3001-0302240007

MOUND

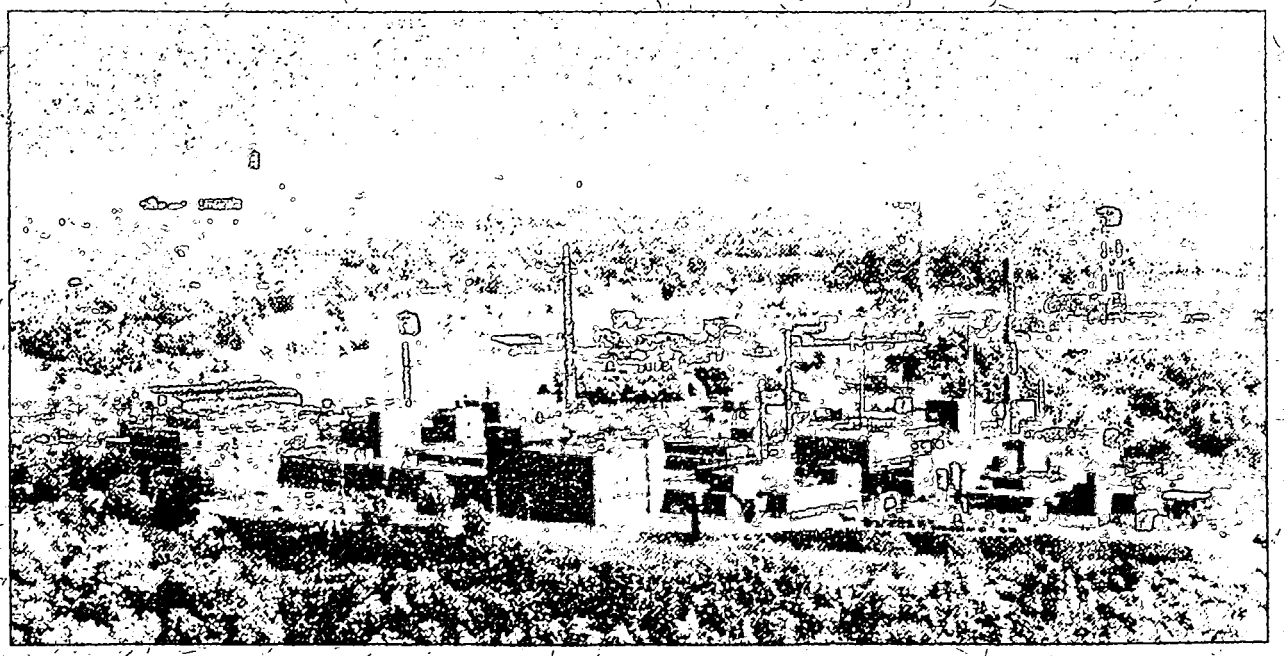
Environmental
Restoration
Program

MOUND PLANT

Potential Release Site Package

PRS 28

PUBLIC REVIEW DRAFT
MAY 2002



MOUND

Environmental Restoration Program

MOUND PLANT POTENTIAL RELEASE SITE PACKAGE

Notice of Public Review Period

The following Potential Release Site (PRS) package is available for public review in the CERCLA Public Reading Room, 305 E. Central Ave., Miamisburg, Ohio. Public comment on this document will be accepted May 8, 2002 through June 8, 2002.

PRS 28: Building 27 Solvent/Drum Storage Area

Questions can be referred to Paul Lucas at (937) 865-4578.

PRS 28

Building 27 Solvent/ Drum Storage Area

PRS HISTORY (Prior to 1995 Safe Shutdown and Lease to the City of Miamisburg):

Potential Release Site (PRS) 28 is identified in Operable Unit 9, Volume 12 – Site Summary Report as the Building 27 Solvent/Drum Storage Area (Reference 1). Building 27 was constructed in 1969 and was used strictly for the purpose of research and testing activities of energetic materials. No activities involving radioactive materials have occurred in Building 27 (Reference 2). Located on the south side of Building 27, PRS 28 is an old deteriorating asphalt pad, approximately 50 feet by 200 feet in size. It was used as a temporary storage area (short-term storage, less than 90 days) for drums containing solvent waste generated from operations in Building 27 (Reference 3). Based on these operations, it is not a RCRA PRS and is not included in the Building 1/Building 27 Closure Plan as addressed in the PRS Data Package 21, 22, 25, 26, 27, 29 (Reference 4). Building 7 process operations were completed in September 1995 (Reference 5). The building is expected to be demolished.

CONTAMINATION (References 3, 6, and 7):

Only Beryllium exceeds its guideline value (GV) for several sampling events. Maximum detected values do not exceed 1.0 mg/kg. GV is 0.7 mg/kg. Background is 1.3 mg/kg.

PRS HISTORY (After Safe Shutdown and Lease to the City of Miamisburg):

Leased operations began in 1995 by the current PerkinElmer company (formerly EG&G Star City). DOE/MEMP states that chemical processes similar to those accomplished prior to Safe Shutdown are currently conducted in Building 27. The PRS 28 pad is used for temporary storage of acetone. A containment system exists, and there are no known spills or occurrences associated with the storage pad (Reference 8).

CONTAMINATION:

No sampling and analysis has occurred at PRS 28 since Safe Shutdown. No spills or other occurrences have been reported in this period.

READING ROOM REFERENCES:

1) Operable Unit 9, Site Scoping Report,: Volume 12 – Site Summary Report, December 1994
2) Environmental Appraisal Report of the Mound Plant, Volume 6, March 1996
3) Operable Unit 3, Miscellaneous Sites Limited Field Investigation Report, Volume 1, July 1993
4) PRS Data Package, PRSs 21, 22, 25, 26, 27, 29
5) Mound Ten Year Plan, formerly The Integrated Comprehensive Plan, 6 January 1997
6) Operable Unit 9, Site Scoping Report: Volume 3 – Radiological Site Survey, June 1993

OTHER REFERENCES:

7) GIS mapping/Sampling Information
8) Correspondence DOE/MEMP (Watkins)—BWXTO Geneczko, 4/4-5, 2001

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MOUND PLANT
PRS 28
BUILDING 27 SOLVENT/DRUM STORAGE AREA

RECOMMENDATION:

Potential Release Site (PRS) 28 is the Building 27 Solvent/Drum Storage Area. It is an asphalt pad used for the temporary storage of past process solvent waste, and is presently used for storage of acetone. GIS mapping/sampling information identified Beryllium as exceeding its Guideline Value (GV) for several sampling events, but not exceeding background concentrations. There are no reported recent historical events to indicate other reasons for concern. Current plans call for Building 27 and the surrounding pad to be demolished.

Therefore, NO FURTHER ASSESSMENT is recommended for PRS 28.

CONCURRENCE:

DOE/MEMP: _____ 6/19/01
Robert S. Rothman, Remedial Project Manager (date)

USEPA: _____ 6/19/01
Timothy J. Fischer, Remedial Project Manager (date)

OEPA: _____ 6/19/01
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 FOR PRS 28

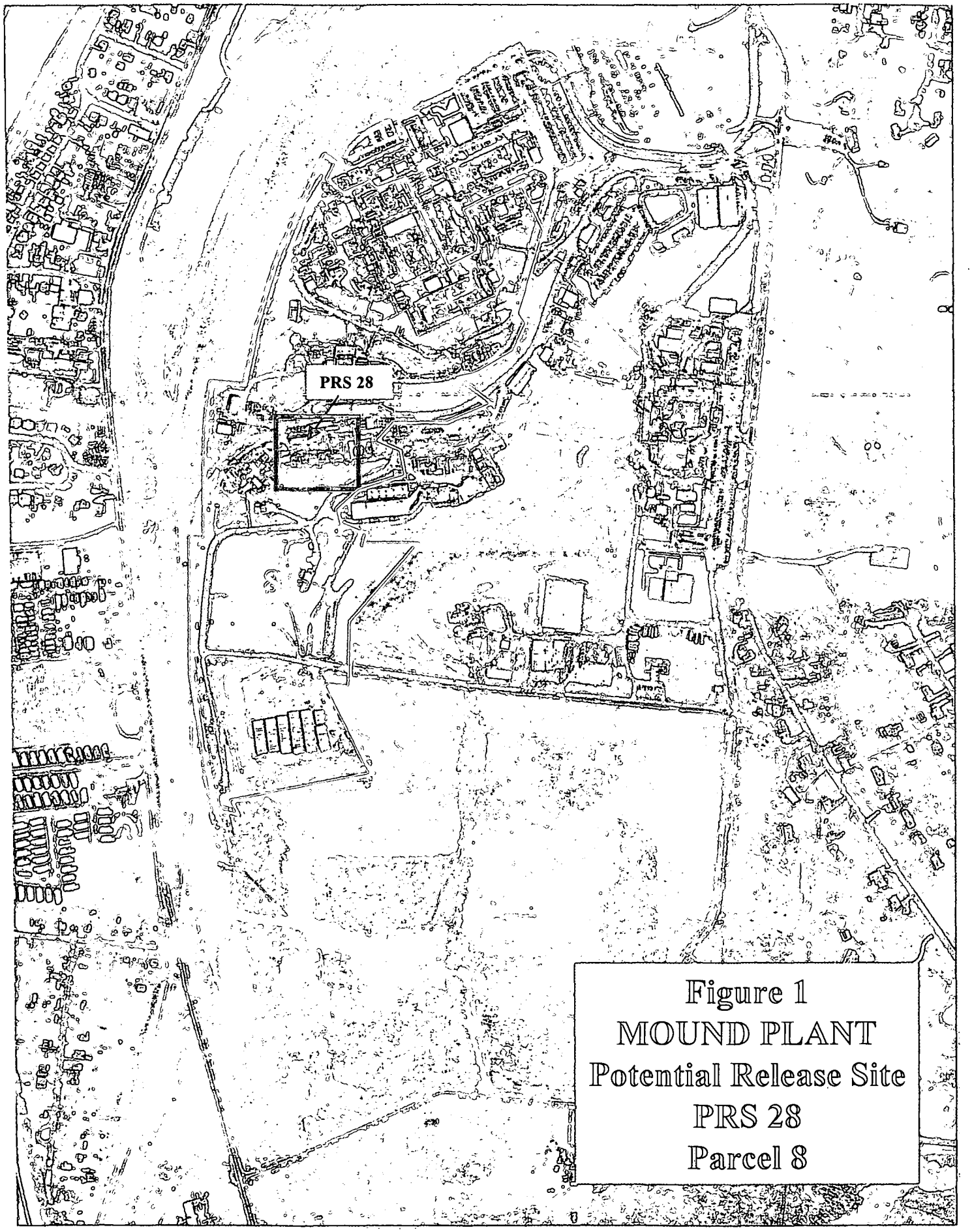
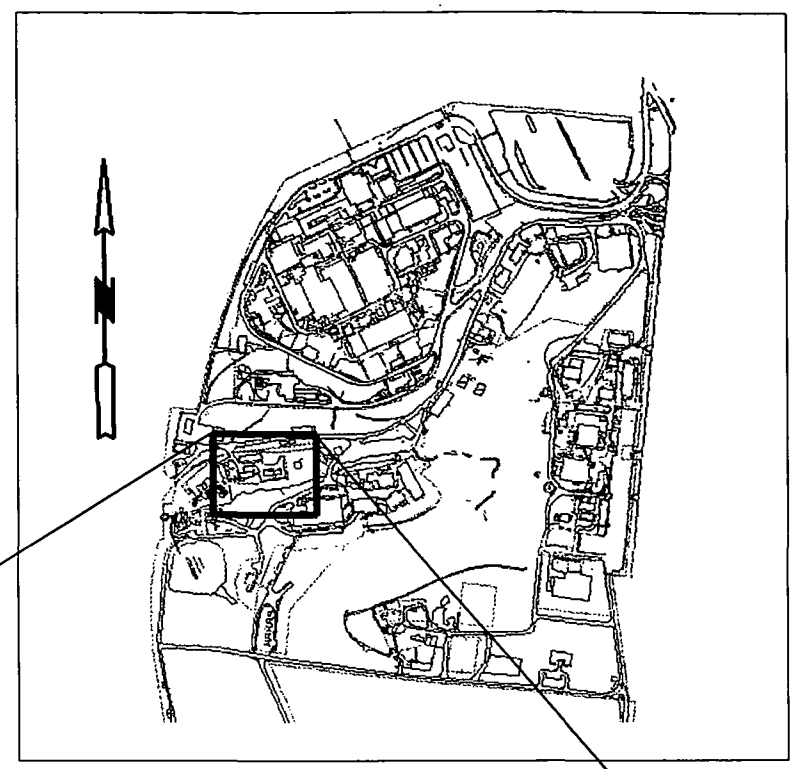
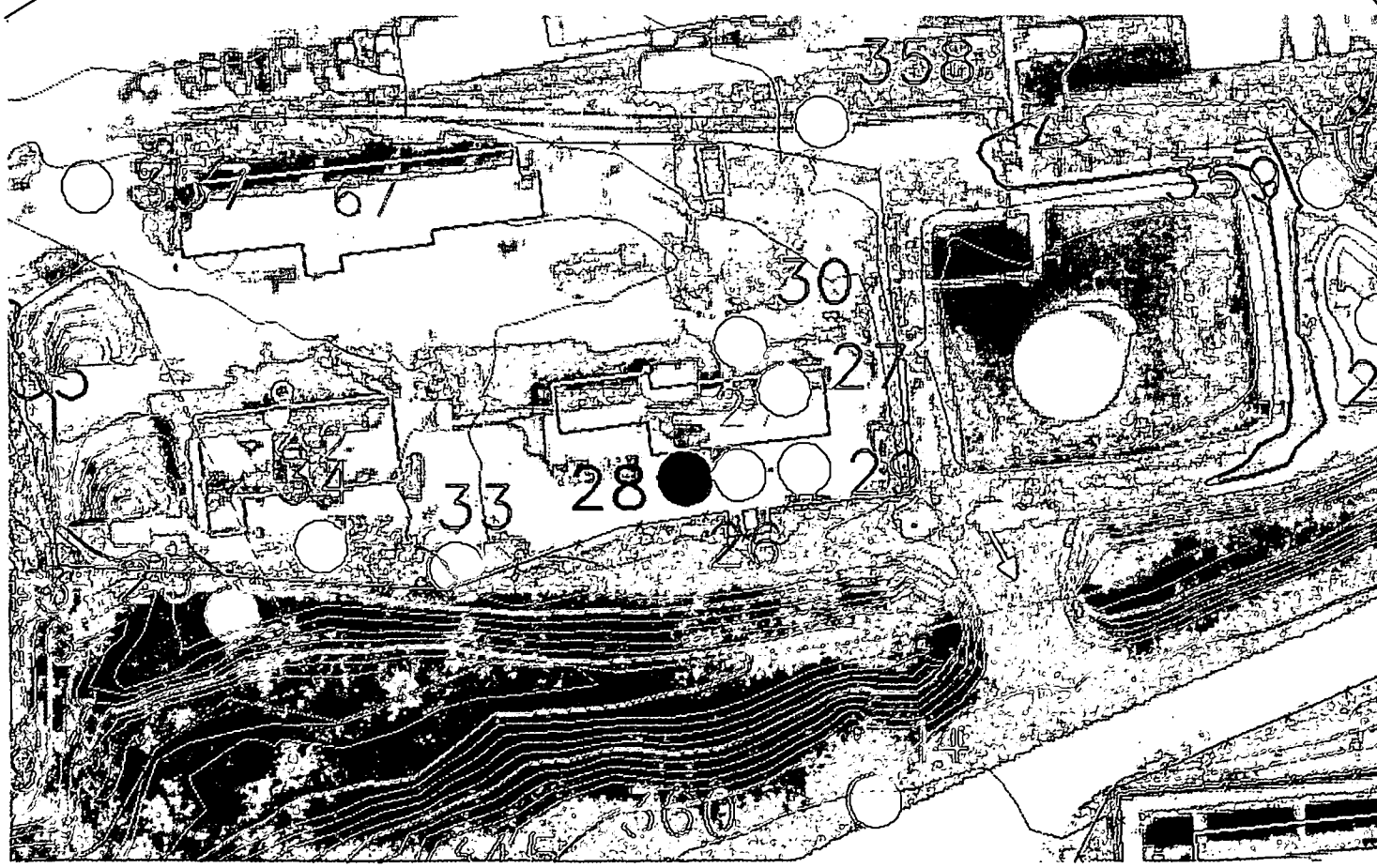


Figure 1
MOUND PLANT
Potential Release Site
PRS 28
Parcel 8

Figure 2
Mound Plant
PRS 28
Building 27 Solvent/Drum Storage Area

On the map below:
- PRS number and location shown in black
- Fencing shown in red
- Elevation contours shown in brown
- Other PRS's shown in blue





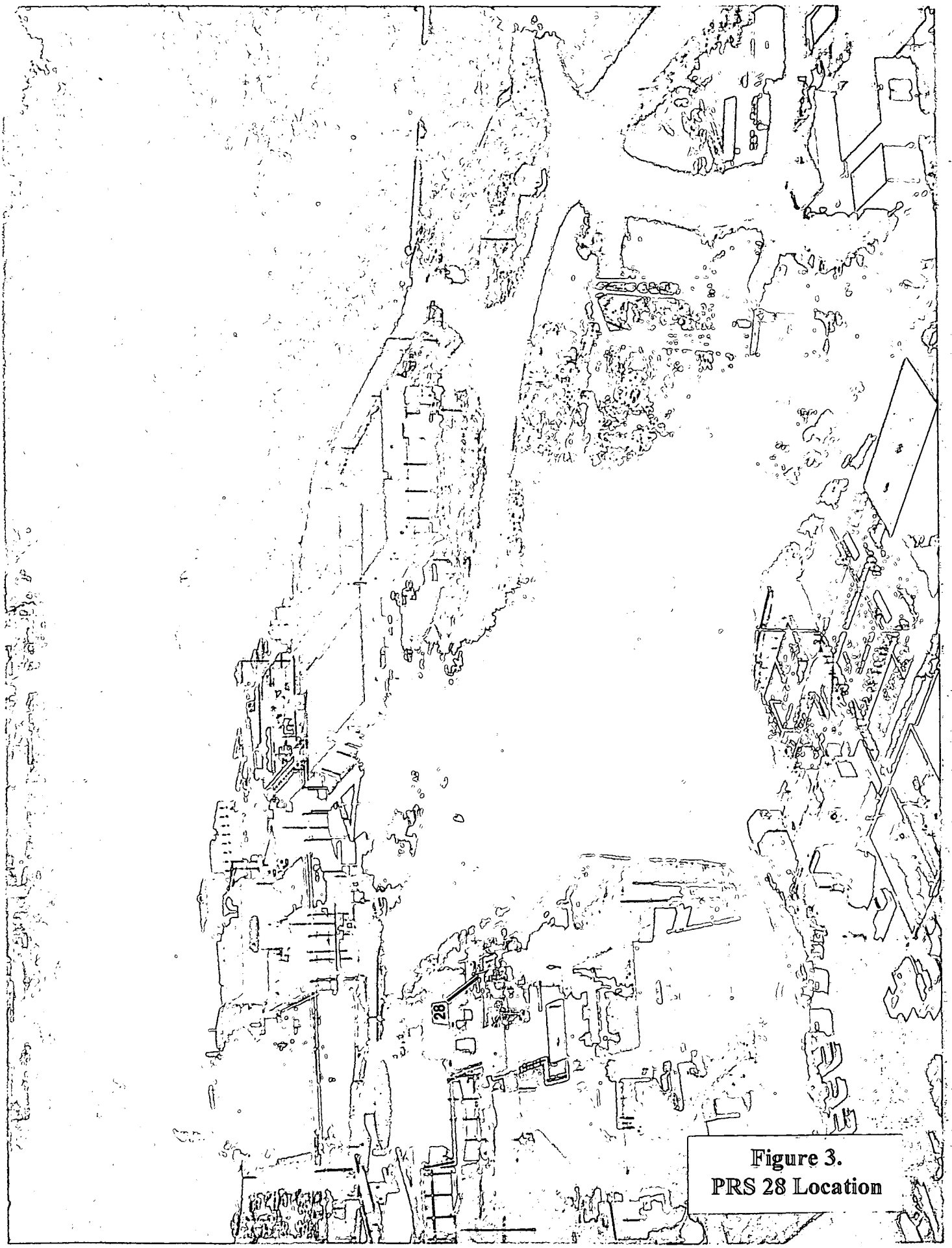


Figure 3.
PRS 28 Location

PRS 28

4 April 01

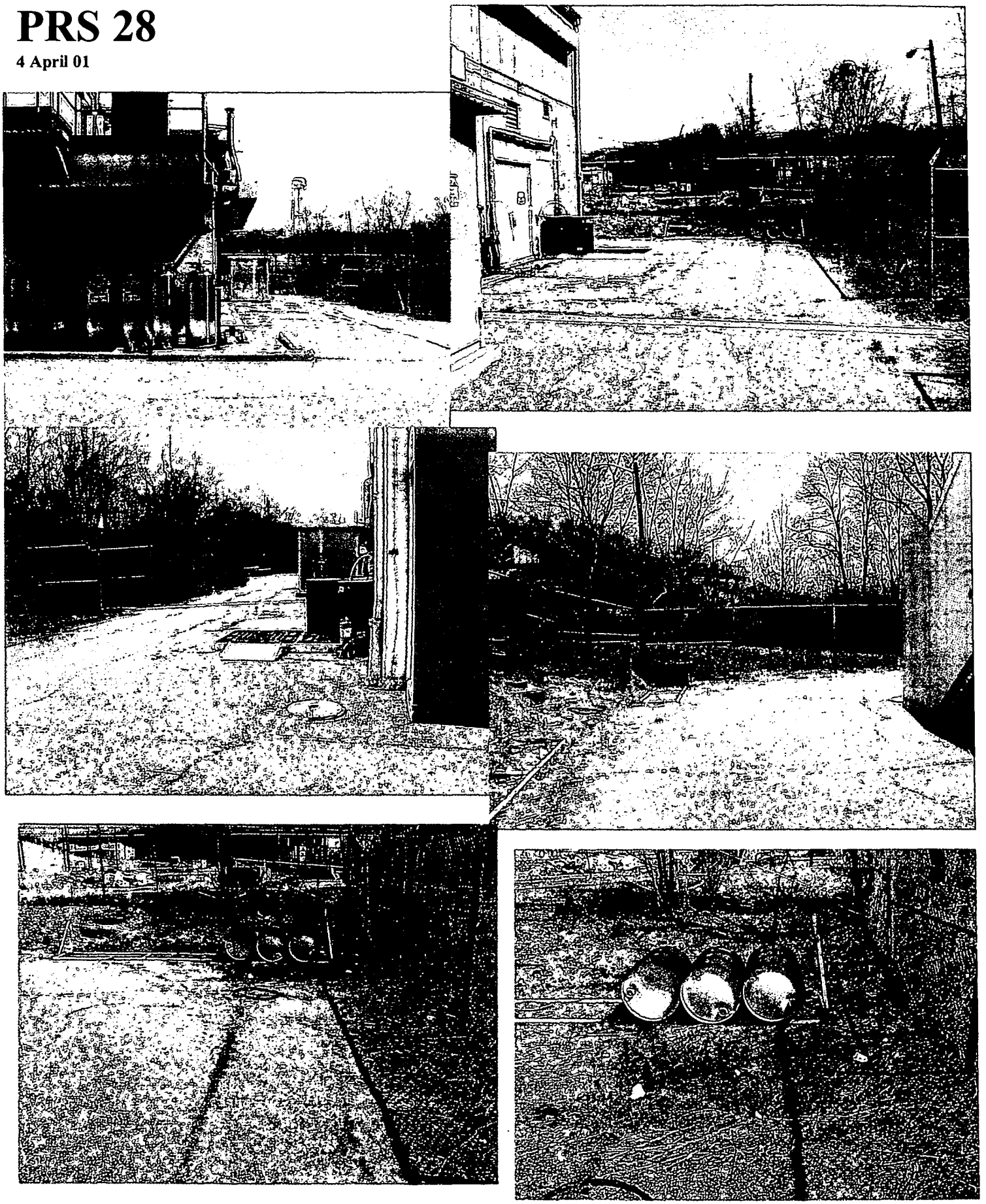


Figure 4
PRS 28 Pad

Reference 1

DUPLICATE
Classification Code: 29-01-01-07-12
Accession No. 9503280015

ENVIRONMENTAL RESTORATION PROGRAM

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

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
20	Building 34 Aviation Fuel Storage Tank (Tank 219)	H-5	Historical	Aviation fuel	3, 5, 18	Tank removed, VOC residuals		7, 18, 22	3, 4, 5, 6, 8	Tables B.6, B.7, and B.8	7, 22
21	Building 1 Leach Pit (Area I)	G-6	Surplus	Wastewater from explosives processes Organic solvents (primarily acetone)	1, 4, 5, 18	Suspected, not confirmed		7, 18	3, 4, 5, 6 14	Tables B.6, B.7, B.8, and B.9 RSS[c] Location S0504 (Appendix E in Ref. 6)	7 6
22	Building 1 Explosives Wastewater Settling Basin (Tank 200)	G-6	Surplus	Wastewater from explosives processes Organic solvents	3, 4, 5, 18	Suspected		7, 18	No Data		4
23	Building 43 Explosives Wastewater Settling Basin (Tank 201)	G-6	Surplus	Explosives production process wastes	3, 11	Suspected		7, 18	No Data		
24	Building 43 Solvent Storage Tank (Tank 221)	G-6	Never used Removed	None suspected (never used)	3	Suspected		7, 18	No Data		
25	Building 27 Leach Pit (Area I)	H-6	Surplus	Wastewater from explosives processes Organic solvents (primarily acetone)	1, 4, 5, 18	Suspected, not confirmed		7, 18	3, 4, 5, 6, 12	Tables B.6, B.7, and B.8	4, 7
26	Building 27 Concrete Flume (Tank 217)	G-6	Surplus	Wastewater from explosives processes Organic solvents (primarily acetone)	3, 5, 18	Suspected, not confirmed		7, 18	3, 4, 5, 6, 12	Tables B.6, B.7, and B.8	4, 7
27	Building 27 Settling Sump (Tank 218)	G-6	Surplus	Wastewater from explosives processes Organic solvents (primarily acetone)	3, 4, 5, 18	Suspected, not confirmed		7, 18	3, 4, 5, 6, 12	Tables B.6, B.7, and B.8	4, 7
28	Building 27 Solvent/Drum Storage Area	G-6	Surplus	Wastewater from explosives processes Organic solvents (acetone and ethanol)	4, 5, 18	Suspected, not confirmed		7, 18	3, 4, 5, 6, 12	Tables B.6, B.7, and B.8	7
29	Building 27 Filtration System	G-6	Inactive	Wastewater from explosives processes Organic solvents		Not Suspected		7, 18	No Data		

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 1992l "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."

Reference 2

MLM-ML-96-43-0001

ENVIRONMENTAL APPRAISAL REPORT OF THE MOUND PLANT

Volume 6

Prepared March 29, 1996 by:
EG&G Mound Applied Technologies
P.O. Box 3000
1 Mound Road
Miamisburg, OH 45343

9.50 BUILDING 27

9.50.1 Scope of Building 27 Report

In late 1995 and the early months of 1996, EG&G MAT performed a review of environmental conditions at the Mound Plant. The purpose was to develop a performance baseline, and to identify areas for improvement on a building and a sitewide basis. EG&G MAT did not perform a "due diligence" or Phase I Environmental Site Assessment as specified by ASTM 1527 or ASTM 1528. The scope of the appraisal effort and a discussion of the appraisal methodology are detailed in Sections 2.0 and 5.0, found in Volume 1 of this report.

The appraisal team prepared to perform a walk-through of Building 27 on the morning of January 29, 1996; however, it was confirmed by the building manager that the building had been leased to the City of Miamisburg. Therefore, an environmental appraisal was not conducted. No Building Manager's Questionnaire (BMQ) was available and the Environmental Appraisal Checklist (EAC) was not completed since the magazine was leased.

9.50.2 Description of Building 27

Building 27, the explosive materials laboratory and testing, is a two-story, 5,300-square-foot, reinforced concrete, slab-on-grade structure with a built-up membrane (asphalt) roof. The south wall has frangible panels. The location is shown in Attachment 1 (Section 9.50.4.1). The building is bounded by a roadway to the north, the Mound Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) drum storage area to the east, a store water canal to the south and Building 42 to the west. The second floor contains a lavatory and a locker room. The first floor contains laboratories, an office, storage, and explosive bays. The building is serviced by sanitary and storm water service lines, a fire sprinkler water main, and electric service of 480V (*Mound Facility Physical Characterization*, 12-1-93).

Building 27 was constructed in 1969 (*Capital Assets Management Process, CAMP Report, FY96*). The building has been used for the same purpose since construction. Research and testing activities using energetic materials have occurred in the building. Research, development and testing activities using radioactive materials have not occurred (*Mound Facility Physical Characterization*, 12-1-93).

9.50.3 Summary of Findings

Building 27 has undergone Safe Shutdown which includes removal of wastes and other materials plus equipment which cannot be released. A health physics safety determination and a liabilities assessment were made. An Environmental Site Assessment (ASTM E 1527-94 or ASTM E 1528-93) was not conducted. The building has been leased by the Department of Energy (DOE) to the City of Miamisburg which accepted the liabilities assessment. The General Purpose Lease between the DOE and the City of Miamisburg requires the sub-lessee to obtain and comply with regulatory agency permits.

Reference 3

ENVIRONMENTAL RESTORATION PROGRAM

OPERABLE UNIT 3 – MISCELLANEOUS SITES
LIMITED FIELD INVESTIGATION REPORT
VOLUME I
SECTIONS 1-6

MOUND PLANT
MIAMISBURG, OHIO

July 1993

DEPARTMENT OF ENERGY

ENVIRONMENTAL RESTORATION PROGRAM
EG&G MOUND APPLIED TECHNOLOGIES

FINAL
(REVISION 0)

- MND33-0052-0003 — Additional sample from the 10.0- to 13.0-ft BGS split spoon samples were necessary to obtain the required sample volume. The 13.0- to 15.0-ft BGS interval was not sampled because of auger and split spoon refusal at 13.0 ft BGS.
- MND33-0053-0001 — Two surface split spoon samples were necessary to obtain the required sample volume. The sampling interval was increased from 0.0 to 0.5 ft BGS to 0.0 to 1.0 ft BGS because of insufficient sample recovery.
- MND33-0054-0001 — Three surface split spoon samples were necessary to obtain the required sample volume. The sampling interval was increased from 0.0 to 0.5 ft BGS to 0.0 to 1.0 ft BGS because of insufficient sample recovery.
- MND33-0055-0001 — Three surface split spoon samples were necessary to obtain the required sample volume. The sampling interval was increased from 0.0 to 0.5 ft BGS to 0.0 to 1.0 ft BGS because of insufficient sample recovery.
- MND33-0055-0002 — The 5.0- to 7.0-ft BGS split spoon sample was collected to obtain the required sample volume.
- MND33-0055-0004 — The 15.0- to 17.0-ft BGS split spoon sample was collected to obtain the required sample volume.
- MND33-0056-0001 — Three surface split spoon samples were necessary to obtain the required sample volume. The sampling interval was increased from 0.0 to 0.5 ft BGS to 0.0 to 1.0 ft BGS because of insufficient sample recovery.
- MND33-0056-0002 — The 5.0- to 7.0-ft BGS split spoon sample was collected to obtain the required sample volume.
- MND33-0056-0003 — The 8.0-ft BGS split spoon encountered refusal at 8.3 ft BGS. The augers over-drilled to 9.0 ft BGS and the 9.0-ft BGS split spoon encountered refusal at 9.9 ft BGS. The TCL VOC sample was collected at the 8.0- to 8.3-ft BGS interval. Soil for the remainder of the requested analytical parameters was collected at depths of 9.0 to 9.9 ft BGS.

2.7. BUILDING 27 SOLVENT STORAGE AREA

2.7.1. Site History

2.7.1.1. Description of the Building 27 Solvent Storage Area

The Building 27 Solvent Storage Area is adjacent to the Building 27 Concrete Flume and the Building 27 Sump, all of which are located directly behind (south of) Building 27 (Figure 1.3). The storage area is approximately 50 ft by 200 ft and the ground surface is covered with asphalt. Wastewater generated from

Building 27 activities is pumped into 55-gallon drums and temporarily stored onsite. The drummed wastewater is transported from the solvent storage area to the hazardous waste storage area (Building 72) approximately once a week. There is no berm surrounding the storage pad.

At the time of soil sampling, the drums in the Building 27 Solvent Storage Area appeared to be in good condition. The asphalt appeared to be in good condition, and no stained soils were observed near the storage site. However, distressed/dead vegetation was previously observed adjacent to the asphalt pad during an RCRA visual site inspection, suggesting releases may have occurred.

No prior environmental samples have been collected in the Building 27 area.

2.7.1.2. Potential Area Contaminants

A solvent/wastewater treatment system at Building 27 formerly utilized filtration to remove suspended explosives from spent solvents generated from recrystallization processes. The spent solvents were transferred to Building 72. The solvents typically used in the recrystallization process or related activities included acetonitrile, methylene chloride, toluene, isopropyl alcohol, acetone, dimethyl formamide, dioxane, and dimethyl sulfoxide (DOE 1991f). The suspended explosives removed in the filtration process included noninitiating explosives such as HMX, RDX, and PETN. The primary solvent in the wastewater is acetone. Acetone is RCRA regulated as a spent nonhalogenated solvent, F003. Explosives are regulated under the reactivity characteristic D003. No reports of leaks or spills have been reported at the Building 27 Solvent Storage Area.

2.7.2. Field Investigation Procedures

The objective of sampling at the Building 27 Solvent Storage Area was to assess whether the site is or has been a source of hazardous contaminants released to the environment through spillage or leakage. The Building 27 Solvent Storage Area sampling activities included soil sampling by hollow stem auger drilling techniques using split spoon samplers. Soil sample collection at the Building 27 sites was conducted by WESTON representatives from 27 June 1991 to 2 July 1991. The samples were shipped to IT Laboratories for analysis.

Soil samples were collected at three borehole locations as shown in Figure 2.7. Soil boring locations were placed on the edge of the asphalt surface which comprised the storage area. The soils in the vicinity of the solvent storage area ranged from a clayey silty soil to a sandy silty soil from the ground surface and graded into a silty sand at 3.0 ft BGS. At location MND33-0010, a clayey soil was present at the ground surface and

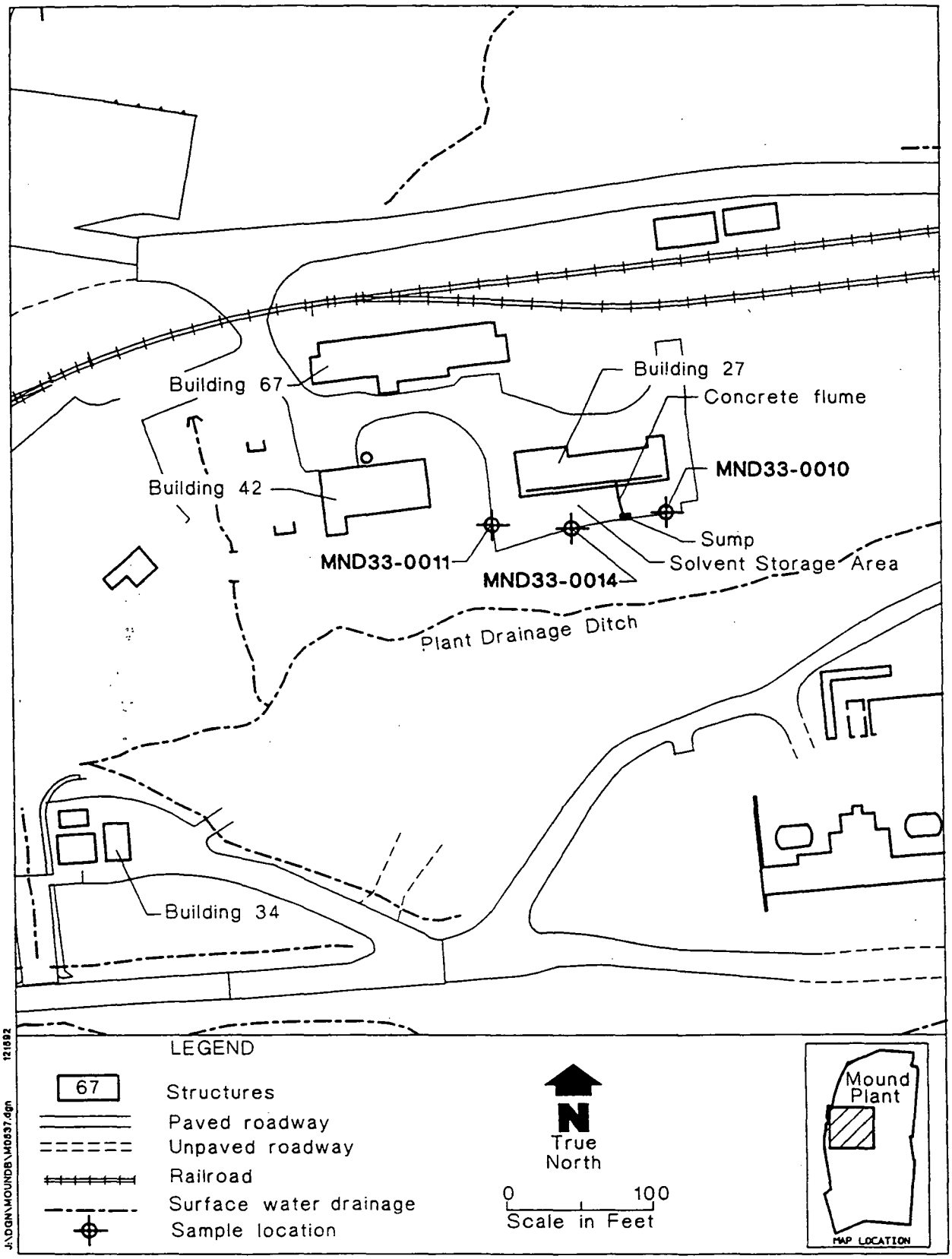


Figure 2.7. Building 27 Solvent Storage Area soil sample locations.

graded into a till unit at a depth of 2.5 ft BGS. Also, a plastic organic-rich clay layer occurred at a depth of approximately 16.0 ft BGS at the location. Groundwater in the site area was encountered between 8.0 and 14.0 ft BGS. A summary of soil samples collected at each location listing the sample identification number, sampling depth interval, date sampled, and requested analytical parameters is presented in Table II.7.

Every effort was made to comply with approved sampling protocol; however, some deviations were necessary in order to obtain the required sample. A summary of deviations for each applicable sample is presented below:

- MND33-0010-0001 — Interval 0.0 to 0.5 ft BGS. Two additional 0.0- to 1.0-ft BGS split spoon samples were driven next to the original location to obtain the required sample volume.
- MND33-0010-0002 — Interval 1.5 to 2.0 ft BGS. Sample volume was not sufficient to fill all sample containers. No sample was obtained for TAL inorganics. Because of underground utilities, a second boring could not be installed to collect additional sample.
- MND33-0010-0004 — Interval 8.5 to 12.5 ft BGS. Sample volume not sufficient to fill all sample containers. Samples were obtained for TCL VOCs in the first boring attempt. Direct reading instruments indicated no readings above background levels at the 5.0-ft BGS interval and sample volume was sufficient at the 5.0-, 15.0-, and 20.0-ft intervals; because of underground utilities, installation of a second boring for sample collection was not possible.
- MND33-0011-0001 — Interval 0.0 to 1.5 ft BGS. Location was moved from original location on the southern edge of the asphalt pad outside of the fence line to adjacent western edge of asphalt pad because of underground utilities. Three surface split spoon samples were necessary to obtain the required sample volume.
- MND33-0014-0001 — Interval 0.0 to 2.0 ft BGS. Sampling location was moved from its original location to a location outside south gate, adjacent of the asphalt pad because of the presence of underground utilities. Two split spoons were necessary to obtain the required sample volume.

Table II.7. Building 27 Solvent Storage Area Sample Summary

Sample Location	Sample Number	Matrix	Date Sampled	Sample Interval (ft BGS)	Parameters Analyzed
MND33-0010	MND33-0010-0001	Soil	6/29/91	0.0-0.5	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.
	MND33-0010-0002	Soil	6/29/91	1.5-2.0	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.
	MND33-0010-0003	Soil	6/29/91	2.5-6.5	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.
	MND33-0010-0004	Soil	6/29/91	8.5-12.5	TCL VOCs.
	MND33-0010-0005	Soil	6/29/91	14.5-18.5	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.
	MND33-0010-0006	Soil	6/29/91	18.5-20.5	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.
MND33-0011	MND33-0011-0001	Soil	6/30/91	0.0-1.5	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.
	MND33-0011-1001	Soil	6/30/91	0.0-1.5	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.
	MND33-0011-0002	Soil	6/30/91	1.5-3.0	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.
	MND33-0011-5001	Water	6/30/91	---	TCL VOCs.
MND33-0014	MND33-0014-0001	Soil	7/1/92	0.0-2.0	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.
	MND33-0014-0002	Soil	7/1/92	2.0-3.0	TCL VOCs, SVOCs, P/PCBs; TAL Inorganics; explosives.

BGS - Below Ground Surface
ft - Feet
P/PCBs - Pesticides/Polychlorinated Biphenyls
SVOCs - Semivolatile Organic Compounds
TAL - Target Analyte List
TCL - Target Compound List
VOCs - Volatile Organic Compounds

3.7. BUILDING 27 SOLVENT STORAGE AREA

The Building 27 Solvent Storage Area is an approximate 50-ft by 200-ft asphalt-covered area that serves as a temporary storage location for 55-gallon drums containing wastewater from the Building 27 process waste stream. The waste stream is reported to contain trace quantities of volatile compounds and explosives. Soil sampling was conducted in the solvent storage area to assess whether the site is or has been a source of hazardous constituents released to the environment through spills of wastewater or drum leakage. A description of the solvent storage area, including a more detailed summary of the waste stream and the field investigative procedures, is presented in subsection 2.7.

Nine soil samples and one duplicate sample collected from three locations (MND33-0010, -0011, and -0014) at the perimeter of the solvent storage area were analyzed for TCL VOCs, SVOCs, P/PCBs; TAL inorganics; and explosives. Because of low sample volume, one sample (MND33-0010-0004) was analyzed only for TCL VOCs. The validated analytical results for all analytes detected at concentrations above the laboratory reporting limits in each sample are presented in Table III.11.

3.7.1. Volatile Organic Compounds

Of the 11 soil samples analyzed, three contained detectable concentrations of VOCs. Carbon disulfide, 2-butanone, and dichloromethane were detected in samples MND33-0010-0001, MND33-0010-0005, and MND33-0014-0001, respectively. However, the concentrations of these three compounds in the soils were less than 10 times the laboratory reporting limit and did not exceed the PRGs established for each compound. The low concentrations of these compounds in the soils sampled indicate that the soils in the vicinity of the solvent storage area have not been significantly impacted by VOCs from storage of the Building 27 wastewater.

3.7.2. Semivolatile Organic Compounds

SVOCs were not detected in concentrations above laboratory reporting limits in any of the samples analyzed.

3.7.3. Pesticides

Pesticides were not detected in concentrations above laboratory reporting limits in any of the samples analyzed.

3.7.4. Polychlorinated Biphenyls

Of the 10 soil samples analyzed, one sample (MND33-0011-0001), and the associated duplicate sample (MND33-0011-1001), contained detectable concentrations of PCBs. Aroclor 1248 was detected in concentrations of 0.147 mG/Kg and 0.182 mG/Kg in these samples, considerably below the PRG of 50.0 mG/Kg for total PCB concentrations. Because of the relatively low concentration of PCBs in only one sample, it is concluded that soils in the vicinity of the solvent storage area have not been significantly impacted by PCBs.

3.7.5. TAL Inorganics

Inorganic compounds were not detected in soil samples from the solvent storage area at concentrations above the PRGs or proposed action levels.

3.7.6. Explosives

Explosives were not detected in any soil samples collected in the solvent storage area at concentrations above the laboratory reporting limits.

3.7.7. Summary

The analytical results for samples collected a the Building 27 Solvent Storage Area indicate that site activities involving the storage of solvents in this area have not adversely impacted soil quality in the vicinity of the site. As a result of these findings, no further action involving site characterization or soil remediation is recommended.

TABLE III.11
BUILDING 27 SOLVENT STORAGE AREA
Location: MWD33-0010
Summary of analytical data
for analyte concentrations
above reporting limits
Report Date: 03/05/93

Parameter	Sample Id	Matrix	Units of Measure	Laboratory Reporting Limit	Validated Result (1)	Data Validation Qualifier	PRG	Run Type
2-BUTANONE	0005	S	mG/Kg	0.012	0.063	J	1.4E+04	I
ALUMINUM, TOTAL	0001	S	mG/Kg	6.	1590.	J	7.8E+05	I
ALUMINUM, TOTAL	0003	S	mG/Kg	6.	8550.	J	7.8E+05	I
ALUMINUM, TOTAL	0005	S	mG/Kg	6.	14000.	J	7.8E+05	I
ALUMINUM, TOTAL	0006	S	mG/Kg	6.	4950.	J	7.8E+05	I
ANTIMONY, TOTAL	0001	S	mG/Kg	3.	40.9	J	1.1E+02	I
ANTIMONY, TOTAL	0003	S	mG/Kg	3.	3.3	J	1.1E+02	I
ANTIMONY, TOTAL	0006	S	mG/Kg	3.	29.0	J	1.1E+02	I
ARSENIC, TOTAL	0001	S	mG/Kg	.2	3.1	J	2.1E+03	I
ARSENIC, TOTAL	0003	S	mG/Kg	.2	3.3		2.1E+03	I
ARSENIC, TOTAL	0005	S	mG/Kg	.2	7.6	J	2.1E+03	I
ARSENIC, TOTAL	0006	S	mG/Kg	.2	5.3	J	2.1E+03	I
BARIUM, TOTAL	0001	S	mG/Kg	.2	16.		1.9E+04	I
BARIUM, TOTAL	0003	S	mG/Kg	.2	72.3		1.9E+04	I
BARIUM, TOTAL	0005	S	mG/Kg	.2	85.6		1.9E+04	I
BARIUM, TOTAL	0006	S	mG/Kg	.2	40.7		1.9E+04	I
BERYLLIUM	0001	S	mG/Kg	.2	.59		1.5E-01	I
BERYLLIUM	0003	S	mG/Kg	.2	.65		1.5E-01	I
BERYLLIUM	0005	S	mG/Kg	.2	.87		1.5E-01	I
BERYLLIUM	0006	S	mG/Kg	.2	.64		1.5E-01	I
CADMIUM, TOTAL	0001	S	mG/Kg	.2	8.7	J	1.4E+02	I
CADMIUM, TOTAL	0003	S	mG/Kg	.2	1.2	J	1.4E+02	I
CADMIUM, TOTAL	0005	S	mG/Kg	.2	0.75	J	1.4E+02	I
CADMIUM, TOTAL	0006	S	mG/Kg	.2	5.9	J	1.4E+02	I
CALCIUM, TOTAL	0001	S	mG/Kg	2.	167000.		NA	I
CALCIUM, TOTAL	0003	S	mG/Kg	2.	52200.		NA	I
CALCIUM, TOTAL	0005	S	mG/Kg	2.	14500.		NA	I
CALCIUM, TOTAL	0006	S	mG/Kg	2.	117000.		NA	I
CARBON DISULFIDE	0001	S	mG/Kg	0.006	0.009	J	2.7E+04	I
CHROMIUM, TOTAL	0001	S	mG/Kg	1.	23.5		1.4E+03	I
CHROMIUM, TOTAL	0003	S	mG/Kg	1.	24.7		1.4E+03	I
CHROMIUM, TOTAL	0005	S	mG/Kg	1.	23.6		1.4E+03	I
CHROMIUM, TOTAL	0006	S	mG/Kg	1.	27.6		1.4E+03	I
COBALT, TOTAL	0001	S	mG/Kg	1.	6.1		3.9E+01	I
COBALT, TOTAL	0003	S	mG/Kg	1.	10.2		3.9E+01	I
COBALT, TOTAL	0005	S	mG/Kg	1.	17.1		3.9E+01	I
COBALT, TOTAL	0006	S	mG/Kg	1.	9.8		3.9E+01	I
COPPER, TOTAL	0001	S	mG/Kg	1.	11.1		1.0E+04	I
COPPER, TOTAL	0003	S	mG/Kg	1.	22.1		1.0E+04	I
COPPER, TOTAL	0005	S	mG/Kg	1.	20.		1.0E+04	I
COPPER, TOTAL	0006	S	mG/Kg	1.	17.7		1.0E+04	I
IRON, TOTAL	0001	S	mG/Kg	1.	4630.		NA	I
IRON, TOTAL	0003	S	mG/Kg	1.	15900.		NA	I

PRG - Preliminary Remediation Goals (Risk Based)
J - The associated value is an estimated quantity
I - Initial Analysis
S - Soil
mG/Kg - Milligrams per Kilogram
(1) - This includes laboratory results that were not qualified from data validation, but were accepted by data validators

TABLE III.11
BUILDING 27 SOLVENT STORAGE AREA
Location: MWD33-0010
Summary of analytical data
for analyte concentrations
above reporting limits
Report Date: 03/05/93

Parameter	Sample Id	Matrix	Units of Measure	Laboratory Reporting Limit	Validated Result (1)	Data Validation Qualifier	PRG	Run Type
IRON, TOTAL	0005	S	mG/Kg	1.	27600.		NA	I
IRON, TOTAL	0006	S	mG/Kg	1.	11500.		NA	I
LEAD, TOTAL	0001	S	mG/Kg	.2	5.4	J	5.3E+01	I
LEAD, TOTAL	0003	S	mG/Kg	.2	6.2	J	5.3E+01	I
LEAD, TOTAL	0005	S	mG/Kg	.2	14.9	J	5.3E+01	I
LEAD, TOTAL	0006	S	mG/Kg	.2	6.4	J	5.3E+01	I
MAGNESIUM, TOTAL	0001	S	mG/Kg	5.	82300.	J	NA	I
MAGNESIUM, TOTAL	0003	S	mG/Kg	5.	9700.	J	NA	I
MAGNESIUM, TOTAL	0005	S	mG/Kg	5.	7180.	J	NA	I
MAGNESIUM, TOTAL	0006	S	mG/Kg	5.	47100.	J	NA	I
MANGANESE, TOTAL	0001	S	mG/Kg	.2	145.	J	2.7E+04	I
MANGANESE, TOTAL	0003	S	mG/Kg	.2	537.	J	2.7E+04	I
MANGANESE, TOTAL	0005	S	mG/Kg	.2	1320.	J	2.7E+04	I
MANGANESE, TOTAL	0006	S	mG/Kg	.2	343.	J	2.7E+04	I
NICKEL, TOTAL	0001	S	mG/Kg	2.	15.8		5.4E+03	I
NICKEL, TOTAL	0003	S	mG/Kg	2.	19.1		5.4E+03	I
NICKEL, TOTAL	0005	S	mG/Kg	2.	29.		5.4E+03	I
NICKEL, TOTAL	0006	S	mG/Kg	2.	26.		5.4E+03	I
POTASSIUM, TOTAL	0001	S	mG/Kg	10.	783.		NA	I
POTASSIUM, TOTAL	0003	S	mG/Kg	10.	1120.		NA	I
POTASSIUM, TOTAL	0005	S	mG/Kg	10.	2080.		NA	I
POTASSIUM, TOTAL	0006	S	mG/Kg	10.	1020.		NA	I
SILVER, TOTAL	0001	S	mG/Kg	1.	18.3		1.4E+03	I
SILVER, TOTAL	0003	S	mG/Kg	1.	10.8		1.4E+03	I
SILVER, TOTAL	0005	S	mG/Kg	1.	4.4		1.4E+03	I
SILVER, TOTAL	0006	S	mG/Kg	1.	16.9	J	1.4E+03	I
SODIUM, TOTAL	0001	S	mG/Kg	10.	213.		NA	I
SODIUM, TOTAL	0003	S	mG/Kg	10.	118.		NA	I
SODIUM, TOTAL	0005	S	mG/Kg	10.	369.		NA	I
SODIUM, TOTAL	0006	S	mG/Kg	10.	294.		NA	I
VANADIUM, TOTAL	0001	S	mG/Kg	1.	22.3		1.9E+03	I
VANADIUM, TOTAL	0003	S	mG/Kg	1.	27.6		1.9E+03	I
VANADIUM, TOTAL	0005	S	mG/Kg	1.	29.2		1.9E+03	I
VANADIUM, TOTAL	0006	S	mG/Kg	1.	23.8		1.9E+03	I
ZINC, TOTAL	0001	S	mG/Kg	.5	26.1		5.4E+04	I
ZINC, TOTAL	0003	S	mG/Kg	.5	47.4		5.4E+04	I
ZINC, TOTAL	0005	S	mG/Kg	.5	60.4		5.4E+04	I
ZINC, TOTAL	0006	S	mG/Kg	.5	37.1		5.4E+04	I

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J - The associated value is an estimated quantity
I - Initial Analysis
S - Soil
mG/Kg - Milligrams per Kilogram
(1) - This includes laboratory results that were not qualified from data validation, but were accepted by data validators

TABLE III.11
BUILDING 27 SOLVENT STORAGE AREA
Location: MWD33-0011
Summary of analytical data
for analyte concentrations
above reporting limits
Report Date: 03/05/93

Parameter	Sample Id	Matrix	Units of Measure	Laboratory Reporting Limit	Validated Result (1)	Data Validation Qualifier	PRG	Run Type
ALUMINUM, TOTAL	0001	S	mG/Kg	.06	3050.	J	7.8E+05	I
ALUMINUM, TOTAL	0002	S	mG/Kg	.06	5180.	J	7.8E+05	I
ALUMINUM, TOTAL	1001	S	mG/Kg	.06	1490.	J	7.8E+05	I
ANTIMONY, TOTAL	0001	S	mG/Kg	.03	48.5	J	1.1E+02	I
ANTIMONY, TOTAL	0002	S	mG/Kg	.03	24.4	J	1.1E+02	I
ANTIMONY, TOTAL	1001	S	mG/Kg	.03	53.3	J	1.1E+02	I
AROCLOR-1248	0001	S	mG/Kg	0.08	0.147	J	50. total	I
AROCLOR-1248	1001	S	mG/Kg	0.08	0.182	J	50. total	I
ARSENIC, TOTAL	0001	S	mG/Kg	.002	2.7	J	2.1E+03	I
ARSENIC, TOTAL	0002	S	mG/Kg	.002	3.4	J	2.1E+03	I
ARSENIC, TOTAL	1001	S	mG/Kg	.002	2.6	J	2.1E+03	I
BARIUM, TOTAL	0001	S	mG/Kg	.002	22.2		1.9E+04	I
BARIUM, TOTAL	0002	S	mG/Kg	.002	35.4		1.9E+04	I
BARIUM, TOTAL	1001	S	mG/Kg	.002	18.		1.9E+04	I
BERYLLIUM	0001	S	mG/Kg	.002	.66		1.5E-01	I
BERYLLIUM	0002	S	mG/Kg	.002	.65		1.5E-01	I
BERYLLIUM	1001	S	mG/Kg	.002	.63		1.5E-01	I
CADMIUM, TOTAL	0001	S	mG/Kg	.002	9.5	J	1.4E+02	I
CADMIUM, TOTAL	0002	S	mG/Kg	.002	6.0	J	1.4E+02	I
CADMIUM, TOTAL	1001	S	mG/Kg	.002	12.7	J	1.4E+02	I
CALCIUM, TOTAL	0001	S	mG/Kg	.02	149000.		NA	I
CALCIUM, TOTAL	0002	S	mG/Kg	.02	129000.		NA	I
CALCIUM, TOTAL	1001	S	mG/Kg	.02	188000.		NA	I
CHROMIUM, TOTAL	0001	S	mG/Kg	.01	26.7		1.4E+03	I
CHROMIUM, TOTAL	0002	S	mG/Kg	.01	24.5		1.4E+03	I
CHROMIUM, TOTAL	1001	S	mG/Kg	.01	22.3		1.4E+03	I
COBALT, TOTAL	0001	S	mG/Kg	.01	10.6		3.9E+01	I
COBALT, TOTAL	0002	S	mG/Kg	.01	7.2		3.9E+01	I
COBALT, TOTAL	1001	S	mG/Kg	.01	8.		3.9E+01	I
COPPER, TOTAL	0001	S	mG/Kg	.01	17.6		1.0E+04	I
COPPER, TOTAL	0002	S	mG/Kg	.01	14.8		1.0E+04	I
COPPER, TOTAL	1001	S	mG/Kg	.01	11.8		1.0E+04	I
IRON, TOTAL	0001	S	mG/Kg	.01	15400.		NA	I
IRON, TOTAL	0002	S	mG/Kg	.01	9470.		NA	I
IRON, TOTAL	1001	S	mG/Kg	.01	4250.		NA	I
LEAD, TOTAL	0001	S	mG/Kg	.002	5.3	J	5.3E+01	I
LEAD, TOTAL	0002	S	mG/Kg	.002	6.6	J	5.3E+01	I
LEAD, TOTAL	1001	S	mG/Kg	.002	5.7	J	5.3E+01	I
MAGNESIUM, TOTAL	0001	S	mG/Kg	.05	60700.	J	NA	I
MAGNESIUM, TOTAL	0002	S	mG/Kg	.05	37300.	J	NA	I
MAGNESIUM, TOTAL	1001	S	mG/Kg	.05	93000.	J	NA	I
MANGANESE, TOTAL	0001	S	mG/Kg	.002	329.	J	2.7E+04	I

PRG - Preliminary Remediation Goals (Risk Based)
J - The associated value is an estimated quantity
I - Initial Analysis
S - Soil
mG/Kg - Milligrams per Kilogram
(1) - This includes laboratory results that were not qualified from data validation, but were accepted by data validators

TABLE III.11
BUILDING 27 SOLVENT STORAGE AREA
Location: MWD33-0011
Summary of analytical data
for analyte concentrations
above reporting limits
Report Date: 03/05/93

Parameter	Sample Id	Matrix	Units of Measure	Laboratory Reporting Limit	Validated Result (1)	Data Validation Qualifier	PRG	Run Type
MANGANESE, TOTAL	0002	S	mG/Kg	.002	383.	J	2.7E+04	I
MANGANESE, TOTAL	1001	S	mG/Kg	.002	345.	J	2.7E+04	I
NICKEL, TOTAL	0001	S	mG/Kg	.02	22.3		5.4E+03	I
NICKEL, TOTAL	0002	S	mG/Kg	.02	20.3		5.4E+03	I
NICKEL, TOTAL	1001	S	mG/Kg	.02	16.7		5.4E+03	I
POTASSIUM, TOTAL	0001	S	mG/Kg	.1	501.		NA	I
POTASSIUM, TOTAL	0002	S	mG/Kg	.1	503.		NA	I
POTASSIUM, TOTAL	1001	S	mG/Kg	.1	242.		NA	I
SILVER, TOTAL	0001	S	mG/Kg	.01	18.1	J	1.4E+03	I
SILVER, TOTAL	0002	S	mG/Kg	.01	15.8	J	1.4E+03	I
SILVER, TOTAL	1001	S	mG/Kg	.01	19.6	J	1.4E+03	I
SODIUM, TOTAL	0001	S	mG/Kg	.1	215.		NA	I
SODIUM, TOTAL	0002	S	mG/Kg	.1	152.		NA	I
SODIUM, TOTAL	1001	S	mG/Kg	.1	217.		NA	I
VANADIUM, TOTAL	0001	S	mG/Kg	.01	24.3		1.9E+03	I
VANADIUM, TOTAL	0002	S	mG/Kg	.01	23.9		1.9E+03	I
VANADIUM, TOTAL	1001	S	mG/Kg	.01	22.1		1.9E+03	I
ZINC, TOTAL	0001	S	mG/Kg	.005	24.5		5.4E+04	I
ZINC, TOTAL	0002	S	mG/Kg	.005	30.7		5.4E+04	I
ZINC, TOTAL	1001	S	mG/Kg	.005	14.8		5.4E+04	I

PRG - Preliminary Remediation Goals (Risk Based)
J - The associated value is an estimated quantity
I - Initial Analysis
S - Soil
mG/Kg - Milligrams per Kilogram
(1) - This includes laboratory results that were not qualified from data validation, but were accepted by data validators

TABLE III.11
BUILDING 27 SOLVENT STORAGE AREA
Location: MWD33-0014
Summary of analytical data
for analyte concentrations
above reporting limits
Report Date: 03/05/93

Parameter	Sample Id	Matrix	Units of Measure	Laboratory Reporting Limit	Validated Result (1)	Data Validation Qualifier	PRG	Run Type
ALUMINUM, TOTAL	0001	S	mG/Kg	.06	8600.	J	7.8E+05	I
ALUMINUM, TOTAL	0002	S	mG/Kg	.06	8220.	J	7.8E+05	I
ANTIMONY, TOTAL	0001	S	mG/Kg	.03	21.2	J	1.1E+02	I
ANTIMONY, TOTAL	0002	S	mG/Kg	.03	21.8	J	1.1E+02	I
ARSENIC, TOTAL	0001	S	mG/Kg	.002	3.6	J	2.1E+03	I
ARSENIC, TOTAL	0002	S	mG/Kg	.002	2.7	J	2.1E+03	I
BARIUM, TOTAL	0001	S	mG/Kg	.002	29.3		1.9E+04	I
BARIUM, TOTAL	0002	S	mG/Kg	.002	28.7		1.9E+04	I
BERYLLIUM	0001	S	mG/Kg	.002	.71		1.5E-01	I
BERYLLIUM	0002	S	mG/Kg	.002	.71		1.5E-01	I
CADMIUM, TOTAL	0001	S	mG/Kg	.002	3.4	J	1.4E+02	I
CADMIUM, TOTAL	0002	S	mG/Kg	.002	3.8	J	1.4E+02	I
CALCIUM, TOTAL	0001	S	mG/Kg	.02	80800.		NA	I
CALCIUM, TOTAL	0002	S	mG/Kg	.02	92100.		NA	I
CHROMIUM, TOTAL	0001	S	mG/Kg	.01	27.4		1.4E+03	I
CHROMIUM, TOTAL	0002	S	mG/Kg	.01	27.6		1.4E+03	I
COBALT, TOTAL	0001	S	mG/Kg	.01	13.		3.9E+01	I
COBALT, TOTAL	0002	S	mG/Kg	.01	12.7		3.9E+01	I
COPPER, TOTAL	0001	S	mG/Kg	.01	21.5		1.0E+04	I
COPPER, TOTAL	0002	S	mG/Kg	.01	19.9		1.0E+04	I
DICHLOROMETHANE-METHYLENE CHLORIDE	0001	S	mG/Kg	0.005	0.013		8.5E+01	I
IRON, TOTAL	0001	S	mG/Kg	.01	20100.		NA	I
IRON, TOTAL	0002	S	mG/Kg	.01	19700.		NA	I
LEAD, TOTAL	0001	S	mG/Kg	.002	8.5	J	5.3E+01	I
LEAD, TOTAL	0002	S	mG/Kg	.002	7.0	J	5.3E+01	I
MAGNESIUM, TOTAL	0001	S	mG/Kg	.05	22200.	J	NA	I
MAGNESIUM, TOTAL	0002	S	mG/Kg	.05	24700.	J	NA	I
MANGANESE, TOTAL	0001	S	mG/Kg	.002	457.	J	2.7E+04	I
MANGANESE, TOTAL	0002	S	mG/Kg	.002	413.	J	2.7E+04	I
NICKEL, TOTAL	0001	S	mG/Kg	.02	27.9		5.4E+03	I
NICKEL, TOTAL	0002	S	mG/Kg	.02	28.2		5.4E+03	I
POTASSIUM, TOTAL	0001	S	mG/Kg	.1	1510.		NA	I
POTASSIUM, TOTAL	0002	S	mG/Kg	.1	1530.		NA	I
SILVER, TOTAL	0001	S	mG/Kg	.01	14.0	J	1.4E+03	I
SILVER, TOTAL	0002	S	mG/Kg	.01	14.6	J	1.4E+03	I
SODIUM, TOTAL	0001	S	mG/Kg	.1	194.		NA	I
SODIUM, TOTAL	0002	S	mG/Kg	.1	210.		NA	I

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J - The associated value is an estimated quantity
I - Initial Analysis
S - Soil
mG/Kg - Milligrams per Kilogram
(1) - This includes laboratory results that were not qualified from data validation, but were accepted by data validators

TABLE III.11
BUILDING 27 SOLVENT STORAGE AREA
Location: MWD33-0014
Summary of analytical data
for analyte concentrations
above reporting limits
Report Date: 03/05/93

Parameter	Sample Id	Matrix	Units of Measure	Laboratory Reporting Limit	Validated Result (1)	Data Validation Qualifier	PRG	Run Type
VANADIUM, TOTAL	0001	S	mG/Kg	.01	24.1		1.9E+03	I
VANADIUM, TOTAL	0002	S	mG/Kg	.01	24.6		1.9E+03	I
ZINC, TOTAL	0001	S	mG/Kg	.005	57.8		5.4E+04	I
ZINC, TOTAL	0002	S	mG/Kg	.005	52.8		5.4E+04	I

PRG - Preliminary Remediation Goals (Risk Based)
I - Initial Analysis
S - Soil
mG/Kg - Milligrams per Kilogram
(1) - This includes laboratory results that were not qualified from data validation, but were accepted by data validators

Reference 4

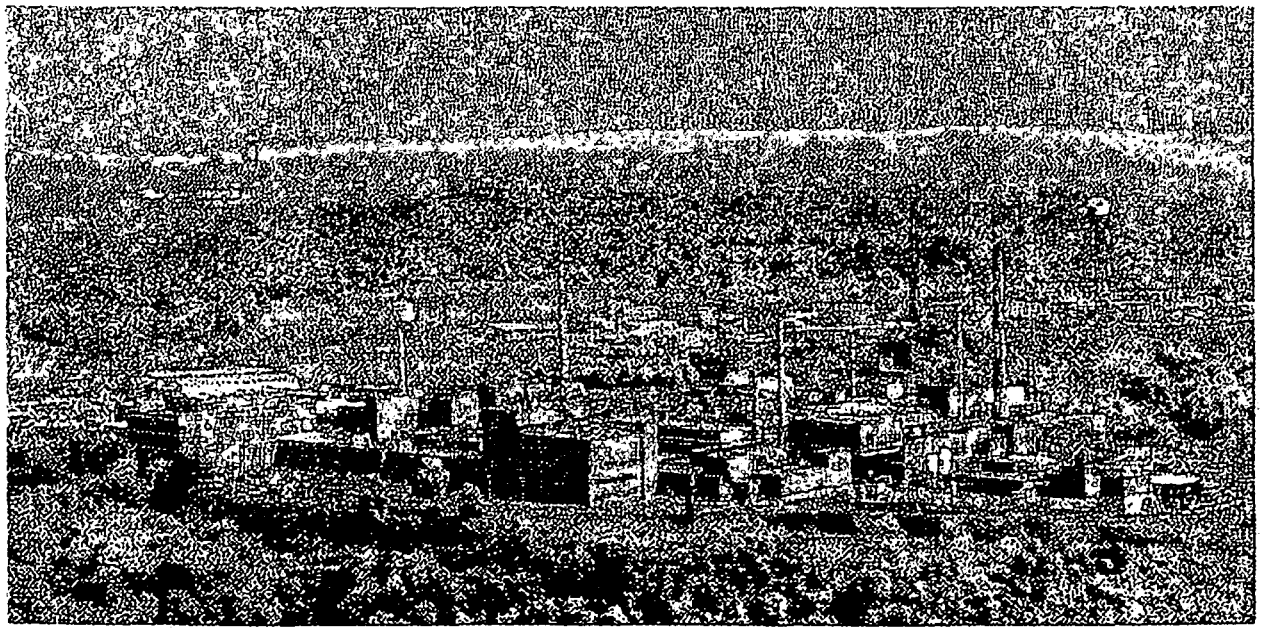
MOUND

Environmental
Restoration
Program

MOUND PLANT

Potential Release Site Package

PRS #21, 22, 25, 26, 27, 29



PRS 21, 22, 25, 26, 27, 29 (FILE)

REV	DESCRIPTION	DATE
WORKING DRAFT		21 July 2000
DRAFT		16 August 2000
DRAFT PROPOSED FINAL	All six PRSs binned No Further Assessment on 19 September 2000. Recommendation signed on 18 October 2000 and includes adjustments requested by OEPA.	7 November 2000
PUBLIC REVIEW DRAFT		
FINAL		

PRS 21, 22, 25, 26, 27, 29

PRS HISTORY:

Potential Release Site (PRS) 21 was a triangular shaped, gravel lined depression measuring approximately 50'x50'x50'x6' deep that formerly received stormwater from Buildings 1 and 43 and wastewater from the Building 1 Sump (**PRS 22**). The Building 1 Sump was located adjacent to Building 1, constructed of concrete, with interior dimensions of 4 feet square and 3 feet deep. Wastewater contained dilute waste solvents and trace explosives from processing operations conducted in Building 1. Explosives processing in Building 1 ceased by 1985 and subsequent explosives processing occurred at Building 27. Buildings 1 and 43 were demolished in 1999.

Building 27 operations discharged process wastewater containing spent diluted solvents and trace explosives via gravity in open troughs (**PRS 27**) built into the concrete floor slab of Building 27. Seven separate troughs within Building 27 (each powder processing cell houses one trough) pass through to the exterior of the building on the south side of Building 27 and merge into a t-shaped trough (**PRS 26**), prior to discharge into a concrete sump (**PRS 29**). Wastewater was filtered to remove suspended explosive contaminants from the wastewater. From the sump, wastewater was directed to a leach pit (**PRS 25**) located southwest of Building 27 where evaporation and absorption were responsible for reducing wastewater volumes. Both the sump and leach pit were taken out of service in 1985. In 1991, the interior and exterior troughs were taken out of service when the process equipment was modified to pipe wastewater directly into drums currently being managed in a satellite accumulation area in accordance with hazardous waste generator requirements.

All six PRSs (listed below and shown on Figures 1 through 4) were designated as RCRA units requiring closure, which occurred in June/July 2000.

PRS 21: Building 1 Leach Pit
PRS 22: Building 1 Sump
PRS 25: Building 27 Leach Pit
PRS 26: Building 27 Exterior Trough
PRS 27: Building 27 Interior Troughs
PRS 29: Building 27 Sump

CONTAMINATION:

RCRA CONTAMINATION

Based on information presented in the **RCRA Closure Plan**[1], and as directed via the Ohio EPA Closure Plan approval letter[2], both leach pits and the interior troughs (**PRSs 21, 25, & 27**) were clean closed based on existing information and additional sampling was not required. No action was required in the Closure Plan for the interior troughs.

The sumps and exterior trough (PRSs 22, 26, & 29) were decontaminated and a rinsewater sample collected in each was analyzed for the contaminants of concern. Table 1 lists the four contaminants of concern identified in the Closure Plan as well as the maximum concentrations

Figure 1

MOUND PLANT

Potential Release Sites

PRS 21, 22, 25, 26, 27, 29

Figure 2:

Mound Plant

PRS 21, 22, 25, 26, 27, 29 Wastewater Transfer Structures

On the map below:
-Elevation contours shown in yellow
-PRS number & location shown in red
-Buildings shown in green
-Drainage channel shown in blue

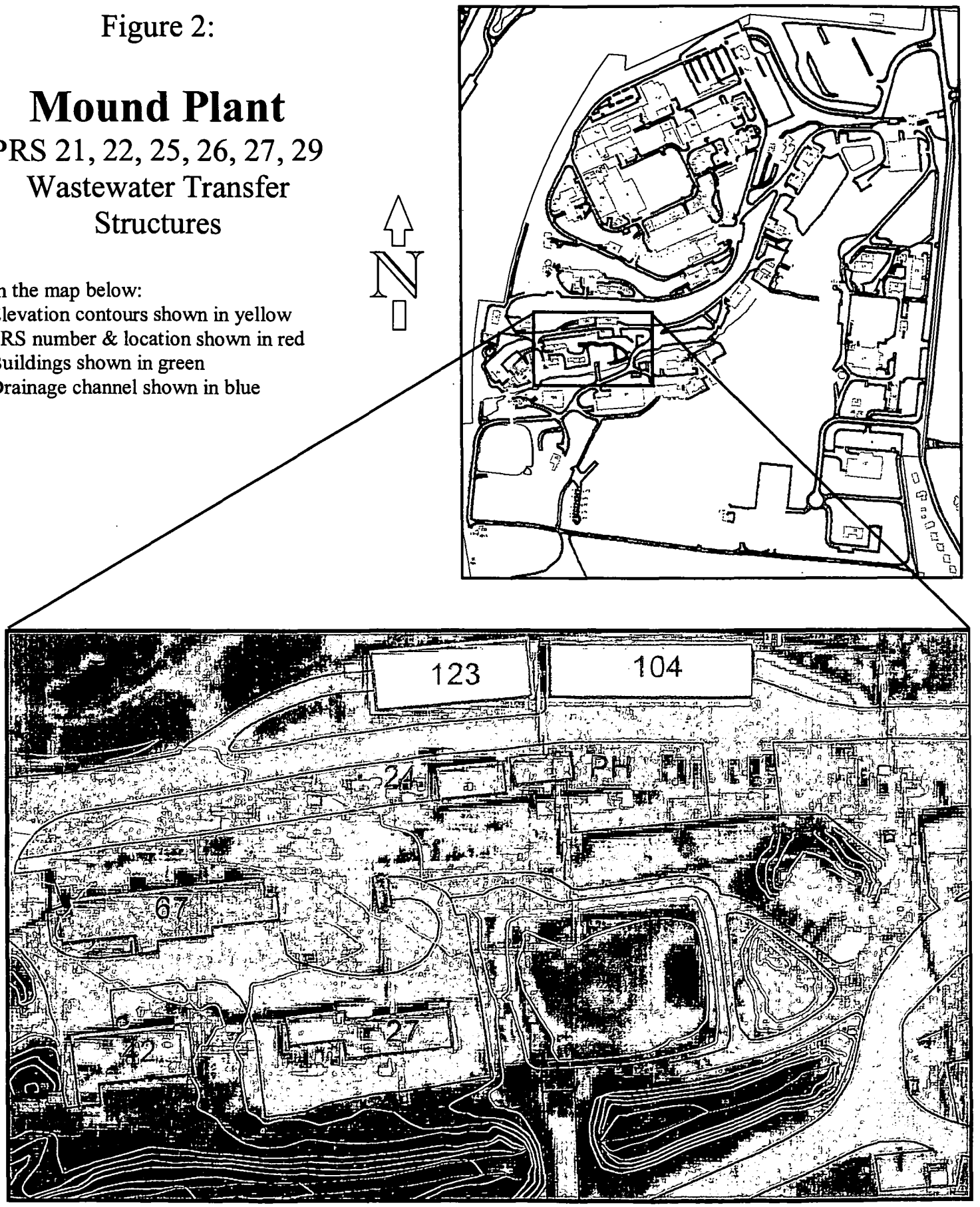
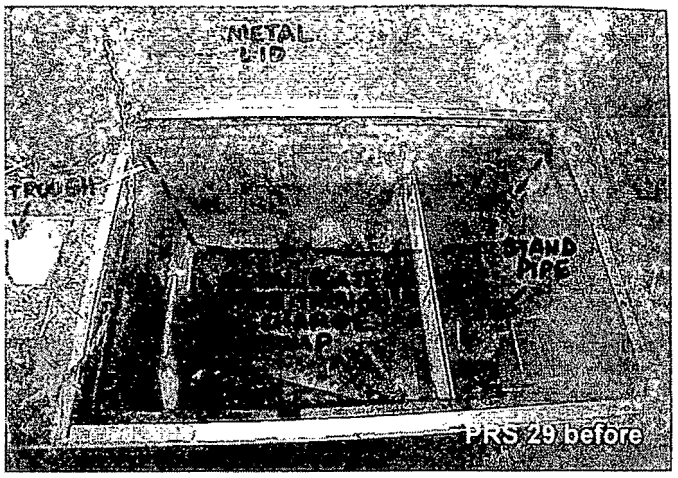
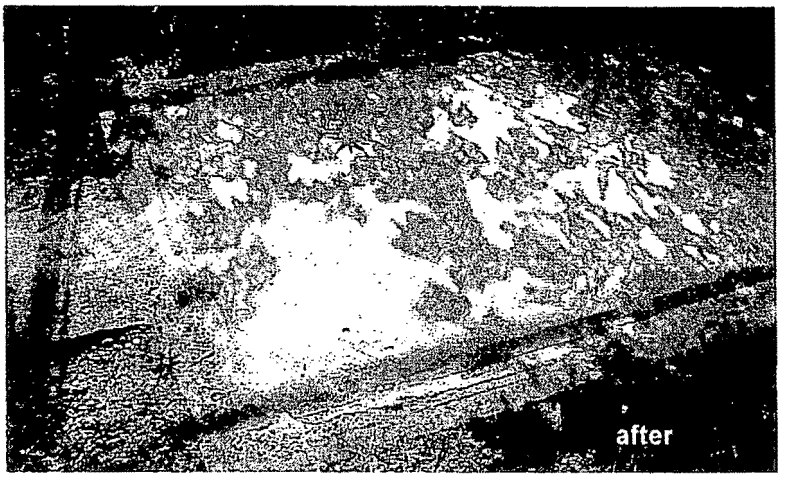
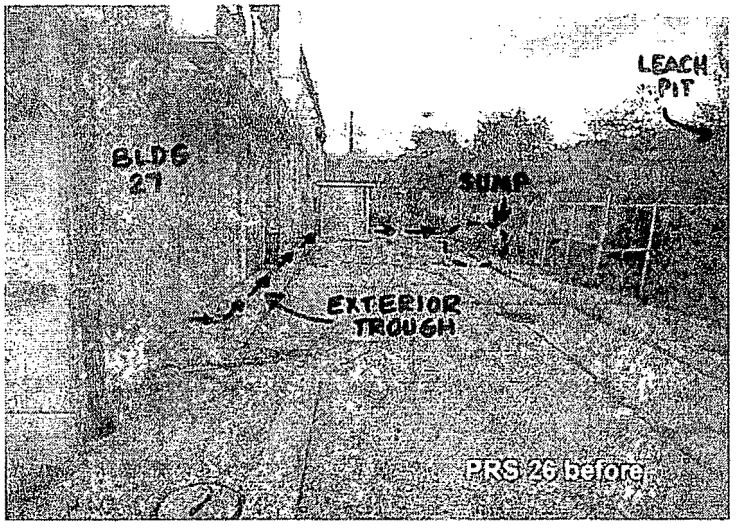


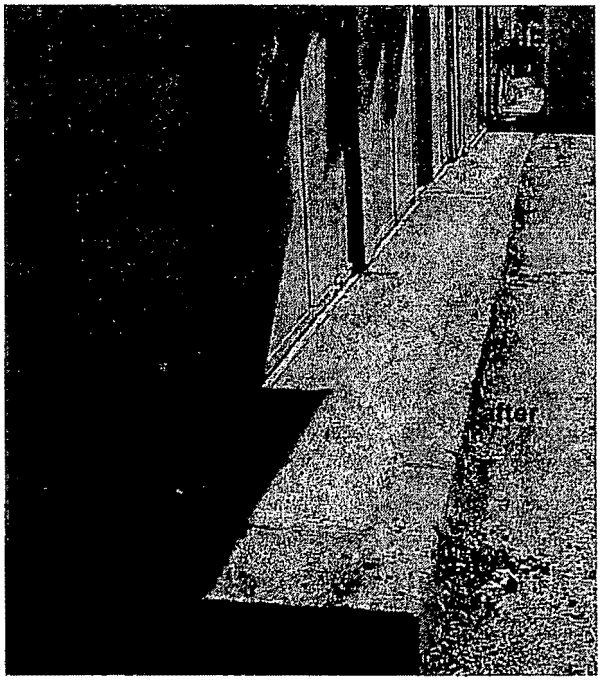
Figure 3

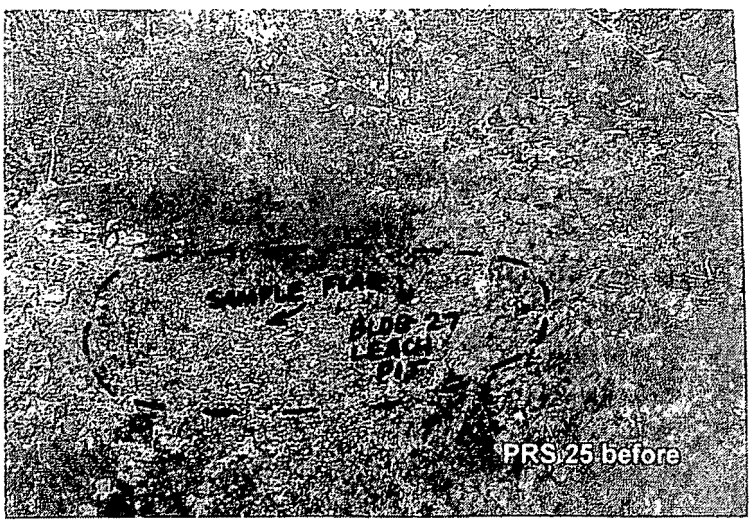
Bldg 27 Sump, Trough, & Pit











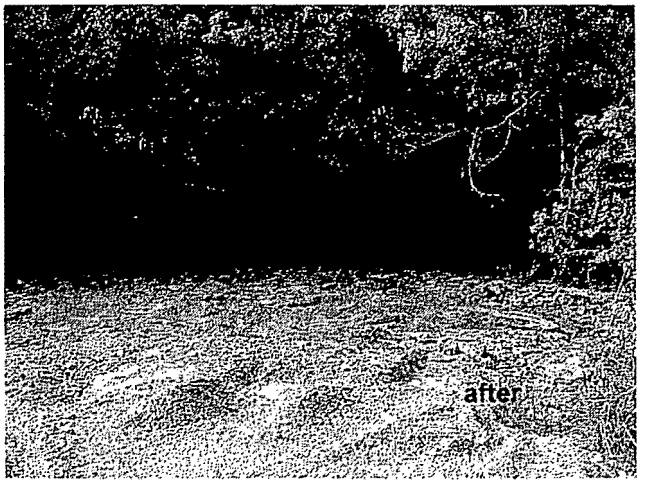
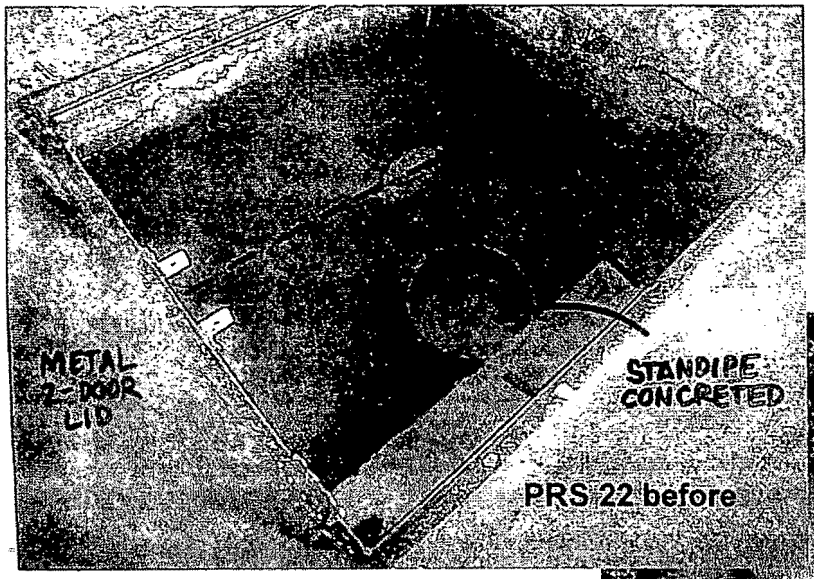


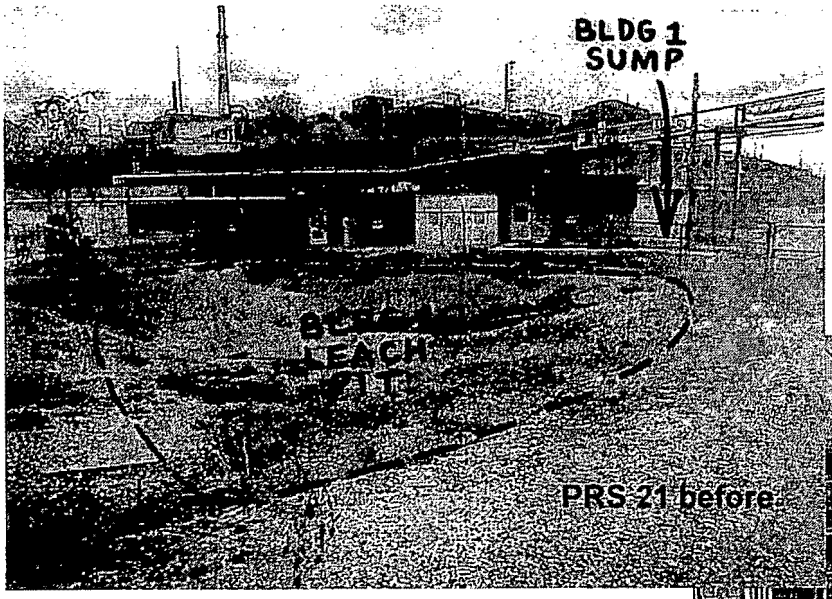
Figure 4

Bldg 1 Sump & Pit



PRS 22 before

after



PRS 21 before

after

detected during surface rinse sampling. **All results were below the 1 mg/L criteria** specified in the Closure Plan.

Table 1: Maximum Residual Surface Contamination (mg/L)

Analyte	Result & Data Qualifier	Guideline Value*	Cleanup Objective
acetone	0.010 U	21,000	1.0
acetonitrile	0.020 U	NC	1.0
toluene	0.001 U	250	1.0
methylene chloride	0.001 U	395	1.0

U: not detected at the detection limit (value presented)
*most stringent scenario of 10^{-6} or Hazard Index = 1
NC: not calculated

RADIOLOGICAL CONTAMINATION

No radiological operations were conducted in either Building 1 or Building 27, and for that reason, radionuclides were not identified as a contaminant of concern for any of the six PRSs. Radiological data; however, is reported herein for completeness and documentation.

Soil/Sediment. A limited number of samples were collected as part of previous investigations from the Building 27 and Building 1 Leach Pit areas, as well as adjacent to the Building 27 Exterior Trough and Sump. Additional sediment/soil from the bottom of the structure within the Building 1 Leach Pit was collected and analyzed for radionuclide contamination[6]. The highest activity noted for residual soil/sediment contamination associated with PRS 21, 25, 26, and 29 is presented in Table 2. PRS 22 and PRS 27 were decontaminated and contained no residual soil/sediment.

Table 2: Maximum Residual Soil/Sediment Contamination (pCi/g)

Analyte	Result & Data Qualifier	Guideline Value[a]
Plutonium-238	25	55[b]
Thorium-232	2U	0.1
Cobalt-60	0.01U	0.1
Cesium-137	0.05	0.46
Lead-210	1.62	1.7
Radium-226	1.07	0.14
Actinium-227(D)	0.05	1
Thorium-230	1.48U	c
Americium-241	0.02U	4.95

a: GV presented is most stringent scenario of 10^{-6} or Hazard Index = 1 unless otherwise specified
b: Core Team approved 10^{-5} value
c: GV currently under consideration by the Core Team
U: not detected at the detection limit (value presented)

Surface/Fixed. Interior surfaces of PRSs 22, 26, 27, and 29 were surveyed to confirm the absence of alpha (α) and beta (β)/gamma (γ) emissions. A total of 39 direct readings for alpha identification were collected on representative surfaces. The average[3] allowable residual surface contamination for transuranic α emitters is 100 dpm/100 cm^2. The maximum[3] allowable residual surface contamination for transuranic α emitters is 300 dpm/100 cm^2. **All results were below the allowable limits[4].**

Surface/Removable. A total of 39 swipes were collected from the same surfaces to confirm the absence of removable contamination. Allowable residual surface contamination guidelines for removable β/γ and transuranic α are 1,000 dpm/100cm^2 and 20 dpm/100cm^2, respectively. **All results were below the allowable limits[4].**

The sumps and exterior trough were filled with concrete to grade to permanently remove them from operation. Both leach pits were backfilled to grade per the plan. Pre and post-closure photographic documentation of these units is presented in Figure 2 and Figure 3. The **Closure Report** has been issued to Ohio EPA (approval letter pending) and includes required certifications[5] of closure.

REFERENCES:

1) Excerpts from Closure Plan, Buildings 1 & 27 Wastewater Transfer Structures, August 1999.
2) Closure Plan Approval Letter from Christopher Jones (Ohio EPA) to Oba Vincent (DOE Mound) dated 18 January 2000.
3) Excerpts from Work Plan for Environmental Restoration of the DOE Mound Site, the Mound 2000 Approach, February 1999.
4) As documented in RSDS 00-LS-151, 00-LS-157, 00-LS-161, and 00-LS-162.
5) Excerpt from Closure Report containing certifications of closure.
6) Additional Radiological data (RSDS 00-LS-062 and vistamap information).

PREPARED BY:

Karen M. Arthur, BWXTO Soils Project Engineer
Joseph C. Geneczko, BWXTO Technical Staff

MOUND PLANT
PRS 21, 22, 25, 26, 27, 29
Wastewater Transfer Structures/RCRA Closures

RECOMMENDATION:

The RCRA PRSs (21, 22, 25, 26, 27, and 29), otherwise known as wastewater transfer structures, were identified as potential release sites because of the concern that residual volatile organic compounds from past operations associated with Buildings 1 & 27 remained in/on the structures.

Available data supports that radiological contamination is within acceptable risk (10^{-5}) for industrial reuse.

A Closure Report was submitted to OEPA, which documents that the standards established for the RCRA constituents presented in the OEPA-approved Closure Plan have been met. The Core Team, therefore, now recommends No Further Assessment for PRSs 21, 22, 25, 26, 27, and 29.

CONCURRENCE:

DOE/MEMP:	Robert S. Rothman, Remedial Project Manager	10/12/00 (date)
USEPA:	Timothy J. Fischer, Remedial Project Manager	11/16/00 (date)
OEPA:	Brian K. Nickel, Project Manager	10/17/00 (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 5

MOUND TEN YEAR PLAN

formerly the Integrated Comprehensive Plan

Semiannual Issue

January 6, 1997

BUILDING ID	RELEASE BLOCK	DESCRIPTION	GROSS BUILDING AREA	Major Contamination (1)	Operations Completed	Safe Shutdown Completion Date	Building Lease Schedule Date	Shutdown II (After Lease)		Final Disposition		ICP Assumptions (2)
										Date	State (3)	
6	M	Magazine	90	No	4/94	7/96			8/98	9/98	Demolish	BD5
7	R	Storage	387	No	4/94	8/94			3/99	4/99	Demolish	BD5
8	C	Magazine	66	No	2/98	4/98			10/98	4/99	Demolish	BD5
10	C	Magazine	66	No	7/95	12/95			12/98	1/99	Demolish	BD5
11	R	Magazine	372	No	4/94	8/94			1/99	2/99	Demolish	BD5
13	E	Firing Shed	47	No	9/95	6/96			9/98	10/98	Demolish	BD5
14	E	Magazine (Old Lead Melting)	53	No	4/94	6/94				9/95	Removed	
16	R	Storage for I Bldg Area	480	No	4/94	9/94				11/95	Removed	
17	R	Warehouse	1,120	No	4/94	7/94				11/95	Removed	
19	K	Salvage & Sales	4,480	No	10/97	n/a			1/99	2/99	Sell	
20	C	Magazine	303	No	8/94	9-95			1/99	2/99	Demolish	
21	E	Raw Material Storage (Thorium Sludge)	4,069	Yes	12/95	n/a			3/02	4/02	Demolish	
22	C	Radioactive Storage Warehouse	9,090	No	3/03	n/a			6/05	7/05	Sell	BD7
23	M	Waste Material Storage Center	3,422	Yes	9/03	n/a			6/05	7/05	Sell	BD7
24	C	Water Treatment Plant	840	No	9/03	12/03				4/04	Sell	
25	O	Weather/Meteorological Station	430	No	9/99	12/99				4/01	Demolish	
26	Q	Maintenance Shop	800	No	4/94	9/94				9/95	Removed	
27	C	Explosive Processing Facility	5,285	Yes	9/94	9/95	9/95	12/99	5/01	6/01	Sell	CP9, KA16, KA19, BD5, BD7
28	O	Ceramic Production (Plastics Development)	11,329	No	5/94	11/95	11/95	1/00	6/01	7/01	Sell	CP9, KA16, KA19
29	F	Plastics Formulation Facilities	6,601	Yes	5/94	4/96			12/98	2/99	Sell	
30	F	Health Physics (SM Storage Building)	740	No	9/97	1/98				4/98	Sell	
31	F	Contaminated TRU Waste Storage (SM Area)	8,740	No	4/00	n/a			5/03	10/03	Demolish	
33	F	Old SM Area Maintenance Shop (D&D Storage)	1,344	No	10/99	9/00			10/02	11/02	Demolish	
34	J	Emergency Brigade Training Facility	1,110	Yes	10/98	9/99			4/01	5/01	Demolish	
35	C	Non-destructive Testing Facility	2,500	Yes	8/94	11/96			5/99	4/99	Sell	
36	F	Support Functions for RTG Assembly & Testing Operations	4,255	No	NE	n/a				n/a	-	CP8, CP16, KA7
37	F	(Radioactive Heat Source Testing/ Organic Materials Development)	2,463	No	NE	n/a				n/a	-	CP8, CP16, KA7
38	F	Production - aka PP Building (Plutonium Processing)	44,327	Yes	9/97	9/99			2/03	3/03	Demolish	KA4, KA8, KA9
39	F	Maintenance Offices (Old Production)	3,516	No	NE	n/a				n/a	-	CP8, CP16, KA7
40	P	Print Shop, Technical Manauals, Publications, Word Processing	12,227	No	10/97	9/98	10/98	12/99		3/00	Sell	CP9, CP13, KA16, KA19
42	C	H.E. Production (Pyrotechnic Component Fabrication Facility)	2,892	Yes	6/94	8/96			5/99	6/99	Sell	BD5
43	C	Devices Development (addition to bldg #1)	1,516	Yes	8/94	3/97			4/99	5/99	Sell	BD5
44	F	Cafeteria - SM Area	2,480	No	NE	n/a				n/a	-	CP8, CP16, KA17
45	L	Health Physics Calibration Facility	9,682	No	10/98	9/99			4/01	5/01	Sell	
46	L	Weld Development	2,439	No	9/99	6/00				5/01	Sell	
47	O	Security (Old Central Fire Station)	3,611		4/96	9/98				1/00	Demolish	
48	Q	Surveillance (Old Process Mechanization Facility)	7,950	Yes	9/95	6/99	6/99	12/99	5/01	6/01	Sell	CP9, KA16, KA19, BD5
49	C	Explosive Fabrication Facility	14,929	Yes	9/94	8/95	9/95	12/99	11/01	12/01	Sell	CP9, KA16, KA19, BD5
50	F	RTG Assembly & Testing (Alpha Fuels Environmental Test Facility)	14,849		NE	n/a				n/a	-	CP8, CP16, KA7
51	F	Pilot Scale Test Facility (Incinerator Facility)	3,541	Yes	9/95	2/98			2/99	4/99	Sell	
52	C	Magazine	78	No	11/94	9/95	11/95	12/99	8/00	9/00	Demolish	CP9, KA16, KA19
53	E	Magazine	239	No	9/95	9/96			5/97	6/97	Demolish	BD5, BD7
54	Q	Magazine (SEE DS BLDG)	331	No	5/94	9/94			11/98	12/98	Demolish	BD5

Reference 6

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

WESTON
6501 Americas Parkway N.E.
SUITE 800
ALBUQUERQUE, NM 87110
PHONE: (505) 884-5050

ER PROGRAM

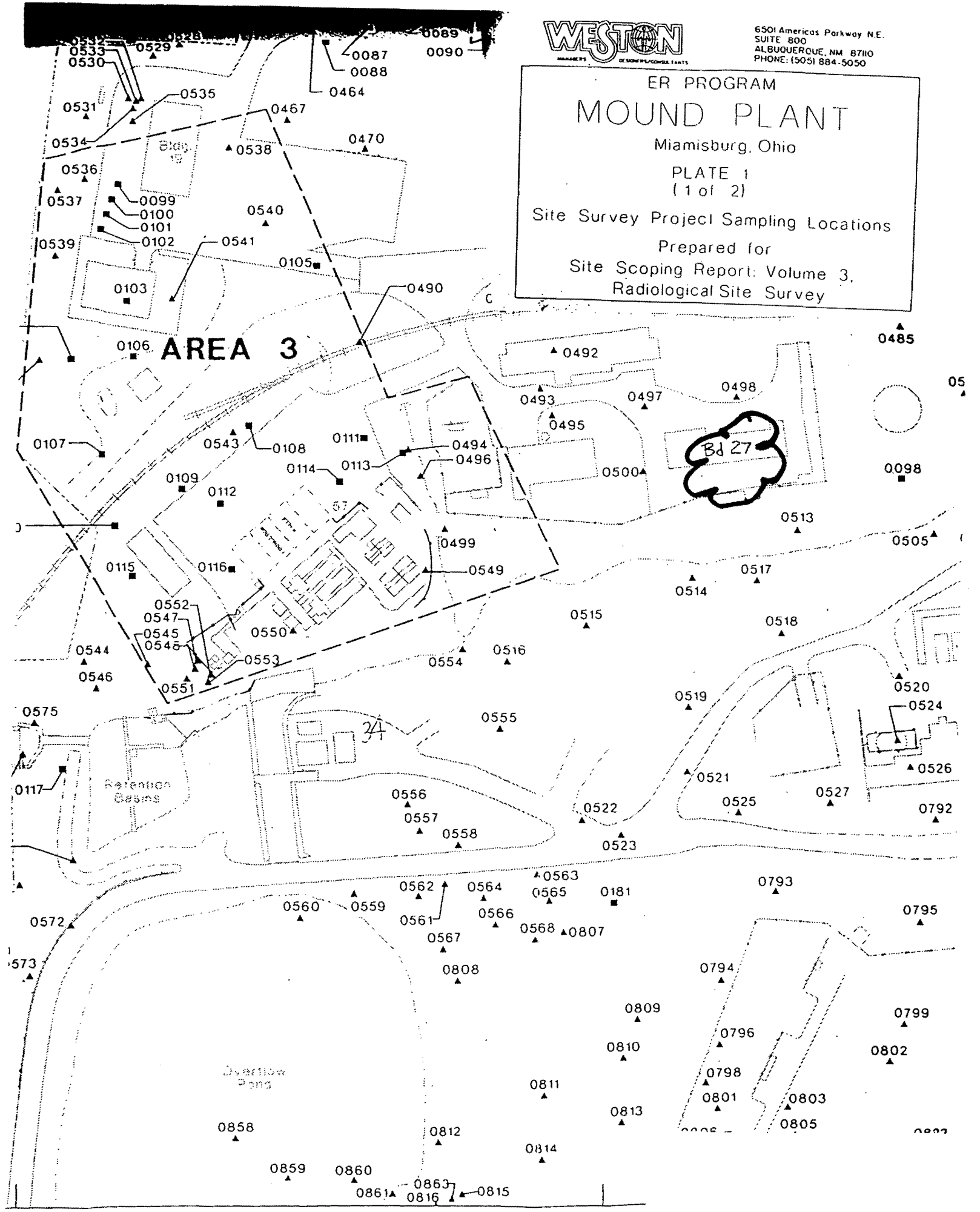
MOUND PLANT

Miamisburg, Ohio

PLATE 1
(1 of 2)

Site Survey Project Sampling Locations

Prepared for
Site Scoping Report: Volume 3,
Radiological Site Survey



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)
S0491	2200	4010	2917	10-83	0	5.26	b					
S0492	2250	3985	6872	08-84	0	0.02	b					
S0493	2275	4010	6870	08-84	0	0.03	b					
S0494	2275	4135	6874	08-74	0	1.48	b					
(The collection date of 08-74 should probably be either 08-84 or 07-84)												
S0495	2300	4010	2920	10-83	0	0.03	b					
S0496	2300	4135	6873	08-84	0	0.02	b					
S0497	2325	3935	6871	08-84	0	0.04	b					
S0498	2350	3860	2922	10-83	0	0.10	b					
S0499	2350	4135	2919	10-83	0	0.04[c]	b					
S0500	2375	3960	2921	10-83	0	0.54	b					
C0097	2400	3380	8278	10-84	72	0.46	b		LDL	LDL	1	LDL
S0501	2425	3455	2994	10-83	0	2.91	b					
S0502	2425	3655	2993	10-83	0	2.32	b					
S0503	2425	3680	2992	10-83	0	0.13	b					
S0504	2500	3655	5884	07-84	0	0.18	b					
S0505	2525	3755	5887	07-84	0	0.87	b		LDL	LDL	0.9	LDL
S0506	2550	3480	5883	07-84	0	1.32	b					
S0507	2550	3730	5886	07-84	0	1.05	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)
S0508	2575	3430	5882	07-84	0	2.83[c]	b					
S0509	2575	3680	5885	07-84	0	2.24	b					
S0510	2625	3580	2990	10-83	0	0.13[c]	b	0.19				
S0511	2625	3730	2991	10-83	0	0.89	b	1.52				
S0512	2675	3380	2988	10-83	0	0.03	b					
S0457	2675	3405	2989	10-83	0	0.25[c]	b					
C0098	2470	3760	7755	10-84	90	0.16	b					
			7756	10-84	180	0.02	b					
S0513	2475	3860	5888	07-84	0	4.57	b					
S0514	2475	3960	5896	07-84	0	0.17	b					
S0515	2475	4060	5895	07-84	0	0.26	b					
S0516	2475	4135	5894	07-84	0	1.31	b					
S0517	2500	3910	5897	07-84	0	1.43	b					
S0518	2550	3910	5898	07-84	0	1.12	b					
S0519	2575	4010	2689	09-83	0	7.28[c]	b					
S0520	2625	3835	2688	09-83	0	0.03	b					
S0521	2625	4035	5893	07-84	0	1.71	b					
S0522	2625	4135	2690	09-83	0	0.05	b					
S0523	2650	4110	5892	07-84	0	1.09	b					
S0524	2675	3860	5889	07-84	0	0.88	b					

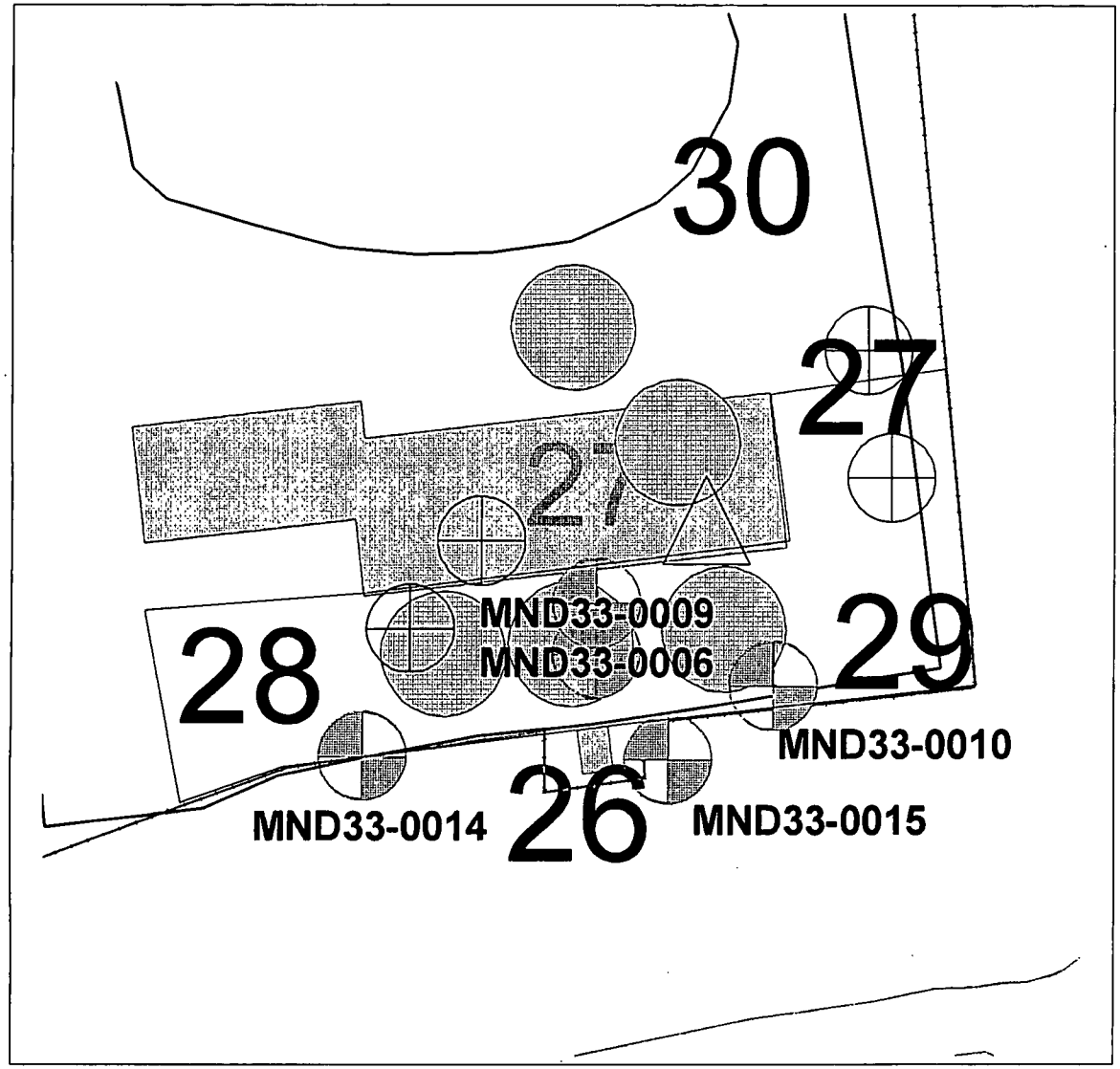
Table IV.5. Mound Site Survey Project - Area 16

Plate 1 Location[a]	Coordinates South	Coordinates West	MRC ID No.	Mo-Yr	Depth (inch)	Plutonium-238 (pCi/g)	Thorium[b] (pCi/g)	Tritium (pCi/mL)	Cobalt-60 (pCi/g)	Cesium-137 (pCi/g)	Radium-226 (pCi/g)	Americium-241 (pCi/g)
S0347	2475	2440	4103	10-83	0	1.65	b					
C0046	2440	2550	10109	07-85	18	0.21	b					
			10110	07-85	42	1.42	b					
C0047	2485	2470	10106	07-85	18	29.10	b					
			10107	07-85	36	1.45	b					
			10108	07-85	54	0.02	b					
C0048	2500	2480	10103	07-85	18	0.23	b					
			10104	07-85	36	1.30	b					
			10105	07-85	54	0.06	b					
C0049	2515	2460	10100	07-85	18	2.30	b					
			10101	07-85	36	0.51	b					
			10102	07-85	54	0.17	b					
C0050	2530	2430	10097	07-85	18	0.39	b					
			10098	07-85	36	0.60	b					
			10099	07-85	54	0.11	b					

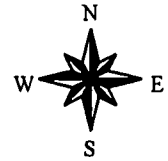
[a]Map locations are given using a "C" to designate core locations and an "S" to designate surface locations.
[b]A "b" indicates that the total thorium concentration was less than the background level of 2.0 pCi/g, using FIDLER screening. Therefore, radiochemical analysis was not performed.
[c]MRC IDs 10119 and 10120 were also assigned to the samples from core location C0059, also in Area 16.
[d]MRC IDs 10121 to 10124 were also assigned to the samples from core location C0060, also in Area 16.
[e]MRC IDs 10125 to 10128 were also assigned to the samples from core location C0061, also in Area 16. MRC ID 10128 was also assigned to the samples taken at 72 and 90 inches at C0058.
FIDLER - field instrument for the detection of low-energy radiation
LDL - The measured concentration was below the lower detection limit, estimated to be 0.5 pCi/g for cobalt-60, cesium-137, and americium-241; and 1 pCi/g for radium-226.
MRC ID - Monsanto Research Corporation identification
NR - No result given
pCi/g - picocuries per gram
pCi/mL - picocuries per milliliter

Reference 7

PRS 28 Sample Locations



— Sample Detect Outline
Sample Detect
Sample Location Outline
— Soil Boring Outline
— Surface Sample Outline
Fence
— Fence Line
PRS Point
Fill
PRS Label
Text Site ID
Building Label
Text Bldg ID
Building Outline
--- Hidden Building Outline
— Building Outline
Building
Color Fill
Roads
— Paved Drives/Parking
..... Unpaved Drives/Parking
Hydrology
River
Pond
— Creek/Stream



Location_name	Sample_id	Location_typ	Collection_c	Value_name	Measured_val	Value_units	Detection	Chem_class	Start_c	End_d	CAS_number	Lab_	Da	Project_co	Media	Comments
MND33-0006	0006-0001	Borehole	19910627	Tetrachloroethene	12.000	UG/KG	5.000	ORVOA	0.0	2.0	127-18-4			MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Acetone	27.000	UG/KG	11.000	ORVOA	0.0	2.0	67-64-1	B	J	MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Aluminum	4990.000	MG/KG	0.060	INORG	0.0	2.0	7429-90-5	*	J	MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Iron	12300.000	MG/KG	0.010	INORG	0.0	2.0	7439-89-6	*		MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Lead	10.000	MG/KG	0.002	INORG	0.0	2.0	7439-92-1		J	MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Magnesium	34400.000	MG/KG	0.050	INORG	0.0	2.0	7439-95-4	*	J	MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Manganese	337.000	MG/KG	0.002	INORG	0.0	2.0	7439-96-5		J	MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Nickel	23.000	MG/KG	0.020	INORG	0.0	2.0	7440-02-0			MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Potassium	1010.000	MG/KG	0.100	INORG	0.0	2.0	7440-09-7			MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Silver	**15.700**	MG/KG	0.010	INORG	0.0	2.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0001	Borehole	19910627	Sodium	180.000	MG/KG	0.100	INORG	0.0	2.0	7440-23-5			MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Antimony	27.100	MG/KG	0.030	INORG	0.0	2.0	7440-36-0		J	MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Arsenic	4.200	MG/KG	0.002	INORG	0.0	2.0	7440-38-2		J	MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Barium	34.600	MG/KG	0.002	INORG	0.0	2.0	7440-39-3			MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Beryllium	0.670	MG/KG	0.002	INORG	0.0	2.0	7440-41-7	B		MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Cadmium	**4.800**	MG/KG	0.002	INORG	0.0	2.0	7440-43-9		J	MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0001	Borehole	19910627	Chromium	**25.900**	MG/KG	0.010	INORG	0.0	2.0	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0001	Borehole	19910627	Cobalt	9.000	MG/KG	0.010	INORG	0.0	2.0	7440-48-4			MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Copper	17.900	MG/KG	0.010	INORG	0.0	2.0	7440-50-8			MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Vanadium	21.400	MG/KG	0.010	INORG	0.0	2.0	7440-62-2			MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Zinc	34.700	MG/KG	0.005	INORG	0.0	2.0	7440-66-6	*		MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	Calcium	113000.000	MG/KG	0.020	INORG	0.0	2.0	7440-70-2			MND33	Soil	
MND33-0006	0006-0001	Borehole	19910627	2-Butanone	2.000	UG/KG	11.000	ORVOA	0.0	2.0	78-93-3	J	J	MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Bis(2-ethylhexyl)phthal	220.000	UG/KG	790.000	ORSVO	8.0	12.0	117-81-7	J	J	MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Tetrachloroethene	4.000	UG/KG	6.000	ORVOA	8.0	12.0	127-18-4	J	J	MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Aluminum	11000.000	MG/KG	0.060	INORG	8.0	12.0	7429-90-5	*	J	MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Iron	23000.000	MG/KG	0.010	INORG	8.0	12.0	7439-89-6	*		MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Magnesium	12000.000	MG/KG	0.050	INORG	8.0	12.0	7439-95-4	*	J	MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Manganese	432.000	MG/KG	0.006	INORG	8.0	12.0	7439-96-5		J	MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Nickel	26.600	MG/KG	0.020	INORG	8.0	12.0	7440-02-0			MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Potassium	**2030.000**	MG/KG	0.100	INORG	8.0	12.0	7440-09-7			MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0003	Borehole	19910627	Silver	**13.500**	MG/KG	0.010	INORG	8.0	12.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0003	Borehole	19910627	Sodium	228.000	MG/KG	0.100	INORG	8.0	12.0	7440-23-5			MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Antimony	14.800	MG/KG	0.030	INORG	8.0	12.0	7440-36-0		J	MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Arsenic	1.900	MG/KG	0.002	INORG	8.0	12.0	7440-38-2		J	MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Barium	37.500	MG/KG	0.002	INORG	8.0	12.0	7440-39-3			MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Beryllium	**0.820**	MG/KG	0.002	INORG	8.0	12.0	7440-41-7	B		MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0006	0006-0003	Borehole	19910627	Cadmium	1.800	MG/KG	0.002	INORG	8.0	12.0	7440-43-9		J	MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Chromium	**29.200**	MG/KG	0.010	INORG	8.0	12.0	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0003	Borehole	19910627	Cobalt	14.000	MG/KG	0.010	INORG	8.0	12.0	7440-48-4			MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Copper	19.500	MG/KG	0.010	INORG	8.0	12.0	7440-50-8			MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Vanadium	22.100	MG/KG	0.010	INORG	8.0	12.0	7440-62-2			MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Zinc	46.800	MG/KG	0.005	INORG	8.0	12.0	7440-66-6	*		MND33	Soil	
MND33-0006	0006-0003	Borehole	19910627	Calcium	85500.000	MG/KG	0.020	INORG	8.0	12.0	7440-70-2			MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Acetone	56.000	UG/KG	12.000	ORVOA	2.0	6.0	67-64-1	B	J	MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Aluminum	13000.000	MG/KG	0.060	INORG	2.0	6.0	7429-90-5	*	J	MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Iron	27900.000	MG/KG	0.010	INORG	2.0	6.0	7439-89-6	*		MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Lead	10.000	MG/KG	0.002	INORG	2.0	6.0	7439-92-1		J	MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Magnesium	8650.000	MG/KG	0.050	INORG	2.0	6.0	7439-95-4	*	J	MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Manganese	766.000	MG/KG	0.002	INORG	2.0	6.0	7439-96-5		J	MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Nickel	29.900	MG/KG	0.020	INORG	2.0	6.0	7440-02-0			MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Potassium	**2340.000**	MG/KG	0.100	INORG	2.0	6.0	7440-09-7			MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0002	Borehole	19910627	Silver	**14.700**	MG/KG	0.010	INORG	2.0	6.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0002	Borehole	19910627	Sodium	**372.000**	MG/KG	0.100	INORG	2.0	6.0	7440-23-5			MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0002	Borehole	19910627	Antimony	13.600	MG/KG	0.030	INORG	2.0	6.0	7440-36-0		J	MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Arsenic	2.600	MG/KG	0.002	INORG	2.0	6.0	7440-38-2		J	MND33	Soil	

Location_name	Sample_id	Location_typ	Collection_c	Value_name	Measured_val	Value_units	Detection	Chem_class	Start_c	End_d	CAS_number	Lab_	Da	Project_cc	Media	Comments
MND33-0006	0006-0002	Borehole	19910627	Barium	40.400	MG/KG	0.002	INORG	2.0	6.0	7440-39-3			MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Beryllium	**0.990**	MG/KG	0.002	INORG	2.0	6.0	7440-41-7	B		MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0006	0006-0002	Borehole	19910627	Cadmium	1.400	MG/KG	0.002	INORG	2.0	6.0	7440-43-9		J	MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Chromium	**33.100**	MG/KG	0.010	INORG	2.0	6.0	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0002	Borehole	19910627	Cobalt	17.300	MG/KG	0.010	INORG	2.0	6.0	7440-48-4			MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Copper	24.800	MG/KG	0.010	INORG	2.0	6.0	7440-50-8			MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Vanadium	**27.600**	MG/KG	0.010	INORG	2.0	6.0	7440-62-2			MND33	Soil	2-Exceeds background value.
MND33-0006	0006-0002	Borehole	19910627	Zinc	61.700	MG/KG	0.005	INORG	2.0	6.0	7440-66-6	*		MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	Calcium	97700.000	MG/KG	0.020	INORG	2.0	6.0	7440-70-2			MND33	Soil	
MND33-0006	0006-0002	Borehole	19910627	2-Butanone	5.000	UG/KG	12.000	ORVOA	2.0	6.0	78-93-3	J	J	MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Tetrachloroethene	1.000	UG/KG	6.000	ORVOA	8.0	12.0	127-18-4	J	J	MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Aluminum	7980.000	MG/KG	0.060	INORG	8.0	12.0	7429-90-5	*	J	MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Iron	18900.000	MG/KG	0.010	INORG	8.0	12.0	7439-89-6	*		MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Lead	7.100	MG/KG	0.002	INORG	8.0	12.0	7439-92-1		J	MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Magnesium	13900.000	MG/KG	0.050	INORG	8.0	12.0	7439-95-4	*	J	MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Manganese	385.000	MG/KG	0.002	INORG	8.0	12.0	7439-96-5		J	MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Nickel	21.400	MG/KG	0.020	INORG	8.0	12.0	7440-02-0			MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Potassium	1410.000	MG/KG	0.100	INORG	8.0	12.0	7440-09-7			MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Silver	**15.500**	MG/KG	0.010	INORG	8.0	12.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0009	0009-0003	Borehole	19910628	Sodium	166.000	MG/KG	0.100	INORG	8.0	12.0	7440-23-5			MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Antimony	17.300	MG/KG	0.030	INORG	8.0	12.0	7440-36-0		J	MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Arsenic	2.400	MG/KG	0.002	INORG	8.0	12.0	7440-38-2		J	MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Barium	29.200	MG/KG	0.002	INORG	8.0	12.0	7440-39-3			MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Beryllium	**0.770**	MG/KG	0.002	INORG	8.0	12.0	7440-41-7	B		MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0009	0009-0003	Borehole	19910628	Cadmium	**2.200**	MG/KG	0.002	INORG	8.0	12.0	7440-43-9		J	MND33	Soil	2-Exceeds background value.
MND33-0009	0009-0003	Borehole	19910628	Chromium	**27.700**	MG/KG	0.010	INORG	8.0	12.0	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0009	0009-0003	Borehole	19910628	Cobalt	11.100	MG/KG	0.010	INORG	8.0	12.0	7440-48-4			MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Copper	18.300	MG/KG	0.010	INORG	8.0	12.0	7440-50-8			MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Vanadium	20.600	MG/KG	0.010	INORG	8.0	12.0	7440-62-2			MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Zinc	39.200	MG/KG	0.005	INORG	8.0	12.0	7440-66-6	*		MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	Calcium	114000.000	MG/KG	0.020	INORG	8.0	12.0	7440-70-2			MND33	Soil	
MND33-0009	0009-0003	Borehole	19910628	2-Butanone	3.000	UG/KG	12.000	ORVOA	8.0	12.0	78-93-3	J	J	MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Tetrachloroethene	1.000	UG/KG	6.000	ORVOA	3.0	6.0	127-18-4	J	J	MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Aluminum	9480.000	MG/KG	0.060	INORG	3.0	6.0	7429-90-5	*	J	MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Iron	21200.000	MG/KG	0.010	INORG	3.0	6.0	7439-89-6	*		MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Lead	6.700	MG/KG	0.002	INORG	3.0	6.0	7439-92-1		J	MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Magnesium	17400.000	MG/KG	0.050	INORG	3.0	6.0	7439-95-4	*	J	MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Manganese	458.000	MG/KG	0.002	INORG	3.0	6.0	7439-96-5		J	MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Nickel	26.800	MG/KG	0.020	INORG	3.0	6.0	7440-02-0			MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Potassium	1720.000	MG/KG	0.100	INORG	3.0	6.0	7440-09-7			MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Silver	**13.500**	MG/KG	0.010	INORG	3.0	6.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0009	0009-0002	Borehole	19910628	Sodium	202.000	MG/KG	0.100	INORG	3.0	6.0	7440-23-5			MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Antimony	18.500	MG/KG	0.030	INORG	3.0	6.0	7440-36-0		J	MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Arsenic	3.000	MG/KG	0.002	INORG	3.0	6.0	7440-38-2		J	MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Barium	32.000	MG/KG	0.002	INORG	3.0	6.0	7440-39-3			MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Beryllium	**0.770**	MG/KG	0.002	INORG	3.0	6.0	7440-41-7	B		MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0009	0009-0002	Borehole	19910628	Cadmium	**2.500**	MG/KG	0.002	INORG	3.0	6.0	7440-43-9		J	MND33	Soil	2-Exceeds background value.
MND33-0009	0009-0002	Borehole	19910628	Chromium	**28.100**	MG/KG	0.010	INORG	3.0	6.0	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0009	0009-0002	Borehole	19910628	Cobalt	13.400	MG/KG	0.010	INORG	3.0	6.0	7440-48-4			MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Copper	23.000	MG/KG	0.010	INORG	3.0	6.0	7440-50-8			MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Vanadium	23.100	MG/KG	0.010	INORG	3.0	6.0	7440-62-2			MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Zinc	43.500	MG/KG	0.005	INORG	3.0	6.0	7440-66-6	*		MND33	Soil	
MND33-0009	0009-0002	Borehole	19910628	Calcium	84400.000	MG/KG	0.020	INORG	3.0	6.0	7440-70-2			MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Tetrachloroethene	2.000	UG/KG	5.000	ORVOA	0.0	1.0	127-18-4	J	J	MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Aluminum	6700.000	MG/KG	0.060	INORG	0.0	1.0	7429-90-5	*	J	MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Iron	16000.000	MG/KG	0.010	INORG	0.0	1.0	7439-89-6	*		MND33	Soil	

Location_name	Sample_id	Location_typ	Collection_d	Value_name	Measured_val	Value_units	Detection	Chem_class	Start_d	End_d	CAS_number	Lab	Da	Project_cc	Media	Comments
MND33-0009	0009-0001	Borehole	19910628	Lead	7.400	MG/KG	0.002	INORG	0.0	1.0	7439-92-1		J	MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Magnesium	31800.000	MG/KG	0.050	INORG	0.0	1.0	7439-95-4	*	J	MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Manganese	262.000	MG/KG	0.002	INORG	0.0	1.0	7439-96-5		J	MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Nickel	24.500	MG/KG	0.020	INORG	0.0	1.0	7440-02-0			MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Potassium	1020.000	MG/KG	0.100	INORG	0.0	1.0	7440-09-7			MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Silver	**13.800**	MG/KG	0.010	INORG.	0.0	1.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0009	0009-0001	Borehole	19910628	Sodium	170.000	MG/KG	0.100	INORG	0.0	1.0	7440-23-5			MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Antimony	25.500	MG/KG	0.030	INORG	0.0	1.0	7440-36-0		J	MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Arsenic	4.800	MG/KG	0.002	INORG	0.0	1.0	7440-38-2		J	MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Barium	25.800	MG/KG	0.002	INORG	0.0	1.0	7440-39-3			MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Beryllium	**0.710**	MG/KG	0.002	INORG	0.0	1.0	7440-41-7	B		MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0009	0009-0001	Borehole	19910628	Cadmium	**4.300**	MG/KG	0.002	INORG	0.0	1.0	7440-43-9		J	MND33	Soil	2-Exceeds background value.
MND33-0009	0009-0001	Borehole	19910628	Chromium	**24.900**	MG/KG	0.010	INORG	0.0	1.0	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0009	0009-0001	Borehole	19910628	Cobalt	9.900	MG/KG	0.010	INORG	0.0	1.0	7440-48-4			MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Copper	25.300	MG/KG	0.010	INORG	0.0	1.0	7440-50-8			MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Vanadium	23.600	MG/KG	0.010	INORG	0.0	1.0	7440-62-2			MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Zinc	39.700	MG/KG	0.005	INORG	0.0	1.0	7440-66-6	*		MND33	Soil	
MND33-0009	0009-0001	Borehole	19910628	Calcium	87800.000	MG/KG	0.020	INORG	0.0	1.0	7440-70-2			MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Aluminum	8550.000	MG/KG	6.000	INORG	2.5	6.5	7429-90-5	*	J	MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Iron	15900.000	MG/KG	1.000	INORG	2.5	6.5	7439-89-6	*		MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Lead	6.200	MG/KG	0.200	INORG	2.5	6.5	7439-92-1		J	MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Magnesium	9700.000	MG/KG	5.000	INORG	2.5	6.5	7439-95-4	*	J	MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Manganese	537.000	MG/KG	0.200	INORG	2.5	6.5	7439-96-5		J	MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Nickel	19.100	MG/KG	2.000	INORG	2.5	6.5	7440-02-0			MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Potassium	1120.000	MG/KG	10.000	INORG	2.5	6.5	7440-09-7			MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Silver	**10.800**	MG/KG	1.000	INORG	2.5	6.5	7440-22-4			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0003	Borehole	19910629	Sodium	118.000	MG/KG	10.000	INORG	2.5	6.5	7440-23-5	B		MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Thallium	0.450	MG/KG	0.450	INORG	2.5	6.5	7440-28-0			MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Antimony	3.300	MG/KG	3.000	INORG	2.5	6.5	7440-36-0		J	MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Arsenic	3.300	MG/KG	0.200	INORG	2.5	6.5	7440-38-2			MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Barium	72.300	MG/KG	0.200	INORG	2.5	6.5	7440-39-3			MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Beryllium	0.650	MG/KG	0.200	INORG	2.5	6.5	7440-41-7	B		MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Cadmium	1.200	MG/KG	0.200	INORG	2.5	6.5	7440-43-9		J	MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Chromium	**24.700**	MG/KG	1.000	INORG	2.5	6.5	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0003	Borehole	19910629	Cobalt	10.200	MG/KG	1.000	INORG	2.5	6.5	7440-48-4	B		MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Copper	22.100	MG/KG	1.000	INORG	2.5	6.5	7440-50-8			MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Vanadium	**27.600**	MG/KG	1.000	INORG	2.5	6.5	7440-62-2			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0003	Borehole	19910629	Zinc	47.400	MG/KG	0.500	INORG	2.5	6.5	7440-66-6	*		MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Calcium	52200.000	MG/KG	2.000	INORG	2.5	6.5	7440-70-2			MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	Carbon Disulfide	3.000	UG/KG	6.000	ORVOA	2.5	6.5	75-15-0	J	J	MND33	Soil	
MND33-0010	0010-0003	Borehole	19910629	2-Butanone	7.000	UG/KG	11.000	ORVOA	2.5	6.5	78-93-3	J	J	MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	4-Methyl-2-pentanone	8.000	UG/KG	11.000	ORVOA	0.0	0.5	108-10-1	J	J	MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Xylenes, Total	2.000	UG/KG	6.000	ORVOA	0.0	0.5	1330-20-7	J	J	MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Benzene	5.000	UG/KG	6.000	ORVOA	0.0	0.5	71-43-2	J	J	MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Aluminum	1590.000	MG/KG	6.000	INORG	0.0	0.5	7429-90-5	*	J	MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Iron	4630.000	MG/KG	1.000	INORG	0.0	0.5	7439-89-6	*		MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Lead	5.400	MG/KG	0.200	INORG	0.0	0.5	7439-92-1		J	MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Magnesium	**82300.000**	MG/KG	5.000	INORG	0.0	0.5	7439-95-4	*	J	MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0001	Borehole	19910629	Manganese	145.000	MG/KG	0.200	INORG	0.0	0.5	7439-96-5		J	MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Nickel	15.800	MG/KG	2.000	INORG	0.0	0.5	7440-02-0			MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Potassium	783.000	MG/KG	10.000	INORG	0.0	0.5	7440-09-7	B		MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Silver	**18.300**	MG/KG	1.000	INORG	0.0	0.5	7440-22-4			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0001	Borehole	19910629	Sodium	213.000	MG/KG	10.000	INORG	0.0	0.5	7440-23-5	B		MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Thallium	0.430	MG/KG	0.430	INORG	0.0	0.5	7440-28-0			MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Antimony	40.900	MG/KG	3.000	INORG	0.0	0.5	7440-36-0		J	MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Arsenic	3.100	MG/KG	0.200	INORG	0.0	0.5	7440-38-2		J	MND33	Soil	

Location_name	Sample_id	Location_typ	Collection_c	Value_name	Measured_val	Value_units	Detection	Chem_class	Start_c	End_d	CAS_number	Lab_	Da	Project_co	Media	Comments
MND33-0010	0010-0001	Borehole	19910629	Barium	16.000	MG/KG	0.200	INORG	0.0	0.5	7440-39-3	B		MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Beryllium	0.590	MG/KG	0.200	INORG	0.0	0.5	7440-41-7	B		MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Cadmium	**8.700**	MG/KG	0.200	INORG	0.0	0.5	7440-43-9		J	MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0001	Borehole	19910629	Chromium	**23.500**	MG/KG	1.000	INORG	0.0	0.5	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0001	Borehole	19910629	Cobalt	6.100	MG/KG	1.000	INORG	0.0	0.5	7440-48-4	B		MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Copper	11.100	MG/KG	1.000	INORG	0.0	0.5	7440-50-8			MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Vanadium	22.300	MG/KG	1.000	INORG	0.0	0.5	7440-62-2			MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Zinc	26.100	MG/KG	0.500	INORG	0.0	0.5	7440-66-6	*		MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Calcium	167000.000	MG/KG	2.000	INORG	0.0	0.5	7440-70-2			MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	Carbon Disulfide	9.000	UG/KG	6.000	ORVOA	0.0	0.5	75-15-0		J	MND33	Soil	
MND33-0010	0010-0001	Borehole	19910629	2-Butanone	5.000	UG/KG	11.000	ORVOA	0.0	0.5	78-93-3	J	J	MND33	Soil	
MND33-0010	0010-0002	Borehole	19910629	Di-n-octyl Phthalate	77.000	UG/KG	710.000	ORSVO	1.5	2.5	117-84-0	J	J	MND33	Soil	
MND33-0010	0010-0002	Borehole	19910629	2-Butanone	3.000	UG/KG	11.000	ORVOA	1.5	2.5	78-93-3	J	J	MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Xylenes, Total	2.000	UG/KG	6.000	ORVOA	18.5	20.5	1330-20-7	J	J	MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Aluminum	4950.000	MG/KG	6.000	INORG	18.5	20.5	7429-90-5	*	J	MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Iron	11500.000	MG/KG	1.000	INORG	18.5	20.5	7439-89-6	*		MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Lead	6.400	MG/KG	0.200	INORG	18.5	20.5	7439-92-1		J	MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Magnesium	**47100.000**	MG/KG	5.000	INORG	18.5	20.5	7439-95-4	*	J	MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0006	Borehole	19910629	Manganese	343.000	MG/KG	0.200	INORG	18.5	20.5	7439-96-5		J	MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Nickel	26.000	MG/KG	2.000	INORG	18.5	20.5	7440-02-0			MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Potassium	1020.000	MG/KG	10.000	INORG	18.5	20.5	7440-09-7	B		MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Silver	**16.900**	MG/KG	1.000	INORG	18.5	20.5	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0006	Borehole	19910629	Sodium	**294.000**	MG/KG	10.000	INORG	18.5	20.5	7440-23-5	B		MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0006	Borehole	19910629	Antimony	29.000	MG/KG	3.000	INORG	18.5	20.5	7440-36-0		J	MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Arsenic	5.300	MG/KG	0.200	INORG	18.5	20.5	7440-38-2		J	MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Barium	40.700	MG/KG	0.200	INORG	18.5	20.5	7440-39-3	B		MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Beryllium	0.640	MG/KG	0.200	INORG	18.5	20.5	7440-41-7	B		MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Cadmium	**5.900**	MG/KG	0.200	INORG	18.5	20.5	7440-43-9		J	MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0006	Borehole	19910629	Chromium	**27.600**	MG/KG	1.000	INORG	18.5	20.5	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0006	Borehole	19910629	Cobalt	9.800	MG/KG	1.000	INORG	18.5	20.5	7440-48-4	B		MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Copper	17.700	MG/KG	1.000	INORG	18.5	20.5	7440-50-8			MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Vanadium	23.800	MG/KG	1.000	INORG	18.5	20.5	7440-62-2			MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Zinc	37.100	MG/KG	0.500	INORG	18.5	20.5	7440-66-6	*		MND33	Soil	
MND33-0010	0010-0006	Borehole	19910629	Calcium	117000.000	MG/KG	2.000	INORG	18.5	20.5	7440-70-2			MND33	Soil	
MND33-0010	0010-0004	Borehole	19910629	Tetrachloroethene	3.000	UG/KG	6.000	ORVOA	8.5	12.5	127-18-4	J	J	MND33	Soil	
MND33-0010	0010-0004	Borehole	19910629	2-Butanone	4.000	UG/KG	12.000	ORVOA	8.5	12.5	78-93-3	J	J	MND33	Soil	
MND33-0010	0010-0004	Borehole	19910629	Trichloroethene	2.000	UG/KG	6.000	ORVOA	8.5	12.5	79-01-6	J	J	MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Aluminum	14000.000	MG/KG	6.000	INORG	14.5	18.5	7429-90-5	*	J	MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Iron	27600.000	MG/KG	1.000	INORG	14.5	18.5	7439-89-6	*		MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Lead	14.900	MG/KG	0.200	INORG	14.5	18.5	7439-92-1		J	MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Magnesium	7180.000	MG/KG	5.000	INORG	14.5	18.5	7439-95-4	*	J	MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Manganese	1320.000	MG/KG	0.200	INORG	14.5	18.5	7439-96-5		J	MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Nickel	29.000	MG/KG	2.000	INORG	14.5	18.5	7440-02-0			MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Potassium	**2080.000**	MG/KG	10.000	INORG	14.5	18.5	7440-09-7			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0005	Borehole	19910629	Silver	**4.400**	MG/KG	1.000	INORG	14.5	18.5	7440-22-4			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0005	Borehole	19910629	Sodium	**369.000**	MG/KG	10.000	INORG	14.5	18.5	7440-23-5	B		MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0005	Borehole	19910629	Thallium	**0.470**	MG/KG	0.470	INORG	14.5	18.5	7440-28-0			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0005	Borehole	19910629	Antimony	7.000	MG/KG	7.000	INORG	14.5	18.5	7440-36-0		J	MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Arsenic	7.600	MG/KG	0.200	INORG	14.5	18.5	7440-38-2		J	MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Barium	85.600	MG/KG	0.200	INORG	14.5	18.5	7440-39-3			MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Beryllium	**0.870**	MG/KG	0.200	INORG	14.5	18.5	7440-41-7	B		MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0010	0010-0005	Borehole	19910629	Cadmium	0.750	MG/KG	0.200	INORG	14.5	18.5	7440-43-9		J	MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Chromium	**23.600**	MG/KG	1.000	INORG	14.5	18.5	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0010	0010-0005	Borehole	19910629	Cobalt	17.100	MG/KG	1.000	INORG	14.5	18.5	7440-48-4			MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Copper	20.000	MG/KG	1.000	INORG	14.5	18.5	7440-50-8			MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Vanadium	**29.200**	MG/KG	1.000	INORG	14.5	18.5	7440-62-2			MND33	Soil	2-Exceeds background value.

Location_name	Sample_id	Location_typ	Collection_c	Value_name	Measured_val	Value_units	Detection	Chem_class	Start_c	End_d	CAS_number	Lab	Da	Project_cc	Media	Comments
MND33-0010	0010-0005	Borehole	19910629	Zinc	60.400	MG/KG	0.500	INORG	14.5	18.5	7440-66-6	*		MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Calcium	14500.000	MG/KG	2.000	INORG	14.5	18.5	7440-70-2			MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	Carbon Disulfide	6.000	UG/KG	6.000	ORVOA	14.5	18.5	75-15-0	J	J	MND33	Soil	
MND33-0010	0010-0005	Borehole	19910629	2-Butanone	63.000	UG/KG	12.000	ORVOA	14.5	18.5	78-93-3		J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Aroclor-1260	**25.400**	UG/KG	160.000	ORPPB	2.0	3.0	11096-82-5	J	J	MND33	Soil	2-Exceeds background value.
MND33-0014	0014-0002	Borehole	19910701	Aroclor-1254	42.400	UG/KG	160.000	ORPPB	2.0	3.0	11097-69-1	J	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Bis(2-ethylhexyl)phthal	140.000	UG/KG	730.000	ORSVO	2.0	3.0	117-81-7	J	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Di-n-octyl Phthalate	300.000	UG/KG	730.000	ORSVO	2.0	3.0	117-84-0	J	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Pyrene	240.000	UG/KG	730.000	ORSVO	2.0	3.0	129-00-0	J	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Benzo(b)fluoranthene	230.000	UG/KG	730.000	ORSVO	2.0	3.0	205-99-2	J	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Fluoranthene	250.000	UG/KG	730.000	ORSVO	2.0	3.0	206-44-0	J	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Chrysene	240.000	UG/KG	730.000	ORSVO	2.0	3.0	218-01-9	J	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Benzo(a)pyrene	77.000	UG/KG	730.000	ORSVO	2.0	3.0	50-32-8	J	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Benzo(a)anthracene	110.000	UG/KG	730.000	ORSVO	2.0	3.0	56-55-3	J	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Aluminum	8220.000	MG/KG	0.060	INORG	2.0	3.0	7429-90-5	*	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Iron	19700.000	MG/KG	0.010	INORG	2.0	3.0	7439-89-6	*		MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Lead	7.000	MG/KG	0.002	INORG	2.0	3.0	7439-92-1		J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Magnesium	24700.000	MG/KG	0.050	INORG	2.0	3.0	7439-95-4	*	J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Manganese	413.000	MG/KG	0.002	INORG	2.0	3.0	7439-96-5		J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Nickel	28.200	MG/KG	0.020	INORG	2.0	3.0	7440-02-0			MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Potassium	1530.000	MG/KG	0.100	INORG	2.0	3.0	7440-09-7			MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Silver	**14.600**	MG/KG	0.010	INORG	2.0	3.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0014	0014-0002	Borehole	19910701	Sodium	210.000	MG/KG	0.100	INORG	2.0	3.0	7440-23-5			MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Antimony	21.800	MG/KG	0.030	INORG	2.0	3.0	7440-36-0		J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Arsenic	2.700	MG/KG	0.002	INORG	2.0	3.0	7440-38-2		J	MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Barium	28.700	MG/KG	0.002	INORG	2.0	3.0	7440-39-3			MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Beryllium	**0.710**	MG/KG	0.002	INORG	2.0	3.0	7440-41-7			MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0014	0014-0002	Borehole	19910701	Cadmium	**3.800**	MG/KG	0.002	INORG	2.0	3.0	7440-43-9		J	MND33	Soil	2-Exceeds background value.
MND33-0014	0014-0002	Borehole	19910701	Chromium	**27.600**	MG/KG	0.010	INORG	2.0	3.0	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0014	0014-0002	Borehole	19910701	Cobalt	12.700	MG/KG	0.010	INORG	2.0	3.0	7440-48-4			MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Copper	19.900	MG/KG	0.010	INORG	2.0	3.0	7440-50-8			MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Vanadium	24.600	MG/KG	0.010	INORG	2.0	3.0	7440-62-2			MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Zinc	52.800	MG/KG	0.005	INORG	2.0	3.0	7440-66-6	*		MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Calcium	92100.000	MG/KG	0.020	INORG	2.0	3.0	7440-70-2			MND33	Soil	
MND33-0014	0014-0002	Borehole	19910701	Phenanthrene	150.000	UG/KG	730.000	ORSVO	2.0	3.0	85-01-8	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Aroclor-1260	**44.600**	UG/KG	160.000	ORPPB	0.0	2.0	11096-82-5	J	J	MND33	Soil	2-Exceeds background value.
MND33-0014	0014-0001	Borehole	19910701	Aroclor-1254	42.400	UG/KG	160.000	ORPPB	0.0	2.0	11097-69-1	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Bis(2-ethylhexyl)phthal	130.000	UG/KG	720.000	ORSVO	0.0	2.0	117-81-7	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Di-n-octyl Phthalate	180.000	UG/KG	720.000	ORSVO	0.0	2.0	117-84-0	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Pyrene	380.000	UG/KG	720.000	ORSVO	0.0	2.0	129-00-0	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Benzo(b)fluoranthene	300.000	UG/KG	720.000	ORSVO	0.0	2.0	205-99-2	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Fluoranthene	390.000	UG/KG	720.000	ORSVO	0.0	2.0	206-44-0	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Chrysene	200.000	UG/KG	720.000	ORSVO	0.0	2.0	218-01-9	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Benzo(a)pyrene	95.000	UG/KG	720.000	ORSVO	0.0	2.0	50-32-8	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Benzo(a)anthracene	160.000	UG/KG	720.000	ORSVO	0.0	2.0	56-55-3	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Aluminum	8600.000	MG/KG	0.060	INORG	0.0	2.0	7429-90-5	*	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Iron	20100.000	MG/KG	0.010	INORG	0.0	2.0	7439-89-6	*		MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Lead	8.500	MG/KG	0.002	INORG	0.0	2.0	7439-92-1		J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Magnesium	22200.000	MG/KG	0.050	INORG	0.0	2.0	7439-95-4	*	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Manganese	457.000	MG/KG	0.002	INORG	0.0	2.0	7439-96-5		J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Nickel	27.900	MG/KG	0.020	INORG	0.0	2.0	7440-02-0			MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Potassium	1510.000	MG/KG	0.100	INORG	0.0	2.0	7440-09-7			MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Silver	**14.000**	MG/KG	0.010	INORG	0.0	2.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0014	0014-0001	Borehole	19910701	Sodium	194.000	MG/KG	0.100	INORG	0.0	2.0	7440-23-5			MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Antimony	21.200	MG/KG	0.030	INORG	0.0	2.0	7440-36-0		J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Arsenic	3.600	MG/KG	0.002	INORG	0.0	2.0	7440-38-2		J	MND33	Soil	

Location_name	Sample_id	Location_typ	Collection_c	Value_name	Measured_val	Value_units	Detection	Chem_class	Start_c	End_d	CAS_number	Lab	Da	Project_cc	Media	Comments
MND33-0014	0014-0001	Borehole	19910701	Barium	29.300	MG/KG	0.002	INORG	0.0	2.0	7440-39-3			MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Beryllium	**0.710**	MG/KG	0.002	INORG	0.0	2.0	7440-41-7			MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0014	0014-0001	Borehole	19910701	Cadmium	**3.400**	MG/KG	0.002	INORG	0.0	2.0	7440-43-9		J	MND33	Soil	2-Exceeds background value.
MND33-0014	0014-0001	Borehole	19910701	Chromium	**27.400**	MG/KG	0.010	INORG	0.0	2.0	7440-47-3			MND33	Soil	2-Exceeds background value.
MND33-0014	0014-0001	Borehole	19910701	Cobalt	13.000	MG/KG	0.010	INORG	0.0	2.0	7440-48-4			MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Copper	21.500	MG/KG	0.010	INORG	0.0	2.0	7440-50-8			MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Vanadium	24.100	MG/KG	0.010	INORG	0.0	2.0	7440-62-2			MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Zinc	57.800	MG/KG	0.005	INORG	0.0	2.0	7440-66-6	*		MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Calcium	80800.000	MG/KG	0.020	INORG	0.0	2.0	7440-70-2			MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Methylene Chloride	13.000	UG/KG	5.000	ORVOA	0.0	2.0	75-09-2			MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Carbon Disulfide	2.000	UG/KG	5.000	ORVOA	0.0	2.0	75-15-0	J	J	MND33	Soil	
MND33-0014	0014-0001	Borehole	19910701	Phenanthrene	270.000	UG/KG	720.000	ORSVO	0.0	2.0	85-01-8	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Aroclor-1254	66.400	UG/KG	160.000	ORPPB	0.0	3.0	11097-69-1	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Pyrene	510.000	UG/KG	770.000	ORSVO	0.0	3.0	129-00-0	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Benzo(g,h,i)perylene	220.000	UG/KG	770.000	ORSVO	0.0	3.0	191-24-2	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Indeno(1,2,3-cd)pyrene	150.000	UG/KG	770.000	ORSVO	0.0	3.0	193-39-5	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Benzo(b)fluoranthene	580.000	UG/KG	770.000	ORSVO	0.0	3.0	205-99-2	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Fluoranthene	490.000	UG/KG	770.000	ORSVO	0.0	3.0	206-44-0	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Chrysene	300.000	UG/KG	770.000	ORSVO	0.0	3.0	218-01-9	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Benzo(a)pyrene	190.000	UG/KG	770.000	ORSVO	0.0	3.0	50-32-8	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Benzo(a)anthracene	290.000	UG/KG	770.000	ORSVO	0.0	3.0	56-55-3	J	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Aluminum	6140.000	MG/KG	0.060	INORG	0.0	3.0	7429-90-5			MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Iron	16300.000	MG/KG	0.010	INORG	0.0	3.0	7439-89-6			MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Lead	21.500	MG/KG	0.002	INORG	0.0	3.0	7439-92-1			MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Magnesium	22000.000	MG/KG	0.050	INORG	0.0	3.0	7439-95-4			MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Manganese	401.000	MG/KG	0.002	INORG	0.0	3.0	7439-96-5			MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Mercury	**0.130**	MG/KG	0.000	INORG	0.0	3.0	7439-97-6			MND33	Soil	2-Exceeds background value.
MND33-0015	0015-0001	Borehole	19910702	Nickel	25.300	MG/KG	0.020	INORG	0.0	3.0	7440-02-0			MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Potassium	1000.000	MG/KG	0.100	INORG	0.0	3.0	7440-09-7	B		MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Silver	**13.200**	MG/KG	0.010	INORG	0.0	3.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0015	0015-0001	Borehole	19910702	Sodium	128.000	MG/KG	0.100	INORG	0.0	3.0	7440-23-5	B		MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Antimony	20.800	MG/KG	0.030	INORG	0.0	3.0	7440-36-0		J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Arsenic	3.900	MG/KG	0.002	INORG	0.0	3.0	7440-38-2		J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Barium	36.400	MG/KG	0.002	INORG	0.0	3.0	7440-39-3	B		MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Beryllium	0.700	MG/KG	0.002	INORG	0.0	3.0	7440-41-7	B		MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Chromium	**28.400**	MG/KG	0.010	INORG	0.0	3.0	7440-47-3		J	MND33	Soil	2-Exceeds background value.
MND33-0015	0015-0001	Borehole	19910702	Cobalt	11.200	MG/KG	0.010	INORG	0.0	3.0	7440-48-4	B	J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Copper	25.300	MG/KG	0.010	INORG	0.0	3.0	7440-50-8		J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Vanadium	21.600	MG/KG	0.010	INORG	0.0	3.0	7440-62-2			MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Zinc	62.500	MG/KG	0.005	INORG	0.0	3.0	7440-66-6		J	MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Calcium	71200.000	MG/KG	0.020	INORG	0.0	3.0	7440-70-2			MND33	Soil	
MND33-0015	0015-0001	Borehole	19910702	Phenanthrene	250.000	UG/KG	770.000	ORSVO	0.0	3.0	85-01-8	J	J	MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Aluminum	10400.000	MG/KG	0.060	INORG	3.5	8.0	7429-90-5			MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Iron	23500.000	MG/KG	0.010	INORG	3.5	8.0	7439-89-6			MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Lead	7.000	MG/KG	0.002	INORG	3.5	8.0	7439-92-1			MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Magnesium	14100.000	MG/KG	0.050	INORG	3.5	8.0	7439-95-4			MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Manganese	543.000	MG/KG	0.002	INORG	3.5	8.0	7439-96-5			MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Nickel	26.100	MG/KG	0.020	INORG	3.5	8.0	7440-02-0			MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Potassium	1290.000	MG/KG	0.100	INORG	3.5	8.0	7440-09-7			MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Silver	**12.100**	MG/KG	0.010	INORG	3.5	8.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0015	0015-0002	Borehole	19910702	Sodium	119.000	MG/KG	0.100	INORG	3.5	8.0	7440-23-5	B		MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Antimony	16.000	MG/KG	0.030	INORG	3.5	8.0	7440-36-0		J	MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Arsenic	3.600	MG/KG	0.002	INORG	3.5	8.0	7440-38-2		J	MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Barium	65.500	MG/KG	0.002	INORG	3.5	8.0	7440-39-3			MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Beryllium	**0.920**	MG/KG	0.002	INORG	3.5	8.0	7440-41-7	B		MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0015	0015-0002	Borehole	19910702	Chromium	**26.900**	MG/KG	0.010	INORG	3.5	8.0	7440-47-3		J	MND33	Soil	2-Exceeds background value.

Location_name	Sample_id	Location_typ	Collection_d	Value_name	Measured_val	Value_units	Detection	Chem_class	Start_d	End_d	CAS_number	Lab_Da		Project_co	Media	Comments
MND33-0015	0015-0002	Borehole	19910702	Cobalt	12.900	MG/KG	0.010	INORG	3.5	8.0	7440-48-4		J	MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Copper	20.000	MG/KG	0.010	INORG	3.5	8.0	7440-50-8		J	MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Vanadium	**27.600**	MG/KG	0.010	INORG	3.5	8.0	7440-62-2			MND33	Soil	2-Exceeds background value.
MND33-0015	0015-0002	Borehole	19910702	Zinc	47.000	MG/KG	0.005	INORG	3.5	8.0	7440-66-6		J	MND33	Soil	
MND33-0015	0015-0002	Borehole	19910702	Calcium	63000.000	MG/KG	0.020	INORG	3.5	8.0	7440-70-2			MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	4-Methyl-2-pentanone	3.000	UG/KG	12.000	ORVOA	8.0	12.0	108-10-1	J	J	MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Aluminum	8490.000	MG/KG	0.060	INORG	8.0	12.0	7429-90-5			MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Iron	21700.000	MG/KG	0.010	INORG	8.0	12.0	7439-89-6			MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Lead	4.300	MG/KG	0.002	INORG	8.0	12.0	7439-92-1			MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Magnesium	12700.000	MG/KG	0.050	INORG	8.0	12.0	7439-95-4			MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Manganese	437.000	MG/KG	0.002	INORG	8.0	12.0	7439-96-5			MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Nickel	25.300	MG/KG	0.020	INORG	8.0	12.0	7440-02-0			MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Potassium	1540.000	MG/KG	0.100	INORG	8.0	12.0	7440-09-7			MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Silver	**14.700**	MG/KG	0.010	INORG	8.0	12.0	7440-22-4		J	MND33	Soil	2-Exceeds background value.
MND33-0015	0015-0003	Borehole	19910702	Sodium	198.000	MG/KG	0.100	INORG	8.0	12.0	7440-23-5	B		MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Antimony	17.000	MG/KG	0.030	INORG	8.0	12.0	7440-36-0		J	MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Arsenic	2.200	MG/KG	0.002	INORG	8.0	12.0	7440-38-2	B	J	MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Barium	10.500	MG/KG	0.002	INORG	8.0	12.0	7440-39-3	B		MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Beryllium	**0.770**	MG/KG	0.002	INORG	8.0	12.0	7440-41-7	B		MND33	Soil	1-Exceeds soil 10-6 GV.
MND33-0015	0015-0003	Borehole	19910702	Chromium	**27.700**	MG/KG	0.010	INORG	8.0	12.0	7440-47-3		J	MND33	Soil	2-Exceeds background value.
MND33-0015	0015-0003	Borehole	19910702	Cobalt	13.700	MG/KG	0.010	INORG	8.0	12.0	7440-48-4		J	MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Copper	18.800	MG/KG	0.010	INORG	8.0	12.0	7440-50-8		J	MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Vanadium	22.500	MG/KG	0.010	INORG	8.0	12.0	7440-62-2			MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Zinc	37.900	MG/KG	0.005	INORG	8.0	12.0	7440-66-6		J	MND33	Soil	
MND33-0015	0015-0003	Borehole	19910702	Calcium	94600.000	MG/KG	0.020	INORG	8.0	12.0	7440-70-2			MND33	Soil	

Reference 8

From: Linda Watkins at MOUND
To: MNDCONT.MNDPO(GENEJC)
Date: 4/5/01 8:19AM
Subject: Building 27 operations

Joe,

You asked me to check about the operations conducted by Perkin Elmer in building 27 for purposes of your binning documentation. Here's what I found out:

P/E has done most of the same operations as was done before, that is, working with explosive powder and processes that involve acetone. They did use the pad out back to store some barrels of acetone at one time, but they had a barrel containment system around them. There were NO spills of acetone to their knowledge, but per Al Munger, if there had been, that system would have caught them.

When the building was used by EG&G (prior to lease), the solvents and water were captured through a trough system - PerkinElmer did not use the trough system.

I hope this helps.

Linda
4194

CC: MNDCONT.MNDPO(GALLDM),MNDCONT.CCMAIL("Robert Rothman","Ronald Church")