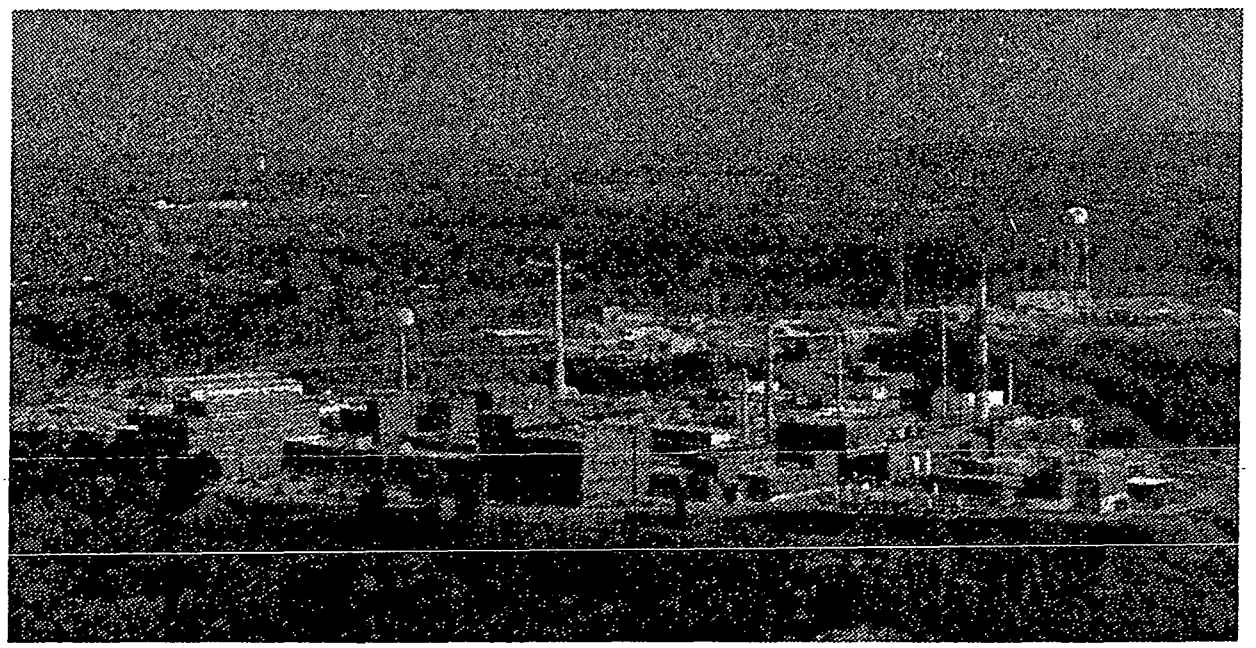
EG&G MOUND-30-03-04-02--9611130057

MOUND

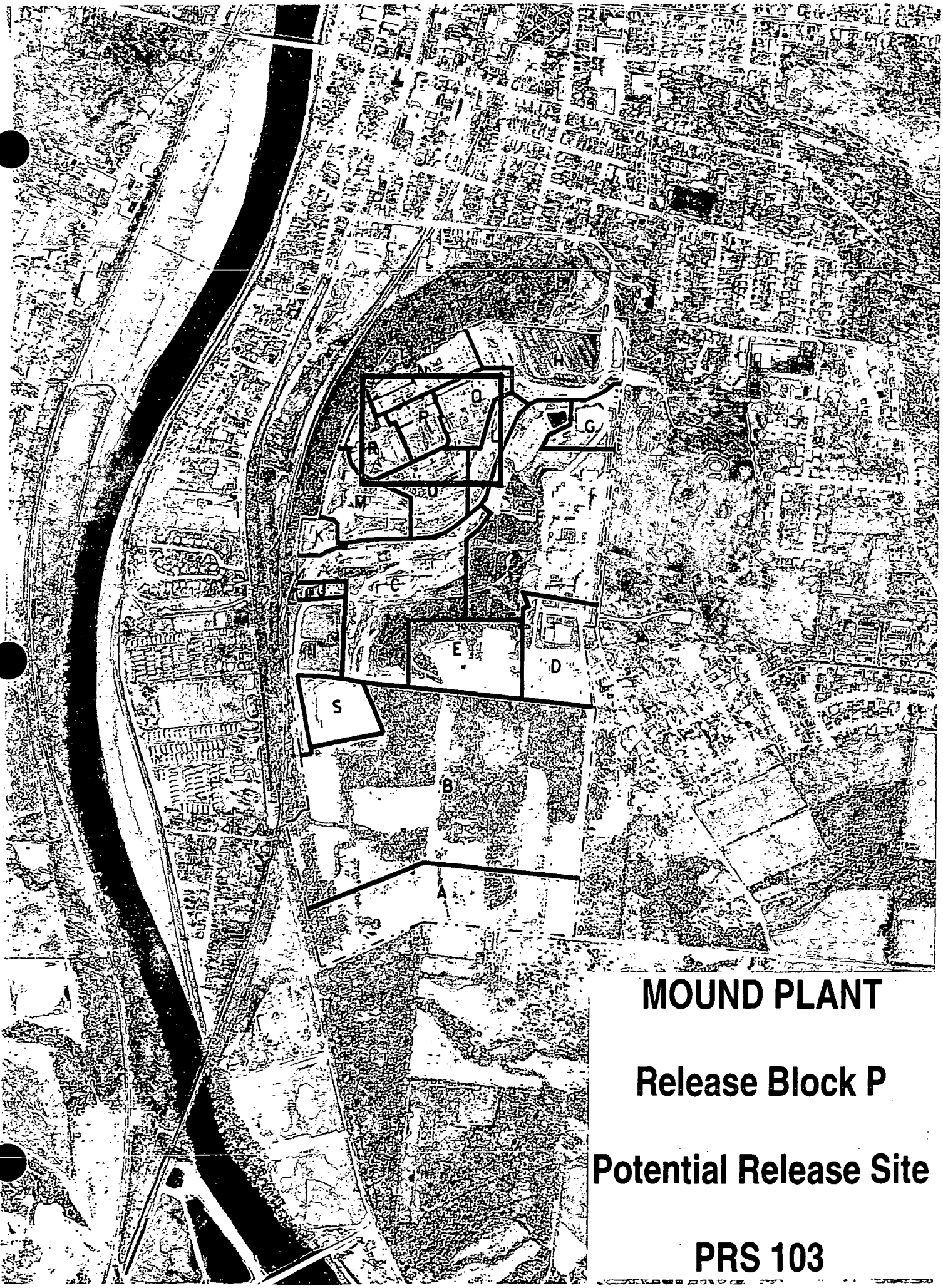
Environmental
Restoration
Program

MOUND PLANT
Potential Release Site Package
PRS # 103



PRS 103

REV	DESCRIPTION	DATE
PUBLIC RELEASE 0	Available for comments.	Aug. 20, 1996
FINAL 1	Comment period expired. No comments. Recommendation page annotated.	Oct. 16, 1996

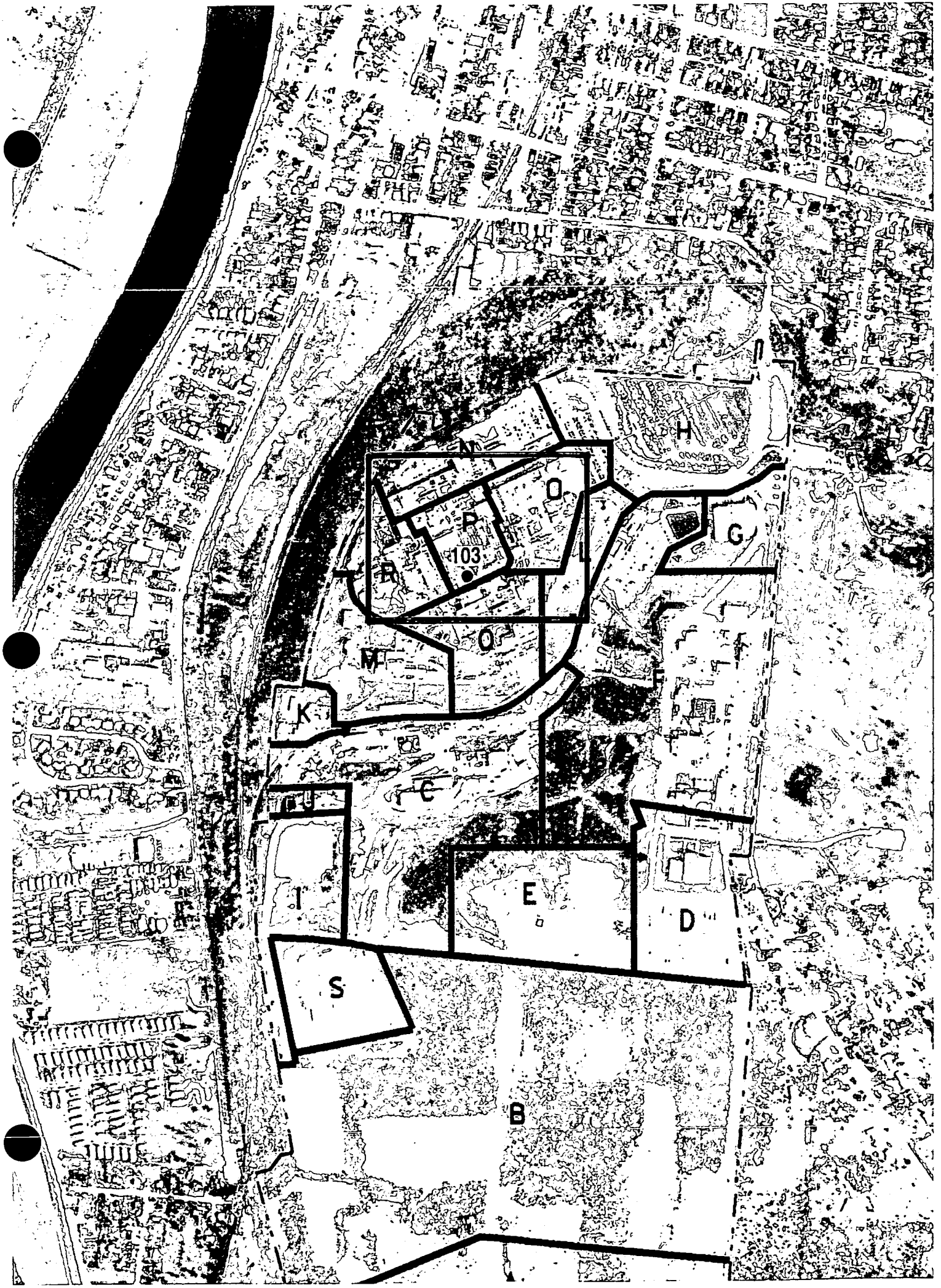


MOUND PLANT

Release Block P

Potential Release Site

PRS 103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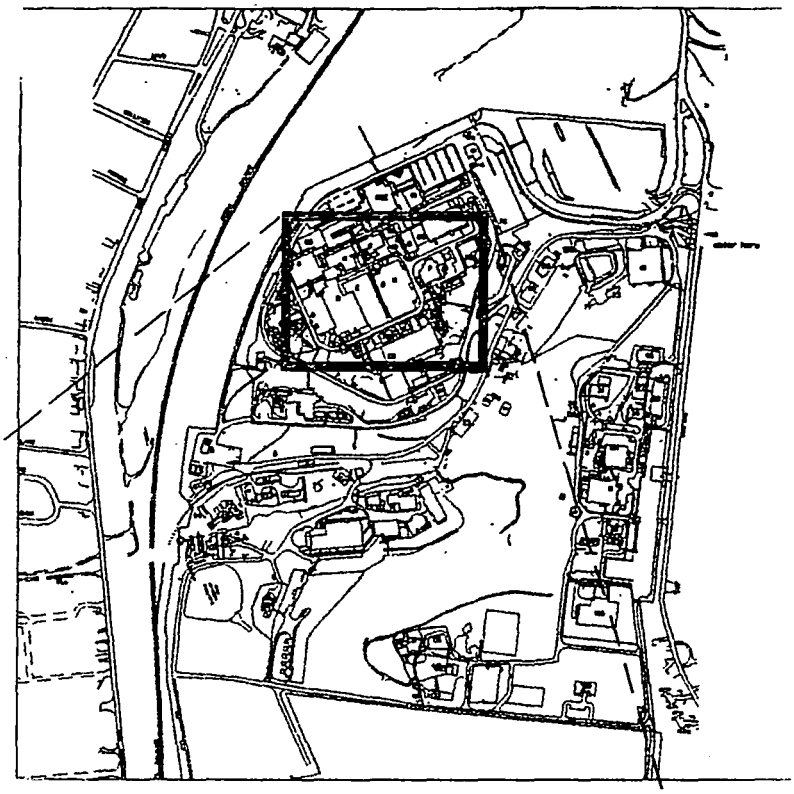
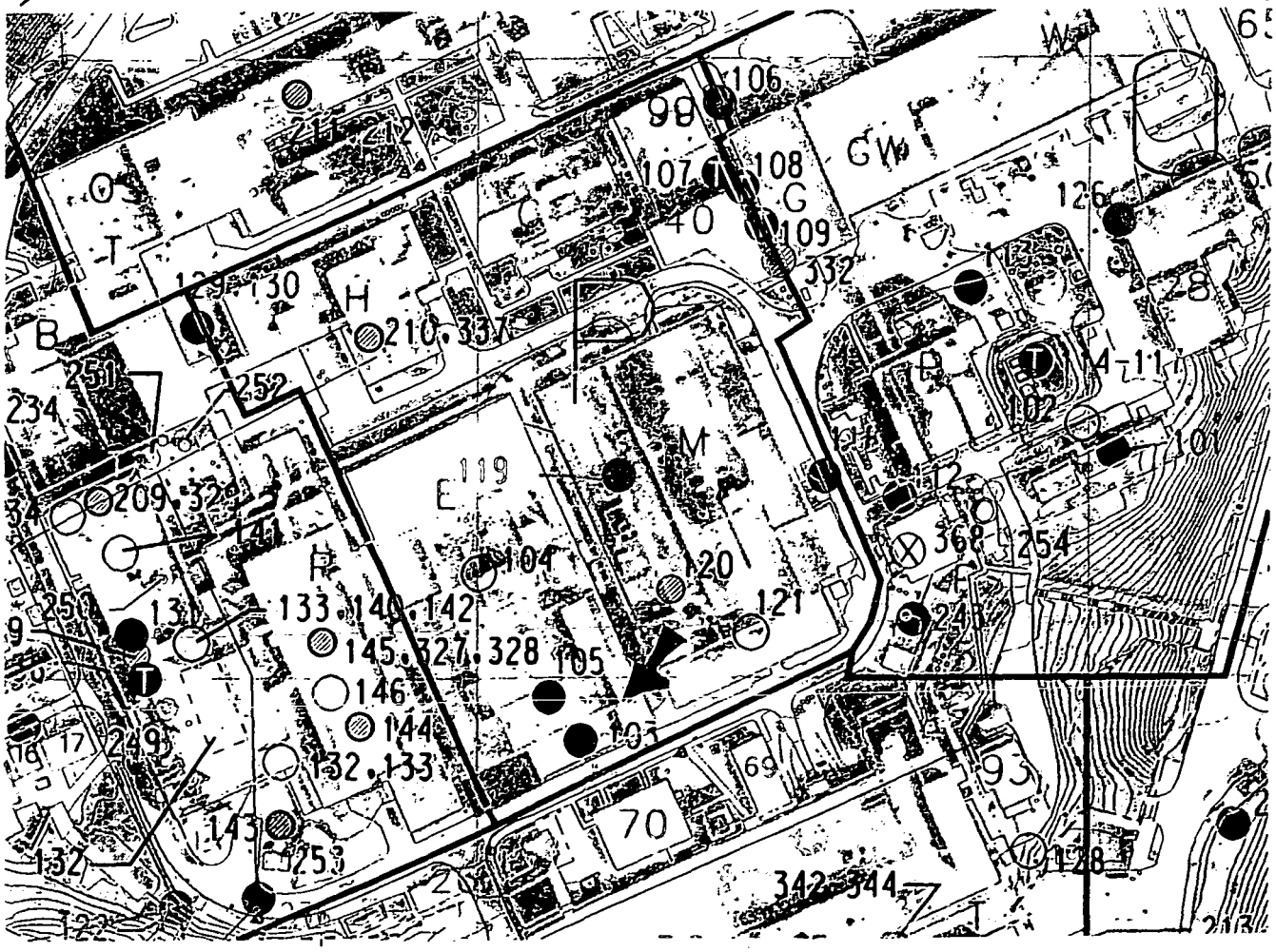
MOUND PLANT

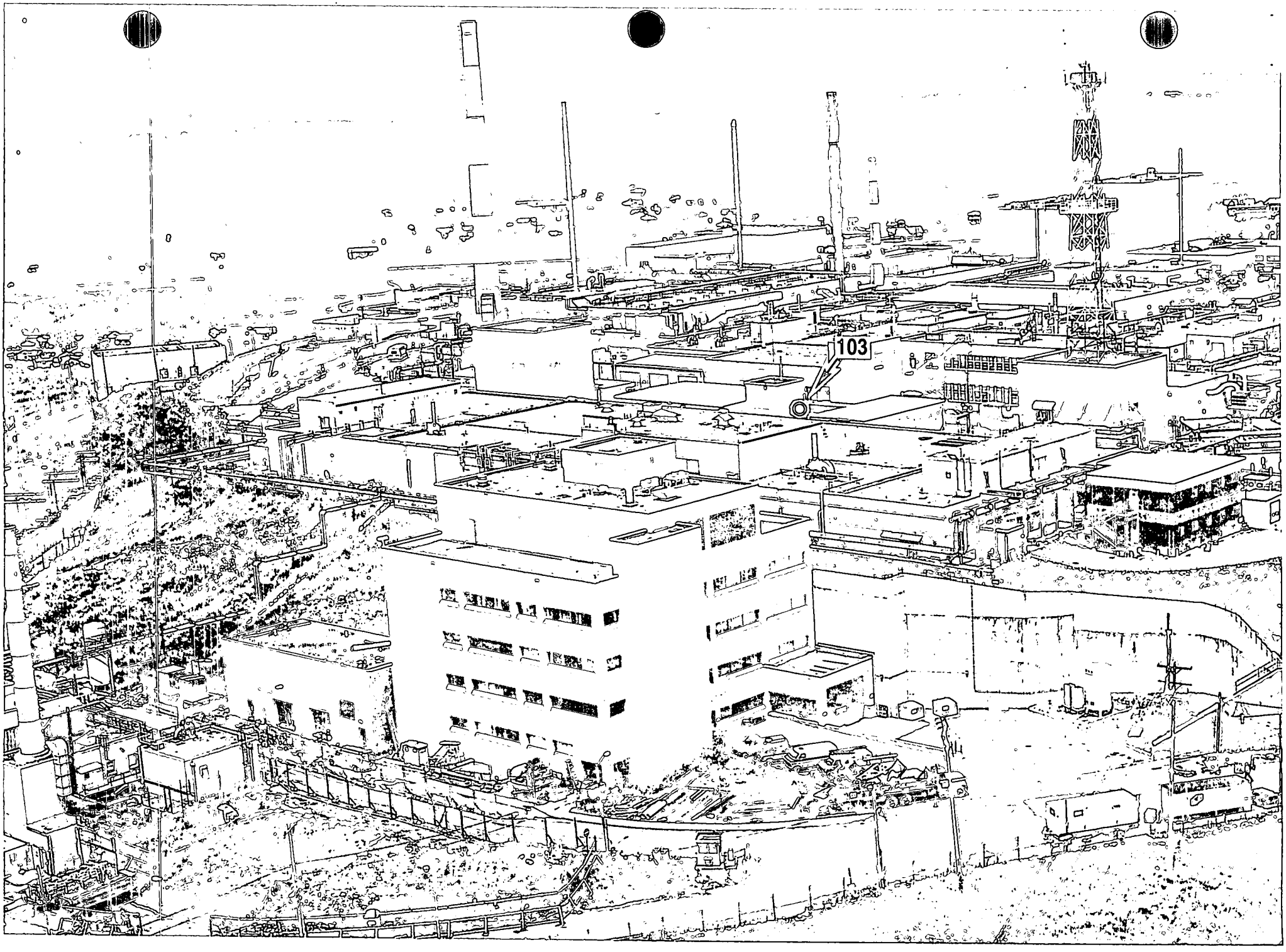
Release Block P

Potential Release Site

PRS 103






103

PRS 103

PRS HISTORY:

This location was identified as a potential release site as a result of total soil gas VOCs detections discovered during Reconnaissance sampling in 1991.[3] These locations are on the north and south sides of E Building. The sample points are adjacent to the commonly traveled inter-plant roadway.

CONTAMINATION:

Soil gas survey results from 1993 indicate detectable quantities of 1,1,1-TCA, TCE and toluene.[3]

Samples analyzed for radioactive contaminants during the radiological site survey (report data June, 1993) found plutonium-238 and thorium-232 levels less than the guideline values.[2]

Contaminants which can be compared to guideline criteria:

Contaminant	Maximum Value Detected	Guideline or Calculated Comparison Criteria
1,1,1 Trichloroethane (1,1,1-TCA)	7 ppb (soil gas)	173400 ppb (calculated soil gas)
Trichloroethene (TCE)	188 ppb (soil gas)	2400 ppb (calculated soil gas)
Toluene	226 ppb (soil gas)	414,600 ppb (calculated soil gas)
Plutonium (Pu-238)	0.41 pCi/g	25 pCi/g
Thorium (Th-232)	<2 pCi/g	5 pCi/g

READING ROOM REFERENCES:

1) OU9, Site Scoping Report: Volume 12 - Site Summary Report, December 1994. (pages 5-12)
2) OU9, Site Scoping Report: Volume 3 - Radiological Site Survey, June 1993. (pages 13-17)
3) Reconnaissance Sampling Report Soil Gas Survey and Geophysical Investigations, Mound Plant Main Hill and SM/PP Hill, February 1993. (pages 18-22)

OTHER REFERENCES:

4) Comparison of Actual Soil Gas Values with Calculated Acceptable Soil Gas Values, March 1996. (pages 23-25)

PREPARED BY:

Gerald F. Maul, Member of EG&G Technical Staff

MOUND PLANT
PRS 103
SOIL CONTAMINATION - E BUILDING

RECOMMENDATION:

This soils location was identified as a Potential Release Site (PRS) because of the detection of Volatile Organic Compounds (VOCs) during the Mound Reconnaissance Sampling soil gas survey. The compounds identified were trichloroethane (111-TCA), trichloroethene (TCE), and toluene.

Calculations were performed converting the 10^{-6} Risk Based Guideline Values (given in mg contaminant per kg soil) to corresponding 10^{-6} Risk Based Guideline Values for soil gas concentrations (parts contaminant per parts soil gas). The results of the calculation showed that the 111-TCA detection was approximately 25,000 times less than guideline criteria, TCE approximately 10 times less than guideline criteria and toluene 1,800 times less than guideline criteria. Additionally, Pu-238 and Th-232 were at concentrations below their respective guideline criteria of 25 pCi/g and 5 pCi/g.

Therefore, since the VOC soil gas detections establishing this soils location as a PRS have been shown not to be evidence of contamination above guideline criteria and since there is no additional evidence of contamination, PRS 103 requires <u>NO FURTHER ASSESSMENT</u>.

CONCURRENCE:

DOE/MB: Arthur W. Kleinrath, Remedial Project Manager — 8/20/96 (date)

USEPA: Timothy J. Fischer, Remedial Project Manager — 8/20/96 (date)

OEPA: Brian K. Nickel, Project Manager — 8/24/96 (date)

SUMMARY OF COMMENTS AND RESPONSES:

Comment period from 9/15/96 to 10/15/96

☒ No comments were received during the comment period.

☐ Comment responses can be found on page _____ of this package.

REFERENCE MATERIAL
PRS 103

OPERABLE UNIT 9
SITE SCOPING REPORT:
VOLUME 12 - SITE SUMMARY REPORT

MOUND PLANT
MIAMISBURG, OHIO

December 1994

U.S. DEPARTMENT OF ENERGY
OHIO FIELD OFFICE

ENVIRONMENTAL RESTORATION PROGRAM
EG&G MOUND APPLIED TECHNOLOGIES

FINAL

Table V.1. Potential Release Sites Recommended for Inclusion in the ER Program, Listed by Operable Unit

No.	Site Name	Evidence of Release[a]	Further Action Recommended[a]	FFA OU
8	Site Sanitary Landfill	No	Yes	1
9	Area 18, Site Sanitary Landfill Cover	Yes	Yes	1
10	Historic Landfill	Yes	Yes	1
11	Area 2, Thorium and Polonium-Contaminated Wastes (AKA Crushed Drums)	Yes	Yes	1
12	Area B Drum Storage Area	No	Yes	1
13	Trash incinerator	No	No	1
84	Building 56 Diesel Fuel Storage Tank (Tank 223)	No	Yes	2
91	Main Hill Seep 0601	Yes	Yes	2
92	Main Hill Seep 0602	Yes	Yes	2
93	Main Hill Seep 0603	Yes	Yes	2
94	Main Hill Seep 0604	Yes	Yes	2
95	Main Hill Seep 0605	Yes	Yes	2
96	Main Hill Seep 0606	Yes	Yes	2
97	Main Hill Seep 0607	Yes	Yes	2
98	Main Hill Seep 0608	Yes	Yes	2
99	Area 6, WD Building Filter-Cleaning Waste	No	Yes	2
100	Area F, Chromium Trench	No	Yes	2
101	Cooling Tower Basins	Yes	Yes	2
103	E Building Soils	Yes	Yes	2
105	E Building Solvent Storage Shed	Yes	Yes	2
106	G Building Soils (AKA Garage Area)	Yes	Yes	2
107	G Building Gasoline Tank (Tank 202)	Yes	Yes	2
108	G Building Gasoline Tank (Tank 203)	Yes	Yes	2
109	G Building Gasoline Tank (Tank 204)	Yes	Yes	2
110	I Building Soils	Yes	Yes	2
111	Monitor Well 0034	Yes	Yes	2
112	Paint Shop Area	Yes	Yes	2
113	Powerhouse Soils	Yes	Yes	2
114	Powerhouse Fuel Oil Storage Tank (Tank 113)	Yes	Yes	2
115	Powerhouse Fuel Oil Storage Tank (Tank 114)	Yes	Yes	2
116	Powerhouse Fuel Oil Storage Tank (Tank 115)	Yes	Yes	2

Table A.1. Comprehensive Tabulation of Potential Release Sites

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
102	Cooling Tower Drum Storage Area	E-7 E-8	In service	Contaminants listed under Cooling Tower Basins Ethylene glycol	4, 5				No Data		
103	E Building Soils	E-6 E-7 F-7	Grounds			Indicated by Soil Gas Survey	S	12	1 14	SGS[b] Table B.4 Locations 1046, 1047, 1048, 1066, 1067 Table B.9 RSS[c] Locations S0152, S0153, S0164 (Appendix E in Ref. 6)	12 6
104	Scintillation Vial Storage Area	E-6	In service	Tritium, Trimethylbenzene	4, 5, 18	None suspected (within E Building)			No Data		
105	E Building Solvent Storage Shed	F-6	Historical	Trichloroethene, Ethanol, Methanol	4, 5, 18	Closed before construction of E Building Annex, soil removed	S	4	1	SGS[b] Table B.4 Location 1066	12
106	G Building Soils (AKA Garage Area)	E-7	Grounds	Waste oil, Waste antifreeze, Automotive batteries Asbestos	1, 4, 18	Suspected petroleum products			1 14	SGS[b] Table B.4 Locations 1019 Table B.9 RSS[c] Locations S0137 and S0141 (Appendix E in Ref. 6)	12 6
	ling Gasoline Tank (Tank 202)	E-7	Historical	Gasoline	3, 18	Tanks removed 1986, petroleum contaminated soils removed		3, 18	No Data		
	ling Gasoline Tank (Tank 203)	E-7	Historical								

lyte List Codes
, Soil Gas Survey
, Radiological Site Survey

1 - Soil Gas Survey - Freon 11, Freon 113, Trans-1,2-Dichloroethylene, Cis-1,2-Dichloroethylene, 1,1,1-Trichloroethane, Perchloroethylene, Trichloroethylene, Toluene
2 - Gamma Spectroscopy - Thorium-228, -230, Cobalt-60, Cesium-137, Radium-224, -226, -228, Americium-241, Actinium-227, Bismuth-207, Bismuth-210m, Potassium-40
3 - Target Analyte List
4 - Target Compound List (VOC)
5 - Target Compound List (SVOC)
6 - Target Compound List (Pesticides/Polychlorinated Biphenyl)
7 - Dioxins/Furans
8 - Extractable Petroleum Hydrocarbons (EPH)/Total Petroleum Hydrocarbons (TPH)
9 - Lithium
10 - Nitrate/Nitrite
11 - Chloride
12 - Explosives
13 - Plutonium-238
14 - Plutonium-238, Thorium-232
15 - Cobalt-60, Cesium-137, Radium-226, Americium-241
16 - Tritium

Reference List

1. DOE 1986 "Phase I: Installation Assessment Mound [DRAFT]."
2. DOE 1992a "Remedial Investigation/Feasibility Study, Operable Unit 9, Site-Wide Work Plan (Final)."
3. DOE 1992c "Mound Plant Underground Storage Tank Program Plan & Regulatory Status Review (Final)."
4. DOE 1993a "Site Scoping Report: Vol. 7 - Waste Management (FINAL)."
5. EPA 1988a "Preliminary Review/Visual Site Inspection for RCRA Facility Assessment of Mound Plant"
6. DOE 1993d "Operable Unit 9, Site Scping Report: Vol. 3 - Radiological Site Survey (FINAL)."
7. DOE 1993c "Operable Unit 3, Misc. Sites Limited Field Investigation Report."
8. DOE 1992d "Reconnaissance Sampling Report Decontamination & Decommissioning Areas, OU6, (FINAL)."
9. Fentiman 1990 "Characterization of Mound's Hazardous, Radioactive and Mixed Wastes."
10. DOE 1992f "Operable Unit 9, Site Scpoing Report: Vol. 9 - Spills and Response Actions (FINAL)."
11. Styron and Meyer 1981 "Potable Water Standards Project: Final Report."
12. DOE 1993b "Reconnaissance Sampling Report - Soil Gas Survey & Geophysical Investigations, Mound Plant Main Hill and SM/PP Hill (FINAL)."
13. DOE 1993d "Operable Unit 9, Site Scoping Report: Vol. 3 - Radiological Site Survey (FINAL)."
14. DOE 1991b "Main Hill Seeps, Operable Unit 2, On-Scene Coordinator Report for CERCLA Section 104 Remedial Action, West Powerhouse PCB Site."
15. Halford 1990 "Results of South Pond Sampling."
16. DOE 1993e "Operable Unit 4, Special Canal Sampling Report, Miami Erie Canal."
17. DOE 1990 "Preliminary Results of Reconnaissance Magnetic Survey of Mound Plant Areas 2, 6, 7, and C."
18. DOE 1992a "Remedial Investigation/Feasibility Study, Operable Unit 9, Site-Wide Work Plan (FINAL)."
19. Rogers 1975 "Mound Laboratory Environmental Plutonium Study, 1974."
20. DOE 1992h "Ground Water and Seep Water Quality Data Report Through First Quarter, FY92."
21. Dames and Moore 1976a, b "Potable Water Standards Project Mound Laboratory" and "Evaluation of the Buried Valley Aquifer Adjacent to Mound Laboratory."
22. DOE 1992i "Closure Report, Building 34 - Aviation Fuel Storage Tank."
23. DOE 1992j "Closure Report, Building 51 - Waste Storage Tank."
24. DOE 1994 "Operable Unit 1, Remedial Investigation Report."
25. EG&G 1994 "Active Underground Storage Tank Plan."

Table A.2. Assignment of Regulatory Authorities to Potential Release Sites and Recommendations for Further Action

				Operational Jurisdiction				Historic Activities			
No.	Site Name	Location	Status	Regulated Units	Regulatory Authority	Spill Response	SWMU	Evidence Of Release	Response Authority	Further Action Recommended	FFA OU
93	Main Hill Seep 0603	D-8	NA		NA			Yes	CERCLA	Yes	2
94	Main Hill Seep 0604	D-6	NA		NA			Yes	CERCLA	Yes	2
95	Main Hill Seep 0605	D-6	NA		NA			Yes	CERCLA	Yes	2
96	Main Hill Seep 0606	D-7	NA		NA			Yes	CERCLA	Yes	2
97	Main Hill Seep 0607	C-7	NA		NA			Yes	CERCLA	Yes	2
98	Main Hill Seep 0608	D-6	NA		NA			Yes	CERCLA	Yes	2
99	Area 6, WD Building Filter-Cleaning Waste	D-8	Historical		NA			No	CERCLA	Yes	2
100	Area F, Chromium Trench	D-8	Historical		NA		SWMU	No	CERCLA	Yes	2
101	Cooling Tower Basins	E-7 E-8	In Service	Discharge to plant drainage ditch	RCRA	RCRA	SWMU	Yes	CERCLA	Yes	2
102	Cooling Tower Drum Storage Area	E-7 E-8	In Service	PBR	RCRA	RCRA	SWMU	No	NA	OM	
103	E Building Soils	E-6 E-7	Grounds		AEA			Yes	CERCLA	Yes	2
104	Scintillation Vial Storage Area	E-6	In Service	PBR	RCRA	RCRA	SWMU	No	NA	OM	
105	E Building Solvent Storage Shed	F-7	Historical		NA		SWMU	Yes	CERCLA	Yes	2
106	G Building Soils (AKA Garage Area)	E-7	Grounds		AEA	AEA		Yes	CERCLA	Yes	2
107	G Building Gasoline Tank (Tank 202)	E-7	Historical		NA			Yes	CERCLA	Yes	2
	ng Gasoline Tank Tank 203)	E-7	Historical		NA			Yes	CERCLA	Yes	2
	ng Gasoline Tank Tank 204)	E-7	Historical		NA			Yes	CERCLA	Yes	2
	uilding Soils	F-6	Grounds		AEA	AEA		Yes	CERCLA	Yes	2
	tor Well 0034	F-7	Surplus		NA		SWMU	Yes	CERCLA	Yes	2
	it Shop Area	E-7	In Service		AEA	AEA		Yes	CERCLA	Yes	2
	erhouse Soils	E-7	Grounds		AEA	AEA		Yes	CERCLA	Yes	2
	se Fuel Oil Storage ((Tank 113)	E-7	In Service		AEA	CWA		Yes	CERCLA	Yes	2
	se Fuel Oil Storage ((Tank 114)							Yes	CERCLA	Yes	2
	se Fuel Oil Storage ((Tank 115)							Yes	CERCLA	Yes	2

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-01-1002-1003	28 JUL 92	---	---	---	---	---	---	---	40
MND-01-1003-0005	28 JUL 92	---	---	---	---	---	---	---	3 *
MND-01-1005-0005	28 JUL 92	---	---	---	---	---	---	---	21 *
MND-01-1007-0005	29 JUL 92	---	---	---	---	---	---	2	---
MND-01-1008-0005	29 JUL 92	---	---	---	---	---	---	---	5
MND-01-1008-1005	29 JUL 92	---	---	---	---	---	---	---	3
MND-01-1009-0005	29 JUL 92	---	---	---	---	---	---	4	19
MND-01-1010-0005	29 JUL 92	---	---	---	---	---	---	---	13
MND-01-1014-0005	29 JUL 92	---	---	---	---	---	---	---	8
MND-01-1016-0003	30 JUL 92							2	8
MND-01-1046-0005	4 AUG 92	---	---	---	---	2	---	188	3 *
MND-01-1047-0005	4 AUG 92	---	---	---	---	7	---	4	---
MND-01-1048-0005	4 AUG 92	---	---	---	---	6	---	4	---
MND-01-1050-0003	4 AUG 92							8	
MND-01-1050-1003	4 AUG 92	---	---	---	---	---	---	17	27 *
MND-01-1051-0003	4 AUG 92	---	---	---	---	---	---	8	5 *
MND-01-1052-0003	4 AUG 92	---	---	---	---	---	---	---	13 *
MND-01-1053-0002	5 AUG 92	2	---	---	---	---	---	---	447
MND-01-1054-0005	5 AUG 92	4	---	---	---	7	---	226 *	11
MND-01-1055-1005	5 AUG 92	---	---	---	---	---	---	4 *	5
MND-01-1057-0005	5 AUG 92	---	---	---	---	---	---	---	24
MND-01-1062-0003	5 AUG 92	---	---	---	---	13	---	6	---
MND-01-1064-0005	11 AUG 92	---	---	---	---	---	---	---	19
MND-01-1066-0005	11 AUG 92	---	---	---	---	6	---	---	220
MND-01-1067-0005	11 AUG 92	---	---	---	---	---	---	11	133
MND-01-1069-1005	12 AUG 92								37
MND-01-1070-0005	12 AUG 92	---	---	---	---	---	---	---	8
MND-01-1070-1005	12 AUG 92	---	---	---	---	---	---	---	5
-01-1072-0005	12 AUG 92	---	---	---	---	---	---	---	106
-01-1074-0005	12 AUG 92	---	799	---	---	---	1191	---	5
-01-1074-1005	12 AUG 92	---	812	---	---	---	1117	---	5
-01-1075-0005	12 AUG 92	---	---	---	---	---	---	---	80
-01-1076-0005	12 AUG 92	---	2934	---	---	148	---	---	---
-01-1077-0005	12 AUG 92	---	---	---	---	---	---	---	27
-01-1079-0005	13 AUG 92	---	13	---	---	---	---	---	---
-01-1080-0005	13 AUG 92	---	13	---	---	---	---	---	---
-01-1085-0005	13 AUG 92	---	102	---	---	22	---	41	---
-01-1086-0005	13 AUG 92	---	47	---	---	---	---	---	---
-01-1093-0005	15 AUG 92	---	**131000	247	40600	---	---	**34780	53 *
-01-1094-0005	14 AUG 92	---	83	13	405	---	---	976	---
-01-1097-0002	14 AUG 92	---	---	---	---	---	---	6	8
-01-1099-0005	15 AUG 92	---	---	---	---	---	---	4	8 *
-01-1101-0005	16 AUG 92	---	865	---	---	---	---	---	8
-01-1102-0005	16 AUG 92	---	419	---	---	---	---	---	13
-01-1106-0003	16 AUG 92	---	329	---	---	---	---	6	---
-01-1108-0005	16 AUG 92	---	---	---	---	---	---	6	---
-01-1109-0005	16 AUG 92	---	---	---	---	---	---	8	13
-01-1110-0005	16 AUG 92	---	---	---	---	---	---	---	255

Table B.9. Summary of Radiological Data[a,b]

Site Name	Radiological Contaminants															
	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	Reference
79. Warehouse 15			0.52		<2		10.									6
80. Warehouse 15A			0.7				10.									6
85. Building 29 Solvent Storage Shed	NA	NA	0.29	NA	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
86. Building 29 Septic Tank (Tank 224)				1.2					2.0			1,400				6
88. Tritium in Buried Valley Aquifer						20										11,18
90. Site Survey Project Potential Hot Spot Location S0425			1.08		5.74											6
91. Main Hill Seep 0601 (f)				10		1033		82								18
92. Main Hill Seep 0602 (f)						16.17										18
95. Main Hill Seep 0605 (f)						56.60										18
97. Main Hill Seep 0607 (f)						89.56										18
98. Main Hill Seep 0608 (f)						27.60										18
103. E Building Soils	NA	NA	0.25	NA	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
108. G Building Soils (AKA Garage Area)	NA	NA	0.68	NA	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
110. I Building Soils	NA	NA	1.87	NA	<2	1.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
112. Paint Shop Area							ND									7
113. Powerhouse Soils	NA	NA	0.86	NA	<2	2.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
[illegible]	NA	NA	0.62	NA	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
[illegible] Shed	NA	NA	0.12	NA	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
[illegible] Shed	NA	NA	0.64	NA	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
[illegible] Storage Area	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6
134. Syl-[illegible] Drum Storage Area	NA	NA	0.96	NA	<2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6

Table B.9. Summary of Radiological Data[a,b]

Site Name	Radiological Contaminants															
	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	Reference
308. Site Survey Project Potential Hot Spot Location C0028			11.4		109.											6
309. Site Survey Project Potential Hot Spot Location S0307			5.36		6.46											6
310. Site Survey Project Potential Hot Spot Location S0647				270					1.3							6
311. Site Survey Project Potential Hot Spot Location S0706			28.9													6
312. Site Survey Project Potential Hot Spot Location S0971			0.15		5.02	2										6
313. Site Survey Project Potential Hot Spot Location S0982			0.43		14.94											6
314. Farm Trash Area			0.02				<2									7
319. Epoxy Resin Disposal																7

(a) - All units are reported in pCi/g unless otherwise noted.
(b) - Blank spaces implies not sampled.
(c) - Additional data on other analytes are available in reference 16.
(d) - Groundwater data. Unit of measure is pCi/L.
(e) - This site is the same as Site #19.
(f) - Groundwater data. Unit of measure is nCi/L.

LDL - Lower Detection Limit.
ND - Not detected.
NA - Not analzyed for.
NR - No result reported.

References:
6) DOE 1993d
7) DOE 1993c
11) Styron and Meyer 1981
13) DOE 1993d
18) DOE 1992a
24) DOE 1994

Document Control No. _____

Environmental Restoration Program

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

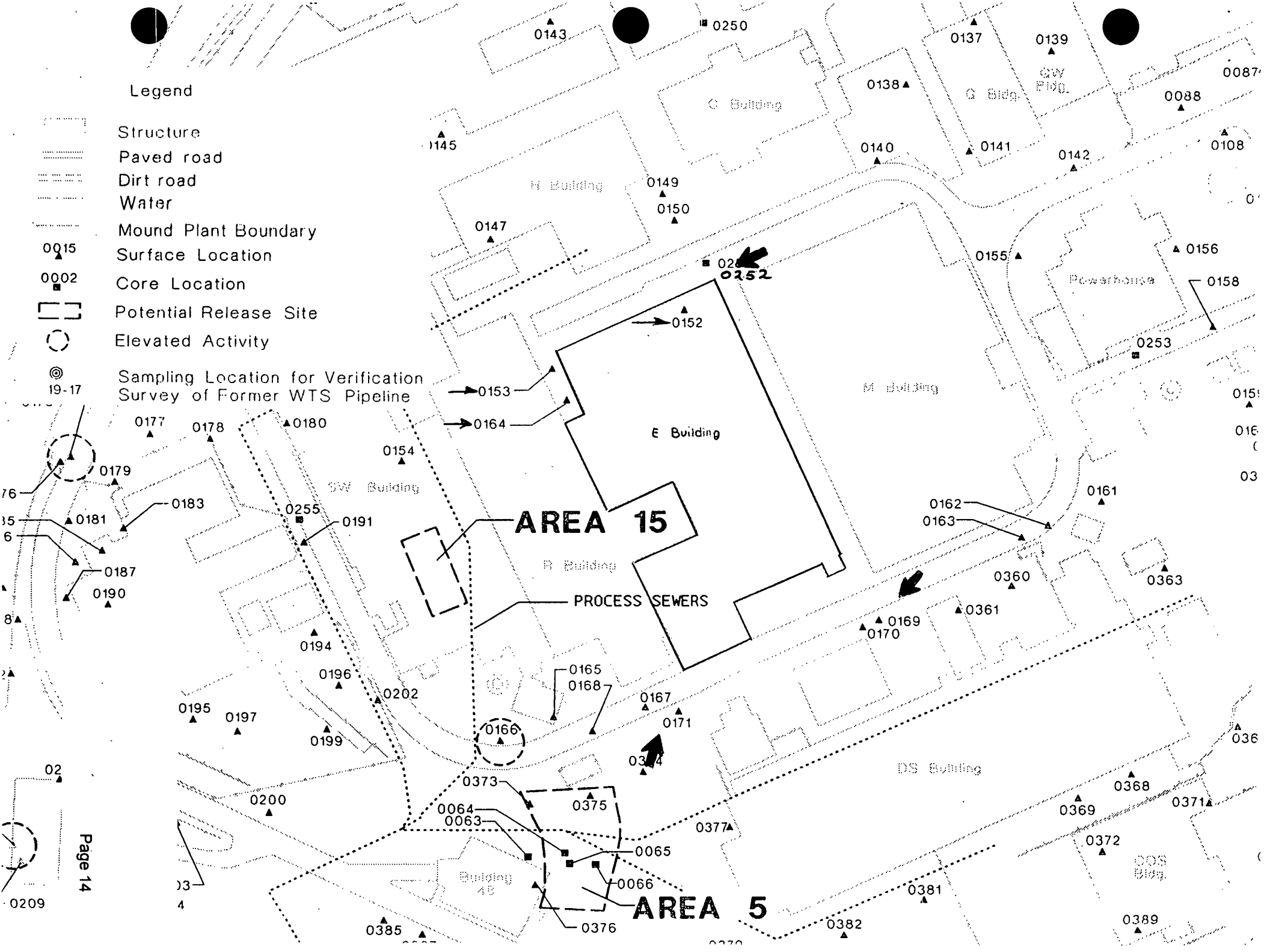
MOUND PLANT
MIAMISBURG, OHIO

June 1993

FINAL

Department of Energy
Albuquerque Field Office

Environmental Restoration Program
EG&G Mound Applied Technologies


Legend
Structure
Paved road
Dirt road
Water
Mound Plant Boundary
0015 Surface Location
0002 Core Location
Potential Release Site
Elevated Activity
19-17 Sampling Location for Verification Survey of Former WTS Pipeline
AREA 15
AREA 5
PROCESS SEWERS
E Building
M Building
R Building
SW Building
C Building
H Building
G Bldg.
Powerhouse
DS Building
Building 48
0252
0143
0250
0137
0139
0138
0088
0108
0140
0141
0142
0149
0150
0147
0155
0156
0158
0152
0253
0153
0164
0177
0178
0180
0154
0179
0183
0181
0255
0191
0187
0190
0162
0163
0161
0360
0363
0361
0169
0170
0194
0196
0202
0165
0168
0167
0171
0195
0197
0199
0166
0373
0375
0200
0064
0063
0065
0066
0376
0377
0368
0369
0371
0372
0381
0382
0385
0389
0209

Map Location[a]	Coordinates South	Coordinates 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)
S0142	1500	2695	6181	08-84	0	0.43	b					
S0143	1200	3050	3049	10-83	0	0.46	b	1.34				
S0144	1225	3375	3045	10-83	0	0.03	b	6.83				
S0145	1250	3175	6182	08-84	0	0.02	b					
S0146	1300	3225	6183	08-84	0	0.64	b					
S0147	1350	3175	3047	10-83	0	0.02	b					
S0148	1350	3325	3046	10-83	0	0.20	b					
S0149	1375	3025	3044	10-83	0	0.15	b					
S0150	1400	3025	3048	10-83	0	0.06[c]	b					
C0252	1445	3015	8400	12-84	36	0.13	b					
S0152	1475	3050	6184	08-84	0	0.20	b					
S0153	1475	3175	6185	08-84	0	0.20	b					
S0154	1495	3325	6186	08-84	0	0.03	b					
S0155	1550	2770	3090	10-83	0	0.54	b					
S0156	1600	2645	3095	10-83	0	0.27[c]	b					
C0253	1670	2715	8396	12-84	36	0.11	b					
S0158	1675	2645	3094	10-83	0	0.73	b					
S0159	1750	2645	6210	08-84	0	0.17	b					
S0160	1775	2620	6209	08-84	0	0.17	b					

Map Location[a]	Coordinates South	Coordinates 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)
S0161	1775	2795	3093	10-83	0	1.19	b					
S0162	1775	2845	6206	08-84	0	0.62	b					
S0163	1775	2870	6207	08-84	0	0.34	b					
S0164	1505	3175	3096	10-83	0	0.25	b					
S0165	1750	3300	6211	08-84	0	0.22[c]	b					
S0166	1750	3350	4000	10-83	0	34.50	b					
S0167	1775	3225	6212	08-84	0	0.81	b					
S0168	1775	3275	3099	10-83	0	1.78	b	12.78				
S0169	1790	3010	8424	11-84	0	0.05	b					
S0170	1790	3025	3097	10-83	0	0.41	b					
S0171	1790	3200	3098	10-83	0	1.87	b					
S0172	1285	3555	4081	10-83	0	0.17	b	1.65				
173	1315	3465	3050	10-83	0	0.17[c]	b					
254	1325	3630	8415	11-84	36	0.22	b					
175	1375	3580	9845	06-85	0	NR	NR		82	10	0.8	LDL
176	1375	3590	3051	10-83	0	2.82	b					
177	1385	3510	3055	10-83	0	1.17	b					
178	1410	3465	6187	08-84	0	0.55	b					
79	1410	3555	6189	08-84	0	0.48	b					

-10

f 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)
~~C0289~~	~~2422.7~~	~~2081.0~~	~~None[d]~~	~~07-84~~	~~0~~	~~NR~~	~~0.6~~					
			None[d]	07-84	12	NR	1.1					
			None[d]	07-84	24	NR	0.5					
			None[d]	07-84	36	NR	0.8					
			None[d]	07-84	48	NR	1.0					
			None[d]	07-84	60	NR	0.8					
C0290	2401.5	2102.1	None[d]	07-84	0	NR	0.7					
			None[d]	07-84	12	NR	0.8					
			None[d]	07-84	24	NR	0.8					
			None[d]	07-84	36	NR	0.8					
			None[d]	07-84	48	NR	0.6					
			None[d]	07-84	60	NR	0.9					
			None[d]	07-84	72	NR	0.8					
C0291	2915.3	2490.3	None[d]	07-84	0	NR	0.6					
			None[d]	07-84	12	NR	0.4					
			None[d]	07-84	24	NR	0.5					
			None[d]	07-84	36	NR	0.4					
			None[d]	07-84	48	NR	0.4					
			None[d]	07-84	60	NR	0.3					
			None[d]	07-84	72	NR	0.5					
			None[d]	07-84	84	NR	0.4					
			None[d]	07-84	96	NR	0.7					
			None[d]	07-84	108	NR	0.6					
			None[d]	07-84	120	NR	0.3					
			None[d]	07-84	132	NR	0.3					
~~S1092~~	~~2185~~	~~3362~~	~~8413~~	~~12-84~~	~~f~~	~~0.31~~	~~323.5[g]~~					

[a]C denotes core location and S denotes surface sample location on Plate 1.

[b]Thorium results of ≤ 2 pCi/g are listed as "b".

[c]Verification sample analyzed for QA/QC.

[d]No MRC ID assigned because *in situ* gamma spectrometry was performed for thorium-232.

[e]Gamma results could not be confirmed using the gamma spectroscopy printout given in this appendix.

[f]The depth for this sample was given as "SS". For mapping purposes (Plates 1 and 5), this is assumed to be a surface sample.

[g]Sample results were given isotopically for this sample and included 0.99 pCi/g thorium-228; 321 pCi/g thorium-230; and 1.5 pCi/g thorium-232, for a total of 323.5 pCi/g.

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

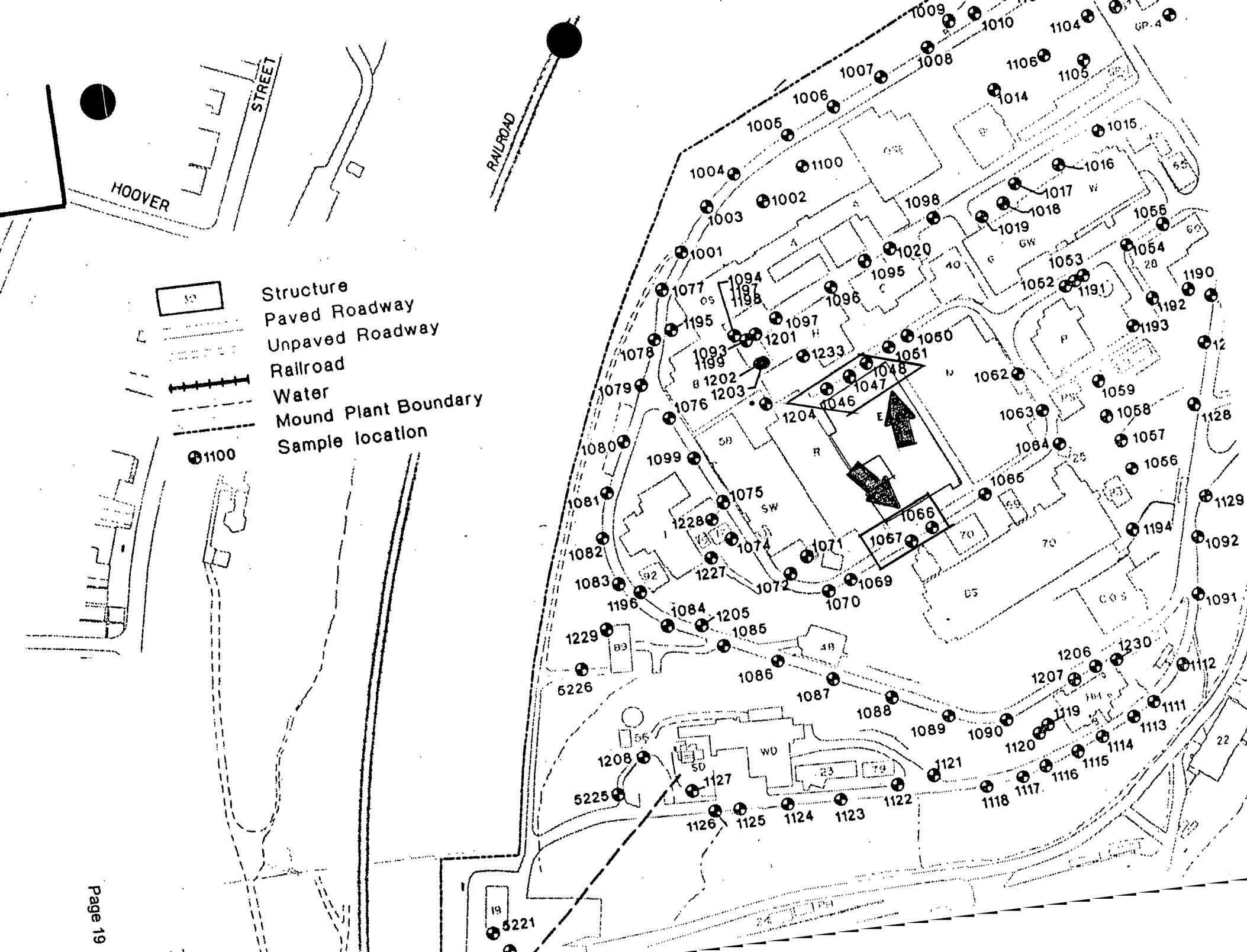

HOOVER
STREET
RAILROAD
Structure
Paved Roadway
Unpaved Roadway
Railroad
Water
Mound Plant Boundary
Sample location
1100

Table II.2. SUMMARY OF DATA IDENTIFCATIONS, LOCATIONS, AND DEPTHS

SAMPLE	DATE	LOCATION	SAMPLE DEPTH (FEET)	QA/QC
MND-01-1001-0005	7/25/92	Main Hill	5	
MND-01-1001-3001	7/25/92	Main Hill		Ambient Blank
MND-01-1001-3002	7/28/92	Main Hill		Ambient Blank
MND-01-1001-5000	7/25/92	Main Hill		Field Blank
MND-01-1002-0003	7/28/92	Main Hill	3	
MND-01-1003-0005	7/28/92	Main Hill	5	
MND-01-1004-0005	7/28/92	Main Hill	5	
MND-01-1005-0005	7/28/92	Main Hill	5	
MND-01-1005-1005	7/28/92	Main Hill		Duplicate
MND-01-1005-2000	7/29/92	Main Hill		Trip Blank
MND-01-1005-3001	7/29/92	Main Hill		Ambient Blank
MND-01-1006-1005	7/29/92	Main Hill		Duplicate
MND-01-1006-3002	7/29/92	Main Hill		Ambient Blank
MND-01-1006-5000	7/29/92	Main Hill		Field Blank
MND-01-1007-0005	7/29/92	Main Hill	5	
MND-01-1008-0005	7/29/92	Main Hill	5	
MND-01-1008-1005	7/29/92	Main Hill		Duplicate
MND-01-1009-0005	7/29/92	Main Hill	5	
MND-01-1010-0005	7/29/92	Main Hill	5	
MND-01-1011-0005	7/29/92	Main Hill	5	
MND-01-1012-0005	7/29/92	Main Hill	5	
MND-01-1013-0005	7/29/92	Main Hill	5	
MND-01-1013-1005	7/29/92	Main Hill		Duplicate
MND-01-1014-0005	7/29/92	Main Hill	5	
MND-01-1014-2000	7/30/92	Main Hill		Trip Blank
MND-01-1015-0005	7/30/92	Main Hill	5	
MND-01-1015-3001	7/30/92	Main Hill		Ambient Blank
MND-01-1015-3002	7/30/92	Main Hill		Ambient Blank
MND-01-1015-5000	7/30/92	Main Hill		Field Blank
MND-01-1016-0003	7/30/92	Main Hill	3	
MND-01-1017-0003	7/30/92	Main Hill	3	
MND-01-1017-1003	7/30/92	Main Hill		Duplicate
MND-01-1018-1005	7/30/92	Main Hill		Duplicate
MND-01-1019-0003	8/04/92	Main Hill	3	
MND-01-1019-3001	8/04/92	Main Hill		Ambient Blank
MND-01-1019-5000	8/04/92	Main Hill		Field Blank
MND-01-1020-0002	7/30/92	Main Hill	2	
MND-01-1020-0002	7/31/92	Main Hill		MS/MSD
MND-01-1020-2000	7/30/92	Main Hill		Trip Blank
MND-01-1021-3001	7/31/92	Main Hill		Ambient Blank
MND-01-1021-5000	7/31/92	Main Hill		Field Blank
MND-01-1046-0005	8/04/92	Main Hill	5	
MND-01-1047-0005	8/04/92	Main Hill	5	
MND-10-1048-0005	8/04/92	Main Hill	5	
MND-01-1050-0003	8/04/92	Main Hill	3	
MND-01-1050-1003	8/04/92	Main Hill		Duplicate
MND-01-1051-0003	8/04/92	Main Hill	3	
MND-01-1051-1003	8/04/92	Main Hill		MS/MSD
MND-01-1052-0003	8/04/92	Main Hill	3	
MND-01-1052-2000	8/05/92	Main Hill		Trip Blank
MND-01-1053-0002	8/05/92	Main Hill	2	
MND-01-1053-1002	8/05/92	Main Hill		MS/MSD
MND-01-1054-0005	8/05/92	Main Hill	5	
MND-01-1054-3001	8/05/92	Main Hill		Ambient Blank
MND-01-1054-5000	8/05/92	Main Hill		Field Blank
MND-01-1055-1005	8/05/92	Main Hill		Duplicate
MND-01-1056-0005	8/05/92	Main Hill	5	
MND-01-1056-1005	8/05/92	Main Hill		Duplicate
MND-01-1057-0005	8/05/92	Main Hill	5	
MND-01-1058-0005	8/05/92	Main Hill	5	
MND-01-1059-0005	8/05/92	Main Hill	5	
MND-01-1062-0003	8/05/92	Main Hill	3	
MND-01-1062-2000	8/05/92	Main Hill		Trip Blank
MND-01-1063-0005	8/11/92	Main Hill	5	
MND-01-1063-3001	8/11/92	Main Hill		Ambient Blank
MND-01-1063-5000	8/11/92	Main Hill		Field Blank
MND-01-1064-0005	8/11/92	Main Hill	5	
MND-01-1065-0005w	8/12/92	Main Hill	5	
MND-01-1065-1005w	8/12/92	Main Hill		Duplicate
MND-01-1065-2000w	8/12/92	Main Hill		
MND-01-1065-2000w	8/12/92	Main Hill		
MND-01-1065-5000w	8/12/92	Main Hill		
MND-01-1066-0005	8/11/92	Main Hill		

Table II.2 SUMMARY OF DATA IDENTIFCATIONS, LOCATIONS, AND DEPTHS

SAMPLE	DATE	LOCATION	SAMPLE DEPTH (FEET)	QA/QC
MND-01-1066-1005	8/11/92	Main Hill		Duplicate
MND-01-1067-0005	8/11/92	Main Hill	5	
MND-01-1069-1005	8/12/92	Main Hill		Duplicate
MND-01-1070-0005	8/12/92	Main Hill	5	
MND-01-1070-1005	8/12/92	Main Hill		Duplicate
MND-01-1070-2000	8/12/92	Main Hill		Trip Blank
MND-01-1071-0003	8/12/92	Main Hill	3	
MND-01-1071-3001	8/12/92	Main Hill		Ambient Blank
MND-01-1071-5000	8/12/92	Main Hill		Field Blank
MND-01-1072-0005	8/12/92	Main Hill	5	
MND-01-1072-1005	8/12/92	Main Hill		MS/MSD
MND-01-1074-0005	8/12/92	Main Hill	5	
MND-01-1074-1005	8/12/92	Main Hill		Duplicate
MND-01-1075-0005	8/12/92	Main Hill	5	
MND-01-1076-0005	8/12/92	Main Hill	5	
MND-01-1077-0005	8/12/92	Main Hill	5	
MND-01-1078-0005	8/13/92	Main Hill	5	
MND-01-1079-0005	8/13/92	Main Hill	5	
MND-01-1080-0005	8/13/92	Main Hill	5	
MND-01-1080-2000	8/13/92	Main Hill		Trip Blank
MND-01-1081-0005	8/13/92	Main Hill	5	
MND-01-1081-5000	8/13/92	Main Hill		Field Blank
MND-01-1082-0005	8/13/92	Main Hill	5	
MND-01-1082-1005	8/13/92	Main Hill		MS/MSD
MND-01-1083-0005	8/13/92	Main Hill	5	
MND-01-1083-1005	8/13/92	Main Hill		Duplicate
MND-01-1084-0005	8/13/92	Main Hill	5	
MND-01-1085-0005	8/13/92	Main Hill	5	
MND-01-1086-0005	8/13/92	Main Hill	5	
MND-01-1087-0005	8/13/92	Main Hill	5	
MND-01-1088-0005	8/13/92	Main Hill	5	
MND-01-1089-0005	8/13/92	Main Hill	5	
MND-01-1090-0005	8/13/92	Main Hill	5	
MND-01-1091-0005	8/14/92	Main Hill	5	
MND-01-1092-0005	8/14/92	Main Hill	5	
MND-01-1092-2000	8/14/92	Main Hill		Trip Blank
MND-01-1093-0005	8/15/92	Main Hill	5	
MND-01-1093-3002	8/14/92	Main Hill		Ambient Blank
MND-01-1093-5000	8/14/92	Main Hill		Field Blank
MND-01-1094-0005	8/14/92	Main Hill	5	
MND-01-1095-0002	8/14/92	Main Hill	2	
MND-01-1095-1002	8/14/92	Main Hill		MS/MSD
MND-01-1096-0003	8/14/92	Main Hill	3	
MND-01-1096-1003	8/14/92	Main Hill		Duplicate
MND-01-1097-0002	8/14/92	Main Hill	2	
MND-01-1098-0004	8/15/92	Main Hill	4	
MND-01-1099-0005	8/15/92	Main Hill	5	
MND-01-1099-2000	8/15/92	Main Hill		Trip Blank
MND-01-1100-0004	8/15/92	Main Hill	4	
MND-01-1100-2000	8/15/92	Main Hill		Trip Blank
MND-01-1100-3001	8/15/92	Main Hill		Ambient Blank
MND-01-1100-5000	8/15/92	Main Hill		Field Blank
MND-01-1101-0005	8/16/92	Main Hill	5	
MND-01-1101-3002	8/16/92	Main Hill		Ambient Blank
MND-01-1101-5000	8/16/92	Main Hill		Field Blank
MND-01-1102-0005	8/16/92	Main Hill	5	
MND-01-1102-1005	8/16/92	Main Hill		MS/MSD
MND-01-1103-0005	8/16/92	Main Hill	5	
MND-01-1103-1005	8/16/92	Main Hill		Duplicate
MND-01-1104-0003	8/16/92	Main Hill	3	
MND-01-1105-0005w	8/17/92	Main Hill	5	
MND-01-1105-1005w	8/17/92	Main Hill		Duplicate
MND-01-1105-2000w	8/17/92	Main Hill		Trip Blank
MND-01-1105-5000w	8/17/92	Main Hill		Field Blank
MND-01-1106-0003	8/16/92	Main Hill	3	
MND-01-1107-1005	8/16/92	Main Hill		Duplicate
MND-01-1108-0005	8/16/92	Main Hill	5	
MND-01-1109-0005	8/16/92	Main Hill	5	
MND-01-1110-0005	8/16/92	Main Hill		
MND-01-1110-2000	8/17/92	Main Hill		
MND-01-1111-0005	8/17/92	Main Hill		
MND-01-1111-5000	8/17/92	Main Hill		
MND-01-1112-0005	8/17/92	Main Hill		

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–01–1002–1003	28 JUL 92	---	---	---	---	---	---	---	40
MND–01–1003–0005	28 JUL 92	---	---	---	---	---	---	---	3 *
MND–01–1005–0005	28 JUL 92	---	---	---	---	---	---	---	21 *
MND–01–1007–0005	29 JUL 92	---	---	---	---	---	---	2	---
MND–01–1008–0005	29 JUL 92	---	---	---	---	---	---	---	5
MND–01–1008–1005	29 JUL 92	---	---	---	---	---	---	---	3
MND–01–1009–0005	29 JUL 92	---	---	---	---	---	---	4	19
MND–01–1010–0005	29 JUL 92	---	---	---	---	---	---	---	13
MND–01–1014–0005	29 JUL 92	---	---	---	---	---	---	---	8
MND–01–1016–0003	30 JUL 92	---	---	---	---	---	---	2	8
MND–01–1046–0005	4 AUG 92	---	---	---	---	2	---	188	3 *
MND–01–1047–0005	4 AUG 92	---	---	---	---	7	---	4	---
MND–01–1048–0005	4 AUG 92	---	---	---	---	6	---	4	---
MND–01–1050–0003	4 AUG 92	---	---	---	---	---	---	8	---
MND–01–1050–1003	4 AUG 92	---	---	---	---	---	---	17	27 *
MND–01–1051–0003	4 AUG 92	---	---	---	---	---	---	8	5 *
MND–01–1052–0003	4 AUG 92	---	---	---	---	---	---	---	13 *
MND–01–1053–0002	5 AUG 92	2	---	---	---	---	---	---	447
MND–01–1054–0005	5 AUG 92	4	---	---	---	7	---	226 *	11
MND–01–1055–1005	5 AUG 92	---	---	---	---	---	---	4 *	5
MND–01–1057–0005	5 AUG 92	---	---	---	---	---	---	---	24
MND–01–1062–0003	5 AUG 92	---	---	---	---	13	---	6	---
MND–01–1064–0005	11 AUG 92	---	---	---	---	---	---	---	19
MND–01–1066–0005	11 AUG 92	---	---	---	---	6	---	---	220
MND–01–1067–0005	11 AUG 92	---	---	---	---	---	---	11	133
MND–01–1069–1005	12 AUG 92	---	---	---	---	---	---	---	37
MND–01–1070–0005	12 AUG 92	---	---	---	---	---	---	---	5
MND–01–1070–1005	12 AUG 92	---	---	---	---	---	---	---	5
MND–01–1072–0005	12 AUG 92	---	---	---	---	---	---	---	106
MND–01–1074–0005	12 AUG 92	---	799	---	---	---	1191	---	5
MND–01–1074–1005	12 AUG 92	---	812	---	---	---	1117	---	5
·01–1075–0005	12 AUG 92	---	---	---	---	---	---	---	60
·01–1076–0005	12 AUG 92	---	2934	---	---	148	---	---	---
·01–1077–0005	12 AUG 92	---	---	---	---	---	---	---	27
·01–1079–0005	13 AUG 92	---	13	---	---	---	---	---	---
·01–1080–0005	13 AUG 92	---	13	---	---	---	---	---	---
·01–1085–0005	13 AUG 92	---	102	---	---	22	---	41	---
01–1086–0005	13 AUG 92	---	47	---	---	---	---	---	---
01–1093–0005	15 AUG 92	---	**131000	247	40800	---	---	**34780	53 *
01–1094–0005	14 AUG 92	---	83	13	485	---	---	978	---
01–1097–0002	14 AUG 92	---	---	---	---	---	---	6	8
01–1099–0005	15 AUG 92	---	---	---	---	---	---	4	8 *
01–1101–0005	16 AUG 92	---	865	---	---	---	---	---	8
01–1102–0005	16 AUG 92	---	419	---	---	---	---	---	13
01–1106–0003	16 AUG 92	---	329	---	---	---	---	6	---
01–1108–0005	16 AUG 92	---	---	---	---	---	---	6	---
01–1109–0005	16 AUG 92	---	---	---	---	---	---	8	13
01–1110–0005	16 AUG 92	---	---	---	---	---	---	---	255

COMPARISON OF ACTUAL SOIL GAS VALUES WITH CALCULATED ACCEPTABLE SOIL GAS VALUES

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:

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

where

Cg	concentration of volatile chemical concentrations as soil vapor in ng/ml
Pb	Bulk density of the soil in g/ml
Kd	soil/water partition coefficient in ml/g
H	Dimensionless Henry's Law Constant
pw	water filled porosity
pt	total porosity
Ct	target soil concentration in ng/g or ug/kg (ppb)

The technique that Mound Plant will use for screening a PRS is to compare the soil gas values obtained at a PRS with soil gas 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 "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 guideline values, therefore they are more conservative and are appropriate to be used as the basis for the soil gas calculations.

By re-arranging the equation, and using either the soil guideline values or the soil screening levels as the target soil concentration, a soil gas concentration can be calculated; this calculated soil gas concentration can be compared to the actual observed soil gas values:

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

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

Pb	1.6	Bulk density of the soil in g/ml
pw	0.15	water filled porosity
pt	0.43	total porosity
foc	0.02	fraction organic material in soil (used in developing the SSL values)

Typical chemicals that are detected with soil gas sampling are:					
NAME	H	Kd	Calculated Acceptable Soil Screening Level Value	Calculated Acceptable Soil Gas Reading	Calculated Acceptable Soil Gas Reading
		ml/g	mg/kg (ppm)	ng/ml	ppb
Toluene	2.52E-01	3.42	22.06	1.56E+03	414600
Trichloroethene (TCE)	4.35E-01	2.24	0.07	1.26E+01	2400
111 Trichloroethane (TCA)	7.63E-01	2.2	3.01	9.46E+02	173400
Trans-1,2 Dichloroethene (DCE)	2.29E-01	1	0.70	1.41E+02	35700
cis-1,2 Dichloroethene (DCE)	1.85E-01	2.78	0.31	1.97E+01	5000
Freon 11	NA	NA			
Freon 113	NA	NA			
Tetrachloroethene (PCE)	7.09E-01	2.78	0.09	2.13E+01	3100

na not available

IF THE SOIL GAS READING IS BELOW THE VALUES IN THE CALCULATED SOIL GAS READING COLUMN (SHADED), THEN THERE IS NO THREAT TO GROUNDWATER FROM THIS PRS.

The soil screening level values are calculated using the Soil Screening Methodology. The Potential Release Site is assumed to be more than 100 meters from a potential drinking water source with an aquifer thickness of 15 meters and a source size of 10 meters. The hydraulic gradient is assumed to be 0.01 which is conservative for most of the Mound Plant PRSs. In special instances where the PRS lies less than 100 meters from a potential drinking water source, or the hydraulic gradient is much less than 0.01, new SSL values and new acceptable soil gas values will be calculated for that particular PRS.