

MOUND

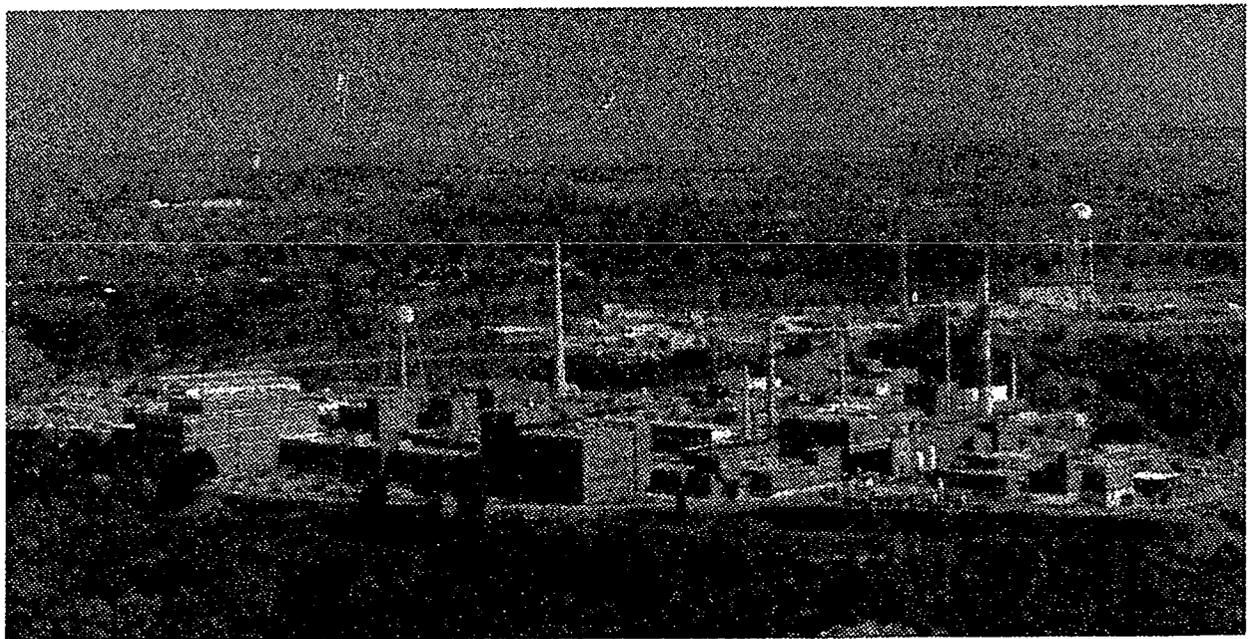


**Environmental
Restoration
Program**



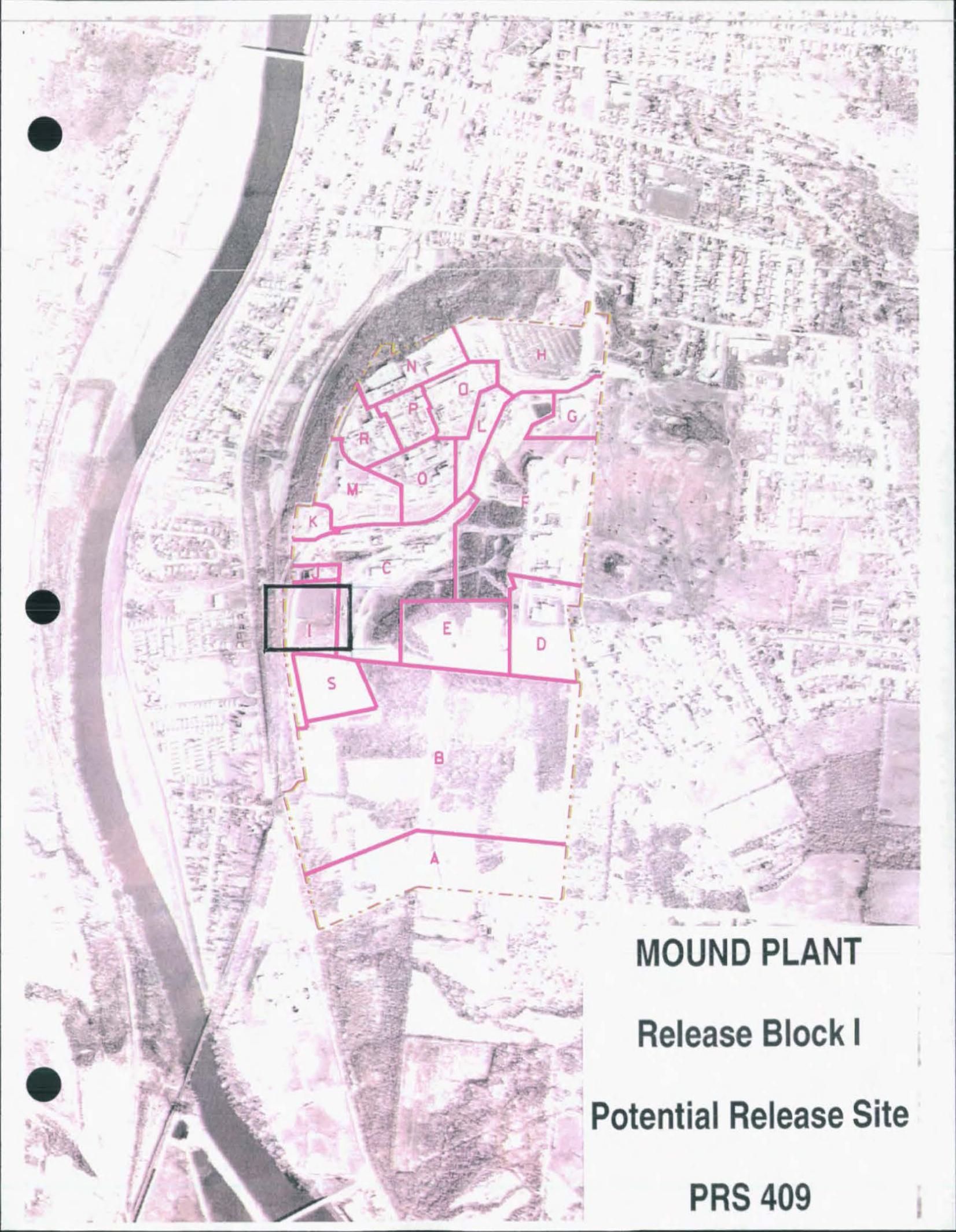
OhioEPA

MOUND PLANT Potential Release Site Package PRS # 409



PRS 409

REV	DESCRIPTION	DATE
0 PUBLIC RELEASE	Available for comments.	Aug. 06, 1997
1 FINAL		



MOUND PLANT

Release Block I

Potential Release Site

PRS 409



409



I

S

B

A

D

E

J

C

K

M

O

R

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Q

L

N

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G

F

Mound Plant

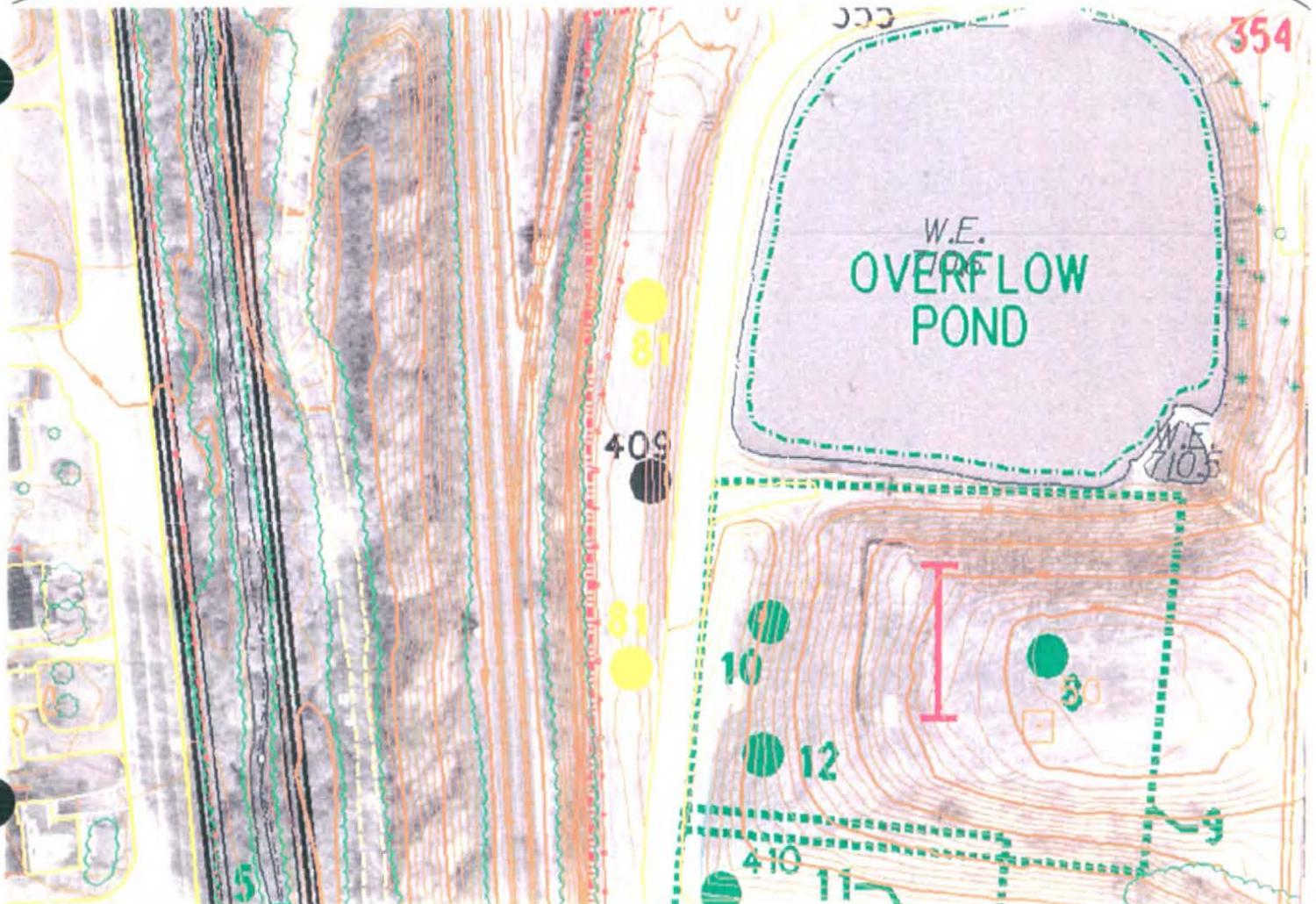
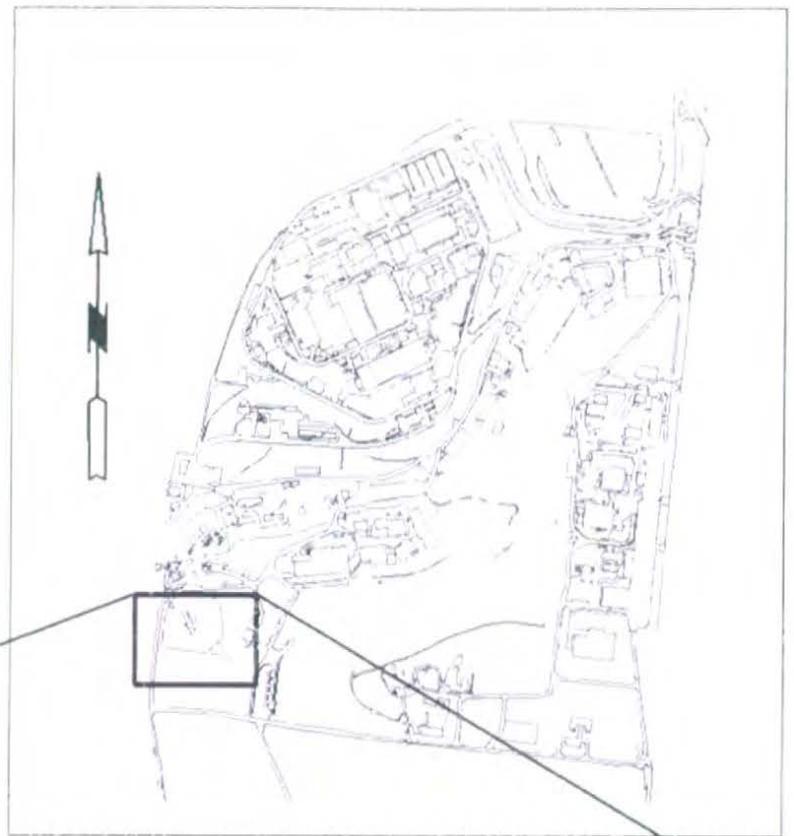
Release Block I

Potential Release Site

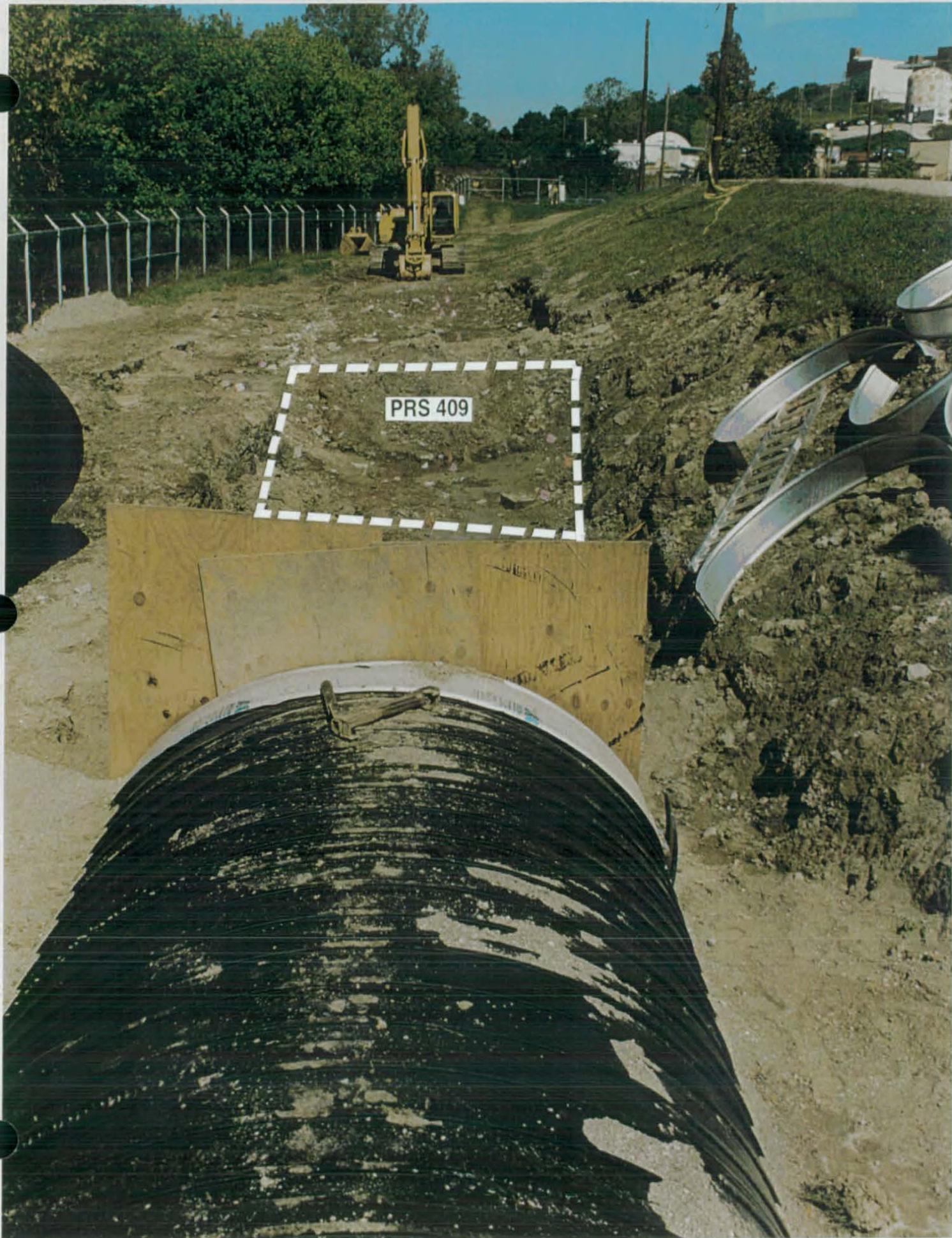
PRS 409

On the map below:

- PRS number and location shown in black
- Fencing shown in red
- Elevation contours shown in brown



PRS 409





PRS HISTORY:

Potential Release Site (PRS) 409 is a chemical (Stoddard Solvent) contamination soils area located in Release Block I, Operable Unit 1, just west of the site sanitary landfill. Stoddard Solvent is a petroleum-based solvent. This area was identified September 23, 1996 by the contractor installing the OU-4 canal re-route drainage pipe. The soil contamination extended around and below a buried concrete pad that had been used as a drum-staging pad in the middle 1960's.

CONTAMINATION:

During excavation, horizontal and vertical field sampling for Total Petroleum Hydrocarbons (TPH) indicated petroleum product soil contamination beneath the concrete pad and 5 feet to the west as well as extending at least 9 feet east of the OU-4 diversion pipe excavation. Levels were encountered above 20,000 ppm¹ as compared to the 105 ppm guideline criteria. Confirmatory laboratory samples indicated elevated readings of volatile and semi-volatile compounds consistent with Stoddard Solvent. Soil samples were collected below the surface for the Mound plant radiological soil screening facility. Pu-238 was found at a maximum of 49 pCi/g and Th-232 was found at 6.48 pCi/g², which are below the Pu-238 10⁻⁵ risk based guideline of 55 pCi/g and below the Th-232 regulatory guideline of 15 pCi/g.

The contaminated soil in the path of the pipeline diversion project and immediately to the west was removed and staged for treatment in the Mound Plant bio-remediation facility for petroleum contaminated soils. The removal of the soil at this time was necessitated by access limitations imposed by the installed diversion pipe. Construction resumed after eighteen verification samples indicated the soils within the diversion pipe excavation were below the Ohio Bureau of Underground Storage Tank Regulations (BUSTR) petroleum contaminated soils guideline values. The contamination under the remaining portion of the concrete pad was not removed because it extends approximately halfway across the access road. The job Field Coordinator, when describing the site, indicated the soil in the area of pad had an odor of a petroleum product, appeared grayish in color with a sheen. It could not be determined if contamination extended under the road to the east.

The eighteen verification samples on ten foot centers were taken to verify that the soils in the path of the diversion pipe and the soils immediately to the west of the pipe were below the applicable BUSTR guideline criteria. The results show that the soils that are now under the diversion pipe and the adjacent western soils are below the guideline criteria of 105 Total Petroleum Hydrocarbons (TPH)⁴ and below the 0.006 ppm, 4 ppm, 6 ppm, and 28 ppm Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) BUSTR criteria respectively³.

OTHER REFERENCES:

- 1) Personnel communication, Dennis Gault, re.: field sampling results for TPH
- 2) Soil Screening Results Memo, Alec Bray, 24-Sep-96. (pages 5-6)
- 3) Sampling Report, R. F. Weston Analytics, 9-Oct-96 (BTEX Method 8020). (pages 7-10)
- 4) Sampling Report, R. F. Weston Analytics, 23-Oct-96 (TPH). (pages 11-15)

PREPARED BY:

Eric W. Horstman, Member of EG&G Technical Staff

**MOUND PLANT
PRS 409
Contaminated Soil**

RECOMMENDATION:

Potential Release Site (PRS) 409 is a chemical (Stoddard Solvent) contamination soils area located in Release Block I, Operable Unit 1, just west of the site sanitary landfill. This area was identified September 23, 1996 by the contractor installing the OU-4 canal re-route drainage pipe. The soil contamination extended around and below a buried concrete pad that had been used as a drum-staging pad in the middle 1960's. Levels were encountered above 20,000 ppm as compared to the 105 ppm guideline criteria.

The contaminated soil in the path of the pipeline diversion project and immediately to the west was removed and staged for treatment in the Mound Plant bio-remediation facility for petroleum contaminated soils. However, no attempt was made to remediate the entire extent of contamination under the concrete pad. Field observations indicate that contamination extends under the remaining portion of the concrete pad and half way across the access road.

Therefore, a RESPONSE ACTION is recommended for PRS 409.

CONCURRENCE:

DOE/MEMP:

Arthur W. Kleinrath 8/6/97
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA:

Timothy J. Fischer 8/6/97
Timothy J. Fischer, Remedial Project Manager (date)

OEPA:

Brian K. Nickel 8/6/97
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 409

Contaminated Soil

Soil Screening Results Memo
September 24, 1996

24-Sep-96

Craig Stolle:

RE: OU-4 Canal Re-Route project oil stained soils sample

The following is the soil screening information from the excavation that the sample was taken.

Pu-238
pCi/g

Th-232
pCi/g

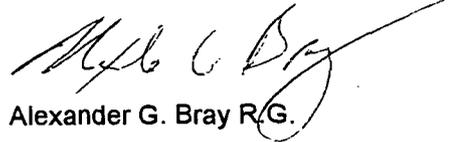
6.48 (only one sample analyzed)

39
31
35
39
21
34
22
24
21
39
25
32
37
42
33
27
33
49
37
19
23

Average = 31.52381
Max = 49

We feel that these 20 sample locations are representative of the sample you now have in your possession. If you have any questions please call Alec Bray at (513) 865-5599.

Sincerely,



Alexander G. Bray R.G.

Sampling Report
BTEX
Roy F. Weston Analytics
10/9/96

0000014

	Cust ID:	000006	000007	000007	000007	000008	000009
Sample Information	RFW#:	001	002	002 MS	002 MSD	003	004
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
	Fluorobenzene	86 %	70 %	72 %	70 %	72 %	67 %
	=====fl=====						
Benzene		1.1 U	1.2 U	67 %	65 %	1.2 U	1.2 U
Ethylbenzene		1.1 U	1.2 U	69 %	65 %	1.2 U	1.2 U
Toluene		1.1 U	1.2 U	71 %	67 %	1.2 U	1.2 U
Xylene (total)		1.1 U	1.2 U	69 %	65 %	1.2 U	1.2 U

	Cust ID:	000010	000011	000012	000013	000014	000015
Sample Information	RFW#:	005	006	007	008	009	010
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
	Fluorobenzene	66 %	80 %	84 %	70 %	75 %	77 %
	=====fl=====						
Benzene		1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.2 U
Ethylbenzene		1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.2 U
Toluene		1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.2 U
Xylene (total)		1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.2 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
 %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

0000015

	Cust ID:	000016	000017	000018	000019	000020	000021
Sample Information	RFW#:	011	012	013	014	015	016
	Matrix:	SOIL	SOIL	SOIL	WATER	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	UG/KG	UG/KG	UG/KG	UG/L	UG/KG	UG/KG

	Fluorobenzene	74 %	73 %	65 %	86 %	51 %	44 %
	=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====
Benzene	1.3 U	1.2 U	1.1 U	1.0 U	1.2 U	1.2 U	1.2 U
Ethylbenzene	1.3 U	1.2 U	1.1 U	1.0 U	1.2 U	1.2 U	1.2 U
Toluene	1.3 U	1.2 U	1.1 U	1.0 U	1.2 U	1.2 U	1.2 U
Xylene (total)	1.3 U	1.2 U	1.1 U	1.0 U	1.2 U	1.2 U	1.2 U

	Cust ID:	000022	000023	T.B.	TBLKBE	TBLKBE BS	TBLKBG
Sample Information	RFW#:	017	018	019	96LVF111-MB1	96LVF111-MB1	96LVD066-MB1
	Matrix:	SOIL	WATER	WATER	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00
	Units:	UG/KG	UG/L	UG/L	UG/KG	UG/KG	UG/KG

	Fluorobenzene	54 %	82 %	85 %	100 %	105 %	86 %
	=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====
Benzene	1.2 U	1.0 U	1.0 U	1.0 U	93 %	1.0 U	1.0 U
Ethylbenzene	1.2 U	1.0 U	1.0 U	1.0 U	102 %	1.0 U	1.0 U
Toluene	1.2 U	1.0 U	1.0 U	1.0 U	97 %	1.0 U	1.0 U
Xylene (total)	1.2 U	1.0 U	1.0 U	1.0 U	103 %	1.0 U	1.0 U

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not reported. NS= Not spiked.
 %= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of EPA CLP QC

Sampling Report

TPH

Roy F. Weston Analytics

10/23/96

ROY F. WESTON INC.

INORGANICS DATA SUMMARY REPORT 10/23/96

CLIENT: EG&G MOUND (OU4RR)
 WORK ORDER: 05376-069-001-0200-01

WESTON BATCH #: 9610L469

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	000006	% Solids	85.7	%	0.10	1.0
		Petroleum Hydrocarbons	14.0	MG/KG	3.9	1.0
-002	000007	% Solids	83.9	%	0.10	1.0
		Petroleum Hydrocarbons	9.5	MG/KG	4.0	1.0
-003	000008	% Solids	86.0	%	0.10	1.0
		Petroleum Hydrocarbons	13.6	MG/KG	3.9	1.0
-004		% Solids	84.9	%	0.10	
		Petroleum Hydrocarbons	11.2	MG/KG	3.9	
-005	000010	% Solids	85.0	%	0.10	1.0
		Petroleum Hydrocarbons	15.9	MG/KG	3.9	1.0
-006	000011	% Solids	81.6	%	0.10	1.0
		Petroleum Hydrocarbons	7.9	MG/KG	4.1	1.0
-007	000012	% Solids	84.1	%	0.10	1.0
		Petroleum Hydrocarbons	8.6	MG/KG	4.0	1.0
-008	000013	% Solids	82.2	%	0.10	1.0
		Petroleum Hydrocarbons	5.6	MG/KG	4.1	1.0
-009	000014	% Solids	78.7	%	0.10	1.0
		Petroleum Hydrocarbons	9.1	MG/KG	4.2	1.0

Table B.1. Potential Release Canal Special Sampling - Field Entry Form

Invoice File	(a) Sample Location Code	(b) Sequential Sample Id	(c) Area Description	(d) Survey Coordinate (X)	(e) Survey Coordinate (Y)	(f) Matrix	(g) QC Type	(h) Sample Date	(i) Collection Time	(j) Submit all		(j) Submit all		
										On-Site Rad. Screening	WESTON Lab Batch	TPH 418.1	BTEX 8020	
OCT_CST	OU4	000001	OU4RR-0-B01-01-000001			Soil		30-Sep-96	14:45		9610L449	2-Oct-96		
OCT_CST	OU4	000002	OU4RR-0-B03-01-000002			Soil		30-Sep-96	16:00		9610L449	2-Oct-96		
OCT_CST	OU4	000003	OU4RR-0-B05-01-000003			Soil		30-Sep-96	16:20		9610L449	2-Oct-96		
OCT_CST	OU4	000004	OU4RR-0-B07-01-000004			Soil		30-Sep-96	17:05		9610L449	2-Oct-96		
OCT_CST	OU4	000005	OU4RR-2-B07-01-000004FB			Water	FB	30-Sep-96	16:40		9610L449	2-Oct-96		
OCT_CST	OU4	000006	OU4RR-0-B09-01-000005			Soil		1-Oct-96	8:30		9610L469	3-Oct-96		
OCT_CST	OU4	000007	OU4RR-0-B11-01-000006			Soil	MS	1-Oct-96	10:00		9610L469	3-Oct-96		
OCT_CST	OU4	000008	OU4RR-0-B13-01-000007			Soil		1-Oct-96	10:15		9610L469	3-Oct-96		
OCT_CST	OU4	000009	OU4RR-0-B15-01-000008			Soil		1-Oct-96	10:50		9610L469	3-Oct-96		
OCT_CST	OU4	000010	OU4RR-1-B15-01-000008DUP			Soil	FD-9	1-Oct-96	10:50		9610L469	3-Oct-96		
OCT_CST	OU4	000011	OU4RR-0-B02-01-000009			Soil		1-Oct-96	11:25		9610L469	3-Oct-96		
OCT_CST	OU4	000012	OU4RR-0-B04-01-000010			Soil		1-Oct-96	11:50		9610L469	3-Oct-96		
OCT_CST	OU4	000013	OU4RR-0-B06-01-000011			Soil		1-Oct-96	13:10		9610L469	3-Oct-96		
OCT_CST	OU4	000014	OU4RR-0-B08-01-000012			Soil		1-Oct-96	13:35		9610L469	4-Oct-96		
OCT_CST	OU4	000015	OU4RR-0-B10-01-000013			Soil		1-Oct-96	14:10		9610L469	4-Oct-96		
OCT_CST	OU4	000016	OU4RR-0-B12-01-000014			Soil		1-Oct-96	14:40		9610L469	4-Oct-96		
OCT_CST	OU4	000017	OU4RR-0-B14-01-000015			Soil		1-Oct-96	15:05		9610L469	4-Oct-96		
OCT_CST	OU4	000018	OU4RR-1-B14-01-000015DUP			Soil	FD-17	1-Oct-96	15:05		9610L469	4-Oct-96		
OCT_CST	OU4	000019	OU4RR-2-B14-01-000015FB			Water	FB	1-Oct-96	16:00		9610L469	4-Oct-96		
OCT_CST	OU4	000020	OU4RR-0-B16-01-000016			Soil		1-Oct-96	16:20		9610L469	4-Oct-96		
OCT_CST	OU4	000021	OU4RR-0-B17-01-000021			Soil		1-Oct-96	16:35		9610L469	4-Oct-96		
OCT_CST	OU4	000022	OU4RR-0-B18-01-000022			Soil		1-Oct-96	17:00		9610L469	4-Oct-96		
OCT_CST	OU4	000023	OU4RR-2-B14-01-000016TB			Water	TB	1-Oct-96	16:25		9610L469			
Quality Control: Field Duplicate: 1/10 samples Matrix Spike: 1/20 investigative samples Field Blanks: 1/10 samples			Special Instructions for COC: TPH will be analyzed Fast TAT: (1-day) BTEX will be received on hold pending 418.1 results Indicate MS/MSD in checkboxes							Notes: Send the laboratory the rad screen results FAX COC to Cincinnati before FEDEX Collect Double Volume for MS Mark Federal Express for Sat. Delivery				

Notes:

Field Blank 000005 was not submitted for BTEX Analysis as required
 Samples 000021 and 000022 were added during the field event
 Receive Date shows date that verbal results were received



SHEET ___ of ___

CLIENT/SUBJECT EG+G MOUND CANAL

W.O. NO. 05376-069-001

TASK DESCRIPTION REMOVAL VERIFICATION SAMPLE

TASK NO. 0200-01

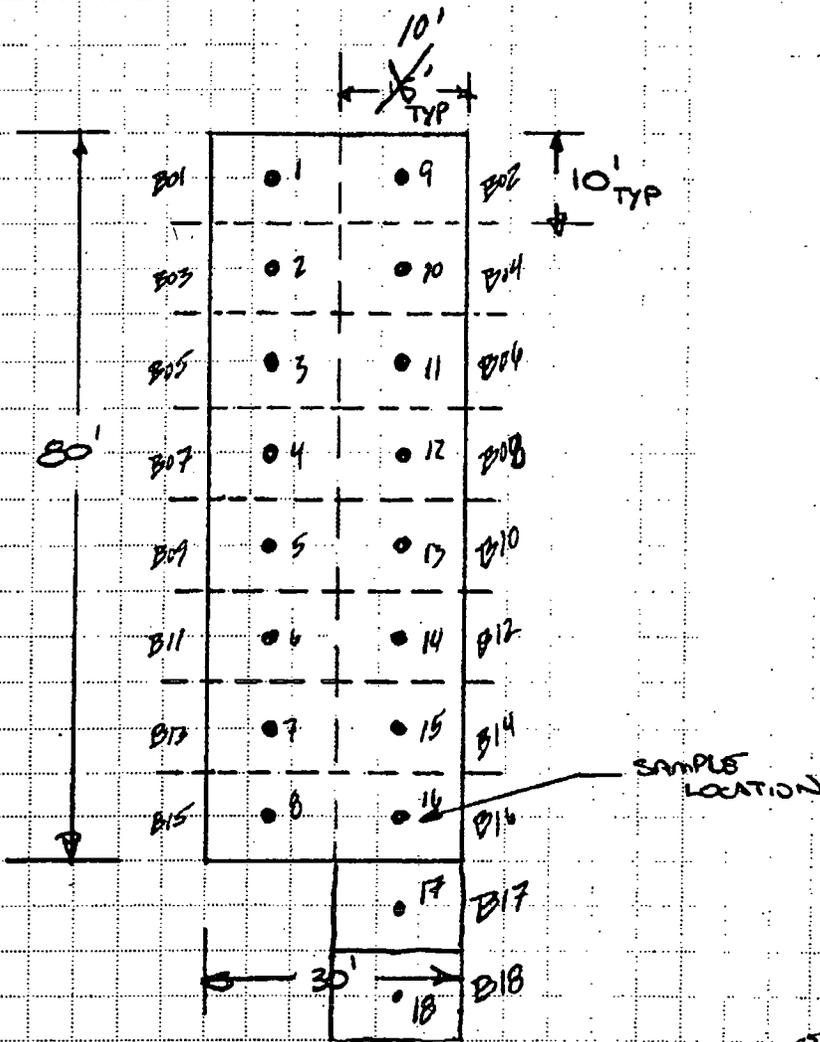
PREPARED BY GSH DEPT _____ DATE _____

MATH CHECK BY _____ DEPT _____ DATE _____

METHOD REV. BY _____ DEPT _____ DATE _____

APPROVED BY
DEPT _____ DATE _____

SAMPLING LOCATIONS



Judy Stone
LAWRENCE

341-4937 Ray's Beepel

3444 0620
3802 07344