

# MOUND



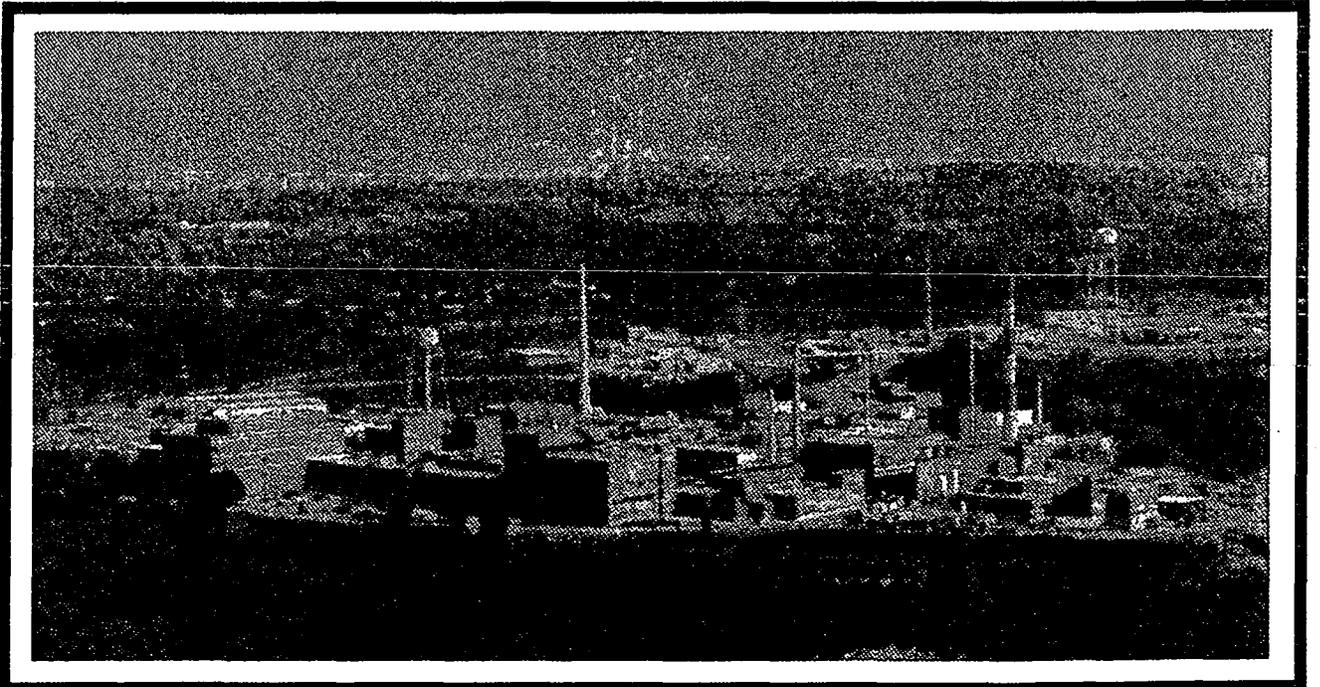
**Environmental  
Restoration  
Program**



# MOUND PLANT

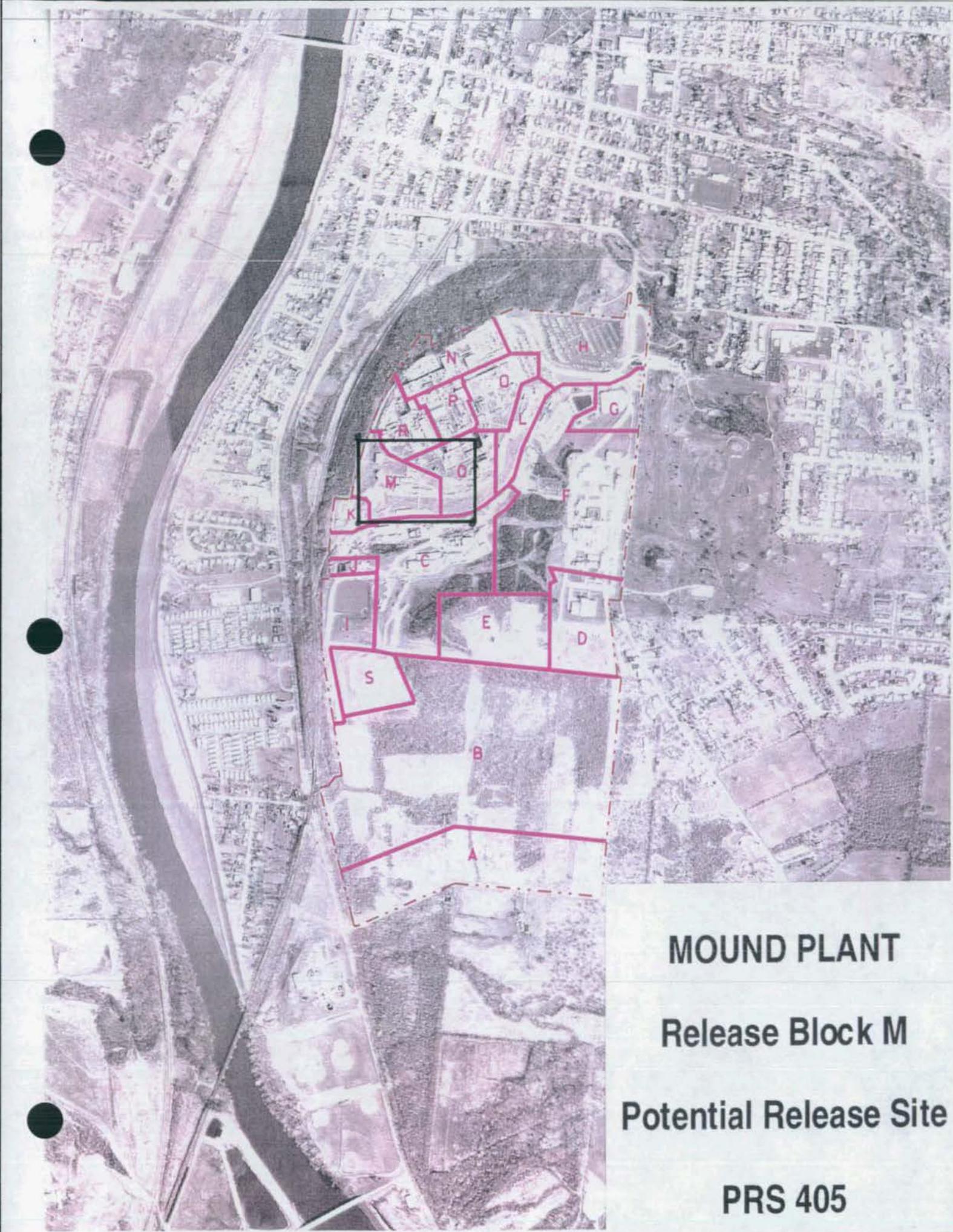
## Potential Release Site Package

### PRS # 405



PRS 405

REV	DESCRIPTION	DATE
0 <b>PUBLIC RELEASE</b>	Available for comments.	Aug. 25, 1997
1 <b>FINAL</b>		



**MOUND PLANT**

**Release Block M**

**Potential Release Site**

**PRS 405**



405

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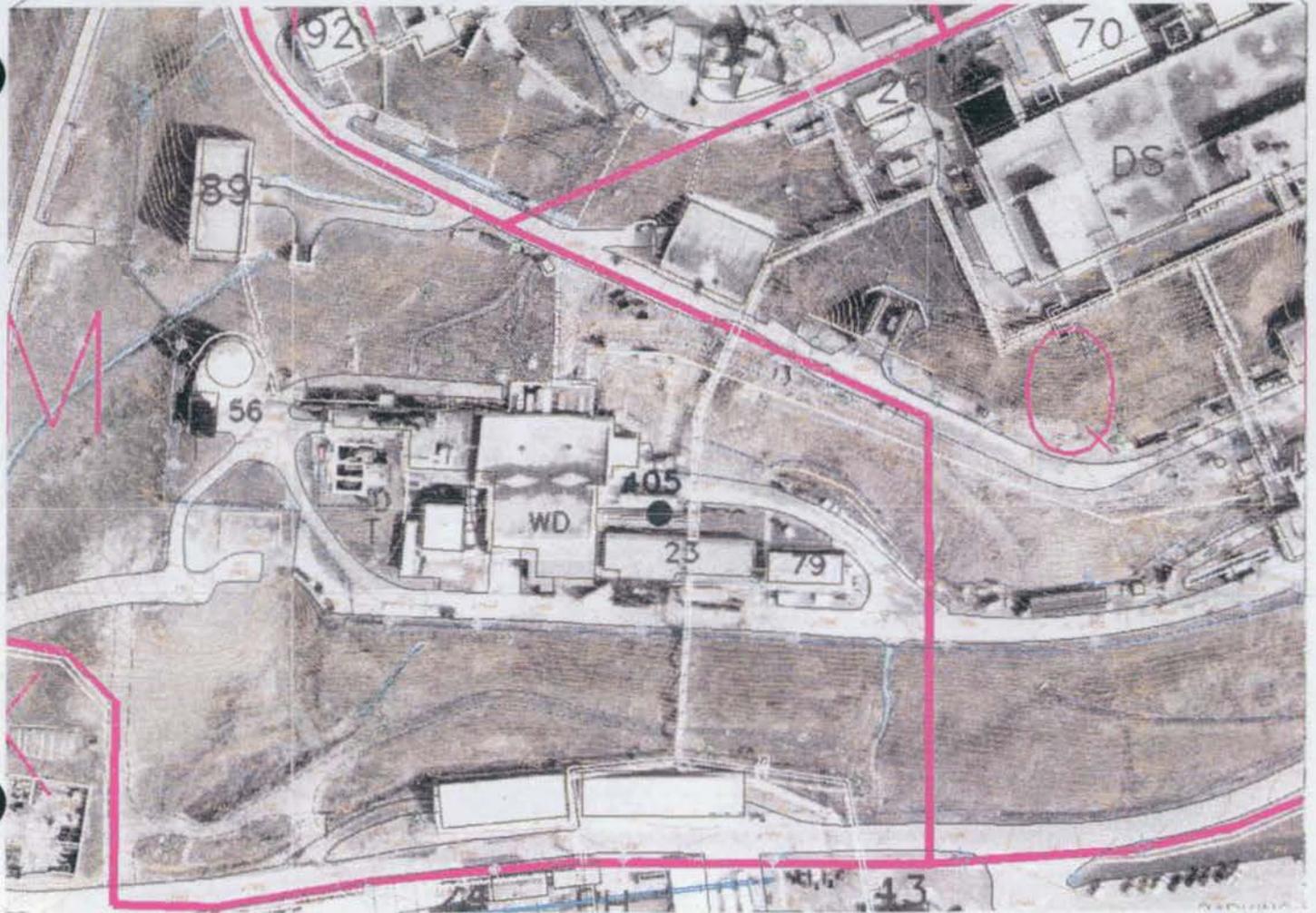
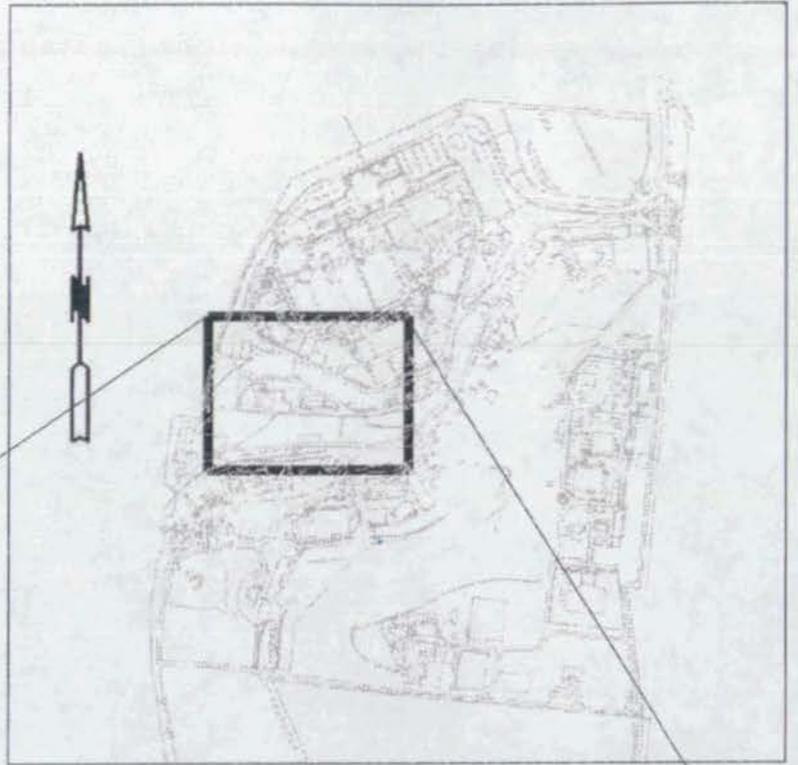
B

# Mound Plant

## Release Block M

Potential Release Site

### PRS 405





405

## PRS 405

### PRS HISTORY:

Potential Release Site (PRS) 405 is a soil area located approximately 5 feet north of Building 23 (Waste Management Facility) at the east end of that building. PRS 405 was identified during construction activities in June 1994.<sup>2</sup> The contaminant of concern during construction was an oily substance.

### CONTAMINATION:

In June 1994, during excavation for a potable water line, dark stained soils with an oily residue were discovered.<sup>2</sup> Preliminary field screening results indicated that the soil contained diesel fuel and polychlorinated biphenyls (PCBs). Two soil samples were taken and analyzed for PCBs and several soil samples were analyzed for radionuclides. The analysis indicated:

- No PCB contamination was detected.<sup>4</sup>
- The maximum radionuclide concentrations detected were Plutonium-238 at 110 pCi/g and Thorium-232 at 6.8 pCi/g.<sup>5</sup> Pu-238 exceeded the Mound Plant ALARA of 25 pCi/g and Th-232 exceeds the regulatory limit of 5 pCi/g.

In 1992, the Soil Gas Survey collected samples in the proximity of this PRS:

- Toluene was detected, but the ambient blank also contained toluene. The presence or absence of toluene could not be determined.

### READING ROOM REFERENCES:

- 1) Soil Gas Survey and Geophysical Investigations, Main Hill and SM/PP Hill Areas, Reconnaissance Sampling, Final, February 1993. (pages 5-7)

### OTHER REFERENCES:

- 2) Memorandum, Katherine Koehler to W.B. Clark, dated June 21, 1994, Morning Report - 06/22/94 - Unexpected Contamination. (pages 8-9)
- 3) Memorandum, Katherine Koehler to Monte A. Williams, dated January 15, 1996, Sampling Results of Oil Contamination at WD/23. (page 10)
- 4) Hayden Environmental Laboratory Analysis Report, June 23, 1994. (pages 11-12)
- 5) Soil Screening Results. (pages 13-15)

### PREPARED BY:

Richard Bauer, Member of EG&G Technical Staff

**MOUND PLANT  
PRS 405  
Soil Contamination – Building 23**

**RECOMMENDATION:**

Potential Release Site (PRS) 405 is a soil area located approximately 5 feet north of Building 23 (Waste Management Facility) at the east end of that building. PRS 405 was identified during construction activities in June 1994. The contaminant of concern was an oily substance presumed to be fuel oil.

The Core Team originally recommended Further Assessment for PRS 405. Subsequently, the cost of further investigation versus the cost of removing the potentially contaminated soils was evaluated. Cost estimates indicate that the cost of removal is not significantly greater than the cost of further assessment at PRS 405. Additionally Further Assessment findings may indicate the need for a Response (removal) Action, resulting in costs associated with both Further Assessment and Response Action. Therefore, the Core Team recommends a RESPONSE ACTION as a more cost-effective course of action for PRS 405.

**CONCURRENCE:**

DOE/MEMP:	<u>Arthur W. Kleinrath</u>	<u>8/13/97</u>
	Arthur W. Kleinrath, Remedial Project Manager	(date)
USEPA:	<u>Timothy J. Fischer</u>	<u>8/18/97</u>
	Timothy J. Fischer, Remedial Project Manager	(date)
OEPA:	<u>Brian K. Nickel</u>	<u>8/13/97</u>
	Brian K. Nickel, Project Manager	(date)

**SUMMARY OF COMMENTS AND RESPONSES:**

Comment period from \_\_\_\_\_ to \_\_\_\_\_

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

**REFERENCE MATERIAL**  
**PRS 405**

ENVIRONMENTAL RESTORATION PROGRAM

SOIL GAS SURVEY AND GEOPHYSICAL INVESTIGATIONS  
MAIN HILL AND SM/PP HILL AREAS  
RECONNAISSANCE SAMPLING

MOUND PLANT  
MIAMISBURG, OHIO

February 1993

DEPARTMENT OF ENERGY  
ALBUQUERQUE OFFICE

ENVIRONMENTAL RESTORATION PROGRAM  
EG&G MOUND APPLIED TECHNOLOGIES



TABLE II.4. SUMMARY OF POSITIVE DETECTIONS—MAIN HILL  
(ppb)

SAMPLE ID	SAMPLE DATE	FREON 11	FREON 113	TRAN-12DCE	CIS-12DCE	111TCA	PCE	TCE	TOLUENE
MND-01-1113-0005	17 AUG 92	---	---	---	---	---	---	11	---
MND-01-1114-0005	17 AUG 92	---	9	---	---	315	10	357	5*
MND-01-1114-1005	17 AUG 92	---	---	---	---	259	9	263	3*
MND-01-1115-0005	17 AUG 92	---	---	---	---	58	---	13	---
MND-01-1117-0005	18 AUG 92	---	---	---	---	---	12	8	---
MND-01-1117-1005	18 AUG 92	---	---	---	---	---	15	9	---
MND-01-1118-0005	18 AUG 92	---	---	---	---	---	3	---	---
MND-01-1118-0005	18 AUG 92	---	---	---	---	---	---	---	213
MND-01-1122-0005	18 AUG 92	801	13	---	---	---	---	---	---
MND-01-1123-0005	18 AUG 92	---	---	---	---	---	---	---	5*
MND-01-1124-0005	18 AUG 92	---	---	---	---	---	---	---	8884*
MND-01-1127-0005	18 AUG 92	---	---	---	---	---	4	---	27*
MND-01-1129-0005	18 AUG 92	---	10	---	---	37	12	4	11*
MND-01-1190-0005	24 SEP 92	240	477	---	---	---	---	---	3*
MND-01-1190-1005	24 SEP 92	287	707	---	---	---	---	---	3*
MND-01-1192-0005	24 SEP 92	---	---	---	---	---	---	---	5*
MND-01-1193-0005	24 SEP 92	---	---	---	---	---	---	---	16*
MND-01-1196-0005	25 SEP 92	---	---	---	---	---	---	4	64
MND-01-1197-0002	25 SEP 92	---	---	---	---	---	---	23	5
MND-01-1198-0008	25 SEP 92	---	24	13	518	33	---	474	5
MND-01-1199-0002	25 SEP 92	---	10218	---	120	---	---	479	---
MND-01-1201-0007	25 SEP 92	---	4716	13	811	---	---	130	48
MND-01-1201-1007	25 SEP 92	---	5895	---	612	---	---	117	43
MND-01-1202-0002	25 SEP 92	---	6419	66	2499	9	---	1921	3
MND-01-1202-1002	25 SEP 92	---	9301	41	1706	---	---	1737	---
MND-01-1203-0002	25 SEP 92	---	1475	---	334	---	---	45	192
MND-01-1204-0005	25 SEP 92	---	453	---	---	---	---	11	5
MND-01-1205-0005	25 SEP 92	---	---	---	---	---	---	---	21
MND-01-1208-0005	26 SEP 92	---	---	---	---	---	---	---	23142
MND-01-1207-0005	26 SEP 92	---	---	---	---	---	---	---	90
MND-01-1227-0005	28 SEP 92	---	10	---	---	---	---	---	4788
MND-01-1228-0005	28 SEP 92	---	---	---	---	---	---	---	11
MND-01-1230-0005	28 SEP 92	---	---	---	---	---	---	---	13
MND-01-1230-1005	28 SEP 92	---	---	---	---	---	---	---	5
MND-01-1231-0005	28 SEP 92	---	48	---	---	---	34	21	5
MND-01-1232-0005	28 SEP 92	---	4	---	---	---	13	8	24
MND-01-1233-0002	29 SEP 92	---	29	---	---	---	---	---	72
MND-01-1233-1002	29 SEP 92	---	29	---	---	---	---	---	64

Notes:

Only sample locations having positive detections are shown.

\*: Associated trip, ambient, equipment or field blank contained specified compound.

B: Indicates blank sample.

w: Indicates water sample.

\*\* : Freon 113 & TCE Off-Scale

M O U N D      Electronic Message

Date:            21-Jun-1994 05:18pm EST  
From:            Katherine Koehler  
                  KOEHKG  
Dept:            ENGINEERING  
Tel No:          865-4886

TO: See Below

Subject: Morning Report - 6/22/94 - Unexpected Contamination

A. Category

This is not a 5000.3B occurrence at the present time (per discussions between the facility manager and the DOE facility representative).

B. Group

Not applicable

C. Narrative

What happened

On June 21, 1994, at approximately 1:15 p.m., Dyno Construction unexpectedly detected oil contaminated soils located north of building 23 and east of WD building during excavation activities. Dyno Construction is the general contractor for the Potable Water Project. The contractor noticed dark stained soils with an oily residue and called the construction inspector. The construction project was formally stopped at 1:20 p.m. and industrial hygiene was called. Less than one cubic yard of soil had been excavated. The pit and the excavated soils were tarped to prevent potential contaminant migration.

Soil samples were taken by Waste Management personnel for field screening and for independent sample analysis (quick turn around) at a certified laboratory. Preliminary field screening results indicated that the soils contained PCB contaminated diesel fuel. The reliability of Hydrocarbon field screening results for PCB contamination is questionable. Hydrocarbons contain other constituents which can give false positives during the PCB field screening. Two soil samples were sent to Hayden Environmental labs for quick turn-around certified analysis. Soil samples will also be analyzed for radionuclides at the soil screening facility. Pending results of the analysis and further investigation of the magnitude and extent of contamination (oil, PCB, and radionuclides), 5000.3b re-categorization may be required.

What is the significance

There were no personal injuries, no impacts to safety systems or production, no press release is planned, and no congressional inquiries are likely. The environmental impact is anticipated as being minimal at this time.

The contamination is not a result of any known release. The contamination is present due to historic operations. The reportable quantity for current oil releases is 25 gallons and must be reported to local and state authorities within 24 hours of detection. Presently it is not likely that more than 25 gallons of oil reside below ground surface. Oil has not reached waterways or waterways of the United States as a result of excavating in an area of historic contamination. If greater than ten gallons of oil are detected in the soils, this detection of this unexpected contamination would become a 5000.3B "off normal" reportable occurrence. The soils in this area will be suspected as "mixed waste" until radionuclide analysis and PCB analysis are available. The magnitude and extent of the oil contamination are presently unknown. There is no project funding available or budgeted to investigate the magnitude and extent of contamination. This area of contamination resides within the geographical boundaries of operable unit 2. The work plan for the OU2 assessment is in process.

#### Corrective Actions

The pit and the excavated soils have been tarped to minimize the potential for contaminant migration. Further actions will not be warranted until sample results are available and the magnitude and extent of oil contamination is assessed. The options for further corrective actions should consider the following:

- 1.) CERCLA Removal Action based on a risk assessment.
- 2.) Remediation activities funded with contingency from a line item Construction Project.
- 3.) Relocated Potable Water lines to uncontaminated areas.
- 4.) Put the excavated soils back in the pit and proceed with the OU2 assessment workplan.

#### Distribution:

TO: W. B. Clark	( CLARWB )
TO: Jeffrey L. Boston	( BOSTJL )
TO: Cynthia Simmons	( SIMMCR )
TO: R. Steven Tunning	( TUNNRS )
TO: Daniel G. Carfagno	( CARFDG )
CC: Dave L. Michaels	( MICHDL )
CC: CONNIE F. HUGHES	( HUGHCF )
CC: Larry Berna	( BERNLA )

M o u n d

From :Katherine Koehler  
KOEHKG  
Dept. :ENGINEERING  
Tel. No :865-4886  
Date :15-Jan-1996 09:04am EST  
Subject :Sampling Results of Oil Contamination at WD/23

TO :MONTE A. WILLIAMS ( WILLMA )

CC :R. Steven Tunning ( TUNNRS )

CC :Mike Isper ( ISPEMP )

Monte,

After refreshing my memory on the attached morning report, I remembered that Steve King did the initial PCB screening and Steve Tunning assigned the sampling collection and analysis work in Waste Management. Waste management informed me of the results verbally. Steve Tunning contacted Mike Isper and obtained copies of the original sampling results from Hayden Environmental Labs. Two samples were collected and submitted as a composite sample. The results were nondetects for PCB 1016, PCB 1260, PCB 1248, PCB 1232, PCB 1221, PCB 1254, and PCB 1242.

Waste management did not request any PAH analysis or BTEX analysis to evaluate the intensity or magnitude of the fuel oil contamination.

This WD/23 location would likely require further investigation of the magnitude and extent of fuel oil contamination for the following two reasons:

1.) If you look at the structural geometry of the above ground fuel oil transfer system, this is the location where the line would have likely been (historically) drained if the piping system required repair or maintenance. Drainage of the line may have been associated with overfills/spills etc.

2.) Analysis was only conducted for PCB's. BTEX/PAH analysis was not performed because it was obviously fuel oil contamination. Historically I think we (Mound) has used two types of fuel oil (I forget the numbers).

Waste Managements results are attached on the fax copy.

Kathy

LABORATORY ANALYSIS REPORT

Mr. Mike Isper  
 EG&G MOUND APPLIED TECHNOLOGIES, INC.  
 1 Mound Ave.  
 Miamisburg, OH 45343

Page 1  
 Report Date : 06/23/94  
 HEG Task # : 94060277  
 HEG P/N, Acct:

P.O. Number: 32908  
 Proj Name: Waste Management

Date Received: 06/21/94  
 Proj #: Building 72

HEG Sample # : 9407992 Sample Date: 06/21/94 Sample Priority: Emergency  
 Sample ID : WM94-995 ..

Parameter	Units	Results	Comments
PCB - 1016	mg/kg	< 0.12	
PCB - 1260	mg/kg	< 0.12	
PCB - 1248	mg/kg	< 0.12	
PCB - 1232	mg/kg	< 0.12	
PCB - 1221	mg/kg	< 0.12	
PCB - 1254	mg/kg	< 0.12	
PCB - 1242	mg/kg	< 0.12	

*BLDG. 23/WO*

*SUSPECT PCB IN SOIL SAMPLE  
 - NONE  
~~WAS~~ DETECTED*

*\$97.50*

HEG / LIMS  
Analysis Date Report  
Report Date: 06/23/94

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HEG Lab Task # 94060277  
HEG Client: EG&G MOUND APPLIED TECHNOLOGIES, INC.

Date Received : 06/21/94 Date Reported: 06/23/94

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Sample #: 9407992 Sample Date: 06/21/94  
Sample ID: WM94-995

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Analysis Date	Analyst	Test Performed	Hold Time (Days)
06/22/94	jep	PCB Extraction(Solid)	14
06/22/94	rl1	PCB (Solid)	40

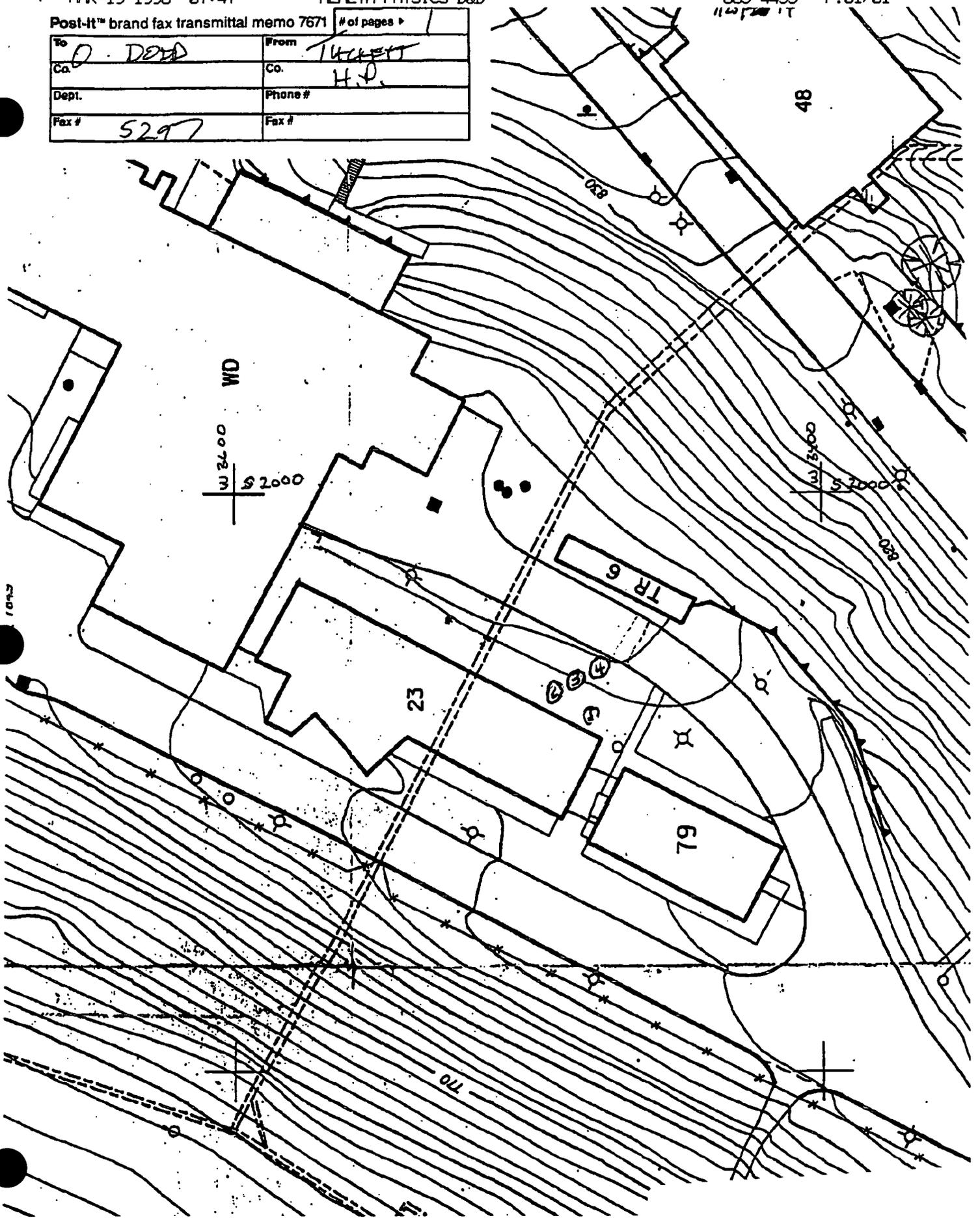
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## Soil Screening Results

Post-It™ brand fax transmittal memo 7671 # of pages ▶ 1

To <i>D. DODD</i>	From <i>TACKETT</i>
Ca.	Co. <i>H.P.</i>
Dept.	Phone #
Fax # <i>5297</i>	Fax #



SODIUM IODIDE SOIL SCREEN, 400 SECOND COUNT  
PREPARED BY \_\_\_\_\_

SAMPLE NO.	DATE COLLECTED	DATE SCREENED	SAMPLER	SAMP TYPE	REGION	REGION	MORE ISO-TOPEs	GRID LOCATION	WELL
					1(a)	2(a)			
					$Pu-238$	$Th-232$			
94063034	07/21/94	07/21/94	C. COLLAS [REDACTED]	CONT	17	1.0	N	DYNO BLDG-23 TRENCH #1	A
94063035	07/21/94	07/21/94	C. COLLAS [REDACTED]	CONT	12	1.1	N	DYNO BLDG-23 TRENCH #2	B
94063036	07/21/94	07/21/94	C. COLLAS [REDACTED]	CONT	16	1.2	N	DYNO BLDG-23 TRENCH #3 TOP LAYER	C
94063037	07/21/94	07/21/94	C. COLLAS [REDACTED]	CONT	24	1.7	N	DYNO BLDG-23 TRENCH #4 TOP LAYER	A
94063067	07/21/94	07/22/94	C. COLLAS [REDACTED]	CONT	19	1.5	N	DYNO BLDG-23 TRENCH #5	B
94063068	07/21/94	07/22/94	C. COLLAS [REDACTED]	CONT	16	0.7	N	DYNO BLDG-23 TRENCH #6	C
94063069	07/21/94	07/22/94	C. COLLAS [REDACTED]	CONT	21	1.4	N	DYNO BLDG-23 TRENCH #7	A
94063070	07/21/94	07/22/94	C. COLLAS [REDACTED]	CONT	20	1.1	N	DYNO BLDG-23 TRENCH #8	B
94063074	07/21/94	07/22/94	C. COLLAS [REDACTED]	CONT	15	2.3	N	DYNO BLDG-23 TRENCH #9	B
94063099	07/25/94	07/25/94	J. TACKETT [REDACTED]	CONT	110	6.8	N	DYNO BLDG-23 SURFACE SAMPLE	C
94063131	07/25/94	07/26/94	J. TACKETT [REDACTED]	CONT	18	1.4	N	DYNO BLDG-23 FIRE WATER LINE #2 @ 0-5'	B
94063132	07/25/94	07/26/94	J. TACKETT [REDACTED]	CONT	53	2.0	N	DYNO BLDG-23 FIRE WATER LINE #3 @ 0-5'	A
94063133	07/25/94	07/26/94	J. TACKETT [REDACTED]	CONT	31	2.0	N	DYNO BLDG-23 FIRE WATER LINE #4 @ 0-5'	C
94063134	07/25/94	07/26/94	J. TACKETT [REDACTED]	CONT	0	0.0	N	DYNO BLDG-23 FIRE WATER LINE #4 @ 0-5'	A

