

MOUND



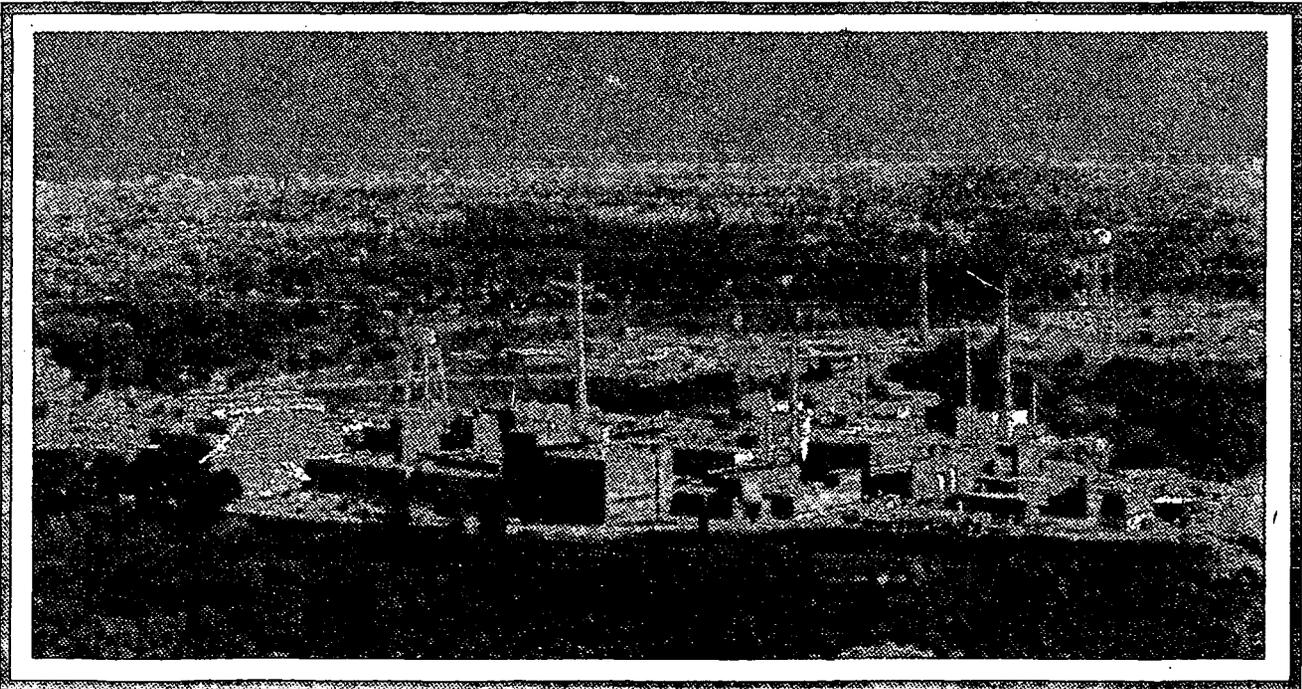
**Environmental
Restoration
Program**



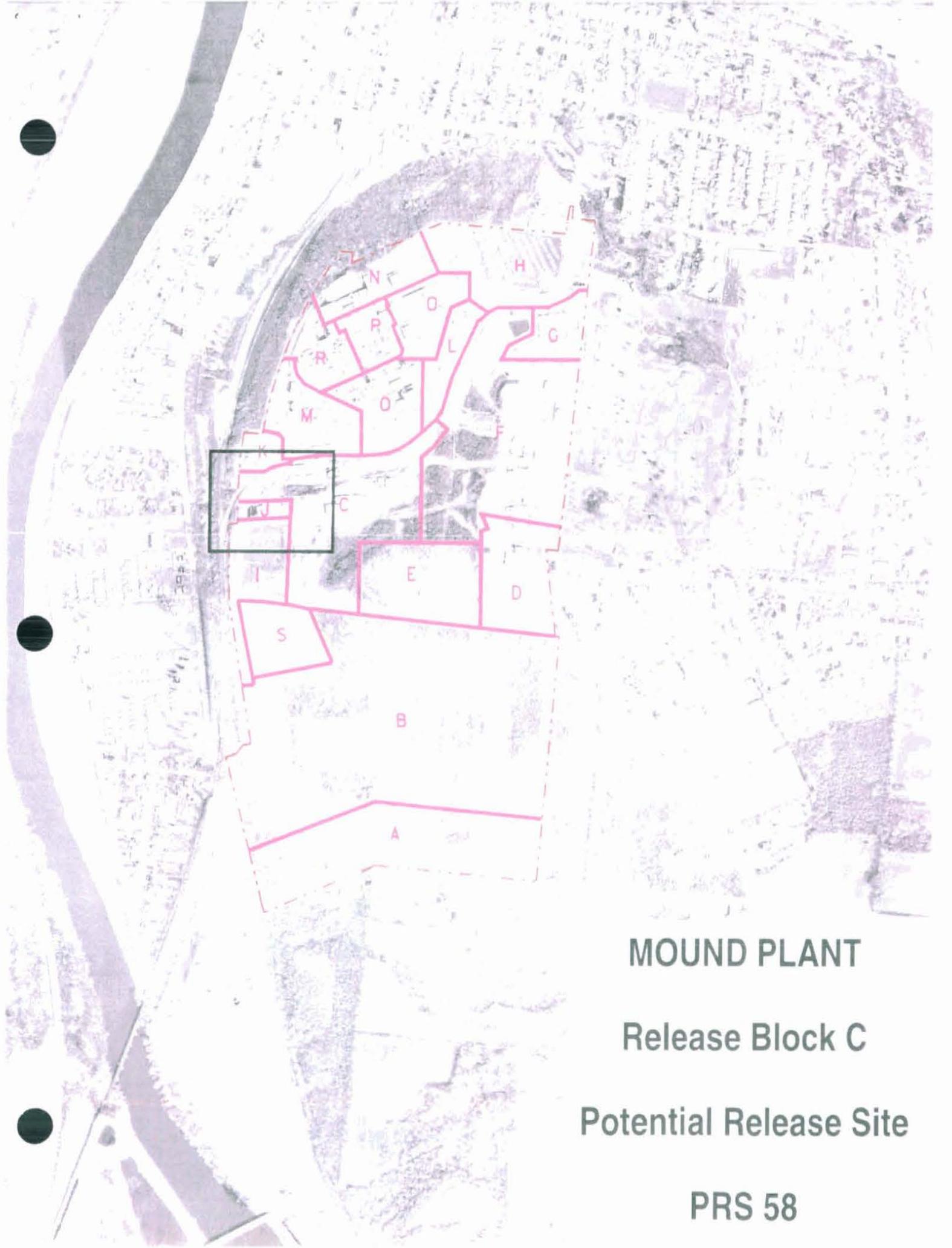
MOUND PLANT

Potential Release Site Package

PRS # 58



REV	DESCRIPTION	DATE
<p>0</p> <p>PUBLIC RELEASE</p>	<p>Available for comment.</p>	<p>Nov. 21, 1996</p>
<p>1</p> <p>FINAL</p>		

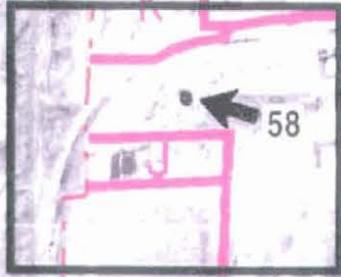


MOUND PLANT

Release Block C

Potential Release Site

PRS 58

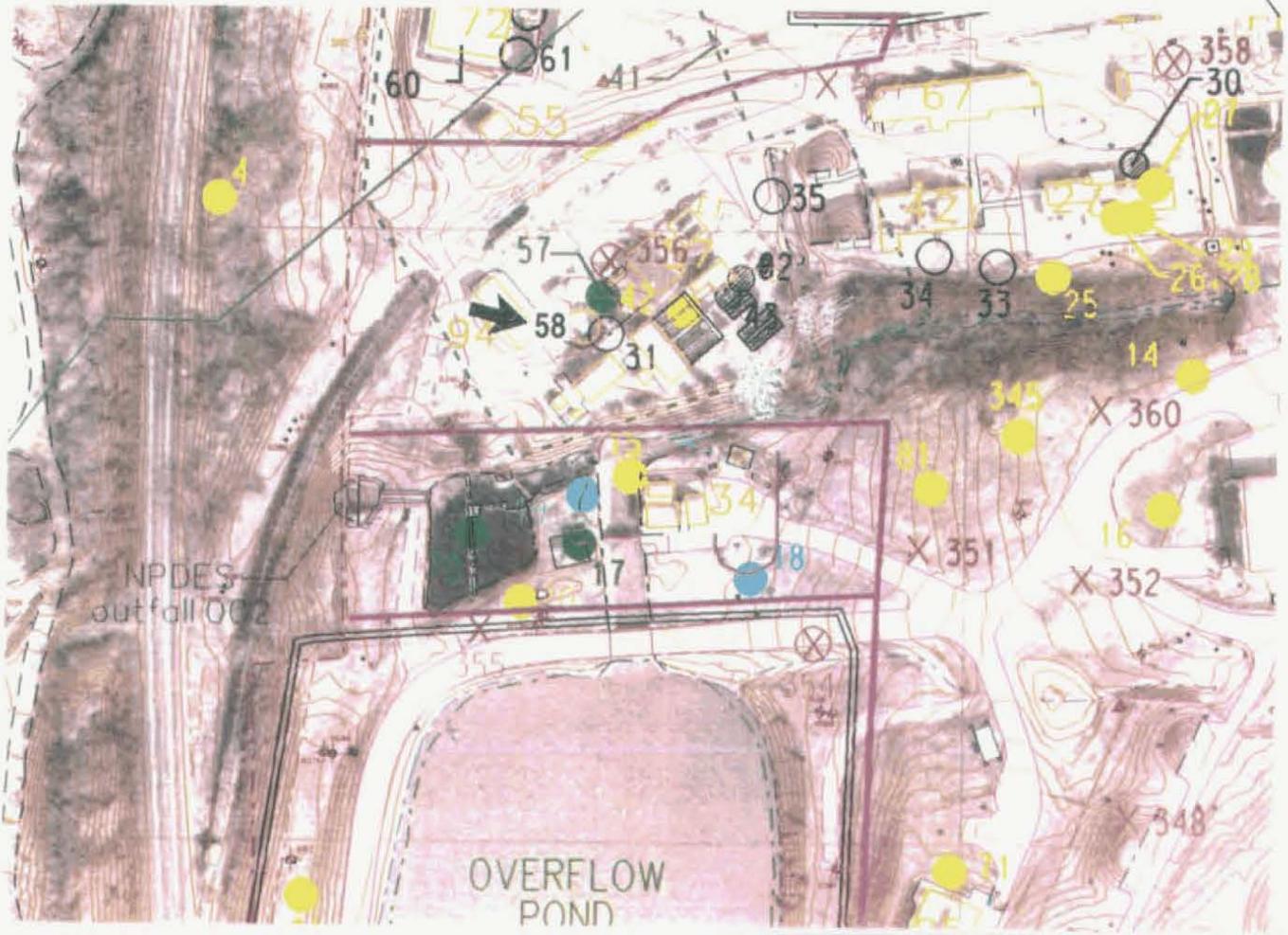


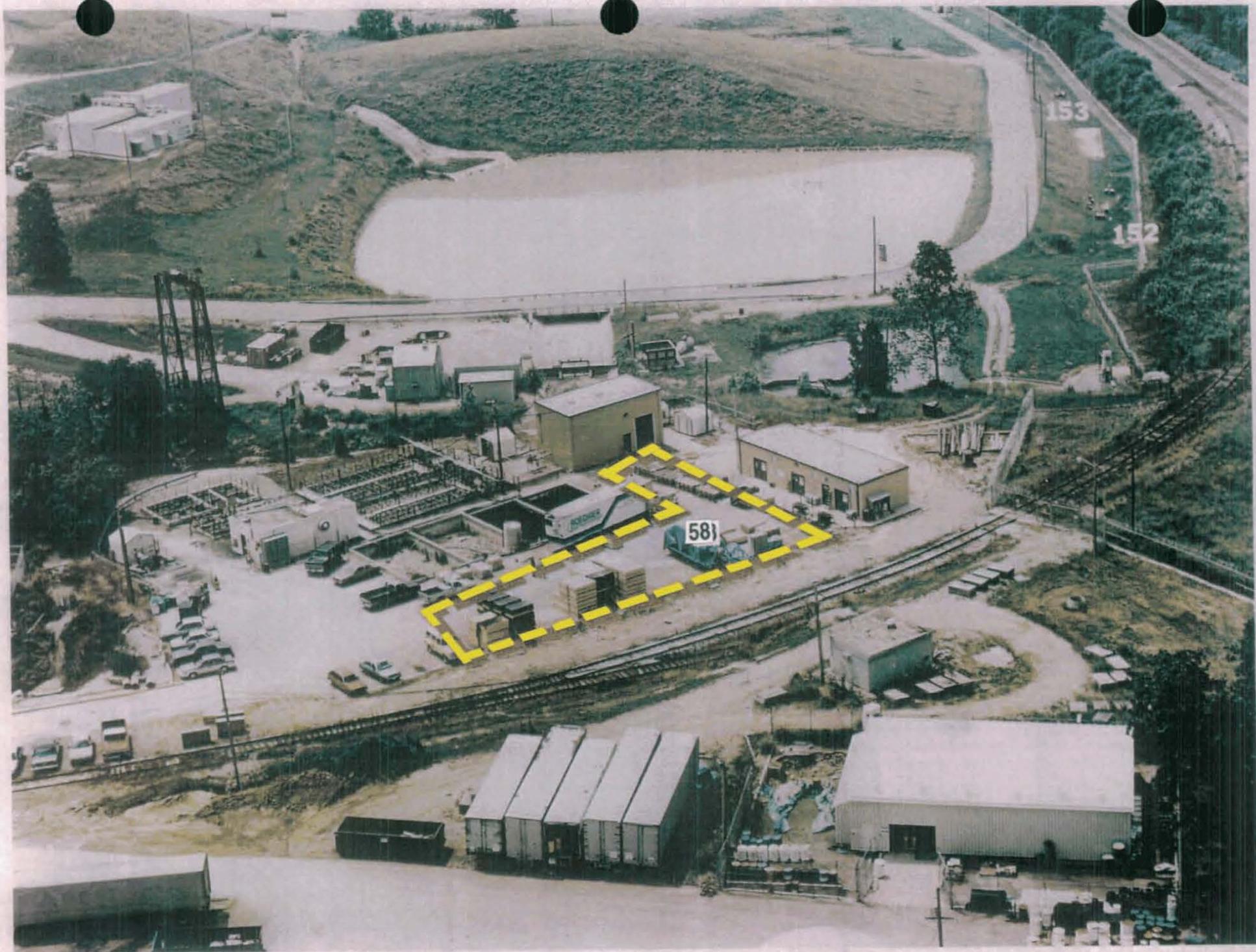
MOUND PLANT

Release Block C

Potential Release Site

PRS 58





PRS 58

PRS HISTORY:

Potential Release Site 58¹ (the Dredge Spoils Drying Beds) is located in the lower valley area near the sanitary treatment facility (Building 57). It was identified in the Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) conducted by the Environmental Protection Agency as a result of storage of the drying beds. PRS 58 is the location where the beds were stored on and near the parking lot of Building 57 after they were removed from service.²

The dredge spoil drying beds were open-topped wooden structures, approximately 6 to 8 feet wide and 3 feet deep. The wooden beds consisted of an upper bed lined with plastic canvas that drained to a lower bed of sheet metal. The beds were originally placed around the asphalt-lined pond. Wet sediments dredged from the pond were placed in the upper bed, and excess water that drained to the lower pan was allowed to drain back to the pond.^{2,3} The resulting dredge spoil materials contained low levels of plutonium-238 (up to 161 pCi/g) that was packaged for off-site disposal. After service, the beds were moved for storage from the pond to the parking lot of Building 57. The beds were occasionally used to dry sanitary sludge from the sanitary treatment plant.⁴ The dredge spoil beds themselves were surveyed by Mound Health Physics, found to be uncontaminated, and have since been destroyed as excess property.⁷ The storage area, on and near the parking lot of Building 57 now remains essentially as it was when the beds were stored there. It is still used for staging construction materials when required.

CONTAMINATION:

Radiological data from the Site Survey Project,⁵ conducted in 1983-84, indicated plutonium-238 concentration as high as 18.6 pCi/g in one surface sample; subsurface samples indicated plutonium-238 only as high as 2.3 pCi/g.⁵ These are below the Mound's as low as reasonably achievable (ALARA) guideline of 25 pCi/g. Thorium-232 was below 2 pCi/g. The thorium clean-up value is 5 pCi/g surface, and 15 pCi/g at depth.

The OU5, Operational Area Phase I investigation⁶ recently (1994) included part of PRS 58 in a systematic investigation of Area 3. This investigation included a field instrument for the detection of low energy radiation (FIDLER) survey; surface soil sampling and analysis using the Mound Plant screening facility. The survey was conducted over a 25-foot grid system that partially covered the area on and near the parking lot used to store the historic drying beds.

The radiological results, of the OU5 investigation, indicated that no plutonium-238 or thorium-232 contamination is present above the ALARA guidelines in the area of PRS 58 covered by the survey.⁶

READING ROOM REFERENCES:

- 1) OU9, Site Scoping Report: Volume 12 - Site Summary Report, December 1994. (pages 6-10)
- 2) Limited Field Investigation Work Plan, RCRA Sites, OU7, April 1990. (pages 11-14)
- 3) OU9, Site Scoping Report: Volume 7, Waste Management, February 1993. (pages 15-17)
- 4) Remedial Investigation/Feasibility Study, OU9, Site-Wide Work Plan. (pages 18-20)
- 5) OU9, Site Scoping Report: Volume 3 - Radiological Site Survey, June 1993. (pages 21-24)
- 6) OU5, Operational Area Phase I Investigations, Area 3 Field Report, June 1995. (pages 25-26)

OTHER REFERENCES:

- 7) Personal communication - with F. F. Raker. (pages 27-28)

PREPARED BY:

Dean A. Buckner, Member of EG&G Technical Staff
Alexander Bray, Member of EG&G Technical Staff

**MOUND PLANT
PRS 58
SEDIMENT DRYING BEDS**

RECOMMENDATION:

Potential Release Site (PRS) 58 was identified by the RCRA Facility Assessment due to its use as a storage area for the dredged spoils drying beds. This storage area, near the Sanitary Treatment Facility (Building 57), was used to store the beds after the beds were removed from servicing the Asphalt-Lined Pond's dredged spoils. The pond's dredged spoils contained low levels of plutonium-238 which were packaged for off-site disposal.

In 1984 and 1994, sampling taken from the area where the beds were stored, indicated that no contamination from the sludge or drying beds had occurred.

Therefore, NO FURTHER ASSESSMENT is recommended.

CONCURRENCE:

DOE/MB:

Arthur W. Kleinrath 11/21/96
Arthur W. Kleinrath, Remedial Project Manager (date)

USEPA:

Timothy J. Fischer 11/19/96
Timothy J. Fischer, Remedial Project Manager (date)

OEPA:

Brian K. Nickel 11/21/96
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 58

Environmental Restoration Program

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

**MOUND PLANT
MIAMISBURG, OHIO**

December 1994

Final

U.S. Department of Energy
Ohio Field Office



EG&G Mound Applied Technologies

Table 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
54	Building 57 Sand Filters (2 units)	(Cont.)	(Cont.)	(Cont.)	(Cont.)	(Cont.)	(Cont.)	(Cont.)	(Cont.)	
55	Building 57 Chlorine contact chamber (Tank 111)									
59	Building 57 Chlorine contact chamber (Tank 112)									
67	Sludge Drying Beds	H-5	Historical	Plutonium-238	4, 5, 18	Suspected	S	4	14	Table B.9
58	Dredge Spoil Drying Beds	H-5	Surplus	Contaminants listed under Asphalt-Lined Pond	4, 5, 18	Suspected	S	4	No Data	
59	Contaminated Soil Box Storage Area	G-6	Historical	Plutonium-238	4, 5, 18	Suspected			14	Table B.9
60	Hazardous Waste Storage Area (Building 72)		In service	Combustible and Flammable liquids, Waste oils, Solvent-containing wastes, Ignitable wastes, Plating wastes, Photo-processing wastes, Polymeric wastes, Toxic wastes	4, 5, 18	None Suspected			1	SGS ^b Table B.5 Locations 5221 and 5222
	Building 72 Outdoor Hazardous Waste Storage Area	G-5	Inactive	Waste oils	4, 5, 18				14	Table B.9 RSS ^c Location C0103 (Appendix E in Ref. 6)
	Building 72 Outdoor Hazardous Waste Storage Area	G-5	Inactive	Waste oils	4, 5, 18				1	SGS ^b Table B.5 Locations 5221 and 5222
	Building 72 Outdoor Hazardous Waste Storage Area	G-5	Inactive	Waste oils	4, 5, 18				14	Table B.9 RSS ^c Location S0541 (Appendix E in Ref. 6)
	Building 72 Empty Drum Storage Area		In service	None suspected	4, 5, 18				1	SGS ^b Table B.5 Locations 5221 and 5222

Description of History and Nature of Waste Handling

Hazardous Conditions and Incidents

Environmental Data

No.	Site Name	Location	Status	Potential Hazardous Substances	Ref	Hazardous Conditions and Incidents			Environmental Data	
						Releases	Media	Ref	Analytes*	Results
67	Plant Drainage Ditch	F-4 F-5 F-6 F-7 F-8 G-4 G-5 G-6 G-7 G-8 H-4 H-5 H-6 H-7	In service, Waters of the U.S.	Plutonium-238, Thorium, Tritium Fuel oil, boiler blowdown water, ethylene glycol, sodium sulfite, sodium phosphate, octadecylamin, cyclohexylamine Effluent from asphalt-lined pond	4, 5, 18	Plutonium-238 Oil Zinc chromate Calcium chloride Ethylene glycol	SW	10	1 14, 15	Table B.9 RSS ^c Locations S0401, S0420, S0442, S0443, S0449, S0505, S0506, S0514, S0554 (Appendix E and Table X.4 in Ref. 6) SGS ^b Table B.3 Locations 4158 and 4159 Table B.1
68	Asphalt-Lined Pond	E-9	In service, Waters of the U.S.	Wastewater from SM/PP Hill Storm Sewers Plutonium-238 Non-contact cooling water - cooling tower blowdown, regeneration of zeolite water softeners	4, 5, 18	Effluent to Plant Drainage Ditch	SW	4	3 2	Table B.8 Table B.9
69	Overflow Pond	H-5 I-5	In service, Waters of the U.S.	Site sanitary landfill leachate, plutonium-238 Effluent from plant drainage ditch Stormwater runoff	4, 5, 18	Zinc chromate Calcium chloride Ethylene glycol	SW	10		
	Retention Basins and Weir Basin	H-5	In service, Waters of the U.S.	Stormwater runoff Effluent from Plant Drainage Ditch Plutonium-238	4, 5, 18		SW			
	g 85 Waste Solvent Tank (Tank 136)	I-5	Inactive	None (never used)	7	Never Used			No Data	

*Analyte List Codes

^bSGS, Soil Gas Survey

^cRSS, 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: Volume 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 Scoping Report: Volume 3 - Radiological Site Survey (Final)."
7. DOE 1993c "Operable Unit 3, Miscellaneous Sites Limited Field Investigation Report."
8. DOE 1992d "Reconnaissance Sampling Report Decontamination & Decommissioning Areas, OUG, (Final)."
9. Fentiman 1990 "Characterization of Mound's Hazardous, Radioactive and Mixed Wastes."
10. DOE 1992f "Operable Unit 9, Site Scoping Report: Volume 11 - 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: Volume 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 1976 a, 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

No.	Site Name	Location	Status	Operational Jurisdiction			SWMU	Historic Activities		Further Action Recommended	FF/ OI
				Regulated Units	Regulatory Authority	Spill Response		Evidence Of Release	Response Authority		
51	Building 57 Aeration Basin (Tank 108)	(Cont.)	(Cont.)	(Cont.)	(Cont.)	(Cont.)	SWMU	No	NA	OM	
52	Building 57 Clarifier (Tank 109)						SWMU	No	NA	OM	
53	Building 57 Clarifier (Tank 110)						SWMU	No	NA	OM	
54	Building 57 Sand Filters (2 units)						SWMU	No	NA	OM	
55	Building 57 Chlorine contact chamber (Tank 111)						SWMU	No	NA	OM	
56	Building 57 Chlorine contact chamber (Tank 112)						SWMU	No	NA	OM	
57	Sludge Drying Beds	H-5	Historical		NA		SWMU	Yes	CERCLA	Yes	5
58	Dredge Spoil Drying Beds	H-5	Surplus		NA		SWMU	Yes	CERCLA	Yes	5
59	Contaminated Soil Box Storage Area	G-8	Historical		NA			No	CERCLA	Yes	5
60	Hazardous Waste Storage Area (Building 72)		In service	HWMU Included In Part B application	RCRA	RCRA	SWMU	No	NA	OM	
61	Building 72 Outdoor Hazardous Waste Storage Area	G-5	Inactive		RCRA	RCRA	SWMU	No	NA	OM	
62	Building 72 Empty Drum Storage Area		In service		RCRA	RCRA	SWMU	No	NA	OM	
63	Building 19 Soils	G-5	Grounds		AEA	AEA		Yes	CERCLA	Yes	
64	Building 19 Historic Gasoline Tank (Tank 238)	G-5	Historical		NA			No	CERCLA	Yes	
65	Building 61 Area, Former Heavy Equipment Area	E-10	Historical		AEA	AEA		Yes	CERCLA	Yes	
	7, Thorium and Polonium Wastes	E-8 E-9 F-8 F-9	Historical		NA			Yes	AEA	Yes	
	Plant Drainage Ditch	F-4 F-5 F-6 F-7 F-8 G-4 G-5 G-6 G-7 G-8 H-4 H-5 H-6 H-7	Waters of the U.S.	Effluent permitted to discharge under NPDES (outfall 002)	CWA	AEA	SWMU	Yes	CERCLA	Yes	
	Asphalt-Lined Pond	E-9	Waters of the U.S.				SWMU	No	CERCLA	Yes	

ENVIRONMENTAL RESTORATION PROGRAM

LIMITED FIELD INVESTIGATION
WORK PLAN

MOUND PLANT
RCRA SITES, OPERABLE UNIT 7

April 1990

DEPARTMENT OF ENERGY
ALBUQUERQUE OPERATIONS OFFICE
ENVIRONMENTAL RESTORATION PROGRAM
TECHNICAL SUPPORT OFFICE
LOS ALAMOS NATIONAL LABORATORY

DRAFT
(REVISION 0)

5. DREDGE SPOIL DRYING BEDS

5.1. SITE HISTORY

5.1.1. Description of Dredge Spoil Drying Beds

The dredge spoil drying beds are located east of Building 94, near the sludge drying beds and the Sewage Disposal Building area (section 3; Figures 1.3 and 5.1). The beds are located near the west end of the sanitary wastewater treatment system. Dredge spoil from the asphalt-lined pond (section 6) was stored and dried in the beds before it was packaged for offsite disposal, and the remaining capacity of the beds was filled with material from the sludge drying beds (section 4). The dredge spoil drying beds now in use receive sludge from the sanitary wastewater treatment system (see section 3). Monitoring well 0137 is located downgradient of the beds (Figure 5.1).

The dredge spoil drying beds are open-topped, wooden structures approximately 6 to 8 ft wide and 3 ft deep. The beds in use are lined with plastic and are positioned on asphalt. Three units are currently in use at the location shown on Figure 5.1. An additional 56 beds are stacked in the adjacent parking lot and are full and closed.

5.1.2. Potential Dredge Spoil Drying Beds Contaminants

Plutonium-contaminated dredged material from the asphalt-lined pond was once placed in the beds. This material was removed and shipped to the Nevada Test Site for disposal. The three units still in operation receive sewage sludge (Kearney 1988). The soil under the dredge spoil drying beds has not been analyzed for hazardous constituents.

5.2. EXISTING SITUATION

5.2.1. Water Sample Analytical Results, Dredge Spoil Drying Beds

Water samples from monitoring well 0137 have been analyzed for TCL VOCs. The analytes detected in samples from this well are given in Table V.1. Only the contaminants present above the detection limit are given. Elevated levels of contaminants could also be derived from other potentially contaminated areas close to the dredge spoil drying beds.

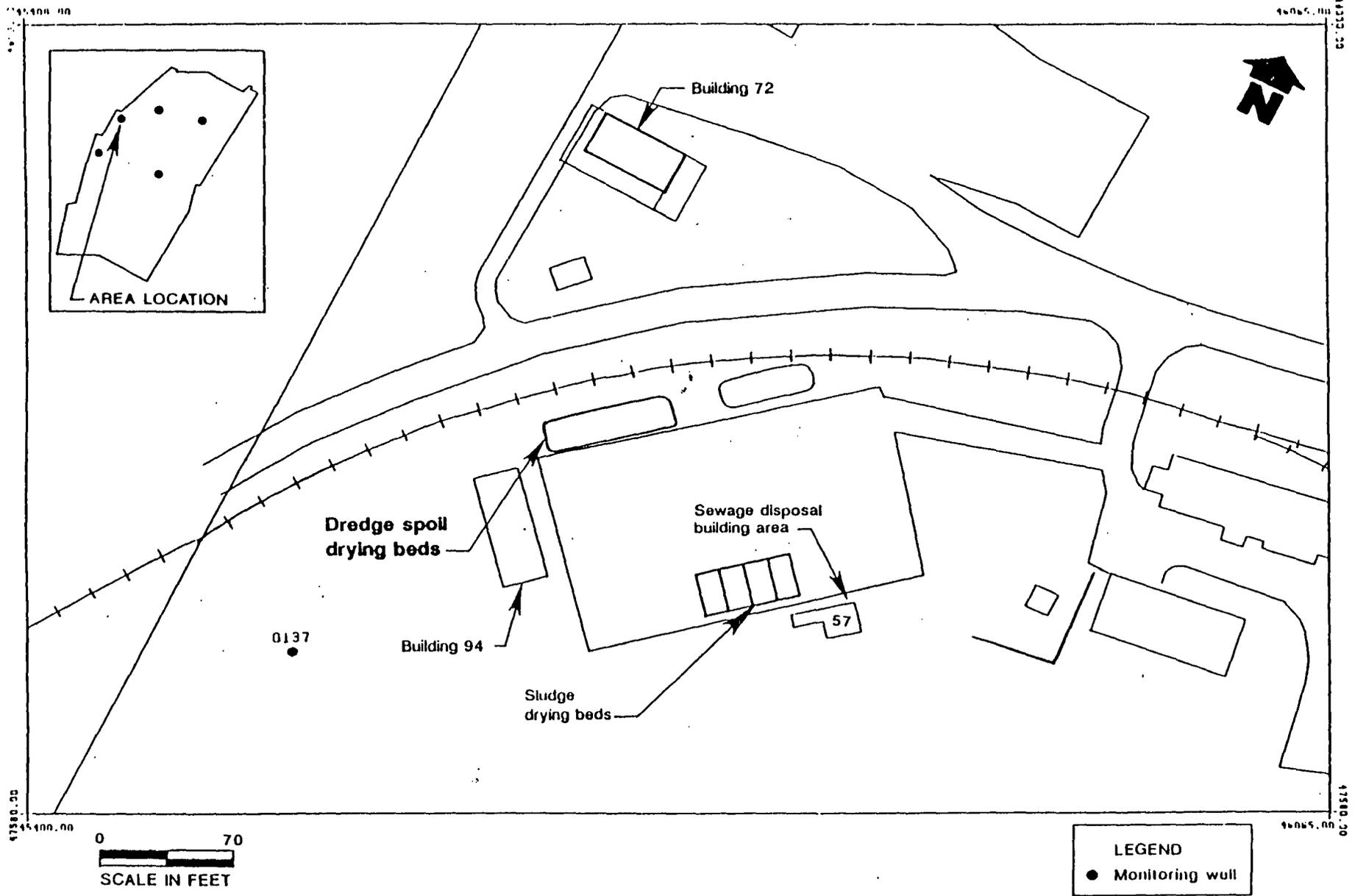


Figure 5.1. Dredge spoil drying beds.

Table V.1. Monitoring Well 0137 Analytical Results

<u>Date</u>	<u>Contaminant</u>	<u>Concentration ($\mu\text{g/L}$)</u>	<u>MCL ($\mu\text{g/L}$)</u>	<u>MCLG ($\mu\text{g/L}$)</u>
March 1988	1,2- <i>trans</i> -dichloroethene	16.0	70 ^a	NE
	1,2-dichloroethane ^b	11.0	5	0
May 1988	1,2- <i>trans</i> -dichloroethene	13.0	70 ^a	NE
March 1988	styrene ^b	6.0	5	0

Note: MW-0137 analyzed for VOCs

^aProposed MCL or MCLG (SDWA 1988)

^bMeasured concentration meets or exceeds the MCL, MCLG, proposed MCL, or proposed MCLG

MCL - Maximum contaminant level (40 CFR 141)

MCLG - Maximum contaminant level goal (40 CFR 141 and 143)

NE - Not established

Environmental Restoration Program

**OPERABLE UNIT 9, SITE SCOPING REPORT:
VOLUME 7 - WASTE MANAGEMENT**

**MOUND PLANT
MIAMISBURG, OHIO**

July 1992

**DRAFT FINAL
(Revision 0)**

**Department of Energy
Albuquerque Field Office**

Environmental Restoration Program
Technical Support Office
Los Alamos National Laboratory



As an interim measure, ash generated from incineration operations was incorporated into the reclamation and recycling program (Garbe 1973b).

By May 1974, Mound was salvaging approximately four tons of white, high-grade paper; and 15 to 16 tons of mixed paper each month. An additional 15 to 16 tons of general waste were transported to the reclamation facility for salvage offsite each month.

The economic advantages were indicated by a reduction of \$51,000/year in waste handling costs. A net cost of \$2,000/year to dispose of 300 to 400 tons of waste was incurred. By phasing out the incinerator, an estimated \$450,000 did not have to be spent to upgrade the operation to meet pollution standards. This program also made land space available by eliminating the need for a landfill (Garbe and Wolfe 1974). The program continues today.

→ 4.22. DREDGE SPOIL DRYING BEDS (HISTORICAL)

The dredge spoil drying beds were originally placed around the edge of the asphalt-lined pond. The dredge spoil drying beds are open-topped wooden structures, approximately 6 to 8 ft wide and 3 ft deep. The wooden beds consisted of an upper bed lined with plastic canvas that drained to a lower bed of sheet metal. Wet sediments dredged from the asphalt-lined pond were placed in the upper bed, and excess water that drained to the lower pan was allowed to drain back to the pond. The dredge spoil material contained low levels of radioactivity. Dredge spoil was packaged for offsite disposal. The beds were moved for storage to the southeast of the Main Hill in the parking lot of Building 57, next to the sludge drying beds (Figure 4.1). The beds have also been used to dry sanitary material from the sludge drying beds. The dredge spoil drying beds were first used in the mid-1980s and are not now in use.

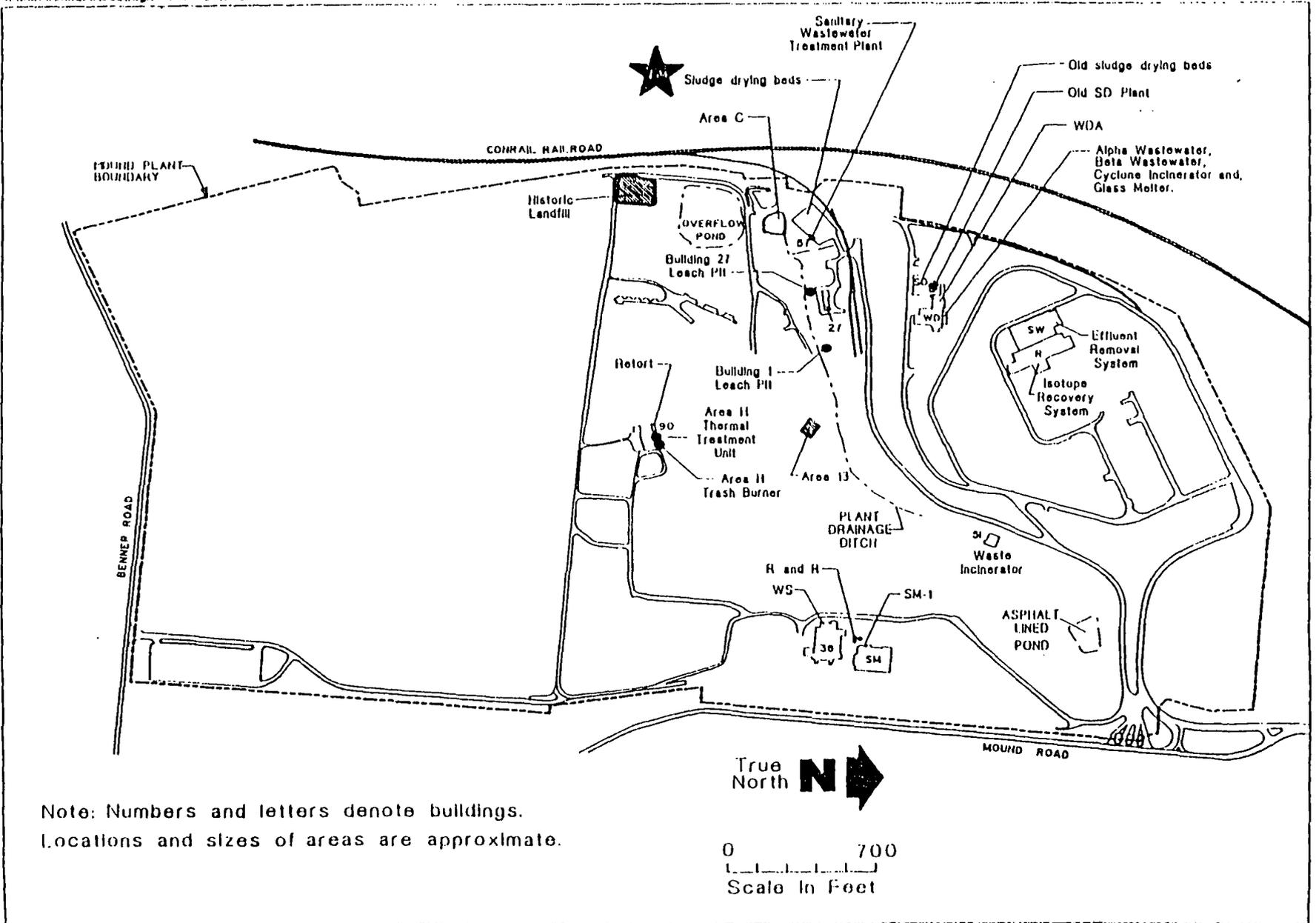


Figure 4.1 Waste treatment facilities.

Environmental Restoration Program

**REMEDIAL INVESTIGATION/FEASIBILITY STUDY
OPERABLE UNIT 9, SITE-WIDE WORK PLAN**

**MOUND PLANT
MIAMISBURG, OHIO**

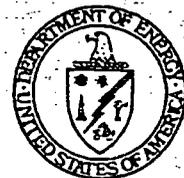
VOLUME II

May 1992

FINAL

**Department of Energy
Albuquerque Field Office**

Environmental Restoration Program
Technical Support Office
Los Alamos National Laboratory



5.10. AREA 21, OLD BUNKER USED FOR RADIOACTIVE SW BUILDING WASTE STORAGE

Area 21 is on the SM/PP Hill, near Area 22 (Figure A.5). An area with elevated levels of cesium-137 was discovered during the Mound Site Survey Project, and it was postulated that this was the location of an old bunker once used to store radioactive materials from the SW Building (Stought, Edling, and Draper 1988). Area 21 contaminants include plutonium-238 (1.1 pCi/g) and cesium-137 (31 pCi/g).

5.11. AREA 22, ORPHAN SOIL FROM OTHER AREAS

Area 22 is on the SM/PP Hill, east of Building 53 (Figure A.5). It consists of many piles of excavated soil from Area 20 and other areas. Area 22, which is roped off, is approximately 75 ft x 150 ft (11,250 ft²).

The Mound Site Survey Project analyzed soil samples collected from Area 22. Elevated concentrations of cobalt-60 (143 pCi/g), cesium-137 (7.0 pCi/g), and radium-226 (0.7 pCi/g) were reported (Stought, Edling, and Draper 1988).

5.12. AREA J, DREDGE MATERIAL DISPOSAL AREA

Area J, also known as the hillside disposal area (RFA 1988), is located in the eastern portion of Mound Plant, at the base of SM/PP Hill (Figure A.5). It is adjacent to Area 12 (this Operable Unit) and Area D (Operable Unit 6). Area D is slated for clean-up as part of the D&D program. Area J contains a hillside slope west of Building 38 and three ponded areas. Area J was used for placement of construction spoils from the early 1950s to the early 1980s (DOE 1986). Currently, Area J includes an area of approximately 4 acres. The volume of spoils material exceeds 100,000 yd³. Although records and interviews indicate that no hazardous substances were discarded at the hillside, Area J is an uncontrolled area and may have received contaminated materials. Construction residues including excavated soils, chunks of concrete, pipes of various sizes and types, metal banding, plumbing fixtures, roofing materials, and various other materials that have been dumped or bulldozed over the hillside (DOE 1986). At Areas 12 and D, plutonium and thorium are potential contaminants because of their usage and disposal at those areas. Portions of Area J, including the ponds, are in a position to receive runoff from Areas 12 and D. The highest surface contamination measured by the Site Survey Project was 71.30 pCi/g plutonium-238 and 30.42 pCi/g thorium (Stought, Edling, and Draper 1988).

5.13. DREDGE SPOIL DRYING BEDS

The dredge spoil drying beds are located southwest of the Main Hill at the southwest edge of the plant (Figure A.5). The beds are located near the west end of the sanitary wastewater treatment system at

Building 94. The dredge spoil drying beds are open-topped wooden structures, approximately 6 to 8 ft wide and 3 ft deep. The wooden beds are lined with plastic and are positioned on bare soil. The dredge spoil material contained low levels of radioactivity. Dredge spoil from the asphalt-lined pond was once stored in the beds before it was packaged for offsite disposal at the Nevada Test Site. Currently, the beds are used to dry material from the sludge drying beds. The initial date of operation is not known.

5.14. SEWAGE DISPOSAL BUILDING AREA

The Sewage Disposal Building area is located southwest of the Main Hill on the southwestern edge of the plant, near Building 94 (Figure A.5) (RFA 1988). This area is located east of the retention basins. The sanitary wastewater treatment plant at the Sewage Building area is used for treatment of sanitary and process wastewater produced by the facility. The sanitary wastewater treatment plant includes several components: the grit chamber, grit conveyer, comminutor, equalization basins, aeration basins, clarifiers, sand filters, and chlorine contact chambers. The system has been in operation since 1975.

Sources of wastewater treated by the components of the sanitary wastewater treatment plant include restrooms, showers, laundry facilities, lab sinks, floor drains, and rinse from a small metal refinishing system (RFA 1988). The sludge produced is reported to contain radionuclides; but, it does not constitute a RCRA-listed hazardous waste nor does it have hazardous waste characteristics (RFA 1988). The sludge is packaged and shipped to the Nevada Test Site as a low-level radioactive waste.

5.15. SLUDGE DRYING BEDS

The sludge drying beds are located in the southwest portion of Mound Plant, near Building 90 (Figure A.5). The sludge drying beds are four inactive components of the sanitary wastewater treatment system. The treatment system is utilized for treatment of sanitary and process wastewater produced by the facility. The beds were put into operation in 1975 and are no longer in use.

In the past, the sludge drying beds received sludge from the grit chamber and clarifiers. Each unit is approximately 40 ft long, 20 ft wide, and 3 or 4 ft deep. The sides are constructed of 6-inch-thick concrete and the bottom consists of gravel fill. The bottom is underlain with drains that directed liquid from the sludge back into the treatment system. The sludge was placed into the beds and allowed to dry in the sun.

The sludge contained radionuclides; but, it did not constitute a RCRA hazardous waste nor did it have hazardous waste characteristics (RFA 1988). The sludge was packaged and shipped as a low-level radioactive waste to the Nevada Test Site. Sources of wastewater treated by all units in the sanitary wastewater treatment system include rest rooms, showers, laundry facilities, lab sinks, and rinses from a

ENVIRONMENTAL RESTORATION PROGRAM

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

**MOUND PLANT
MIAMISBURG, OHIO**

June 1993

**DEPARTMENT OF ENERGY
ALBUQUERQUE FIELD OFFICE**

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

FINAL

Table V.2. Mound Site Survey Project - Area 3

Plate 1 Location ^a	Coordinates		MRC ID No.	Mo-Yr	Depth (inch)	Plutonium-238 (pCi/g)	Thorium ^b (pCi/g)
	South	West					
C0099	1965	4285	10419	08-85	18	31.4	b
			10420	08-85	36	14.7	b
C0100	1975	4275	10421	08-85	18	32.4	b
			10422	08-85	36	17.7	b
			10423	08-85	54	12.4	b
			10424	08-85	72	10.1	b
C0101	1985	4285	10425	08-85	18	22.0	b
			10426	08-85	36	0.90	b
			10427	08-85	54	0.34	b
			10428	08-85	72	0.71	b
C0102	1995	4295	10429	08-85	18	10.4	b
			10430	08-85	36	6.44	b
			10431	08-85	54	2.16	b
			10432	08-85	72	0.93	b
C0103	2060	4300	1624	04-83	18	0.26	3.95
			1625	04-83	36	0.50	b
C0104	2085	4365	1622	04-83	18	50.60	b
			1623	04-83	36	5.28	b
C0105 ^c	2100	4140	7804	10-84	90	0.47	b
			7805	10-84	180	0.01	b
C0106	2105	4315	1626	10-84	18	0.41	b
			1626	10-84	36	0.13	b
C0107	2170	4375	1620	04-83	18	0.69	b
			1621	04-83	36	0.07	2.56
C0108	2200	4250	1632	04-83	18	0.25	b
			1633	04-83	36	0.14	b
C0109	2225	4325	1658	04-83	18	2.30	b
			1659	04-83	36	0.66	b
			1660	04-83	54	0.47	b
C0110	2230	4390	1628	04-83	18	0.48	b
			1629	04-83	36	0.14	b
C0111	2250	4165	1636	04-83	18	0.82	b
			1637	04-83	36	0.21	b
C0112	2250	4300	1640	04-83	18	0.02	b
			1641	04-83	36	0.03	b
C0113 ^c	2275	4140	7759	09-84	90	2.83	b
			7760	09-84	180	0.03	b
C0114	2275	4200	1638	04-83	18	0.16	b
			1639	04-83	36	0.01	b

Table V.2. (page 2 of 2)

Plate 1 Location ^a	Coordinates		MRC ID		Depth (inch)	Plutonium-238 (pCi/g)	Thorium ^b (pCi/g)
	South	West	No.	Mo-Yr			
C0115	2275	4395	1644	04-83	18	1.46	3.56
			1646	04-83	36	0.31	b
✓ C0116	2305	4315	1642	04-83	18	0.05	b
			1643	04-83	36	0.24	b
S0490	2175	4135	2918	10-83	0	0.71	b
S0494	2275	4135	6974	08-74 ^d	0	1.48	b
S0496	2300	4135	6873	08-84	0	0.02	b
S0499	2350	4135	2919	10-83	0	0.04	b
S0536	1950	4290	7157	09-84	0	2.20	b
S0537	1950	4315	2683	10-83	0	0.17	b
S0538	1975	4165	7165	09-84	0	5.94	b
S0539	2000	4340	7168	09-84	0	10.20	b
S0540	2050	4165	2685	10-83	0	36.94	b
S0541	2075	4265	2688	10-83	0	0.64	b
S0542	2075	4390	2684	10-83	0	0.83	b
S0543	2200	4265	6881	08-84	0	18.60	b
S0545	2350	4415	6876	08-84	0	4.16	b
S0547	2365	4375	10485	08-85	0	11.0	5.30
S0548	2370	4380	10488	08-85	0	5.77	b
S0549	2375	4165	6880	08-84	0	0.23	b
S0550	2375	4290	6879	08-84	0	12.10	b
S0551	2375	4390	6878	08-84	0	27.10	b
S0552	2380	4370	10486	08-85	0	41.70	b
S0553	2385	4375	10487	08-85	0	8.42	b

^aMap locations are given using a "C" to designate core locations and an "S" to designate surface locations.

^bA "b" indicates that the total thorium concentration was less than the background level of 2.0 pCi/g, using FIDLER screening. Therefore, radiochemical analysis was not performed.

^cBoring logs indicate that these locations were not sampled to bedrock (Appendix B)

^dDate of 08-74 given in the data is suspect. The correct date is probably 08-84 or 07-84.

FIDLER - field instrument for the detection of low-energy radiation

MRC ID - Monsanto Research Corporation Identification

pCi/g - picocuries per gram

Environmental Restoration Program

**OPERABLE UNIT 5
OPERATIONAL AREA PHASE I INVESTIGATION
AREA 3 FIELD REPORT**

**MOUND PLANT
MIAMISBURG, OHIO**

VOLUME I - TEXT

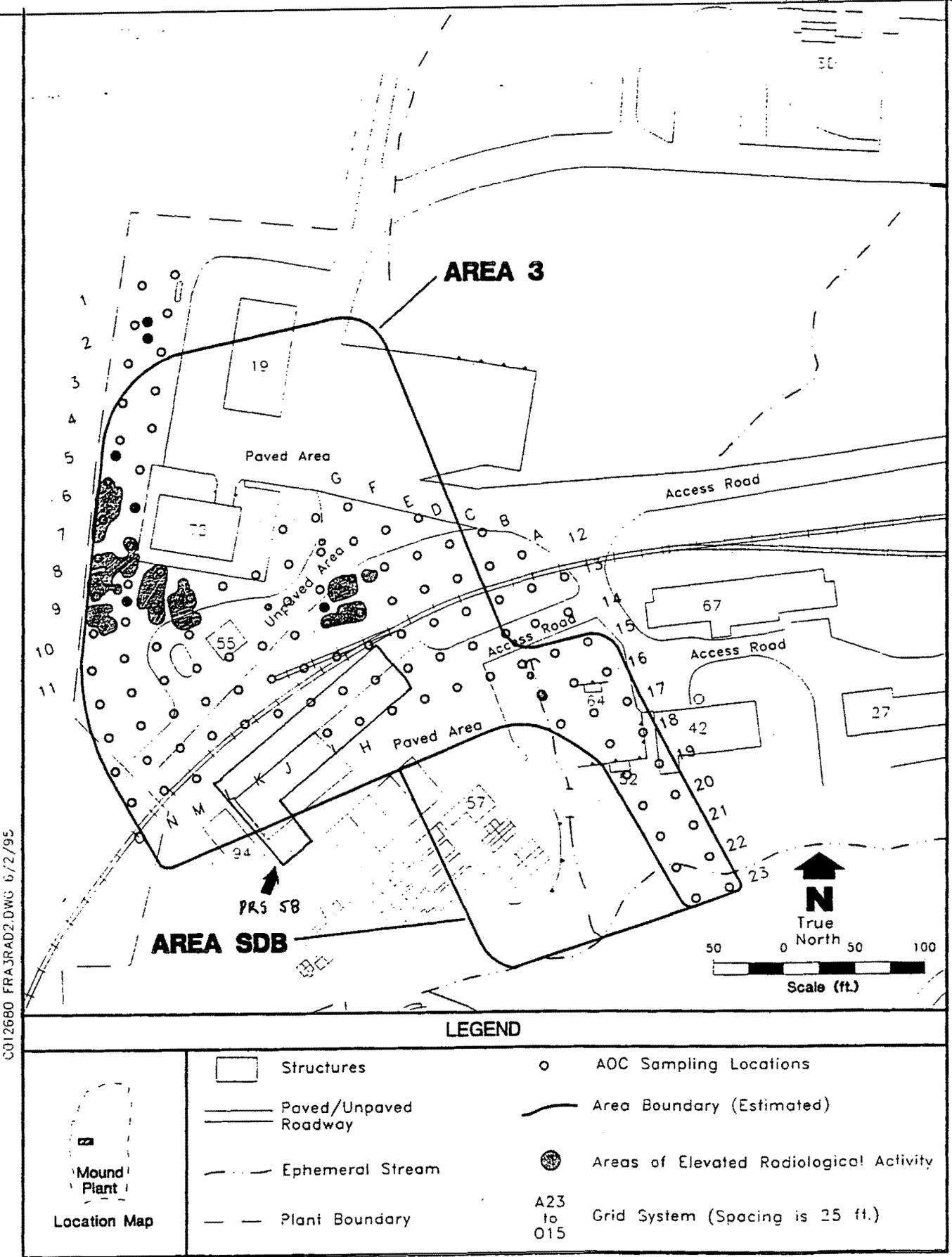
June 1995

Final (Revision 1)



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

EG&G Mound Applied Technologies



C012680 FRA3RAD2.DWG 6/2/95

LEGEND			
	Structures		AOC Sampling Locations
	Paved/Unpaved Roadway		Area Boundary (Estimated)
	Ephemeral Stream		Areas of Elevated Radiological Activity
	Plant Boundary		A23 to O15 Grid System (Spacing is 25 ft.)
	Location Map		

Figure 2.2. Areas of Elevated Surface Radiological Activity (FIDLER Survey)

PERSONAL COMMUNICATION

FOREMAN, UTILITY OPERATIONS

Frank F. Raker

The dredge spoils drying beds were stored in the SD Area, and sanitary sludge was dried in some of them. New SD facilities came on-line which negated further use of the drying beds. They were, therefore, declared to be excess and dismantled. Health Physics surveyed the structures to ensure there was no residual radioactivity. The wooden structures were disposed through the plant excess channels.