3006-0309010001

Mound Site
CERCLA
Reading Room Copy

Environmental
Restoration
Program

Miamisburg Closure Project
CLOSEOUT REPORT

Building 34
(Demolition)

Final
September 2003

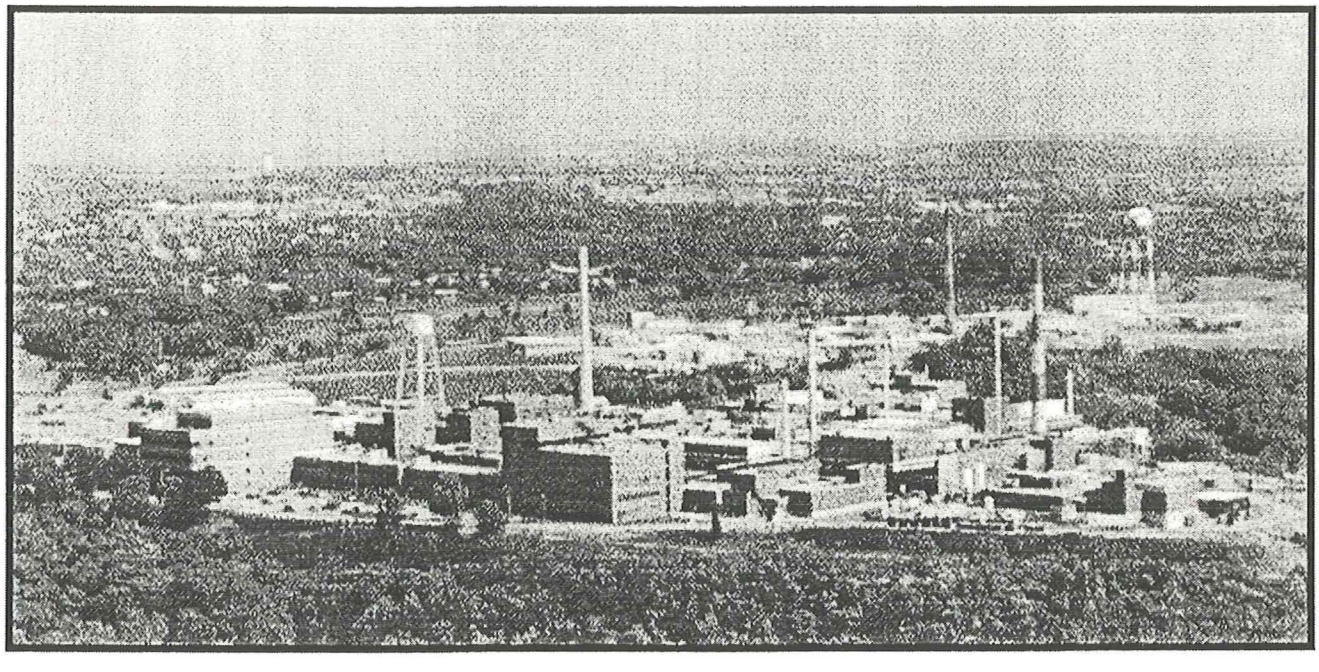

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Table 1 - PRSs in Proximity to Building 34

PRS	CERCLA or Bldg. Related	Binning Status	Comments
15	CERCLA	NFA	Area C, Lithium Burn Area (AKA Lithium Carbonate Disposal)
17*	CERCLA	RA	Oil Burn Structure
18	CERCLA	NFA	Building 34, Fire Fighting Training Facility Pits
19	CERCLA	NFA	Building 34, Historical Firefighting Training Pit
56**	Building	UB	Building 57 Chlorine Contact Chamber (Tank 112)
67*	CERCLA	FA	Plant Drainage Ditch
69*	CERCLA	FA	Overflow Pond
70*	CERCLA	FA	Retention Basins and Weir Basins
354	CERCLA	NFA	Elevated Soil Gas Location

* *PRSs 17, 67, 69, and 70 will be handled by the ER project.*
** *PRS 56, Building 57 Chlorine Contact Chamber, will be addressed in the Building 57 BDP.*
FA – Further Assessment; NFA – No Further Assessment; RA – Removal Action; UB – Unbinned

3.0 ACTIONS TAKEN

The Building 34 BDP was submitted for simultaneous Core Team and public review on 22 May 2003, and the 30-day public review period concluded on 21 June 2003.

This Closeout Report documents the completion of the demolition and removal of Building 34. All preparation and demolition activities were performed in accordance with the detailed Work Plan to perform demolition and debris removal.

A Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) study of Building 34 was performed prior to demolition. The Final Status Report (provided in the BDP) provides details of the survey design and results. Rooms 2 and 4 were cleared for free release. Room 1, because of its historical exposure to depleted uranium, was not included in the study. Room 3 (the open corridor between Rooms 1 and 2) was also not included in the study because it was constructed at the same time as Room 1.

Post-demolition radiological surveys (provided in Appendix B) of the Rooms 2 and 4 superstructure debris showed no elevated readings. That debris was loaded into haulers and disposed of at a local sanitary landfill. The Rooms 1 and 3 superstructure debris was shipped by rail to Envirocare and disposed of as Low Level Waste (LLW). The Rooms 2 and 4 slabs were radiologically surveyed (with no elevated readings) and taken to the

onsite concrete crusher. Rooms 1 and 3 shared a continuous slab, which was left in place for removal under a CERCLA removal action (RA). The area with the remaining slab is currently radiologically controlled and posted in accordance with Mound Radiological Control Procedures, and will remain so until the slab removal is complete.

After removal of the Rooms 2 and 4 slabs, two biased surface soil samples were collected from underneath each, and the analytical results are provided in Appendix B. Maximum exceedances to screening levels (the Core Team approved, or the most restrictive of either the 10^{-6} Risk-Based Guideline Values [RBGVs] plus background or Hazard Index = 1) are listed in Table 2. All other results are below applicable levels.

Table 2 - Maximum Results Exceeding Screening Levels (pCi/g)

Analyte	Maximum Result	Background	RBGV (10^{-6})	Screening Level
Lead-210	2.11	1.2	0.62	1.8
Radium-226	2.41	2	0.09	2.1

RBGV: most stringent of construction and office worker scenarios per Risk-Based Guideline Values, March 1997, Final, as performed using April 2001 HEAST slope factors.

These data are below 10^{-5} RBGV + background, which is within the acceptable risk range (10^{-4} to 10^{-6} per the NCP). These data will be considered in the CERCLA RA for the removal of the Room 1 and 3 slab.

The demolition of Building 34 commenced on 30 June 2003 and was completed on 8 July 2003. Site restoration was completed on 17 July 2003. Photographs taken before and after demolition are provided in Appendix A.

Demolition debris was disposed of as indicated in Table 3.

Table 3 - Materials Disposition

Debris	Quantity	Method	Location
Construction Debris *(Rooms 2 and 4 superstructure)*	60 cubic yards	Landfill	Stoney Hill
Low Level Waste *(Rooms 1 and 3 superstructure)*	90 cubic yards	Landfill	Envirocare
Concrete *(Rooms 2 and 4 slabs)*	120 cubic yards	Concrete crusher	MCP

4.0 PROBLEMS ENCOUNTERED

Building 34 was successfully demolished per the Work Package. The Work Package indicated that the debris from Rooms 1 and 3 superstructure would be radiologically

surveyed and sent to the onsite concrete crusher; however, upon further evaluation and regulatory discussion, it was decided that based on the history of exposure to depleted uranium, the debris from Rooms 1 and 3 superstructure would be disposed of as LLW.

5.0 RESOURCES COMMITTED

5.1 Personnel Organization

Table 4 lists the personnel organization for the demolition.

Table 4 - Personnel Organization for the Demolition

Agency or Party Involved	Contact	Description of Participation
US EPA (SR-6J) 77 W. Jackson Chicago, IL 60604 312-886-7058	David Seely	Federal agency responsible for MCP oversight.
Ohio EPA 410 E. Fifth Street Dayton, OH 45402-2911 937-285-6468	Brian Nickel	State agency responsible for MCP oversight.
DOE/ MCP P.O. Box 66 500 Capstone Circle Miamisburg, OH 45342 937-847-8350, ext 304	Frank Schmaltz	DOE/ MCP Project Manager responsible for project oversight and success.
CH2M Hill Mound, Inc. SMPP-TFV Project P.O. Box 3030 500 Capstone Circle Miamisburg, OH 45342 937-865-4169	Kurt Kehler	Provided the DOE/ MCP Project Manager with technical assistance, administrative support, sampling, decontamination, photo and site documentation, site safety, and report preparation.
CH2M Hill Mound, Inc. General Superintendent and Equipment Manager P.O. Box 3030 500 Capstone Circle Miamisburg, OH 45342 937-865-4278	Max Edington	Provided the equipment necessary for the demolition.

5.2 Demolition Cost

Under the new site contract, CH2M Hill Mound, Inc. has elected to cluster financial data for multiple buildings together. For Building 34, the cluster includes both Buildings 19 and 34. The total cost for the demolition of the Building 34 cluster is provided in Table 5.

Table 5 - Cluster 34 Total Cost

Activity	Cost
Work Planning & Regulatory	$34K
Facility Prep and Removals	$80K
Rad Support & Decon	$29K
Demolition	$27K
Total	$170K

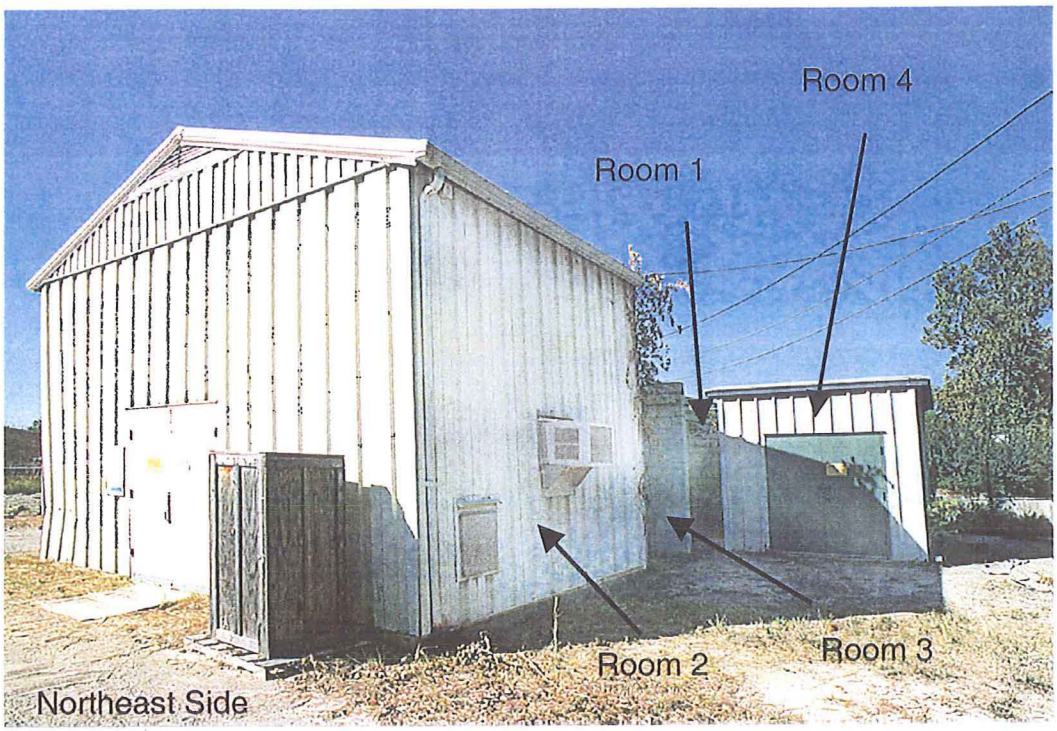
APPENDIX A

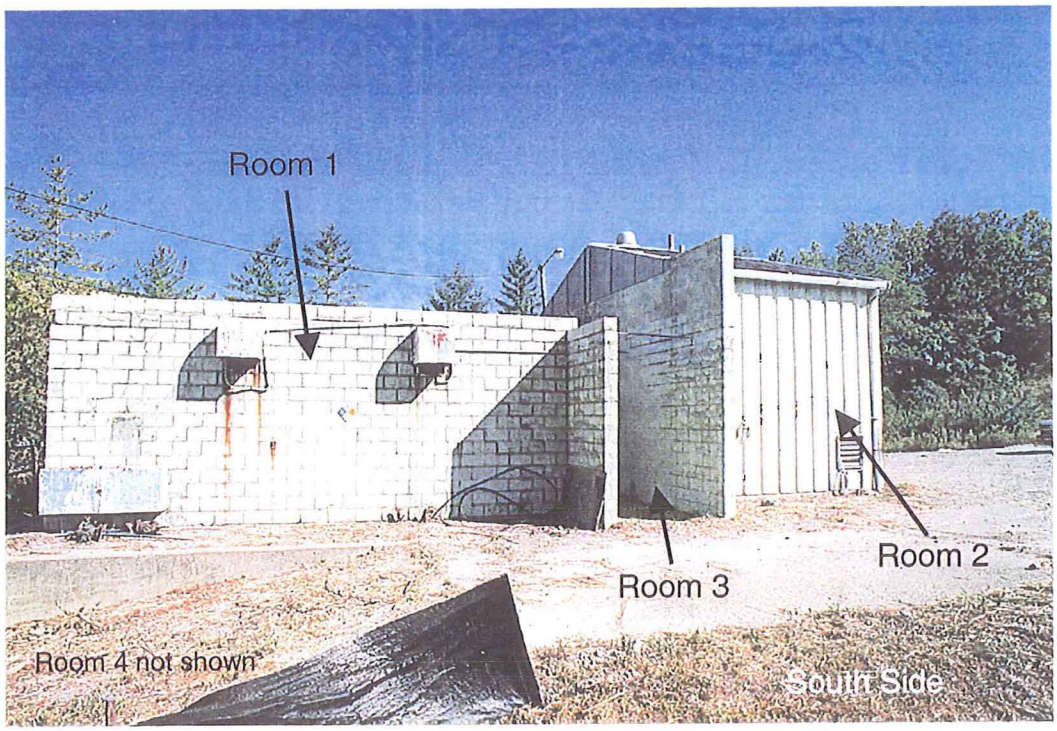
Figures

Figure 1 - Location of Building 34

A 1 of 3

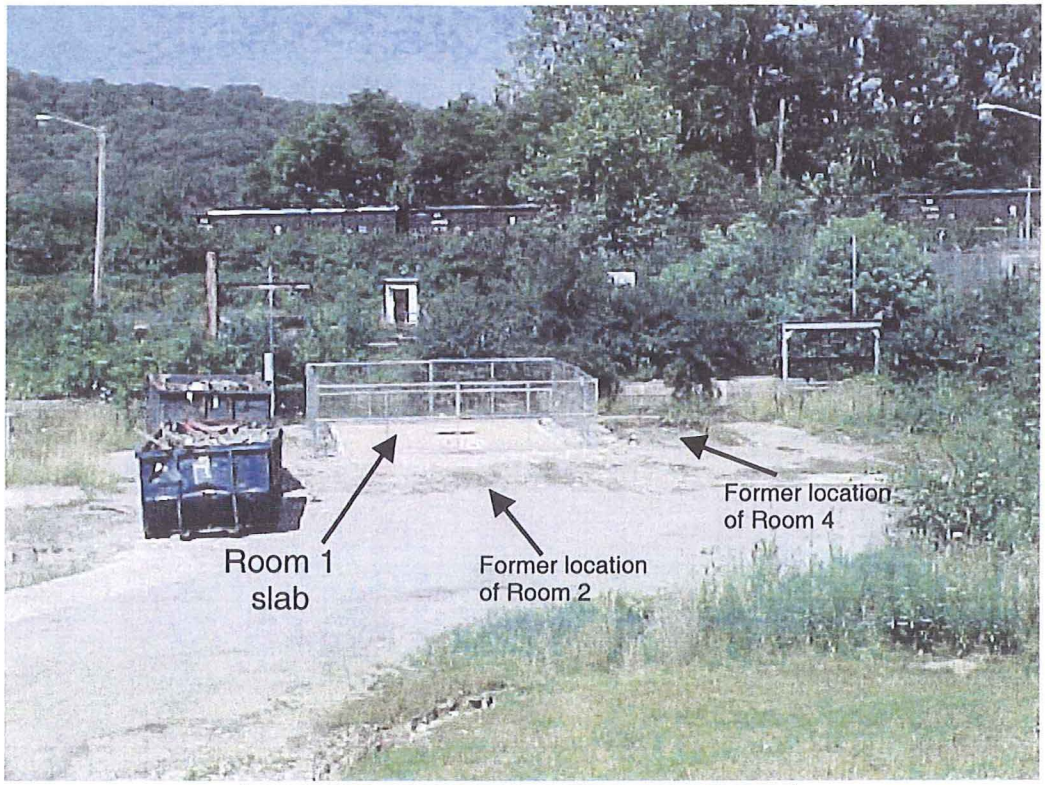
Figure 3 - Building Photos



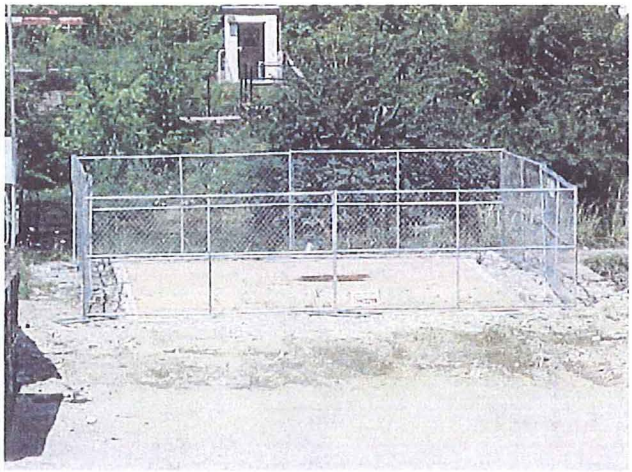


Bldg. 34

A2 of 3



Building 34 After Demolition



Remaining Room 1 Slab

Building 34 After Seeding

APPENDIX B

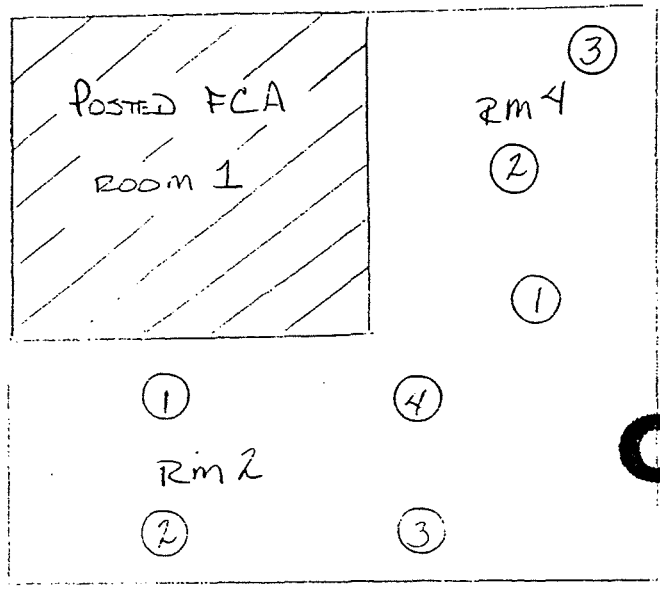
Post-Final Status Survey Report
Radiological Surveys and
Soil Analytical Results

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BUILDING 34 AREA	SURVEY NO. 03-TF-0179
PURPOSE: COLLECT SOIL SAMPLES FROM PREVIOUS ROOMS 2 & 4 OF BUILDING 34	RWP NO. N/A
	DATE: 07-30-03
	TIME: 1430

MAP/DRAWING

SEE ATTACHED RESULTS



COPY

FIDLER USED FOR INDICATION ONLY.
NO READINGS DETECTED OVER BACKGROUND.

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact
△# = mrem/hr neutron
[#] = air sample number
(#) = swipe number
(#/α) or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
FIDLER	3712/3961	05-28-04
	N/A	

Completed by: (Signature) [signature]	[redacted]	Date: 080503
Completed by: (Print Name) DANNY K. RICEK		
Counted by: (Signature)	HP #	Date:
Counted by: (Print Name) SEE ATTACHED		
Reviewed/Approved by: (Signature) [signature]	[redacted]	Date: 8-5-03
Reviewed/Approved by: (Print Name) DANIEL J. HARVEY		

ML-9620 (2-98)

Survey No. 03-TF-0179

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1				SOIL #1
2				#2
3				#3
4				#4
5				#1
6				#2
7				SOIL #3

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments

COMMENTS:

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

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SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML15651
File ID: MG301151.S0
Priority: Yes

Description\Location
Soil Sample Building 34 Room 4 Sample 1
Long Count

Collector: [redacted]
Date Received: 7/30/03
Date Collected: 7/30/03

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60		0.05	0.05	45,000
Cs-137		0.23	0.04	45,000
Pb-210	*	0.51	1.18	45,000
Ra-226		1.36	0.96	800
Ac-227 (D)	*	0	0.52	40
Th-230	*	7.32	9.29	800
Th-232 (D)		0.7	0.16	130
Pu-238	*	0	25.33	500
Am-241	*	0	0.11	500

Other Nuclides

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

Σ_{DOT} 0.04 nCi/g $\Sigma_{Respirator}$ 0.08

Instrument type: High Purity Germanium

$\Sigma_{Respirator}$ <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4

Σ_{DOT} 2nCi/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

Comments:

Date: 7/31/03 Counted By: [redacted] Analyzed By: [redacted] Initials ST

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML15652
File ID: MG400561.S0
Priority: Yes

Description\Location
Soil Sample Building 34 Room 4 Sample 2
Long Count

Collector: [redacted]
Date Received: 7/30/03
Date Collected: 7/30/03

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60		0.03	0.02	45.000
Cs-137		0.11	0.02	45.000
Pb-210		1.28	0.74	45.000
Ra-226		1.2	0.54	800
Ac-227 (D)	*	0	0.33	40
Th-230	*	0	5.74	800
Th-232 (D)		0.57	0.08	130
Pu-238	*	0	44.92	500
Am-241	*	0.05	0.06	500

Other Nuclides

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

Σ_{DOT} 0.05 nCi/g $\Sigma_{Respirator}$ 0.11

$\Sigma_{Respirator}$ <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4

Instrument type: High Purity Gennanium

Σ_{DOT} 2nCi/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

Comments:

Date: 7/31/03 Counted By: [redacted] Analyzed By: [redacted] Initials SY

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML15653
File ID: MG500442.S0
Priority: Yes

Description\Location
Soil Sample Building 34 Room 4 Sample 3
Long Count

Collector: [redacted]
Date Received: 7/30/03
Date Collected: 7/30/03

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0	0.06	45.000
Cs-137		0.18	0.05	45.000
Pb-210		2.11	0.97	45.000
Ra-226		1.7	0.91	800
Ac-227 (D)	*	0.19	0.47	40
Th-230	*	0.61	9.14	800
Th-232 (D)		0.73	0.17	130
Pu-238	*	0	29.32	500
Am-241	*	0.01	0.1	500

Other Nuclides

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

Σ_{DOT} 0.04 nCi/g $\Sigma_{Respirator}$ 0.09

Instrument type: High Purity Germanium

$\Sigma_{Respirator}$ <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4

Σ_{DOT} 2nCi/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

Comments:

Date: 7/31/03 Counted By: [redacted] Analyzed By: [redacted] Initials

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML15654
File ID: MG301152.S0
Priority: Yes

Description\Location
Soil Sample Building 34 Room 2 Sample 1
Long Count

Collector: [redacted]
Date Received: 7/30/03
Date Collected: 7/30/03

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.03	0.05	45.000
Cs-137		0.06	0.04	45.000
Pb-210		1.45	0.85	45.000
Ra-226		2.41	0.6	800
Ac-227 (D)	*	0.24	0.38	40
Th-230	*	5.41	7.04	800
Th-232 (D)		0.41	0.12	130
Pu-238	*	2.85	16.94	500
Am-241	*	0	0.09	500

Other Nuclides

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

Σ_{DOT} 0.03 nCi/g $\Sigma_{Respirator}$ 0.06

Instrument type: High Purity Germanium

$\Sigma_{Respirator}$ <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4

Σ_{DOT} 2nCi/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

Comments:

Date: 7/31/03 Counted By: [redacted] Analyzed By: [redacted] Initials [illegible]

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML15655
File ID: MG500443.S0
Priority: Yes

Description\Location
Soil Sample Building 34 Room 2 Sample 2
Long Count

Collector: [redacted]
Date Received: 7/30/03
Date Collected: 7/30/03

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.01	0.03	45,000
Cs-137	*	0.02	0.03	45,000
Pb-210		0.82	0.53	45,000
Ra-226		0.7	0.57	800
Ac-227 (D)	*	0.05	0.26	40
Th-230	*	0	5.54	800
Th-232 (D)		0.28	0.09	130
Pu-238	*	0	16.49	500
Am-241	*	0	0.06	500

Other Nuclides

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

Σ_{DOT} 0.02 nCi/g $\Sigma_{Respirator}$ 0.05

Instrument type: High Purity Germanium

$\Sigma_{Respirator}$ <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4

Σ_{DOT} 2nCi/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

Comments:

Date: 7/31/03 Counted By: [redacted] Analyzed By: [redacted] Initials ST

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML15656
File ID: MG301153.S0
Priority: Yes

Description\Location
Soil Sample Building 34 Room 2 Sample 3
Long Count

Collector: [redacted]
Date Received: 7/30/03
Date Collected: 7/30/03

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.04	0.05	45,000
Cs-137		0.08	0.04	45,000
Pb-210		1.05	0.9	45,000
Ra-226		0.81	0.79	800
Ac-227 (D)	*	0	0.42	40
Th-230	*	0	8.02	800
Th-232 (D)		0.4	0.12	130
Pu-238	*	0	22.74	500
Am-241	*	0.06	0.09	500

Other Nuclides

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

Σ_{DOT} 0.03 nCi/g $\Sigma_{Respirator}$ 0.07

Instrument type: High Purity Germanium

$\Sigma_{Respirator}$ <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4

Σ_{DOT} 2nCi/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

Comments:

Date: 7/31/03 Counted By: [redacted] Analyzed By: [redacted] Initials

SOIL ANALYSIS REPORT

Field Sample ID:
Lab Sample ID: ML15657
File ID: MG500445.S0
Priority: Yes

Description\Location
Soil Sample Building 34 Room 2 Sample 4
Long Count

Collector: [redacted]
Date Received: 7/30/03
Date Collected: 7/30/03

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60		0.03	0.03	45,000
Cs-137		0.12	0.03	45,000
Pb-210	*	0	0.88	45,000
Ra-226		1.05	0.69	800
Ac-227 (D)	*	0	0.36	40
Th-230	*	0	7.34	800
Th-232 (D)		0.47	0.11	130
Pu-238	*	0	20.43	500
Am-241	*	0	0.08	500

Other Nuclides

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

Σ_{DOT} 0.03 nCi/g $\Sigma_{Respirator}$ 0.06

$\Sigma_{Respirator}$ <1 indicates soil levels below limit.
Values > or = 1 indicate soil levels exceed limit. Limits based on MD-10438 table 4

Σ_{DOT} 2nCi/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

Comments:

Date: 7/31/03 Counted By: [redacted] Analyzed By: [redacted] Initials [signature]

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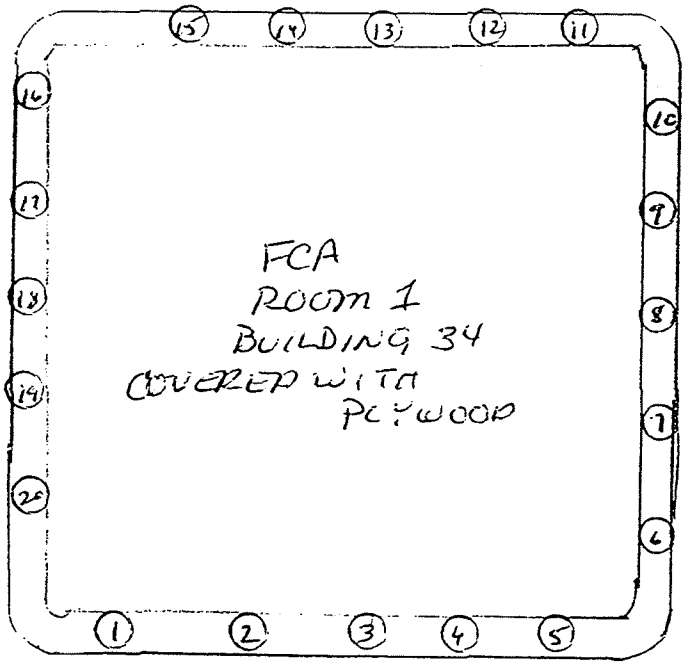
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 34 ROOM 1	SURVEY NO. 03-TF-0161
PURPOSE: POST DEMO OF WALLS AROUND ROOM 1 FCA	RWP NO. N/A
	DATE: 7-8-03
	TIME: 1400

MAP/DRAWING



COPY

<100 / α

<5K / β-

LEGEND: # = mrem/hr (γ) whole body
#E = mrem/hr (β+η+γ) extremity on contact

△# = mrem/hr neutron

[#] = air sample number

(#) = swipe number

(#/α) or/β = direct cont. measurement in dpm/100cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360	5833/5847	3-13-04
	N/A	

Completed by: (Signature)	HP # [redacted]	Date: 7-9-03
Completed by: (Print Name) DANIEL J. HARVEY		
Counted by: (Signature) SEE	HP #	Date:
Counted by: (Print Name) ATTACHED		
Reviewed/Approved by: (Signature)	[redacted]	Date: 07-09-03
Reviewed/Approved by: (Print Name) DANNY K. RILEY		

ML-9620 (2-98)

Bill of 21

Survey No. 03-TF-0161

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	SEE ATTACHED		N/A	GRADE WALL
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20	✓	✓	✓	✓
		N	A	

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
		N	A	

COMMENTS: N/A

NOTES:
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620A (4-98)

Alpha/Beta Analysis

Batch ID:	Smear Unit 1 - 200307081542	**Count Date:**	7/8/2003
Group:	E	**Count Minutes:**	1.5
Serial Number:	78218-1 0161 DJH 7-9-03	**Count Mode:**	Simultaneous
Batch ID:	03-TF-~~0162~~ HARVEY-20 BSB	**Operating Volts:**	1410
Selected Geometry:	Swipe/Smear	**Cal Due Dates:**	6/19/2004

	Efficiency (%)				Spillover (%)			
Alpha:	34.73	±	0.13		**Alpha to Beta:**	11.39	±	0.00
Beta:	46.13	±	0.13		**Beta to Alpha:**	0.07	±	0.00

Sample ID	Carrier ID	Alpha (dpm)	σ	Beta (dpm)	σ
1	35	0.00	0.00	0.00	0.00
2	36	2.18	1.92	5.32	2.90
3	23	13.11	4.70	12.77	4.59
4	51	2.18	1.92	2.58	2.05
5	27	0.00	0.00	1.37	1.45
6	5	2.19	1.92	0.00	0.16
7	21	0.00	0.00	2.74	2.04
8	100	2.18	1.92	5.32	2.90
9	87	0.00	0.00	4.11	2.50
10	19	2.19	1.92	1.21	1.45
11	57	0.00	0.00	2.74	2.04
12	69	0.00	0.00	2.74	2.04
13	42	0.00	0.00	1.37	1.45
14	59	0.00	0.00	1.37	1.45
15	37	0.00	0.00	4.11	2.50
16	61	0.00	0.00	5.48	2.89
17	55	0.00	0.00	2.74	2.04
18	74	0.00	0.00	2.74	2.04
19	98	4.37	2.72	0.00	0.23
20	40	0.00	0.00	2.74	2.04
		DJH		DJH	

[signature]

Batch ID: 03-TF-0162 HARVEY-20 BSB

~~Page 1 of 1~~ [initials] 07-09-03

PS 3 of 3

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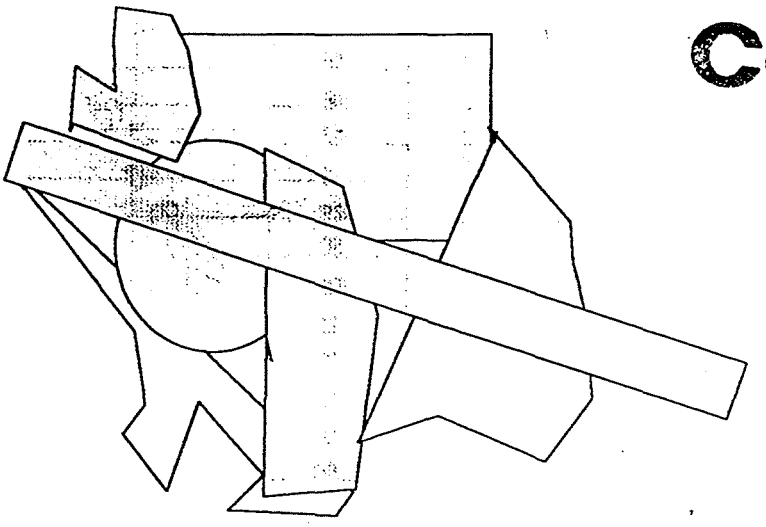
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 34	SURVEY NO. 03-TF-0159
PURPOSE: RELEASE CONCRETE TO WASTEMANAGEMENT	RWP NO. N/A
	DATE: 7-7-03
	TIME: 1300

MAP/DRAWING

* NOTE: THIS IS SLAB FROM ROOM 2 AND 4 ONLY



COPY

Fidler used for indication only. Results were NON-detectable.

Integrated count taken IF audible detected. NO audible detected.

ALL direct readings <100dpm/100cm2 Alpha and <5000dpm/100cm2 Beta

LEGEND:
# = mrem/hr (γ) whole body
# E = mrem/hr (β+n+γ) extremity on contact
K= factor of 1000
- - - - - - - = radiological boundary

= mrem/hr neutron

= air sample number

(#) = swipe number

(#/α) or /β = direct contamination measurement in dpm/100cm2

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360	5833/5847	3-13-04
FIDLER	3638/3960	4-28-04
	N/A	

Completed by: (Signature)	HP# [redacted]	Date: 7-9-03
Completed by: (Print) DAVID J. HARVEY		
Counted by: (Signature) SEE	HP#	Date:
Counted by: (Print) ATTACHED		
Reviewed/Approved by (Signature)	HP# [redacted]	Date: 07-09-03
Reviewed/Approved by (Print) DANNY K. RILEY		

ML-9620

RSDS# 03-TF-0159

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
1				CONCRETE
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				

See attached results

N/A

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
22				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
99				
70				

See attached results

N/A

COMMENTS: N/A

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO count Room analysis for β/γ ,alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached , write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620

Batch ID:	Smear Unit 1 - 200307071547	**Count Date:**	7/7/2003
Group:	H	**Count Minutes:**	1.5
Serial Number:	78218-1	**Count Mode:**	Simultaneous
Batch ID:	03-TF-0159 RILEY-12 BSB	**Operating Volts:**	1410
Selected Geometry:	Swipe/Smear	**Cal Due Dates:**	6/19/2004

	Efficiency (%)				Spillover (%)			
Alpha:	34.73	±	0.13		**Alpha to Beta:**	11.39	±	0.00
Beta:	46.13	±	0.13		**Beta to Alpha:**	0.07	±	0.00

Sample ID	Carrier ID	Alpha (dpm)	σ	Beta (dpm)	σ
1	8	2.19	1.92	0.00	0.16
2	91	4.37	2.72	3.80	2.51
3	75	2.19	1.92	0.00	0.16
4	97	0.00	0.00	2.74	2.04
5	73	0.00	0.00	0.00	0.00
6	20	0.00	0.00	1.37	1.45
7	32	0.00	0.00	1.37	1.45
8	79	8.74	3.84	2.12	2.07
9	15	2.19	1.92	0.00	0.16
10	82	0.00	0.00	1.37	1.45
11	17	2.18	1.92	2.58	2.05
12	68	2.18	1.92	5.32	2.90

DJH DJH

Batch ID: 03-TF-0159 RILEY-12 BSB

3 of 3

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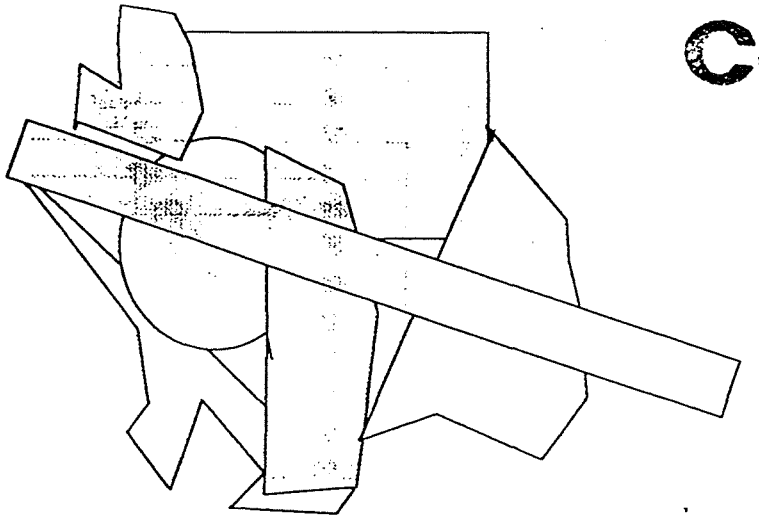
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 34	SURVEY NO. 03-TF-0159
PURPOSE: RELEASE CONCRETE TO WASTEMANAGEMENT	RWP NO. N/A
	DATE: 7-7-03
	TIME: 1300

MAP/DRAWING

* NOTE: THIS IS SLAB FROM ROOM 2 AND 4 ONLY



CC

Fidler used for indication only. Results were NON-detectable.

Integrated count taken IF audible detected. NO audible detected.

ALL direct readings <100dpm/100cm2 Alpha and <5000dpm/100cm2 Beta

LEGEND:
# = mrem/hr (γ) whole body
# E = mrem/hr (β+n+γ) extremity on contact
K= factor of 1000
- - - - - - - = radiological boundary
= mrem/hr neutron
= air sample number
= swipe number
/α or /β = direct contamination measurement in dpm/100cm2

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360	5833/5847	3-13-04
FIDLER	3638/3960	4-28-04
	N/A	

Completed by: (Signature)	HP# [redacted]	Date: 7-9-03
Completed by: (Print) DANIEL J. HARVEY		
Counted by: (Signature) SEE	HP#	Date:
Counted by: (Print) ATTACHED		
Reviewed/Approved by (Signature)	HP# [redacted]	Date: 07-09-03
Reviewed/Approved by (Print) DANNY K. RILEY		

ML-9620

RSDS# 03-TF-0159

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
1				CONCRETE
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
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28				
29				
30				
31				
32				
33				
34				
35				

See attached results

N/A

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Commer
36				
37				
38				
39				
40				
41				
42				
43				
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45				
46				
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65				
66				
67				
68				
99				
70				

See attached results

N/A

COMMENTS: N/A

NOTES:

1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO count Room analysis for β/γ ,alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached , write "see attached" in column.
3. Annotate special sample type (e.g., soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

MI-0620

Batch ID:	Smear Unit 1 - 200307071547	**Count Date:**	7/7/2003
Group:	H	**Count Minutes:**	1.5
Serial Number:	78218-1	**Count Mode:**	Simultaneous
Batch ID:	03-TF-0159 RILEY-12 BSB	**Operating Volts:**	1410
Selected Geometry:	Swipe/Smear	**Cal Due Dates:**	6/19/2004

Efficiency (%)				Spillover (%)			
Alpha:	34.73	±	0.13	**Alpha to Beta:**	11.39	±	0.00
Beta:	46.13	±	0.13	**Beta to Alpha:**	0.07	±	0.00

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1	8	2.19	1.92	0.00	0.16
2	91	4.37	2.72	3.80	2.51
3	75	2.19	1.92	0.00	0.16
4	97	0.00	0.00	2.74	2.04
5	73	0.00	0.00	0.00	0.00
6	20	0.00	0.00	1.37	1.45
7	32	0.00	0.00	1.37	1.45
8	79	8.74	3.84	2.12	2.07
9	15	2.19	1.92	0.00	0.16
10	82	0.00	0.00	1.37	1.45
11	17	2.18	1.92	2.58	2.05
12	68	2.18	1.92	5.32	2.90
		Dg H		Dg H	