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Babcock & Wilcox, a McDermott company

3005-9804220006

o, Inc.

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ESC-080/98
March 26, 1998

Mr. Tim Fischer
U.S. Environmental Protection Agency
Region 5
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Mr. Brian Nickel
Ohio Environmental Protection Agency
Southwest District Office
401 E. Fifth Street
Dayton, Ohio 45402-2911

SUBJECT: Contract No. DE-AC24-97OH20044
**FINAL RELEASE BUILDING DATA PACKAGES: BUILDINGS C,
33, 43, 35/59**

REFERENCE: Statement of Work Requirement C 5.3.2 -- Stakeholder
Participation in Mound

Dear Mr. Fischer and Mr. Nickel:

During the Public Review of the Building Data Packages for Buildings C, 33, 43 and 35/59, DOE/MEMP received comments from MMCIC. The Core Team has responded to these comments. The attached change pages for the buildings C, 33, 43 and 35/59 Building Data Packages incorporate the comments, responses and necessary changes in the Building Data Packages.

In addition, for the Building 33 Building Data Package, please add the attached radiological survey information to Appendix 6.6.1 and replace the information in Appendix 6.9 with the attached revised Work Plan.

This information has been authorized for release to US EPA, OEPA and ODH by Sam Cheng of MEMP.

If you require further information, please contact Dave Rakel at extension 4203.

Sincerely,



Linda R. Bauer, Ph.D.
Department Manager, Environmental Safeguards & Compliance

LRB/nmg

Enclosures as stated

cc: Kathy Lee Fox, OEPA, (1) w/attachments
Ray Beaumier, OEPA, (1) w/attachments
Jim Webb, ODH, (1) w/attachments
Dann Bird, MMCIC, (1) w/attachments
Administrative Record, (1) w/attachments
Public Reading Room, (5) w/attachments
DCC

BDP 43

REV	DESCRIPTION	DATE
PUBLIC RELEASE 0	Available for comments.	Jan. 13, 1998
FINAL RELEASE 1	Comment period expired. MMCIC comments noted.	Mar. 25, 1998

MOUND



Environmental
Restoration
Program

**MOUND PLANT
BUILDING DATA PACKAGE**
Notice of Public Review Period



The following Building Data Packages will be available for public review in the CERCLA Public Reading Room, 305 E. Central Ave., Miamisburg, Ohio beginning January 15, 1998. Public comment will be accepted on these packages from January 15, 1998, through February 15, 1998.

BDP 43: Devices Development
BDP: 35/59: Nondestructive Testing Facility

Written comments may be sent to U.S. Department of Energy,
c/o Jane Greenwalt, P.O. Box 66, Miamisburg, Ohio 45343-0066 or by E-Mail to:
jane.greenwalt@em.doe.gov

Questions can be referred to DOE Office of Public Affairs at (937) 865-3116.

MOUND PLANT RECOMMENDATION

Building 43

Background:

Building 43 is a one-story, 1516 square-foot, reinforced concrete structure with a built-up membrane (asphalt) roof.

Building 43 was constructed in 1970 in an area known as the lower valley to replace and enlarge the explosive processing facility maintained by Building 1. Building 1 is located adjacent to, and to the east of Building 43. Building 43 acted as a laboratory for the development of energetic thermite materials and devices. There were no other structures, roads or improvements that would impact the environmental conditions of the building.

Recommendation:

Piping insulation containing friable asbestos is present in a damaged state. Residual thermite dust is present in the ventilation system. Oil was visible on the floor in Room 4.

It has been determined that these conditions are not protective of human health and the environment. Therefore, a RESPONSE ACTION is recommended.

Concurrence:

DOE/MEMP:	<u><i>Sam Cheng</i></u>	11-19-97
	Sam Cheng, D&D Team Leader	(date)
USEPA:	<u><i>Timothy J. Fischer</i></u>	11/19/97
	Timothy J. Fischer, Remediation Project Manager	(date)
OEPA:	<u><i>Brian K. Nickel</i></u>	11/19/97
	Brian K. Nickel, Project Manager	(date)



The Mound Core Team
P.O. Box 66
Miamisburg, Ohio 45343-0066

March 18, 1998

Mr. Dann Bird
Planning Manager
MMCIC
P.O. Box 232
Miamisburg, OH
45342-0232

Dear Mr. Bird:

Thank you for your comments on the Building Data Packages for Building C, 33, 43 and 35/59. The Core Team, consisting of the U.S. Department of Energy Miamisburg Environmental Management Project (DOE-MEMP), U.S. Environmental Protection Agency (USEPA), and the Ohio Environmental Protection Agency (OEPA), appreciates the input provided by the public stakeholders of the Mound facility. The public stakeholders have significantly contributed to the forward progress that has been made establishing the safety of the Mound property prior to its return to public use after remediation and residual risk evaluation.

The comments for Building C, 33, 43 and 35/59 all indicated the need for continued cooperation. We concur and were pleased to see your comments also addressed to members of the Partnership Council. This group will be particularly effective in achieving the level of cooperation your comments suggest.

Concerning your question about the timing of a radiation survey of Building 59, our plans are to perform a radiation survey before the building is demolished.

Should the responses to comments require additional detail, please contact Sam Cheng at (937) 865-4778 and we will gladly arrange a meeting or telephone conference.

Sincerely,

DOE/MEMP: *Sam Cheng* 3/17/98
Sam Cheng, DFR Team Leader

USEPA: *Timothy J. Fischer* 3/19/98
Timothy J. Fischer, Remedial Project Manager

OHIO EPA: *Brian K. Nickel* 3/19/98
Brian K. Nickel, Project Manager

BUILDING DATA PACKAGE (BDP)

BUILDING 43

DOE MOUND PLANT

MIAMISBURG, OHIO 45343

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1.0 Summary

1.1 General

This document has been prepared in response to an agreement between the Department of Energy (DOE), the U.S. Environmental Protection Agency, and the Ohio Environmental Protection Agency. It is a Building Data Package of Building 43 located at the DOE Mound Plant in Miamisburg, Ohio. This investigation was performed in accordance with the procedures laid out in ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (Designation E 1527-94).

The scope of the investigation included the building and a 15-foot wide perimeter border around the building. This perimeter includes roadways, sidewalks, pavement and grass covered areas. The investigation of Building 43 included the following.

- 1) A building and perimeter inspection
- 2) An examination of historical aerial photographs and maps.
- 3) A review of federal and state regulatory agency records.
- 4) Personnel interviews.
- 5) A review of Mound Plant records for:
 - A) History of spills and releases
 - B) Past sampling data
 - Radiological survey
 - Chemical history
 - Lead paint
 - Asbestos
 - Radon

The building investigation was conducted by EG&G personnel on 5/23/95.

Mound Plant is located in the southern portion of the corporation limits of Miamisburg, Ohio. The entire Mound Plant facility is situated on 305 acres of land and contains approximately 130 buildings. The subject property consists of Mound Plant Building 43 and a 15 foot perimeter border. All areas are *in gross* square feet (external wall to external wall).

Building 43 was constructed in 1970 in an area known as the lower valley. It was constructed to replace and enlarge the explosive processing facility maintained by Building 1. This need became obsolete and the building was assigned to thermite work.

1.2 Statement of Environmental Concerns

Energetic material (thermite dusts) may be present in vacuum and exhaust duct work.

Friable asbestos is present in pipe covering.

Lead is suspected to be in any painted surface.

Refrigerant is contained in the HVAC system.

Fluorescent lights may contain PCBs in the ballasts.

Radiological contamination associated with PRS 75 (soils area/railroad spur) near/under Building 43 is possible.

2.0 Introduction

2.1 Purpose

The purpose of this Building Data Package is to identify, if possible, any recognized environmental conditions (defined below) that may affect the subject property.

2.2 Special Terms and Conditions

Key Site Manager – The Key Site Manager is the person identified by the owner of a property as having good knowledge of the uses and physical characteristics of the property. This individual is frequently, but not necessarily always, the Building Manager. Mr. Robert A. Ward has been designated as the Building Manager for Building 43.

Recognized Environmental Condition – The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a likely release, a past release, or a material threat of a release of any hazardous substances or petroleum into structures or into the ground, ground water, or surface water near the building. The term is not intended to include *deminimis* conditions that generally do not present a material risk of harm to public health or the environment, and generally would not be the subject of an enforcement action brought to the attention of the appropriate governmental agencies.

2.3 Limitations and Exceptions of Assessment

Building 43 as stated above, is covered by the building footprint, the surrounding concrete roadway, concrete sidewalk, asphalt pavement, and grass covered areas 15 feet around the perimeter of the building. Soil conditions beneath the building and the paved areas could not be observed. Based on the process history of the building and the records of soil investigations in the soil areas near the building, it was determined that further soil samples will be required within the 15-foot perimeter.

2.4 Limiting Conditions and Methodology Used

2.4.1 On-Site Methodology

Mound Plant personnel examined the site on May 23, 1995. This examination consisted of a detailed inspection of the site and a survey of the neighboring properties.

2.4.2 Use of Previous Assessments

This report used a variety of previous assessments completed by EG&G Mound and/or its subcontractors. The reports used were as follows.

- OU-9 Site Scoping Report, Volumes 1-12
- Mound Facility Physical Characterization, December 1992
- Active Underground Storage Plan, November 1994.
- MD-22153, Mound Site Radionuclides By Location, July 1995
- Asbestos Surveys
- Environmental Appraisal of the Mound Plant, March 1996
- Mound Safe Shutdown Plan for Building 43
- Relevant PRS Documentation

2.4.3 Historical Information

A complete title search of the Mound Plant was completed on June 3, 1995 for the site to determine the previous owners of the site. A copy of the report is in Appendix 7.3.

2.4.4 Records Review

Environmental Data Resources (EDR), Inc., of Southport, Connecticut, a regulatory database search company, was contracted in 1995 to provide environmental regulatory information concerning the site and surrounding properties, consistent with the requirements of ASTM Standard E1527-94. This information was reviewed by Environmental Restoration personnel for indications of recognized environmental conditions. (See Appendix 7.4.)

3.0 Site Description

3.1 Location and Legal Description

Building 43 is located at the U.S. Department of Energy Facility known as Mound Plant. Mound is situated in the city of Miamisburg, Miami Township, Montgomery County, state of Ohio, and is being a track of land containing 305.116 acres, more or less, situated in part of Section 30 and fractional Sections 35 and 36, Town 2, Range MRS and being all of city lots numbered 2259, 2290, 4777, 4778, and 4779 and part of out lot #6 lying within the city of Miamisburg, Ohio; and being the same premises convened in Warranty Deeds recorded in Volume 1214, pages 10, 12, 15, and 17, Volume 1215, page 347, Volume 1214, page 2105, Volume 1246, page 45, Volume 1258, page 74, Volume 1258, Volume 1256, page 179, and microfiche no. 81-376A01 and microfiche #81-323. Deed records, maps, and site plans are in Appendix 7.2 and 7.3.

3.2 Site and Vicinity Characteristics

The subject site consists of Mound Plant Building 43 and a 15-foot wide perimeter border around the building. (See Appendix 7.2 and Introductory Pages.)

The Mound facility is situated on 305 acres of land and contains approximately 130 buildings with a total of approximately 1.4 million square feet of floor space (the number of buildings is constantly diminishing as buildings are decommissioned and either sold or demolished). The original 182-acre site, purchased by the Manhattan Engineering District in 1946, consists of two hills and an intervening valley that runs approximately east and west. Building 43 is located in the lower valley. The 124-acre tract, acquired in 1981, is an undeveloped mixture of fields and woods that undulates and slopes downward to the west, away from the main site. This area was acquired to serve as a buffer and has been used as a staging area and parking area for contractors working on-site.

To the west lies a Conrail Railroad line and the north south trending Miami-Erie Canal. The northern boundaries of the site abuts the historic residential area of Miamisburg, Ohio. Mound Road marks the northern half of the eastern perimeter of the facility then veers east, away from the southern half of the eastern boundary. A public golf course (belonging to the City of Miamisburg), the Miamisburg Mound Memorial Park, old agricultural fields, residential lots, and vacant wooded lots border against the facility along Mound Road. Benner Road forms the southern property line of the Mound Plant, with agricultural fields and farms occupying the lands beyond.

3.3 Description of Structures, Roads, Other Improvements on the Site

Building 43 was constructed in 1970 and acted as a laboratory for the development of energetic thermite materials and devices. There were no other structures, roads or improvements that would impact the environmental conditions of the building.

3.4 Information Reported by User Regarding Environmental Liens or Specialized Knowledge or Experience

The title search completed on June 3, 1995 indicated one lien against the property. That resulted from an unpaid Montgomery County incinerator fee. After this was discovered, the fee was paid and the lien was removed from the title.

3.5 Current Uses of Building 43

Building 43 is currently inactive.

3.6 Past Uses of Building 43

Building 43 has had only one use in its history and previously served as a location for the development of thermite materials and devices.

3.7 Current and Past Uses of Adjacent Buildings

Close Proximity to Building	Building Area (Sq. Ft.)	Current Use	Past Use	Direction from Building
1	1,000	Vacant	Explosive Production	SW
74	400	Vacant	Explosive Packaging	SW

These facilities have had no environmental impact on Building 43.

4.0 Records Review

4.1 Standard Environmental Record Sources, Federal and State

Environmental Data Resources (EDR), Inc., of Southport, Connecticut provided information regarding sites in the vicinity of the subject site, which appear in regulatory agency summaries and databases. Sites under the jurisdiction of various regulatory offices or programs were included in the EDR search report, provided in Appendix 7.4.

There are fourteen sites within the appropriate radii for an ASTM Phase I Environmental Site Assessment search. The properties are designated in Table 1 as well as in the EDR report. (See EDR document, Appendix 7.4)

All of the identified sites listed in Table 1 are located north or west of the Mound Plant. These other sites are as much as 170 feet lower in elevation than the Mound Plant main hill; thus they are down gradient or down slope in terms of surface water, and probably ground water flow. These other sites are very unlikely to adversely effect the soil or ground water conditions at the subject site.

The Mound Plant site was identified as a contaminated site on the National Priority List under CERCLA (Superfund) in 1989. The Mound Plant site was originally listed as a consequence of historic disposal practices including use of a commercial/industrial landfill, various spills, and the use of underground storage tanks, resulting in the contamination of soils and drinking water. The original contaminants of concern were calcium cyanide, copper cyanide, plutonium and its isotopes and compounds, specifically plutonium-238, and uranium, its isotopes and compounds.

The clean-up of the Mound Site was originally to be accomplished under the CERCLA mandated procedures for regulating Superfund Sites using the operable unit (OU) system to define and characterize clean-up areas. As the clean-up effort went forward, it became apparent that the Mound Site did not fit the profile for a clean-up strategy based on the operable units. The Department of Energy (DOE), the United States Environmental Protection Agency (USEPA), and the Ohio Environmental Protection Agency (OEPA) designed a new decision making process for the clean-up of Mound. The new process is known formally as a "removal site evaluation process" and informally as the "Mound 2000 process." The Mound 2000 process system divided Mound in 19 Release Blocks containing over 400 Potential Release Sites (PRSS) with approximately 200 concerned with potentially contaminated soils, and the balance with potential contamination in buildings.

In compliance with permit requirements under RCRA, the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), and the Clean Air Act (CAA), Mound Plant has applied for or has received permits for its surface water discharges, air emissions, and hazardous waste program. Mound Plant has submitted both RCRA Part A and Part B permit applications and operates as a RCRA hazardous waste treatment and storage facility under an interim status. Mound Plant also maintains a NPDES surface water discharge permit with Facility I.D. number OH 009857. Permits for the open burning of wastes involving explosives and other fuels have been issued by the Regional Air Pollution Control Agency (RAPCA). Other operations that produce particulate or vaporous emissions are registered with RAPCA and OEPA. Mound Plant also submits annual Emergency and Hazardous Chemical Inventory forms to the OEPA, pursuant to SARA, Title III, the Emergency Planning and Community Right-to-Know Act. The 1995 version of this report indicated that no chemicals are stored in Building 43.

Table 1. Properties of ASTM Phase 1 Environmental Sites Assessment

Address and Property Name	Proximity	Status
U.S. DOE Mound Plant	Mound Road Miamisburg, OH (target property)	NPL, PADS, CERLIS, LUST, & TRIS
D.J. Ceramics	611 S. Main Street Miamisburg, OH (WNW)	LUST
CG&R	901 S. Main Street Miamisburg, OH (W)	LUST
GMC Delco Products Division	329 E. First Street Miamisburg, OH (NNW)	RCRIS-SQG, FINDS
Dayton Public Schools	348 W. First Street Miamisburg, OH (NNW)	RCRIS-SQG, FINDS
City of Miamisburg Pump Station	1021 S. Main Street Miamisburg, OH	UST
Richard Church, Sr. Estate	1009 S. Main Street Miamisburg, OH	LUST
Preston Adhesive Paper Co., Inc.	222 Mound Avenue Miamisburg, OH (N)	RCRIS-LQG, FINDS
Plocher Andrew Sons	4128 E. First Street Miamisburg, OH (N)	RCRIS-SQG, FINDS
Shell Oil Co.	1224 S. Main Street Miamisburg, OH	LUST
Point Store	155 S. Main Street Miamisburg, OH (N)	LUST
Miamisburg Water Treatment Plant	302 S. Riverview Miamisburg, OH (NW)	LUST
Miamisburg Well Field/Unknown Source	302 S. Riverview Miamisburg, OH (NW)	LUST
Technicote, Inc.	222 Mound Avenue Miamisburg, OH (N)	RCRIS-SQG, UST, LUST

4.2 Physical Setting Sources(s)

See Appendix 7.2.

4.3 Historical Use Information

A history of the site was developed to identify past uses that may have an environmental impact. A title search was performed on June 3, 1995 to establish a history of ownership. The history of operations comes from other documents. In the summer of 1942, the United States Army organized the Manhattan Engineering District for the purpose of developing an atomic bomb. This undertaking became known as the "Manhattan Project." In 1943, the director of Monsanto Chemical Company (MCC, now Monsanto Corporation) Central Research department in Dayton, Ohio, accepted the responsibility for chemistry and the metallurgy of radioactive polonium-210, and the Dayton Project was launched. MCC operated five (5) units of the Dayton Project at various locations around the Dayton area. For Dayton Unit V (more formally known as the Dayton Engineer Works under the Dayton Engineer District), a 128-acre site on the outskirts of the town of Miamisburg, Montgomery County, Ohio, was selected in 1946 as the location for a permanent research facility in support of the Manhattan Project. In July 1946, the Monsanto Research Corporation (MRC), a subsidiary of MCC, engaged the firm of Giffels and Vallet of Detroit, Michigan, to design the plant. Construction of the new facility, consisting of fourteen (14) original buildings began in February 1947 by Maxon Construction Co., Dayton, Ohio. The plant was the first permanent facility of the Atomic Energy Commission, which succeeded the wartime Manhattan Engineering District. The Mound Plant was occupied by MRC personnel in May 1948 and operations involving radionuclides began in January 1949.

Mound Plant is a Government Owned/Contractor Operated (GOCO) facility, originally administered under the Oak Ridge Operations office of the AEC. The plant was assigned new production and development functions in 1955 when the administrative control was assumed by the AEC's Santa Fe operations office. The Santa Fe Operations Office was changed to the Albuquerque Operations office in April 1956. In January 1975, upon the dissolution of the AEC, the plant formally came under the Energy Research and Development Administration. In October 1977, the plant was incorporated into the DOE complex and the facility designation was changed from Mound Laboratory to Mound Plant. MRC was the sole operating contractor until October 1988 when EG&G Mound Applied Technologies took over.

4.4 Additional Record Sources

4.4.1 History of Past Spills and Releases

There are no records of past spills or releases associated with Building 43.

4.4.1.1 Associated PRS Overview

As a result of the investigations and documentation conducted to comply with the CERCLA cleanup process via the FFA/DOE ER program, DOE and EG&G Mound Applied Technologies have tabulated all the Potential Release Sites (PRSs). Many additional contaminants of concern and types of operations were identified beyond the original NPL listing of site activities. A total of 414 PRSs have been identified. Three (3) PRSs are of interest - PRSs 23, 24, and 75. PRSs 23 and 24 are attributed to operations in Building 43.

PRS 23 - (UGT #201) was identified as a PRS because of the nature of the chemicals potentially contained as a waste water settling basin in a planned explosive production process. Neither the process nor the tank was ever used. This PRS has been binned "No Further Assessment." See Appendix 7.2.4.

PRS 24 - (UGT #221) was identified as a PRS because it was originally designed to store acetone and alcohol solvents for use in the Building 43 production. It was never used and was removed in 1990. This PRS has been binned "No Further Assessment." See Appendix 7.2.4.

PRS 75 - Identified as an abandoned and dismantled extension of the Mound Plant railroad spur extending from north of Building 1, east and under Building 43, to a location near the old Warehouse 9. This PRS was binned RA due to radiological contamination. See Appendix 7.2.4 for the PRS 75 narrative. Reference is made to the pictures and graphics of this Building 43 Building Data Package.

4.4.1.2 Occurrence Reports

There are no occurrence reports associated with Building 43.

4.4.2 Past Sampling Data

4.4.2.1 Radiation

A radiation survey was conducted on Building 43 on September 25, 1995. A wipe and scan survey was accomplished per the requirements of the Property/Waste Release Evaluation (P/WRE). The Radiological Characterization Summary indicates that no radiological contamination was detected above the DOE 5400.5 Guidelines, NUREG 1500 Guidelines or the Attachment 1 Limit (MD-90043). See the following Table 2 and Appendix 7.6.1.

4.4.2.2 Chemical

The bulk of the chemicals used in Building 43 were the oxides of iron and copper, and aluminum metal powder. Some materials were used as thermite modifiers, e.g., Nickel oxide or Nickel or Titanium metal powders. Various inorganic chemicals were on hand in small quantities to support the general R&D. (See Appendix 7.6.4.) Acetone was commonly used in small quantity and evaporation was the disposal method. Alcohol was sometimes used as a solvent/cleaner. Miscellaneous epoxies, cements, tapes, paint and lubricant sprays were used to facilitate device fabrication. The Thermite materials were burned as devices or test vehicles or as waste; these energetic materials were destroyed in the explosive "burn" area. The used alcohols and acetone evaporated. Other chemicals used were not hazardous and wastes went into the general trash. All bulk chemicals were removed in July 1995 for dispensation by Waste Management. See Appendix 7.6.4.

4.4.2.3 Lead Paint

A survey for lead was not made. The use of lead paint is suspected. See Appendix 7.6.3.

4.4.2.4 Asbestos

An asbestos survey was accomplished. There is friable asbestos in the pipe insulation in Room 7. Roofing and floor tile contain non-friable asbestos. See Appendix 7.6.2.

4.4.2.5 Radon

The radon survey of April 1990 reported radon present at 0.5 p Ci/l, i.e., ten times below the acceptable guideline level.

4.4.3 Chemicals Removed After Mission End

See Appendix 7.6.4, 1994 inventory and the Chemical Waste Disposal list.

4.4.4 Reviews of Building Prints

Building prints were reviewed and included in Appendix 7.2.3.

4.4.5 Aerial Photographs

Aerial photographs from 1994, 1983, 1973, 1968, 1965, 1959, 1949, and 1938 were reviewed and copies are found in Appendix 7.2.5.

The 1938 photograph shows that the Mound Plant site was agricultural fields and undeveloped wooded lots. The historic Miamisburg Indian Mound is visible for a location reference.

The 1949 photograph shows the completed initial phase of construction on the Mound Plant Main Hill. Approximately fourteen (14) buildings are visible. Roadways on both the Main Hill and the eastern hill are present.

The overall Mound Plant facilities, as depicted in the 1968, 1973, 1983, and 1994 photographs continue to show change and expansion.

Building 43 is visible in the 1973 aerial photograph.

Table 2
Radiological Characterization Summary
Building 43

TYPE	RSDS	LOCATION	SURVEY RESULTS (dpm/100 cm ²)	5400.5 Guidelines for Groups 1, 3, 4 (fixed + loose) (dpm/100 cm ²)	NUREG 1500 Guidelines (loose) (dpm/100 cm ²)	Attachment 1 Limit (fixed + loose) (See Note 2.) (dpm/100 cm ²)	COMMENTS
Highest Alpha Smearable Activity	97-GA-213		1.44	20	211	20	<MDA
Highest Alpha Fixed Activity			ND	100	Note 1	100	ND FIDLER
Highest Beta Smearable Activity	97-GA-213		1.45	1,000	9940	1,000	<MDA
Highest Beta Fixed Activity			ND	5,000	Note 1	5,000	ND FIDLER
Highest Tritium Smearable Activity			23.4	1,000	Note 1	1,000	<AL
<p>Note 1: NUREG-1500 gives guidelines for loose beta and alpha only. Note 2: The limits referenced above are based on MD-80043, Radiological work Requirements Procedure 400 "Transfer of Radioactive Material and Unrestricted Release of Property/Waste," Attachment 1. Note 3: ND=Non-Detectable Swipe Note 4: ND FIDLER=Non-Detectable Using FIDLER Note 5: AL = Action Level Note 6: MDA=Minimum Detectable Activity</p>							

5.0 Site Reconnaissance

5.1 Hazardous Substances in Connection with Identified Uses

5.1.1 Space

Building 43 is not in use at this time. There are no indications of the presence of hazardous substances, although it is supposed that thermite dusts are present in the vacuum line and exhaust duct work.

5.1.2 Heating/Cooling

Steam for heating is provided to Building 43 via an above ground system of distribution piping running from the powerhouse (Building P).

Ventilation was provided to Building 43 through a roof mounted HVAC system.

5.1.3 Stains or Corrosion

Other than an oil stain on the floor, no stains were observed that would indicate residual chemicals or contaminated waters are present in the facility or drains.

5.1.4 Drains and Sumps

Building 43 is served by a sanitary drain line. Three sinks, one shower and one toilet are connected there also. A storm drain takes water from two roof down spouts and from surface water. There are no indications of materials other than storm water flowing into these drains. A sump, UST-201, is connected to the west side of the building. This tank was a part of the original design of the facility in which to settle solids from waste wash water, but has never been used.

5.1.5 Wastewater

Potable water and sanitary service was provided for Building 43. The Mound Plant facility operates an on-site sanitary and storm water sewer treatment plant (Building 57) to manage the plant's storm water and sanitary waste water pursuant to a National

Pollution Discharge Elimination System (NPDES) permit issued by OEPA. The wastewater that was generated in the building was simple wash or sanitary water.

5.1.6 Septic Systems

No evidence of a septic system was noted or is known to have ever existed in the immediate vicinity of the building.

5.1.7 Asbestos

Observations were consistent with the report on asbestos in Section 4.4.2.4.

5.1.8 Lead Paint

Painted surfaces were noted. Lead paint is suspected. Paint observed to be in good condition. No excessive wear noted.

5.1.9 Fluorescent Lamps

Fluorescent lamps were utilized in Building 43 for overhead lighting. The lamps are still present.

5.2 Hazardous Substance Containers and Unidentified Substance Containers

Process history indicates that the waste water/solvent sump was never used. UST-201 contains water, from snow or run-off.

5.3 Storage Tanks

No storage tanks are associated with the building. PRS 24, a solvent storage tank, was never used and was removed in 1990.

5.4 Indications of PCBs

Fluorescent lighting was used in this building. Since Building 43 was constructed before the 1979 ban on PCBs in lamp ballastics, it is possible that lamp ballast capacitors may contain PCB. No wet type transformers were utilized in the building. There were no other indications of PCBs in the building.

5.5 Indications of Solid Waste Disposal

No solid waste was observed in the building. No evidence of hazardous waste was noted in the immediate vicinity of the building.

5.6 Physical Setting Analysis, If Migrating Hazardous Substances Are An Issue

There are no migrating hazardous substances associated with the building.

5.7 Other Conditions of Concern

Fine thermite dusts generated via machining and other processing were picked up through a vacuum line or in the fume hood exhaust. It must be assumed that thermite dusts still exist in the internal duct work.

PRS 75 is an abandoned and dismantled extension of the Mound Plant railroad spur extending from north of Building 1, east and under Building 43, to a location near the old Warehouse 9. This PRS was binned RA due to radiological contamination.

5.8 Interviews

Information gained in discussions with the following personnel and the historical information have been incorporated within this document.

5.8.1 Recent Interviews

The current Building Manager, Mr. Robert Ward, has been employed at the Mound plant for 20 years and the Building Manager of this building for the last 3 years.

5.8.2 Historical Interviews

Mr. D.A. Buckner has been employed at Mound for 15 years. He was the Building Manager and Supervisor of Building 43 operations from 1982 until 1994.

6.0 Findings and Observations

Mound Personnel accomplished this Building Data Package for Building 43. The following is derived:

Energetic material (thermite dust) contamination is suspect and must be evaluated.

Radiological: No radiological materials were housed within the building. A final safe shutdown survey did not detect any radiological contamination such that might have been tracked in accidentally. PRS 75 soils contamination must be determined and removed.

Lead Paint: A survey of the paint was not done. Because of the age of the building, all painted surfaces must be suspect of containing lead.

HVAC Refrigerants: The HVAC refrigerants will be retained for use by a new landlord; or if demolition is recommended, will be disposed according to law or will be salvaged.

Asbestos: Asbestos is suspected in some tile and roofing materials. Pipe covering in Room 7 (equipment room) does contain friable asbestos.

Fluorescent lights may contain PCBs in the ballasts.

Based on the process history of the building, the records of soil investigation in the soil areas near the building, it was determined that no further soil samples were required in the 15-foot perimeter boundary. However, due to the close proximity of PRS 75, soil sampling will be performed prior to release of the building or building site.

6.1 Environmental Concern Evaluation (Matrix)

See the following table.

BUILDING #43: ENVIRONMENTAL CONCERN EVALUATION

DESCRIPTION	PROBLEM?	COMMENT	PROPOSED RESOLUTION	REFERENCE
Energetic Material (Thermite) in exhaust ducts and vacuum line.	No	Fine dusts (airborne) adherent in duct work.	Decontamination	Para. 5.7
Lead	No	Painted surfaces	Verify, dispose	Para. 4.4.2.3
HVAC	No	Refrigerant	Salvage, dispose	Para. 5.1.2
Asbestos	No	Pipe wrap, floor tile, roofing	Remove ACM	Para. 4.4.2.4
Fluorescent	No	PCB in ballasts	Removal	Para. 5.1.9
Metals	No	Metal Lathing	Removal	Para. 5.7
Chemicals	No	Oil Spill	Evaluate, remove, demolish	Para. 5.1.3
Radiological	No	PRS 75 Soils	Sample, remove	Para. 4.4.1.1

7.0 Appendices

Appendix 7.1 Acronyms

AEA	Atomic Energy Act of 1954
AEC	Atomic Energy Commission
ACM	Asbestos Containing Materials
AL	Action Level
ASTM	American Society for Testing and Materials
BUSTR	Bureau of Underground Storage Tank Regulations
CAA	Clean Air Act
CEG	Conditionally Exempt Generator
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
COD	Chemical Oxygen Demand
CWA	Clean Water Act
COD	Chemical Oxygen Demand
CWA	Clean Water Act
D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
DPM/100 cm ²	Disintegration Per Minute per one hundred square
EMF	Electromagnetic Field
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration (Program)
ERDA	Energy Research and Development Administration
ERNS	Emergency Response Notification System
FFA	Federal Facility Agreement
FINDS	Facility Index System
FS	Feasibility Study
GSA	General Services Administration
HEPA	High Efficiency Particulate Air
LQG	Large Quantity Generator
LUST	Leaking Underground Storage Tank
M&O	Maintenance and Operations
MAT	Mound Applied Technologies
MCC	Monsanto Chemical Company
MDA	Minimum Detectable Activity
MEMP	Mound Environmental Management Project
MMCIC	Miamisburg Mound Community Improvement Corporation
MRC	Monsanto Research Corporation

ND	Non-Detectable Swipe
ND FIDLER	Non-Detectable using FIDLER
NPDES	National Pollutant Discharge Elimination System
NUREG	Nuclear Regulatory Guide
OEPA	Ohio Environmental Protection Agency
ORPS	Occurrence Reporting and Processing System
PADS	PCB Activity Database
PCB	Polychlorinated Biphenyls
PRS	Potential Release Site
P/WRE	Property/Waste Release Evaluation
RAPCA	Regional Air Pollution Control Agency
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RI	Remedial Investigation
RSDS	Radiological Survey Data Sheet
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SHWS	State Hazardous Waste Site
SQG	Small Quantity Generator
SWMU	Solid Waste Management Unit
TRIS	Toxic Chemical Release Inventory System
TSD	Treatment, Storage, & Disposal Facility
UST	Underground Storage Tank
VOC	Volatile Organic Compound

Appendix 7.2 Maps, Figures, and Photographs, and PRS Supplemental Information

Appendix 7.2.1 Map of Montgomery County

Appendix 7.2.2 Site Plan and PRS Release Blocks

Appendix 7.2.3 Building Drawings

Appendix 7.2.4 PRS Supplemental Information

Appendix 7.2.5 Aerial Photographs

Appendix 7.3 Ownership/Historical Documentation: "Title Search"

Appendix 7.4 Regulatory Documentation: "EDR Document"

Appendix 7.5 Environmental Appraisal Report of the Mound Plant (Extract)

Appendix 7.6 Radiological and Other Survey Reports

Appendix 7.6.1 Radiological

Appendix 7.6.2 Asbestos

ACM in buildings can be found in five (5) forms: sprayed or troweled on ceilings and walls (surfacing materials); insulation around pipes, ducts, boilers and tanks (pipe and boiler insulation); transite (in ground piping); and in roofing materials (shingles and roofing felts); other products such as ceiling and floor tiles and wall boards (miscellaneous materials).

Appendix 7.6.3 Lead

Lead Paint

Prior to the 1970s, lead-based paints were nearly exclusively used in U.S. industry. Because of Congressional action, paints used since 1979 are not supposed to contain lead. Therefore, it is said that surfaces painted prior to 1979 "probably contain lead" and those painted after 1979 "may contain lead."

If a building is to be demolished, the paint film is a minuscule portion of the weight of the debris and all may be discarded in a land fill. If a building is to be refurbished, the costly lead survey may be requested to be completed to the degree required by the end use.

Appendix 7.6.4 Chemical History

Chemical Waste Disposal List
of July, 1995

Epoxy Hardener
Epoxy
Silver oxide
Magnesium Perchlorate
Chromium oxide
Zirconium oxide
Titanium oxide
Barium oxide
Potassium Permanganate
Dust Burst
Rust Preventative
RTV
M.R.T.U. Part A
Foot spray
Paint
M.R.T.U., Part B
Plastic coating
Hydraulic fluid
Glass Plus
Teflon powder
Aluminum Silicon
Zirconium
WD-40
Iron powder
Tantalum
Silica
Silicon carbide
Magnesium metal
Silicon rod
Magnesium aluminum
Hydrochloric acid
Electro temp cement
K-poxy
Vacuum fluid
Permalon
Spray-ment adhesive
Duco cement
Duct seal