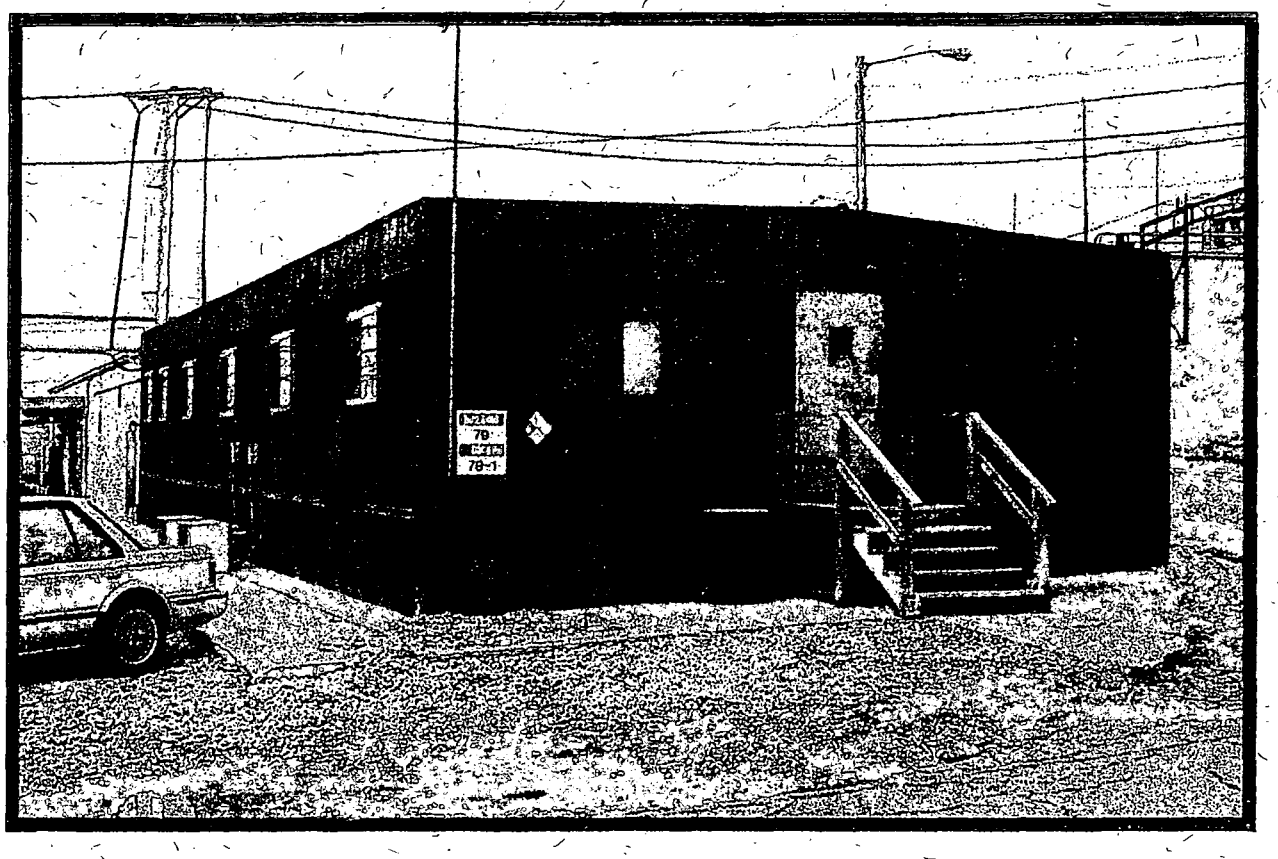
9908250001

TEST FIRE VALLEY PROJECT

CLOSE OUT REPORT

Removal By Auction of Building 79



Final

August 1999

Babcock & Wilcox of Ohio

Department Of Energy

9908250001

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

ESC-146/99
August 23, 1999

99-TC/08-23

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 REPORT FOR BUILDING 79

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

Dear Mr. Provencher:

Attached is the Final Close Out Report for Building 79. This report provides 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 Ron Church of MEMP.

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
Ruth Vandergrift, ODH, (1) w/attachment
Terrence Tracy, DOE/HQ, (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 Removal By Auction

Of

Building 79

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

August 1999

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EXECUTIVE SUMMARY

This is the final report documenting the removal by auction of Mound Plant modular Building 79. This building resided in the Test Fire Valley east of WD Building. The Test Fire Valley Project of Babcock and Wilcox of Ohio (BWO) managed the preparatory removal activities and accomplished the demolition of the concrete pad and other site close-out functions.

This Close Out Report serves as a record of the removal activities and reports the final costs, schedule, waste disposition information, preparatory and close-out actions, and any unusual findings. Photographs, sampling data, and references to other related documents are also included.

Building 79 was constructed in 1983. It was sold by auction on October 8, 1997 to a private individual who dismantled and removed it from the Mound Plant site in November 1997. Building 79 was a one-story wooden structure comprising 1650 square feet. It had a hypalon roof. It sat on a concrete slab. The building was not supplied with potable or service water, and had no sanitary facilities. The building was serviced by 120 volt and 240 volt electric and possessed two small internal HVAC systems.

Building 79 was used exclusively for administrative offices. No research, development, storage, or production activities involving radioactive or energetic materials occurred in the building.

Preparation, removal, and clean-up operations included structure characterization, safe shutdown, utilities isolation, site access control, and debris removal. After auction and building removal, the concrete slab was demolished and removed per the Work Plan, Work Scope For Removal of Concrete Pad Associated with Modular Building 79, January 15, 1998. Slab demolition and removal occurred in February 1998. Approximately 60 cubic yards of construction debris were removed from the auction site, as noted in Table 2.

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

1.0 SUMMARY OF EVENTS

1.1 Objective of Removal Activities

The objective of the auction activities was to remove Building 79 in support of the Mound Plant Exit project. The physical structure was purchased and removed by a private citizen after required building release activities were accomplished by BWO. The concrete slab was demolished as described in the Work Plan. Debris was removed to the plant spoils area and then shipped to Envirocare for disposal. Note Figure 1 and Figure 2 for Mound Plant depiction and Building 79 location.

The decision to ship the concrete debris to Envirocare was primarily due to the fact that the area in which the concrete slab was located is within a Potential Release Site (PRS 154). This PRS is currently scheduled for further assessment due to a history of Thorium contamination in the soil. Prior to the removal and during demolition of the slab, soil samples were obtained yielding Thorium levels above action limits for free release. Due to the fact that the concrete was in direct contact with the soil, all concrete was considered Low Specific Activity (LSA) waste and shipped to Envirocare.

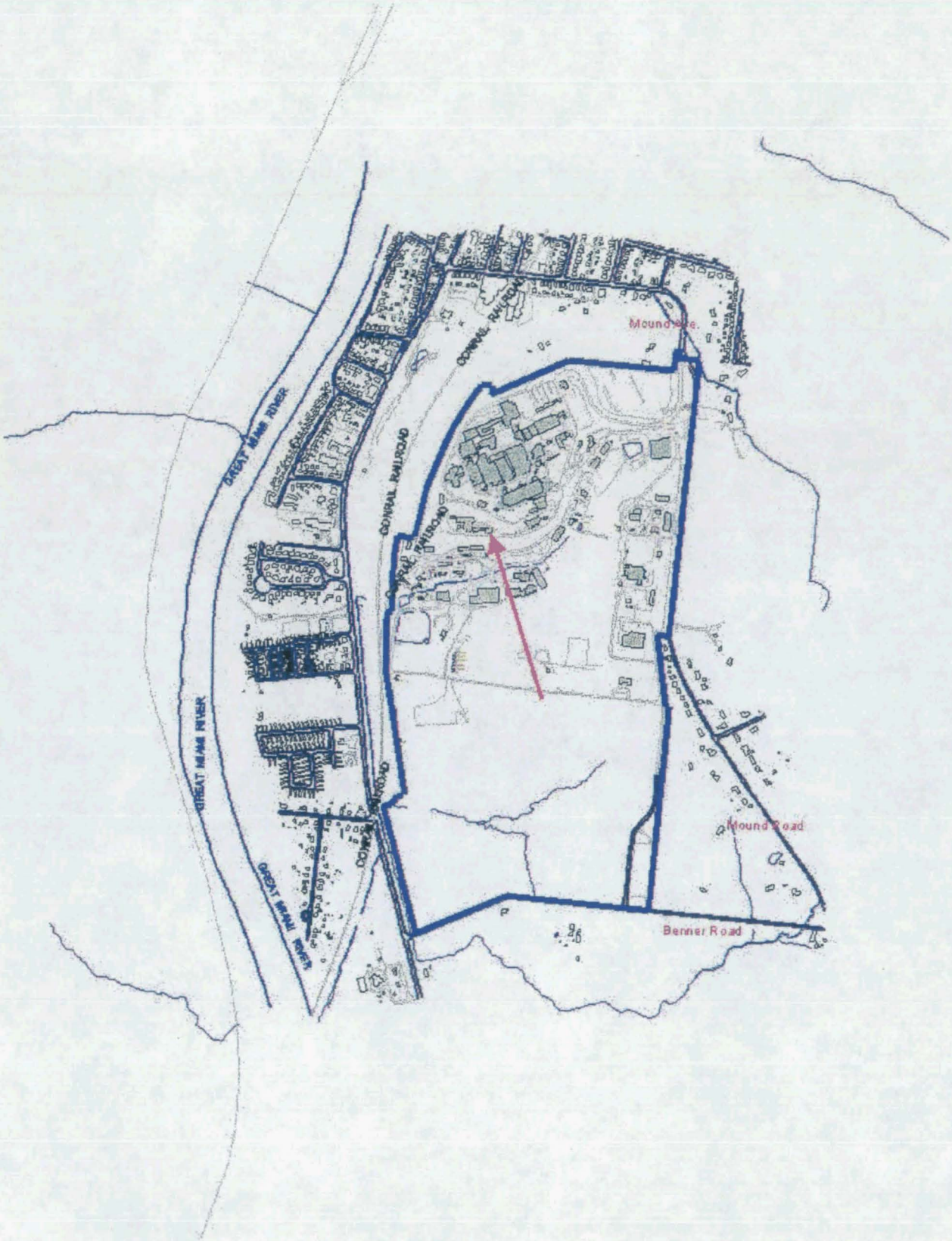


Figure 1. Mound Plant Site Depiction and Building 79 Location

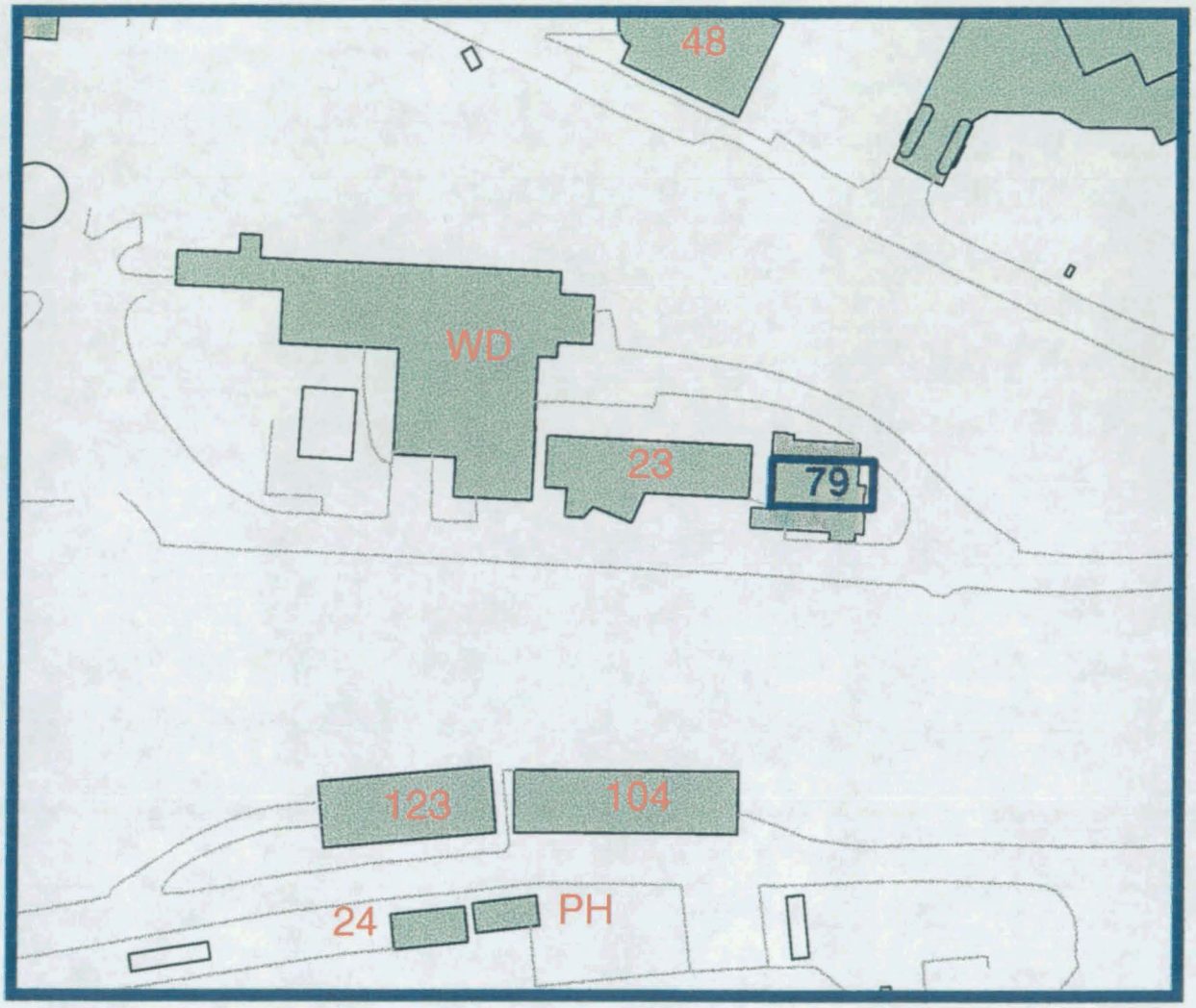


Figure 2. Auction Site Location

1.2 Personnel Organization for the Removal

Table 1. Personnel Organization for the Removal

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 oversight.
Ohio EPA 410 E. Fifth Street Dayton, OH 45402-2911 937-285-6468	Brian Nickel	State agency responsible for site oversight.
DOE/MEMP P.O. Box 66 1 Mound Road Miamisburg, OH 45343-3030 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, 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 Summary of Removal Activities

10/8/97	Building 79 sold at auction.
11/1-30/97	Building dismantled and removed from Mound Plant.
2/2-04/98	Slab demolition and removal accomplished.

1.4 Listing of Waste Materials Generated and Resources Committed

Table 2 is a summary of waste materials removed from the auctioned building location. Table 3 lists the total cost summary for the building removal.

Table 2. Materials and Disposition

Waste Type	Volume (cy)	Destination
Construction Debris (concrete)	60	Mound Site spoils area, then to Envirocare.

Table 3. Removal Project Total Cost Summary

Project Costs	Cost ($)
Labor	8500.00
Material & Supplies	0
Purchased Services	0
Waste Allocations	0
Total Project Cost (Unburdened)	8500.00

2.0 EFFECTIVENESS OF THE REMOVAL

Building 79 was successfully auctioned and removed from Mound Plant. Required preparatory and close-out functions, including slab removal and the conduct of the auction, were accomplished by Babcock & Wilcox of Ohio personnel.

3.0 RECOMMENDATION

Building 79 was auctioned and removed from the Mound Plant site as described in this Close Out Report. It is recommended to the Department of Energy that the scope of work relating to this building removal 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 acess to these supplemental documents.

- *Work Scope For Removal of Concrete Pad Associated With Modular Building 79*, January 5, 1998
- *Site-Specific Health and Safety Plan, Building 79 Concrete Slab/Foundation Removal*, January 14, 1998.

Appendix A

Photographic Documentation

03/06/96 Bldg. 79 *960608

Moving of Bldg. 79. 11/18/97

Moving of Bldg. 79. 11/18/97

Appendix B

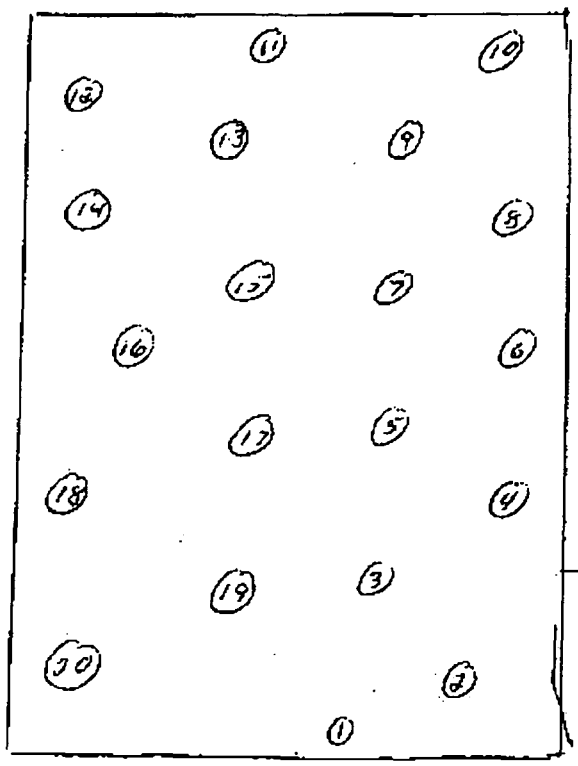
Sampling/Characterization Information

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Foundation of Bldg 79 East of Bldg 23	SURVEY NO. 97-TF-094
PURPOSE: Survey Foundation of Bldg 79 (that was removed)	RWP NO. N/A
	DATE: 12-1-97
	TIME: 14:36

COPY

MAP/DRAWING



Bicron MicroRem #3928, 2-29-98

Took MicroRem Readings at or near each wipe Location. Took MicroRem Readings between Pad and asphalt Road on North, South and east sides. on West Took Readings Between Pad and Bldg 23. All Readings < 10 MicroRem/hr. BW 12-1-97

TOOK DIRECT READINGS WITH NE AT OR NEAR EACH WIPE
α = <100 dpm/100cm²
β = <5K dpm/100cm²
CHECKED AREA WITH FIDLER ON CH1 + CH2 - ALL READINGS BKG-READINGS

SEE BACK OF SHEET FOR WIPE RESULTS

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
NE	5340/5343	12-11-97
Fidler	3356/3356	4-5-98
~~NE~~	~~Further Entries~~	

Completed by: (Signature/HP#) RL Williams / [redacted]	Date: 12-1-97
Counted by: (Signature/HP#) RL Williams / [redacted]	Date: 12-1-97
Reviewed/Approved by: (Signature/HP#) [redacted]	Date: 12/9/97

ML-9820 (8-97)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Charge Authorization No. J000035

☐ All swipes < MD10019, Table 2.2 values except as noted.

Swipes (dpm/100cm²)

Sample #	β/γ	Alpha	Tritium	Comments
1	<1K	<20	N/A	
2	<1K	<20		
3	<1K	<20		
4	<1K	<20		
5	<1K	<20		
6	<1K	<20		
7	<1K	<20		
8	<1K	<20		
9	<1K	<20		
10	<1K	<20		
11	<1K	<20		
12	<1K	<20		
13	<1K	<20		
14	<1K	<20		
15	<1K	<20		
16	<1K	<20		

FROM PREVIOUS SHEET

☐ All swipes < MD10019, Table 2.2 values except as noted.

Swipes (dpm/100cm²)

Sample #	β/γ	Alpha	Tritium	Comments
17	<1K	<20	N/A	
18	<1K	<20		
19	<1K	<20		
20	<1K	<20		

NO FURTHER

AIR SAMPLE DATA

Sample ID or Serial #	Date & Time On	Date & Time Off	Flow Rate	Activity (DAC)
		N/A		

AIR SAMPLE DATA

Sample ID or Serial #	Date & Time On	Date & Time Off	Flow Rate	Activity (DAC)
		N/A		

COPY

COMMENTS: COUNTED ALL WIPES WITH NE

N/A = NOT APPLICABLE

← NO FURTHER ENTRIES →

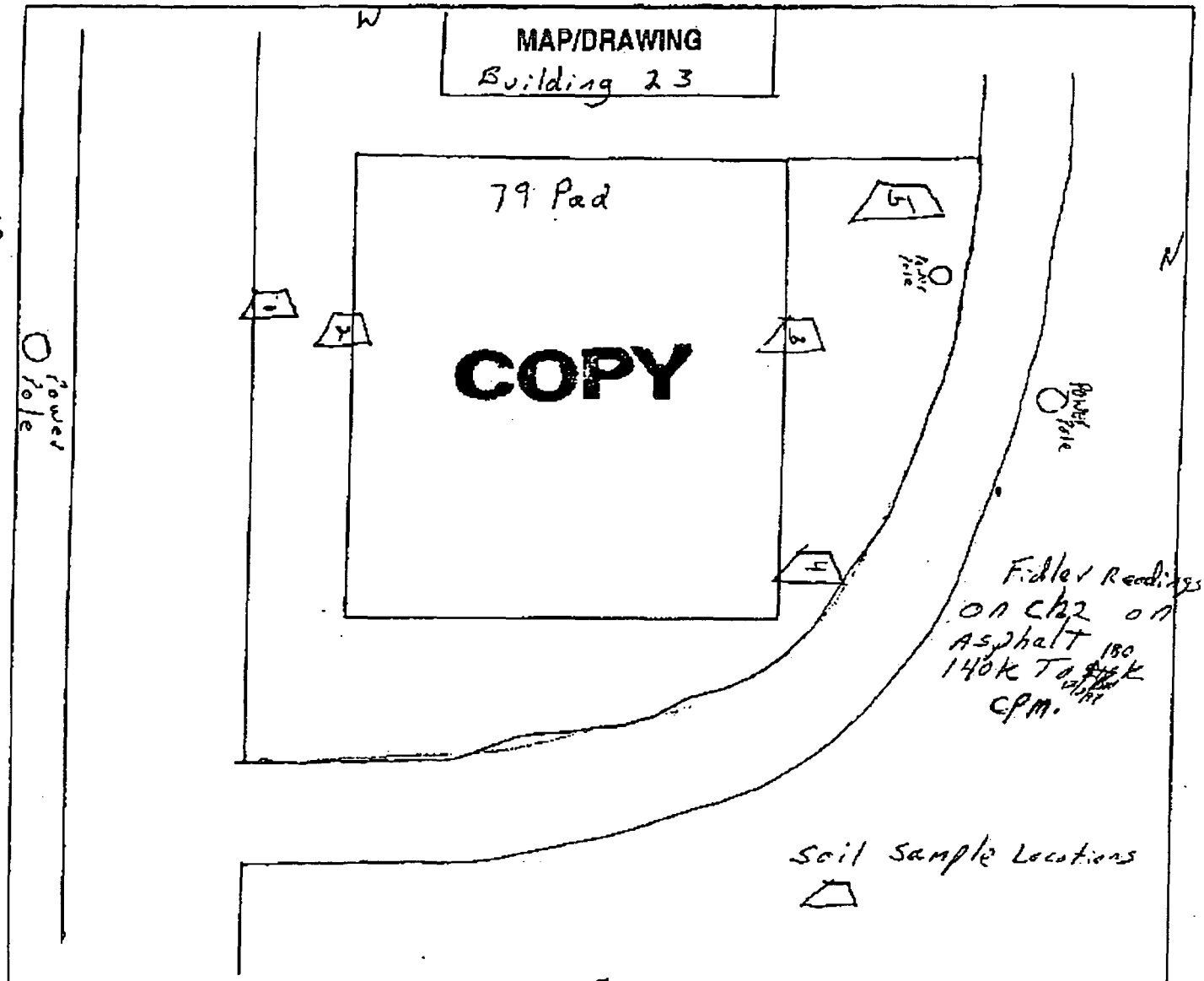
NOTES:

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 (9-97)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Old 79 Pad	SURVEY NO. 97-TF-102
PURPOSE: Take Soil samples around pad at 79.	RWP NO. ~~TF-03-97~~
	DATE: 12-2-97
	TIME: 1300



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
NE	5340/5343	12-11-97
Fidler	3855/3856	4-8-98

Completed by: (Signature/HP#) [redacted]	Date: 12/2/97
Counted by: (Signature/HP#) [redacted]	Date: 12/2/97
Reviewed/Approved by: (Signature/HP#)	Date:

ML-9620 (8-97)

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700909
FILE ID: GEA00119.S0
PRIORITY: Y

Description\Location:
TEST FIRE SAMPLE #1

Collector: 6057

Date Received: 12/2/97 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.00	0.04
Cs-137	*	0.00	0.04
Pb-210		0.87	0.65
Ra-226		1.64	0.71
Ac-227 (D)	*	0.20	0.36
Th-230	*	0.00	7.93
Th-232 (D)		0.72	0.13
Pu-238	*	12.92	77.94
Am-241	*	0.00	0.08

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA

Σ DOT 0.09 nCi/g

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

Comments:

Date: 12/3/97 Counted By: 5890 Analyzed By: 5755 INITIALS

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700910
FILE ID: GEC00126.S0
PRIORITY: Y

Description\Location:
TEST FIRE SAMPLE #2

Collector: 6057

Date Received: 12/2/97 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.00	0.04
Cs-137		0.07	0.03
Pb-210	*	0.10	0.64
Ra-226		1.35	0.72
Ac-227 (D)	*	0.12	0.21
Th-230	*	0.00	6.41
Th-232 (D)		0.55	0.12
Pu-238	*	12.69	61.28
Am-241	*	0.00	0.07

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA

Σ DOT 0.07 nCi/g

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

Comments:

Date: 12/3/97 Counted By: 5890 Analyzed By: 5755 INITIALS

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700911
FILE ID: SSD00911.S0
PRIORITY: Y

Description\Location:
TEST FIRE SAMPLE #3

Collector: 6057

Date Received: 12/2/97 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.00	0.04
Cs-137	*	0.02	0.03
Pb-210	*	0.23	0.54
Ra-226		0.88	0.56
Ac-227 (D)	*	0.08	0.18
Th-230		6.43	5.17
Th-232 (D)		0.66	0.10
Pu-238	*	16.59	52.56
Am-241	*	0.02	0.06

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA

Σ DOT 0.06 nCi/g

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

Comments:

Date: 12/3/97 Counted By: 5890 Analyzed By: 5755 INITIALS JSS

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700912
FILE ID: GEA00120.S0
PRIORITY: Y

Description\Location:
TEST FIRE SAMPLE #4

Collector: 6057

Date Received: 12/2/97 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.00	0.04
Cs-137	*	0.18	0.20
Pb-210		229.00	8.10
Ra-226		182.00	10.00
Ac-227 (D)		345.00	16.00
Th-230		1885.00	120.00
Th-232 (D)	*	0.56	0.67
Pu-238	*	859.10	967.60
Am-241	*	0.00	1.02

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA
Pa-231	391	14.9
Pb-214	124	1.7
Rn-219	366	2.6

Σ DOT 4.49 nCi/g

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

Comments: Pa-231 and daughters present. Th-230 and daughters present.

Date: 12/3/97 Counted By: 5890 Analyzed By: 5755 INITIALS YS

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700913
FILE ID: GEA00127.S0
PRIORITY: Y

Description\Location:
TEST FIRE SAMPLE #5

Collector: 6057

Date Received: 12/2/97 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.00	0.05
Cs-137		0.09	0.05
Pb-210		5.02	1.48
Ra-226	*	9.11	21.11
Ac-227 (D)		7.90	1.20
Th-230		196.00	21.10
Th-232 (D)		0.59	0.16
Pu-238	*	35.00	150.00
Am-241	*	0.00	0.17

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA
Pa-231	7	3.0
Pb-214	4.7	0.24
Rn-219	7.21	0.48

Σ DOT 0.40 nCi/g

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

Comments: Pa-231 and daughters present. Th-230 and daughters present.

Date: 12/3/97 Counted By: 5890 Analyzed By: 5755 INITIALS SS

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700760
FILE ID: GEC00150.S0
PRIORITY:

Description\Location:
BD 79 Core #1 0' - 8.5' NW

Collector: P Ryan [redacted]

Date Received: 12/16/97 **Date Collected:** 12/15/97

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.00	0.05
Cs-137	*	0.00	0.05
Pb-210		1.19	0.74
Ra-226		1.70	0.84
Ac-227 (D)	*	0.13	0.36
Th-230	*	3.47	7.78
Th-232 (D)		0.82	0.16
Pu-238	*	0.00	101.70
Am-241	*	0.05	0.09

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA
Th-228	18.22	

Σ DOT 0.13 nCi/g

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

Comments:

Date: 12/16/97 Counted By: 5890 Analyzed By: 5390 INITIALS: [illegible]

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700961
FILE ID: GEC00152.S0
PRIORITY:

Description\Location:
BD 79 Core #2 0' - 10' SW

Collector: P. Ryan [redacted]

Date Received: 12/16/97 **Date Collected:** 12/15/97

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.00	0.06
Cs-137	*	0.01	0.04
Pb-210		1.03	0.78
Ra-226		1.98	0.87
Ac-227 (D)	*	0.02	0.40
Th-230	*	5.96	8.74
Th-232 (D)		0.88	0.18
Pu-238	*	19.73	79.42
Am-241	*	0.00	0.09

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA

Σ DOT 0.09 nCi/g

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

Comments:

Date: 12/16/97 Counted By: 5890 Analyzed By: 5390 INITIALS:

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700962
FILE ID: GEA00145.S0
PRIORITY:

Description\Location:
BD 79 Core #2 10' - 20' SW

Collector: P. Ryan [redacted]

Date Received: 12/16/97 **Date Collected:** 12/15/97

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.00	0.06
Cs-137	*	0.00	0.04
Pb-210		0.84	0.72
Ra-226		1.59	0.88
Ac-227 (D)		0.46	0.31
Th-230	*	0.02	8.86
Th-232 (D)		1.04	0.18
Pu-238	*	40.20	72.27
Am-241	*	0.00	0.09

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA

Σ DOT 0.09 nCi/g

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.

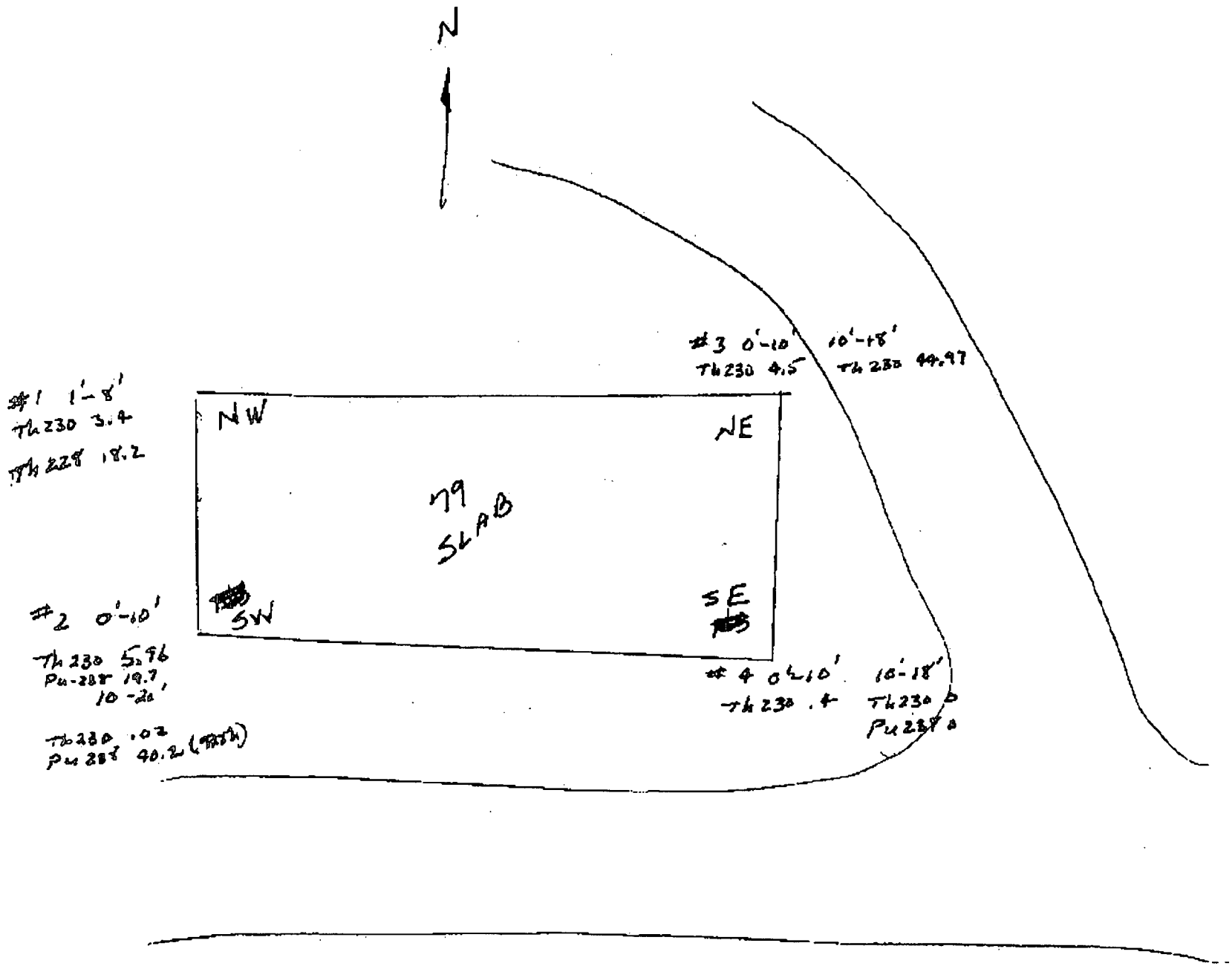
(D) Denotes identification by daughter emissions.
Sample is assumed to be in secular equilibrium.

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

Instrument type: High Purity Germanium

Comments:

Date: 12/16/97 Counted By: 5890 Analyzed By: 5390 INITIALS: [signature]


N
#1 1'-8'
Th230 3.4
Th228 18.2
NW
NE
79
SLAB
SW
SE
#2 0'-10'
Th230 5.96
Pu-238 19.7,
10-20'
Th230 .02
Pu238 40.2
#3 0'-10'
Th230 4.5
10'-18'
Th230 44.97
#4 0'-10'
Th230 .4
10'-18'
Th230
Pu238

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700963
FILE ID: GEC00151.50
PRIORITY:

Description\Location:
BD 79 Core #3 0' - 10' NE

Collector: P. Ryan [redacted]

Date Received: 12/16/97 **Date Collected:** 12/15/97

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.04	0.05
Cs-137	*	0.00	0.05
Pb-210		0.92	0.80
Ra-226		1.66	0.90
Ac-227 (D)		0.43	0.33
Th-230	*	4.51	8.20
Th-232 (D)		0.99	0.19
Pu-238	*	0.00	100.30
Am-241	*	0.00	0.09

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA

Σ DOT 0.11 nCi/g

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

Comments:

Date: 12/16/97 Counted By: 5890 Analyzed By: 5390 INITIALS: [illegible]

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700964
FILE ID: SSD01010.S0
PRIORITY:

Description\Location:
BD 79 Core #3 10' - 18' NE

Collector: P. Ryan [redacted]

Date Received: 12/16/97 Date Collected: 12/15/97

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.00	0.05
Cs-137	*	0.03	0.04
Pb-210		2.60	0.85
Ra-226		3.92	0.96
Ac-227 (D)		3.25	0.42
Th-230		44.97	11.35
Th-232 (D)		0.88	0.13
Pu-238	*	0.00	97.42
Am-241	*	0.00	0.11

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA

$\sum$ DOT 0.15 nCi/g

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

$\sum$ 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

Comments:

Date: 12/16/97 Counted By: 5890 Analyzed By: 5390 INITIALS: [signature]

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700965
FILE ID: SSD01011.S0
PRIORITY:

Description\Location:
BD 79 Core #4 0' - 10' SE

Collector: P. Ryan [redacted]

Date Received: 12/16/97 **Date Collected:** 12/15/97

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.01	0.03
Cs-137	*	0.00	0.04
Pb-210	*	0.29	0.57
Ra-226		0.78	0.66
Ac-227 (D)	*	0.00	0.29
Th-230	*	0.41	6.14
Th-232 (D)		0.70	0.11
Pu-238	*	0.00	60.55
Am-241	*	0.05	0.06

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA

Σ DOT 0.07 nCi/g

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

Comments:

Date: 12/16/97 Counted By: 5890 Analyzed By: 5390 INITIALS: [illegible]

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: SS700966
FILE ID: GEA00144.S0
PRIORITY:

Description\Location:
BD 79 Core #4 10' - 18' SE

Collector: P. Ryan [redacted]

Date Received: 12/16/97 **Date Collected:** 12/15/97

Radionuclide		Activity (pCi/g)	MDA
Co-60	*	0.04	0.06
Cs-137	*	0.00	0.04
Pb-210		1.37	0.66
Ra-226		1.83	0.92
Ac-227 (D)	*	0.00	0.37
Th-230	*	0.00	9.15
Th-232 (D)		1.01	0.12
Pu-238	*	0.00	89.53
Am-241	*	0.00	0.11

Other Nuclides:

Radionuclide	Activity (pCi/g)	MDA

Σ DOT 0.10 nCi/g

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

Comments:

Date: 12/16/97 Counted By: 5890 Analyzed By: 5390 INITIALS: [illegible]

MOUND RADIOLOGICAL WORK PERMIT COPY

GENERAL INFORMATION (Radiological Control Completes)

RWP NUMBER	TF-003-98	GENERAL	X	EFFECTIVE DATE	1/5/98	Rad Ops Contact Name	B JOHNSON	# of Task Breakdown Sheets	0
RWP REVISION NUMBER	0	JOB-SPECIFIC		EXPIRATION DATE	12/31/98	Rad Ops Contact Phone	3298	# of Special Instruction Sheets	2

JOB INFORMATION (Job Sponsor/Leader Completes)

Requester Name (Last Name, Initial)	DAVE GLOEKLER	Requester HP #	[redacted]	Requester Phone	4559
Requester Work Group	TEST FIRE				

Technical/Work Document Number	NA	Estimated Work Start Date	1/5/98
Technical/Work Document Title	NA	Estimated Work Complete Date	12/31/98

Work Location (Bldg., room, pad, area, etc.)
Test Fire Potential Release Sites posted as SCA's.

Detailed Description of Work

1) Soil intrusion work in SCA's, including sampling of soil and water, excavation, well drilling, transporting soil and related soil disturbance work.
2) Routine maintenance and cleaning of heavy duty equipment.

RADIOLOGICAL LIMITATIONS (Radiological Control completes)

Assay	Units	STOP WORK LEVEL	Specific Isotopes or Radiation Emission	Assay	Units	STOP WORK LEVEL	Specific Isotopes or Radiation Emission
Airborne Conc. - Alpha	DAC	0.1	NA	Removable Tritium	dpm/100 cm2	1000	NA
Airborne Conc. - Beta/Gamma	DAC	0.1	NA	Soil Concentration	pCi/gm	NA	NA
Airborne Conc. - Tritium	DAC	NA	NA	Liquid Conc.	NA	N/A	NA
Removable Alpha	dpm/100 cm2	20	NA	Gamma Dose Rate	mrem/hr	0.050	NA
Total Alpha	dpm/100 cm2	100	NA	Neutron Dose Rate	mrem/hr	NA	NA
Removable Beta/Gamma	dpm/100 cm2	1000	NA	Total Dose Rate	mrem/hr	0.050	NA
Total Beta/Gamma	dpm/100 cm2	5000	NA	Individual Dose	mrem	50	NA

RADIOLOGICAL PROTECTION REQUIREMENTS (Radiological Control completes)

Radiological Protective Clothing

- [X] NONE Required
- [ ] Std Partial Set (labcoat, rubber gloves, cotton glove liners, plastic shoe covers)
- [ ] Std Full Set (coveralls, hood, rubber gloves, cotton glove liners, plastic shoe covers, plastic shoe booties, taped wrists/ankle openings)
- [ ] Std Double Set (same as Std Full Set with second pair of coveralls, rubber gloves and shoe covers)
- [ ] Other (specify)

[ ] labcoat	[ ] rubber gloves	[ ] plastic shoe booties	[ ] taped openings
[ ] coveralls	[ ] cotton liners	[ ] rubber shoe covers	[ ] surgeon's gloves
[ ] hood	[ ] outer heavy work gloves	[ ] plastic shoe covers	

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RWP Number TF-003-98

RWP Revision # 0

COPY

MOUND RADIOLOGICAL WORK PERMIT

RADIOLOGICAL PROTECTION REQUIREMENTS (Radiological Control completes)

Respiratory Protection for Radiological Purposes

- [x] NONE Required
- [ ] Full Face Filter Mask
- [ ] Supplied Air Bubblesuit
- [ ] Combo Air Supplied/Purify
- [ ] Powered Air Purifying
- [ ] SCBA

External Dosimetry

- [x] NONE Required
- [ ] Whole Body TLD
- [ ] Self Reading Dosimeter
- [ ] Multiple Whole Body TLDs
- [ ] Extremity TLDs
- [ ] Other (specify)

Internal Dosimetry (Bioassay)

- [x] NONE Required
- [ ] Tritium
- [ ] Plutonium 238 or 239
- [ ] Uranium
- [ ] Thorium
- [ ] Actinium
- [ ] Americium
- [ ] Protactinium
- [ ] Strontium
- [ ] Polonium
- [ ] _____
- [ ] Nose Wipe on Exit

Training

- [x] Radiological Worker II
- [ ] General Employee (GERT)
- [ ] Visitor Orientation
- [ ] General Respirator
- [ ] Mound Bubblesuit
- [x] Other (specify) See note 8 on special instruction sheet

Radiological Control Techician (RCT) Coverage

- [ ] NONE Required
- [ ] Continuous
- [x] Intermittent
- [ ] At start, finish & breaks
- [ ] Notify RCT before start each day

Personnel Contamination Monitoring

- [x] NONE Required
- [ ] Whole Body Frisk (alpha)
- [ ] Whole Body Frisk (beta)
- [ ] Tritium Wipes
- [ ] Minimum Hand & Foot Frisk

Special ALARA Controls

- [x] NONE Required
- [ ] Formal ALARA Review and Pre-job Briefing Required
- [ ] See Attachment

Amplifying Instructions

1) An RCT must be present for any material transfer across radiological boundaries, including SCA and RMMA.

See special instruction sheet for notes and instructions.

RWP Approval

	Printed Name	Signature	HP #	Date
ALARA Program Coordinator	N/A	N/A	N/A	N/A
Job Sponsor/Leader	W. David Gockler	W. David Gockler	[redacted]	1-5-98
Project RC Point-of-Contact	Karla S. Kent	Karla S. Kent	[redacted]	1-5-98

RWP Closure

	Printed Name	Signature	HP #	Date
Master RCT				

ML-812 (11-97)

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MOUND RWP Attachment - SPECIAL INSTRUCTIONS SHEET

COPY

GENERAL INFORMATION (Radiological Control Completes)

RWP Number	RWP Revision No.	Rad Ops Contact Name	Rad Ops Contact Phone
TF-003-98	0	B JOHNSON	3298

SPECIAL ALARA CONTROLS

	ALARA Review Required		Temporary shielding required		Dry run required		Mock up required
	Containment device required		Stay Time keeping required				

SPECIAL INSTRUCTIONS

1. No entry allowed into Contamination Areas (CAs), High Contamination Areas (HCAs), Airborne Radioactivity Areas (ARAs), Radiation Areas (RAs), High Radiation Areas (HRAs), or Very High Radiation Areas (VHRAs).
2. Air monitoring should be considered whenever Derived Action Levels (Table 4 of MD-10438) are achieved via soil analysis. Minimum sampling times used shall be taken from Table 10 of MD-10438 and correspond to the 0.1 DAC value. See special instruction sheet .
3. The primary tools for making radiological decisions are soil analysis results, swipe results and historical data.
** NOTE: The Bicron FIDLER readings shall only be used for an indication of the presence of Radioactivity. No quantitative data can be obtained from these readings. Do not log the FIDLER readings on an RSDS without a disclaimer such as: FIDLER FOR REFERENCE USE ONLY , NO QUANTITATIVE NUMBERS CAN BE USED.
4. In-process radiological monitoring using swipes of the soil intrusion equipment and debris uncovered during excavation will be used to determine the status of radiological conditions and be the tool to ascertain whether the STOP WORK LEVEL (SWLs) associated with surface contamination have been exceeded. Intially , swipes may be necessary following each retraction of equipment from the soil. However, as work progresses this may be relaxed (e.g. swipe taken once every 15 minutes while digging) based upon the judgement of the lead RCT or the Area Radiological Engineer.
5. Personnel contamination monitoring is not required unless an RBA is posted for Contamination Control purposes.
6. Because of the difference between in-process Tritium values of Table 2-2 and the release criteria of MD-80043 operation 400 Attachment 1, release surveys shall be performed on any soil intrusion equipment prior to release from the work site. This does not imply that equipment must be surveyed at the end of each day (unless equipment is to leave the work site). If leaving the work site criteria MD-80043, operation 400 applies.
7. Contact the Job Sponsor/Leader, the RCT Team Leader and the appropriate Area Radiological Engineer immediately upon the unexpected discovery of any buried drums, cans, equipment or other artifacts.
8. Required training is Rad Worker II. Personnel who have not completed Rad Worker II MUST have completed General Employee Radiological Training (GERT) and be escorted by a Mound Employee that is RW II qualified at all times per MD-10019 Article 631.
9. Unless otherwise directed, all swipes will be analyzed for alpha, beta/gamma and tritium. The lead RCT or the Area Radiological Engineer may choose to waive certain analyses if supported by characterization data (i.e. only alpha and beta/gamma counting required for swipes from the SM/PP area).
10. An RCT must be present for any material transfer across radiological boundaries, including SCA and RMMA.

ML-9713 (11-97)

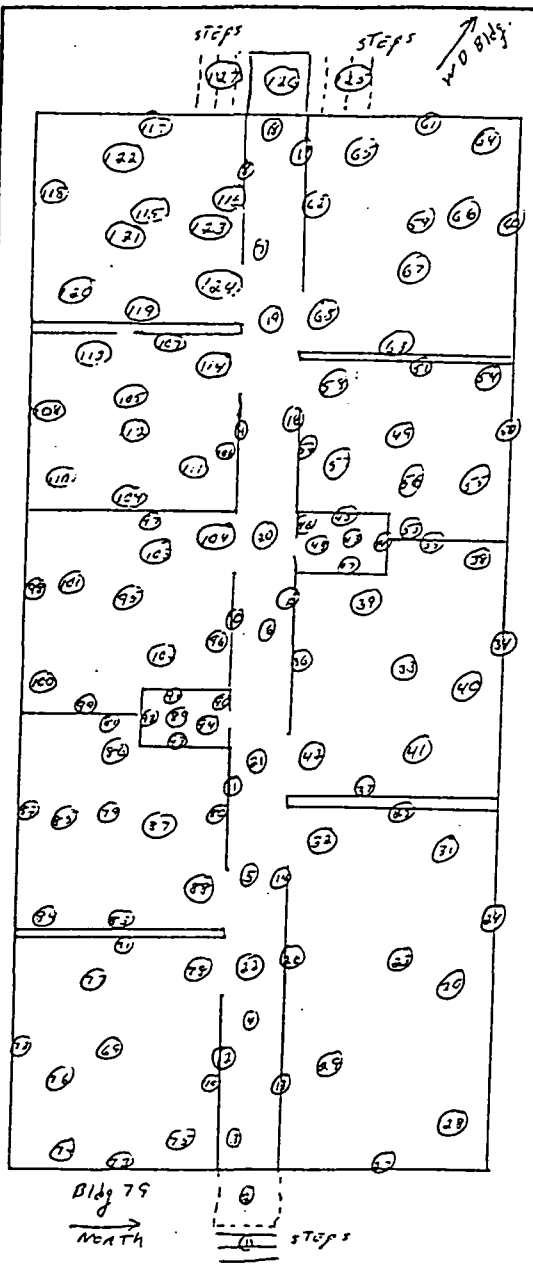
COPY

RADIOLOGICAL SURVEY DATA SHEET

#3 309 ~~#29~~ Bldg 61

LOCATION: (BLDG./AREA/ROOM) Bldg 79 (TRAILER)	SURVEY NO. 97-TF-08
PURPOSE: SURVEY Bldg FOR RELEASE (UR)	RWP NO. N/A
	DATE: 10-20-97
	TIME: 13:00

MAP/DRAWING



TOOK DIRECT READINGS WITH NE AT OR NEAR AREA WIPE (EACH)
RESULTS – α = < 100 dpm/100 cm²
β = < 5K dpm/100 cm²

TOOK 127 WIPES OF Bldg - SEE ATTACH FOR WIPE RESULTS

TOOK RANDOM READINGS THROUGHOUT Bldg WITH MICRO REM 10-21-97
RESULTS – < .025 mrem/hr.

COPY

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
NE	5309/5320	1-17-98
MICRO REM	3927	1-1-98
	NO FURTHER ENTRIES	

Completed by: (Signature/HP#) R L Williams / [redacted]	Date: 10-20-97
Counted by: (Signature/HP#) [redacted]	Date: 10/21/97
Reviewed/Approved by: (Signature/HP#) [redacted]	Date: 10/22/97

ML-9620 (10-95)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Charge Authorization No. J00035

☒ Removable Contamination ☐ Airborne Activity (check one)

Swipes (dpm/100cm²) or Airborne (µCi/cc)

Sample #	β/γ	Alpha	Tritium	Comments
1				STEPS
2				STEPS
3				CEILING
4				
5				
6				
7				
8				SOUTH WALL
9				
10				
11				
12				
13				NORTH WALL
14				
15				
16				
17				
18				FLOOR
19				
20				
21				
22				
23				CEILING
24				N. WALL
25				W. WALL
26				S. WALL
27				E. WALL
28				FLOOR
29				
30				

☒ Removable Contamination ☐ Airborne Activity (check one)

Swipes (dpm/100cm²) or Airborne (µCi/cc)

Sample #	β/γ	Alpha	Tritium	Comments
31				FLOOR
32				
33				CEILING
34				N. WALL
35				W. WALL
36				S. WALL
37				E. WALL
38				FLOOR
39				
40				
41				
42				
43				CEILING
44				N. WALL
45				W. WALL
46				S. WALL
47				E. WALL
48				FLOOR
49				CEILING
50				N. WALL
51				W. WALL
52				S. WALL
53				E. WALL
54				FLOOR
55				
56				
57				
58				
59				CEILING
60				N. WALL

SEE ATTACHED

COPY

COMMENTS: CHECKED EACH WIPE WITH NE All < 1000 DPM

N/A = NOT APPLICABLE

← NO FURTHER ENTRIES →

Max. Activity on Large Area Wipe (dpm)	Tritium Airborne Activity (µCi/m³)
N/A	N/A

NOTES:
1. LSC results #3 corresponds to Sample #1 on this RSDS.
2. See MD-80036 10002 for calculations of WB, extremity and skin dose rates
3. 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.
4. Annotate special sample type (e.g. soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

ML-9620 (10-95)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Charge Authorization No. J00035

☒ Removable Contamination ☐ Airborne Activity (check one)

Swipes (dpm/100cm²) or Airborne (µCi/cc)

Sample #	β/γ	Alpha	Tritium	Comments
61				W. WALL
62				S. WALL
63				E. WALL
64				FLOOR
65				↓
66				↓
67				↓
68				↓
69				CEILING
70				N. WALL
71				W. WALL
72				S. WALL
73				E. WALL
74				FLOOR
75				↓
76				↓
77				↓
78				↓
79				CEILING
80				N. WALL
81				W. WALL
82				S. WALL
83				E. WALL
84				FLOOR
85				↓
86				↓
87				↓
88				↓
89				CEILING
90				N. WALL

☒ Removable Contamination ☐ Airborne Activity (check one)

Swipes (dpm/100cm²) or Airborne (µCi/cc)

Sample #	β/γ	Alpha	Tritium	Comments
91				W. WALL
92				S. WALL
93				E. WALL
94				FLOOR
95				CEILING
96				N. WALL
97				W. WALL
98				S. WALL
99				E. WALL
100				FLOOR
101				↓
102				↓
103				↓
104				↓
105				CEILING
106				N. WALL
107				W. WALL
108				S. WALL
109				E. WALL
110				FLOOR
111				↓
112				↓
113				↓
114				↓
115				CEILING
116				N. WALL
117				W. WALL
118				S. WALL
119				E. WALL
120				FLOOR

SMEARS

SMEARS

COPY

COMMENTS:

N/A

Max. Activity on Large Area Wipe (dpm)	Tritium Airborne Activity (µCi/m³)
N/A	N/A

NOTES:
1. LSC results # 1 corresponds to Sample #1 on this RSDS.
2. See MD-80036 10002 for calculations of WB, extremity and skin dose rates
3. 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.
4. Annotate special sample type (e.g. soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

AL-9620 (10-95)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Charge Authorization No. J00035

☐ Removable Contamination ☐ Airborne Activity (check one)				
Swipes (dpm/100cm^2) or Airborne (μCi/cc)				
Sample #	β/γ	Alpha	Tritium	Comments
121				FLOOR
122				↓
123				
124				↓
125				STEPS
126				↓
127				

SEE ATTACH

NO FURTHER ENTRIES

☐ Removable Contamination ☐ Airborne Activity (check one)				
Swipes (dpm/100cm^2) or Airborne (μCi/cc)				
Sample #	β/γ	Alpha	Tritium	Comments

N/A

COPY

COMMENTS:

N/A

Max. Activity on Large Area Wipe (dpm)	Tritium Airborne Activity (μCi/m^3)
N/A	N/A

NOTES:
1. LSC results # 1 corresponds to Sample #1 on this RSDS.
2. See MD-80036 10002 for calculations of WB, extremity and skin dose rates
3. 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.
4. Annotate special sample type (e.g. soil, water), special identifiers or otherwise in Comments. If not needed, mark N/A.

IL-9620 (10-95)

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RSOS 97-TF-08
10-21-97
RPR

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR112
Batch Ended: 10/20/97 13:13
Cal. Due Date: 3/3/98
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 97-TF-08 BD. 79-WILLIAMS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.09	<MDA	0.00	1.52	<MDA
A2	2	0.00	2.09	<MDA	0.00	1.81	<MDA
A3	3	1.54	1.98	<MDA	1.20	2.28	<MDA
A4	4	0.00	2.16	<MDA	0.13	1.91	<MDA
B1	5	0.00	2.08	<MDA	0.00	1.98	<MDA
B2	6	1.13	2.15	<MDA	2.12	2.77	<MDA
B3	7	5.13	3.36	<AL	0.59	2.22	<MDA
B4	8	1.15	2.04	<MDA	2.18	2.72	<MDA
C1	9	0.00	2.13	<MDA	1.07	2.28	<MDA
C2	10	0.00	2.05	<MDA	2.33	2.68	<MDA
C3	11	0.00	1.90	<MDA	1.75	2.44	<MDA
C4	12	0.00	1.94	<MDA	2.22	2.34	<MDA
D1	13	0.94	2.15	<MDA	3.43	3.09	<MDA
D2	14	0.00	2.21	<MDA	0.77	2.51	<MDA
D3	15	0.09	2.08	<MDA	0.00	2.17	<MDA
D4	16	0.00	2.10	<MDA	0.00	1.59	<MDA
A1	17	3.30	2.93	<AL	0.74	2.39	<MDA
A2	18	0.00	2.09	<MDA	0.00	1.80	<MDA
A3	19	3.45	2.75	<AL	1.09	2.28	<MDA
A4	20	0.83	2.17	<MDA	1.22	2.28	<MDA
B1	21	5.39	3.52	<AL	0.00	1.98	<MDA
B2	22	0.00	2.12	<MDA	0.00	1.60	<MDA
B3	23	0.00	1.99	<MDA	0.00	1.85	<MDA
B4	24	0.00	2.02	<MDA	0.00	2.08	<MDA
C1	25	0.00	2.13	<MDA	1.07	2.28	<MDA
C2	26	3.42	2.83	<AL	0.00	1.57	<MDA
C3	27	0.00	1.89	<MDA	0.00	1.80	<MDA

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ASDS 97-TF-0
10-21-97

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR112
Batch Ended: 10/20/97 13:13
Cal. Due Date: 3/3/98
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

COPY

Batch ID: T 97-TF-08 BD. 79-WILLIAMS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	28	0.89	1.93	<MDA	0.92	2.04	<MDA
D1	29	0.94	2.15	<MDA	3.43	3.09	<MDA
D2	30	0.00	2.20	<MDA	0.00	1.59	<MDA
D3	31	0.00	2.08	<MDA	0.07	2.52	<MDA
D4	32	0.00	2.11	<MDA	0.00	2.05	<MDA
A1	33	0.00	2.09	<MDA	0.00	1.52	<MDA
A2	34	0.96	2.10	<MDA	0.00	2.23	<MDA
A3	35	1.54	1.97	<MDA	0.00	1.90	<MDA
A4	36	0.00	2.15	<MDA	0.00	1.45	<MDA
B1	37	0.00	2.08	<MDA	0.00	1.98	<MDA
B2	38	0.00	2.16	<MDA	3.57	3.06	<MDA
B3	39	0.00	2.00	<MDA	3.36	2.82	<AL
B4	40	0.00	2.02	<MDA	0.00	2.08	<MDA
C1	41	0.00	2.12	<MDA	0.00	1.90	<MDA
C2	42	0.00	2.05	<MDA	2.33	2.68	<MDA
C3	43	0.00	1.89	<MDA	0.59	2.14	<MDA
C4	44	2.72	2.65	<AL	0.00	1.69	<MDA
D1	45	0.00	2.14	<MDA	0.85	2.43	<MDA
D2	46	2.52	3.04	<MDA	0.00	2.10	<MDA
D3	47	0.00	2.08	<MDA	0.00	2.17	<MDA
D4	48	4.35	3.43	<AL	0.00	1.59	<MDA
A1	49	1.26	2.12	<MDA	2.19	2.73	<MDA
A2	50	0.96	2.10	<MDA	0.00	2.23	<MDA
A3	51	0.00	1.98	<MDA	1.31	2.28	<MDA
A4	52	0.83	2.17	<MDA	1.22	2.28	<MDA
B1	53	0.00	2.08	<MDA	0.00	1.98	<MDA
B2	54	0.00	2.12	<MDA	0.00	1.61	<MDA
B3	55	1.31	1.99	<MDA	0.00	1.85	<MDA
B4	56	1.15	2.03	<MDA	0.94	2.42	<MDA

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RSDS 97-TF-
10-21-97
RLM

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR112
Batch Ended: 10/20/97 13:13
Cal. Due Date: 3/3/98
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

COPY

Batch ID: T 97-TF-08 BD. 79-WILLIAMS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C1	57	0.00	2.14	<MDA	2.33	2.60	<MDA
C2	58	1.45	2.02	<MDA	0.00	1.57	<MDA
C3	59	0.00	1.88	<MDA	0.00	1.38	<MDA
C4	60	0.00	1.90	<MDA	0.00	1.24	<MDA
D1	61	0.00	2.13	<MDA	0.00	2.02	<MDA
D2	62	0.44	2.20	<MDA	0.00	1.59	<MDA
D3	63	0.09	2.08	<MDA	0.00	2.17	<MDA
D4	64	0.00	2.10	<MDA	0.00	1.59	<MDA
A1	65	0.00	2.10	<MDA	0.00	2.00	<MDA
A2	66	0.00	2.10	<MDA	0.00	2.23	<MDA
A3	67	1.54	1.98	<MDA	2.44	2.59	<MDA
A4	68	0.00	2.16	<MDA	0.13	1.91	<MDA
B1	69	0.00	2.08	<MDA	0.00	1.98	<MDA
B2	70	1.13	2.16	<MDA	3.42	3.06	<MDA
B3	71	0.00	1.99	<MDA	0.92	2.22	<MDA
B4	72	0.00	2.04	<MDA	2.32	2.72	<MDA
C1	73	0.00	2.14	<MDA	2.33	2.60	<MDA
C2	74	0.00	2.03	<MDA	0.00	2.01	<MDA
C3	75	0.00	1.89	<MDA	0.00	1.80	<MDA
C4	76	0.89	1.92	<MDA	0.00	1.69	<MDA
D1	77	0.00	2.15	<MDA	2.19	2.78	<MDA
D2	78	0.42	2.21	<MDA	0.63	2.51	<MDA
D3	79	0.07	2.09	<MDA	1.23	2.82	<MDA
D4	80	0.52	2.11	<MDA	0.00	2.05	<MDA
A1	81	0.00	2.13	<MDA	3.65	3.02	<AL
A2	82	0.00	2.10	<MDA	0.00	2.23	<MDA
A3	83	0.00	1.97	<MDA	0.07	1.90	<MDA
A4	84	0.00	2.17	<MDA	1.37	2.28	<MDA
B1	85	1.38	2.07	<MDA	0.00	1.50	<MDA

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RSDS 97-TF-08
10-21-97
RZ

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR112
Batch Ended: 10/20/97 13:13
Cal. Due Date: 3/3/98
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 97-TF-08 BD. 79-WILLIAMS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B2	86	0.00	2.12	<MDA	0.00	1.60	<MDA
B3	87	0.00	2.00	<MDA	2.14	2.54	<MDA
B4	88	0.00	2.01	<MDA	0.00	1.67	<MDA
C1	89	0.00	2.13	<MDA	1.07	2.28	<MDA
C2	90	0.00	2.03	<MDA	0.00	2.01	<MDA
C3	91	3.04	2.63	<AL	0.38	2.14	<MDA
C4	92	0.89	1.92	<MDA	0.00	1.69	<MDA
D1	93	3.03	2.95	<AL	0.00	1.51	<MDA
D2	94	0.00	2.25	<MDA	6.27	3.73	<AL
D3	95	0.00	2.09	<MDA	1.35	2.82	<MDA
D4	96	0.00	2.10	<MDA	0.00	1.59	<MDA

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RSDS 97-TF-08
10-21-97
ATM

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR113
Batch Ended: 10/20/97 13:40
Cal. Due Date: 3/3/98
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 97-TF-08 BD. 79-WILLIAMS

Detector ID	Sample ID	Alpha Activity DPM	Alpha Activity σ	Alpha Activity flags	Beta Activity DPM	Beta Activity σ	Beta Activity flags
A1	97	1.27	2.09	<MDA	0.00	1.52	<MDA
A2	98	2.99	2.92	<AL	0.00	2.23	<MDA
A3	99	1.54	1.97	<MDA	0.00	1.44	<MDA
A4	100	0.83	2.17	<MDA	1.22	2.28	<MDA
B1	101	1.37	2.09	<MDA	2.07	2.69	<MDA
B2	102	0.00	2.12	<MDA	0.00	1.60	<MDA
B3	103	3.22	2.76	<AL	0.70	2.22	<MDA
B4	104	0.00	2.03	<MDA	1.08	2.42	<MDA
C1	105	0.00	2.12	<MDA	0.00	1.90	<MDA
C2	106	1.44	2.02	<MDA	0.00	1.57	<MDA
C3	107	1.23	1.88	<MDA	0.00	1.38	<MDA
D1	109	0.97	2.13	<MDA	0.00	2.02	<MDA
D2	110	4.61	3.69	<AL	0.00	2.10	<MDA
D3	111	0.08	2.08	<MDA	0.00	2.52	<MDA
D4	112	0.52	2.11	<MDA	0.00	2.05	<MDA
A1	113	1.27	2.09	<MDA	0.00	1.52	<MDA
A2	114	0.00	2.09	<MDA	0.00	1.81	<MDA
A3	115	1.54	1.98	<MDA	2.44	2.59	<MDA
A4	116	0.00	2.17	<MDA	1.37	2.28	<MDA
B1	117	0.00	2.08	<MDA	0.00	1.98	<MDA
B2	118	0.00	2.14	<MDA	0.96	2.44	<MDA
B3	119	0.00	1.99	<MDA	0.00	1.85	<MDA
B4	120	0.00	2.01	<MDA	0.00	1.68	<MDA
C1	121	1.12	2.12	<MDA	0.00	1.90	<MDA
C2	122	1.42	2.06	<MDA	3.45	2.96	<MDA
C3	123	0.00	1.91	<MDA	2.91	2.70	<MDA
C4	124	0.90	1.90	<MDA	0.00	1.24	<MDA

See pg. 2 for #108* 10/20/97

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10-21-97
MAA

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR113
Batch Ended: 10/20/97 13:40
Cal. Due Date: 3/3/98
Serial Number: 26966-3

Alpha activity action level (DPM): 20
Beta activity action level (DPM): 200

Batch ID: T 97-TF-08 BD. 79-WILLIAMS

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
D1	125	0.94	2.15	<MDA	3.43	3.09	<MDA
D2	126	0.00	2.23	<MDA	3.52	3.18	<MDA
D3	127	2.02	2.84	<MDA	0.00	2.17	<MDA
C4	~~180~~ 108	0.00	1.90	<MDA	0.00	1.24	<MDA

10/20/97 lab

B-30

Protocol #: 3 PW H3 20CC #405828 User : 5268

Time: 2.00
Data Mode: DPM Nuclide: SM-PW-UG Quench Set: SM-PW-UG
Background Subtract: 1st Vial

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RSDS 97-TF-0
10-21-9
RLW

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	4.70
Region B:	2.0 -	18.6	0	0.0	4.30
Region C:	20.0 -	2000	0	0.0	14.10

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
97-TF-08 BLDG. 79-WILLIAMS(30-9 C1-127)
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: c:\data\PROT3.DAT
Count Data Filename: c:\data\SDATA3.DAT
Spectrum Data Drive & Path: c:\data

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
-1	10.00	4.70	4.30	2	B	625.39		0.00	14.10
0	2.00	422.30	395.20	0		595.10	845.44	86.94	2.90
1	2.00	4.80	4.20	0		561.91	9.70	9.26	0.00
2	2.00	5.30	5.20	0		605.88	10.58	9.37	1.40
3	2.00	5.30	5.20	0		612.71	10.53	9.33	2.90
4	2.00	0.30	0.70	0	E	644.57	0.58	6.69	0.00
5	2.00	0.80	1.20	0		611.25	1.59	7.14	0.00
6	2.00	0.00	0.00	0		606.81	0.00	0.00	3.90
7	2.00	4.30	4.70	0	E	644.48	8.34	8.67	0.00
8	2.00	4.80	5.20	0		629.87	9.41	8.99	0.00
9	2.00	9.30	8.20	0		575.78	18.72	11.10	0.00
10	2.00	7.30	7.20	0	E	652.05	14.08	9.87	0.00
11	2.00	2.30	2.20	0		591.01	4.61	7.99	0.40
12	2.00	2.30	2.70	0		634.90	4.49	7.79	0.00
13	2.00	0.30	0.70	0	E	647.68	0.58	6.67	4.40
14	2.00	5.30	5.20	0	E	648.75	10.25	9.08	0.00
15	2.00	1.80	2.20	0		616.23	3.57	7.65	1.90
16	2.00	1.80	1.20	0	E	648.93	3.48	7.46	0.00
17	2.00	7.80	7.70	0	E	642.42	15.15	10.14	0.00
18	2.00	6.80	6.70	0		560.48	13.75	10.14	0.00
19	2.00	2.80	3.20	0		540.21	5.84	8.58	0.00
20	2.00	0.30	0.70	0		587.71	0.60	6.91	0.00
21	2.00	4.80	4.70	0		541.23	9.98	9.53	0.00
22	2.00	1.80	1.70	0		603.26	3.60	7.71	2.90
23	2.00	10.30	7.70	0		555.82	20.85	11.54	2.40
24	2.00	5.30	5.20	0		630.95	10.39	9.20	0.00
25	2.00	2.30	2.20	0		636.40	4.49	7.78	0.00
26	2.00	1.80	2.20	0	E	645.14	3.49	7.48	0.00
27	2.00	2.30	2.20	0		615.78	4.56	7.91	0.00
28	2.00	0.30	0.70	0		624.12	0.59	6.79	0.00
29	2.00	2.30	1.20	0		619.72	4.55	7.88	0.00
30	2.00	1.80	2.20	0		584.93	3.61	7.75	0.00
31	2.00	3.30	3.70	0		615.86	6.54	8.40	0.00
32	2.00	0.30	0.70	0		599.40	0.60	6.89	0.00
33	2.00	7.30	7.20	0		593.99	14.62	10.25	0.00
34	2.00	9.80	9.70	0		629.68	19.22	11.00	0.40

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RSDS
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10-21-
RJr

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2Sigma	CPMC
35	2.00	3.30	2.70	0	E	641.88	6.41	8.23	0.00
36	2.00	4.30	4.70	0	E	643.66	8.35	8.66	0.00
37	2.00	3.30	3.20	0	E	643.75	6.40	8.22	0.00
38	2.00	5.30	5.70	0		619.35	10.46	9.28	0.00
39	2.00	6.30	6.70	0		625.24	12.40	9.66	0.90
40	2.00	1.80	2.20	0		633.73	3.52	7.55	1.90
41	2.00	4.30	4.20	0		621.88	8.48	8.82	0.00
42	2.00	0.00	0.00	0		617.20	0.00	0.00	0.40
43	2.00	3.80	3.70	0		587.51	7.62	8.74	0.00
44	2.00	1.80	1.70	0		596.33	3.60	7.72	0.00
45	2.00	4.30	2.70	0		592.11	8.62	8.96	0.00
46	2.00	3.80	3.70	0		636.55	7.40	8.48	0.40
47	2.00	0.30	0.20	0		614.07	0.60	6.84	0.00
48	2.00	3.30	3.20	0		594.61	6.61	8.48	1.90
49	2.00	3.30	3.20	0	E	656.00	6.35	8.15	0.00
50	2.00	4.80	5.20	0		615.91	9.51	9.09	0.00
51	2.00	5.30	5.20	0	E	644.77	10.28	9.11	0.00
52	2.00	5.30	5.70	0		632.56	10.37	9.19	0.00
53	2.00	2.80	3.20	0		606.63	5.59	8.21	0.00
54	2.00	2.80	2.70	0		618.37	5.54	8.14	0.00
55	2.00	3.80	3.70	0		615.85	7.53	8.63	0.00
56	2.00	1.30	1.20	0		625.78	2.56	7.33	0.00
57	2.00	7.30	7.20	0		638.48	14.22	9.97	0.40
58	2.00	3.80	4.20	0		616.31	7.53	8.63	0.00
59	2.00	2.30	2.20	0		622.19	4.54	7.87	0.00
60	2.00	4.80	4.70	0		597.50	9.60	9.17	0.00
61	2.00	4.80	5.20	0		582.69	9.64	9.21	5.40
62	2.00	3.30	3.20	0		497.71	7.30	9.38	0.00
63	2.00	1.80	2.20	0		634.96	3.52	7.54	0.00
64	2.00	2.30	2.20	0		638.52	4.48	7.77	0.00
65	2.00	0.80	1.20	0		629.86	1.57	7.04	0.00
66	2.00	4.30	4.20	0		631.27	8.42	8.76	2.40
67	2.00	4.80	5.20	0		582.80	9.64	9.21	0.00
68	2.00	3.30	3.20	0		628.18	6.48	8.32	0.00
69	2.00	6.30	6.70	0		639.48	12.27	9.56	3.40
70	2.00	5.80	5.20	0		596.72	11.61	9.61	0.00
71	2.00	4.80	4.70	0		600.30	9.60	9.16	0.00
72	2.00	3.80	4.20	0		594.34	7.61	8.72	0.00
73	2.00	3.30	3.20	0		532.12	7.01	9.00	0.00
74	2.00	6.30	5.70	0		603.23	12.58	[illegible]	0.00
75	2.00	3.30	3.20	0		631.85	6.46	[illegible]	0.00
76	2.00	3.80	4.20	0		606.20	7.58	8.69	0.00
77	2.00	2.30	1.20	0		621.05	4.54	7.88	0.00
78	2.00	3.30	2.70	0		567.78	6.66	8.55	0.00
79	2.00	2.80	3.20	0		627.53	5.50	8.08	0.00
80	2.00	4.30	4.20	0		614.59	8.53	8.87	0.00
81	2.00	5.30	4.20	0		635.48	10.35	9.17	0.00
82	2.00	2.30	1.70	0		524.21	4.97	8.82	2.40
83	2.00	4.30	4.70	0		640.13	8.37	8.70	0.00
84	2.00	4.80	4.70	0		620.72	9.48	9.05	0.00
85	2.00	6.80	6.20	0		610.96	13.53	9.98	0.00
86	2.00	2.80	3.20	0		575.71	5.64	8.26	0.00
87	2.00	1.80	2.20	0		619.71	3.56	7.63	0.90
88	2.00	3.30	3.70	0		609.48	6.57	8.44	0.00
89	2.00	1.30	1.20	0		598.35	2.60	7.45	1.40
90	2.00	4.30	4.70	0		620.41	8.49	8.83	0.00

COPY

S#	TIME	CPMA	CPMB	LUM FLAG	tSIE	DPM1	2Sigma	CPMC
91	2.00	0.80	1.20	0	604.04	1.60	7.17	2.90
92	2.00	6.30	6.70	0	567.24	12.71	8.91	0.00
93	2.00	8.30	8.20	0	595.35	16.62	10.65	0.00
94	2.00	3.80	4.20	0	583.79	7.63	8.75	0.00
95	2.00	5.30	5.70	0	596.48	10.61	9.40	0.00
96	2.00	2.80	3.20	0	594.46	5.61	8.24	0.00
97	2.00	5.30	4.70	0 E	649.35	10.24	9.07	0.00
98	2.00	3.80	4.20	0	605.48	7.59	8.68	0.00
99	2.00	1.80	2.20	0 E	644.05	3.49	7.49	2.40
100	2.00	3.60	3.70	0	609.94	7.57	8.67	0.00
101	2.00	4.80	4.70	0	526.69	10.32	9.86	0.00
102	2.00	2.80	2.70	0	618.59	5.54	8.14	2.40
103	2.00	1.80	2.20	0	627.00	3.54	7.58	0.00
104	2.00	2.80	3.20	0	595.11	5.61	8.24	0.00
105	2.00	5.80	4.70	0 E	654.95	11.16	9.25	0.00
106	2.00	2.30	2.20	0	611.61	4.57	7.33	2.90
107	2.00	6.80	6.70	0	601.45	13.59	10.02	0.00
108	2.00	1.30	1.20	0	568.28	2.62	7.52	0.00
109	2.00	2.80	2.70	0 E	649.53	5.41	7.95	0.00
110	2.00	2.80	2.70	0	618.07	5.54	8.14	0.00
111	2.00	3.80	4.20	0	616.88	7.53	8.63	4.90
112	2.00	2.80	2.70	0	565.63	5.65	8.31	0.00
113	2.00	4.30	4.20	0	633.24	8.41	8.75	3.90
114	2.00	1.80	1.70	0	615.00	3.57	7.66	0.00
115	2.00	3.30	3.20	0	616.27	6.54	8.39	0.00
116	2.00	6.80	7.20	0	606.84	13.57	10.01	0.00
117	2.00	0.00	0.00	0	578.62	0.00	0.00	0.00
118	2.00	5.80	5.20	0	571.59	11.69	9.68	1.40
119	2.00	7.30	7.20	0 E	646.92	14.13	9.91	0.40
120	2.00	6.80	7.20	0	615.79	13.48	9.94	0.00
121	2.00	6.30	5.70	0	593.28	12.62	9.84	0.00
122	2.00	2.80	2.70	0	610.07	5.58	8.19	0.00
123	2.00	2.80	2.70	0	583.36	5.62	8.26	2.40
124	2.00	6.80	6.70	0	604.63	13.58	10.01	0.00
125	2.00	1.30	1.20	0	629.73	2.55	7.31	0.00
126	2.00	5.80	5.20	0	609.84	11.55	9.57	0.00
127	2.00	2.30	2.70	0	618.88	4.55	7.89	0.00

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RZ7

COPY

~~For BWO internal use only.~~

Hierarchy For: Close Out Report for Removal By Auction of Building 79

Document that directed this document be produced: *Work Plan For Environmental Restoration of the DOE Mound Site, the Mound 2000 Approach*, Final (Revision 0), February, 1999.

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: 06-09-10