

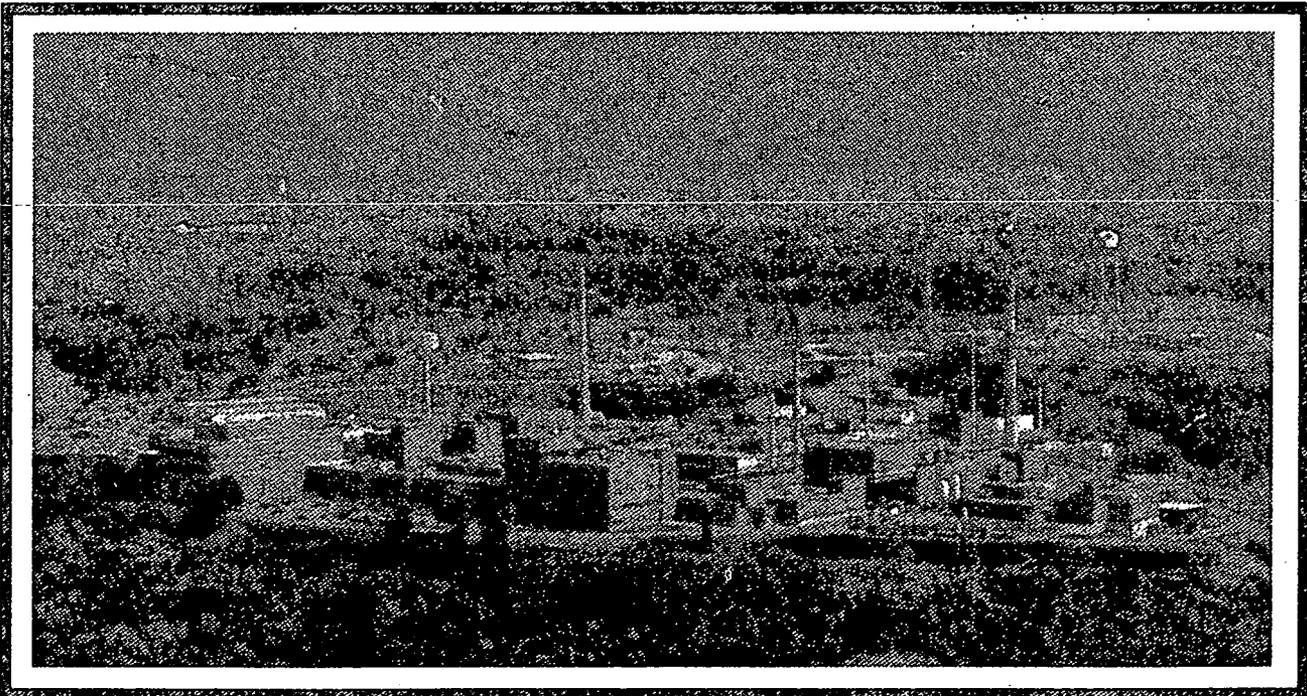
MOUND



**Environmental
Restoration
Program**

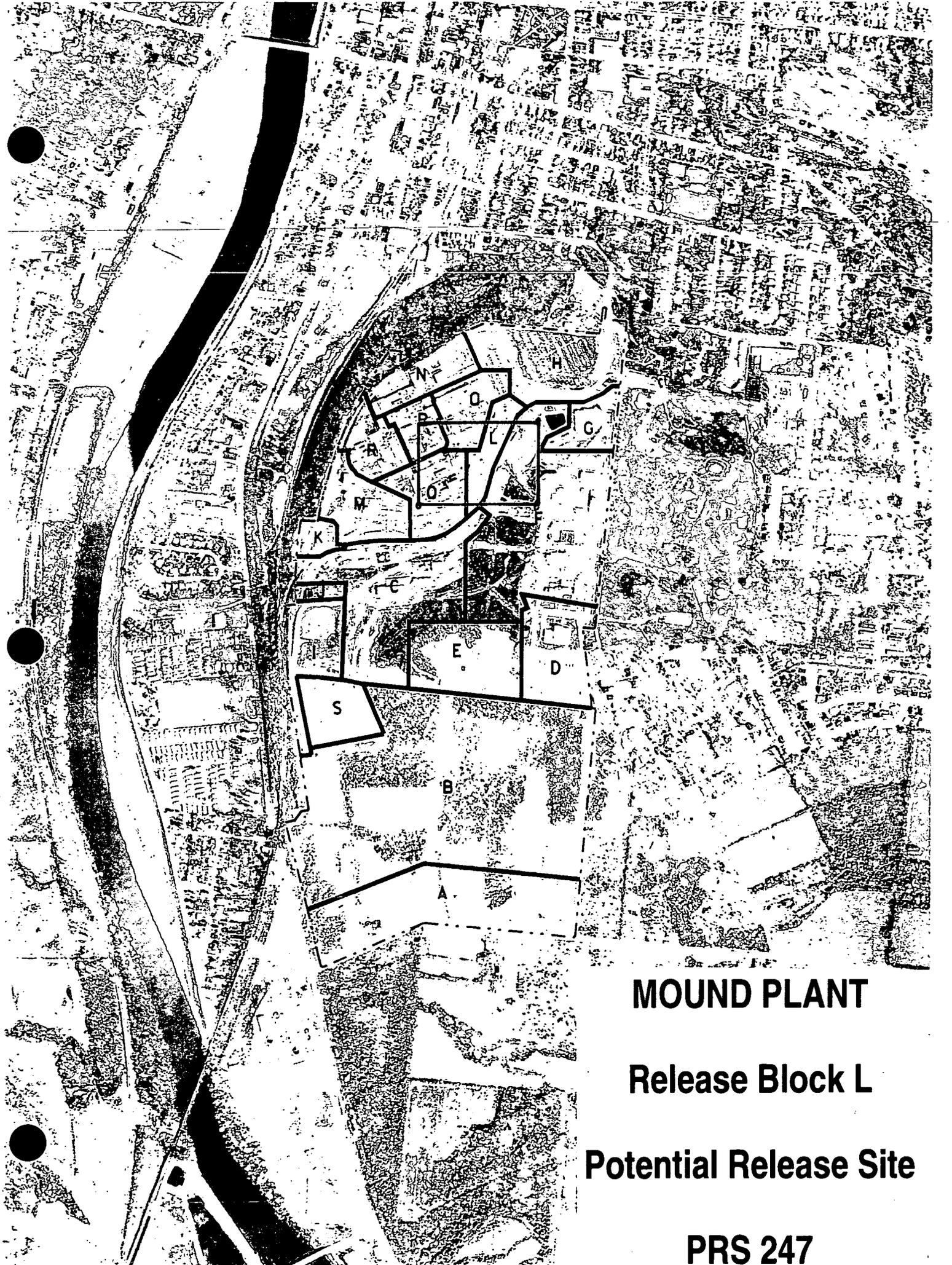


MOUND PLANT Potential Release Site Package PRS # 247



PRS 247

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

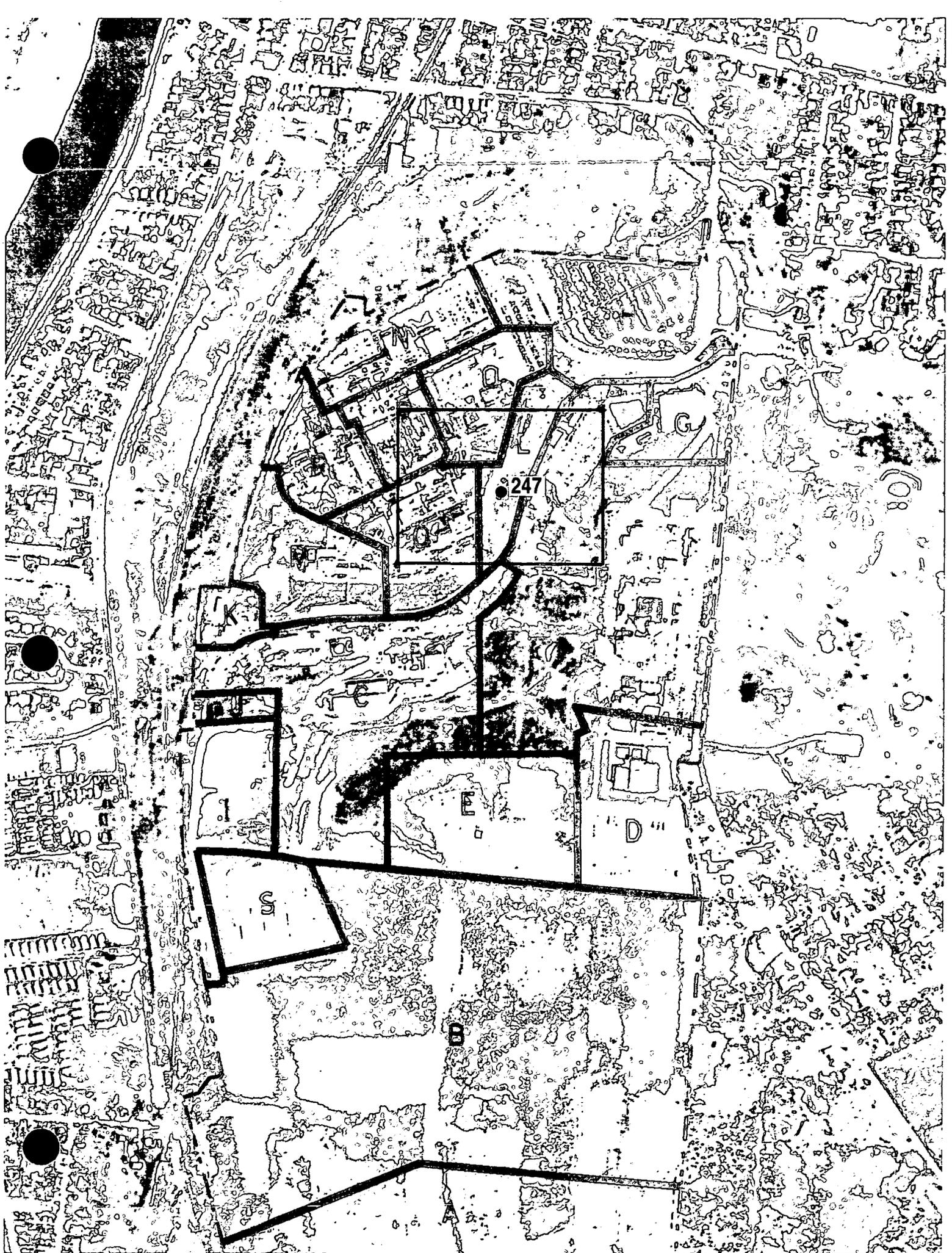


MOUND PLANT

Release Block L

Potential Release Site

PRS 247



247

G

D

S

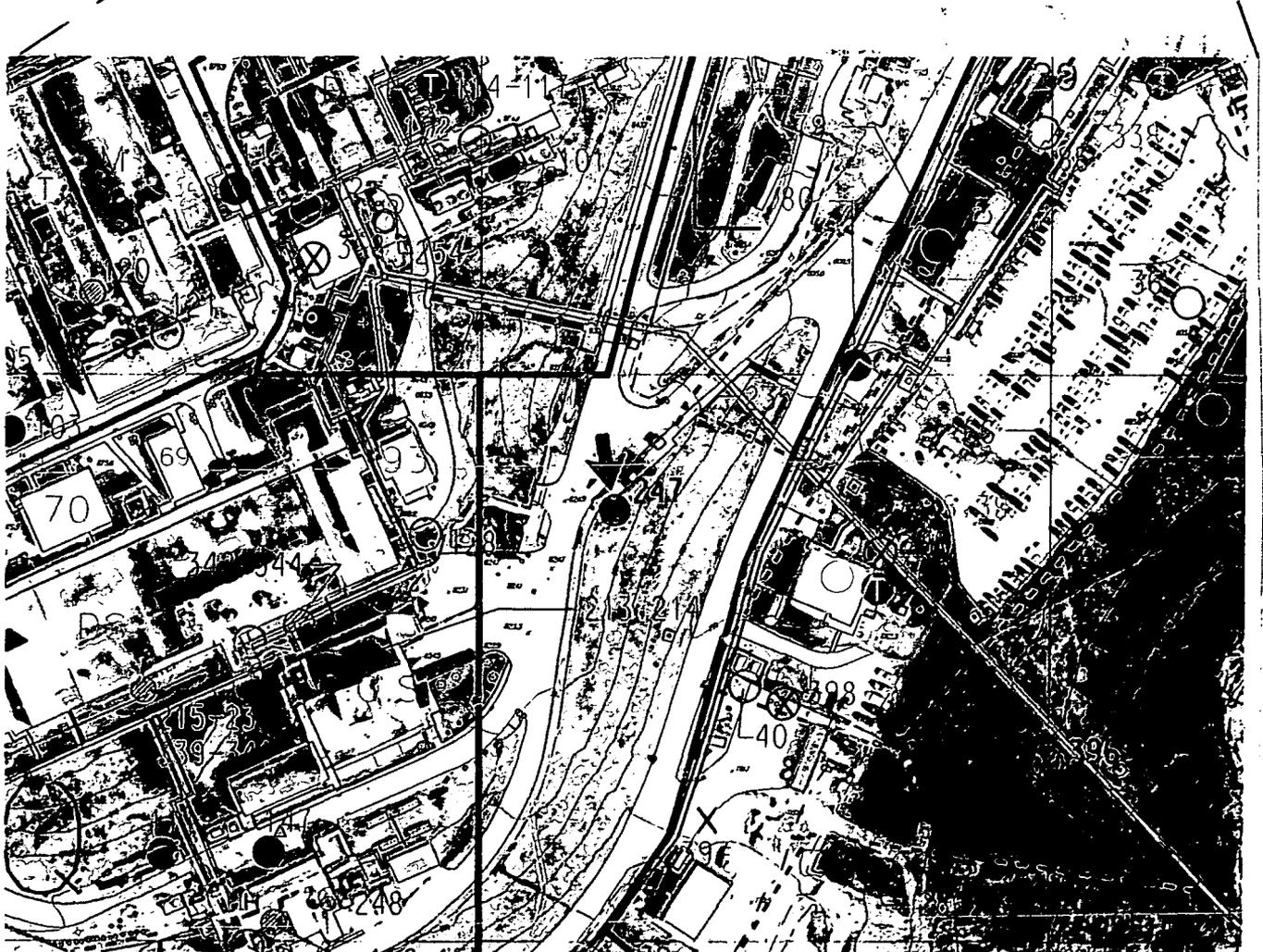
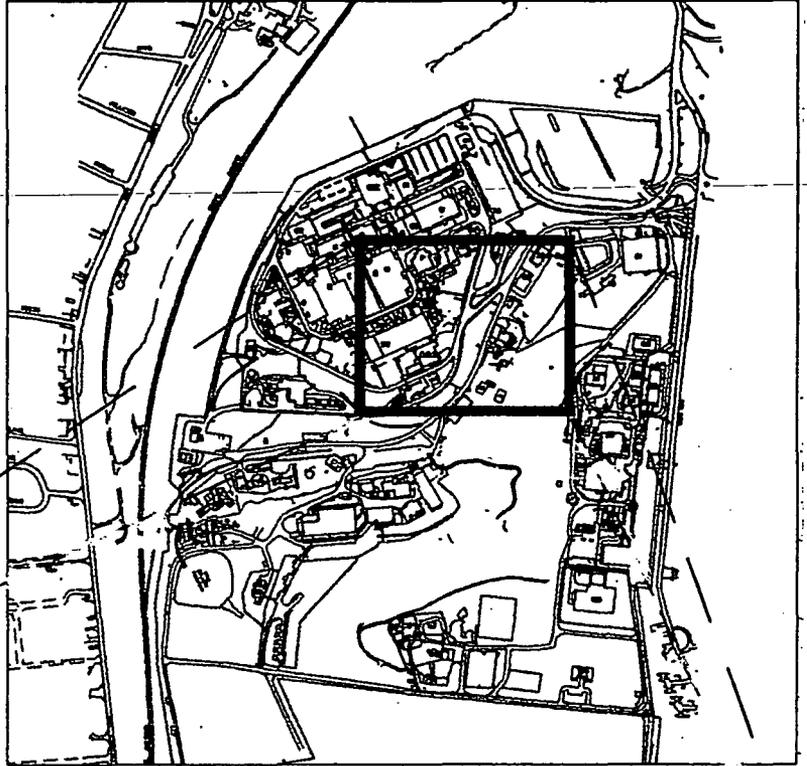
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MOUND PLANT

Release Block L

Potential Release Site

PRS 247





247

PRS 247

PRS HISTORY:

Potential Release Site (PRS) 247 was identified as a result of the August 1992 Soil Gas Survey sampling which identified sample location 1129 as a potential Volatile Organic Compound hot spot.²

Sample location 1129 (PRS 247) is located on the southern part of the Main Hill, approximately due north of Building 51. No radioactive or hazardous waste generating processes are known to have occurred at the location of PRS 247.

CONTAMINATION:

The February 1993 Soil Gas Survey showed that levels of contamination as:

<u>Parameter</u>	<u>Soil Gas Reading</u>	<u>Calculated Soil Concentration⁴</u>	<u>Calculated Soil Screening Comparison Value⁵</u>
Freon 113	10 ppb	-	-
Toluene	11 ppb	0.05 mg/kg	127 mg/kg
1,1,1-TCA	37 ppb	0.13 mg/kg	17 mg/kg

Surface soil samples were collected and analyzed in the area of PRS 247 during the Site Survey Project for Plutonium-238 and Thorium-232. Results indicated no elevated activity of either, values measured were at or below background.

READING ROOM REFERENCES:

- 1) Operable Unit 9 Site Scoping Report, Volume 12 - Site Summary Report, September 1994 (pages 5-8)
- 2) Soil Gas Survey and Geophysical Investigations, February 1993. (pages 9-11)
- 3) Operable Unit 9, Site Scoping Report, Volume 3 - Radiological Site Survey, June 1993. (pages 12-14)

OTHER REFERENCES:

- 4) Calculation of soil contaminant concentration from observed soil gas readings. (pages 15-17)
- 5) Soil screening level calculations - soil concentrations that pose no calculated threat to groundwater. (pages 18-21)

PREPARED BY:

Eric Horstman, Member of EG&G Technical Staff
John Nichols, Member of EG&G Technical Staff

**MOUND PLANT
PRS 247
SOIL CONTAMINATION - MAIN HILL**

RECOMMENDATION:

This Potential Release Site (PRS) was created due to quantitative soil gas volatile organic compound (VOC) detection. However, the calculated soil concentrations of the VOCs detected were all less than their respective 10^{-6} risk based Guideline Values. Additionally, there is no history or evidence of any hazardous or radiological activities or processes occurring at this PRS. Therefore, PRS 247 is recommended for NO FURTHER ASSESSMENT.

CONCURRENCE:

DOE/MB: Arthur W. Kleinrath 5/19/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA: Timothy J. Fischer 5/18/96
Timothy J. Fischer, Remedial Project Manager (date)

OHIO EPA: Brian K. Nickel 5/18/96
Brian K. Nickel, Project Manager (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 5/15/96 to 6/15/96

- No comments were received during the comment period.
- Comment responses can be found on page 6/17/96 of this package.

REFERENCE MATERIAL
PRS 247

OU9
SITE SCOPING REPORT
VOLUME 12-SITE SUMMARY REPORT
SEPT 94

Table V.1. (page 2 of 5)

No.	Site Name	Evidence of Release ^a	Further Action Recommended ^a	FFA OU
117	Powerhouse Fuel Oil Storage Tank (Tank 116)	Yes	Yes	2
118	M Building Soils	Yes	Yes	2
119	Room M-38 Metal Plating Rinse Water Sump (Tank 225)	No	No	2
120	Building 28 Solvent Storage Area	No	No	2
127	Building 28 Solvent Storage Shed	Yes	Yes	2
129	B Building Solvent Storage Shed	Yes	Yes	2
130	B Building Temporary Drum Storage Area	Yes	Yes	2
131	SW Building Soils	Yes	Yes	2
147	MA Building Soils	Yes	Yes	2
234	Building 58 Diesel Fuel Storage Tank (Tank 222)	No	Yes	2
238	Site Survey Project Potential Hot Spots Location S0166	Yes	Yes	2
239	Site Survey Project Potential Hot Spot Location S0208	Yes	Yes	2
241	Northwest Parking Lots	Yes	Yes	2
242	VOC Potential Hot Spot Location 1016	Yes	Yes	2
243	VOC Potential Hot Spot Location 1064	Yes	Yes	2
244	VOC Potential Hot Spot Locations 1076, 1077, 1079 and 1080	Yes	Yes	2
245	VOC Potential Hot Spot Location 1085	Yes	Yes	2
246	VOC Potential Hot Spot Locations 1117 and 1118	Yes	Yes	2
247	VOC Potential Hot Spot Location 1129	Yes	Yes	2
332	Building G Waste Oil Tank (Tank 262)	No	Yes	2
1	Miami-Erie canal (north pond)	No	No	4
2	Miami-Erie canal (south pond)	No	No	4
3	Miami-Erie canal (north canal)	Yes	Yes	4
4	Miami-Erie canal (runoff hollow)	Yes	No	4

Description of History and Nature of Waste Handling						Hazardous Conditions and Incidents			Environmental Data		
No.	Site Name	Location	Status	Potential Hazardous Substances	Ref	Releases	Media	Ref	Analytes ^a	Results	Ref
241	Northwest Parking Lots	D-7	Grounds	Toluene, Freon-113, Trichloroethene	12	Indicated by Soil Gas Survey	S	12	1	SGS ^b Table B.4 Locations 1002, 1007, 1008, 1009, 1010, 1014, 1101, 1102, 1106, 1109, 1110	12
242	VOC Potential Hot Spot Location 1015	D-7	Grounds	Toluene, Trichloroethene	12				1	SGS ^b Table B.4	12
243	VOC Potential Hot Spot Location 1064	E-7	Grounds	Toluene	12						
244	VOC Potential Hot Spot Locations 1076, 1077, 1079, and 1080	E-6	Grounds	Toluene, Freon-113, 1,1,1-Trichloroethane	12						
245	VOC Potential Hot Spot Location 1085	F-6	Grounds	Freon-113, Trichloroethene, 1,1,1-Trichloroethane	12						
246	VOC Potential Hot Spot Locations 1117 and 1118	G-7	Grounds	Tetrachloroethene	12						
247	VOC Potential Hot Spot Location 1129	F-8	Grounds	Freon-113, Trichloroethene, 1,1,1-Trichloroethane, Tetrachloroethene	12	Indicated by soil gas survey	S	12	1	SGS ^b Table B.4	12
248	HH Building Stack	F-7	In service	Polonium-210, Tritium	4, 18	None suspected beyond routine emissions	A	4, 18	Emissions reported in Annual Environmental Monitoring Reports		18
249	SW Building Stack (NEPDF)	E-6	In service	Tritium	4, 18						
	SW Building Stack (SW1C)	E-6	In service	Uranium-238	4, 18						
	W Building Stack (HEFS)	E-6	In service	Tritium	4, 18						
	B Building Stack	E-6	Inactive	Polonium-210, Tritium	4, 18						
	F Building WEST Stack	F-6	In service	Tritium, Plutonium-238-239, Uranium-238	4, 18						
	F Building EAST Stack	E-7	In service	Tritium, Plutonium-238, Uranium-238	4, 18						
	D Building Stack (ALR)	F-6	In service	Plutonium-238	4, 18						

No.	Site Name	Location	Status	Operational Jurisdiction			SWMU	Historic Activities		Further Action Recommended	FFA OU
				Regulated Units	Regulatory Authority	Spill Response		Evidence Of Release	Response Authority		
240	Site Survey Project Potential Hot Spot Location S0472	G-6	Grounds	/	AEA	/	/	Yes	AEA	Yes	6
241	Northwest Parking Lots	D-6 D-7	Grounds	/	AEA	/	/	Yes	CERCLA	Yes	2
242	VOC Potential Hot Spot Location 1016	D-7	Grounds	/	AEA	/	/	Yes	CERCLA	Yes	2
243	VOC Potential Hot Spot Location 1064	E-7	Grounds	/	AEA	/	/	Yes	CERCLA	Yes	2
244	VOC Potential Hot Spot Locations 1076, 1077, 1079 and 1080	E-6	Grounds	/	AEA	/	/	Yes	CERCLA	Yes	2
245	VOC Potential Hot Spot Location 1085	F-6	Grounds	/	AEA	/	/	Yes	CERCLA	Yes	2
246	VOC Potential Hot Spot Locations 1117 and 1118	G-7	Grounds	/	AEA	/	/	Yes	CERCLA	Yes	2
247	VOC Potential Hot Spot Location 1129	F-8	Grounds	/	AEA	/	/	Yes	CERCLA	Yes	2
248	HP Building Stack	F-7	In Service	NESHAP	CAA	AEA	/	No	NA	OM	/
249	SW Building Stack (NCPDF)	F-6	In Service	/	/	/	/	No	NA	OM	/
250	SW Building Stack (SW1C)	F-6	In Service	NESHAP	CAA	AEA	/	No	NA	OM	/
251	SW Building Stack (HEFS)	F-6	In Service	/	/	/	/	No	NA	OM	/
252	B Building Stack	E-6	Inactive	/	AEA	AEA	/	No	AEA	D&D	/
253	T Building WEST Stack	F-7	In Service	/	/	/	/	No	NA	OM	/
254	T Building EAST Stack	F-7	In Service	/	/	/	/	No	NA	OM	/
255	WD Building Stack (ALR)	F-6	In Service	NESHAP	CAA	AEA	/	No	NA	OM	/
256	WD Building Stack (AHR)	F-6	In Service	/	/	/	/	No	NA	OM	/
257	WD Building Stack (SS)	F-6	In Service	/	/	/	/	No	NA	OM	/
258	Area 11 Open Burn Unit (AKA Biotechnic Waste Disposal Area)	I-7	In Service	/	/	/	SWMU	No	NA	OM	/
	Biotechnic Waste Shed	I-7	In Service	HWMUs included in Part B application	RCRA	RCRA	SWMU	No	NA	OM	/
	Thermal Treatment Unit	I-7	Inactive	/	/	/	SWMU	No	NA	OM	/
	Trash Burner	I-7	Historical	/	NA	NA	SWMU	No	CERCLA	No	5
	Retort	I-7	In Service	HWMU included in Part B application	RCRA	RCRA	SWMU	No	NA	OM	/

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

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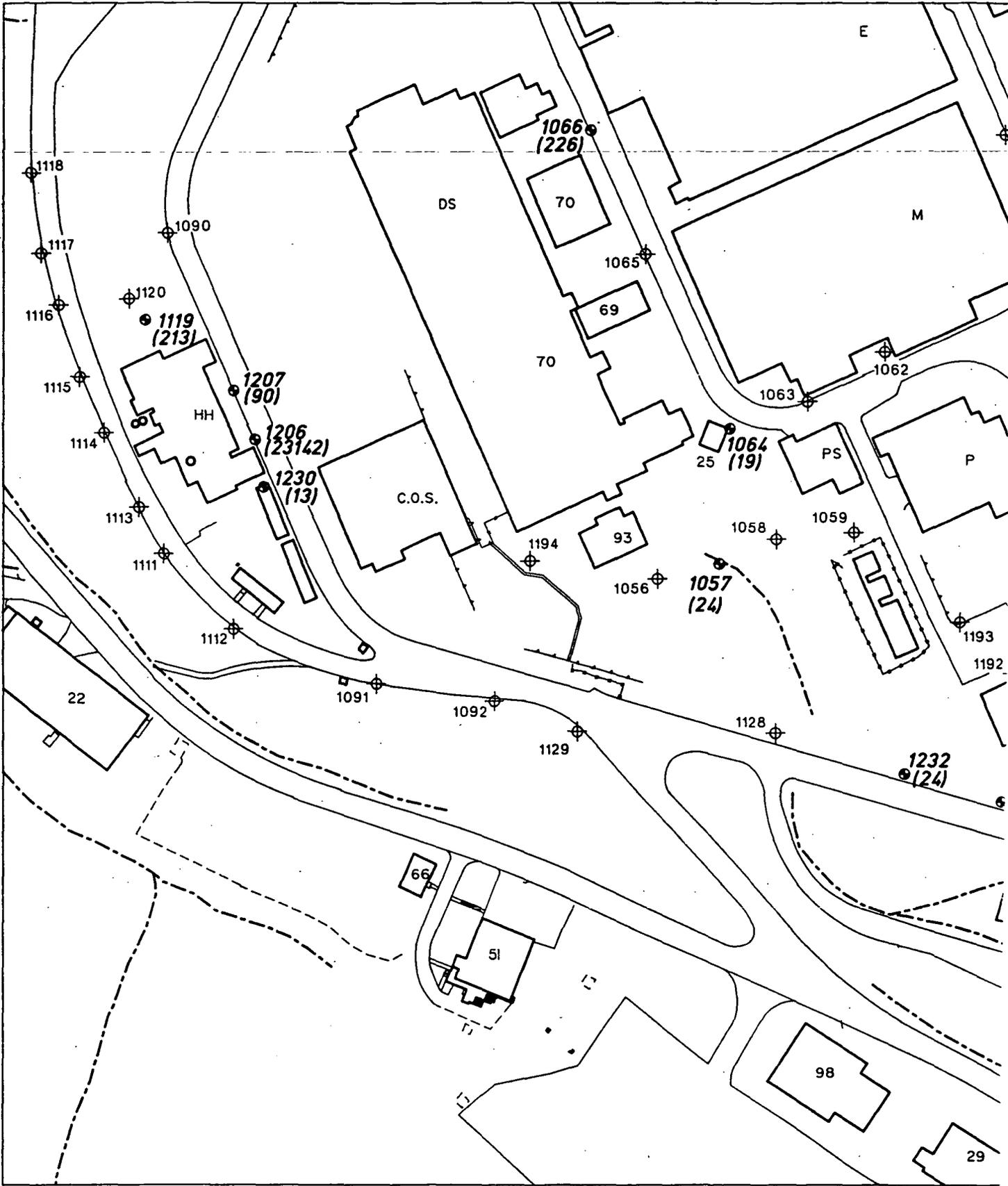


TABLE II.4. SUMMARY OF POSITIVE DETECTIONS—MAIN HILL
(ppb)

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-01-1114-0005	17 AUG 92	---	---	---	---	259	9	26	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-01-1119-0005	18 AUG 92	---	---	---	---	---	---	---	13
MND-01-1122-0005	18 AUG 92	801	---	---	---	---	---	---	---
MND-01-1123-0005	18 AUG 92	---	---	---	---	---	---	---	5*
MND-01-1124-0005	18 AUG 92	---	---	---	---	---	---	---	8884*
MND-01-1129-0005	18 AUG 92	---	10	---	---	37	12	4	11*
MND-01-1190-0005	24 SEP 92	---	---	---	---	---	---	---	---
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-01-1198-0006	25 SEP 92	---	24	13	518	33	---	474	5
MND-01-1199-0002	25 SEP 92	---	10218	---	120	---	---	---	---
MND-01-1201-0007	25 SEP 92	---	4716	13	811	---	---	---	48
MND-01-1201-1007	25 SEP 92	---	5895	---	612	---	---	117	43
MND-01-1202-0002	25 SEP 92	---	6412	66	2499	---	---	1821	3
MND-01-1202-1002	25 SEP 92	---	9501	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-01-1206-0005	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	---	---	---	---	---	---	---	---
MND-01-1231-0005	28 SEP 92	---	48	---	---	---	34	21	5
MND-01-1232-0005	28 SEP 92	---	4	---	---	---	1	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

Environmental Restoration Program

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

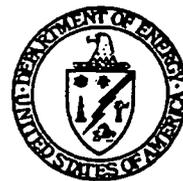
**MOUND PLANT
MIAMISBURG, OHIO**

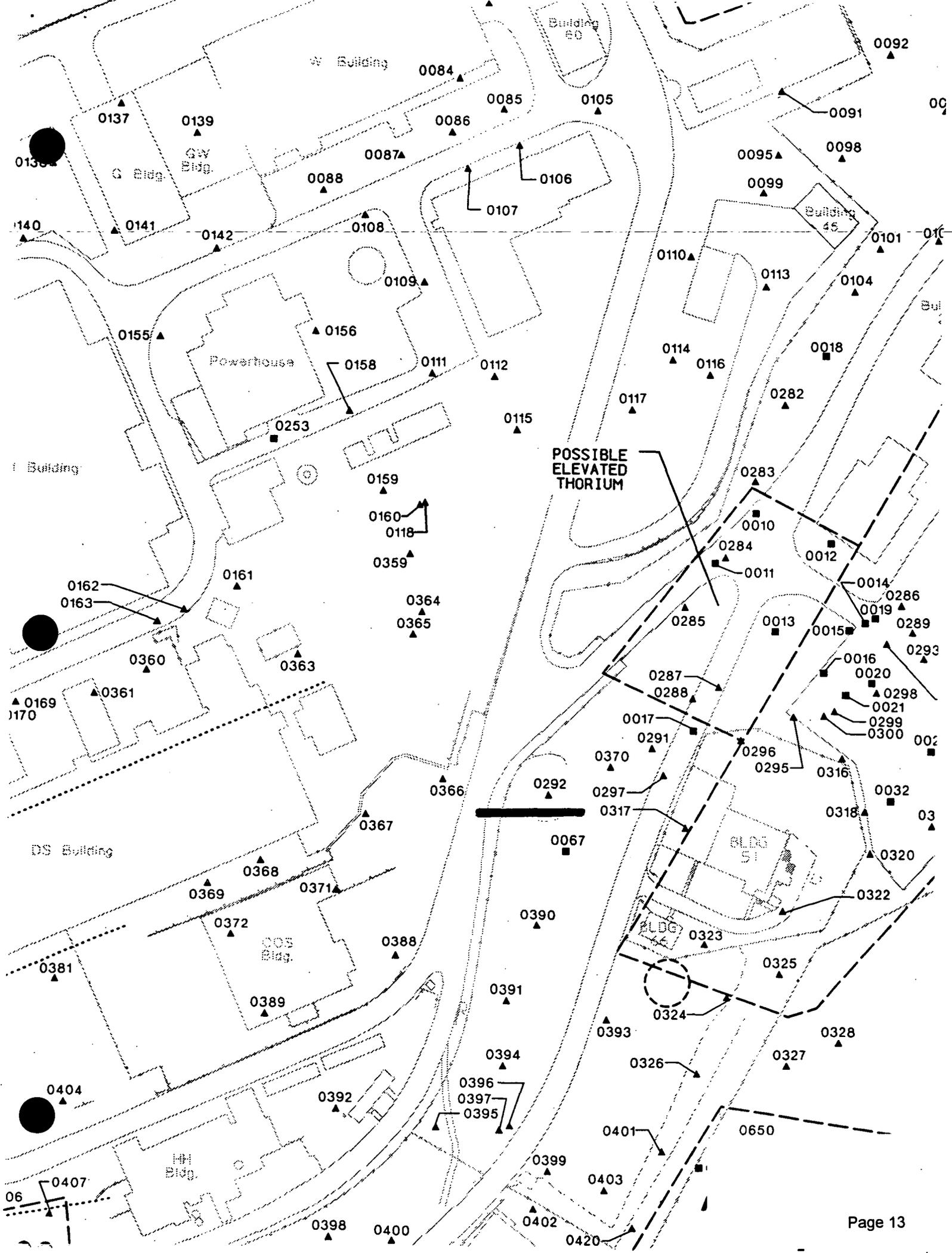
June 1993

FINAL

**Department of Energy
Albuquerque Field Office**

Environmental Restoration Program
EG&G Mound Applied Technologies





Map Location ^a	Coordinates South West	MRC ID No.	Mo-Yr	Depth (inch)	Pu-238 (pCi/g)	Thorium ^b (pCi/g)	Tritium (pCi/mL)	Co-60 (pCi/g)	Cs-137 (pCi/g)	Ra-226 (pCi/g)	Am-241 (pCi/g)
S0288	202	2465	5986	07-84	0	0.29	8.09				
S0289	2050	2555	5983	07-84	0	0.64	b				
		2555	5978	07-84	0	2.72	b				
S0290	2050	2290	6753	08-84	0	1.01	b				
S0291	2050	2515	4088	10-83	0	4.66 ^c	b	1.29			
S0292	2050	2615	4089	10-83	0	0.40	b	0.25			
S0293	2075	2265	5979	07-84	0	0.60	b				
C021	2075	2340	5982	07-84	0	1.52	b				
			1867	05-83	12	0.88	3.2				
			1868	05-83	2	1.00	5.80				
			1869	05-83	38	NR	18.00				
			1870	05-83	48	0.20 ^c	6.94 ^c				
			1871	05-83	60	0.08	b				
			1872	05-83	72	0.12	b				
			1873	05-83	84	0.03	b				
			1874	05-83	96	0.04	b				
			1875	05-83	108	0.02	b				
			1876	05-83	120	0.04	b				
			1877	05-83	132	0.11	b				
			1878	05-83	144	0.08	b				
			1879	05-83	156	0.18	b				
			1880	05-83	168	0.10 ^c	b				
			1881	05-83	180	0.21	3.9				
			1882	05-83	192	0.09	b				
			1883	05-83	204	0.21	b				
			1884	05-83	216	0.17	b				
			1885	05-83	228	0.04	b				
			1886	05-83	240	0.18	b				

CALCULATION OF SOIL
CONTAMINANT CONCENTRATION
FROM OBSERVED SOIL GAS
READINGS

SCREENING POTENTIAL RELEASE SITES BASED ON SOIL GAS READINGS

Soil gas readings can be utilized in the PRS screening process to identify potential release sites that may present a potential soil contamination problem for volatile organics. The soil gas survey that was conducted at Mound as part of the "Reconnaissance Sampling Report--Soil Gas Survey and Geophysical Investigations, Mound Plant Main Hill and SM/PP Hill" investigated 8 volatile compounds. The concentrations of these compounds in the in the vapor phase within the pore spaces of the soil can be correlated to the actual soil contaminant concentrations by utilizing a method developed by ICF Kaiser Engineers. This technique has been used with US EPA Region IX approval at a large Superfund site contaminated with many of the same chemicals found at relatively low levels in soils at the Mound Plant.

The soil concentration can be estimated from the soil gas values by the following equation:

$$C_t = (C_g/P_b) * [(P_b * K_d / H) + (p_w / H) + (p_t - p_w)]$$

where

C_g	concentration of volatile chemical concentrations as soil vapor in ng/ml
P_b	Bulk density of the soil in g/ml
K_d	soil/water partition coefficient in ml/g
H	Dimensionless Henry's Law Constant
p_w	water filled porosity
p_t	total porosity
C_t	estimated soil concentration in mg/kg

The values of the soil specific and chemical parameters for this equation are summarized as follows:

P_b	1.6	Bulk density of the soil in g/ml
p_w	0.15	water filled porosity
p_t	0.43	total porosity

The technique that Mound Plant will use for screening a PRS is to compare the estimated soil concentration (C_t) values obtained at a PRS with soil concentrations that are known to be below any regulatory or health based level of concern. The risk based guideline values for the Mound Plant (DOE, December 1995) soils are based upon 10^{-6} risk levels or a hazard index of 1. These values correspond to direct soil exposure to persons who's activities place them at the highest risk, in particular inhalation and ingestion by a Mound Plant construction worker.

Another potential exposure path must be considered, however. The potential for some of the organic contaminants to leach into ground water must be considered in developing protective Soil Screening Levels. A Soil Screening Level (SSL) is the level of contamination that can exist in soil that does not adversely affect the quality of groundwater at a potential drinking water source such as the Buried Valley Aquifer. A "Mound Plant Soil Screening Level" paper explains the calculation of soil screening levels. For all of the chemicals that the soil gas survey identified, the calculated soil screening level soil concentrations are below the standard soil guideline values, therefore they are more conservative and are appropriate to be used as the basis for comparison with the estimated soil concentration (C_t).

**SOIL CONCENTRATION FROM SOIL GAS READINGS
PRS 247**

A method developed by ICF Kaiser Engineers, Inc. to estimate soil concentrations from soil gas concentrations has been relatively successful. (ICF KE, 1992). In US EPA Region IX, this technique has been used, with EPA approval, at a large Superfund site contaminated with many of the same chemicals found at relatively low levels in soils at the Mound plant. The soil concentrations are related to the soil gas concentrations by the following equation:

$$Ct = (Cg/Pb) * [[Pb * Kd / H] + [pw / H] + [pt - pw]]$$

Parameters used in the equation

Cg	concentration of volatile chemical concentrations as soil vapor in ng/ml	
Pb	1.6 Bulk density of the soil in g/ml	Mound soil specific
Kd	soil/water partition coefficient in ml/g	Chemical specific
H	Dimensionless Henry's Law Constant	Chemical specific
pw	0.15 water filled porosity	Default SSL soil values
pt	0.43 total porosity	Default SSL soil values
foc	0.02 fraction organic material in soil	Mound soil specific

Chemical	Soil Vapor Concentrations ng/ml (ppb)	Kd	H	calculated soil concentration mg/kg
Freon 113*	10	--	--	
Toluene	11	1	0.229	0.06
Trichloroethane	37	0.7	0.236	0.13

*TLV in air is 1000ppm

SOIL SCREENING LEVEL CALCULATIONS

Soil concentrations that pose no calculated threat to groundwater

REFERENCES

Schairbaum, J.R. and Frost, J.P. 1988. "The Hydrology of Sicamore Farm - A Preliminary Report." Center for Ground water Management, Wright State University. September 20, 1988.

DOE. 1994. "Operable Unit 9, Hydrogeologic Investigation: Bedrock Report." U.S. Department of Energy, Albuquerque Field Office, Albuquerque, New Mexico. January, 1994.

USEPA. 1994. "Technical Background Document for soil Screening Guidance - Review Draft." U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. EPA/540/R-94/106 December, 1994

SOIL SCREENING LEVELS--PRS 247

A Soil Screening Level (SSL) is the level of contamination that can exist in soil that does not adversely affect the quality of groundwater at a potential drinking water source such as the Buried Valley Aquifer (BVA).

Soil Screening Calculations are used to determine if a PRS may adversely affect ground water quality due to leaching of organic soil contaminants. These equations conservatively calculate the effects of soil leaching and ground water mixing at a particular PRS. The input parameters represent conditions at the PRS. MCLs are assumed to be protective of ground water that will be used as a drinking water source. Note that the distance a PRS lies from a potential drinking water receptor (BVA) generally controls the amount of ground water mixing.

NOTE: Once the equation calculates a mixing zone depth (d) that is equal to the aquifer thickness (da), no additional mixing or dilution takes place. This is the maximum attenuation that the Soil Screening Level Equation calculates. All distances to a potential receptor greater than the distance that first causes the mixing zone depth to equal the aquifer thickness creates no additional attenuation. For this reason, the tables are only reproduced until (d) is equal to the aquifer thickness, which in the case of the Mound Plant Bedrock is 15 m.

Parameters for soil leaching calculation:

Definition	Parameter	Main Hilltop soil	Units
source length parallel to ground water flow	L	15	m
aquifer thickness (DOE 1994)	da	15	m
hydraulic conductivity (DOE 1994)	K	52	m/y
hydraulic gradient at the source	i	0.1	m/m
horizontal distance to receptor	xr	600	m
infiltration rate (Schairbaum & Frost 1988)	in	0.15	m/y
soil-water partition coefficient (Koc * foc for organic chemicals)	Kd	chemical specific	L/kg
saturated porosity	Ow	0.15	
air filled porosity	Oa	0.28	
Henry's Law constant * 41 (0 for metals and radionuclides)	H	chemical specific	
dry soil bulk density	B	1.6	kg/L
soil organic carbon/water partition coefficient	Koc	chemical specific	L/kg
fraction organic carbon in soil (DOE Mound Plant Data Base)	foc	0.02	
mixing zone depth	d	15	m
dilution factor (used to multiply the target concentration)	df=	35.67	

Mixing Zone Depth Calculation

<p>MIXING ZONE DEPTH (d) $d = (0.0112(L+xr)^2)^{0.5} + da\{1 - \exp[(in(L+xr))/Kida]\}$</p> <p>DILUTION FACTOR (df) $df = 1 + Kid/inL$</p>	<p>(Equation 3)</p> <p>(Equation 4)</p>
--	---

SOIL SCREENING LEVEL CALCULATION

<p>$SSL = Cw\{Kd + (Ow + (OaH))/B\}$</p> <p>$Kd = Koc * foc$</p>	<p>(Equation 1)</p> <p>(Equation 2)</p>
--	---

INPUT PARAMETER DEFINITION

MCL	mg/L	
Cw	mg/L	target soil leachate. Acceptable water conc. * df
Kd	L/kg	soil-water partition coefficient
Ow		saturated porosity
Oa		air filled porosity
H		Henry's Law constant * 41 to make dimensionless
B	kg/L	dry soil bulk density
Koc	L/kg	soil organic carbon/water partition coefficient
foc	g/g	fraction organic carbon in soil

CHEMICAL NAME	H	Koc L/kg	foc	Kd L/kg	MCL mg/L	10-6 GV mg/L	Acceptable Concentration	Cw mg/L	SSL mg/kg
Methoxychlor	2.60E-04	77936	0.02	1558.72	0.04		0.04	1.43	2223.91
Methyl bromide	5.82E-01	11	0.02	0.22			0	0.00	---
Methyl chloride	1.85E+00	7	0.02	0.14			0	0.00	---
Methylene chloride	9.72E-02	13	0.02	0.26			0	0.00	---
2-Methylphenol	6.72E-05		0.02				0	0.00	---
Napthalene	1.98E-02	1549	0.02	30.98			0	0.00	---
Nitrobenzene	8.45E-04		0.02				0	0.00	---
N-Nitrosodiphenylamine	2.86E-02	327	0.02	6.54			0	0.00	---
N-Nitrosodi-n-propylamine	1.70E-03	17	0.02	0.34			0	0.00	---
Pentachlorobenzene		13274	0.02	265.48			0	0.00	---
Pentachlorophenol	5.82E-04		0.02		0.001		0.001	0.04	0.00
Phenol	2.44E-05		0.02			22	22	784.67	73.57
Pyrene	3.39E-04	59865	0.02	1197.3		0.68	0.68	24.25	29040.79
Styrene	1.37E-01	573	0.02	11.46	0.1		0.1	3.57	41.29
1,1,2,2-Tetrachloroethane	1.53E-02	104	0.02	2.08			0	0.00	---
Tetrachloroethylene	7.09E-01	139	0.02	2.78	0.005		0.005	0.18	0.53
Toluene	2.52E-01	171	0.02	3.42	1		1	35.67	126.90
Toxaphene	1.38E-04	501	0.02	10.02	0.003		0.003	0.11	1.08
1,2,4-Trichlorobenzene	1.07E-01	1840	0.02	36.8	0.07		0.07	2.50	92.16
1,1,1-Trichloroethane	7.63E-01	110	0.02	2.2	0.2		0.2	7.13	17.31
1,1,2-Trichloroethane	4.10E-02	61	0.02	1.22	0.005		0.005	0.18	0.24
Trichloroethylene	4.35E-01	112	0.02	2.24	0.005		0.005	0.18	0.43
2,4,5-Trichlorophenol	1.80E-04		0.02				0	0.00	---
2,4,6-Trichlorophenol	1.66E-04		0.02				0	0.00	---
Vinyl acetate	2.26E-02	5	0.02	0.1			0	0.00	---
Vinyl chloride	3.45E+00	11	0.02	0.22	0.002		0.002	0.07	0.07
Xylenes (total)	2.48E-01	381	0.02	7.62	10		10	356.67	2766.72
Inorganics									
Antimony			0.02		0.006		0.006	0.21	0.02
Arsenic			0.02	29	0.05		0.05	1.78	51.88
Barium			0.02	1.4	2		2	71.33	106.55
Beryllium			0.02	4600	0.004		0.004	0.14	656.28
Bromate			0.02		0.01		0.01	0.36	0.03
Cadmium			0.02	120	0.005		0.005	0.18	21.42
Chloramine			0.02		4		4	142.67	13.38

RECOMMENDATION
PRS 247

This PRS was created due to qualitative soil gas VOC detections. However, the concentrations of the VOCs detected were all less than their respective 10^{-6} Risk Based Soil Guidelines. Additionally, there is no history or evidence of any hazardous or radiological activities or processes occurring at this PRS.

Therefore, since no evidence of potential contamination exists at PRS 247, the recommendation is for No Further Assessment.