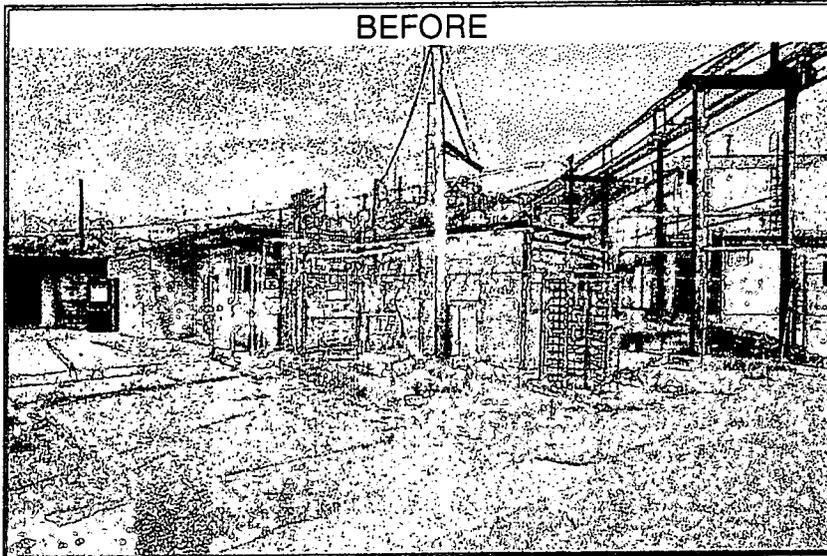


Test Fire Valley Project

CLOSE OUT REPORT

Demolition of Building 1

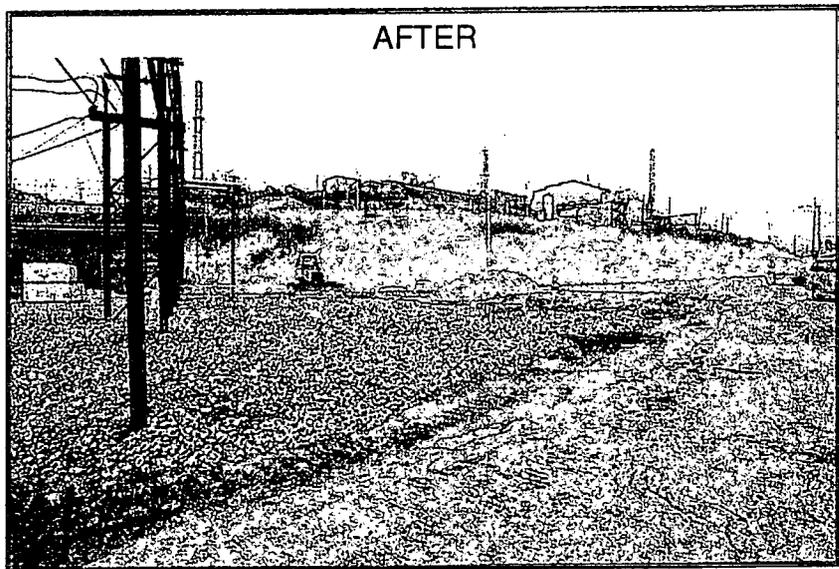


MOUND PLANT

Miamisburg, Ohio

June 1999

Final



Babcock & Wilcox of Ohio, Inc.



Department of Energy



BWX Technologies, Inc.

Babcock & Wilcox, a McDermott company

Public Reading Room
3006 - 9906220004

Babcock & Wilcox of Ohio, Inc.

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

ESC-109/99
June 9, 1999

99-TC/06-09

Mr. Richard B. Provencher, 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
FINAL CLOSE OUT REPORTS FOR BUILDINGS 1 AND 74

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

Dear Mr. Provencher:

Attached are the Final Close Out Reports for Buildings 1 and 74. These reports provide summary information on the successful completion of this effort.

The release of these documents to USEPA, OEPA, ODH, and the public reading room has been authorized by Paul Lucas of MEMP.

Page 2 FINAL CLOSE OUT REPORTS FOR BUILDINGS 1 AND 74

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

Sincerely,



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

LRB/nmg

Enclosures as stated

cc: Tim Fischer, USEPA, (1) w/attachment
Dave Meredith, TechLaw, (1) w/attachment
Brian Nickel, OEPA, (1) w/attachment
Kathy Lee Fox, OEPA, (1) w/attachment
Ruth Vandergrift, ODH, (1) w/attachment
Art Kleinrath, DOE/MEMP, (1) w/attachment
Joe Bartee, B&W, (1) w/attachment
Larry Lamsa, B&W, (1) w/attachment
Public Reading Room, (5) w/attachment
DCC, w/o attachment

Close Out Report For Demolition

Of

Building 1

DOE Mound Plant

Miamisburg, Ohio 45343-3020

Prepared for:

**United States Department of Energy
Miamisburg Environmental Management Project
P.O. Box 3020
Miamisburg, Ohio 45343-3020**

Prepared by:

Babcock & Wilcox of Ohio

June 1999

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Appendix A	Photographic Documentation
Appendix B	Sampling/Characterization Information

Executive Summary

This is the final report documenting the demolition of Building 1, as initially defined in the Building Data Package (BDP) introduced in July 1998. Demolition was completed in February 1999. This documentation serves as the record of the demolition action and reports final costs, schedule, waste disposition information, method of demolition, and any unusual findings. Photographs and references to other related documents are also included. This demolition effort was considered a standard industrial construction demolition and was not considered a removal under CERCLA and was not designated as a HAZWOPER site.

Building 1 was constructed in 1957 and served to process and blend explosives. Additionally, it served as a final packaging location for containers of explosives destined for shipment. It was a one-story, 986 square-foot concrete, slab-on-grade structure with an asphalt, built-up membrane roof. The Test Fire Valley Project of Babcock & Wilcox of Ohio demolished the building and concrete pad per the Work Plan dated August 19, 1998.

All preparation and demolition activities were performed in accordance with the Work Plan to include structure characterization, safe shutdown, utilities isolation, site access control, interior decontamination and demolition requirements (to include contaminant abatement), structure demolition and debris removal. Approximately 270 cubic yards of construction debris (non-radioactively contaminated) were removed from the Building 1 demolition site, as noted in Table 2.

The Building 1 superstructure, slab, and foundation were successfully demolished.

It is recommended to the Department of Energy that the scope of work relating to this structure be considered complete.

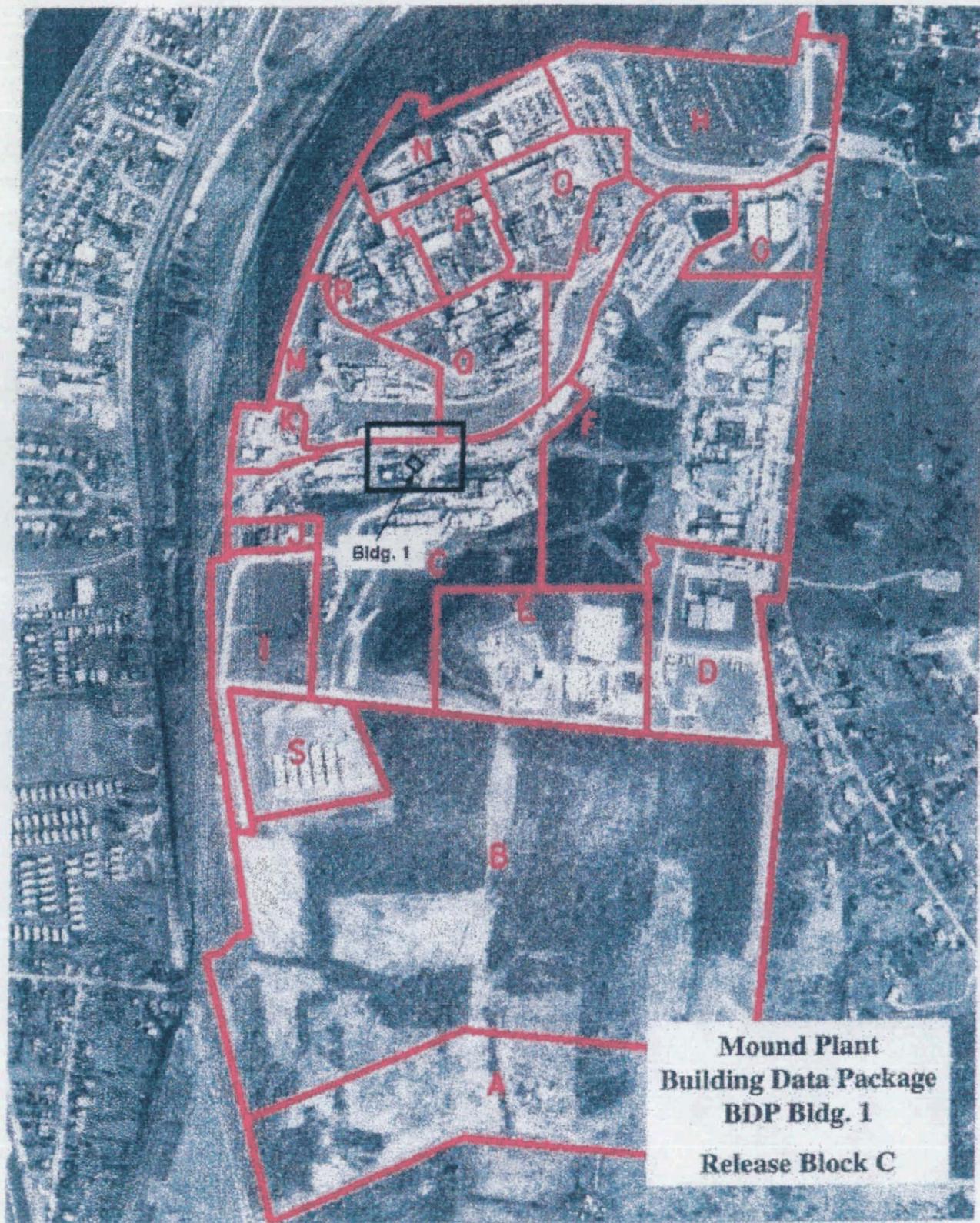


Figure 1. Mound Plant Site Location

Mound Plant

Building 1

EM Test Facility

Release Block C

On the map below:

- Building number and location shown in black
- PRS locations and numbers shown in blue
- Surrounding buildings shown in green
- Fencing shown in red
- Elevation contours shown in brown

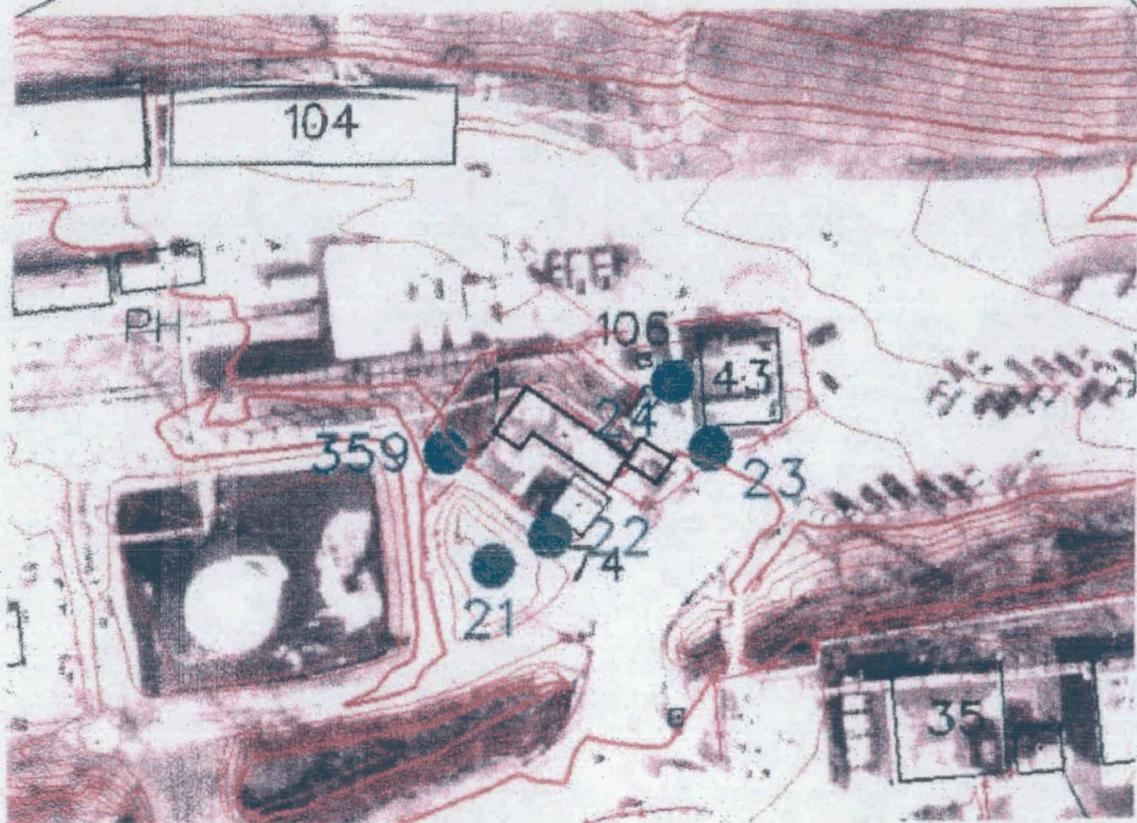
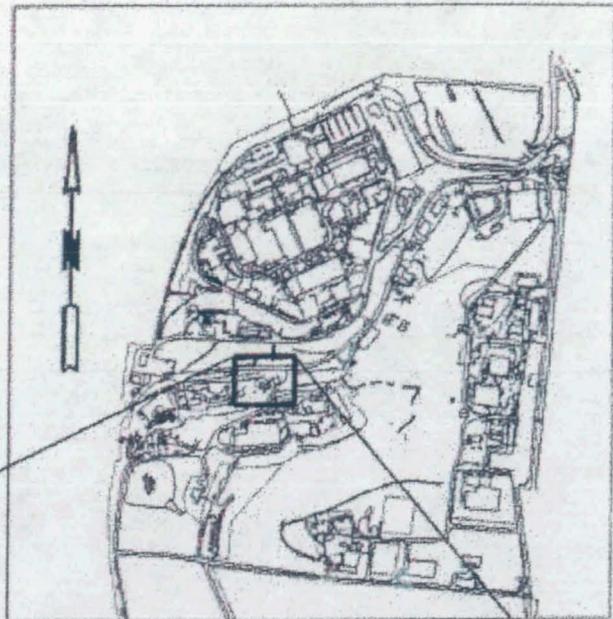


Figure 2. Demolition Site Location

1.0 SUMMARY OF EVENTS

1.1 Objectives of Demolition Activities

Building 1 was removed in support of the Mound Plant Exit Project. The removal was accomplished as a non-CERCLA demolition as noted by the Building Data Package (BDP) and detailed in the *Final Work Plan For Removal of Buildings 1 and 43, Test Fire Valley Project, August 19, 1998*. This Work Plan is also found as Appendix N of the Building Data Package. The Work Plan gives details of the planning and conduct of demolition operations. Note Figures 1 and 2 for Mound Plant and Building 1 locations.

1.2 Personnel Organization For The Demolition

See Table 1, Personnel Organization for the Demolition.

Table 1. Personnel Organization for the Demolition.

Agencies or Parties Involved	Contact	Description of Participation
US EPA HSRM-6J 77 W. Jackson Chicago, IL 60604 312-886-5787	Tim Fischer	Federal agency responsible for Mound Plant oversight.
Ohio EPA 410 E. Fifth Street Dayton, OH 45402-2911 937-285-6468	Brian Nickel	State agency responsible for Mound Plant oversight.
DOE/MEMP P.O. Box 66 1 Mound Road Miamisburg, OH 45343-0066 937-865-4020	Ron Church	DOE/MEMP Project Manager responsible for project oversight and success.
B&W Of Ohio SM/PP Hill Project P.O. Box 3030 1 Mound Road Miamisburg, OH 45343-3030 937-865-4020	Joe Bartee	Provided the DOE/MEMP Project Manager with technical assistance, administrative support, sampling, decontamination, photo and site documentation, site safety, and report preparation.
B&W of Ohio General Superintendent and Equipment Manager P.O. Box 3030 1 Mound Road Miamisburg, OH 45343-3030 937-865-4020	Dave Armstrong	Provided the personnel and equipment necessary for the demolition.

1.3 Chronological Narrative of Key Demolition Activities

November 23, 1998	Started utilities isolation.
December 3, 1998	Started asbestos abatement.
December 10, 1998	Completed utilities isolation.
December 17, 1998	Completed Safe Shutdown activities.
January 6, 1999	Completed asbestos abatement.
January 12, 1999	Started building demolition activities.
February 8, 1999	Completed building demolition activities.
February 8, 1999	Started foundation/soil removal.
March 2, 1999	Completed backfill of demolition area.

1.4 Listing of Resources Committed

Table 2 shows the materials and their disposition. Table 3 includes the demolition total cost summary.

2.0 EFFECTIVENESS OF THE DEMOLITION

Building 1 was successfully demolished per the Work Plan. All field work and laboratory analysis was accomplished by Babcock & Wilcox of Ohio personnel.

Table 2. Materials and Disposition

Material	Quantity	Method	Location
Construction Debris (concrete/masonry)	150 cubic yards	to be crushed later and recycled	Mound site: to be used as fill material.
Construction Debris (metals)	80 cubic yards	recycled	Franklin Metals
Construction Debris (mix/miscellaneous)	30 cubic yards	land fill	Koogler/ Stoney Hollow
Asbestos	10 cubic yards	land fill	Koogler/ Stoney Hollow

Table 3. Demolition Project Total Cost Summary

Activity	Cost (\$)
Work Planning	14,000
Safe Shutdown	21,300
Characterization	2,300
Decontamination & Demolition	21,000
Total Actual Cost (unburdened)	58,600
Budgeted (unburdened)	72,500

3.0 RECOMMENDATION

The Building 1 superstructure, slab, and foundation have been demolished and debris removed in accordance with documentation provided to the Mound 2000 Core Team. (See references below.) It is recommended to the Department of Energy that Babcock & Wilcox of Ohio's contractual obligations for the scope of work relating to this building be considered complete.

4.0 REFERENCE LIST OF SUPPLEMENTARY DOCUMENTS

Contact Mark Becker, Babcock & Wilcox of Ohio, Public Relations, at (937) 865-4450 to request access to these supplemental documents.

- *Building Data Package (BDP) for Building 1*
- *Final Work Plan for Removal of Buildings 1 and 43, Test Fire Valley Project, August 19, 1998.*
- Job Safety and Health Analysis

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION



Building 1 before demolition



Building 1 demolition



Building 1 demolition



Building 1 site restoration

APPENDIX B

SAMPLING/CHARACTERIZATION INFORMATION

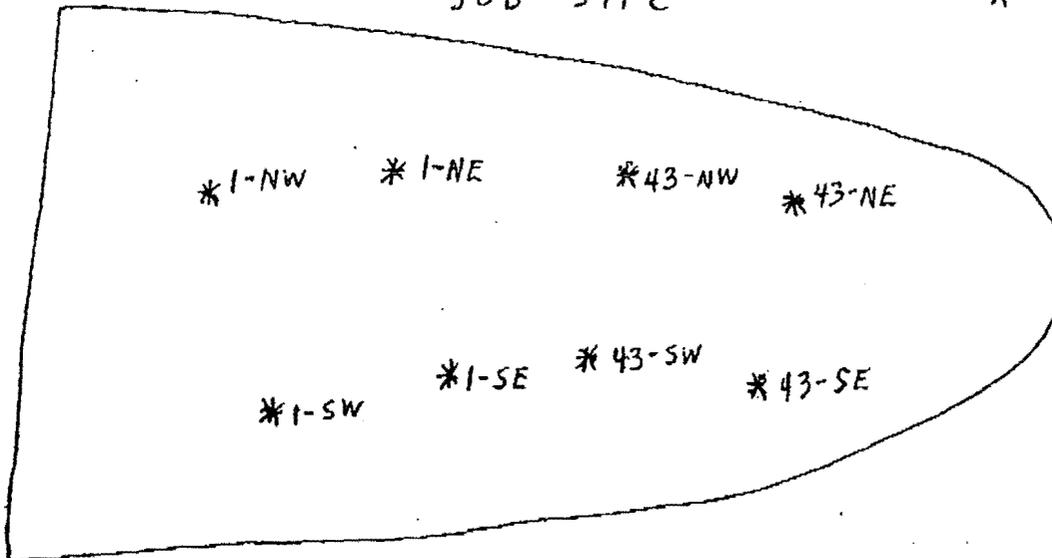
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) BLDG. 1+43 SITE	SURVEY NO. 99-TF-89
PURPOSE: SOIL SAMPLE LOCATION I.D.	RWP NO. N/A
	DATE: 021099
	TIME: 1400

MAP/DRAWING



JOB SITE



COPY

SEE ATTACHMENTS FOR GAMMA SPEC. RESULTS

LEGEND: # = mrem/hr (γ) whole body
 # E = mrem/hr ($\beta + \gamma$) extremity on contact
 * = APPROXIMATE SAMPLE LOCATION
 \triangle # = mrem/hr neutron
 \square # = air sample number
 # = swipe number
 #/α or #/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
N/A		

Completed by: (Signature) <i>P E Ryan</i>	Date: 021099
Completed by: (Print Name) P E RYAN	
Counted by: (Signature) <i>P E Ryan</i>	HP# [redacted] Date:
Counted by: (Print Name) SEE ATTACHMENTS	
Reviewed/Approved by: (Signature) <i>B Wabler</i>	HP# [redacted] Date: 2-15-99
Reviewed/Approved by: (Print Name) B Wabler for R. Johnson	

2910

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
 LAB SAMPLE ID: HPG03288
 FILE ID: GED00152.S0
 PRIORITY:

Description\Location: BD-43 NE 99TF84 Collector: P. Ryan, [REDACTED]
 Date Received: 2/10/99 Date Collected:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60 *	0.01	0.02	45,000
Cs-137 *	0.00	0.01	45,000
Pb-210	0.56	0.25	45,000
Ra-226	0.83	0.16	800
Ac-227 (D) *	0.07	0.08	40
Th-230 *	1.18	2.51	800
Th-232 (D)	0.40	0.04	130
Pu-238 *	6.83	25.05	500
Am-241	0.06	0.03	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Σ DOT 0.03 nCi/g Σ Respirator 0.06

Σ Respirator <1 indicates soil levels below limit.
 Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
 Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

COPY

Comments:

Date: 2/11/99 Counted By: 5890 Analyzed By: 5390 INITIALS [Signature]

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: HPG03289
FILE ID: GED00153.S0
PRIORITY:

Description/Location:

BD-43 SE 99TF84

Collector: P. Ryan

Date Received: 2/10/99

Date Collected:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60 *	0.00	0.01	45,000
Cs-137	0.02	0.01	45,000
Pb-210	0.41	0.22	45,000
Ra-226	0.38	0.12	800
Ac-227 (D) *	0.03	0.07	40
Th-230 *	0.51	2.17	800
Th-232 (D)	0.17	0.04	130
Pu-238 *	0.00	23.84	500
Am-241 *	0.01	0.02	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Σ DOT 0.03 nCi/g

Σ Respirator 0.05

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT = 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

COPY

Comments:

Date: 2/11/99 Counted By: 5890 Analyzed By: 5390 INITIALS ER

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
 LAB SAMPLE ID: HPG03290
 FILE ID: F9800464.S0
 PRIORITY:

Description/Location:

BD-43 NW 99TF84

Collector: P. Ryan

Date Received: 2/10/99

Date Collected:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60 *	0.00	0.01	45,000
Cs-137 *	0.01	0.01	45,000
Pb-210	0.49	0.24	45,000
Ra-226	0.59	0.16	800
Ac-227 (D) *	0.07	0.07	40
Th-230 *	1.97	2.57	800
Th-232 (D)	0.22	0.04	130
Pu-238 *	7.49	24.85	500
Am-241 *	0.00	0.03	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Σ DOT 0.03 nCi/g

Σ Respirator 0.06

Σ Respirator <1 indicates soil levels below limit.
 Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
 Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

COPY

Comments:

Date: 2/11/99 Counted By: 5890 Analyzed By: 5390 INITIALS ER

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: HPG03291
FILE ID: F9800465.S0
PRIORITY:

Description/Location:

BD-43 SW 99TF84

Collector: P. Ryan, [REDACTED]

Date Received: 2/10/99

Date Collected:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60 *	0.00	0.01	45,000
Cs-137 *	0.01	0.01	45,000
Pb-210	0.56	0.21	45,000
Ra-226	0.48	0.15	800
Ac-227 (D) *	0.04	0.07	40
Th-230	2.42	2.32	800
Th-232 (D)	0.20	0.03	130
Pu-238	27.30	23.32	500
Am-241 *	0.00	0.02	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Σ DOT 0.03 nCi/g

Σ Respirator 0.06

Σ Respirator <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

COPY

Comments:

Date: 2/11/99 Counted By: 5890 Analyzed By: 5390 INITIALS [Signature]

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
 LAB SAMPLE ID: HPG03307
 FILE ID: GEA00623.S0
 PRIORITY:

Description/Location: BD-1 NE 99TF84
Collector: P. Ryan, [REDACTED]
Date Received: 2/10/99 **Date Collected:** _____

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60 *	0.00	0.02	45,000
Cs-137	0.03	0.01	45,000
Pb-210	0.66	0.19	45,000
Ra-226	0.58	0.14	800
Ac-227 (D) *	0.05	0.08	40
Th-230 *	0.00	2.44	800
Th-232 (D)	0.24	0.04	130
Pu-238 *	0.00	24.79	500
Am-241 *	0.00	0.02	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Σ DOT 0.03 nCi/g Σ Respirator 0.06

Σ Respirator <1 indicates soil levels below limit.
 Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
 Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

COPY

Comments:

Date: 2/11/99 Counted By: 5890 Analyzed By: 5390 INITIALS [Signature]

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
 LAB SAMPLE ID: HPG03308
 FILE ID: GED00154.S0
 PRIORITY:

Description/Location: BD-1 SE 99TF84 Collector: P. Ryan
 Date Received: 2/10/99 Date Collected:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60 *	0.00	0.01	45,000
Cs-137	0.04	0.01	45,000
Pb-210	0.44	0.20	45,000
Ra-226	0.43	0.12	800
Ac-227 (D) *	0.03	0.06	40
Th-230 *	0.29	2.32	800
Th-232 (D)	0.22	0.04	130
Pu-238 *	0.00	23.05	500
Am-241 *	0.00	0.03	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Σ DOT 0.03 nCi/g Σ Respirator 0.05

Σ Respirator <1 indicates soil levels below limit.
 Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
 Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

COPY

Comments:

Date: 2/11/99 Counted By: 5890 Analyzed By: 5390 INITIALS ER

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
 LAB SAMPLE ID: HPG03309
 FILE ID: GEA00625.S0
 PRIORITY:

Description/Location:

BD-1 NW 99TF84

Collector: P. Ryan

Date Received: 2/10/99

Date Collected:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60 *	0.00	0.01	45,000
Cs-137	0.27	0.01	45,000
Pb-210	1.18	0.14	45,000
Ra-226	1.01	0.08	800
Ac-227 (D)	0.10	0.04	40
Th-230 *	0.36	1.35	800
Th-232 (D)	0.50	0.02	130
Pu-238 *	1.85	14.19	500
Am-241 *	0.00	0.01	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Σ DOT 0.02 nCi/g

Σ Respirator 0.04

Σ Respirator <1 indicates soil levels below limit.
 Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
 Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

COPY

Comments:

Date: 2/12/99 Counted By: 5890 Analyzed By: 5390 INITIALS EPN

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
 LAB SAMPLE ID: HPG03310
 FILE ID: F9800466.S0
 PRIORITY:

Description\Location:

BD-1 SW 99TF84

Collector: P. Ryan

Date Received: 2/10/99

Date Collected:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60 *	0.00	0.01	45,000
Cs-137 *	0.01	0.01	45,000
Pb-210	0.57	0.23	45,000
Ra-226	0.65	0.14	800
Ac-227 (D) *	0.04	0.07	40
Th-230 *	2.19	2.32	800
Th-232 (D)	0.28	0.02	130
Pu-238 *	6.51	24.54	500
Am-241 *	0.02	0.02	500

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Σ DOT 0.03 nCi/g

Σ Respirator 0.06

Σ Respirator <1 indicates soil levels below limit.
 Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4.

Σ DOT 2 nCi/g limit, total activity.

(D) Denotes identification by daughter emissions.
 Sample is assumed to be in secular equilibrium.

* Indicates activity < MDA. MDA used in limits calculation.

Instrument type: High Purity Germanium

COPY

Comments:

Date: 2/12/99 Counted By: 5890 Analyzed By: 5390 INITIALS *PR*

~~For BWO internal use only.~~

Hierarchy For: Close Out Report for Building 1

Document that directed this document be produced: *Work Plan For Environmental Restoration of the DOE Mound Site, the Mound 2000 Approach, February 1999, Final.*

LEVEL 1
LAWS/REGULATIONS
(Imposed by Outside Authority)

LEVEL 2
AGREEMENTS

LEVEL 3
MOUND SITE-WIDE DOCUMENTS
(POLICY & GUIDANCE FROM BWO)

LEVEL 4
ORGANIZATIONAL/OPERATIONS
DOCUMENTS

LEVEL 5
PROCEDURAL/INSTRUCTIONAL
DOCUMENTS

LEVEL 6
REPORTS AND PERFORMANCE
INDICATORS

Close Out Report

CONFIRMED UNCLASSIFIED/NON-SENSITIVE
REVIEWED BY: JANET NESHEIM/EMCBC
DATE: 06-07-10 *JAN*