3001 – 0008080004

SM/PP Hill Project

CLOSE OUT REPORT

Demolition of Building 88

BEFORE

MOUND PLANT

Miamisburg, Ohio

June 2000

Final

AFTER

BWXT of Ohio, Inc.

Department of Energy

Close Out Report For Demolition

Of

Building 88

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:

BWXT of Ohio

June 2000

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Executive Summary

This is the final report documenting the demolition of Building 88, as described in the Building 88 Demolition Work Package, SMPP-1299-1, SMPP Project, February 23, 2000. Demolition was completed in April 2000. This documentation serves as the record of the demolition action and reports final costs, schedule, waste disposition information, method of demolition, and any unusual findings. Photographs and references to other related documents are also included. This demolition effort was considered a standard industrial construction demolition and was not considered a removal under CERCLA and was not designated as a HAZWOPER site. The USDOE, USEPA, and OEPA of the Mound 2000 Plan Core Team waived the requirement to generate a non-CERCLA demolition Building Data Package (BDP) - Core Team meeting of December 1999.

Building 88 was constructed in 1984 to provide administrative offices to the Radioisotopic Thermoelectric Generator (RTG) program. Most recently, it served to provide office space for numerous Mound Plant environmental restoration functions. No radiological or chemical process activities occurred in the building. No radiological waste lines service the building.

Building 88 was a one-story, 7200 square-foot modular structure with a hypalon roof. It had a wooden facade. It sat elevated above the ground on concrete piers. The SM/PP Hill Project of BWXT of Ohio demolished the building and concrete piers per the Work Package.

All preparation and demolition activities were performed in accordance with the Work Package to include structure characterization, safe shutdown, utilities isolation, site access control, interior decontamination and demolition requirements as required (to include contaminant abatement), structure demolition, and debris removal. Approximately 1700 cubic yards of construction debris (non-radioactively contaminated) were removed from the Building 88 demolition site, as noted in Table 2.

The Building 88 structure and concrete piers were successfully demolished.

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

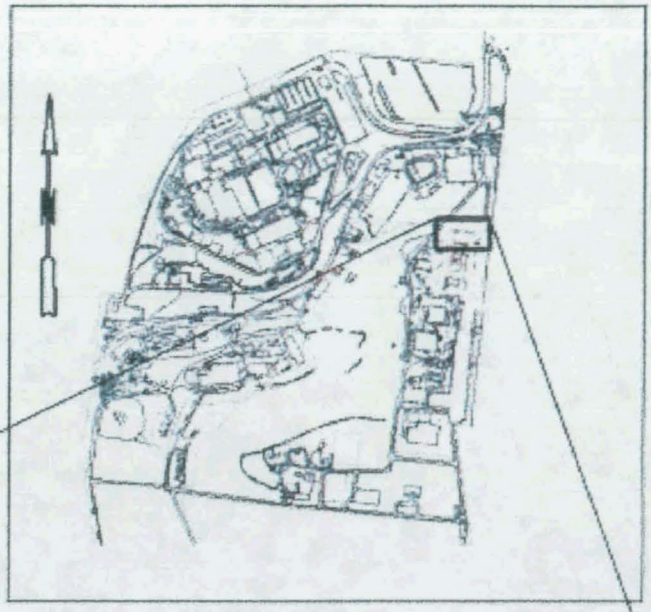
Bldg. 88
MOUND PLANT
Building 88 Location

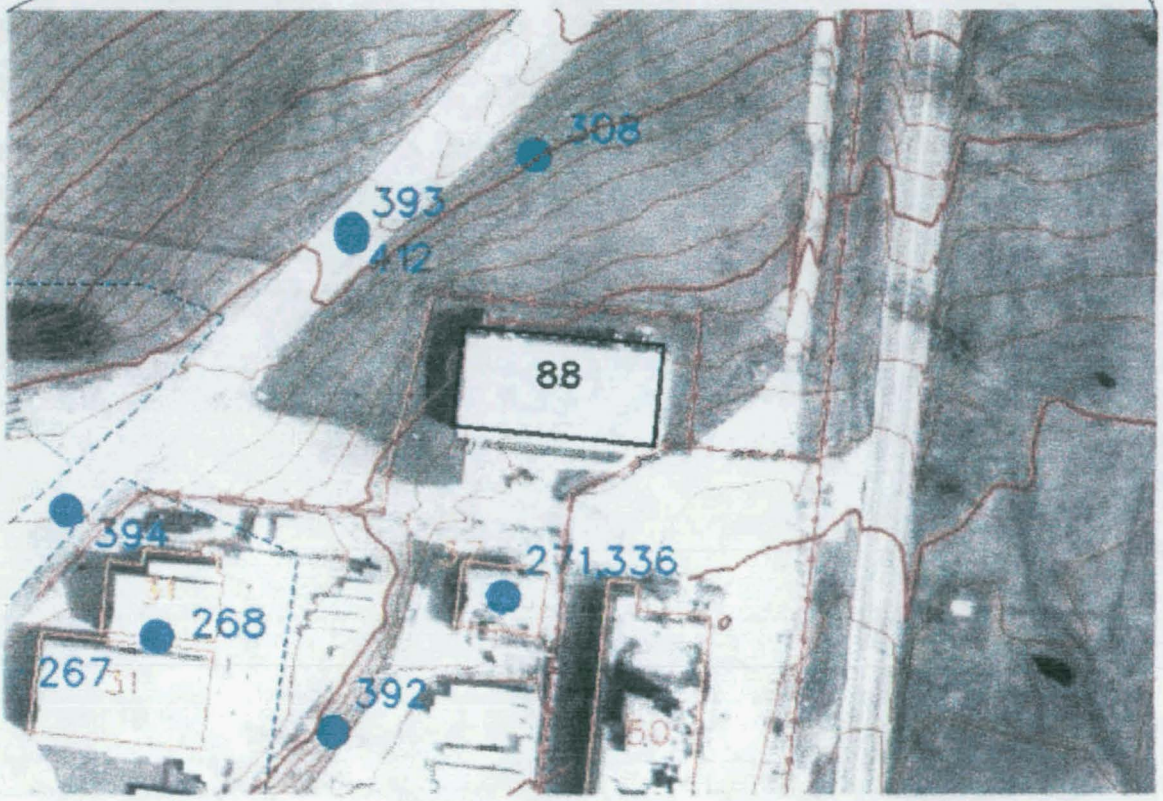
Mound Plant

Building 88

Offices (GPHS Support)

On the map below:
- Bldg. number and location shown in black
- PRS's shown in blue
- Fencing shown in red
- Elevation contours shown in brown





1.0 SUMMARY OF EVENTS

1.1 Objectives of Demolition Activities

Building 88 was removed in support of the Mound Plant Exit Project. The removal was accomplished as a non-CERCLA demolition as noted in the Building 88 Demolition Work Package, SMPP-1299-1, SMPP Project, February 23, 2000. The Work Package gives details of the planning and conduct of demolition operations. Note Figures 1 and 2 for Mound Plant and Building 88 locations.

1.2 Personnel Organization For The Demolition

See Table 1, Personnel Organization for the Demolition.

Table 1. Personnel Organization for the Demolition

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

1.3 Chronological Narrative of Key Demolition Activities

March 10, 2000	Started utilities isolation.
March 17, 2000	Completed utilities isolation.
March 17, 2000	Completed Safe Shutdown activities.
March 20, 2000	Started building demolition activities.
March 30, 2000	Completed building demolition activities.
April 3, 2000	Started concrete pier removal.
April 6, 2000	Completed concrete pier removal.
April 10, 2000	Completed rough grading of demolition area.

1.4 Listing of Resources Committed

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

2.0 EFFECTIVENESS OF THE DEMOLITION

Building 88 was successfully demolished per the Work Package. All field work and laboratory analysis was accomplished by BWXT of Ohio personnel.

Table 2. Materials and Disposition

Material	Quantity	Method	Location
Construction Debris (concrete/masonry)	108 cubic yards	to be crushed later and recycled	Mound site: to be used as fill material.
Construction Debris (metals)	40 cubic yards	recycled	Franklin Metals
Construction Debris (mix/miscellaneous)	1550 cubic yards	land fill	Koogler/ Stoney Hollow

Table 3. Demolition Project Total Cost Summary

Activity	Cost ($)
Work Planning	18,239
Safe Shutdown	115,107
Characterization	1,832
Decontamination & Demolition	26,590
Total Actual Cost (unburdened)	161,768
Budgeted (unburdened)	186,831

3.0 RECOMMENDATION

The Building 88 structure and foundation have been demolished and debris removed as described in this Close Out Report. It is recommended to the Department of Energy that BWXT of Ohio's contractual obligations for the scope of work relating to this building be considered complete.

4.0 REFERENCE LIST OF SUPPLEMENTARY DOCUMENTS

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

Building 88 Demolition Work Package, SMPP-1299-1, SMPP Project, February 23, 2000.

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

03/08/00 Bldg. 88 northeast corner *000347

03/08/00 Bldg. 88 northwest corner *000345

03/21/00 Bldg. 88 demolition *000526

03/29/00 Bldg. 88 demoliton *000606

04/19/00 Bldg. 88 site restoration *000767

04/19/00 Bldg. 88 site restoration *000762

APPENDIX B

SAMPLING/CHARACTERIZATION INFORMATION

BUILDING 88
RADIOLOGICAL SUMMARY DATA

INTERIOR: PRE-DEMOLITION				
TYPE	RSDS	LOCATION	SURVEY RESULTS ($dpm/100cm^2$)	SURFACE CONTAMINATION GUIDELINES ($dpm/100cm^2$)
Highest Alpha Smearable Activity	00-SM-0001	Desk in 88-120	6.08	20
Highest Alpha Fixed Activity	Note 1	Note 1	<100	100
Highest Beta Smearable Activity	00-SM-0001	88-102 Floor Vent	8.02	1000
Highest Beta Fixed Activity	Note 1	Note 1	<5000	5000
Highest Tritium Smearable Activity	00-SM-0001	88-116 Ceiling Vent	14.35	10000

EXTERIOR: PRE-DEMOLITION				
TYPE	RSDS	LOCATION	SURVEY RESULTS ($dpm/100cm^2$)	SURFACE CONTAMINATION GUIDELINES ($dpm/100cm^2$)
Highest Alpha Smearable Activity	00-SM-0002	88-NE Steps	5.37	20
Highest Alpha Fixed Activity	Note 1	Note 1	<100	100
Highest Beta Smearable Activity	00-SM-0002	88-NW Steps	4.12	1000
Highest Beta Fixed Activity	Note 1	Note 1	<5000	5000
Highest Tritium Smearable Activity	00-SM-0002	South Skirt	8.40	10000

SOIL				
TYPE	RSDS	LOCATION	SURVEY RESULTS (Radionuclide: pCi/g)	SOIL REMOVAL GUIDELINES (pCi/g)
Highest Soil Sample	00-38-428	Note 3	Note 3	Note 3

Note 1: All RSDS associated with the confirmatory survey were <100-dpm/100cm² alpha and <5000-dpm/100cm² beta for fixed contamination.

Note 2: Core Team determined values.

Note 3: Measured activities for soil samples did not exceed Mound site soil guideline values.

RSDS: Radiological Survey Data Sheet – documents radiological survey results.

General Note: All debris pile surveys indicated fixed contamination results less than PP-1059F, Table 2.2 values.

RADIOLOGICAL SURVEY DATA SHEET

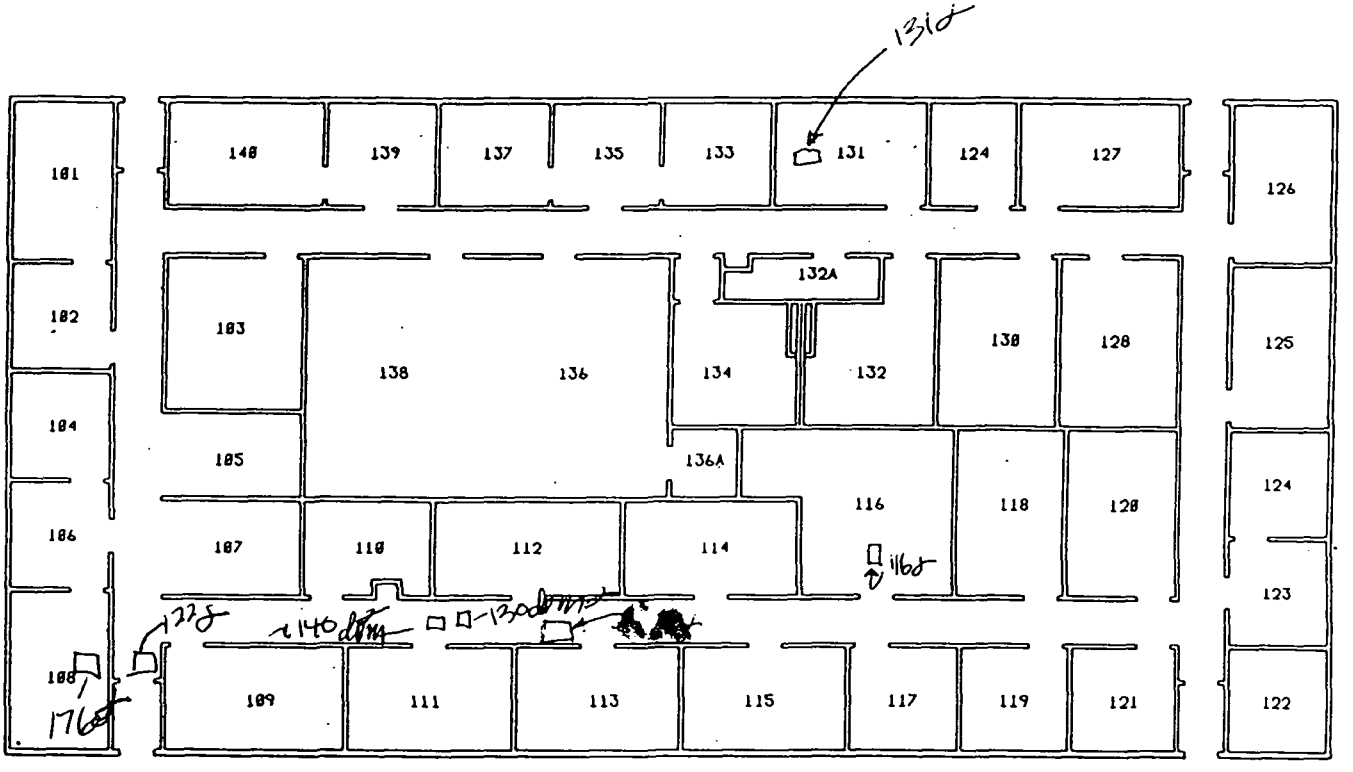
 B1-B230 30-17 P2

LOCATION: (BLDG./AREA/ROOM) BD 88	SURVEY NO. 00-SM-0001
PURPOSE: Building Characterization	RWP NO. N/A
	DATE: 010700
	TIME: 1400

MAP/DRAWING

COPY

NOTE: All direct alpha readings >100 dpm/100cm² decayed to <100 dpm/100cm².



All direct readings: (<100/α), (<5000/β) unless noted on map

LEGEND:
= mrem/hr (γ) whole body
E = mrem/hr (β+n+γ) extremity on contact
△# = 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
NE Electra	5576/5575	041600
NE Electra	5611/5613	043000
	N/A	

Completed by: (Signature) Connie Sowers	HP# [redacted]	Date: 011300
Completed by: (Print) Connie Sowers		
Counted by: (Signature) Carol Y. Robinson	HP# [redacted]	Date: 1-10-00
Counted by: (Print) CAROL Y. ROBINSON		
Reviewed/Approved by (Signature) Roger J. Blum	HP# [redacted]	Date: 01/20/00
Reviewed/Approved by: (Print) Roger Blum		

ML-9620 (2/98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
1				101 C-vent
2				desk
3				floor
4				floor
5				F-vent
6				102 C-vent
7				desk
8				floor
9				floor
10				f-vent
11				104 C-vent
12				desk
13				floor
14				floor
15				f-vent
16				106 C-vent
17				desk
18				desk
19				floor
20				floor
21				108 C-vent
22				desk
23				floor
24				floor
25				f-vent
26				109 C-vent
27				desk
28				floor
29				floor
30				f-vent
31				111 C-vent
32				desk
33				floor
34				floor
35				f-vent

See attached data sheet

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
36				113 C-vent
37				desk
38				desk
39				floor
40				floor
41				115 C-vent
42				desk
43				floor
44				floor
45				f-vent
46				117 C-vent
47				desk
48				floor
49				floor
50				f-vent
51				119 C-vent
52				desk
53				floor
54				floor
55				f-vent
56				121 C-vent
57				desk
58				floor
59				floor
60				f-vent
61				122 C-vent
62				desk
63				floor
64				floor
65				floor f-vent
66				123 C-vent
67				desk
68				desk
69				floor
70				F-vent

See attached data sheet

COMMENTS: C-vent = Ceiling vent f-vent = floor vent

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.

RADIOLOGICAL SURVEY DATA SHEET (cont.)

See attached data sheet

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
71				124 c-vent
72				desk
73				desk
74				floor
75				f-vent
76				125 c-vent
77				desk
78				floor
79				floor
80				f-vent
81				126 c-vent
82				desk
83				floor
84				floor
85				f-vent
86				127 c-vent
87				desk
88				floor
89				floor
90				f-vent
91				129 c-vent
92				desk
93				floor
94				floor
95				f-vent
96				131 c-vent
97				desk
98				floor
99				floor
100				f-vent
101				133 c-vent
102				desk
103				floor
104				floor
105				f-vent

See attached data sheet

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
106				135 c-vent
107				desk
108				floor
109				floor
110				f-vent
111				137 c-vent
112				desk
113				floor
114				floor
115				floor
116				139 c-vent
117				desk
118				floor
119				floor
120				f-vent
121				140 c-vent
122				desk
123				floor
124				floor
125				Floor
126				105 c-vent
127				table
128				floor
129				floor
130				f-vent
131				107 c-vent
132				table
133				printers
134				floor
135				floor
136				110 c-vent
137				cabinet
138				floor
139				floor
140				f-vent

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.

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
141				112 c-vent
142				desk
143				desk
144				floor
145				f-vent
146				114 c-vent
147				desk
148				desk
149				floor
150				floor
151				116 c-vent
152				desk
153				table
154				floor
155				floor
156				118 c-vent
157				desk
158				desk
159				floor
160				f-vent
161				120 c-vent
162				desk
163				desk
164				floor
165				f-vent
166				128 c-vent
167				desk
168				desk
169				floor
170				f-vent
171				130 c-vent
172				desk
173				floor
174				floor
175				f-vent

See attached data sheet

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
176				132 c-vent
177				c-vent
178				counter top
179				floor
180				floor
181				132A c-vent
182				ladder
183				water heater
184				floor
185				floor
186				134 c-vent
187				c-vent
188				counter
189				floor
190				entry way
191				136A coat rack
192				coat rack
193				table top
194				floor
195				floor
196				136 c-vent
197				c-vent
198				table
199				floor
200				f-vent
201				138 c-vent
202				c-vent
203				table
204				floor
205				f-vent
206				103 c-vent
207				desk
208				desk
209				floor
210				f-vent

See attached data sheet

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.

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
211				North Hallway
212				
213				
214				
215				
216				East Hallway
217				
218				
219				
220				
221				South Hallway
222				
223				
224				
225				
226				West Hallway
227				
228				
229				
230				
231				
232				
233				
234				
235				

See attached data sheet

N/A

N A

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

N A

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.

CS

Alpha/Beta Analysis

Batch ID: 00-SM-0001 SOUERS BLDG.88 PART#1 (1-100) CYR

Batch File: Smear Unit 2 - 200001101700

Group: A

Device: Unit 2

Geometry: Swipe/Smear

Serial Number: 59544

Acquisition Date: 1/10/2000

Count Time (min): 1.5

Recalibration Date: 5/17/2000

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	42	0.00	1.20	4.12	5.97
2	15	2.99	5.99	0.20	3.92
3	112	0.00	1.20	0.22	3.92
4	86	0.92	4.32	0.00	2.94
5	129	0.00	1.20	1.52	4.71
6	64	0.00	1.20	0.22	3.92
7	57	0.00	1.20	0.00	2.94
8	10	0.91	4.32	2.81	5.38
9	35	0.92	4.32	0.21	3.92
10	125	0.00	1.22	8.02	7.48
11	144	0.91	4.32	1.51	4.71
12	9	0.00	1.20	0.22	3.92
13	31	0.00	1.20	1.52	4.71
14	103	0.00	1.20	1.52	4.71
15	132	0.00	1.20	0.22	3.92
16	94	0.00	1.20	0.00	2.94
17	130	0.00	1.20	1.52	4.71
18	33	0.00	1.20	0.22	3.92
19	7	2.99	5.99	2.80	5.38
20	103	0.00	1.20	2.82	5.38
21	7	0.00	1.20	0.00	2.94
22	18	0.00	1.20	2.82	5.38
23	55	0.00	1.20	1.52	4.71
		CS		CS	

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
24	139	0.91	4.32	2.81	5.38
25	6	0.91	4.32	2.81	5.38
26	39	0.00	1.20	2.82	5.38
27	129	0.00	1.20	2.82	5.38
28	85	0.91	4.32	1.51	4.71
29	124	0.00	1.20	0.22	3.92
30	11	0.91	4.32	2.81	5.38
31	14	0.00	1.20	2.82	5.38
32	31	0.00	1.20	0.22	3.92
33	40	0.92	4.32	0.00	2.94
34	107	0.00	1.20	0.22	3.92
35	33	0.92	4.32	0.21	3.92
36	73	2.99	5.99	1.50	4.71
37	144	0.00	1.20	2.82	5.38
38	100	0.00	1.20	1.52	4.71
39	32	3.00	5.99	0.00	2.94
40	69	0.00	1.20	0.00	1.37
41	149	0.91	4.32	4.11	5.97
42	133	0.00	1.20	0.22	3.92
43	47	0.00	1.20	1.52	4.71
44	146	0.00	1.20	1.52	4.71
45	95	0.00	1.20	1.52	4.71
46	6	0.91	4.32	1.51	4.71
47	70	0.92	4.32	0.21	3.92
48	143	2.99	5.99	2.80	5.38
49	23	0.91	4.32	2.81	5.38
50	143	0.92	4.32	0.21	3.92
51	140	0.00	1.20	1.52	4.71
52	110	2.99	5.99	2.80	5.38
53	35	0.91	4.32	2.81	5.38
54	99	0.00	1.20	4.12	5.97
55	13	2.99	5.99	0.20	3.92

CS CS CS

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
56	7	0.00	1.20	1.52	4.71
57	119	0.91	4.32	4.11	5.97
58	94	0.00	1.20	1.52	4.71
59	24	0.92	4.32	0.21	3.92
60	100	0.00	1.20	2.82	5.38
61	83	3.00	5.99	0.00	2.94
62	136	0.00	1.20	1.52	4.71
63	95	0.00	1.20	0.22	3.92
64	64	0.91	4.32	4.11	5.97
65	98	0.00	1.20	0.00	2.94
66	7	0.91	4.32	2.81	5.38
67	27	0.92	4.32	0.00	2.94
68	70	0.00	1.20	0.22	3.92
69	8	0.00	1.20	0.22	3.92
70	85	0.92	4.32	0.21	3.92
71	94	0.00	1.20	4.12	5.97
72	144	0.00	1.20	1.52	4.71
73	29	0.00	1.20	0.00	2.94
74	14	0.92	4.32	0.21	3.92
75	147	0.00	1.20	0.22	3.92
76	119	0.91	4.32	1.51	4.71
77	65	0.92	4.32	0.21	3.92
78	17	0.00	1.20	1.52	4.71
79	33	0.92	4.32	0.21	3.92
80	74	0.00	1.20	0.22	3.92
81	111	0.00	1.20	0.00	2.94
82	75	0.00	1.20	0.22	3.92
83	18	0.00	1.20	0.22	3.92
84	126	0.00	1.20	2.82	5.38
85	113	0.00	1.20	1.52	4.71
86	44	0.00	1.21	5.42	6.51
87	79	2.99	5.99	2.80	5.38

CS CS CS

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
88	31	0.00	1.21	5.42	6.51
89	14	0.92	4.32	0.00	2.94
90	116	0.00	1.20	1.52	4.71
91	12	0.00	1.20	2.82	5.38
92	31	0.00	1.20	2.82	5.38
93	128	0.00	1.20	0.22	3.92
94	125	0.00	1.20	2.82	5.38
95	73	0.00	1.20	1.52	4.71
96	99	0.00	1.20	0.22	3.92
97	59	0.92	4.32	0.21	3.92
98	108	0.91	4.32	2.81	5.38
99	84	0.00	1.20	0.00	2.94
100	70	0.91	4.32	1.51	4.71
		CS		CS	

CS

Alpha/Beta Analysis

Batch ID: 00-SM-0001 SOUERS BLDG.88 PART# (101-200) CYR

Batch File: Smear Unit 3 - 200001101701

Group: B

Device: Unit 3

Geometry: Swipe/Smear

Serial Number: 59123

Acquisition Date: 1/10/2000

Count Time (min): 1.5

Recalibration Date: 5/17/2000

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	16	3.77	6.59	4.97	6.42
2	15	0.00	1.06	0.00	2.93
3	18	0.00	1.06	0.00	3.89
4	22	1.49	4.72	0.00	2.93
5	16	1.48	4.72	0.00	3.89
6	127	0.00	1.06	0.00	2.93
7	128	0.00	1.07	7.54	7.37
8	25	0.00	1.06	2.43	5.31
9	108	1.48	4.72	0.00	3.89
10	23	0.00	1.07	6.26	6.91
11	99	0.00	1.06	2.43	5.31
12	12	0.00	1.06	0.00	3.89
13	82	1.48	4.72	2.42	5.31
14	141	1.48	4.72	0.00	3.89
15	54	0.00	1.06	1.15	4.65
16	110	1.48	4.72	2.42	5.31
17	123	0.00	1.06	0.00	2.93
18	9	1.49	4.72	0.00	2.93
19	2	0.00	1.06	0.00	2.93
20	30	0.00	1.06	1.15	4.65
21	86	0.00	1.06	1.15	4.65
22	97	6.08	8.03	0.00	3.89
23	83	1.49	4.72	0.00	2.93

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
24	38	0.00	1.06	0.00	2.93
25	29	0.00	1.06	0.00	3.89
26	94	0.00	1.06	1.15	4.65
27	125	0.00	1.06	1.15	4.65
28	89	1.48	4.72	2.42	5.31
29	114	1.48	4.72	1.14	4.65
30	55	1.48	4.72	1.14	4.65
31	113	1.48	4.72	1.14	4.65
32	59	0.00	1.06	1.15	4.65
33	136	1.48	4.72	0.00	3.89
34	25	1.48	4.72	2.42	5.31
35	5	1.48	4.72	0.00	3.89
36	10	0.00	1.06	0.00	2.93
37	83	0.00	1.06	0.00	3.89
38	40	0.00	1.06	1.15	4.65
39	39	0.00	1.06	0.00	3.89
40	57	6.08	8.03	0.00	2.94
41	24	1.49	4.72	0.00	2.93
42	46	0.00	1.06	0.00	3.89
43	142	1.48	4.72	2.42	5.31
44	15	1.49	4.72	0.00	2.93
45	30	0.00	1.06	4.98	6.42
46	84	1.48	4.72	1.14	4.65
47	123	6.07	8.03	2.40	5.31
48	17	0.00	1.06	0.00	3.89
49	43	1.48	4.72	3.70	5.89
50	89	1.48	4.72	2.42	5.31
51	131	0.00	1.06	0.00	3.89
52	25	1.48	4.72	1.14	4.65
53	63	0.00	1.06	0.00	2.93
54	108	6.08	8.03	1.13	4.66
55	114	1.47	4.72	4.97	6.42
		CS		CS	

CS

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
56	88	6.08	8.03	0.00	2.94
57	72	1.48	4.72	0.00	3.89
58	5	0.00	1.06	0.00	2.93
59	18	1.48	4.72	2.42	5.31
60	133	1.48	4.72	2.42	5.31
61	38	1.48	4.72	0.00	3.89
62	7	1.48	4.72	0.00	3.89
63	23	3.78	6.58	1.13	4.65
64	4	1.48	4.72	0.00	3.89
65	35	1.47	4.72	6.25	6.91
66	149	0.00	1.06	0.00	3.89
67	36	0.00	1.06	0.00	2.93
68	56	1.47	4.72	6.25	6.91
69	144	1.48	4.72	1.14	4.65
70	20	1.48	4.72	2.42	5.31
71	88	0.00	1.06	1.15	4.65
72	23	0.00	1.06	0.00	3.89
73	10	1.48	4.72	3.70	5.89
74	15	1.48	4.72	3.70	5.89
75	55	1.48	4.72	0.00	3.89
76	38	1.48	4.72	2.42	5.31
77	12	3.78	6.58	2.41	5.31
78	10	0.00	1.06	0.00	3.89
79	93	0.00	1.06	0.00	3.89
80	19	0.00	1.06	0.00	3.89
81	94	0.00	1.06	3.71	5.89
82	38	1.48	4.72	1.14	4.65
83	86	0.00	1.06	1.15	4.65
84	23	0.00	1.06	1.15	4.65
85	43	0.00	1.07	7.54	7.37
86	138	1.48	4.72	2.42	5.31
87	59	1.48	4.72	0.00	3.89
		CS		CS	

CS

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
88	63	1.48	4.72	1.14	4.65
89	78	1.48	4.72	1.14	4.65
90	50	1.48	4.72	1.14	4.65
91	89	0.00	1.06	1.15	4.65
92	20	1.48	4.72	1.14	4.65
93	21	0.00	1.06	0.00	2.93
94	19	0.00	1.06	1.15	4.65
95	135	0.00	1.06	0.00	3.89
96	79	1.48	4.72	2.42	5.31
97	30	0.00	1.06	1.15	4.65
98	135	0.00	1.06	0.00	3.89
99	140	3.78	6.58	2.41	5.31
100	31	0.00	1.06	1.15	4.65
		CS		CS	

CS

CS

Alpha/Beta Analysis

Batch ID: 00-SM-0001 SOUERS BLDG.88 PART#3 (201-230) CYR

Batch File: Smear Unit 1 - 200001110755
Group: C
Device: Unit 1
Geometry: Swipe/Smear
Serial Number: 64937

Acquisition Date: 1/11/2000
Count Time (min): 1.5
Recalibration Date: 5/17/2000

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	98	0.00	0.71	0.00	4.84
2	125	0.00	0.73	0.00	4.09
3	90	1.32	3.64	0.00	4.85
4	23	3.10	5.10	0.00	4.85
5	66	0.00	0.73	0.00	4.09
6	98	0.00	0.77	0.00	3.16
7	88	0.00	0.72	0.99	5.50
8	39	1.30	3.64	0.98	5.50
9	15	0.00	0.73	0.00	4.09
10	84	0.00	0.73	0.00	4.09
11	58	0.00	0.71	0.00	4.84
12	99	0.00	0.73	0.00	4.09
13	35	0.00	0.71	0.00	4.84
14	10	1.30	3.64	0.98	5.50
15	69	0.00	0.77	0.00	3.16
16	139	1.32	3.64	0.00	4.85
17	139	1.35	3.65	0.00	3.16
18	33	0.00	0.73	0.00	4.09
19	141	0.00	0.71	0.00	4.84
20	12	0.00	0.73	0.00	4.09
21	47	0.00	0.77	0.00	3.16
22	59	4.88	6.23	0.95	5.50
23	144	0.00	0.71	0.00	4.84

CS CS

CS

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
24	124	1.32	3.64	0.00	4.85
25	1	0.00	0.72	0.99	5.50
26	35	0.00	0.71	0.00	4.84
27	143	0.00	0.71	0.00	4.84
28	50	1.35	3.65	0.00	3.16
29	84	0.00	0.73	0.00	4.09
30	3	0.00	0.72	0.99	5.50
		CS		CS	

CS

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL2 Quench Set: SMVIAL2
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	18.6	0	0.0	6.70
Region B:	2.0	18.6	0	0.0	6.57
Region C:	40.0	2000	0	0.0	11.00

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
C3 00-SM-001 SQUERS BLDG.88 (30-17 B1-B230) CYR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT2.DAT
Count Data Filename: C:\DATA\SDATA2.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.70	6.57	11.00	598.67	4	B		0.00
0	2.00	732.63	703.88	2.86	562.90	0		1633.70	147.27
1	2.00	0.00	0.12	0.00	560.54	0		0.00	0.00
2	2.00	2.80	2.57	0.00	649.56	0		5.77	9.62
3	2.00	0.00	0.00	0.00	535.58	0		0.00	0.00
4	2.00	0.00	0.00	0.00	577.17	0		0.00	0.00
5	2.00	3.30	1.96	0.00	579.39	0		7.24	10.49
6	2.00	0.00	0.00	3.04	640.79	0		0.00	0.00
7	2.00	1.30	1.43	0.00	646.48	0		2.68	8.95
8	2.00	0.00	0.00	0.00	486.70	8		0.00	0.00
9	2.00	0.00	0.00	1.50	546.11	0		0.00	0.00
10	2.00	0.00	0.00	0.00	548.20	0		0.00	0.00
11	2.00	0.30	0.00	0.00	621.59	0		0.63	8.65
12	2.00	2.86	2.49	0.00	642.01	0		5.93	9.71
13	2.00	0.00	0.00	0.00	548.57	0		0.00	0.00
14	2.00	0.00	0.00	3.50	599.33	0		0.00	0.00
15	2.00	0.31	0.45	0.00	580.00	0		0.68	8.99
16	2.00	1.80	1.93	0.00	650.02	0		3.70	9.16
17	2.00	0.00	0.00	1.00	640.45	8		0.00	0.00
18	2.00	0.00	0.00	1.50	650.05	0		0.00	0.00
19	2.00	0.00	0.00	0.00	524.07	0		0.00	0.00
20	2.00	0.00	0.00	2.00	577.18	0		0.00	0.00
21	2.00	2.30	2.43	0.00	632.25	0		4.81	9.54
22	2.00	3.30	2.58	0.00	646.75	5		6.81	9.87
23	2.00	0.00	0.00	0.00	604.50	8		0.00	0.00
24	2.00	1.32	1.33	0.00	520.75	6		3.07	10.07
25	2.00	0.00	0.00	0.00	528.88	9		0.00	0.00
26	2.00	0.00	0.00	2.00	599.07	8		0.00	0.00
27	2.00	0.00	0.00	0.00	617.40	0		0.00	0.00
28	2.00	2.30	2.36	0.44	490.34	0		5.51	10.94
29	2.00	0.00	0.00	0.00	443.23	14		0.00	0.00
30	2.00	3.80	2.54	0.00	571.42	5		8.40	10.80
31	2.00	4.01	3.63	0.00	591.95	5		8.71	10.69
32	2.00	2.55	1.73	1.00	623.69	5		5.37	9.73
33	2.00	0.00	0.00	0.00	536.00	0		0.00	0.00
34	2.00	2.26	0.97	0.00	577.14	0		4.98	10.02
35	2.00	4.67	4.47	0.00	541.53	0		10.62	11.52

CS

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
36	2.00	0.00	0.00	0.00	572.41	11		0.00	0.00
37	2.00	1.30	1.08	1.00	645.30	6		2.69	8.96
38	2.00	0.00	0.00	0.00	646.88	0		0.00	0.00
39	2.00	0.00	0.00	0.00	555.96	0		0.00	0.00
40	2.00	0.70	0.61	0.00	573.47	0		1.55	9.25
41	2.00	2.30	1.41	0.00	589.64	11		5.00	9.92
42	2.00	1.35	1.13	0.00	641.34	0		2.79	9.02
43	2.00	0.80	0.60	0.00	633.41	7		1.67	8.81
44	2.00	1.30	1.07	0.00	648.88	6		2.68	8.93
45	2.00	0.00	0.00	0.50	612.91	0		0.00	0.00
46	2.00	1.30	1.43	0.00	599.63	0		2.80	9.34
47	2.00	0.00	0.00	1.00	643.60	10		0.00	0.00
48	2.00	2.30	1.93	2.93	588.50	6		5.00	9.93
49	2.00	0.00	0.00	0.50	578.10	0		0.00	0.00
50	2.00	0.80	0.93	0.00	552.75	0		1.80	9.49
51	2.00	6.80	5.81	0.00	655.49	4		13.94	11.23
52	2.00	0.00	0.00	0.00	638.62	8		0.00	0.00
53	2.00	0.00	0.00	0.00	531.93	8		0.00	0.00
54	2.00	0.45	0.59	0.50	498.86	7		1.08	9.81
55	2.00	0.00	0.00	0.00	557.79	14		0.00	0.00
56	2.00	3.92	3.81	0.00	586.66	5		8.56	10.70
57	2.00	2.30	2.08	0.00	645.77	0		4.75	9.43
58	2.00	3.58	2.95	0.00	595.76	0		7.73	10.46
59	2.00	0.72	0.86	0.00	544.80	0		1.64	9.52
60	2.00	0.00	0.00	0.00	597.70	0		0.00	0.00
61	2.00	0.80	0.43	1.00	500.46	0		1.89	9.99
62	2.00	0.30	0.08	7.50	646.04	7		0.62	8.46
63	2.00	0.00	0.00	0.00	561.36	0		0.00	0.00
64	2.00	0.00	0.00	0.00	582.05	0		0.00	0.00
65	2.00	0.30	0.00	0.00	596.25	7		0.65	8.85
66	2.00	0.00	0.00	0.00	515.14	0		0.00	0.00
67	2.00	0.00	0.00	0.00	620.29	0		0.00	0.00
68	2.00	0.80	0.00	0.30	619.90	0		1.69	8.92
69	2.00	0.00	0.00	0.00	604.12	0		0.00	0.00
70	2.00	0.00	0.00	0.00	576.31	0		0.00	0.00
71	2.00	2.30	1.60	0.00	603.11	6		4.94	9.79
72	2.00	0.00	0.00	0.00	639.73	0		0.00	0.00
73	2.00	1.81	1.95	0.00	639.13	6		3.76	9.26
74	2.00	0.00	0.00	0.00	594.58	0		0.00	0.00
75	2.00	0.00	0.00	2.94	574.38	0		0.00	0.00
76	2.00	1.80	1.61	0.00	629.85	0		3.77	9.33
77	2.00	3.80	2.79	0.00	658.30	5		7.78	10.00
78	2.00	0.00	0.00	1.00	608.61	8		0.00	0.00
79	2.00	0.80	0.00	0.00	585.72	0		1.74	9.20
80	2.00	1.30	1.43	0.00	585.16	0		2.84	9.46
81	2.00	1.30	1.11	0.50	538.73	0		2.96	9.89
82	2.00	0.00	0.00	0.00	636.03	0		0.00	0.00
83	2.00	0.00	0.00	0.00	511.01	0		0.00	0.00
84	2.00	0.00	0.00	0.00	585.22	0		0.00	0.00
85	2.00	0.00	0.00	0.00	591.68	0		0.00	0.00
86	2.00	2.08	2.21	0.00	625.38	0		4.37	9.50
87	2.00	0.30	0.43	0.00	640.02	0		0.62	8.51
88	2.00	0.80	0.74	0.00	557.49	7		1.79	9.45
89	2.00	0.48	0.00	0.00	609.11	7		1.02	8.84
90	2.00	0.00	0.00	1.00	592.07	0		0.00	0.00
91	2.00	0.00	0.00	0.00	597.93	9		0.00	0.00

CS

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
92	2.00	0.00	0.00	0.00	637.84	0		0.00	0.00
93	2.00	1.23	0.62	0.00	515.24	6		2.87	10.08
94	2.00	0.00	0.00	2.50	556.09	0		0.00	0.00
95	2.00	0.49	0.13	0.00	584.89	0		1.07	9.04
96	2.00	0.20	0.16	0.00	543.43	0		0.45	9.25
97	2.00	0.79	0.61	0.00	623.44	6		1.66	8.88
98	2.00	1.30	1.43	0.00	606.33	0		2.78	9.28
99	2.00	1.30	1.43	0.00	622.58	6		2.74	9.14
100	2.00	0.00	0.00	0.00	596.10	0		0.00	0.00
101	2.00	2.21	2.06	1.78	606.48	6		4.74	9.72
102	2.00	1.80	1.93	0.00	642.02	6		3.73	9.23
103	2.00	1.30	0.68	0.00	590.43	6		2.82	9.42
104	2.00	2.30	2.13	0.00	615.26	0		4.88	9.69
105	2.00	0.00	0.00	0.00	578.45	0		0.00	0.00
106	2.00	0.98	0.61	0.00	629.01	0		2.05	8.93
107	2.00	3.30	3.10	0.00	632.44	0		6.90	9.99
108	2.00	3.60	3.73	1.50	528.36	5		8.29	11.16
109	2.00	0.00	0.00	4.50	597.31	0		0.00	0.00
110	2.00	2.74	1.42	0.00	575.74	0		6.04	10.26
111	2.00	0.80	0.24	2.50	556.75	7		1.79	9.45
112	2.00	3.85	2.14	0.00	640.18	4		8.01	10.17
113	2.00	0.65	0.67	0.50	510.66	7		1.53	9.80
114	2.00	0.80	0.93	0.00	544.29	7		1.81	9.57
115	2.00	0.00	0.00	0.00	598.50	9		0.00	0.00
116	2.00	1.77	1.41	1.50	607.45	6		3.79	9.50
117	2.00	0.00	0.00	1.00	640.64	0		0.00	0.00
118	2.00	1.55	0.68	3.00	564.14	0		3.44	9.78
119	2.00	5.65	5.79	0.00	614.22	0		12.02	11.18
120	2.00	0.00	0.00	0.00	536.31	0		0.00	0.00
121	2.00	2.30	2.13	3.50	615.96	0		4.88	9.68
122	2.00	1.30	0.75	0.00	638.82	0		2.70	9.01
123	2.00	0.00	0.00	0.00	533.95	0		0.00	0.00
124	2.00	0.00	0.00	0.00	602.11	9		0.00	0.00
125	2.00	0.00	0.00	0.00	609.41	0		0.00	0.00
126	2.00	0.30	0.43	0.00	617.79	0		0.63	8.68
127	2.00	6.30	6.14	0.00	614.18	0		13.40	11.45
128	2.00	1.58	1.71	0.00	536.01	0		3.60	10.06
129	2.00	0.30	0.27	1.50	537.04	0		0.68	9.36
130	2.00	0.00	0.00	0.00	458.96	0		0.00	0.00
131	2.00	0.00	0.00	0.00	478.51	0		0.00	0.00
132	2.00	0.00	0.00	0.00	566.34	14		0.00	0.00
133	2.00	2.80	2.32	0.00	619.34	0		5.92	9.88
134	2.00	1.30	0.93	0.00	546.98	6		2.94	9.81
135	2.00	0.00	0.00	0.00	557.14	0		0.00	0.00
136	2.00	4.80	3.70	0.00	651.40	4		9.87	10.47
137	2.00	0.30	0.09	0.00	636.58	0		0.62	8.53
138	2.00	2.12	1.71	0.50	598.21	0		4.57	9.75
139	2.00	1.30	0.75	0.00	636.40	0		2.71	9.03
140	2.00	1.80	1.62	0.00	624.75	0		3.79	9.37
141	2.00	0.00	0.00	0.00	633.44	8		0.00	0.00
142	2.00	3.29	3.09	0.00	638.25	0		6.86	9.94
143	2.00	0.00	0.00	0.00	662.59	0		0.00	0.00
144	2.00	0.00	0.00	0.00	571.70	0		0.00	0.00
145	2.00	0.00	0.00	0.00	528.07	0		0.00	0.00
146	2.00	0.00	0.00	0.00	613.45	0		0.00	0.00
147	2.00	1.80	1.24	0.00	639.76	0		3.74	9.24

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
148	2.00	0.85	0.77	0.00	565.77	0	1.89	9.40
149	2.00	0.00	0.00	0.00	578.19	0	0.00	0.00
150	2.00	1.80	0.22	0.00	616.66	6	3.82	9.44
151	2.00	6.30	5.27	1.15	540.74	4	14.35	12.26
152	2.00	1.80	1.60	0.00	633.73	6	3.76	9.29
153	2.00	0.87	0.50	0.00	553.52	0	1.95	9.52
154	2.00	1.92	0.67	0.00	556.83	0	4.31	10.04
155	2.00	2.24	1.91	0.00	577.47	0	4.93	10.00
156	2.00	2.30	1.22	2.00	646.03	0	4.75	9.43
157	2.00	0.00	0.00	0.00	642.73	0	0.00	0.00
158	2.00	0.00	0.00	0.00	643.61	0	0.00	0.00
159	2.00	0.00	0.00	0.00	524.76	9	0.00	0.00
160	2.00	0.00	0.00	0.00	523.56	0	0.00	0.00
161	2.00	0.00	0.00	0.00	650.27	0	0.00	0.00
162	2.00	0.00	0.00	0.00	614.26	0	0.00	0.00
163	2.00	1.34	0.63	0.00	641.13	0	2.79	9.02
164	2.00	0.30	0.00	0.00	557.84	7	0.67	9.17
165	2.00	2.53	2.39	0.00	600.90	0	5.44	9.92
166	2.00	5.80	5.57	0.00	647.16	0	11.98	10.92
167	2.00	0.00	0.00	0.00	625.34	0	0.00	0.00
168	2.00	2.71	2.56	0.00	603.63	0	5.81	9.98
169	2.00	4.35	3.92	0.00	552.23	4	9.79	11.25
170	2.00	3.36	2.99	0.00	522.94	0	7.78	11.10
171	2.00	2.01	1.65	1.73	621.71	0	4.25	9.50
172	2.00	0.98	0.81	0.00	619.68	0	2.07	9.01
173	2.00	1.30	0.96	1.50	579.09	0	2.85	9.52
174	2.00	0.00	0.00	0.00	629.73	0	0.00	0.00
175	2.00	3.30	3.43	0.00	569.71	0	7.31	10.58
176	2.00	1.30	1.43	0.00	638.96	6	2.70	9.01
177	2.00	0.00	0.00	1.00	634.88	0	0.00	0.00
178	2.00	2.45	2.22	0.00	647.20	0	5.05	9.48
179	2.00	2.58	1.84	0.00	655.10	0	5.29	9.48
180	2.00	0.00	0.00	1.77	661.87	8	0.00	0.00
181	2.00	4.30	3.08	0.00	645.27	5	8.89	10.31
182	2.00	2.80	1.45	1.50	582.32	0	6.13	10.22
183	2.00	3.30	3.43	0.00	586.24	0	7.20	10.42
184	2.00	2.98	1.57	0.00	619.63	0	6.30	9.96
185	2.00	0.00	0.00	0.00	620.90	8	0.00	0.00
186	2.00	1.30	1.09	0.00	638.37	6	2.70	9.02
187	2.00	4.30	3.93	0.00	622.89	5	9.07	10.52
188	2.00	1.30	0.58	0.00	647.13	6	2.68	8.95
189	2.00	1.13	0.94	0.00	628.52	6	2.37	9.01
190	2.00	0.00	0.00	0.00	634.11	0	0.00	0.00
191	2.00	6.20	4.66	0.00	603.03	4	13.32	11.52
192	2.00	2.30	1.82	1.00	617.86	0	4.87	9.66
193	2.00	0.00	0.00	1.50	625.06	0	0.00	0.00
194	2.00	3.30	2.40	0.59	639.21	0	6.86	9.94
195	2.00	1.08	1.22	0.00	625.89	0	2.28	9.01
196	2.00	0.00	0.00	0.00	532.79	0	0.00	0.00
197	2.00	0.34	0.00	0.00	551.78	7	0.76	9.25
198	2.00	0.00	0.00	0.00	639.54	0	0.00	0.00
199	2.00	1.30	0.93	0.00	586.69	0	2.83	9.45
200	2.00	3.80	3.93	2.00	481.87	0	9.22	11.85
201	2.00	0.00	0.00	0.00	550.73	0	0.00	0.00
202	2.00	0.00	0.00	2.50	496.38	10	0.00	0.00
203	2.00	4.30	3.07	0.00	637.19	0	8.96	10.39

CS

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
204	2.00	0.00	0.00	1.00	592.11	9	0.00	0.00
205	2.00	0.00	0.00	0.00	542.80	0	0.00	0.00
206	2.00	0.79	0.43	0.00	518.99	0	1.84	9.80
207	2.00	2.09	1.26	0.00	626.45	6	4.41	9.50
208	2.00	0.30	0.00	0.00	647.13	0	0.62	8.46
209	2.00	3.07	2.57	0.00	565.51	0	6.83	10.52
210	2.00	1.45	1.51	0.00	469.12	0	3.58	10.78
211	2.00	0.00	0.00	0.00	543.63	0	0.00	0.00
212	2.00	0.00	0.00	0.00	525.16	0	0.00	0.00
213	2.00	0.30	0.00	0.00	541.40	0	0.68	9.32
214	2.00	1.80	1.93	0.00	518.02	0	4.19	10.36
215	2.00	0.30	0.00	0.00	535.59	0	0.68	9.37
216	2.00	3.80	3.68	0.00	587.73	0	8.28	10.64
217	2.00	1.80	1.93	0.00	563.98	0	4.01	9.91
218	2.00	0.00	0.00	2.49	531.24	0	0.00	0.00
219	2.00	0.00	0.00	0.00	521.44	0	0.00	0.00
220	2.00	1.80	1.43	0.00	623.44	6	3.79	9.38
221	2.00	0.89	0.83	1.50	554.81	0	2.00	9.52
222	2.00	0.00	0.00	0.00	544.30	0	0.00	0.00
223	2.00	1.80	1.93	0.00	531.28	0	4.13	10.22
224	2.00	0.92	1.06	0.00	497.07	0	2.19	10.09
225	2.00	0.80	0.79	0.00	530.84	0	1.84	9.69
226	2.00	0.30	0.07	0.00	649.43	7	0.62	8.44
227	2.00	0.00	0.00	2.50	527.53	0	0.00	0.00
228	2.00	0.00	0.00	0.00	550.89	0	0.00	0.00
229	2.00	1.81	1.76	0.00	550.04	0	4.09	10.05
230	2.00	0.00	0.00	0.00	608.98	8	0.00	0.00

CS

RADIOLOGICAL SURVEY DATA SHEET

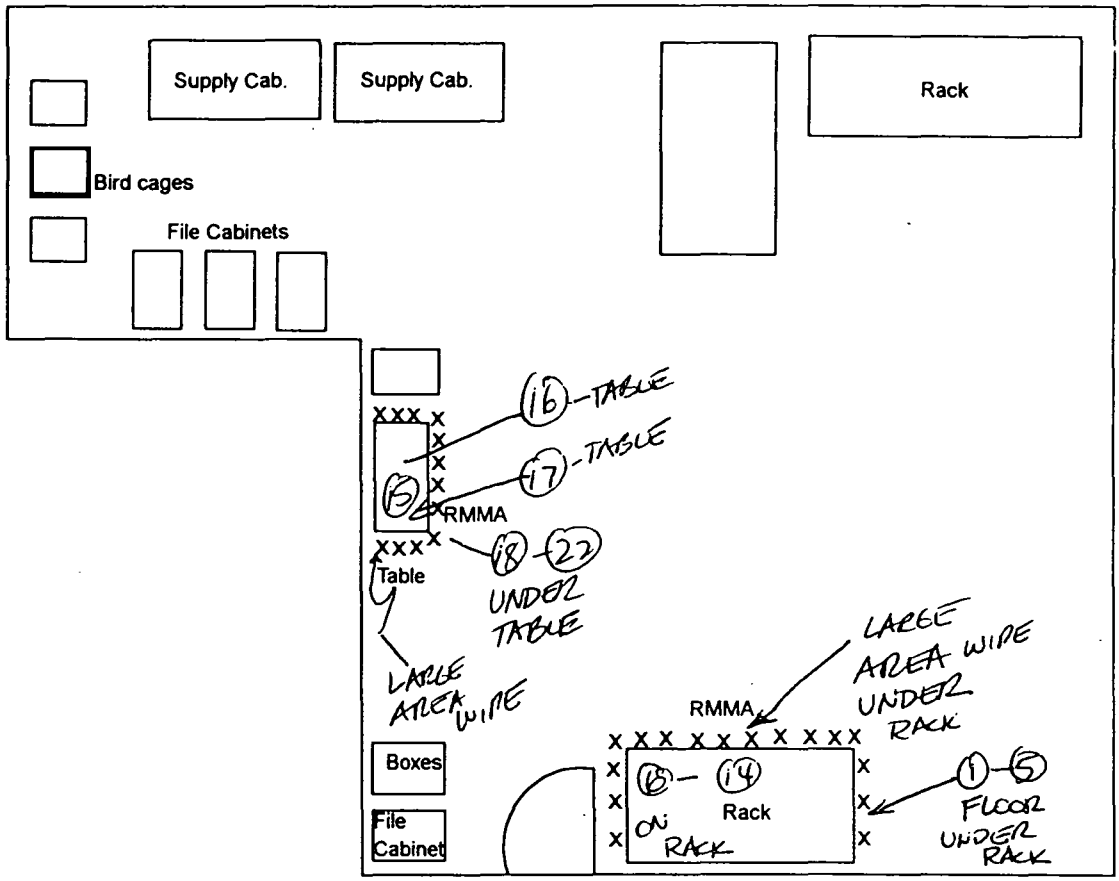
 H-1022 30-18 P2

LOCATION: (BLDG./AREA/ROOM) 88-116	SURVEY NO. 00-38-238
PURPOSE: RMMA roll back survey	RWP NO. N/A
	DATE: 2/29/00
	TIME: 1030

MAP/DRAWING

88-116

COPY



LEGEND:

= mrem/hr (γ) whole body

E = mrem/hr (β+n+γ) extremity on contact

△# = 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
NE	5346/5408	4/28/00
	N/A	

Completed by: (Signature) K. Francis	HP# [redacted]	Date: 2/29/00
Completed by: (Print) K. FRANCIS		
Counted by: (Signature) Carol Y. Robinson	HP# [redacted]	Date: 2/29/00
Counted by: (Print) CAROL Y. ROBINSON		
Reviewed/Approved by (Signature) Roger J. Blum	HP# [redacted]	Date: 03/03/00
Reviewed/Approved by: (Print) ROGER BLUM		

ML-9620 (2/98)

3D-7

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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		NA		
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				

COMMENTS: LARGE WIPE WAS TAKEN ON BOTH LOCATIONS
< 100 DPM/100CM² DIRECT-ALPHA < 5000 DPM/100CM² DIRECT-BETA

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.

Alpha/Beta Analysis

Batch ID: 00-38-238 FRANCIS 88-116 (22) CYR

Batch File: Smear Unit 3 - 200002291356
Group: D
Device: Unit 3
Geometry: Swipe/Smear
Serial Number: 59123

Acquisition Date: 2/29/2000
Count Time (min): 1.5
Recalibration Date: 5/17/2000

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	21	1.48	4.72	0.00	3.89
2	130	1.47	4.72	6.25	6.91
3	26	0.00	1.06	0.00	3.89
4	123	0.00	1.06	0.00	2.93
5	13	0.00	1.06	1.15	4.65
6	115	1.49	4.72	0.00	2.93
7	19	0.00	1.06	0.00	3.89
8	89	1.48	4.72	2.42	5.31
9	19	1.48	4.72	1.14	4.65
10	89	6.07	8.03	3.68	5.89
11	42	0.00	1.06	0.00	3.89
12	38	0.00	1.06	0.00	3.89
13	38	3.78	6.58	0.00	3.89
14	29	0.00	1.06	3.71	5.89
15	133	0.00	1.06	2.43	5.31
16	87	0.00	1.06	0.00	3.89
17	24	0.00	1.06	4.98	6.42
18	34	1.48	4.72	0.00	3.89
19	32	1.48	4.72	0.00	3.89
20	140	0.00	1.06	0.00	2.93
21	139	3.78	6.58	1.13	4.65
22	21	3.78	6.58	1.13	4.65

Protocol #: 2 PW 5CC H3 #403727 User : 5E

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL2 Quench Set: SMVIAL2
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	6.78
Region B:	2.0 -	18.6	0	0.0	6.32
Region C:	40.0 -	2000	0	0.0	10.19

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
00-38-238 FRANCIS 88-116 (30-18 P1-P22) CYR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT2.DAT
Count Data Filename: C:\DATA\SDATA2.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.78	6.32	10.19	574.12	13	B		0.00
0	2.00	1052.88	1006.34	0.81	570.60	0		2330.85	198.37
1	2.00	0.00	0.00	0.00	582.06	0		0.00	0.00
2	2.00	3.72	2.88	0.00	595.63	0		8.04	10.62
3	2.00	0.72	0.88	0.00	615.03	0		1.52	9.03
4	2.00	4.91	4.87	0.00	590.66	4		10.67	11.20
5	2.00	0.22	0.68	0.00	575.57	0		0.48	9.03
6	2.00	2.72	2.84	0.00	639.21	0		5.65	9.77
7	2.00	0.54	0.36	0.00	628.19	7		1.14	8.83
8	2.00	3.60	4.06	0.31	631.39	0		7.53	10.23
9	2.00	1.13	1.26	0.00	633.29	0		2.36	9.08
10	2.00	3.22	2.26	0.81	644.36	5		6.66	9.95
11	2.00	0.00	0.00	0.00	633.24	0		0.00	0.00
12	2.00	1.15	1.28	0.00	634.53	0		2.40	9.08
13	2.00	2.91	3.05	0.31	629.40	0		6.10	9.94
14	2.00	3.72	3.84	0.00	638.61	0		7.74	10.22
15	2.00	2.72	3.18	0.81	533.01	0		6.23	10.78
16	2.00	1.22	1.68	0.00	504.17	0		2.87	10.30
17	2.00	0.00	0.00	0.00	466.41	0		0.00	0.00
18	2.00	4.22	4.40	1.81	604.18	0		9.05	10.76
19	2.00	1.72	1.91	0.00	598.92	0		3.70	9.66
20	2.00	1.22	1.37	0.00	620.59	0		2.57	9.23
21	2.00	0.71	1.18	0.00	594.05	0		1.55	9.20
22	2.00	1.72	1.55	0.00	621.60	0		3.63	9.46

4 of 4
KRF
3/1/00

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BLDG 88 HALL 116, 108, 131	SURVEY NO. 00-38-030
PURPOSE: AREA WIPES - CHARACTERIZATION	RWP NO. NA
	DATE: 1/11/00
	TIME: 0830

MAP/DRAWING

1.) ROOM 116
2.) HALLWAY - (DOOR 113)
3.) DOORWAY - SOUTHWEST
4.) DOORWAY - SOUTHWEST
5.) HALLWAY - (DOOR 111)
6.) ROOM 108
7.) HALLWAY - DOOR 111
8.) ROOM 131

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/100cm^2

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
NE	5293/5300	4-23-00
	NA	

Completed by: (Signature) [signature]	HP# [redacted]	Date: 1/11/00
Completed by: (Print Name) LEN FRANCIS		
Counted by: (Signature) Carol Y. Robinson	HP# [redacted]	Date: 1-11-00
Counted by: (Print Name) CAROL Y. ROBINSON		
Reviewed/Approved by: (Signature) Roger J. Blum	HP# [redacted]	Date: 01/12/00
Reviewed/Approved by: (Print Name) ROGER BLUM		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	↑	↑	NA	Room 116
2				Hallway 113
3				Doorway SW
4	↓	↓		Doorway SW
5				Hallway-111
6				Room 108
7				Hallway-111
8				Room 131
			NA	

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

COMMENTS: CARPET WIPES IN BLDG-88 CHARACTERIZATION -

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.

Alpha/Beta Analysis

Batch ID: 00-38-030 FRANCIS BLDG.88 HALL, 116, 108, 131 (8) CYR

Batch File: Smear Unit 1 - 200001111034
Group: C
Device: Unit 1
Geometry: Swipe/Smear
Serial Number: 64937

Acquisition Date: 1/11/2000
Count Time (min): 1.5
Recalibration Date: 5/17/2000

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	3	0.00	0.73	0.00	4.09
2	33	0.00	0.77	0.00	3.16
3	106	0.00	0.79	3.58	6.61
4	62	1.32	3.64	0.00	4.85
5	39	0.00	0.71	0.00	4.84
6	93	0.00	0.77	0.00	3.16
7	71	4.89	6.23	0.00	4.85
8	130	0.00	0.75	2.28	6.08

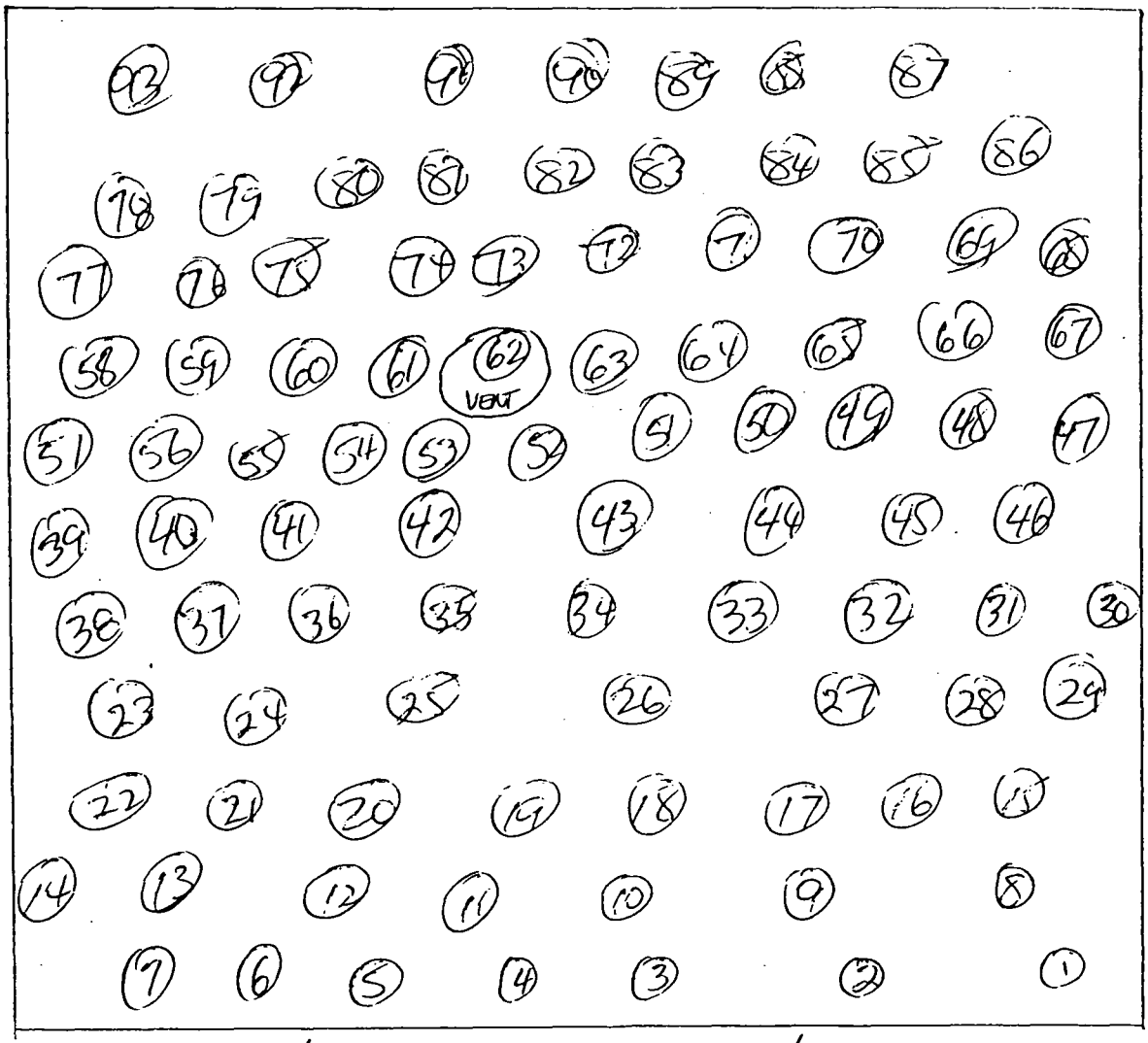
3 of 3 KRF
~~1 of 1~~ 1/12/00

RI-R43 30-14 F

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) 88 - ROOF	SURVEY NO. CO-38-278
PURPOSE: CHARA. ROOF BLDG-88	RWP NO. NA
	DATE: 3-8-00
	TIME: 1230

MAP/DRAWING **COPY**



DIRECTS: <100DPM/100cm² ALPHA <5000DPM/100cm² BETA SOUTH →

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	5273/5289	8-11-00
	NA	

Completed by: (Signature) [signature]	HP# [redacted]	Date: 3-8-00
Completed by: (Print Name) K. FRANCIS		3/8/00 CYR
Counted by: (Signature) Carol Y. Robinson	HP# [redacted]	Date: 3/8/00
Counted by: (Print Name) CAROL Y. ROBINSON		
Reviewed/Approved by: (Signature) [signature]	HP# [redacted]	Date: 03/09/00
Reviewed/Approved by: (Print Name) ROGER BLUM		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
71				ROOF
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84	SEE ATTACHED	SEE ATTACHED	SEE ATTACHED	
85				
86				
87				
88				
89				
90				
91				
92				
93				ROOF
			N/A	

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

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.

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR083
Batch Ended: 3/8/2000 14:43
Cal. Due Date: 8/24/2000
Serial Number: 26966-3

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

Batch ID: 00-38-278 FRANCIS 88-ROOF (93) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.82	2.06	<MDA	0.00	2.28	<MDA
A2	2	1.69	2.22	<MDA	0.35	2.08	<MDA
A3	3	0.00	1.95	<MDA	2.79	2.39	<AL
A4	4	0.00	2.16	<MDA	1.81	2.46	<MDA
B1	5	1.20	2.06	<MDA	1.88	2.52	<MDA
B2	6	0.00	1.90	<MDA	1.73	2.30	<MDA
B3	7	0.00	2.02	<MDA	1.96	2.53	<MDA
B4	8	0.00	1.93	<MDA	0.65	1.96	<MDA
C1	9	0.00	2.02	<MDA	0.05	1.95	<MDA
C2	10	0.00	2.08	<MDA	4.26	2.94	<AL
C3	11	0.00	1.97	<MDA	4.91	2.96	<AL
C4	12	1.57	1.90	<AL	0.00	2.22	<MDA
D1	13	0.00	2.03	<MDA	0.20	1.99	<MDA
D2	14	0.00	2.04	<MDA	0.16	1.74	<MDA
D3	15	1.54	2.13	<MDA	1.57	2.51	<MDA
D4	16	1.65	2.01	<AL	1.33	2.13	<MDA
A1	17	0.81	2.08	<MDA	3.15	3.11	<MDA
A2	18	0.00	2.25	<MDA	3.31	2.88	<AL
A3	19	5.37	3.30	<AL	2.44	2.39	<MDA
A4	20	0.00	2.16	<MDA	1.81	2.46	<MDA
B1	21	0.00	2.05	<MDA	0.00	1.56	<MDA
B2	22	0.00	1.89	<MDA	0.45	1.91	<MDA
B3	23	1.33	2.02	<MDA	1.86	2.53	<MDA
B4	24	0.00	1.95	<MDA	4.58	3.00	<AL
C1	25	0.00	2.02	<MDA	0.05	1.95	<MDA
C2	26	0.00	2.07	<MDA	2.98	2.64	<AL
C3	27	0.00	1.97	<MDA	4.91	2.96	<AL

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR083
Batch Ended: 3/8/2000 14:43
Cal. Due Date: 8/24/2000
Serial Number: 26966-3

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

Batch ID: 00-38-278 FRANCIS 88-ROOF (93) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C4	28	0.00	1.92	<MDA	0.58	2.76	<MDA
D1	29	0.00	2.03	<MDA	0.20	1.99	<MDA
D2	30	0.00	2.08	<MDA	4.76	2.89	<AL
D3	31	1.55	2.12	<MDA	0.19	2.09	<MDA
D4	32	1.65	2.01	<AL	1.33	2.13	<MDA
A1	33	0.00	2.06	<MDA	0.00	1.93	<MDA
A2	34	0.00	2.25	<MDA	3.31	2.88	<AL
A3	35	1.60	1.93	<AL	0.36	1.74	<MDA
A4	36	1.49	2.15	<MDA	0.32	2.06	<MDA
B1	37	0.00	2.06	<MDA	1.98	2.52	<MDA
B2	38	0.00	1.89	<MDA	0.00	1.41	<MDA
B3	39	1.38	2.01	<MDA	0.44	2.09	<MDA
B4	40	0.00	1.93	<MDA	0.00	1.46	<MDA
C1	41	0.00	2.03	<MDA	1.31	2.32	<MDA
C2	42	1.69	2.05	<AL	0.27	1.92	<MDA
C3	43	0.00	1.97	<MDA	4.91	2.96	<AL
C4	44	1.57	1.91	<AL	0.00	2.51	<MDA
D1	45	0.00	2.12	<MDA	8.04	3.77	<AL
D2	46	0.00	2.03	<MDA	0.00	1.31	<MDA
D3	47	0.00	2.13	<MDA	1.72	2.51	<MDA
D4	48	0.00	1.99	<MDA	0.00	1.33	<MDA
A1	49	0.00	2.07	<MDA	0.83	2.59	<MDA
A2	50	3.85	3.11	<AL	1.58	2.51	<MDA
A3	51	0.00	1.97	<MDA	6.25	3.12	<AL
A4	52	0.00	2.14	<MDA	0.00	1.56	<MDA
B1	53	0.00	2.05	<MDA	0.58	2.10	<MDA
B2	54	0.00	1.90	<MDA	1.73	2.30	<MDA
B3	55	0.00	2.02	<MDA	1.96	2.53	<MDA
B4	56	0.00	1.93	<MDA	0.00	1.46	<MDA

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR083
Batch Ended: 3/8/2000 14:43
Cal. Due Date: 8/24/2000
Serial Number: 26966-3

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

Batch ID: 00-38-278 FRANCIS 88-ROOF (93) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
C1	57	0.00	2.04	<MDA	2.58	2.64	<MDA
C2	58	0.00	2.08	<MDA	4.26	2.94	<AL
C3	59	1.63	1.96	<AL	2.43	2.44	<MDA
C4	60	1.56	1.95	<AL	2.76	3.21	<MDA
D1	61	0.00	2.01	<MDA	0.00	1.50	<MDA
D2	62	1.72	2.04	<AL	0.03	1.74	<MDA
D3	63	0.00	2.14	<MDA	3.10	2.86	<MDA
D4	64	1.65	2.01	<AL	1.33	2.13	<MDA
A1	65	0.81	2.07	<MDA	0.72	2.59	<MDA
A2	66	1.68	2.26	<MDA	4.55	3.20	<AL
A3	67	0.00	1.94	<MDA	1.63	2.09	<MDA
A4	68	0.00	2.15	<MDA	0.46	2.06	<MDA
B1	69	0.00	2.06	<MDA	1.98	2.52	<MDA
B2	70	0.00	1.89	<MDA	0.00	1.41	<MDA
B3	71	1.38	2.01	<MDA	0.44	2.09	<MDA
B4	72	1.41	1.93	<MDA	0.00	1.46	<MDA
C1	73	0.00	2.04	<MDA	2.58	2.64	<MDA
C2	74	0.00	2.04	<MDA	0.00	1.42	<MDA
C3	75	0.00	1.97	<MDA	4.91	2.96	<AL
C4	76	1.57	1.91	<AL	0.00	2.51	<MDA
D1	77	0.00	2.03	<MDA	0.20	1.99	<MDA
D2	78	0.00	2.04	<MDA	0.16	1.74	<MDA
D3	79	0.00	2.13	<MDA	1.72	2.51	<MDA
D4	80	0.00	2.01	<MDA	2.62	2.44	<MDA
A1	81	0.81	2.09	<MDA	4.37	3.34	<AL
A2	82	0.00	2.21	<MDA	0.00	1.54	<MDA
A3	83	0.00	1.92	<MDA	0.00	1.31	<MDA
A4	84	0.00	2.15	<MDA	0.46	2.06	<MDA
B1	85	1.11	2.06	<MDA	3.28	2.88	<AL

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Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR083
Batch Ended: 3/8/2000 14:43
Cal. Due Date: 8/24/2000
Serial Number: 26966-3

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

Batch ID: 00-38-278 FRANCIS 88-ROOF (93) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
B2	86	0.00	1.92	<MDA	5.57	3.19	<AL
B3	87	1.27	2.02	<MDA	3.28	2.90	<AL
B4	88	1.16	1.95	<MDA	4.48	3.00	<AL
C1	89	0.00	2.06	<MDA	5.11	3.19	<AL
C2	90	0.00	2.04	<MDA	0.00	1.42	<MDA
C3	91	0.00	1.97	<MDA	3.73	2.71	<AL
C4	92	1.56	1.95	<AL	2.76	3.21	<MDA
D1	93	0.00	2.10	<MDA	6.73	3.54	<AL

Protocol #: 3 PW 5CC H3 #403727 User : 5E

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL2 Quench Set: SMVIAL2
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5 -	18.6	0	0.0	6.70
Region B:	2.0 -	18.6	0	0.0	6.98
Region C:	40.0 -	2000	0	0.0	13.50

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
00-38-278 FRANCIS 88-ROOF (30-19 K1-K93) CYR
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

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	6.70	6.98	13.50	609.89	29	B		0.00
0	2.00	962.36	925.57	2.00	558.92	1		2154.08	186.47
1	2.00	12.80	11.33	0.00	574.07	0		28.24	14.56
2	2.00	3.80	3.09	0.00	565.14	0		8.46	11.07
3	2.00	0.00	0.00	0.00	571.34	0		0.00	0.00
4	2.00	1.30	0.52	0.00	590.14	0		2.83	9.65
5	2.00	2.21	1.93	0.00	573.86	0		4.88	10.24
6	2.00	4.73	4.22	0.00	574.97	0		10.43	11.38
7	2.00	0.00	0.00	0.00	590.92	0		0.00	0.00
8	2.00	0.00	0.00	0.00	581.67	0		0.00	0.00
9	2.00	0.00	0.00	0.00	593.68	0		0.00	0.00
10	2.00	0.00	0.00	0.00	588.90	0		0.00	0.00
11	2.00	3.80	3.52	0.00	594.85	0		8.23	10.77
12	2.00	0.30	0.00	0.00	608.11	0		0.64	8.99
13	2.00	2.67	2.11	0.00	601.26	0		5.74	10.20
14	2.00	1.30	0.16	0.00	605.68	0		2.79	9.51
15	2.00	1.43	0.15	0.00	587.19	0		3.13	9.74
16	2.00	4.80	4.47	0.00	475.08	0		11.77	12.68
17	2.00	7.18	6.12	0.00	601.89	0		15.44	12.11
18	2.00	1.80	1.32	0.00	554.78	0		4.04	10.22
19	2.00	3.01	2.53	0.00	562.14	0		6.73	10.74
20	2.00	0.30	0.02	0.00	607.33	0		0.64	9.00
21	2.00	0.00	0.00	0.00	582.99	0		0.00	0.00
22	2.00	0.30	0.00	0.00	579.40	0		0.67	9.23
23	2.00	1.30	0.63	0.00	556.53	0		2.92	9.95
24	2.00	1.13	0.68	0.00	539.05	0		2.57	10.03
25	2.00	0.00	0.00	0.00	586.47	0		0.00	0.00
26	2.00	2.21	1.43	0.00	591.51	0		4.80	10.07
27	2.00	0.00	0.00	0.00	577.03	0		0.00	0.00
28	2.00	1.04	0.76	0.00	571.55	0		2.31	9.69
29	2.00	0.00	0.00	0.50	556.11	0		0.00	0.00
30	2.00	0.00	0.00	0.00	562.68	0		0.00	0.00
31	2.00	3.80	3.02	0.00	590.15	0		8.26	10.82
32	2.00	5.30	4.73	0.00	605.84	0		11.36	11.30
33	2.00	0.73	0.00	0.00	574.74	0		1.60	9.49
34	2.00	0.30	0.00	0.00	583.71	0		0.66	9.20
35	2.00	0.00	0.00	0.00	579.10	0		0.00	0.00

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
36	2.00	1.84	1.55	0.00	551.50	0		4.14	10.27
37	2.00	2.02	1.24	0.00	532.76	0		4.64	10.56
38	2.00	0.00	0.00	0.00	580.39	0		0.00	0.00
39	2.00	0.00	0.00	0.00	539.54	0		0.00	0.00
40	2.00	2.80	2.52	0.00	557.79	0		6.27	10.68
41	2.00	3.06	2.57	0.00	565.14	0		6.82	10.73
42	2.00	0.18	0.00	0.00	590.49	0		0.39	9.07
43	2.00	0.00	0.00	0.00	557.71	0		0.00	0.00
44	2.00	4.22	3.71	0.00	574.61	0		9.31	11.16
45	2.00	0.00	0.00	0.00	595.51	0		0.00	0.00
46	2.00	0.00	0.00	0.00	592.25	0		0.00	0.00
47	2.00	5.86	4.91	0.00	554.37	0		13.23	12.11
48	2.00	4.80	3.95	0.00	552.41	0		10.81	11.66
49	2.00	0.00	0.00	0.00	590.58	0		0.00	0.00
50	2.00	1.30	0.00	0.00	563.23	0		2.90	9.88
51	2.00	0.62	0.33	0.00	538.33	0		1.41	9.77
52	2.00	3.80	3.31	0.00	560.76	0		8.49	11.12
53	2.00	1.80	1.52	0.00	568.13	0		3.99	10.09
54	2.00	0.00	0.00	0.00	561.50	0		0.00	0.00
55	2.00	0.00	0.00	1.50	563.51	0		0.00	0.00
56	2.00	0.00	0.00	0.00	590.02	0		0.00	0.00
57	2.00	0.00	0.00	0.00	580.38	0		0.00	0.00
58	2.00	1.20	0.69	0.00	572.94	0		2.64	9.75
59	2.00	4.30	3.52	0.00	573.79	0		9.49	11.21
60	2.00	0.00	0.00	0.00	549.94	0		0.00	0.00
61	2.00	0.00	0.00	0.00	558.79	0		0.00	0.00
62	2.00	3.80	3.52	0.00	568.83	0		8.43	11.03
63	2.00	1.04	0.01	0.00	586.37	0		2.27	9.55
64	2.00	0.00	0.00	0.00	563.72	0		0.00	0.00
65	2.00	1.47	0.69	0.00	589.61	0		3.21	9.74
66	2.00	1.30	1.02	0.00	562.30	0		2.90	9.90
67	2.00	0.30	0.00	0.00	558.34	0		0.67	9.42
68	2.00	3.80	3.52	0.50	574.02	0		8.39	10.98
69	2.00	0.00	0.00	0.00	549.97	0		0.00	0.00
70	2.00	3.21	2.93	0.00	518.14	0		7.48	11.30
71	2.00	2.76	1.44	0.00	546.95	0		6.25	10.77
72	2.00	2.80	2.25	0.00	595.87	0		6.05	10.31
73	2.00	0.50	0.00	0.00	561.74	0		1.11	9.49
74	2.00	0.80	0.52	0.00	529.87	0		1.84	9.95
75	2.00	0.00	0.00	0.00	556.50	0		0.00	0.00
76	2.00	3.30	3.02	0.00	545.05	0		7.49	11.05
77	2.00	3.30	2.52	0.00	577.48	0		7.26	10.72
78	2.00	2.54	2.26	0.00	563.72	0		5.66	10.50
79	2.00	1.30	0.78	0.00	578.11	0		2.86	9.75
80	2.00	2.80	2.28	0.00	579.30	0		6.15	10.47
81	2.00	1.76	0.78	0.00	576.80	0		3.87	9.99
82	2.00	0.30	0.00	0.00	567.72	0		0.67	9.33
83	2.00	0.00	0.00	0.00	542.09	0		0.00	0.00
84	2.00	0.00	0.00	0.00	581.56	0		0.00	0.00
85	2.00	1.66	1.18	0.00	560.17	0		3.72	10.10
86	2.00	1.80	1.52	0.00	584.32	0		3.93	9.94
87	2.00	1.80	1.30	0.00	566.29	0		4.00	10.11
88	2.00	0.30	0.02	2.00	585.03	0		0.66	9.18
89	2.00	3.08	2.53	0.00	595.91	0		6.66	10.44
90	2.00	1.57	0.49	0.00	595.29	0		3.40	9.73
91	2.00	2.80	2.52	0.00	568.81	0		6.21	10.57

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
92	2.00	0.00	0.00	0.00	580.64	0		0.00	0.00
93	2.00	1.80	1.29	0.00	574.44	0		3.97	10.04

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RADIOLOGICAL SURVEY DATA SHEET

P1

LOCATION: (BLDG./AREA/ROOM) DD 88	SURVEY NO. 00-SM-0002
PURPOSE: Characterization (outside)	RWP NO. N/A
	DATE: 010700
	TIME: 1500

MAP/DRAWING

See Back for wipe locations

COPY

direct readings
< 100/α
< 5000/β
except for one spot on transformer which is 300/α

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 Electra	5576/5575	04-16-00
	N/A	

Completed by: (Signature) Connie Sowers	HP# [redacted]	Date: 03-01-00
Completed by: (Print Name) Connie Sowers		
Counted by: (Signature) Carol Y. Robinson	HP# [redacted]	Date: 1-27-00
Counted by: (Print Name) CAROL Y. ROBINSON		
Reviewed/Approved by: (Signature) Roger A. Blum	HP# [redacted]	Date: 03/03/00
Reviewed/Approved by: (Print Name) ROGER BLUM		

ML-9620 (2-98)

Survey No. 00-SM-0002

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	See attached			South side
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				East Side
12				
13				
14				
15				
16				North Side
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				West Side
27				
28				
29				
30				
31				South Steps
32				
33				North E steps
34				
35				North W steps

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
36	See attached			North W Steps
			N/A	

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-9620 (4-98)

CS

Alpha/Beta Analysis

Batch ID: 00-SM-0002 SOUERS BLDG.88 (36) CYR

Batch File: Smear Unit 2 - 200001271505

Group: C

Device: Unit 2

Geometry: Swipe/Smear

Serial Number: 59544

Acquisition Date: 1/27/2000

Count Time (min): 1.5

Recalibration Date: 5/17/2000

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
1	129	2.99	5.99	2.80	5.38
2	64	0.00	1.20	2.82	5.38
3	57	0.91	4.32	2.81	5.38
4	10	0.91	4.32	1.51	4.71
5	35	0.92	4.32	0.21	3.92
6	125	0.00	1.20	0.22	3.92
7	144	0.91	4.32	2.81	5.38
8	112	0.91	4.32	1.51	4.71
9	55	0.91	4.32	4.11	5.97
10	58	0.00	1.20	1.52	4.71
11	139	0.00	1.20	0.00	2.94
12	38	0.00	1.20	0.22	3.92
13	111	0.00	1.20	2.82	5.38
14	57	0.00	1.20	1.52	4.71
15	90	0.91	4.32	4.11	5.97
16	32	0.00	1.20	2.82	5.38
17	100	0.00	1.20	0.22	3.92
18	93	0.00	1.20	0.00	2.94
19	146	0.00	1.20	1.52	4.71
20	30	5.06	7.29	4.09	5.98
21	71	0.00	1.20	0.00	2.94
22	19	0.91	4.32	1.51	4.71
23	107	0.92	4.32	0.21	3.92

CS CS

Alpha/Beta Analysis

Sample ID	Carrier	Alpha (dpm)	2σ	Beta (dpm)	2σ
24	22	0.91	4.32	2.81	5.38
25	10	0.00	1.20	2.82	5.38
26	136	5.06	7.29	1.49	4.71
27	4	0.00	1.20	2.82	5.38
28	140	0.00	1.20	1.52	4.71
29	78	0.00	1.20	1.52	4.71
30	113	0.91	4.32	4.11	5.97
31	83	2.99	5.99	0.20	3.92
32	40	0.00	1.20	0.22	3.92
33	15	0.00	1.20	2.82	5.38
34	79	5.07	7.29	0.19	3.93
35	70	0.00	1.20	1.52	4.71
36	18	0.00	1.20	4.12	5.97
		CS		CS	

CS

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL2 Quench Set: SMVIAL2
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	- 18.6	0	0.0	7.55
Region B:	2.0	- 18.6	0	0.0	7.32
Region C:	40.0	- 2000	0	0.0	14.70

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
~~00 TF 33 RITTER BLDG.89/RM.101 (30-18 N1-N6) CYR~~ CS 00-SM-0002 BLDG 88 SOUER: (30-18 A1-A36) CYR 1-31-00
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT1.DAT
Count Data Filename: C:\DATA\SDATA1.DAT

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM	FLAG	DPM1	2SIGMA
-1	10.00	7.55	7.32	14.70	571.87	4	B		0.00
0	2.00	1113.43	1056.72	0.00	560.40	0		2488.75	210.82
1	2.00	2.45	1.56	0.00	620.72	0		5.18	10.17
2	2.00	1.45	0.45	0.00	584.28	0		3.17	10.04
3	2.00	3.03	2.97	0.00	611.29	0		6.46	10.51
4	2.00	3.95	3.38	0.00	614.43	0		8.40	10.88
5	2.00	0.00	0.00	1.80	620.15	0		0.00	0.00
6	2.00	0.00	0.00	0.00	613.25	7		0.00	0.00
7	2.00	2.45	2.68	0.00	602.61	0		5.26	10.34
8	2.00	2.95	2.03	0.00	629.76	0		6.19	10.31
9	2.00	2.78	2.17	0.00	633.38	5		5.80	10.20
10	2.00	0.00	0.00	0.00	599.91	0		0.00	0.00
11	2.00	0.00	0.00	0.00	644.02	0		0.00	0.00
12	2.00	0.00	0.00	0.00	622.69	0		0.00	0.00
13	2.00	1.95	2.18	0.00	649.97	0		4.02	9.69
14	2.00	0.00	0.00	0.00	587.26	0		0.00	0.00
15	2.00	0.87	0.81	0.00	606.54	0		1.86	9.56
16	2.00	1.36	0.92	0.00	633.00	0		2.84	9.57
17	2.00	0.00	0.00	0.00	627.86	0		0.00	0.00
18	2.00	0.95	0.00	0.00	637.54	0		1.98	9.34
19	2.00	1.86	1.53	0.00	603.83	0		4.00	10.06
20	2.00	2.45	2.09	0.00	612.31	0		5.22	10.25
21	2.00	0.94	1.17	0.00	608.61	0		2.00	9.58
22	2.00	0.00	0.00	0.00	606.45	0		0.00	0.00
23	2.00	0.00	0.00	0.00	574.13	0		0.00	0.00
24	2.00	1.45	0.93	0.00	589.84	0		3.15	9.99
25	2.00	0.95	0.59	0.00	611.59	0		2.02	9.56
26	2.00	0.95	0.87	0.00	620.12	0		2.01	9.49
27	2.00	0.00	0.00	0.00	636.37	8		0.00	0.00
28	2.00	0.00	0.00	0.00	632.03	0		0.00	0.00
29	2.00	1.31	1.54	0.00	619.61	0		2.77	9.66
30	2.00	0.00	0.00	0.00	628.35	0		0.00	0.00
31	2.00	0.00	0.00	0.00	569.67	0		0.00	0.00
32	2.00	3.45	2.50	0.00	638.02	0		7.18	10.44
33	2.00	0.86	0.26	0.00	633.21	0		1.80	9.33
34	2.00	0.00	0.18	0.00	624.39	0		0.00	0.00
35	2.00	0.67	0.90	0.00	621.82	6		1.41	9.34

CS

S#	TIME	CPMA	CPMB	CPMC	tSIE	LUM FLAG	DPM1	2SIGMA
36	2.00	1.42	1.15	0.00	622.78	0	2.99	9.68

CS

RADIOLOGICAL SURVEY DATA SHEET

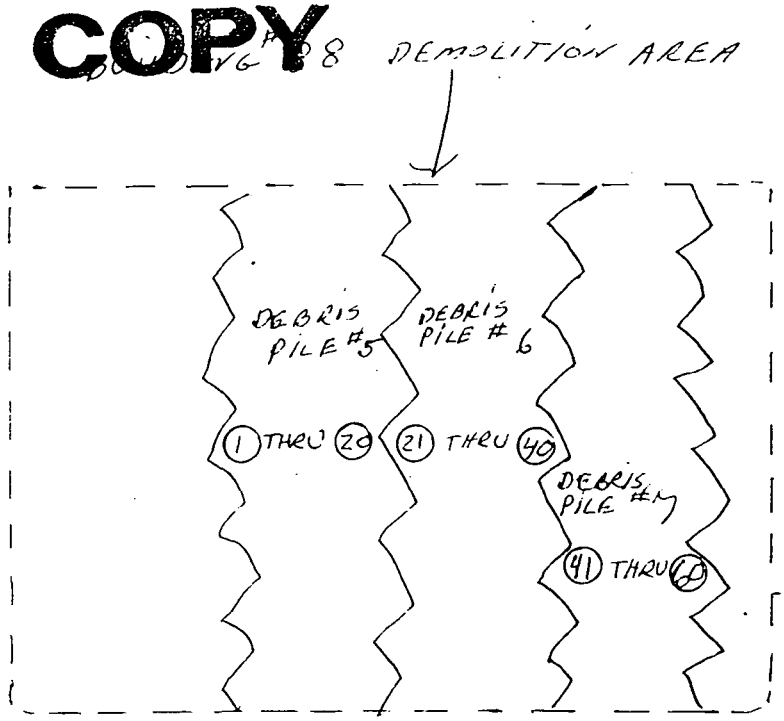
LOCATION: (BLDG/AREA/ROOM) BUILDING 88	SURVEY NO. 00-38-326
PURPOSE: DEMOLITION DEBRIS PILE	RWP NO. N/A
	DATE: 3-23-00
	TIME: 1600

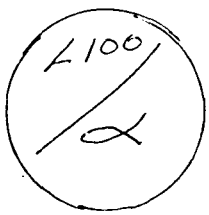
MAP/DRAWING

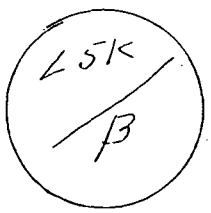
N

- DEMOLITION DEBRIS PILES SURVEYED FOR DISPOSAL
- DEBRIS PILE #5 DISPOSED OF IN ROLLOFF #'S; B&W 15, 16
- DEBRIS PILE #6 DISPOSED OF IN ROLLOFF #'S; B&W 14, 15, 13
- DEBRIS PILE #7 DISPOSED OF IN ROLLOFF #'S; B&W 11, 14

COPY







LEGEND:
= mrem/hr (γ) whole body
E = mrem/hr (β+n+γ) extremity on contact
△# = 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
ELECTRA	5500/5499	8-14-00
		N/A

Completed by: (Signature) S. Lilli	HP# [redacted]	Date: 3-23-00
Completed by: (Print) S. LILLI		
Counted by: (Signature) S. Lilli	HP# [redacted]	Date: 3-23-00
Counted by: (Print) S. LILLI		
Reviewed/Approved by: (Signature) [signature]	HP# [redacted]	Date: 3/27/00
Reviewed/Approved by: (Print) K. FRANCIS		

ML-9620 (2/98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
36	<1K	<20	N/A	DEBRIS PILE #6
37				
38				
39				
40				DEBRIS PILE #6
41				DEBRIS PILE #7
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60	<1K	<20	N/A	DEBRIS PILE #7

COMMENTS: DIRECT FRISK TAKEN AT SMEAR LOCATIONS.
SMEARS FIELD COUNTED WITH N.E. ELECTRA AND COUNTING JIG.

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.

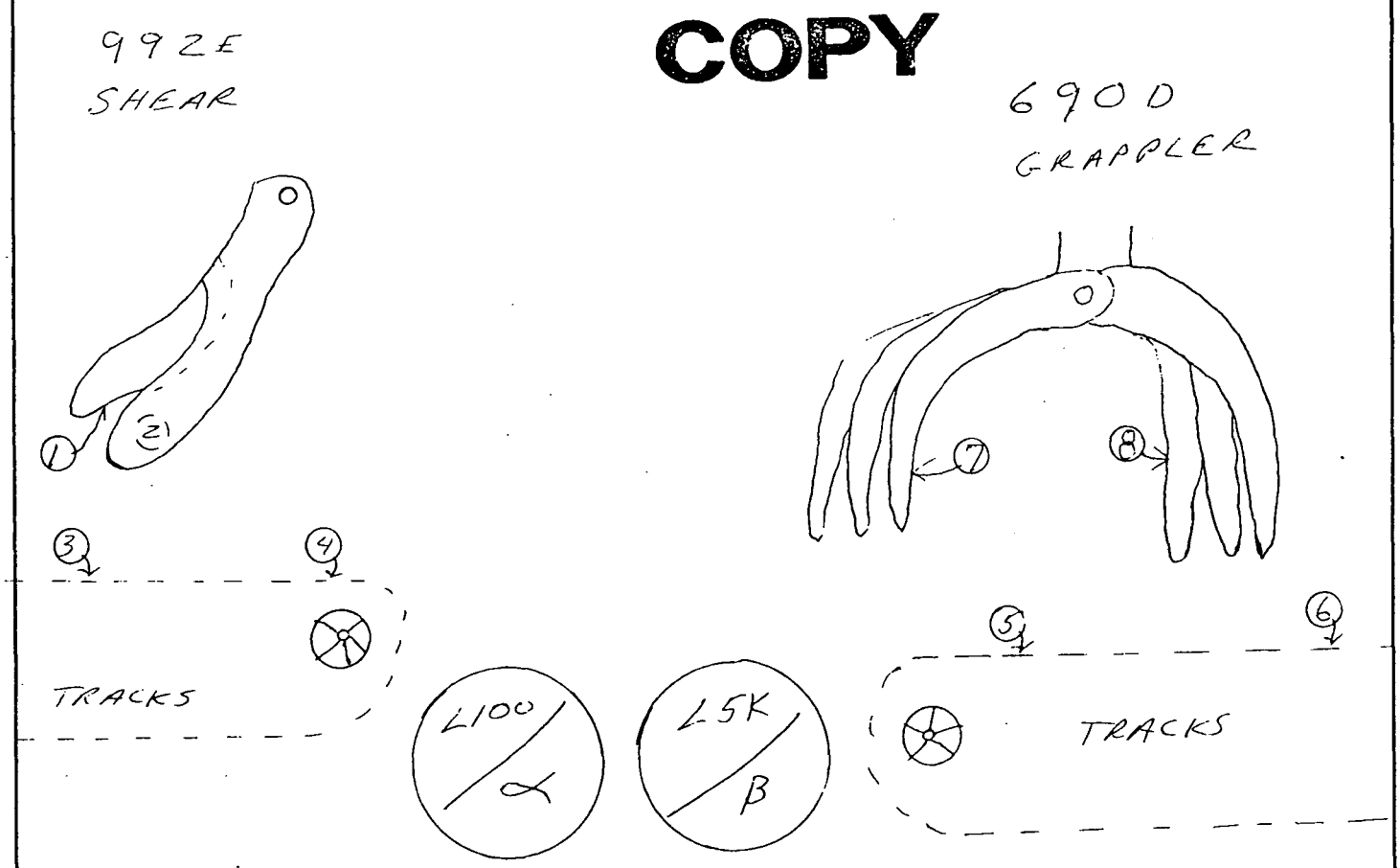
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BLDG. #88	SURVEY NO. 00-38-323
PURPOSE: HEAVY EQUIPMENT SURVEY	RWP NO. N/A
	DATE: 3-22-00
	TIME: 0830

MAP/DRAWING

- JOHN DEERE 992E SHEAR AND TRACKS AND JOHN DEERE 690D GRAPPLER AND TRACKS WERE SURVEYED DUE TO SOIL INVASION DURING BUILDING 88 DEMOLITION.

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
ELECTRA	5500/5499	8-14-00
		N/A

Completed by: (Signature) S. Lilli	HP# [redacted]	Date: 3-22-00
Completed by: (Print Name) S. LILLI		
Counted by: (Signature) S. Lilli	HP# [redacted]	Date: 3-22-00
Counted by: (Print Name) S. LILLI		
Reviewed/Approved by: (Signature) [illegible]	HP# [redacted]	Date: 3-22-00
Reviewed/Approved by: (Print Name) K. FRANCIS		

ML-9620 (2-98)

Survey No. 00-38-323

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	<1K	<20	N/A	SHEAR JAW
2				
3				TRACK
4				
5				
6				TRACK
7				GRAPPLER JAW
8	<1K	<20	N/A	GRAPPLER JAW
				N/A

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

COMMENTS: DIRECT FRISK TAKEN AT SMEAR LOCATIONS
SMEARS FIELD COUNTED WITH N.E. ELECTRA AND COUNTING JIG.

NOTES:

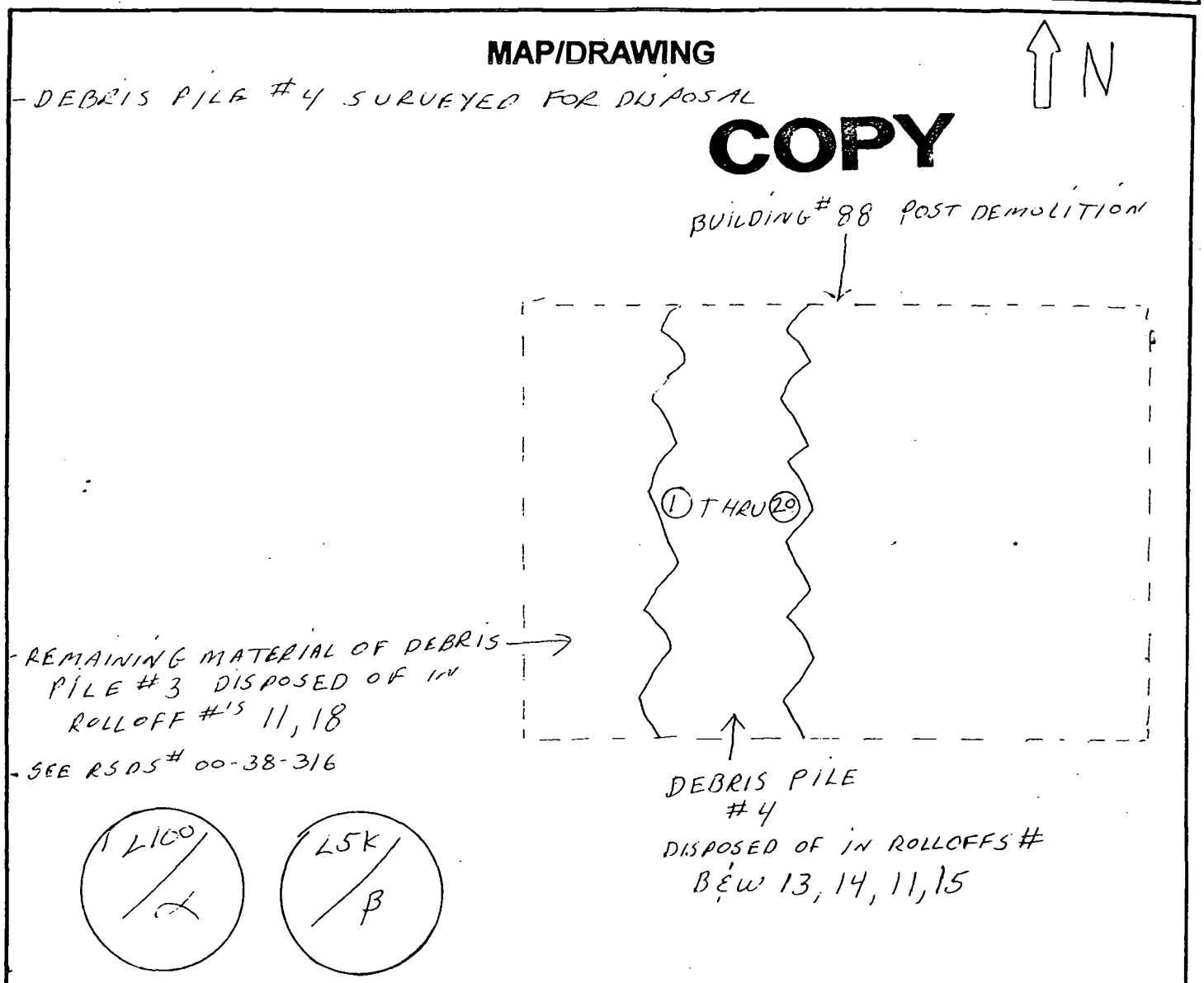
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type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

ML-9620 (4-98)

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) BUILDING #88	SURVEY NO. 00-38-321
PURPOSE: DEMOLITION DEBRIS PILE	RWP NO. N/A
	DATE: ~~3-22-00~~ 3-22-00
	TIME: 1630

MAP/DRAWING



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

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
ELECTRA	5500/5499	8-14-00
		N/A

Completed by: (Signature) S. Lilli	HP# [redacted]	Date: 3-22-00
Completed by: (Print) S. LILLI		
Counted by: (Signature) S. Lilli	HP# [redacted]	Date: 3-22-00
Counted by: (Print) S. LILLI		
Reviewed/Approved by: (Signature) K. Francis	HP# [redacted]	Date: 3-22-00
Reviewed/Approved by: (Print) K. FRANCIS		

ML-9620 (2/98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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

COMMENTS: DIRECT FRISK PERFORMED AT SMEAR LOCATIONS

SMEARS FIELD COUNTED WITH N.E. ELECTRA AND COUNTING JIG.

NOTES:

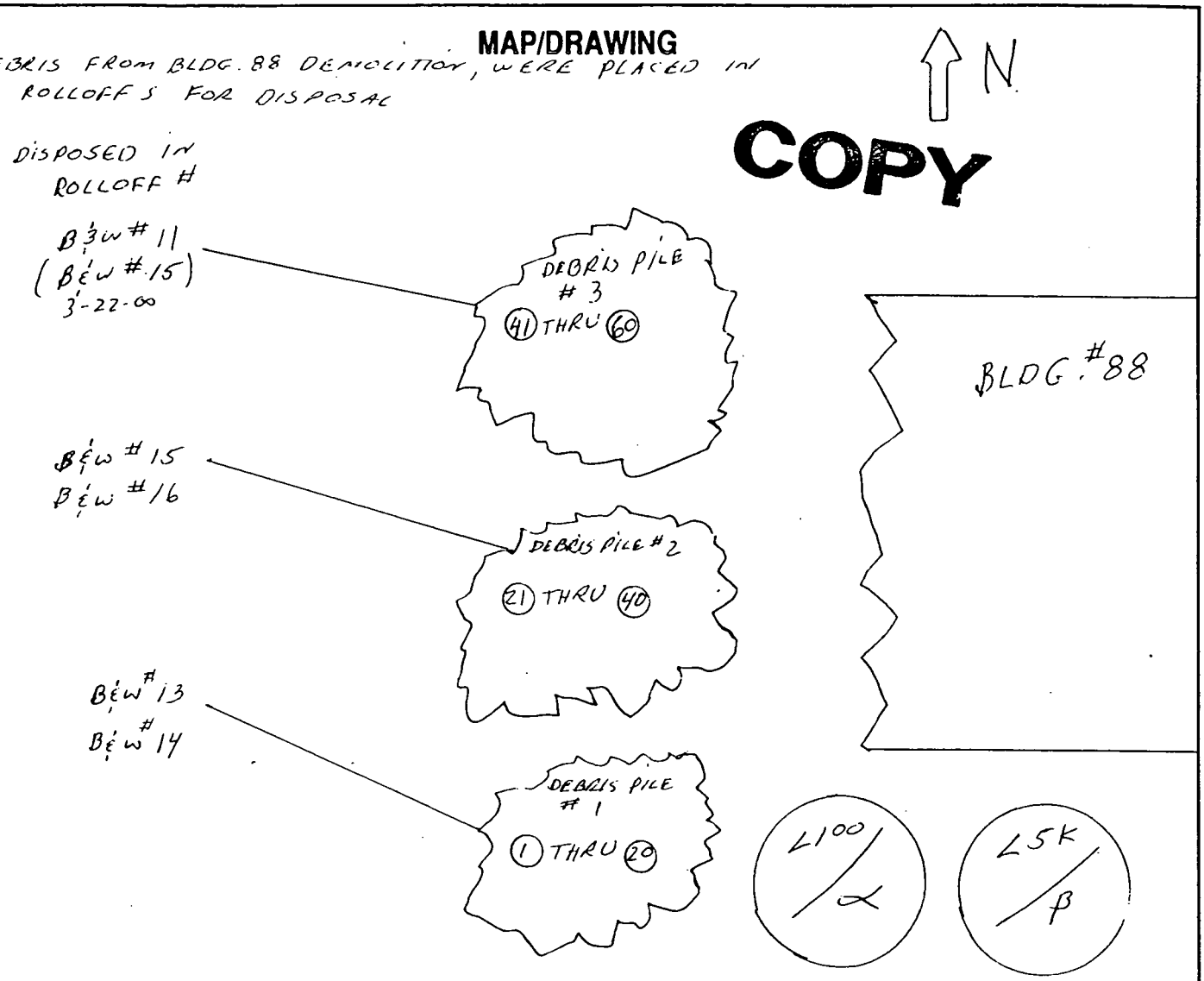
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO count Room analysis for β/γ ,alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached , write "see attached" in column.
3. Annotate special sample type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

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BLDG. # 88	SURVEY NO. 00-38-316
PURPOSE: DEMOLITION DEBRIS PILES	RWP NO. N/A
	DATE: 3-21-00
	TIME: 1600

MAP/DRAWING

-DEBRIS FROM BLDG. 88 DEMOLITION, WERE PLACED IN ROLLOFFS FOR DISPOSAL



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
ELECTRA	5500 / 5499	8-14-00
~~BICRON FIDLER~~	~~3672 / 7~~ 3-2000	
		N/A

Completed by: (Signature) S. Lilli	HP# [redacted]	Date: 3-21-00
Completed by: (Print Name) S. LILLI		
Counted by: (Signature) S. Lilli	HP# [redacted]	Date: 3-21-00
Counted by: (Print Name) S. LILLI		
Reviewed/Approved by: (Signature) K. Francis	HP# [redacted]	Date: 3-22-00
Reviewed/Approved by: (Print Name) K. FRANCIS		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	L/K	L20	N/A	DEBRIS PILE #1
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				DEBRIS PILE #1
21				DEBRIS PILE #2
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35	L/K	L20	N/A	DEBRIS PILE #2

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
36	L/K	L20	N/A	DEBRIS PILE #2
37				
38				
39				
40				DEBRIS PILE #2
41				DEBRIS PILE #3
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60	L/K	L20	N/A	DEBRIS PILE #3
				N/A

COMMENTS: DIRECT FRISK PERFORMED AT SMEAR LOCATIONS
SMEARS FIELD COUNTED WITH N.E. ELECTRA AND COUNTING JIG.

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.

RADIOLOGICAL SURVEY DATA SHEET

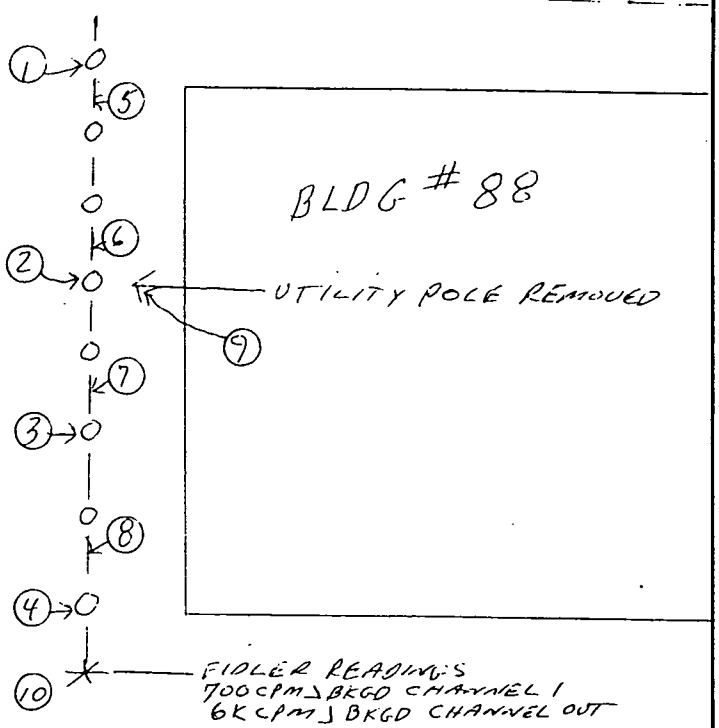
LOCATION: (BLDG./AREA/ROOM) BLDG. # 88	SURVEY NO. 00-38-315
PURPOSE: FENCE REMOVAL JOB COVERAGE	RWP NO. N/A
	DATE: 3-21-00
	TIME: 1000

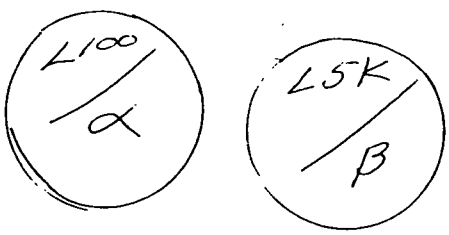
MAP/DRAWING

COPY

N

- FENCING ON WEST SIDE OF BLDG #88 WAS REMOVED.
- FENCE POST BASES AND CONCRETE CURBS WERE SURVEYED FOR DISPOSAL
- DISTURBED SOIL WAS SCANNED WITH BICRON FIDLER FOR INDICATIONS ONLY
- BICRON FIDLER IS NOT CALIBRATED
- ALL BICRON FIDLER READINGS REVEALED NO DETECTABLE ACTIVITY > BKGD UNLESS OTHERWISE NOTED
- * SOIL SAMPLE TAKEN TO MOBILE LAB FOR ANALYSIS
- BICRON FIDLER USED ON CHANNELS 1 & OUT
- SEE ATTACHED LAB RESULTS PAGE 3 OF 3





ROAD

LEGEND: # = mrem/hr (γ) whole body
E = mrem/hr (β+η+γ) extremity on contact
— — — DENOTES FENCE
—O—O— DENOTES REMOVED FENCE

△# = 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
ELECTRA	5500 / 5499	8-14-00
BICRON FIDLER	3672 /	N/A
		N/A

Completed by: (Signature) S. Lilli	HP# [redacted]	Date: 3-21-00
Completed by: (Print Name) S. LILLI		
Counted by: (Signature) S. Lilli	HP# [redacted]	Date: 3-21-00
Counted by: (Print Name) S. LILLI		
Reviewed/Approved by: (Signature) K. Francis	HP# [redacted]	Date: 3-22-00
Reviewed/Approved by: (Print Name) K. FRANCIS		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	<1K	<20	N/A	FENCE POST BASE
2				
3				
4				FENCE POST BASE
5				CONCRETE CURB
6				
7				
8				
9				CONCRETE CURB
10	<1K	<20	N/A	P/S SAMPLE CONTAINER
				N/A

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

COMMENTS: DIRECT FRISK TAKEN AT SMEAR LOCATIONS
SMEARS FIELD COUNTED WITH W.E. ELECTRA AND COUNTING JIG

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.

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: ML000181
FILE ID: MG100665.S0
PRIORITY: N

Description\Location: Building 88 demolition

Collector: 7730

Date Received: 3/21/00 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.01	0.05	45,000
Cs-137	*	0.04	0.04	45,000
Pb-210		1.11	0.39	45,000
Ra-226		2.31	0.57	800
Ac-227 (D)	*	0.14	0.17	40
Th-230	*	0.00	5.09	800
Th-232 (D)		0.96	0.13	130
Pu-238	*	0.00	11.45	500
Am-241	*	0.00	0.05	500

Other Nuclides:

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

Σ DOT 0.02 nCi/g

Σ Respirator 0.04

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

Σ DOT 2 nCi/g limit, total activity.

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

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

Instrument type: High Purity Germanium

Comments: Ra-226 not corrected for U-235 contribution. Ra-226 result will be biased high.

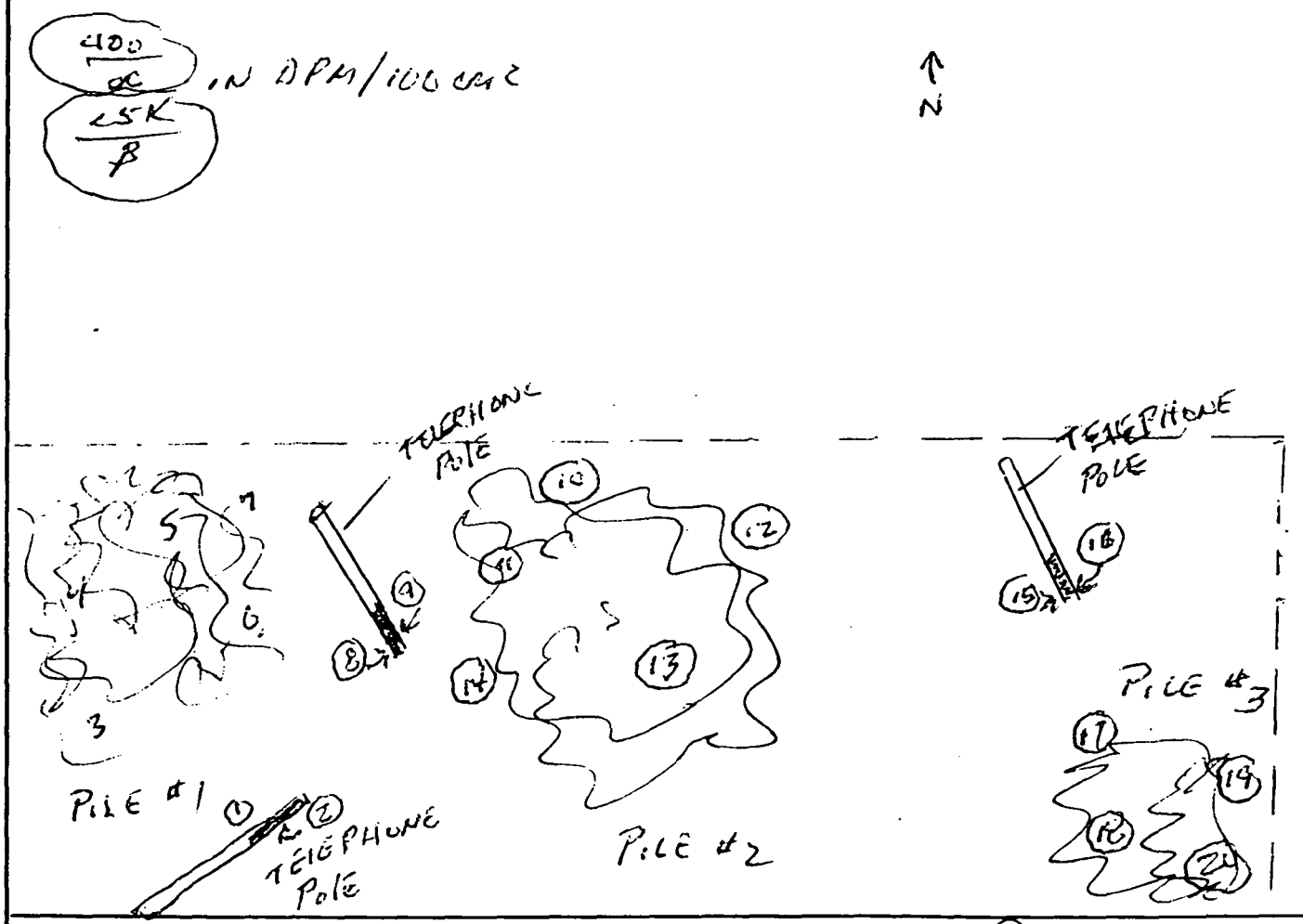
Date: 3/21/00 Counted By: 6024 Analyzed By: 6086 INITIALS

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Bldg 80	SURVEY NO. 00-38-364
PURPOSE: TRASH REMOVAL FROM BLDG DEMOLITION	RWP NO. N/A
	DATE: 04/05/00
	TIME: 1400

MAP/DRAWING

COPY



LEGEND:
= mrem/hr (γ) whole body
E = mrem/hr (β+n+γ) extremity on contact
△# = 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
NE	5408/5346	4/28/00
NE	5594/5595	8/16/00
N/A	N/A	N/A

Completed by: (Signature) Reeves Dudley	HP# [redacted]	Date: 04/05/00
Completed by: (Print) REEVES DUDLEY		
Confirmed by: (Signature) Reeves Dudley	HP# [redacted]	Date: 04/05/00
Counted by: (Print) REEVES DUDLEY		
Reviewed/Approved by: (Signature) [illegible]	HP# [redacted]	Date: 4/5/00
Reviewed/Approved by: (Print) K. FRANCIS		

ML-9620 (2/98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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.

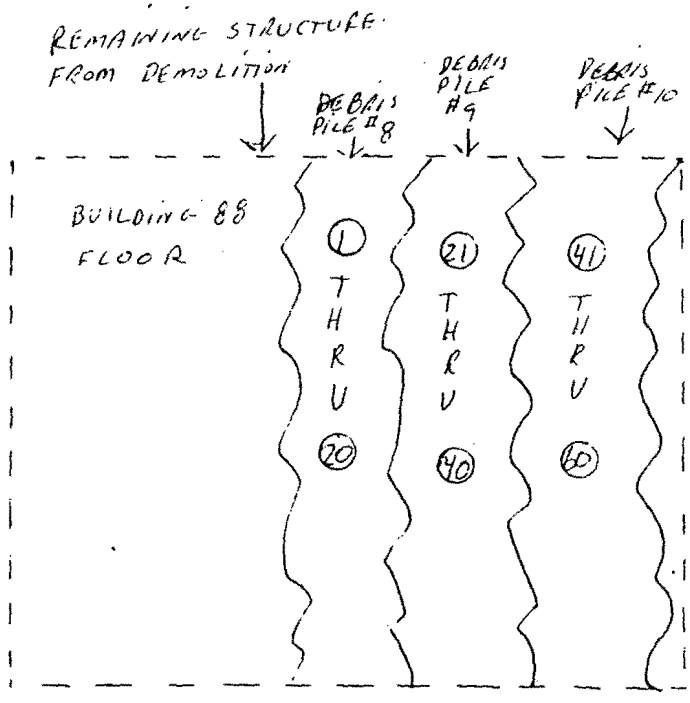
RADIOLOGICAL SURVEY DATA SHEET

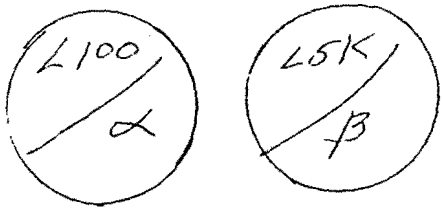
LOCATION: (BLDG./AREA/ROOM) BUILDING 88	SURVEY NO. 00-38-336
PURPOSE: DEMOLITION DEBRIS PILE DISPOSAL	RWP NO. N/A
	DATE: 3-27-00
	TIME: 1600

MAP/DRAWING

COPY

- DEBRIS PILE #8 DISPOSED OF IN ROLLOFF'S # B&W 15, 16, 18
- DEBRIS PILE #9 DISPOSED OF IN ROLLOFF #'S B&W 11, 13
- DEBRIS PILE #10 DISPOSED OF IN ROLLOFF #'S B&W 14, 16, 15, 11





LEGEND:
= mrem/hr (γ) whole body
E = mrem/hr (β+n+γ) extremity on contact
△# = 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
ELECTRA	5500 / 5499	8-14-00
		N/A

Completed by: (Signature) S. Lilli	HP# [redacted]	Date: 3-27-00
Completed by: (Print) S. LILLI		
Counted by: (Signature) S. Lilli	HP# [redacted]	Date: 3-27-00
Counted by: (Print) S. LILLI		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date: 3-27-00
Reviewed/Approved by: (Print) K. FRANCIS		

ML-9620 (2/98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
36	<1K	<20	N/A	DEBRIS PILE #9
37				
38				
39				
40				DEBRIS PILE #9
41				DEBRIS PILE #10
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60	<1K	<20	N/A	DEBRIS PILE #10

COMMENTS: DIRECT FRISK TAKEN AT SMEAR LOCATIONS.

SMEARS FIELD COUNTED WITH NE-ELECTRA AND COUNTING JIG.

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.

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BUILDING 88	SURVEY NO. 00-38-345
PURPOSE: DEMOLITION DEBRIS PILES	RWP NO. N/A
	DATE: 3-29-00
	TIME: 1615

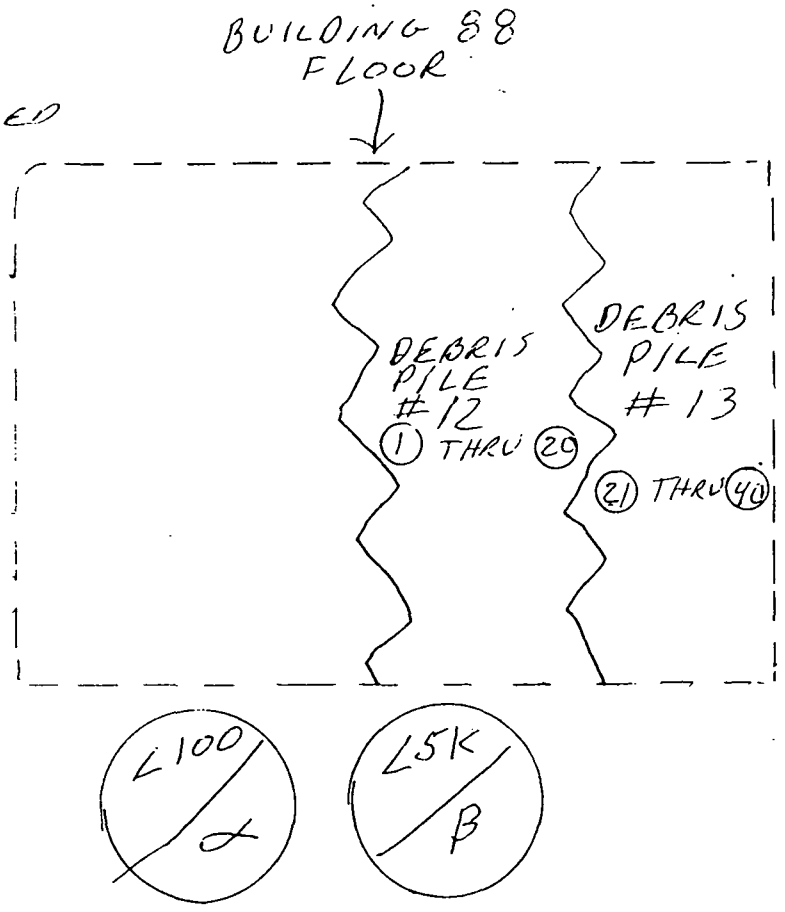
MAP/DRAWING

- DEMOLITION DEBRIS PILES WERE SURVEYED FOR DISPOSAL
- DEBRIS PILE #12 WAS DISPOSED OF IN ROLLOFF #'S; B&W 11, 12, 13, 14
- DEBRIS PILE #13 WAS DISPOSED OF IN ROLLOFF #'S; B&W 12, 14, 17
- *B&W 17, 15, 11

* LOADED ON 3-30-00

N

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
ELECTRA	5404/5326	8-9-00
		N/A

Completed by: (Signature) S. Lilli	HP# [redacted]	Date: 3-29-00
Completed by: (Print Name) S. LILLI		
Counted by: (Signature) S. Lilli	HP# [redacted]	Date: 3-29-00
Counted by: (Print Name) S. LILLI		
Reviewed/Approved by: (Signature) K. Francis	HP# [redacted]	Date: 3/30/00
Reviewed/Approved by: (Print Name) K. FRANCIS		

ML-9620 (2-98)

Survey No. 00-38-345

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	LIK	L20	N/A	DEBRIS PILE #12
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				DEBRIS PILE #12
21				DEBRIS PILE #13
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35	LIK	L20	N/A	DEBRIS PILE #13

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
36	LIK	L20	N/A	DEBRIS PILE #13
37				
38				
39				
40	LIK	L20	N/A	DEBRIS PILE #13
				N/A

COMMENTS: DIRECT FRISK TAKEN AT SMEAR LOCATIONS
SMEARS FIELD COUNTED WITH N.E. ELECTRA AND COUNTING JIG.

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.

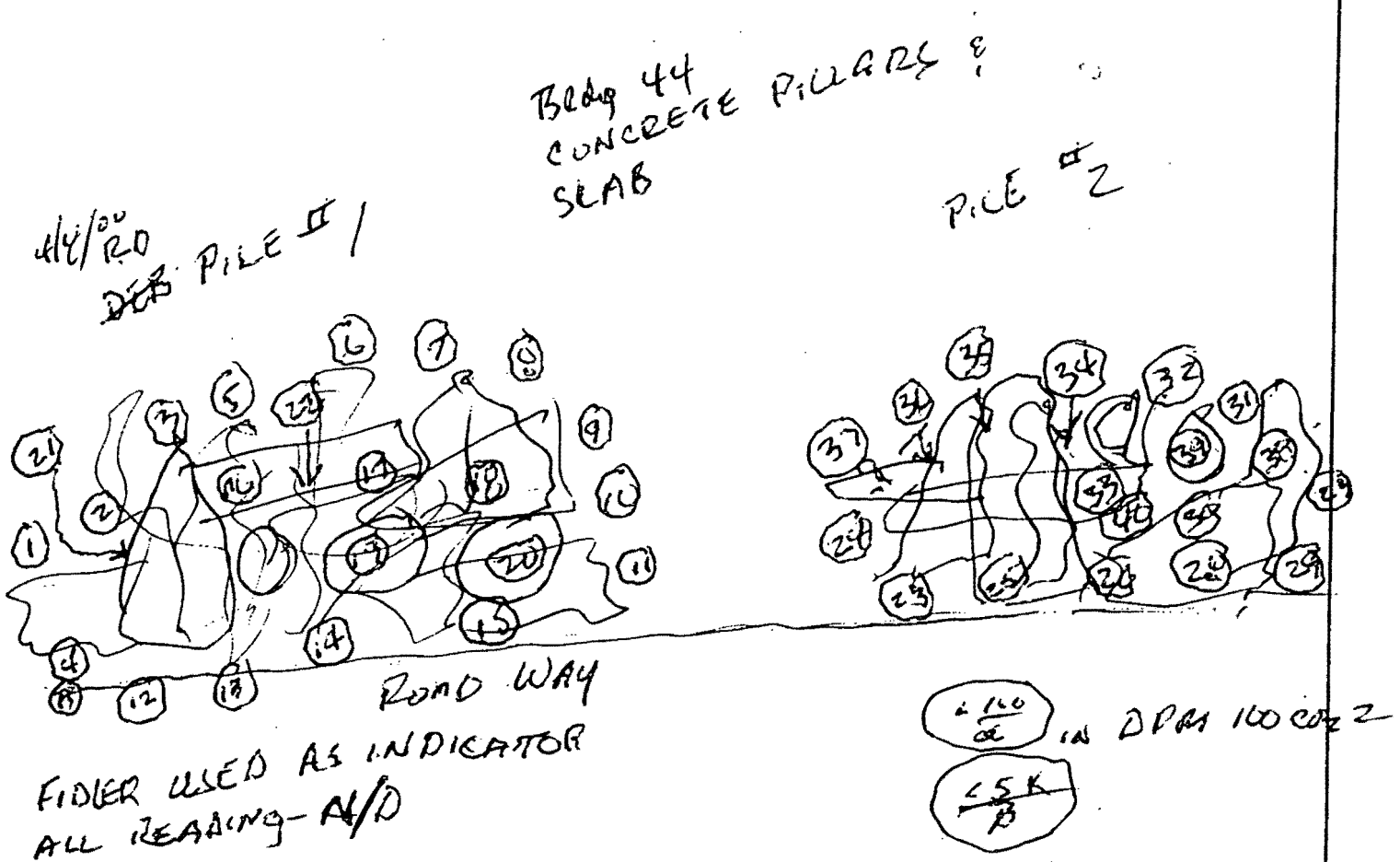
RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) BLDG 88	SURVEY NO. 00-38-357
PURPOSE: RO 4/4/00 ~~DEMOLITION~~ DEMOLITION BLDG 88 CONCRETE PILLAR	RWP NO. N/A
	DATE: 04/04/00
	TIME: 0700

MAP/DRAWING

N

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	5408/5346	4/28/00
BICRON	3076/3851	N/A
N	N	N
A	A	A

Completed by: (Signature) Reeves Dudley	HP# [redacted]	Date: 4/04/00
Completed by: (Print Name) REEVES DUDLEY		
Counted by: (Signature) Reeves Dudley	HP# [redacted]	Date: 4/04/00
Counted by: (Print Name) REEVES DUDLEY		
Reviewed/Approved by: (Signature) [signature]	HP# [redacted]	Date: 4/5/00
Reviewed/Approved by: (Print Name) L. FRANCIS		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
36	<1K	<20	N/A	Concrete PILLAR
37	<1K	<20		Concrete PILLAR
38	<1K	<20		Concrete PILLAR
39	<1K	<20		Concrete SLAB
40	<1K	<20		Concrete, SLAB

N/A

COMMENTS: BIRON FIDLER USED AS AN INDICATOR FOR HOT SPOTS. No such spots found.

NOTES:

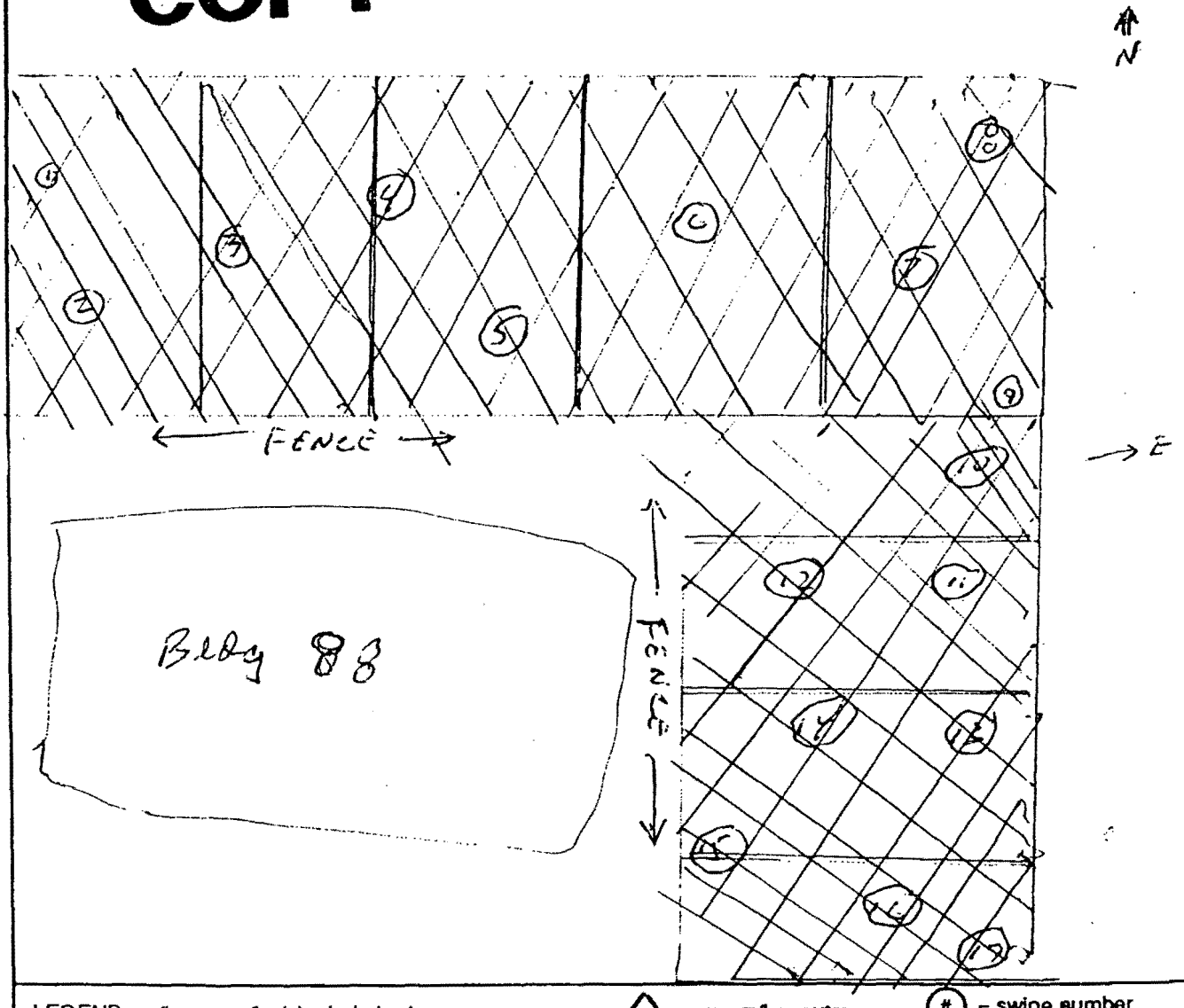
1. See MD-80036 10002 for calculations of WB, extremity and skin dose rates.
2. To request RO Count Room analysis for β/γ, alpha or tritium, leave column blank. Mark column N/A if not needed. If count room printout of results are attached, write "see attached" in column.
3. Annotate special sample type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

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG./AREA/ROOM) Bldg 88	SURVEY NO. 00-38-375
PURPOSE: FENCE REMOVAL ~~Survey~~ Survey 88 Bldg ~~88~~ 88 RD 4/10/00 4/10/00	RWP NO. N/A
	DATE: 04/10/00
	TIME: 0745

MAP/DRAWING

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	5593/5594	8/16/00
N/A	N/A	N/A

Completed by: (Signature) Reeves Dudley	HP# [redacted]	Date: 04/10/00
Completed by: (Print Name) REEVES DUDLEY		
Counted by: (Signature) Reeves Dudley	HP# [redacted]	Date: 04/10/00
Counted by: (Print Name) REEVES DUDLEY		
Reviewed/Approved by: (Signature) [illegible]	HP# [redacted]	Date: 4/10/00
Reviewed/Approved by: (Print Name) K. FRANCIS		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	<1K	<20		
2	<1K	<20		SEE
3	<1K	<20		
4	<1K	<20		FRONT
5	<1K	<20		
6	<1K	<20		FOR
7	<1K	<20		WIPES
8	<1K	<20		
9	<1K	<20		LOCATION
10	<1K	<20	N/A	
11	<1K	<20		
12	<1K	<20		
13	<1K	<20		
14	<1K	<20		
15	<1K	<20		
16	<1K	<20		
17	<1K	<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.

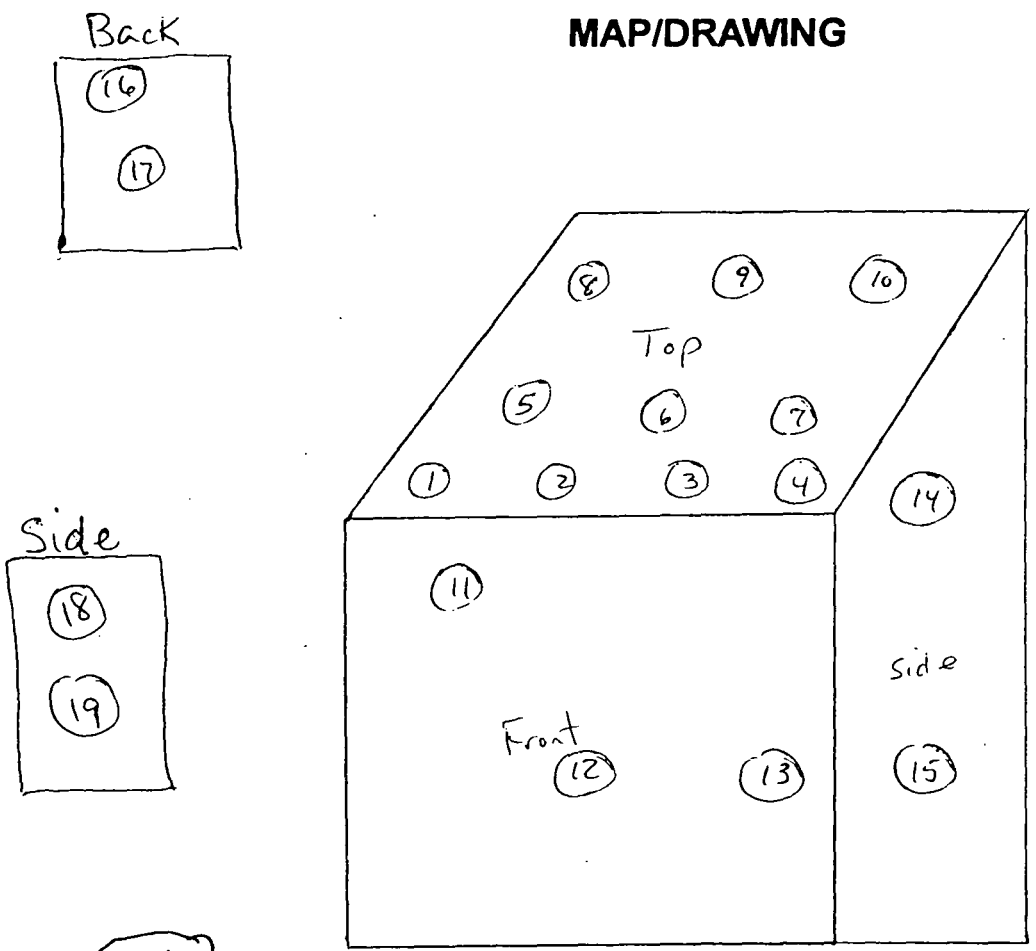
ML-9620 (4-98)

RADIOLOGICAL SURVEY DATA SHEET

 MI-M19 30-20 P5

LOCATION: (BLDG./AREA/ROOM) outside area sm-pp	SURVEY NO. 00-38-423
PURPOSE: Transformer	RWP NO. N/A
	DATE: 050100
	TIME: 1330

MAP/DRAWING



<5/100 α
<5K β
IN DPM/100CM2
ALL DIRECT READING

COPY

LEGEND: # = mrem/hr (γ) whole body
E ▫ mrem/hr (β+n+γ) extremity on contact
= 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
NEElectra	5507/5508	10-1300
N/A	N/A	N/A

Completed by: (Signature) Connie Sowers / Brenda Dudley	HP# [redacted]	Date: 050100
Completed by: (Print) Connie Sowers / Brenda Dudley		
Counted by: (Signature) Carol Y. Robinson	HP# [redacted]	Date: 5-1-00
Counted by: (Print) CAROL Y. ROBINSON		
Reviewed/Approved by (Signature) Roger J. Blum	HP# [redacted]	Date: 05/01/00
Reviewed/Approved by: (Print) R.J. BLUM		

ML-9620 (2/98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm2)				
Sample#	β/γ	Alpha	Tritium	Comments
1			[redacted]	Top
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				Front
12				
13				
14				Side
15				
16				Back
17				
18				Side
19				
			N/A	

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

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.

Smear Analysis

Unit Type: LB4100/W
Counting Unit ID: Blue
Data file name: SMEAR143
Batch Ended: 5/1/2000 13:41
Cal. Due Date: 8/24/2000
Serial Number: 26966-3

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

Batch ID: 00-38-423 SOUERS OUTSIDE AREA OF SMPP (19) CYR

Detector ID	Sample ID	Alpha Activity			Beta Activity		
		DPM	σ	flags	DPM	σ	flags
A1	1	0.00	2.06	<MDA	0.00	2.28	<MDA
A2	2	1.68	2.25	<MDA	3.15	2.88	<MDA
A3	3	0.00	1.92	<MDA	0.00	1.31	<MDA
A4	4	1.49	2.16	<MDA	1.67	2.46	<MDA
C1	5	0.00	2.01	<MDA	0.00	1.48	<MDA
C2	6	5.68	3.49	<AL	1.26	2.31	<MDA
C3	7	0.00	1.94	<MDA	0.20	1.79	<MDA
C4	8	0.00	1.91	<MDA	0.00	2.51	<MDA
D1	9	0.00	2.01	<MDA	0.00	1.50	<MDA
D2	10	0.00	2.07	<MDA	3.61	2.65	<AL
D3	11	5.67	3.60	<AL	0.00	2.09	<MDA
D4	12	0.00	1.99	<MDA	0.00	1.33	<MDA
A1	13	0.00	2.06	<MDA	0.00	2.28	<MDA
A2	14	0.00	2.23	<MDA	1.91	2.51	<MDA
A3	15	3.48	2.72	<AL	3.71	2.65	<AL
A4	16	1.48	2.20	<MDA	7.07	3.65	<AL
C1	17	3.64	2.90	<AL	13.69	4.63	<AL
C2	18	3.69	2.86	<AL	0.12	1.92	<MDA
C3	19	0.00	1.94	<MDA	0.20	1.79	<MDA

01 May 2000 14:04 TRI-CARB - 1.09 Page #1
Protocol #: 5 Pw H3 20cc #407906 User : 5681

Time: 2.00
Data Mode: DPM Nuclide: SMVIAL3 Quench Set: SMVIAL3
Background Subtract: 1st Vial

	LL	UL	LCR	2S%	BKG
Region A:	0.5	- 18.6	0	0.0	6.14
Region B:	2.0	- 18.6	0	0.0	5.79
Region C:	40.0	- 2000	0	0.0	11.40

Quench Indicator: tSIE/AEC
Ext Std Terminator: Count
00-38-423 SOUERS OUTSIDE SMPP AREA M1-M19 CYR
Luminescence Correction On
Coincidence Time(ns): 18
Delay Before Burst(ns): Normal
Protocol Data Filename: C:\DATA\PROT1.DAT
Count Data Filename: C:\DATA\SDATA5.DAT
Spectrum Data Drive & Path: C:\DATA

S#	TIME	CPMA	CPMB	LUM	FLAG	tSIE	DPM1	2SIGMA	CPMC
-1	10.00	6.14	5.79	2	B	521.30		0.000	11.40
0	2.00	1077.25	980.65	0		520.69	4525.10	306.015	0.00
1	2.00	3.86	2.81	0		556.61	38.23	47.023	0.00
2	2.00	21.73	20.40	0		542.01	138.77	49.245	16.71
3	2.00	13.36	11.97	0		549.68	104.87	50.848	0.10
4	2.00	29.26	27.63	0		557.42	299.20	88.891	10.15
5	2.00	4.00	3.80	0		598.32	24.04	28.711	0.00
6	2.00	10.86	10.19	0		591.05	100.27	56.008	4.60
7	2.00	7.59	6.94	0		592.90	61.66	44.574	1.88
8	2.00	0.86	0.74	0		576.01	31.96	151.375	2.10
9	2.00	14.96	11.60	0		615.15	49.81	22.403	0.00
10	2.00	2.86	2.71	0		574.85	91.43	144.836	0.10
11	2.00	5.74	5.09	0		572.39	141.31	126.239	0.11
12	2.00	0.87	1.22	0		594.68	6.38	29.599	0.81
13	2.00	1.86	1.71	0		586.13	26.87	62.183	0.00
14	2.00	2.08	2.21	0		514.52	7.94	16.622	1.60
15	2.00	1.82	2.17	0		548.37	13.79	32.415	0.00
16	2.00	3.36	3.71	0		513.35	12.62	17.423	3.24
17	2.00	6.86	7.14	0		454.59	16.67	12.998	3.60
18	2.00	1.86	1.71	0		590.79	17.48	40.467	0.60
19	2.00	6.40	5.52	0		581.72	188.56	154.961	2.10

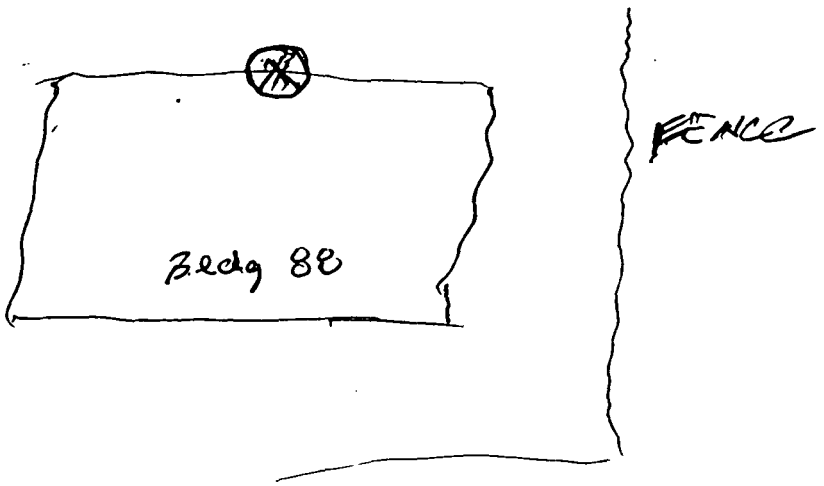
00-38-423
Page 4 of 4

RADIOLOGICAL SURVEY DATA SHEET

LOCATION: (BLDG/AREA/ROOM) Bldg 88	SURVEY NO. 00-38-416
PURPOSE: Soil Sample	RWP NO. ~~N/A~~ 4/10/00 2D
	DATE: 4/10/00
	TIME: 1345

MAP/DRAWING

COPY



(x) Soil SAMPLE LOCATION

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 7β = direct cont. measurement in dpm/100cm^2

INSTRUMENTS USED

Instrument	Serial Number	Cal. Due Date
N/A	N/A	N/A

Completed by: (Signature) Reeves Dudley	HP# [redacted]	Date: 4/10/00
Completed by: (Print Name) REEVES DUDLEY		
Counted by: (Signature) Steven J. Hammond	HP# [redacted]	Date: 4/10/00
Counted by: (Print Name) Steven J. Hammond		
Reviewed/Approved by: (Signature) Roger A. Blum	HP# [redacted]	Date: 05/01/00
Reviewed/Approved by: (Print Name) R. BLUM		

ML-9620 (2-98)

RADIOLOGICAL SURVEY DATA SHEET (cont.)

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

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

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.

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: H0000127
FILE ID: A0000066.S0
PRIORITY:

Description\Location:
88-001040-1

Collector: 2442

Date Received: 04/10/2000 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.01	45,000
Cs-137		0.14	0.01	45,000
Pb-210		0.98	0.11	45,000
Ra-226		1.88	0.12	800
Ac-227 (D)	*	0.02	0.04	40
Th-230		1.23	1.04	800
Th-232 (D)		0.52	0.02	130
Pu-238	*	0.00	6.96	500
Am-241	*	0.01	0.01	500

Other Nuclides:

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

Σ DOT **0.01** **nCi/g**

Σ Respirator **0.02**

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: 04/11/2000 Counted By: 5890 Analyzed By: 5613 INITIALS GVM

RADIOLOGICAL SURVEY DATA SHEET

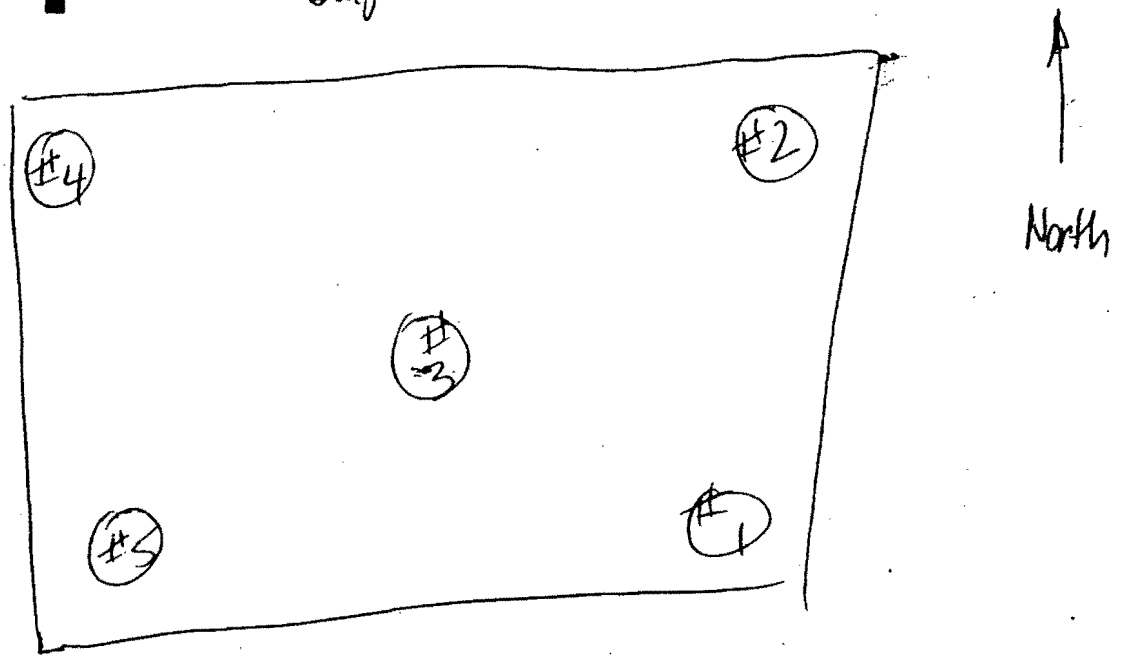
KRF 5/2/00

LOCATION: (BLDG./AREA/ROOM) 88- SITE	SURVEY NO. 00-38-428
PURPOSE: SOIL SAMPLES	RWP NO. N/A
	DATE: 5/2/00
	TIME: 1015

MAP/DRAWING

COPY

Bldg 88 AREA



SEE ATTACHED FOR SOIL SAMPLE 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	5507/5506	10-13-00
	NA	

Completed by: (Signature)	HP# [redacted]	Date: 5/2/00
Completed by: (Print Name) K. FRANCIS		
Counted by: (Signature)	HP# [redacted]	Date: 5/2/00
Counted by: (Print Name) K. FRANCIS		
Reviewed/Approved by: (Signature)	HP# [redacted]	Date: 05/02/00
Reviewed/Approved by: (Print Name) R. J. BLUM		

ML-9620 (2-98)

Survey No. 00-38-428

RADIOLOGICAL SURVEY DATA SHEET (cont.)

Removable Contamination				
Swipes (dpm/100cm²)				
Sample #	β/γ	Alpha	Tritium	Comments
1	<1K	<20	NA	DISH
2	<1K	<20		DISH
3	<1K	<20		DISH
4	<1K	<20		DISH
5	<1K	<20		DISH
		NA		

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

COMMENTS: <100 DPM/100CM² ALPHA <~~5000~~ 5000 DPM/100CM² DIRECTS ON ALL SAMPLES. DISHES

RCF 5/2/00

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.

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: H0000139
FILE ID: A0000073.S0
PRIORITY:

Description\Location:
BD-88 SE CORNER #1

Collector: 5436

Date Received: 05/01/200 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.01	45,000
Cs-137	*	0.00	0.01	45,000
Pb-210		0.69	0.11	45,000
Ra-226		1.67	0.15	800
Ac-227 (D)	*	0.00	0.06	40
Th-230	*	1.31	1.46	800
Th-232 (D)		0.80	0.02	130
Pu-238	*	0.00	0.88	500
Am-241	*	0.00	0.02	500

Other Nuclides:

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

Σ DOT 0.01 nCi/g

Σ Respirator 0.01

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: 05/02/2000 Counted By: 5890 Analyzed By: 5613 INITIALS 6VM

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: H0000140
FILE ID: F0000116.S0
PRIORITY:

Description\Location:
BD-88 NE CORNER #2

Collector: 5436

Date Received: 05/01/200 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	•	0.00	0.01	45,000
Cs-137		0.03	0.01	45,000
Pb-210		0.82	0.22	45,000
Ra-226		0.77	0.14	800
Ac-227 (D)	*	0.05	0.08	40
Th-230	*	1.89	2.41	800
Th-232 (D)		0.78	0.04	130
Pu-238	*	0.00	3.29	500
Am-241	*	0.00	0.03	500

Other Nuclides:

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

Σ DOT 0.01 nCi/g

Σ Respirator 0.02

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: 05/02/2000 Counted By: 5890 Analyzed By: 5613 INITIALS 6 V W

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: H0000141
FILE ID: F0000117.S0
PRIORITY:

Description\Location:
BD-88 MIDDLE #3

Collector: 5436

Date Received: 05/01/200 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.01	0.01	45,000
Cs-137		0.02	0.01	45,000
Pb-210		0.75	0.23	45,000
Ra-226		1.89	0.29	800
Ac-227 (D)	*	0.07	0.08	40
Th-230	*	1.45	2.58	800
Th-232 (D)		0.80	0.04	130
Pu-238	*	0.00	3.35	500
Am-241	*	0.00	0.03	500

Other Nuclides:

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

Σ DOT 0.01 nCi/g

Σ Respirator 0.02

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: 05/02/2000 Counted By: 5890 Analyzed By: 5613 INITIALS 6 V A

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: H0000142
FILE ID: F0000118.S0
PRIORITY:

Description\Location:
BD-88 NW CORNER #4

Collector: 5436

Date Received: 05/01/200 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.01	45,000
Cs-137		0.02	0.01	45,000
Pb-210		0.51	0.25	45,000
Ra-226		1.41	0.26	800
Ac-227 (D)	*	0.00	0.11	40
Th-230	*	2.21	2.38	800
Th-232 (D)		0.74	0.04	130
Pu-238	*	0.00	3.09	500
Am-241	*	0.00	0.03	500

Other Nuclides:

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

Σ DOT 0.01 nCi/g

Σ Respirator 0.02

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: 05/02/2000 Counted By: 5890 Analyzed By: 5613 INITIALS GVM

SOIL ANALYSIS REPORT

FIELD SAMPLE ID:
LAB SAMPLE ID: H0000143
FILE ID: F0000119.S0
PRIORITY:

Description\Location:
BD-88 SW CORNER #5

Collector: 5436

Date Received: 05/01/200 **Date Collected:**

Radionuclide		Activity (pCi/g)	MDA	MD-10438 Limit (pCi/g)
Co-60	*	0.00	0.01	45,000
Cs-137		0.02	0.01	45,000
Pb-210		0.52	0.22	45,000
Ra-226		1.78	0.27	800
Ac-227 (D)	*	0.09	0.11	40
Th-230	*	0.86	2.53	800
Th-232 (D)		0.76	0.04	130
Pu-238	*	0.00	3.02	500
Am-241	*	0.00	0.03	500

Other Nuclides:

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

Σ DOT **0.01** **nCi/g**

Σ Respirator **0.02**

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: 05/02/2000 Counted By: 5890 Analyzed By: 5613 INITIALS GVM

~~For BWXT of Ohio internal use only.~~

Hierarchy For: Close Out Report for Building 88

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

LEVEL 1 LAWS/REGULATIONS (Imposed by Outside Authority)

LEVEL 2 AGREEMENTS

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

LEVEL 4 ORGANIZATIONAL/OPERATIONS DOCUMENTS

LEVEL 5 PROCEDURAL/INSTRUCTIONAL DOCUMENTS

LEVEL 6 REPORTS AND PERFORMANCE INDICATORS	Close Out Report

CONFIRMED UNCLASSIFIED/NON-SENSITIVE
REVIEWED BY: JANET NESHEIM/EMCBC
DATE: 06-22-10