

3006-0402240002



CH2MHILL

CH2M HILL
Mound, Inc.
1 Mound Road
P.O. Box 3030
Miamisburg, OH
45343-3030

SM-032/03
June 9, 2003

Mr. Richard B. Provencher, Director
Miamisburg Closure Project
U. S. Department of Energy
P. O. Box 66
Miamisburg, OH 45343-0066

ATTENTION: Paul Lucas

SUBJECT: Contract No. DE-AC24-03OH20152
BUILDING 49 CLOSEOUT REPORT, FINAL
Bldg 49-GFS/I: Submit Planning Documents - Activity ID: EBDEE095AJ

REFERENCE: Statement of Work Requirement 055 - Regulator Reports

Dear Mr. Provencher:

Paul Lucas from your office has approved the release of the following final document:

- Building 49, Closeout Report, Final

If you or members of your staff have any questions regarding the document, or if additional support is needed, please contact Bob Ransbottom at extension 4220.

Sincerely,

K. L. Kehler
SMPP/TFV Project Manager

KLK/VKD

Enclosures

Approved: Frank Schmaltz 6/9/03
for Paul Lucas Date
CERCLA Program Manager

cc: Dave Seely, USEPA, (1) w/attachments
Brian Nickel, OEPA, (1) w/attachments
Ruth Vandegrift, ODH, (1) w/attachments
Frank Schmaltz, DOE/MCP, (1) w/attachments
Lisa Rawls, DOE/MCP, w/o attachments
Randy Tormey, DOE/MCP, (1) w/attachments
Terry Tracy, DOE/HQ, (1) w/attachments
Dann Bird, MMCIC, (1) w/attachments
Jim Bonfiglio, MESH, (1) w/attachments
Public Reading Room, (4) w/attachments
John Fulton, CH2M Hill, w/o attachments
Bob Ransbottom, CH2M Hill, (1) w/attachments
Val Darnell, CH2M Hill, (1) w/attachments
Kurt Kehler, CH2M Hill, (1) w/attachments
DCC (1) w/attachments



**Environmental
Restoration
Program**



OhioEPA

Miamisburg Closure Project CLOSEOUT REPORT

Building 49

(Demolition)

Final
June 2003

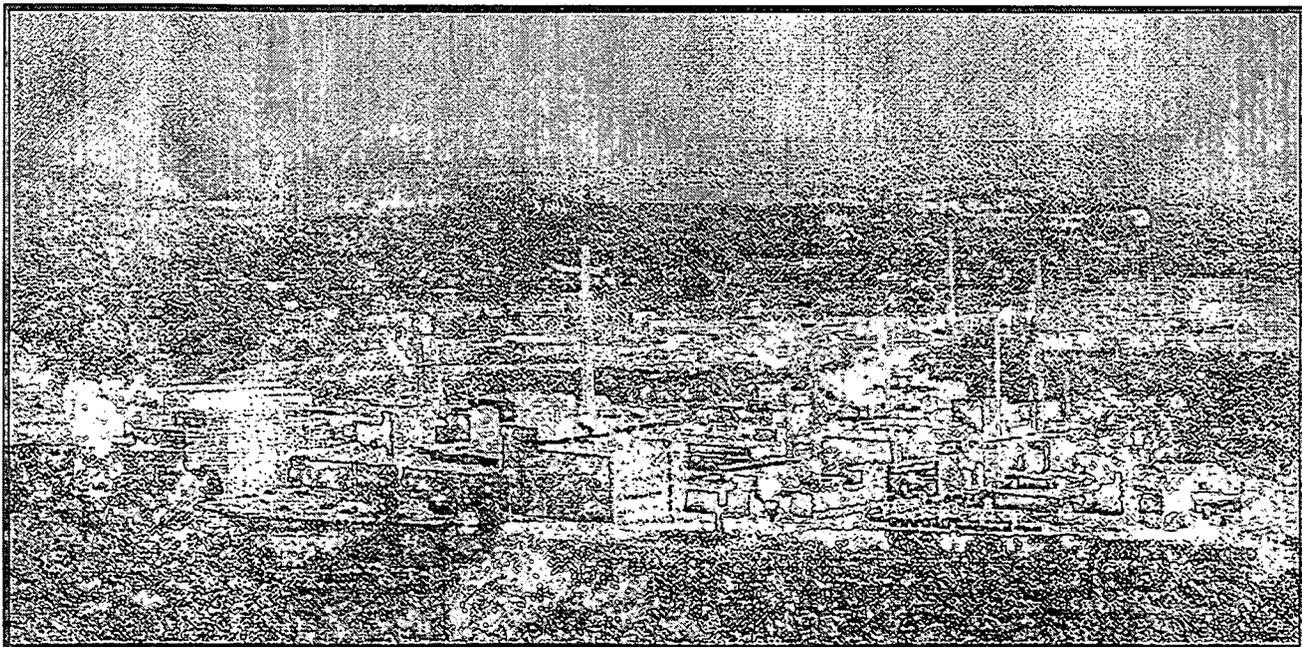


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1.0 PURPOSE

This is the final report documenting completion of the demolition of Building 49 located at the DOE Miamisburg Closure Project (MCP) Site, as shown in the figures provided in Appendix A. The building demolition, including its solvent shed and associated piping, was accomplished per the Work Package for Building 49 Demolition #SMPP/TFV-34119-00, a copy of which was included in Appendix O of the Building Data Package for Building 49. The scope of work relating to this building is considered complete. The Building 49 slab and footers will be removed as part of the PRS 87 Removal Action.

2.0 BACKGROUND

2.1 Building 49

Constructed in 1970, with an addition in 1988, Building 49 was a one-story building with two roof-mounted penthouses. The structure contained 14,929 square feet of floor space. Built slab on grade, Building 49 was a reinforced concrete building with a built-up membrane (coal tar) roof. Building 49 was heated by steam and air conditioned by central chiller systems. It was supplied with potable and non-potable water and sanitary services. Electric service was 460 volts.

To the west/southwest corner of the building is a large concrete pad on which had previously stood a double-wide trailer that was used for offices. The trailer was previously removed.

2.2 Solvent Shed

Included in the Building 49 demolition activities was the solvent shed located approximately 120 feet north-northeast of the building. This metal structure was constructed in 1985, and measured approximately 8 feet by 12 feet. The solvent shed was equipped with a ventilation fan and metal grid floor with an underlying catch basin. When building processes were in operation, solvents were piped directly from drums located in the shed into Building 49. Spent solvents were discharged through a drain and piped back to the solvent shed, where these materials were collected in a 55-gallon drum.

The shed demolished as part of the Building 49 demolition was the second solvent shed to support Building 49 operations. The original shed was located near the north side of the original building footprint. That shed was previously demolished to support construction of the 1988 addition to the north side of Building 49.

Both solvent sheds were designated as Potential Release Site (PRS) 87. Because of the original solvent shed, PRS 87 was binned as a Removal Action due to soil contamination. The second shed (the one demolished with this demolition activity) required no action based on characterization data, and will be closed out along with the original shed via the PRS 87 OSC Report.

2.3 PRSs

As a result of the investigations and documentation accomplished to comply with the CERCLA cleanup process via the Federal Facilities Agreement (FFA)/DOE ER Program, DOE and the site contractor tabulated all of the PRSs identified under the various regulatory programs in effect at the site. Of these 440 PRSs, ten are near Building 49 (see Table 1).

Table 1: PRSs in Proximity to Building 49

PRS #	CERCLA or BLDG. RELATED	BINNING STATUS	COMMENTS
PRS 67	CERCLA	FA	Plant drainage ditch
PRS 72	CERCLA	NFA	Area 13, polonium-contaminated wood from Dayton Unit IV
PRS 83	Building Related	NFA	Building 2 propane tank (Tank 122)
PRS 87	CERCLA	RA	Location of former solvent sheds. The original shed location (under the Bldg 49 footprint) requires remediation; however, the second shed (demolished in this activity) does not require remediation based on characterization data.
PRS 89	Building Related	NFA	Test Fire residual storage area
PRS 319	CERCLA	NFA	Building 49 former epoxy resin waste containers
PRS 330	Building Related	NFA	Building 2 fuel oil tank
PRS 331	CERCLA	NFA	Building 2 septic tank
PRS 363	CERCLA	RA	Elevated soil gas location
PRS 364	CERCLA	NFA	Elevated soil gas location

FA – Further Assessment

NFA – No Further Assessment

RA – Removal Action

The Building 49 slab and foundation were left in place and are slated to be removed by the Environmental Restoration (ER) group as part of the PRS 87 RA. PRSs 67 and 363 are unrelated to Building 49 and will be handled separately from this building demolition.

3.0 ACTIONS TAKEN

The Building 49 Building Data Package (BDP) was submitted for simultaneous Core Team and public review on 19 February 2003, and the 30-day public review period concluded on 21 March 2003.

This Closeout Report documents the completion of the demolition and removal of Building 49, the adjacent solvent shed, and associated overhead piping. 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 49 was performed prior to demolition. The study report (provided in Appendix G of the Building Data Package) provides details of the survey design and results and indicates that Building 49 met applicable surface release criteria. Post-demolition surveys on debris piles showed no elevated readings (copies are provided in Appendix B).

Building debris was loaded into rolloffs and taken to a local sanitary landfill.

The demolition of Building 49 commenced on 12 March 2003 and was completed on 14 April 2003 (CH2M Hill Mound received concurrence to begin demolition prior to the completion of the 30-day public and Core Team review period). The slab remained in place. Photographs taken before, during, and after demolition are provided in Appendix A.

Table 2 - Waste Disposition

Building 49 Material	Quantity	Method	Location
Asbestos Abatement (debris)	30 cubic yards	Landfill	Stoney Hill
Construction Debris (concrete, asphalt, rebar, and metal)	5,160 cubic yards	Landfill	Stoney Hill

4.0 PROBLEMS ENCOUNTERED

Building 49 was successfully demolished per the Work Package, with no variances reported.

5.0 RESOURCES COMMITTED

5.1 Personnel Organization

Table 3 lists the personnel organization for the demolition.

Table 3 - 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.

Table 3 - Personnel Organization for the Demolition

Agency or Party Involved	Contact	Description of Participation
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 1 Mound Road Miamisburg, OH 45343-0066 937-865-3620	Frank Schmaltz	DOE/ MCP Project Manager responsible for project oversight and success.
CH2M Hill Mound, Inc. SMPP-TFV Project P.O. Box 3030 1 Mound Road Miamisburg, OH 45343-3030 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 1 Mound Road Miamisburg, OH 45343-3030 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 49, the cluster includes Buildings 49, 94, and 95. As a result, costs for individual building demolitions are not available. The total cost for the cluster is reported in Table 4.

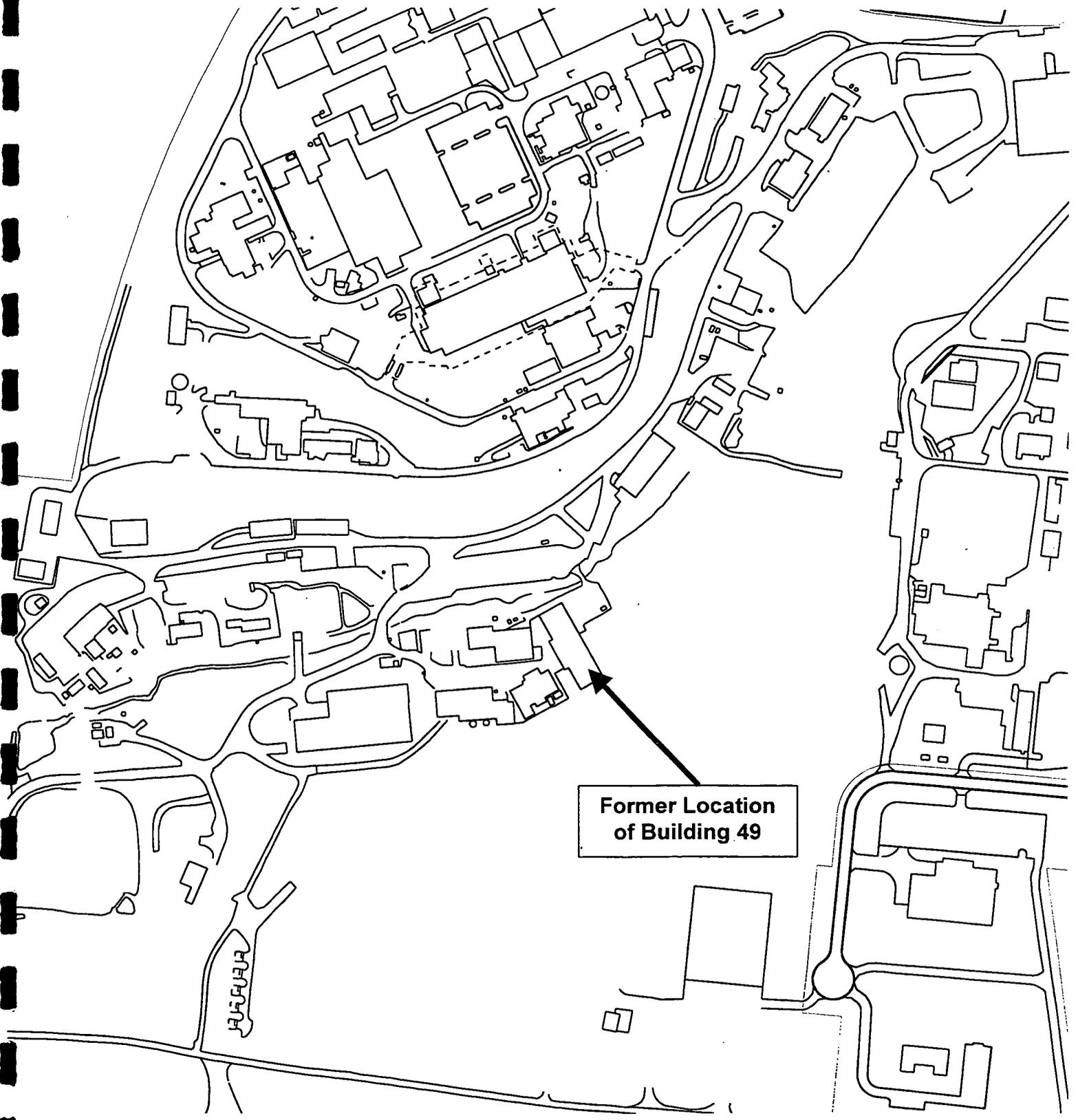
Table 4 - Cluster 95 Total Cost
(Buildings 49, 94, and 95)

FY98	FY99	FY00	FY01	FY02	FY03	Total
\$30	\$39,526	\$9,828	\$310	\$39,460	\$347,890	\$437,043

APPENDIX A

Figures

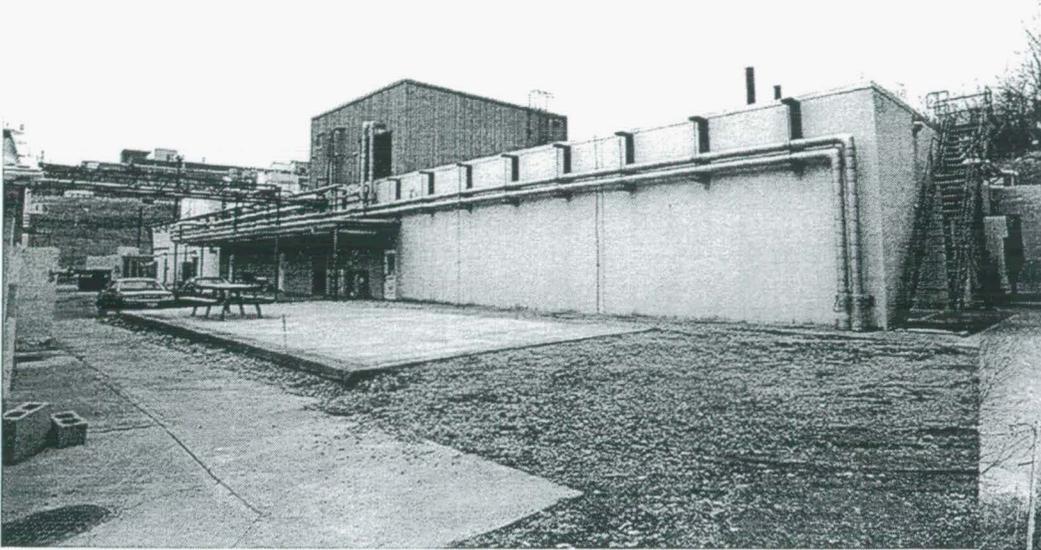
Figure 1 - Location of Building 49



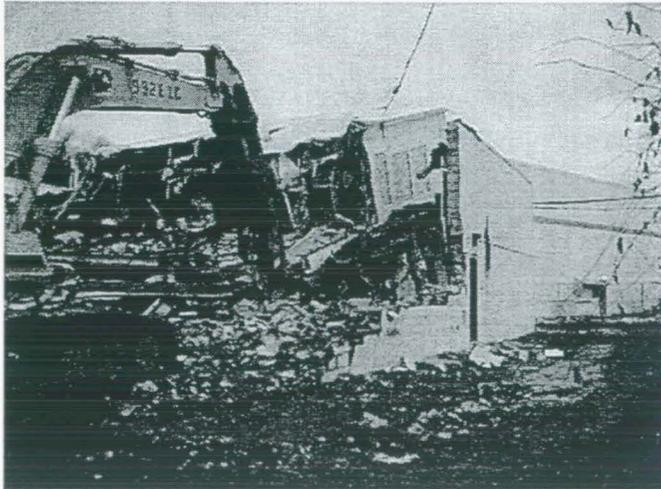
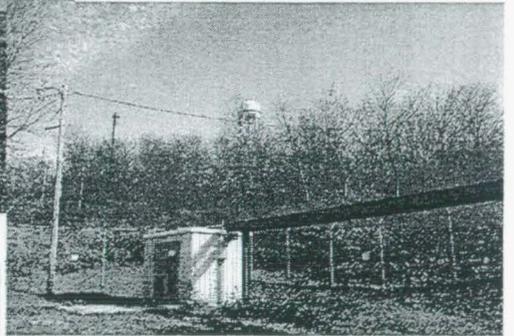
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Figure 2 - Building Photos

Bldg. 49

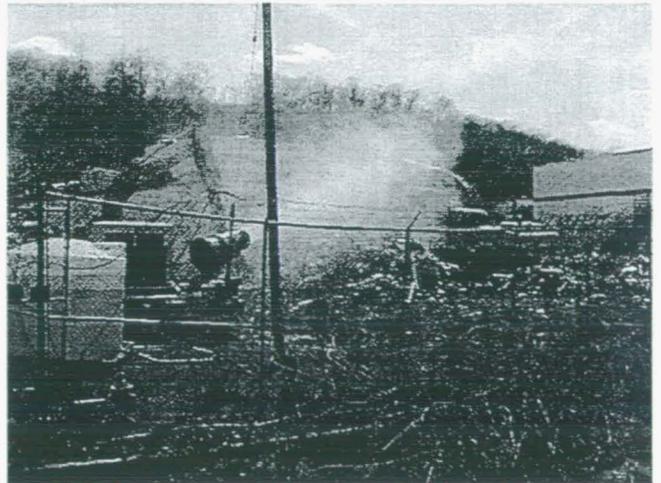


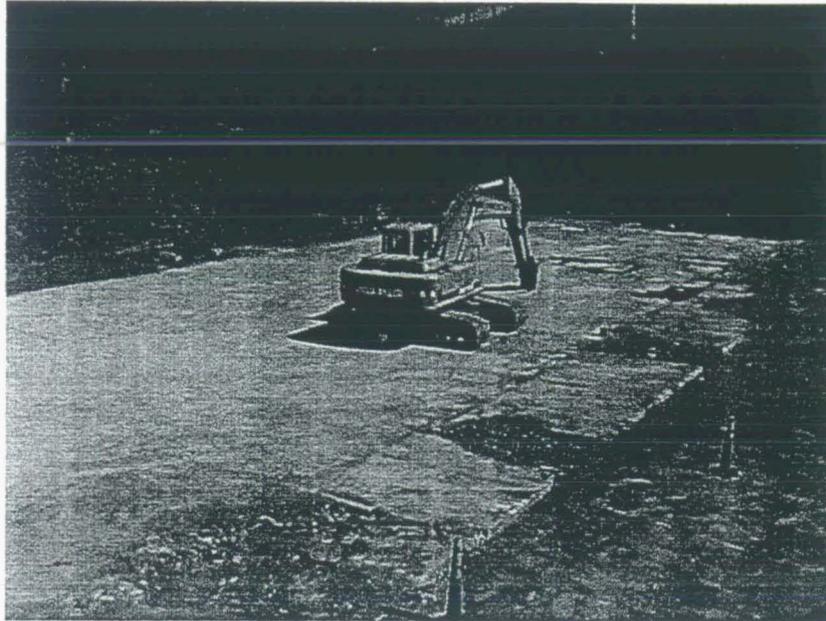
Bldg. 49 Solvent Shed



Bldg. 49 Demolition

Bldg. 49 Misting During Demolition





Bldg. 49 Slab After Building Demolition

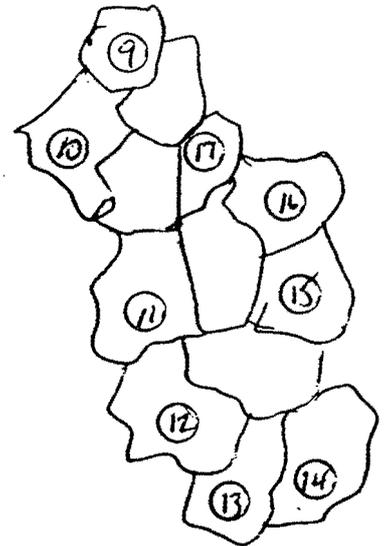
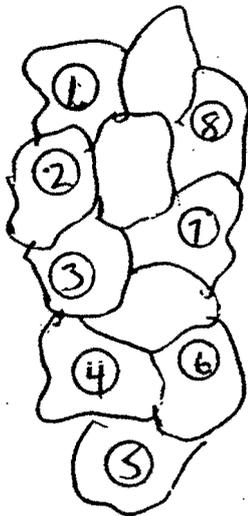
APPENDIX B

**Post-Final Status Survey Report
Radiological Surveys**

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) 49 ASPHALT	SURVEY NO 03-TF-0010
PURPOSE: RELEASE ASPHALT TO WASTEMANAGEMENT	RWP NO. N/A
	DATE: 1-20-2003
	TIME 1430

MAP / DRAWING



COPY

- NOTE: BICRON FIDLER USED FOR INDICATION ONLY. RESULTS WERE NON-DETECTABLE.
- INTEGRATED READING TAKEN IF AUDIBLE ALPHA DETECTED ALL RESULTS:
 <100 dpm/100cm² ALPHA AND <5K dpm/100cm² BETA NO AUDIBLE DETECTED

LEGEND: # = mrem/hr (γ) whole body
 #E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact
 K = factor of 1000
 - - - - - = radiological boundary

Δ # = mrem/hr neutron # = swipe number
 # = air sample number #/α or β = direct contamination measurement in dnm/100 cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
2360	5704/5714	9-26-2003
FIDLER	3672/3882	8-1-2003
N/A		

Completed by: (Signature) <i>Daniel Harvey/Keith Abercrombie</i>	HP#	Date: 1-21-2003
Completed by: (Print Name) DANIEL HARVEY/KEITH ABERCROMBIE		
Counted by: (Signature) RECORD ON FILE	HP# NA	Date: NA
Counted by: (Print Name) NA		
Reviewed/Approved by: (Signature) <i>RM Coblenz</i>	HP#	Date: 01/23/03
Reviewed/Approved by: (Print Name) RM Coblenz		

Alpha/Beta Analysis

Batch ID: Smear Unit 1 - 200301201543

Count Date: 1/20/2003

Group: G

Count Minutes: 1.5

Serial Number: 78218-1

Count Mode: Simultaneous

Batch ID: 03-TF-0010 HARVEY - 17 BSB

Operating Volts: 1440

Selected Geometry: Swipe/Smear

Cal Due Date: 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

<u>Sample ID</u>	<u>Carrier ID</u>	<u>Alpha</u> <u>(dpm)</u>	<u>σ</u>	<u>Beta</u> <u>(dpm)</u>	<u>σ</u>
1	13	0.00	0.00	0.00	0.00
2	14	0.00	0.00	2.74	2.04
3	99	0.00	0.00	0.00	0.00
4	14	0.00	0.00	1.37	1.45
5	22	0.00	0.00	1.37	1.45
6	20	0.00	0.00	2.74	2.04
7	88	2.18	1.92	3.95	2.51
8	67	0.00	0.00	2.74	2.04
9	79	0.00	0.00	0.00	0.00
10	90	0.00	0.00	2.74	2.04
11	4	0.00	0.00	2.74	2.04
12	37	0.00	0.00	1.37	1.45
13	98	0.00	0.00	2.74	2.04
14	22	0.00	0.00	6.85	3.23
15	73	2.18	1.92	8.06	3.54
16	9	0.00	0.00	1.37	1.45
17	76	2.19	1.92	1.21	1.45

DGH

DGH

AS Brown

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RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG. / ROOM / AREA) 49 SHED	SURVEY NO. 03 - TF - 0005
PURPOSE: CHARACTERIZATION SURVEY	RWP NO. N/A
	DATE: 1-15-03
	TIME: 15:00

MAP / DRAWING

β Background (CPM)	152
β Conv. Factor	4
β DL (Net CPM)	30

α Background	0.8
α Conv. Factor	8
α DL (Net CPM)	1.4

* Location
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

β CPM	β dpm/100 cm ²
254	408
256	416
262	440
270	472
271	476
156	16
155	12
162	40
168	64
161	36
152	0
160	32
127	-100
180	112
175	92
158	24
247	380
163	44
183	124
200	192
238	344
209	228
167	60

α CPM	α dpm/100 cm ²
2	9.6
2	9.6
1	1.6
5	33.6
5	33.6
5	33.6
5	33.6
1	1.6
3	17.6
0	-6.4
2	9.6
4	25.6
3	17.6
0	-6.4
2	9.6
4	25.6
6	41.6
5	33.6
7	49.6
4	25.6
2	9.6
1	1.6
3	17.6

* Denotes smear and direct measurement location number. One-Minute integrated count performed at each location. Maps shown on pages 3 and 4.

COPY

LEGEND: # = mrem/hr (γ) whole body
 #E = mrem/hr ($\beta + \eta + \gamma$) extremity on contact
 K = factor of 1000
 - - - - - = radiological boundary

Δ # = mrem/hr neutron # = swipe number
 # = air sample number #/ α or β = direct contamination measurement in dpm/100 cm²

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
Ludlum 2360	5688 / 5809	8-14-03

Completed by: (Signature) <i>M. K. Abernethy</i>	HP#	Date: 1-16-03
Completed by: (Print Name) MICHAEL J. KUBACKI		
Created by: (Signature) SEE	HP#	Date:
Created by: (Print Name) ATTACHED PAGES		
Reviewed/Approved by: (Signature) <i>RM Coetzee</i>	HP#	Date: 01/21/03
Reviewed/Approved by: (Print Name) RM Coetzee		

RADIOLOGICAL SURVEY DATA SHEET (cont.)

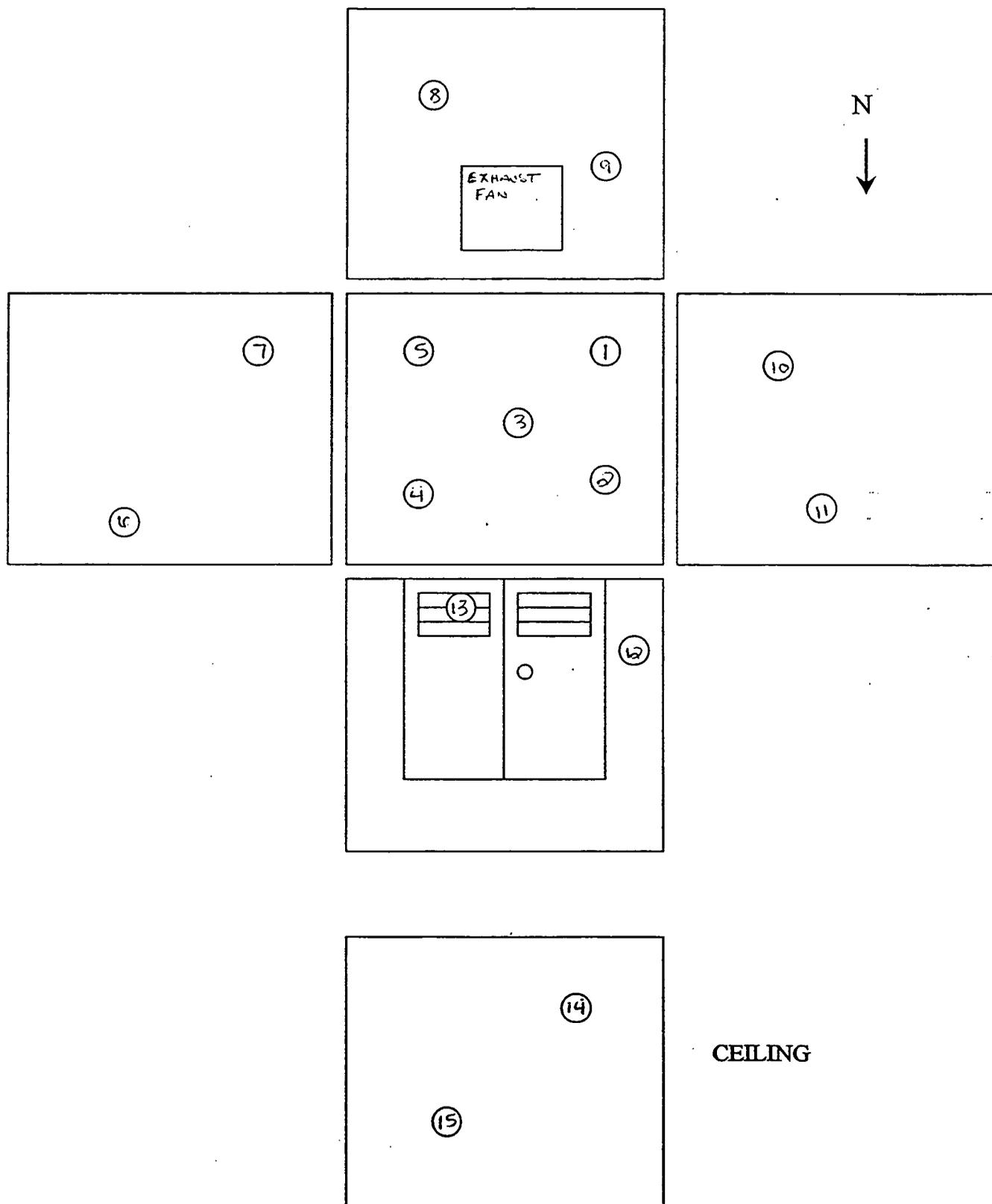
Removable Contamination				
Swipes (dpm/100cm ²)				
Sample #	Beta	Alpha	Tritium	Comments
1	SEE ATTACHED			FLOOR CONCRETE
2				↓
3				
4				
5				↓
6				EAST WALL METAL
7				↓
8				SOUTH WALL METAL
9				↓
10				WEST WALL METAL
11				↓
12				NORTH WALL METAL
13				↓
14				CEILING METAL
15				↓
16				NORTH SIDE
17				↓
18				EAST SIDE
19				↓
20				SOUTH SIDE
21				↓
22	↓	↓	↓	WEST SIDE
23	SEE ATTACHED			↓
A				
N				

Removable Contamination				
Swipes (dpm/100cm ²)				
Sample #	Beta	Alpha	Tritium	Comments
A				
N				

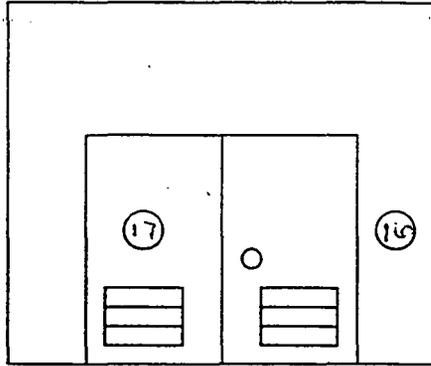
COMMENTS: SMEARS FIELD SCREENED < 1000 dpm/100cm²
N/A

- NOTES:**
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
 2. To request RO Count Room analysis for beta, 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 needed, mark N/A.

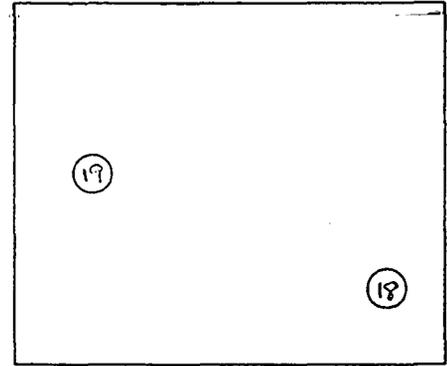
BUILDING 49 SHED INTERIOR SURFACES



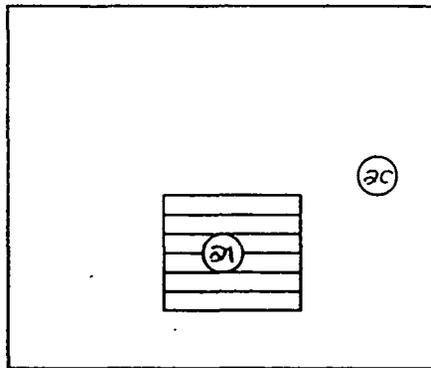
BUILDING 49 SHED EXTERIOR SURFACES



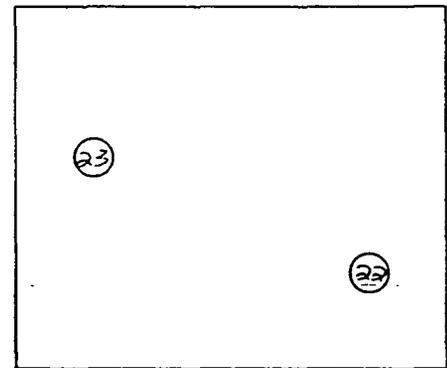
NORTH SIDE



EAST SIDE



SOUTH SIDE



WEST SIDE

Smear Analysis

Unit Type: LB4100/W
 Counting Unit ID: Red
 Data file name: SMEAR001
 Batch Ended: 1/16/03 7:52

Crosstalk correction performed.

Batch ID: RUBADUE 03-TF-0005 (23)/BKS

Recalibration Date: 6/7/04
 Serial Number: 26966-2

Detector ID	Sample ID
A1	1
A2	2
A3	3
A4	4
B1	5
B2	6
B3	7
B4	8
C1	9
C2	10
C3	11
C4	12
D1	13
D2	14
D3	15
D4	16
A1	17
A2	18
A3	19
A4	20
B1	21
B2	22
B3	23

Alpha Activity		
DPM	σ	flags
0.0	2.1	
0.0	2.2	
0.0	2.0	
0.0	1.9	
1.5	2.0	
0.0	2.0	
0.0	1.9	
0.0	1.9	
0.0	2.1	
0.0	2.0	
0.0	1.9	
0.0	1.9	
0.0	2.3	
0.0	2.2	
3.7	2.8	
0.0	2.0	
1.7	2.1	
1.9	2.2	
0.0	2.0	
0.0	1.9	
0.0	2.0	
0.0	2.1	
1.6	2.1	
0.0	1.9	

MSL

Beta Activity		
DPM	σ	flags
0.0	1.4	
2.0	2.4	
0.8	1.8	
0.0	1.4	
0.0	2.3	
0.0	1.6	
0.0	1.3	
1.6	2.1	
3.0	2.5	
0.0	1.4	
0.0	1.2	
0.0	1.2	
0.0	1.4	
2.6	2.7	
0.0	1.3	
0.0	1.4	
3.3	2.7	
0.0	1.5	
0.0	1.4	
0.0	1.4	
4.9	3.4	
2.5	2.7	
3.3	2.7	

MS

Carol G. Robinson

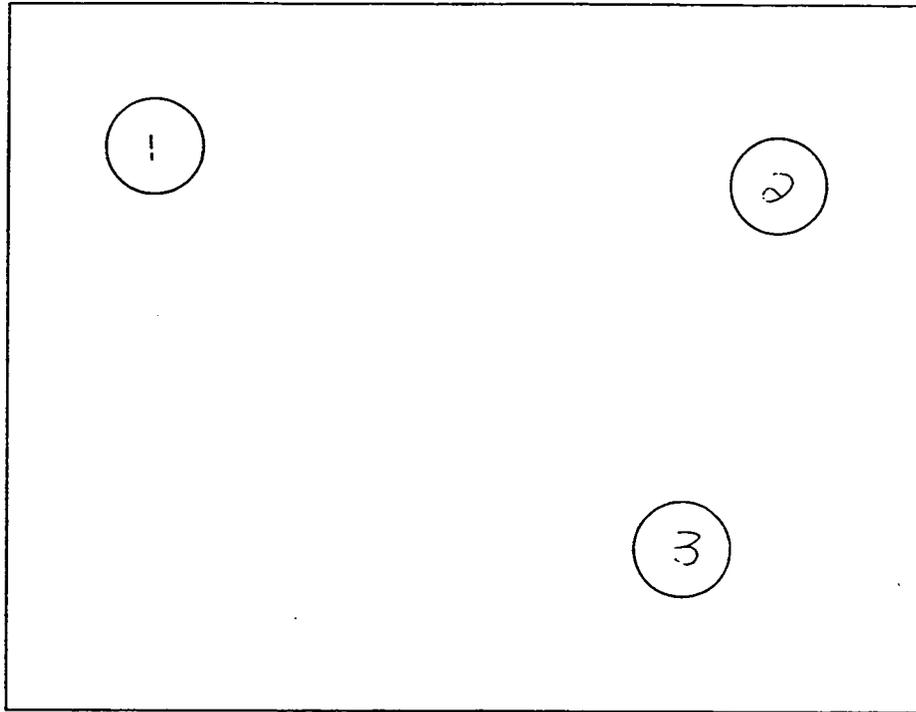
PAGE 1 OF 1

Protocol #: 2 Name: Pw-H3 #401387 16-Jan-2003 08:53
 Region A: LL-UL= 0.5-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region C: LL-UL=40.0-2000 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Time = 2.00 QIP = tSIE/AEC ES Terminator = Count
 RUBADUE 03-TF-0005 (I1-I23) CYR
 Conventional DPM
 Nuclide 1 = 800
 Luminescence Correction On
 Data/Application Drive & Path = c:\data

SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
-1	10.00	9.57	9.14	5.50	B	5	628.		20.45
0	2.00	724.15	694.13	2.50	L	0	502.	1545.99	5.32
1	2.00	0.00	0.00	1.88	L	0	363.	0.00	0.00
2	2.00	0.00	0.00	3.00		0	569.	0.00	0.00
3	2.00	2.43	1.37	0.00		0	515.	5.11	217.0
4	2.00	0.00	0.00	3.50		0	550.	0.00	0.00
5	2.00	0.00	0.00	0.00		10	559.	0.00	0.00
6	2.00	0.00	0.00	0.00		54	626.	0.00	0.00
7	2.00	0.00	0.00	2.00		0	637.	0.00	0.00
8	2.00	0.00	0.00	4.00		17	557.	0.00	0.00
9	2.00	0.00	0.00	0.00		23	596.	0.00	0.00
10	2.00	0.00	0.00	0.00		0	581.	0.00	0.00
11	2.00	2.57	1.49	0.00		4	626.	4.84	213.8
12	2.00	0.00	0.00	1.50		7	640.	0.00	0.00
13	2.00	0.00	0.00	0.00		0	497.	0.00	0.00
14	2.00	0.00	0.00	1.00		11	663.	0.00	0.00
15	2.00	0.00	0.00	0.50		7	640.	0.00	0.00
16	2.00	0.00	0.00	0.50		0	599.	0.00	0.00
17	2.00	0.00	0.00	1.50		7	533.	0.00	0.00
18	2.00	0.00	0.00	0.00		0	597.	0.00	0.00
19	2.00	0.00	0.00	0.00		8	619.	0.00	0.00
20	2.00	0.00	0.00	0.00		0	621.	0.00	0.00
21	2.00	0.00	0.00	0.00		8	606.	0.00	0.00
22	2.00	0.00	0.00	0.50		20	602.	0.00	0.00
23	2.00	0.00	0.00	0.00		10	602.	0.00	0.00

MS
 Carolyn Robinson

BUILDING 49 ROOF



Feed Lines

N
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SMEAR AND DIRECT MEASUREMENT
LOCATIONS

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Red
Data file name: SMEAR010
Batch Ended: 1/22/03 14:45

Crosstalk correction performed.

Batch ID: BECKER 03-TF-0014 RGB

Recalibration Date: 6/7/04
Serial Number: 26966-2

Detector ID	Sample ID
A1	1
A2	2
A3	3

Alpha Activity		
DPM	σ	flags
0.0	2.1	
1.9	2.2	
0.0	2.0	

MR

Beta Activity		
DPM	σ	flags
0.8	2.0	
5.8	3.3	
3.3	2.6	

MR
Carol Y. Robinson

Protocol #: 2 Name: Pw-H3 #401387 22-Jan-2003 15:52
 Region A: LL-UL= 0.5-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region C: LL-UL=40.0-2000 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Time = 2.00 QIP = tSIE/AEC ES Terminator = Count
 BECKER 03-R-0014 (J1-J3) RGB
 Conventional DPM
 Nuclide 1 = 800
 Luminescence Correction On
 Data/Application Drive & Path = c:\data

SAMP	TIME	CPMA	CPMB	CPMC	FLAG	LUM	tSIE	DPM1	A:2S%
-1	10.00	11.48	10.27	4.20	B	4	629.		18.67
0	2.00	734.11	705.36	1.80	L	1	503.	1565.06	5.31
1	2.00	0.00	0.00	1.30	L	0	626.	0.00	0.00
2	2.00	0.00	0.00	0.00		0	572.	0.00	0.00
3	2.00	0.00	0.00	2.30		18	601.	0.00	0.00

MB
 Carolyn Robinson

