

Admin. Record



BWX Technologies, Inc.

Babcock & Wilcox, a McDermott company

Babcock & Wilcox of Ohio, Inc.

1 Mound Road
P.O. Box 3030
Miamisburg, Ohio 45343-3030
(937) 865-4020

3005-9806120005

ESC-151/98

June 4, 1998

98-TC/06-04

Director, Miamisburg Environmental Management Project
U.S. Department of Energy
P.O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Dewain Eckman

SUBJECT: Contract No. DE-AC24-97OH20044
**DELIVERY OF FINAL BUILDING DATA PACKAGE FOR
MAGAZINE 8**

REFERENCE: Statement of Work Requirement C 7.1 -- Regulator Reports

Dear Mr. Brown:

Previously, the demolition of Magazine 8 was determined to be a non-CERCLA event. As a result, the Building Data Package was provided for information to the Regulators and the Public Reading Room in advance of the demolition. The attached change pages indicate that this occurred and include changes requested by OEPA. Please incorporate these change pages in your current version (REV 0) of the document. This completes the development of the Building Data Package for Magazine 8.

This information has been authorized for release by the USEPA, OEPA, ODH, MMCIC, Public Reading Room, and Administrative Record by Sam Cheng of MEMP.

Page 2 DELIVERY OF FINAL BUILDING DATA PACKAGE FOR MAGAZINE 8

Please advise if additional copies are required for distribution within DOE. If you require further information, please contact Dave Rakel at extension 4203.

Sincerely,

David A. Rakel for

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

LRB/nmg

Enclosures as stated

cc: T. Fischer, USEPA, (1) w/attachment
J. Raines, TechLaw, (1) w/attachment
B. Nickel, OEPA, (1) w/attachment
K. Fox, OEPA, (1) w/attachment
R. Beaumier, OEPA, (1) w/attachment
R. Vandegrift, ODH, (1) w/attachment
T. Tracy, DOE/HQ, (1) w/attachment
O. Vincent, DOE/MEMP, (1) w/attachment
S. Cheng, DOE/MEMP, (2) w/attachment
J. Bartee, B&W, (1) w/attachment
G. Coons, B&W, (1) w/attachment
Public Reading Room, (5) w/attachment
Administrative Record, (1) w/attachment
DCC, w/o attachment

Building Data Package for Magazine 8 Revision 1 Instructions

- Replace narrative revision 0 with attached narrative revision 1.
- Add attached press release after the new revision 1 change tracking page.
- Insert the attached new page 11 of Appendix A and remove the old page 11.
- Insert the attached new Appendix L and remove old Appendix L.

BDP Magazine 8

REV	DESCRIPTION	DATE
DRAFT		Apr. 7, 1998
PUBLIC INFORMATION RELEASE 0		Apr. 21, 1998
1	Appendix L information changed: <ul style="list-style-type: none">• Title changed to: "Noted Soil Sampling, Vicinity"• New basic Appendix L map and spreadsheet information inserted. Corrected paragraph numbers for Section 2. Page 3, paragraph 2.1 changed to: "Appendix L notes soil sampling around the building."	May 28, 1998

MOUND



**Environmental
Restoration
Program**



**MOUND PLANT
BUILDING DATA PACKAGE**
Information Notice

Magazine 8 will soon be dismantled. A Building Data Package describing Magazine 8 and its dismantlement is available in the CERCLA Public Reading Room, 305 E. Central Ave., Minnisburg, Ohio.

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

BUILDING DATA PACKAGE (BDP)

MAGAZINE 8

(Non-CERCLA Demolition)

DOE MOUND PLANT

MIAMISBURG, OHIO 45343

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1.0 General Overview

1.1 Introduction

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

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.

1.2 Scope

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 Magazine 8 located at the DOE Mound Plant in Miamisburg, Ohio. This investigation was performed to support procedures as found 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 Magazine, the soil beneath, and a 15-foot wide perimeter border around the Magazine. This perimeter includes roadways, sidewalks, pavement, and grass covered areas. The investigation of Magazine 8 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
 - Lead paint
 - Asbestos
 - Radon

The building investigation was conducted by BWO personnel on 3/4/98.

This report used a variety of previous assessments completed by B&W of Ohio 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.
- EDR Report - Radius Map
- Building Prints
- MD-222153, Mound Site Radionuclides By Location, July 1995
- Contaminant Surveys
- Environmental Appraisal of the Mound Plant, March 1996
- Appropriate Potential Release Site (PRS) Documents
- Title Search
- Mound Plant Building Data Package: Magazines 5, 6, 7, 10, 11, 20, 53, 54, dated Nov. 4, 1997

2.0 Building Specific Overview

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 more than 132 buildings. The subject property consists of Mound Plant Magazine 8, the soil beneath, and a 15-foot wide perimeter around the Magazine. Magazine 8 contains 100 square feet. It was constructed in 1949.

2.1 Current Uses of Magazine 8

Magazine 8 was used for the purpose of storing quantities of containerized explosives. Detonators, high explosive powders, detonator cords, pyrotechnic powders, hexanitrostilbene, and primary explosives were stored in drums on the floor or on shelves. The building has been used for only this purpose since construction. Appendix L notes soil sampling around the building.

No operations are being conducted in Magazine 8 and the magazine is empty. All of the explosive containers were removed from the magazine by September 30, 1995. All ammunition (used by the Protective Force) was removed by the end of June, 1997.

2.2 Summary of Environmental Concerns and Findings

DESCRIPTION	COMMENT	RESOLUTION
Asbestos	Explosion proof lighting in and around the magazine is known to have ACM gasket materials for sealing the fixtures.	The fixtures will be removed intact and placed in double bags and disposed of as directed by waste management. This will be done prior to demolition of the structure
Lead	NA	
Lead Paint	No visible paint.	If paint is noticed, stop and sample.
HVAC	NA	
Mercury	NA	
Chemicals	Explosives were stored in the magazine. All explosive materials were stored in sealed containers. Bulk storage of powders was never permitted.	If visible residue is observed, all work will stop and sampling will be conducted.
Radiological	Sampling within release limits.	Demolition debris to landfill.
Radon	NA	
Fluorescent Lamps	NA	
Septic Systems	NA	
Drains & Sumps	NA	
Waste Water	NA	
Stains & Corrosion	NA	
Space	NA	
Storage Tanks	NA	
Solid Waste Disposal	Building Debris	Will be monitored prior to disposal.
Migratory Hazards	NA	

2.3 Radiological Characterization Summary For Magazine 8

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	98-TF-267	North Wall	5	20	211	20	No Action Necessary
Highest Alpha Fixed Activity	98-TF-267	All	<100	100	Note 1	100	No Action Necessary
Highest Beta Smearable Activity	98-TF-267	West Ceiling	7	1,000	9940	1,000	No Action Necessary
Highest Beta Fixed Activity	98-TF-267	All	<5,000	5,000	Note 1	5,000	No Action Necessary
Highest Tritium Smearable Activity	98-TF-267	West Wall	10	1,000	Note 1	1,000	No Action Necessary
<p>Note 1: NUREG-1500 gives guidelines for loose beta and alpha only.</p> <p>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.</p>							

3.0 Site Description

3.1 Site/Vicinity Location and Characteristics

Magazine 8 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.

The Mound facility is situated on 305 acres of land and contains approximately 130 magazines with a total of approximately 1.4 million square feet of floor space (the number of magazines is constantly diminishing as magazines 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. Magazine 8 is located in the lower southwest of the Mound site. 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.

3.2 Description of Structures, Roads, Other Improvements Related to Magazine 8

The subject property consists of the Mound Plant Magazine 8 footprint, the soil beneath, and a 15-foot wide perimeter around the magazine. Magazine 8 contains 100 square feet. It was constructed in 1949. The magazine has been used for the same purpose since construction. Currently, the magazine is not in use. Magazines 5 and 10 are adjacent to Magazine 8. A Building Data Package exists for Magazines 5, 6, 7, 10, 11, 20, 53, and 54. The binning result for this package was NFA.

There are no other structures, roads, or improvements that would impact

the environmental condition of the magazine.

3.3 Current and Past Uses of Buildings Adjacent To Magazine 8

Proximity to Magazine 8	Building Area (Sq. Ft.)	Current Use	Past Use	Direction From Building
Magazines 5, 10, 20	680	Vacant	Explosive Storage	South
Bldg. 85	3,161	Vacant	Never Used	East

4.0 Records Review

4.1 General/Historical CERCLA Information

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 is currently operating a hazardous waste treatment and storage facility under a new RCRA Part B permit dated October 18, 1996. 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 Magazine 8 in quantities above the regulatory thresholds.

4.2 Specific Record Sources

4.2.1 Occurrence Reports

There are no occurrence reports associated with Magazine 8.

4.2.2 Spills and Releases

No spills or releases of the magnitude that would require an occurrence report are associated with Magazine 8.

4.2.3 Associated PRS Overview

As a result of the investigations and documentation accomplished 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) identified under the various regulatory programs in effect at the site. Many additional contaminants of concern and types of operations were identified beyond the original NPL listing of site activities. Of these 413 PRSs, none are attributed to or impact Magazine 8.

4.3 Review of Building Prints

Building prints were reviewed and are included in Appendix D.

4.4 Aerial Photographs

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

4.5 Interviews

The Building Manager, Robert Ward, was interviewed using a building manager questionnaire. See Appendix F.

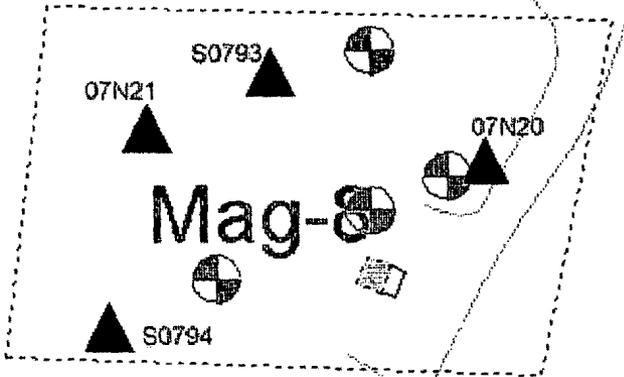
AEA	Atomic Energy Act of 1954
AEC	Atomic Energy Commission
ACM	Asbestos Containing Materials
AL	Action Level
ASTM	American Society for Testing and Materials
BUSTR	Bureau of Underground Storage Tank Regulations
CAA	Clean Air Act
CEG	Conditionally Exempt Generator
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
COD	Chemical Oxygen Demand
CWA	Clean Water Act
D&D	Decontamination and Decommissioning
DOE	U.S. Department of Energy
DPM	Disintegrations Per Minute
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
MEMP	Mound Environmental Management Project
MMCIC	Miamisburg Mound Community Improvement Corporation
MRC	Monsanto Research Corporation
NPDES	National Pollutant Discharge Elimination System

Appendix L
Noted Soil Sampling, Vicinity

Legend

- Highlight
- RedLine
- Default
- Soil Sample w/hits
- Soil Sample
- Site Boundary - Current
- Primary Roads
- Paved Drives_parking
- River
- Pond
- Creek_Stream
- Building Label
- Building Outline
- Hidden Building Outline

Soil Sampling Survey around Mag-8



Mag-5

- Surface Sample
- Boring Sample



Location	Location_type	Collection_d	Media	Value_name	Cas_number	Measured_v	Value_un	Detection_l	Chem_clas	Start_d	End_d	Depth	Project_code
S0793	Surface location	19831001	Soil	Plutonium-238	13981-16-3	18.4	PCI/G	0.01	RAD	0	0	FT	RSS
S0794	Surface location	19831001	Soil	Plutonium-238	13981-16-3	0.5	PCI/G	0.01	RAD	0	0	FT	RSS
07N20	Surface location	19940927	Soil	Total Aromatic Hydrocarbons	AHYD	513849	IC		GENERA	0	1.5	FT	2680
07N20	Surface location	19940927	Soil	Total C5 TO C11 Petroleum Hydrocarbons	TOGRHY	795431	IC		GENERA	0	1.5	FT	2680
07N21	Surface location	19940927	Soil	Total Aromatic Hydrocarbons	AHYD	24517	IC		GENERA	0	1.5	FT	2680
07N21	Surface location	19940927	Soil	Total C5 TO C11 Petroleum Hydrocarbons	TOGRHY	39547	IC		GENERA	0	1.5	FT	2680