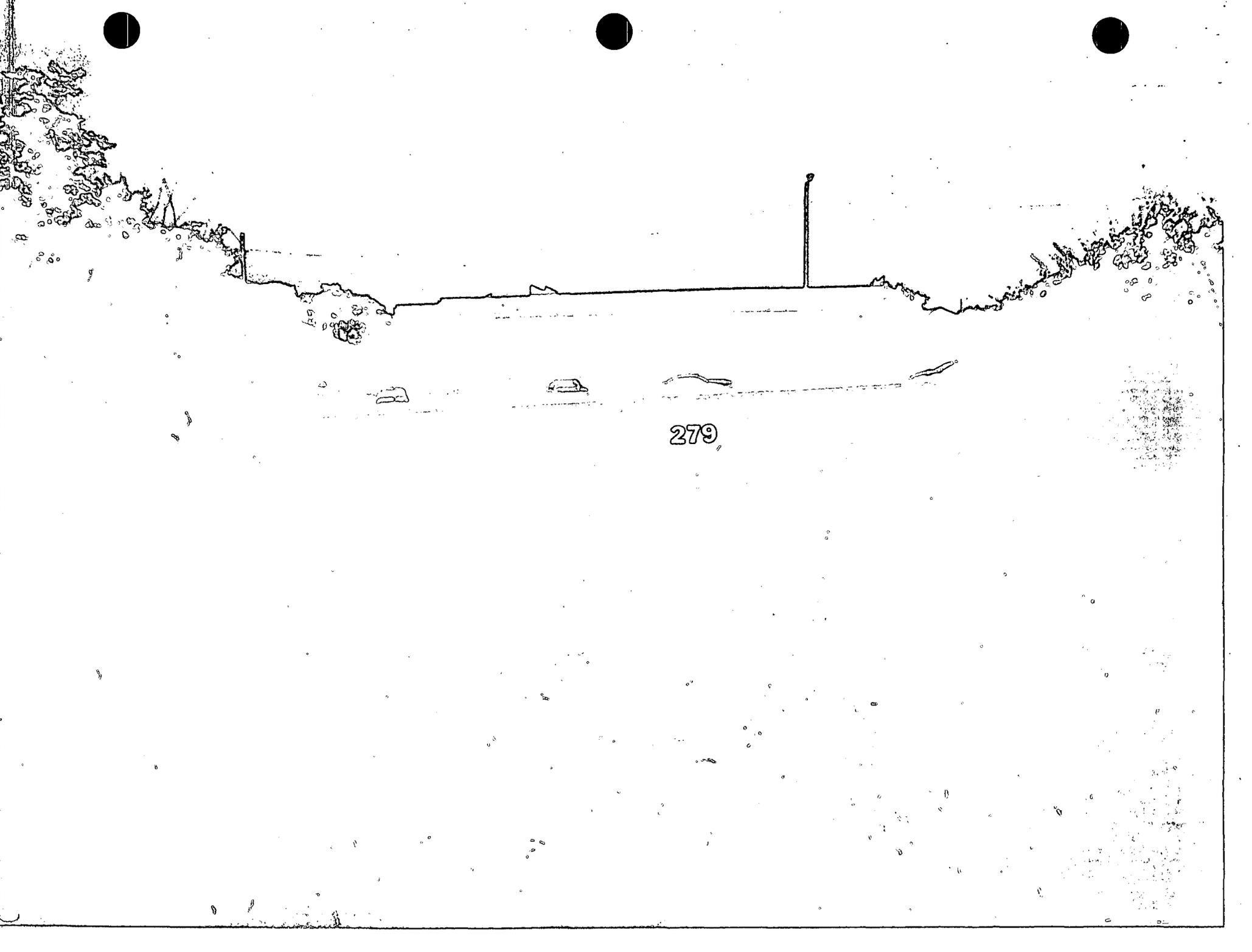
REV	DESCRIPTION	DATE
0 <b>PUBLIC RELEASE</b>	Available for comment.	<b>May 8, 1996</b>
1 <b>FINAL</b>	Comment period expired. No comments. Recommendation page annotated.	<b>Oct. 10, 1996</b>
2 <b>FINAL</b>	Signature page changed to show correct review period.	<b>Nov. 19, 1996</b>



**MOUND PLANT**  
**Release Block D**  
**Potential Release Site**  
**PRS 279**







279

## MOUND PLANT PRS 279

### PRS HISTORY:

PRS 279 was identified based on photographs showing the possible storage of drums containing halogenated and non-halogenated spent solvents, and the OU-9 Scoping Report, Volume 12.<sup>1</sup>

### PROCESS DESCRIPTION:

PRS 279, also known as the Old Firing Range Drum Storage Site (OFRDSS), is located west of Building 105 on SM/PP Hill. The area was used over an approximate 4 year period for the storage of liquid chemical wastes until they could be transported off-site for disposal (the "OU-3 Limited Field Investigation Report"<sup>4</sup> and the "Reconnaissance Sampling Report"<sup>5</sup>, both identified the OFRDSS as being at or near PRS 277 and not PRS 279).

### CONTAMINATION:

The OU-5 sampling in this area<sup>3</sup> showed no elevated soil gas readings and no elevated soil screening or FIDLER (Field Instrument for the Detection of Low Energy Radiation) results at this location. No elevated levels of Plutonium or Thorium were found<sup>2</sup> at the location of PRS 279.

### READING ROOM REFERENCES:

- 1) OU-9 Scoping Report, Vol. 12, Site Summary Report, December 1994 (pages 5-7)
- 2) OU-9 Scoping Report, Vol. 3, Site Survey Report, June 1993 (pages 8-10)
- 3) OU-5 Operational Area Phase I Investigation, Non-AOC Field Report (Draft), March 1995 (pages 11-15)
- 4) OU-3 Misc. Sites Ltd. Field Investigations, March 1993 (pages 16-26)
- 5) Reconnaissance Sampling Report - Soil Gas Survey and Geophysical Investigations, February 1993 (pages 27-32)

### PREPARED BY:

Richard Neff, DOE Technical Support Staff  
Joseph C. Geneczko, Member of EG&G Technical Staff  
George Liebson, Member of EG&G Technical Staff

**MOUND PLANT**

**PRS 279**

**AUGUST 3, 1995**

**RECOMMENDATION:**

No further action. PRS 279 was originally believed to be the site of drum storage. Further sampling and evaluation indicated that drums were stored at the location of PRS 277 rather than PRS 279. PRS 279 is designated for NFA. PRS 277 needs to be evaluated as the potential location of the drum storage shed.

**CONCURRENCE:**

DOE: Arthur van Klennant 10/18/95  
USEPA: Timothy J. Fitch 10/18/95  
OEPA: Ben Ruff 10/18/95

**SUMMARY OF COMMENTS AND RESPONSES:**

Comment period from 3/15/96 to 4/15/96  
<sup>2/15/96</sup> <sup>2/29/96</sup>

- No comments were received during the comment period.
- Comment responses can be found on page \_\_\_\_\_ of this package.

**REFERENCE MATERIAL**

**FOR**

**PRS279**

Environmental Restoration Program

**OPERABLE UNIT 9 SITE SCOPING REPORT:  
VOLUME 12 – SITE SUMMARY REPORT**

**MOUND PLANT  
MIAMISBURG, OHIO**

December 1994

Final

**U.S. Department of Energy  
Ohio Field Office**



EG&G Mound Applied Technologies

**Table B.8. Target Analyte List (TAL) - Inorganics<sup>(a)</sup>**

SITE NAME	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chloride	Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Nitrate	Nitrite	Silver	Thallium	Zinc	Cyanide	Lithium	Mercury	Vanadium	Reference
169. Area A4 WD building sewage sludge drying pits		18.8								105												8
172. WDA Building Basement Wash Sump (Tank 11) (AKA Glass Melter Room Sump) (4)	ND	ND	0.0062	ND	ND		ND	ND	0.0157	ND	0.0079	ND			ND	ND	0.0767	ND		ND	ND	7
174. WD Building Drum Staging Area	26.9	3.3	127	0.67	4.7		163	9.8	36.2	123	639	71.6			14.8	ND	126	ND		ND	19.5	7
175. Area 4, WD building influent tank overflow		7.6	465	1.2	7.5			13.6	13.3	27.2	565						303				20.2	8
176. Area 14, radioactive waste line break		6.2	623	1.3	7.2			19.9				46.7			4.0					0.91	22.3	8
258. Area H Open Burn Pit (AKA Pyrotechnic Waste Disposal Area)	44.5	9.1	13.9	1.8	11.7	ND	31.3	15.2	38.7	23.7	982	44.1	54.8	ND	20.4	ND	91.2	0.32		1.4	35.7	7
259. Pyrotechnic Waste Shed	25.1	8.6	89.1	1.7	4		37	11.6	27.5	15	538	27.9			20.8	ND	72.1	1.7		0.32	33.1	7
260. Thermal Treatment Unit	29.7	11.4	117	2.3	5.7		32.2	14	240	220	8,190	154			17.7	0.65	80.9	0.45		0.31	40	7
261. Trash Burner	5.7	19.5	82.7	2.2	1.1		16.3	11.4	1,100	15.4	290	14.8			3.7	ND	463	ND		ND	31.9	7
270. Underground Sewer Lines G6 and G7	32.3	7.1	58.8	1.4	7.9	121.3	25.1	9	63.2	39.1	562	22.7	129	5.02	16.7	ND	288	ND	ND	ND	20.9	7
279. Old Firing Range Drum Storage Area	39.2	7.5	90.4	0.98	10.2		28.9	14.2	25.2	31.3	698	25.6			18.6	ND	754	0.62		0.04	27	7
280. Waste Oil Drum Field Area	13.6	19.2	116	0.91	1.8		29.9	13.5	29.7	35.2	688	33.7			17	ND	73.4	8.8		1.0	35	7
83. Area 1, Bulk Transfer of Thorium Drums (AKA Plutonium Recoverable Waste Storage)		10.9	604	1.9	8.1		34.8	17.7	18.5	45.0		796			4.4		826			1.4	33.4	8
85. Area 11, Contamination from SM Building Operations		5.3	481	1.3	8.0		17.8	13.8	12.9	15.7		39.9									26.1	8
86. Area 16, SM Building Sanitary Sewage Septic Tank/Leach Field		6.5	491	1.8	5.0			16.6	14.5	41.7	440	39			2.8		327			0.24	22.2	8
88. Area 17, SM Building soils		9.6		1.1	9.6		19.0	16.8	18.1	27.0		31.7			3.2							8



Table B.9. Summary of Radiological Data<sup>(a,b)</sup>

Site Name	Radiological Contaminants														Reference	
	Potassium-40	Plutonium-239	Plutonium-238	Cesium-137	Thorium-Total	Tritium	Thorium-232	Cobalt-60	Radium-224, -226, -228	Radon-222	Americium-241	Actinium-227	Uranium-233, -234, -238	Bismuth-210m		Bismuth-207
172. WDA Building Basement Wash Sump (AKA Glass Melter Room Sump)			257,000			1302 (c)	66.7									7
174. WD Building Drum Staging Area			1,302			ND										7
236. Site Survey Project Potential Hot Spot Location S0166			1.76			12.73										6
237. Site Survey Project Potential Hot Spot Location S0175				10				82	.8							6
238. Site Survey Project Potential Hot Spot Location S1092			0.31		323	.5										6
239. Site Survey Project Potential Hot Spot Location S0208			61			.72										6
240. Site Survey Project Potential Hot Spot Location S0472			1.2		7.5											6
258. Area H Open Burn Pit (AKA Pyrotechnic Waste Disposal Area)			0.81		<2											6
259. Pyrotechnic Waste Shed			0.31		<2											7
260. Thermal Treatment Unit			0.81		<2											7
268. Building 31, Contaminated Material Storage Building			8.15		150											6
270. Underground Sewer Lines G6 and G7						ND										7
279. Old Firing Range Drum Storage Area	26.2			0.121	1.48				12.2							7
280. Waste Oil Drum Field Area			NR		9.2											7
03. Warehouse 14 (AKA Pad 14)			10.2	<2												
107. Site Survey Project Potential Hot Spot Location C0007			.39		41.6											6



**ENVIRONMENTAL RESTORATION PROGRAM**

**OPERABLE UNIT 9, SITE SCOPING REPORT:  
VOLUME 3 - RADIOLOGICAL SITE SURVEY**

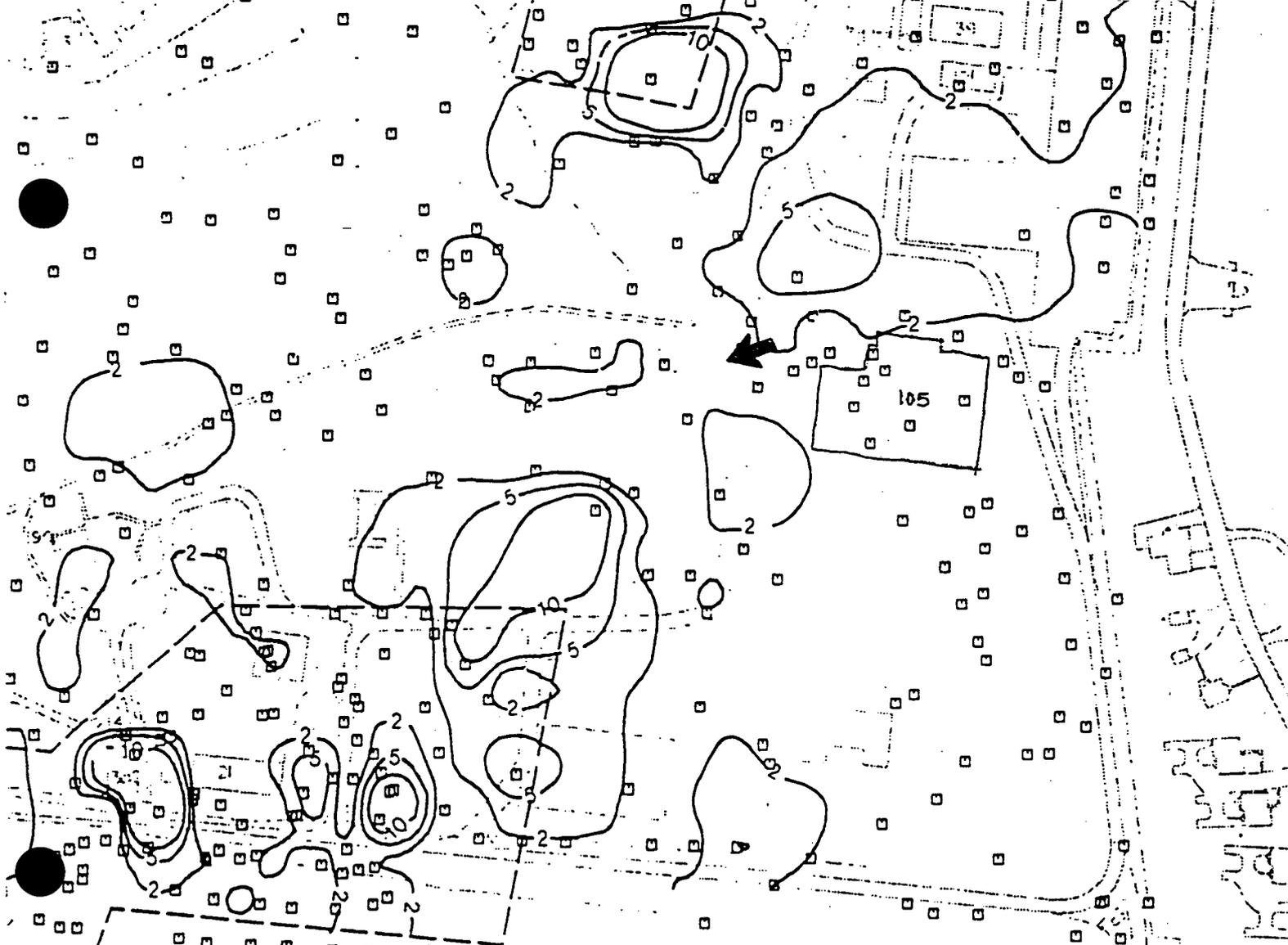
**MOUND PLANT  
MIAMISBURG, OHIO**

**June 1993**

**DEPARTMENT OF ENERGY  
ALBUQUERQUE FIELD OFFICE**

**ENVIRONMENTAL RESTORATION PROGRAM  
EG&G MOUND APPLIED TECHNOLOGIES**

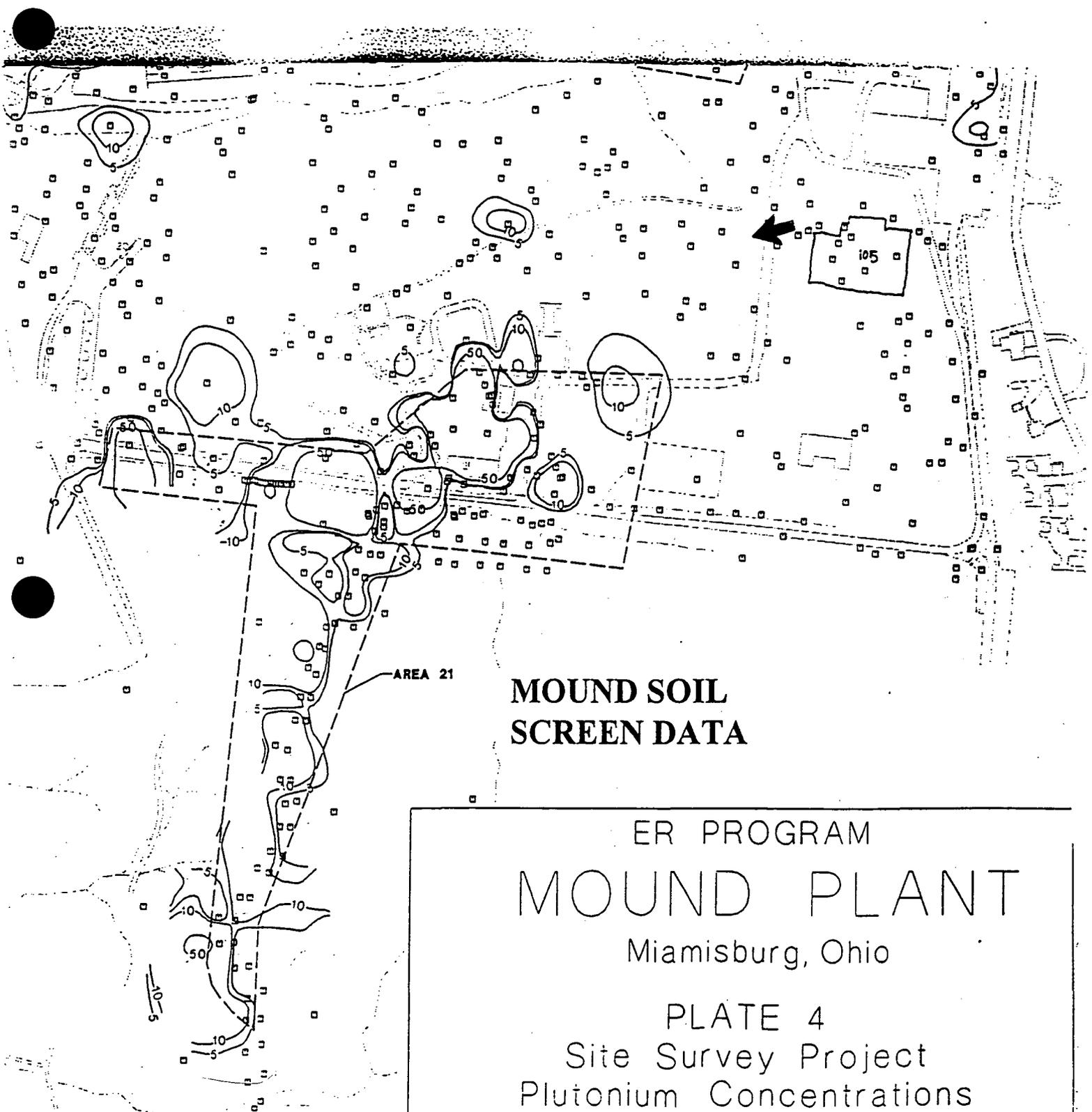
**FINAL**



**MOUND SOIL  
SCREEN DATA**

AREA 1

ER PROGRAM  
MOUND PLANT  
Miamisburg, Ohio  
PLATE 5  
Site Survey Project  
Thorium Concentrations  
Prepared for  
Site Scoping Report: Volume 3,  
Radiological Site Survey



**MOUND SOIL  
SCREEN DATA**

ER PROGRAM

**MOUND PLANT**

Miamisburg, Ohio

PLATE 4

Site Survey Project  
Plutonium Concentrations

Prepared for  
Site Scoping Report: Volume 3,  
Radiological Site Survey

Environmental Restoration Program

**OPERABLE UNIT 5  
OPERATIONAL AREA PHASE I INVESTIGATION  
NON-AOC FIELD REPORT**

**MOUND PLANT  
MIAMISBURG, OHIO**

**VOLUME II - APPENDICES A-G**

**March 1995**

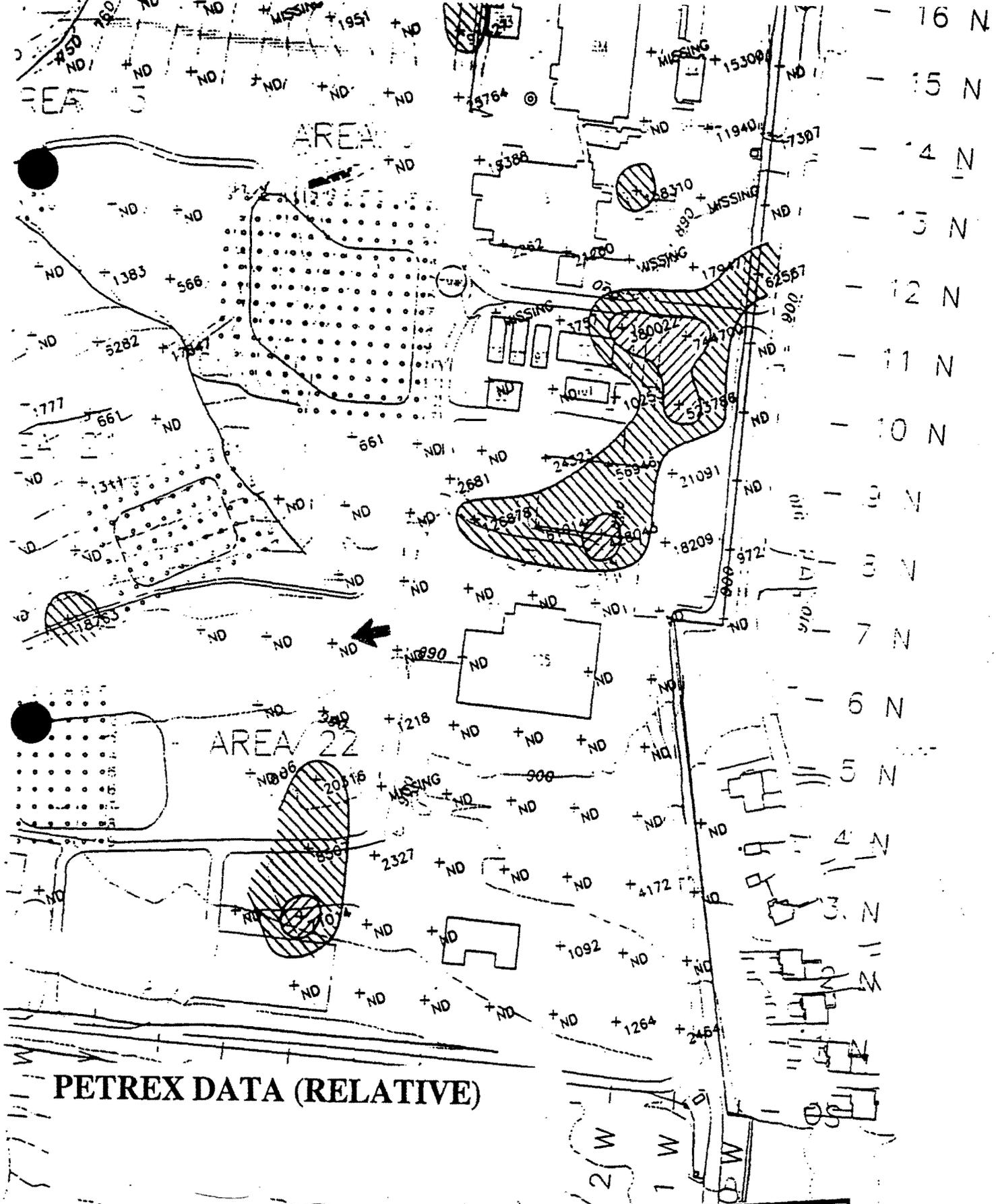
**Draft**



**U.S. Department of Energy  
Ohio Field Office**

**EG&G Mound Applied Technologies**

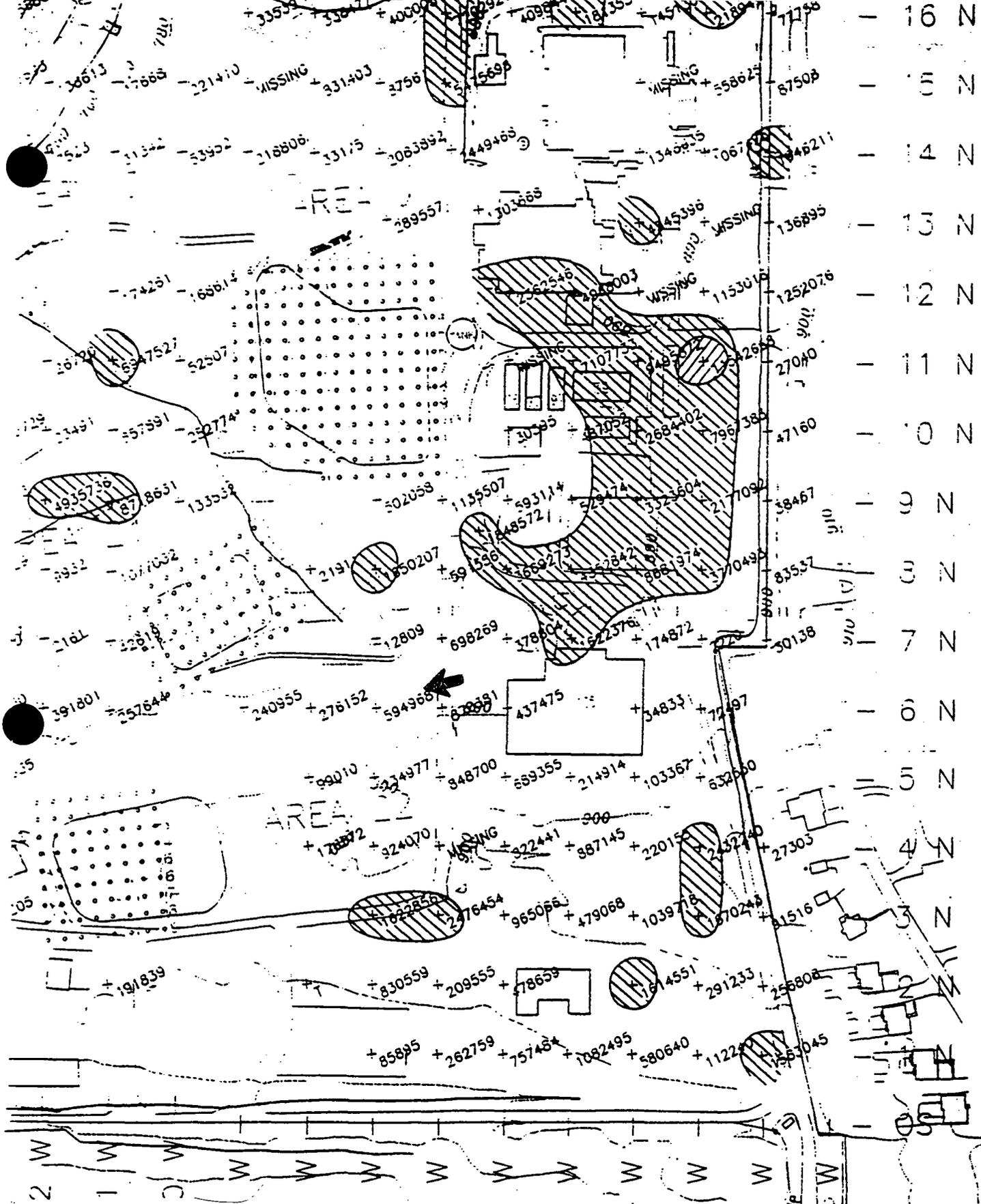


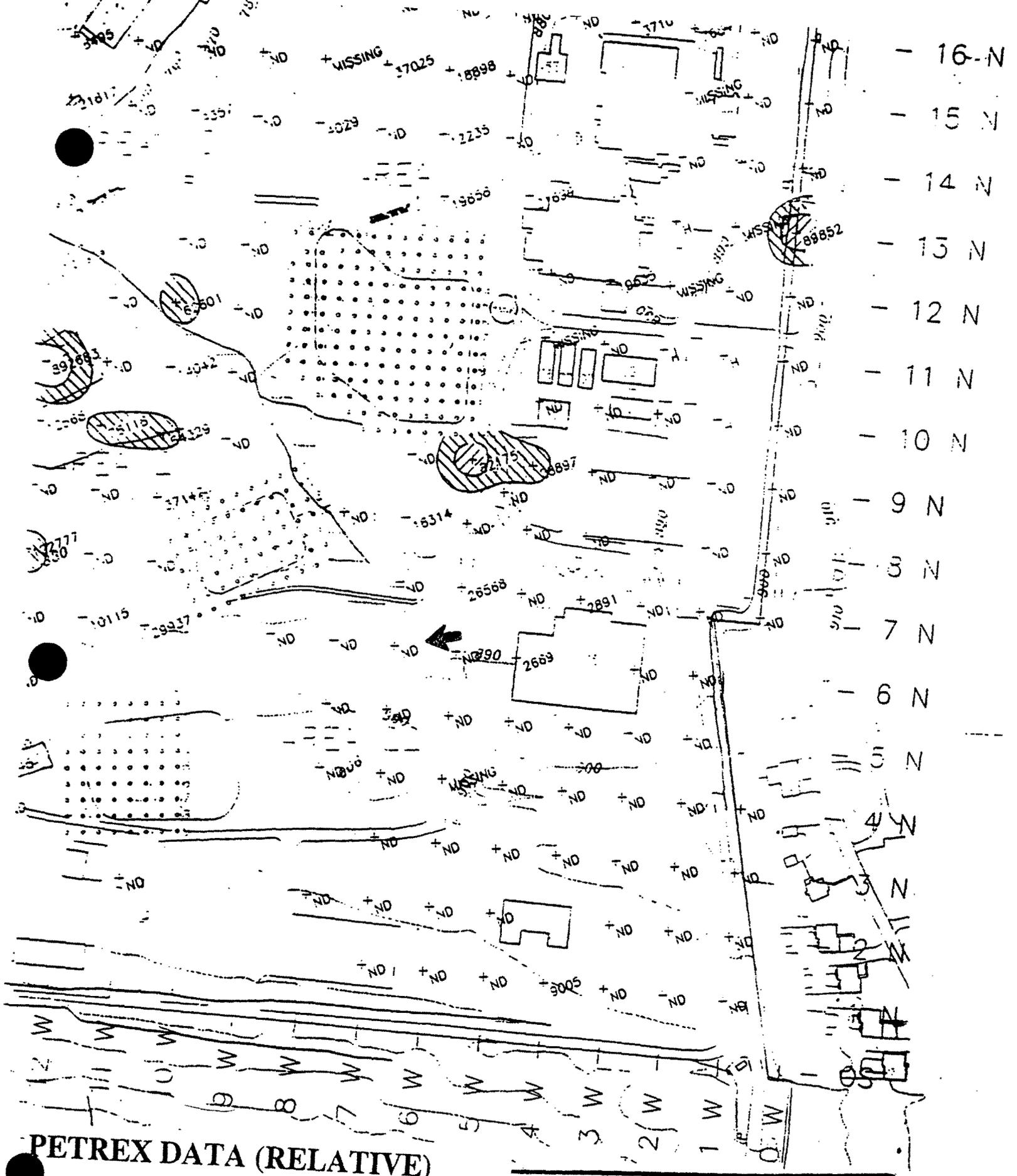


**PETREX DATA (RELATIVE)**

CU-5

Relative Response  
 Total Semivolatile  
 Hydrocarbons





**PETREX DATA (RELATIVE)**

Relative Response

Total Halogen  
Hydrocarbor

Environmental Restoration Program

**OPERABLE UNIT 3, MISCELLANEOUS SITES  
LIMITED FIELD INVESTIGATION REPORT**

**MOUND PLANT  
MIAMISBURG, OHIO**

**VOLUME I LFI REPORT TEXT (SECTIONS 1-6)**

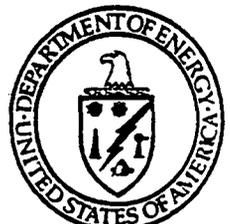
July 1993

**FINAL**

(Revision 0)

**Department of Energy**

EG & G Mound Applied Technologies



- MND33-0034-0002 — Interval 1.0 to 4.0 ft BGS. Three boreholes were necessary to obtain the required sample volume. TCL SVOCs, TCL P/PCBs, TAL inorganics, and TPH were taken by WESTON in addition to the requested analyses for TCL VOCs in order to duplicate regulatory agency samples.
- MND33-0036-0002 — Interval 3.0 to 5.0 ft BGS. A TPH sample was taken in addition to the requested analyses of TCL VOCs in order to duplicate regulatory agency samples.
- MND33-0038-0002 — Interval 3.0 to 5.58 ft BGS. TPH sample was taken in addition to the requested analyses of TCL VOCs in order to duplicate regulatory agency samples.
- MND33-0039-0002 — Interval 3.0 to 7.0 ft BGS. Two boreholes were necessary to obtain the required sample volume due to regulatory agency split samples. TCL SVOCs, TCL P/PCBs, TAL inorganics, and TPH were taken in addition to the requested analyses of TCL VOCs.

Field screening of soil samples using an OVA was not conducted on surface samples from locations MND33-0027, MND33-0029, MND33-0030, MND33-0032, and MND33-0033 because of instrument malfunction.

## 2.23. OLD FIRING RANGE DRUM STORAGE SITE

### 2.23.1. Site History

#### 2.23.1.1 Description of the Old Firing Range Drum Storage Site

The Old Firing Range Drum Storage Site (OFRDSS) is located northwest of Building 105 on SM/PP Hill (Figures 1.3 and 2.23(a)). The area was in operation from about 1970 to 1974. It was used for the collection and staging of liquid chemical wastes until they could be transported offsite for disposal. It was the first staging and storage area used for such purposes when the Historical Landfill (Area B) was closed to open burning. Its operation was concurrent with the limited operation of the Building 51 waste incinerator. Most hazardous wastes generated during this time were collected weekly and were consolidated at the OFRDSS, although some wastes were incinerated (Vaughters 1991). In 1974, the hazardous chemical staging activities were moved back to the area of the historical landfill and the OFRDSS was abandoned.

The OFRDSS may have included an area approximately 300 ft by 100 ft and photographs indicate that 100 to 500 drums were stored in the open on bare ground. The area has since been regraded, and is sparsely vegetated and partially covered by the intersection of two paved roads.

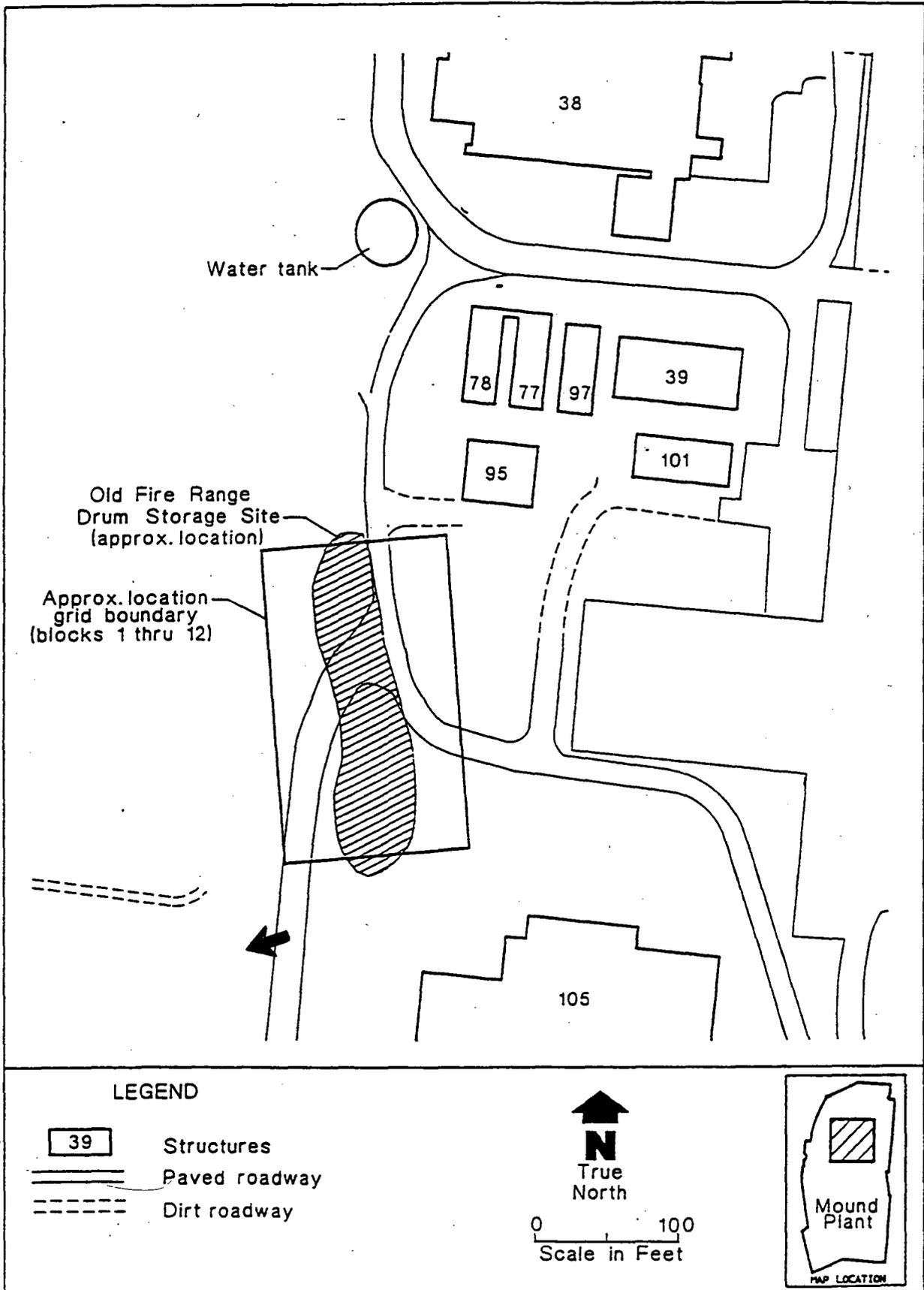


Figure 2.23.(a). Old Firing Range Drum Storage Site

### 2.23.1.2. Potential Area Contaminants

Drums containing chemical wastes such as spent solvents were stored on bare ground. No radiological contamination was detected during a 1988 Mound Site Survey (DOE 1991a). Because this area was operational in the 1970s, RCRA was not yet promulgated, and records of RCRA-listed wastes were not maintained. Based on photographs showing markings on drums, it is possible that wastes may have included substances that are currently RCRA regulated, including:

- Spent solvents, RCRA listing F004.
- Spent nonhalogenated solvents, RCRA listing F002.

Recently obtained information indicates that a cleanup of cesium-137-contaminated soils may have occurred at a location near the OFRDSS. Based on this information, sample analyses via gamma spectroscopy for soils from each sample location at the OFRDSS was performed. The gamma spectroscopy analyses were performed to yield results for cesium-137 and also included additional radioisotopes radium-224, -226, and -228, potassium-40, and thorium-234, a daughter of uranium-238.

A soil gas survey was performed in August 1992 in the vicinity of the OFRDSS as documented in a December 1992 report (DOE 1992e). Soil gas sample locations were located along the western edge of the OU3 LFI sampling grid. Analytical results reported sporadic low-level concentrations (<50 ppb) of several VOC analytes, including Freon II, 1,1,1-TCA, PCE, TCE, and toluene.

There are no monitor wells near the area. No drums or evidence of releases in the area were observed during an RCRA visual site inspection, or during the OU 3 investigation. The drums were removed in 1974, and the area was regraded at that time.

### 2.23.2. Field Investigation Procedures

The objective of sampling at OFRDSS is to identify hazardous contaminants that may be present. Sampling at OFRDSS included surface and subsurface soil sampling by hollow stem auger drilling techniques. Sampling at OFRDSS was conducted from 12 November to 18 November 1991 and from 3 December to 8 December 1991. Soil sample collection was conducted by WESTON representatives, and samples were sent to IT Laboratories for analysis.

Soil samples were composited from 12 grid blocks, as shown on Figure 2.23(b). Twenty-eight soil samples were collected from the OFRDSS. The soils encountered during drilling ranged from a silty sandy gravel to a silty clay. Groundwater was not encountered during drilling. The bedrock surface ranged from 1.67

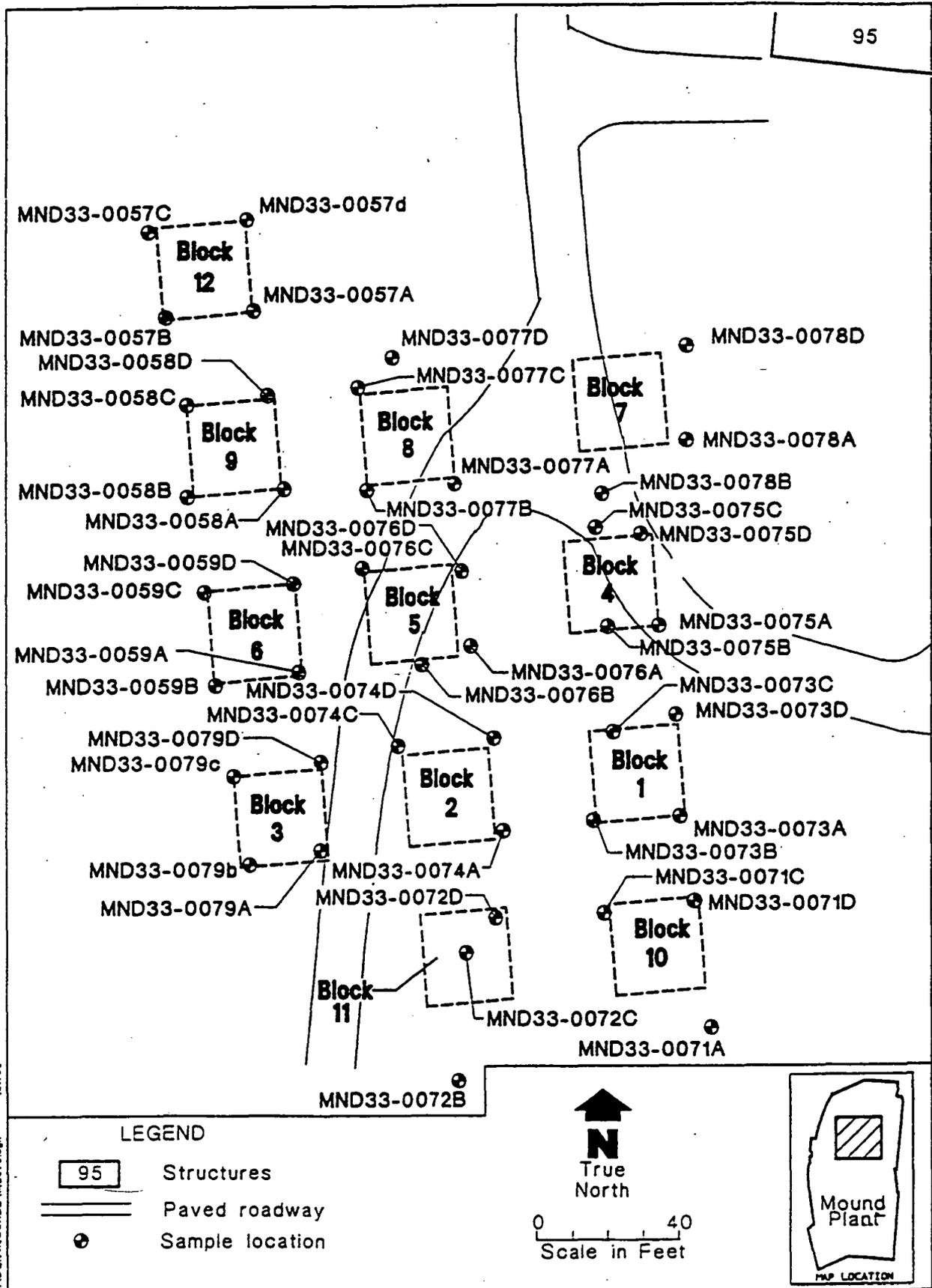


Figure 2.23.(b). Old Firing Range Drum Storage Site soil sample locations.

ft to more than 10.0 ft BGS at this site, based on split spoon and auger refusal and rock fragments. A summary of soil samples collected at each location listing the sample identification number, sampling depth interval, date sampled, and requested analytical parameters is presented in Table II.22.

Every effort was made to comply with the approved sampling protocol; however, some deviations were necessary to obtain the required samples. These deviations are explained below:

- Shortly after the sampling locations were initially marked with stakes by WESTON in concurrence with EPA and OEPA (June 1991), it was determined that the grid for the OFRDSS was incorrectly placed. This is documented in the 2 August 1991 letter (Mauzy 1991a).
- In September 1991, it was determined that the second OFRDSS grid was also incorrectly placed. A photo interpretation map was completed to more precisely locate the OFRDSS (DOE 1991b), and a new grid was staked onsite (Mauzy 1991b).
- Sampling grid blocks 10 and 11 were moved south of the grid at the request of OEPA.

Deviations during the OFRDSS sampling included:

**Block 1:**

- Location C was moved approximately 5 ft east because of the presence of underground utilities.
- The 5.0- and 10.0-ft BGS intervals were not sampled because of auger and split spoon refusal.

**Block 2:**

- Location B was not sampled because of the presence of utilities.
- While attempting to get the sampling interval of 5.0 ft BGS at location C, the boring was offset approximately 3 ft to the west because the auger encountered "soft earth" at a depth of 3.0 ft BGS. This "soft earth" was an indication that the auger was in a sewer line trench and could be near a sewer line. The offset boring had auger and split spoon refusal at 3.8 ft BGS.
- The 5.0- and 10.0-ft BGS intervals were not sampled because of auger and split spoon refusal.

**Block 3:**

- The 10.0-ft BGS intervals were not sampled because of auger and split spoon refusal.
- The 5.0-ft BGS interval was not sampled at location A because of auger and split spoon refusal.

Table II.22. Old Firing Range Drum Storage Site Sample Summary

Sample Location	Sample Number	Matrix	Date Sampled	Sample Interval (ft BGS)	Parameters Analyzed
Block 1 A, B, C, D	MND33-0073-0001	Soil	12/4/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
Block 2 A, C, D	MND33-0074-0001	Soil	12/4/91 12/5/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
Block 3 A, B, C, D	MND33-0079-0001	Soil	12/8/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
Block 4 A, B, C, D	MND33-0079-0002	Soil	12/8/91	3.0-5.0	TCL VOCs (from C), SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0075-0001	Soil	12/8/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
Block 5 A, B, C, D	MND33-0075-5001	Water	12/8/91	---	TCL VOCs.
	MND33-0076-0001	Soil	12/6/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
Block 6 A, B, C, D	MND33-0076-0002	Soil	12/6/91	3.0-5.0	TCL VOCs (from C), SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0059-0001	Soil	11/13/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
	MND33-0059-0002	Soil	11/18/91	3.0-7.0	TCL VOCs (from B), SVOCs, P/PCBs; TAL Inorganics; gamma spec.
Block 7 A, B, D	MND33-0059-0003	Soil	11/18/91	8.0-12.0	TCL VOCs (from B), SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0078-0001	Soil	12/7/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
Block 8 A, B, C, D	MND33-0078-0002	Soil	12/7/91	3.0-4.0	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0077-0001	Soil	12/7/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
	MND33-0077-0002	Soil	12/7/91	3.0-5.0	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0077-1002	Soil	12/7/91	3.0-5.0	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics.
Block 9 A, B, C, D	MND33-0077-0003	Soil	12/7/91	8.0-9.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
	MND33-0058-0001	Soil	11/13/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
	MND33-0058-1001	Soil	11/13/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gamma spec.
	MND33-0058-0002	Soil	11/14/91	3.0-5.0	TCL VOCs (from C), SVOCs, P/PCBs; TAL Inorganics; gamma spec.
Block 10 A, C, D	MND33-0058-0003	Soil	11/14/91	8.0-10.0	TCL VOCs (from C), SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0071-0001	Soil	12/3/91	0.0-2.0	TCL SVOCs; P/PCBs; TAL Inorganics; gross alpha-beta; gamma spec.
	MND33-0071-0002	Soil	12/3/91	3.0-5.1	TCL VOCs (from C), SVOCs, P/PCBs; TAL Inorganics; gamma spec.

**Table II.22. Old Firing Range Drum Storage Site Sample Summary  
(Continued)**

Sample Location	Sample Number	Matrix	Date Sampled	Sample Interval (ft BGS)	Parameters Analyzed
Block 11 B, C, D	MND33-0072-0001	Soil	12/3/91	0.0-2.0	TCL SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0072-0002	Soil	12/3/91	3.0-6.5	TCL VOCs (from C), SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0072-1002	Soil	12/3/91	3.0-6.5	TCL VOCs (from C), SVOCs, P/PCBs; TAL Inorganics.
	MND33-0072-4002	Water	12/3/91		TCL VOCs, SVOCs, P/PCBs; TAL Inorganics.
Block 12 A, B, C, D	MND33-0057-0001	Soil	11/12/91	0.0-2.0	TCL SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0057-0002	Soil	11/13/91	3.0-5.0	TCL VOCs (from C), SVOCs, P/PCBs; TAL Inorganics; gamma spec.
	MND33-0057-5002	Water	11/13/91	---	TCL VOCs.
	MND33-0057-0003	Soil	11/13/91	8.0-12.0	TCL VOCs (from C), SVOCs, P/PCBs; TAL Inorganics; gamma spec.

BGS - Below Ground Surface

ft - Feet

P/PCBs - Pesticides/Polychlorinated Biphenyls

SVOCs - Semivolatile Organic Compounds

TAL - Target Analyte List

TCL - Target Compound List

VOCs - Volatile Organic Compounds

**Block 4:**

- The 5.0- and 10.0-ft BGS intervals were not sampled because of auger and split spoon refusal.
- Locations B and C were moved from the original locations approximately 6 ft east and 10 ft east, respectively, because of underground utilities.

**Block 5:**

- The 5.0-ft BGS interval at location A was not sampled because of split spoon and auger refusal.
- The 10.0-ft BGS intervals were not sampled at any of the locations because of split spoon and auger refusal.
- Location A was moved approximately 2 ft northwest because it was too close to the barbed wire fence.
- Location B was moved approximately 5 ft southeast because of access problems.
- Location C was moved approximately 4 ft northwest because of access problems.
- Location D was moved approximately 1 ft east because of the presence of underground utilities.

**Block 6:**

- There was no OVA reading obtained for MND33-0059-0003C because of instrument malfunction.
- The 8.0- to 10.0-ft BGS interval was not sampled at location A because of auger and split spoon refusal at approximately 7.0 ft BGS.

**Block 7:**

- Location C was eliminated as a sampling location because of the presence of underground utilities.
- Locations A and D were moved approximately 5 ft east of their original locations because they were on a slope and were inaccessible to the drilling rig.
- Location B was moved approximately 7 ft southeast because of the presence of underground utilities.
- The 5.0-ft BGS interval was not sampled at locations A or D because of auger and split spoon refusal.

- The 10.0-ft BGS interval was not sampled at any location because of auger and split spoon refusal.

**Block 8:**

- Location A was moved approximately 3 ft southwest of its original location because of the presence of underground utilities.
- Location B was moved approximately 2 ft southwest of its original location because of the presence of underground utilities.
- Location D was moved approximately 12 ft west of its original location because of the presence of underground utilities.
- The 10.0-ft BGS interval was not sampled at location A because of the presence of fill cuttings and "easy" drilling. This indicated the presence of water line, which resulted in abandoning the hole.
- The 10.0-ft BGS interval was not sampled at locations B or D because of auger and split spoon refusal.

**Block 10:**

- Location A was moved approximately 10 ft south of its original location because of the presence of underground utilities.
- Location B was not sampled and could not be moved because of the presence of underground utilities.
- The 5.0-ft BGS interval was not sampled at location D because of auger and split spoon refusal.
- The 10.0-ft BGS interval was not sampled at any of the locations because of auger and split spoon refusal.

**Block 11:**

- Location A was not sampled and could not be moved because of the presence of underground utilities.
- Location B was moved approximately 18 ft south of its original location because of the presence of underground utilities.
- Location C was moved approximately 8 ft southeast of its original location because of the presence of overhead and underground utilities.
- Location D was moved approximately 4 ft west of its original location because of the presence of underground utilities.

- The 10.0-ft BGS interval was not sampled at any of the locations because of auger and split spoon refusal.

**Block 12:**

- The 10.0- to 12.0-ft BGS split spoon was used for the composite sample of the 10.0-ft BGS interval to obtain sufficient sample volume.

**2.24. FARM TRASH AREA**

**2.24.1. Site History**

**2.24.1.1. Description of the Farm Trash Area**

The Farm Trash Area is located near the southwest corner of the undeveloped Mound Plant property (Figure 1.3). It is the location of a former residence that was razed when the DOE purchased the property in 1981. The site is about 500 ft north of Benner Road and approximately 500 ft east of the western edge of Mound Plant property (RFA 1988).

**2.24.1.2 Potential Area Contaminants**

The Farm Trash Area is estimated to cover less than ¼ acre. It was used to receive trash, tires, and household debris when the farm was in use. Mound Plant has never used this area for waste or trash disposal, and no RCRA-regulated materials have been stored or handled at the area (RFA 1988). It was characterized by a lack of vegetation and dark stains on soil near the assumed eastern edge of the area. The source of the stains is not known, but the stains are probably related to farm vehicle maintenance. Evidence of soil staining was not found during the OU 3 LFI.

**2.24.2. Field Investigation Procedures**

The objective of sampling at the Farm Trash Area was to identify hazardous contaminants that may be present because of substances released to the soils by the previous property owner. WESTON representatives conducted sampling activities at the Farm Trash Area on 16 January 1992. Sampling activities consisted of surface soil sampling with a scoop and subsurface sampling with a hand auger. Samples were collected from two depth intervals at three locations at the Farm Trash Area. All samples were shipped to IT Laboratories for analysis.

Environmental Restoration Program

**RECONNAISSANCE SAMPLING REPORT  
SOIL GAS SURVEY AND GEOPHYSICAL  
INVESTIGATIONS, MOUND PLANT  
MAIN HILL AND SM/PP HILL**

**REPORT  
APPENDICES A, B AND D**

**MOUND PLANT  
MIAMISBURG, OHIO**

February 1993

**Department of Energy  
Albuquerque Field Office**

Environmental Restoration Program  
EG&G Mound Applied Technologies



2.15 and 2.16). Trichloroethylene (TCE) was detected at 33 locations ranging from 2 to 34,780 ppb (Figures 2.17 and 2.18). Toluene was detected at 41 locations ranging from 3 to 23,142 ppb (Figures 2.19 and 2.20). Figures 2.21 and 2.22 illustrate the total VOCs detected at each location on the Main Hill.

Some of the trip blanks, ambient blanks, and field blanks collected during the Main Hill investigation contained minor amounts of some of the target compounds. Table II.5 presents the positive blank detections from the Main Hill sampling effort. Neither of the Main Hill groundwater samples contained measurable concentrations of the target compounds.

### 2.3.2 Old Firing Range Drum Storage Site/Area J

A total of 26 investigative samples were collected and analyzed from the grid at Area J at depths ranging from 5 to 20 feet. All samples initially were collected from a 5-foot depth (samples 3152-3188). Samples 3209 and 3210 were collected as discretionary locations following a review of the geophysical survey data, which showed potential for the burial of ferrous materials below a depth of 10 feet. These samples were collected at depths of 17 and 20 feet near the geophysical anomalies to determine the presence of VOCs at that greater depth. No groundwater was sampled nor encountered during the Area J field effort. Samples 3184 and 3186 could not be collected due to shallow obstructions encountered during probe placement.

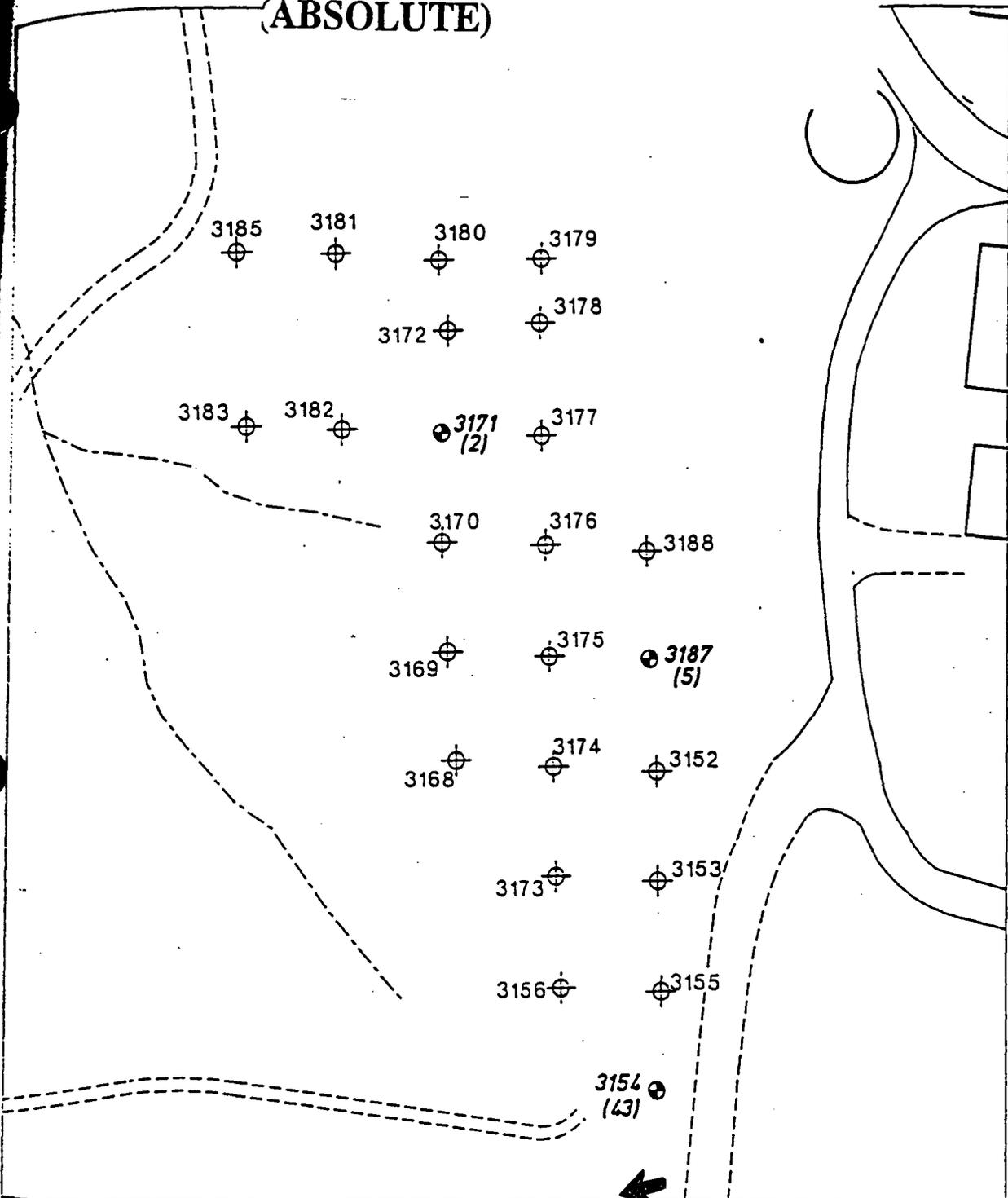
Table II.6 summarizes the positive detections from the Area J sampling effort. Five of the eight target compounds were detected. Freon 11 was detected at three locations at concentrations ranging from 2 to 46 ppb (Figure 2.23). The compound 111TCA was detected at two locations ranging from 7 to 37 ppb (Figure 2.24). PCE was detected at one location at 15 ppb (Figure 2.25). TCE was detected at one location at 13 ppb (Figure 2.26). Toluene was detected at three locations ranging from 5 to 11 ppb (Figure 2.27). Figure 2.28 illustrates the total VOCs detected at each location in Area J.

There was one detection of PCE in an ambient blank sample during the Area J sampling effort at a concentration of 6 ppb. Table II.7 describes this blank detection.

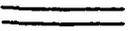
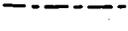
### 2.3.3. Building 51

A total of 18 investigative samples were collected from 10 locations near Building 51. Sampling depths were planned to be 15 and 25 feet at each location, however, two locations were only sampled from 13 to 15 feet due to soil probe refusal. Of the eight locations having 25-foot samples, two were water samples (4159 and 4160).

# SOIL GAS DATA (ABSOLUTE)



## LEGEND

-  Structures
-  Paved roadway
-  Dirt roadway
-  Water
-  Sample location with concentration in ppb
-  Sample location



0 75  
Scale in Feet

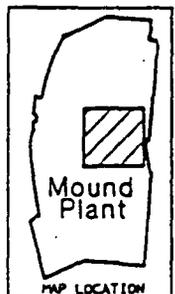


Figure 2.23. Freon II detection map for Area J .

# SOIL GAS DATA (ABSOLUTE)

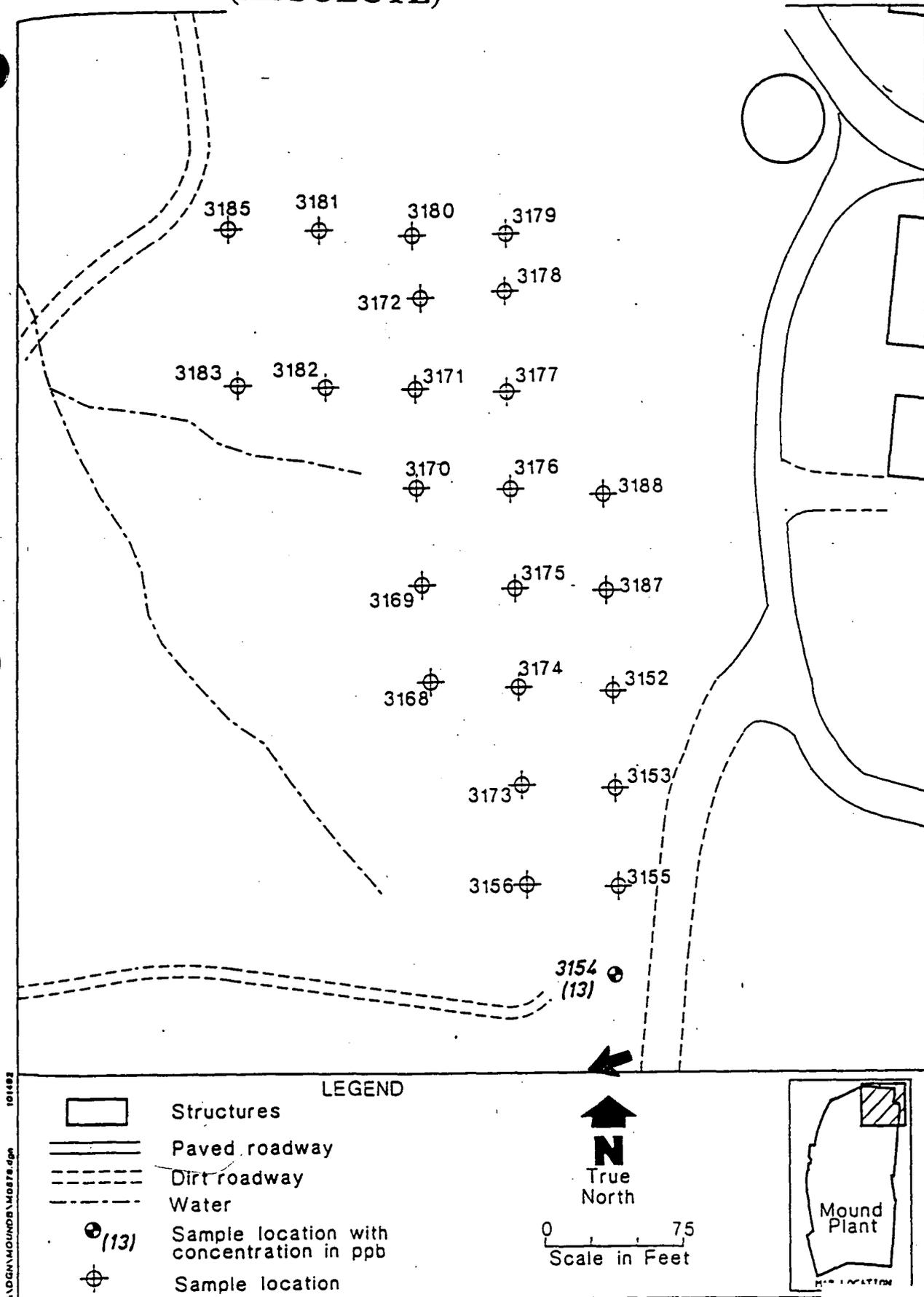


Figure 2.26. Trichloroethene detection map for map Area J .

# SOIL GAS DATA (ABSOLUTE)

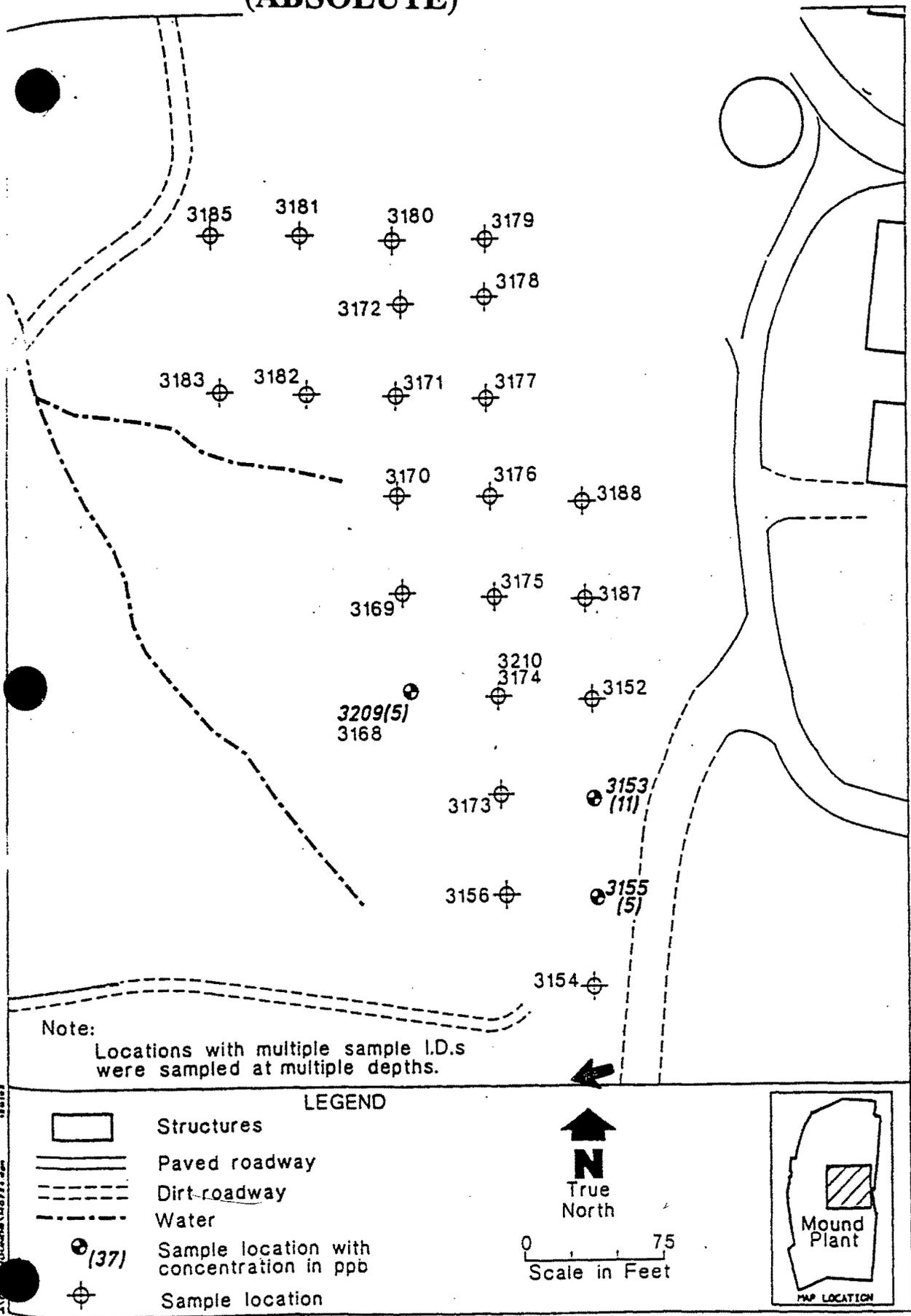


Figure 2.27. Toluene detection map for Area J .

# SOIL GAS DATA (ABSOLUTE)

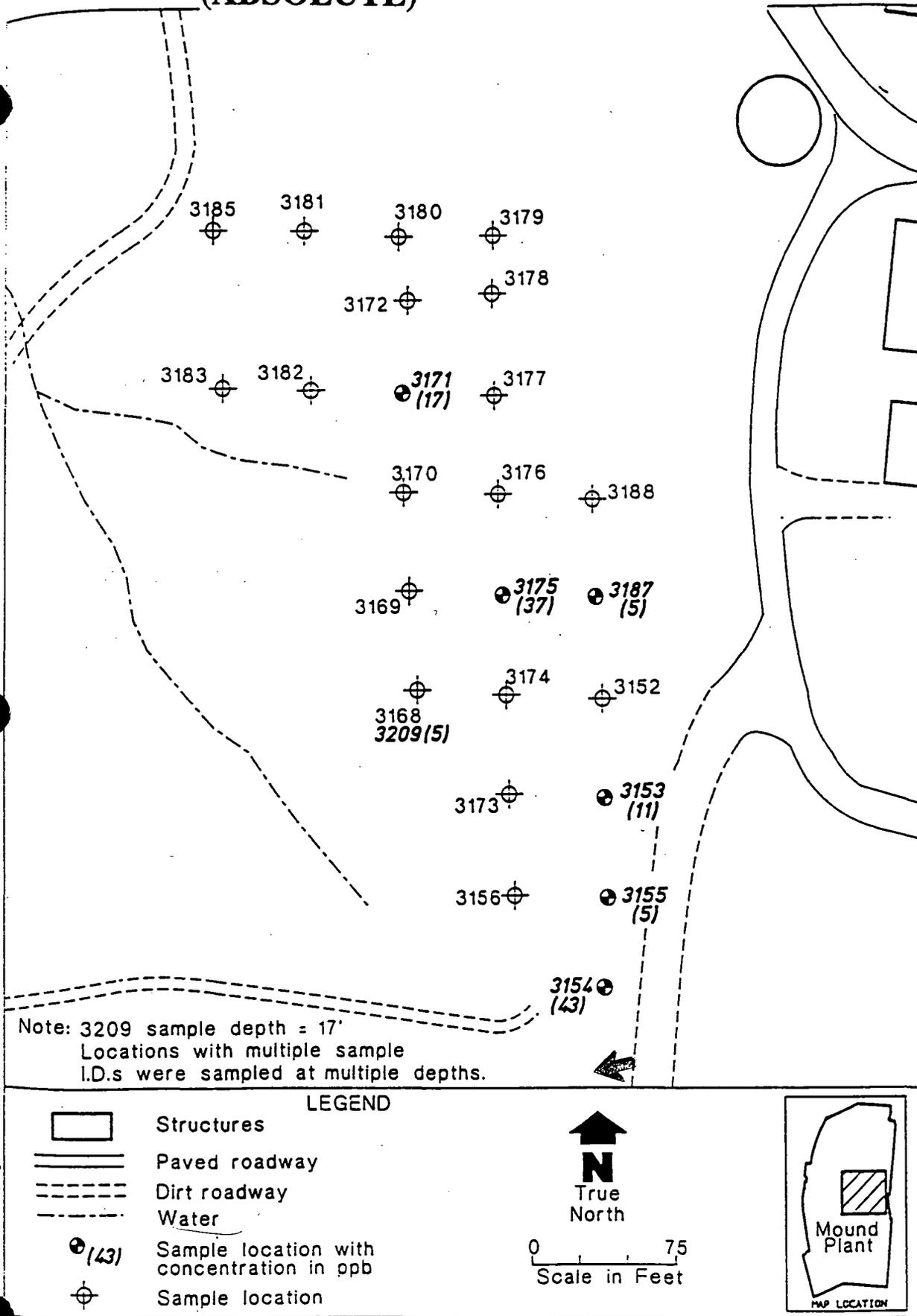


Figure 2.28. Total VOCs detection map for Area J .