APPENDIX G

Field Notebook

CONTENTS

PAGE	REFERENCE	DATE

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Project Ft. Monmouth
Radiological Site Assessment
Book 1

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June 4th, 2012

1400 - Start site tour w/ Alice

Bldg 283 - Squier Hall
- 1st & 2nd floor mostly carpet & tile floor
- Basement contains a "radio" room with tyvek & stripped wiring on tables.
- 1st & 2nd walls are painted block/brick/drywall
- Mostly renovated except basement.
- May update survey grid

Bldg 292
- Flooring mostly concrete, some tile, laminate tile, carpet in office area
- Painted block walls
- May upgrade survey grid

Bldg 275 - Electronics Museum
- Floors mostly carpeting, some laminate tile
- Wood paneling on walls
- Ceramic tile in center sitting area
- Survey grid is good.

Bldg 2540
- Tile/concrete floors, minimal carpet
- Block walls and drywall.
- Room 102 has a fume hood
- Tables/chairs in both survey units
  Machine shop has large equipment we will have a hard time moving . . .

June 4th 2012 cont...

Bldg 2540 cont

- Furniture will be in the way of the original survey grid.
- Calibration/radiation room in Survey Unit (South West corner). has neutron absorber, Californium sign that is hand written, chart of nuclides. "Radioactive material" sign at doorway.
- Room 106 has surveyed radiation detectors and has a room w/ "radioactive material" signage. Room is empty.
- Room 109, entry from back of building, radioactive storage area.
- Sign outside building says no foot access without contacting site RSO.

At the end of the day we hooked one P-10 gas tank to three Ludlum 43-37 detectors in series to keep gas in them.

June 5th 2012

- 700 start, met with Alice, door key to the room we are using will be replaced today so we can lock our sources at night.

- Site Safety brief (initial), PPE will be assessed at each building. We don't expect the need to wear hard hats or safety glasses. Biggest hazards are slip/trips/falls and ladder safety when scanning. Will need to be very careful when moving/storing P-10 gas cylinders.

- Planning on setting up equipment in the morning and starting on Building 275, electronics museum.

- All three detectors were source checked and passed Chi-square test. Thirty one minute counts with both Tc-99 and Th-230 sources.

→ June 5th cont
2nd Start Bldg 275 (Electronics Museum)

Ludlum 2360 SN# 275713
Ludlum 43-37 SN# 093966
Ludlum 19 SN# 245026
Ludlum 19 SN# 253050

			END of DAY Q/C Check	
14th	~~Bkg~~	1α	477 β	1α 518 β
	Tc-99	3α	2968 β	2α 2874 β
	Th-230	4885α	2047 β	5101 α 1923 β (5th pm)

[Limits: 315 α and 7100 β]

Location #1 (240 pm) - Carpet
7 μR 3 α 387 β

Location #2 (242 pm) - Carpet
14 μR 0 α 511 β

Location #3 (244 pm) - Wood panel
12 μR 6 α 763 β

Location #4 (246 pm) - Carpet
8 μR α 399 β

~~Location #6~~

Location #5 (248 pm) - Carpet
6 μR 5 α 417 β

Location #6 (250 pm) - Laminate Tile
8 μR 5 α 488 β

Location #7 (251 pm) - Carpet
10 μR 6 α 487 β

Location #8 (253 pm) - Carpet
8 μR 4 α 421 β

Location #9 (256 pm) - Drywall
11 μR 6 α 598 β

Location #10 (259 pm) - Drywall
12 μR 6 α 724 β

Location #11 (301 pm) - Drywall
11 μR 6 α 795 β

Location #12 (303 pm) - Wood panel
8 μR 4 α 602 β

Location #13 (305 pm) - Carpet
8 μR 4 α 486 β

→ June 5th Cont

Location #14 (311pm) – Carpet
9μR 1α 541B

Location #14-Dup (313pm) - Carpet
10μR 2 α 492 B

Location #15 (315pm) - Carpet
6μR 4α 448B

Location #16 (316pm) - Carpet
8μR 1α 536 B

Location #17 (318pm) Carpet
10μR 1α 508B

Location #18 (319pm) - Carpet
12μR 6α 502B

Location #19 (322pm) - Carpet
7μR 4α 462 B

Location #19-Dup (323pm) - Carpet
6μR 2α 468 B

Location #20 (325pm) - Carpet
12μR 8α 521 B

Location #21 (330pm) - Carpet
7μR 2α 513B

Location #22 (327pm) - Carpet
10μR 4α 587B

Location #23 (331pm) - Carpet
8μR 3α 538B

Location #24 (333pm) - Carpet
10μR 1α 584B

Location #24-Dup (335pm) - Carpet
10μR 5α 541B

Location #25 (337pm) - Wood Panel
10μR 2α 542B

Location #26 (341pm) - Carpet
10μR 6α 576 B

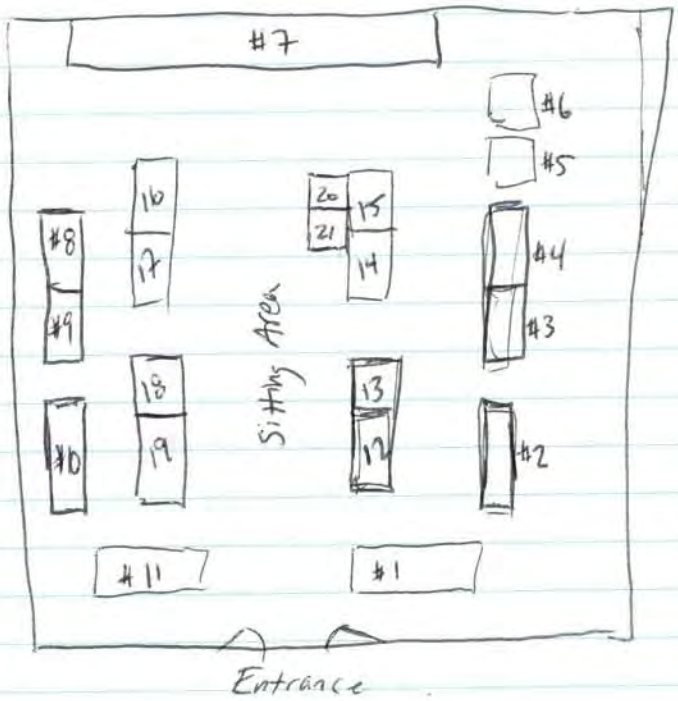
Location #27 (342pm) - Carpet
9μR 0α 517B

Location #28 (344pm) - Carpet
8μR 5α 495B

→ June 5th Cont

Location #29 (347pm) - Carpet
10μR 3α 597 β

Location #30 (350pm) - Wood Panel
10μR 7α 779 β



Display Case Map

Scanning the bottom of each display at one detector width per second (Model 43-37)

Cabinet #	Name	Highest	α	β
1	"Camp Little Silver 1917"		13	676
2	"Radio & Telegraph Go Airborne at Camp Vail"		11	757
3	"Camp Vail Radio Laboratories Ft Monmouth"		8	709
4	"Signal School at Ft Monmouth"		22	723
5	N/A - Floor to ceiling		10	621
6	N/A - Floor to ceiling		12	581
7	N/A - Full back wall			
8	"Radio Miniturization"			
9	"Satellite Development at Ft Monmouth"			
10	"Radar at Ft Monmouth"			
11	N/A			
12	"Edwin H. Armstrong - Pioneer of Radio"			
13	"Vacuum Tube Development"			
14	"Wheather School & The Radiosonde"			
15	"Night Vision Equipment"			
16	"Pigeons at Ft Monmouth"			
17	"Combat Photography"			
18	N/A			
19	N/A			
20	N/A Table Top			
21	N/A Table Top			

→ June 5th cont

Scanned the first six cases in the electronics museum. Ended scanning ~5 Pm to pack up and complete end of day QC checks on detectors. Background and check source readings within the 20% limit for control charts. Tomorrow Morning we will finish the museum display cabinets.

June 6th, 2012

7:00 - Building 2541 was walked with the Ft. Monmouth logistics staff for radiation protection. Dose rate measurements, alpha/beta measurements and removable smears for contamination survey of building.

- Control charts completed for all detectors
- Input all data from yesterday to digital format and calculated SOR for all survey measurements.

10:30 Continue scanning display cabinets in Bldg 275, starting at #7.

- Collecting low energy beta swipe at each of the 30 random locations from yesterday.

Ludlum 2360 # 275713
w/ 43-37 # 083966

				Afternoon	
Morning QC	Bkg	3α	567β	4α	425β
	~~Tc-99~~	7α	2826β	4α	2933β
	Th-230	5483α	1726β	5705α	1887β

→ June 6th cont

- Each systamatic location (30) recieved one low E β swipe. Duplicates collected at same location as the direct read measurements (14DUP, 19DUP, 24DUP)

- The swipe samples were ~~labeled~~ labeled as follows 275-1, 275-2, . . .

- The following display cases had low energy beta swipes
  - #8 - Radio Miniaturization
  - #13 - Vacuum Tube
  - #15 - Night Vision
  - #17 - Combat Photography

13[30] Start at Building 292 - Museum Storage

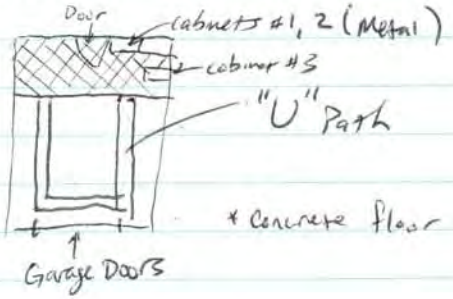
Using one floor monitor attached to cart
Ludlum 2360 # 138251
w/ 43-37-1 136361

	Pre QC		Post Qc	
	α	β	α	β
Bkg	4	506	5	653
~~E~~-99	15	4350	34	4647
Th-230	6033	1987	6213	2187

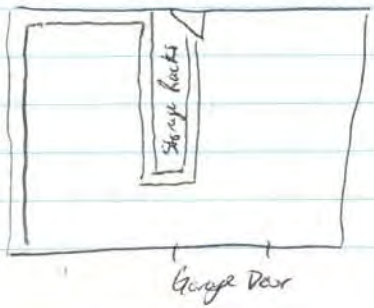
	PRE QC		Post QC	
	α	β	α	β
Bkg	2	379	3	420
Th-230	4962	2138	5245	2236
Tc-99	3	3051	~~3~~ 28	~~3501~~ 20

↳ Ludlum 2360 SN 275713
w/ 43-37 # 093966
This detector will do a one min count at each location

- Scanned 5% of floor in the cabinet storage area w/ floor monitor



- Scaned 5% of floor in "Back Storage Area"



→ June 6th cont

- Scanned 5% of "Movable Storage Area" in a "U" shape path. This room is off the side of the Storage Cabinet/Rack room. Laminate Tile Floor

- Scanned 100% of the metal shelving located in storage cabinet #1, 2 & 3. These cabinets (in "Storage Rack Area") have the following signage.
  Dated 8-11-11
  "These 3 cabinets are being tested ~~periodically~~ presently for radioactive residual from storing radioactive (low level) artifacts. DO NOT remove until cleared with Rad Safety" - Dr. Nicholas ~~By~~ Kovitz

- Direct readings and low energy swipes collected at 30 random locations w/ 3 DUP)
  Duplicates at: 292-6D
  292-12D
  292-29D

Building 292 Direct Readings – All one min counts

	Location	9 α	430 β	5 μR/hr	Cinder block
	" 2	13	607	4	Poured Concrete (PC)
	" 3	6	624	5	PC
	" 4	5	603	5	PC
	" 5	6	479	5	Carpet
DUP	" 6	13 ; 9	648 ; 595	5 ; 5	PC
	" 7	5	515	5	PC
	" 8	8	679	6	Carpet
	" 9	7	446	3	PC
	" 10	8	445	4	Carpet
	" 11	9	629	5	Laminate Tile (LT)
DUP	" 12	5 ; 9	520 ; 584	4 ; 4	PC
	" 13	5	641	5	LT
	" 14	13	522	6	LT
	" 15	3	724	4	PC
	" 16	8	473	4	PC
	" 17	8	516	7	Drywall
	" 18	2	488	5	Carpet
	" 19	11	637	4	LT
	" 20	2	513	4	LT
	" 21	15	638	6	PC
	" 22	9	638	5	Carpet
	" 23	15	551	5	PC
	" 24	8	606	4	PC
	" 25	8	535	5	PC
	" 26	16	595	4	PC

→ June 6 cont

		α	β	μR/hr	Material
Location	#27	4	445	4	LT
	#28	3	520	4	PC
DUP	#29	6 : 10	643 : 614	4 : 4	Carpet
	#30	8	478	6	LT

5:15 End of work day

June 7th, 2012

7:00 Started morning QC check on detectors and finished inputing all data collected to date on our electronic forms

9:00 • Walk through of building 283 (Spanier Hall) to identify areas where a former wet laboratory would have been and confirm the layout of both floors

• Brought site electricians out to the building to identify which outlets were grounded so we can use a shop vac in the old "radio room" located in the basement.

• Dose rate meter was brought through every room in 283 and nothing unusual was identified. Everything was below 10-15 μR/hr.

1:00 • Start to lay out 30 survey measurement grid in 283 and clean the shelf and table top area in "radio room" with a shopvac. Room is VERY dusty.

→ June 7th cont:

Two floor Monitors

JD (2nd Floor)

2360 SN ~~275731~~ 275713

w/ 43-37 SN# 095966

Pre QC	α	β	Post QC	α	β
Bkg:	4	568	Bkg:	1	517
Tc99:	+3 JD	~~3447~~ 2427 JD	Tc99:	4	3067
Th230:	~~5410~~ 5406 JD	~~2020~~ 1452 JD	Th230:	4729	2153

2360 SN 275724 (1st Floor)

w/ 43-37 SN# 068422

Pre QC	α	β	Post QC	α	β
Bkg:	2	639	Bkg:	9	605
Tc99:	~~+3~~ 11 JD	~~4615~~ 3976 JD	Tc99:	17	4639
Th230:	4209	1972	Th230:	4222	1902

α - 3459 to 5187

β - 3128 +/- 469 3

Ludlum 19 SN 253050

Building 283 Direct Measurements

Location #	α (cpm)	Bkg (cpm)	uR/hr	Time: Material
DUP 1	4/1	~~584~~ ~~589~~	12/12	Carpet 334
2	2	637	12	Carpet 327
3	3	528	9	Carpet 351
4	13	516	4	Laminate Tile 332
5	1	579	11	Carpet 341
6	10	432	5	Carpet 338
7	8	756	14	Tile 348
8	~~15~~ 2	~~543~~ 572	~~11~~ 12	Carpet ET 321
9	15	513	4	LT 320
DUP 10	7/3	576/552	10/10	Carpet 319
11	9	777	10	Drywall 359
12	26	444	4	Carpet 341
13	4	643	10	Drywall 343
14	9	850	15	Drywall 405
15	1	540	8	Carpet 389
16	~~8~~ 16	~~579~~ 655	4	Drywall 348
17	8	574	4	Carpet 335
18	16	463	5	Carpet 344
19	3	562	10	Carpet 345
DUP 20	16 & 14	655 : 689	5/5	Black Wall 320 321
21	17	493	4	LT 325
22	5	557	10	LT 327
23	5	523	9	Carpet 353

→ June 7th cont

Location #	α (cpm)	β (cpm)	mR/hr	Material
24	3	634	14	Wood Wall 325
25	15	476	4	Carpet 340
26	15	598	10	Carpet 464
27	19	796	5	LT 355
28	11	584	9	Carpet 401
29	20	538	6	LT 351
30	11	565	8	Carpet 353

- James Moore was on-site today.

June 8th, 2012

7:00 QC check instrument and calculate SOR from past building scans.

Ludlum 2360 SN 275713
w/ 43-37 SN 095966

Pre QC	α	β	Post QC	α	β
Bkg	3	429	Bkg	9	630
Tc99	8	3021	Tc99	8	3121
Th230	4708	2038	Th230	4691	2167

Ludlum Model 19 SN 245026
Prior Checksource ~800 µR/hr
After Checksource ~80 µR/hr

- Scanning floor area of sinks we moved detector around floor and did a one min count at the area we thought was highest (cpm).

	α	β	Material	Time
Main Star Case Bathroom	13	999	Ceramic Tile	907 AM
Second Floor West Wing	19	769	Granite Tile	910 AM
First Floor West Wing	15	726	Granite Tile	913 AM
Room 129 Back Sink	20	354	Poured Concrete	920 AM

→ June 8th cont'

Basement Radio Room	α	β	Time/Motor
Floor 1 (-5') Concrete	11	559	1006
Floor 2 (-10') Concrete	11	510	1007
Floor 3 (-15') Concrete	14	562	1008
Floor 4 (-20') Concrete	10	551	1010
Tabletop 1	Wood	14	360	1015
Tabletop 2	Wood	16	366	1017

10:00 Collected "sludge" samples from drains in the main staircase bathroom and second floor west wing. The other two ~~bathrooms~~ sinks have to be sampled after we get a plumber out to open the traps.

- Collated missed swipe (low E β) in Bldg 275.
- Finished Bldg 283 (Squire Hall) dose rate measurements on 2nd floor random locations and started collecting low energy beta swipes. We do not have enough to finish all. Duplicate swipes at the following
  4DUP 16DUP 23DUP

27, 28, 29, 30 will be swiped next week.

June 11th, 2012

7:00 Started filling detectors w/ P10 gas checked updated QC sheets that were made on Friday afternoon.
Ludlum model 43-37 (PR093966)
and
Ludlum model 43-37 (PR092501)

We were not using the right sources for the daily QC checks (i.e. Control chart used a different source than our dailys).

- Building 1205 - Military Academy Skeet
★ Reference Background Area ★
First Hallway - 289' x 4.8' laminate tile
↳ Generate 14 random points to collect background w/ each detector (all at same locations)

June 11th cont 2360

43-37 SN# 093966 SN# 275713

	Pre QC α	Pre QC β	Post QC α	Post QC β
Bkg	1	296	4	443
Tc99	3	2744	7	2983
Th230	4574	1841	4714	2009

43-37 SN# 092501 2360 SN# 275724

	Pre QC α	Pre QC β	Post QC α	Post QC β
Bkg	6	348	9	479
Tc99	10	4380	9	4657
Th230	4158	1854	4171	1831

43-37-1 SN# 136361 2360 SN# 138251

	Pre QC α	Pre QC β	Post QC α	Post QC β
Bkg	6	552	13	704
Tc99	17	4466	31	4365
Th230	2128	5948	6010	2072

50*

Model 19 SN# 253050

Pre QC - Bkg: 8 Post QC - Bkg: 8

Cs137: 70 Cs137: 70

Model 19 SN# 245026

Pre QC - Bkg: 7 Post QC - Bkg: 10

Cs137: 65 Cs137: 70

* 5948 α
2128 β

June 11 cont

Model 2241-3 SN# 287350

w/ 4393 SN# 311206

Pre-QC Post-QC

	Pre-QC
Bkg	76
Tc99	1716

Laminate Building 1205

Begin scans @ 1030 Domkowski

Tile	138251 α	138251 β	275724 α	275724 β	time
Point					
13	5	412	8	395	SD ~~1032~~
11	8	406	10	438	SD ~~1035~~ 1032
10	9	442	14	399	SD ~~1038~~ 1035
12	5	358	9	379	1038
3	12	405	6	402	1040
7	8	538	12	497	1042
8	10	431	8	411	1044
1	5	420	7	341	1047
9	9	418	7	366	1050
5	8	437	7	386	1052
4	8	381	9	385	1055
2	2	447	2	366	1057
14	8	466	13	391	1100
6	10	461	9	455	1102
	Probe SN 136361		Probe 092501		1105

Hallway

June 11 cont

~~point 43-83 235050 245026~~

Laminate Building 1205 Donakowski

Tile

point	cpm 43-83	nR/hr 235050	μR/hr 245026	time
6	67	5	4	1111
13	72	4	4	1113
11	63	4	4	1115
10	72	4	4	1124
12	58	3	4	1126
3	55	4	4	1127
7	71	8	7	1130
8	56	5	4	1132
1	66	3	3	1134
9	51	4	3	1136
5	55	4	5	1138
4	57	5	5	1140
2	58	5	4	1142
14	63	4	4	1144

Cafeteria

June 11 cont

Ceramic Tile Donakowski

point	cpm 43-93	μR/hr 235050	uR/hr 245026	time
9	220	7	8	1147
10	255	8	8	1149
12	258	10	8	1151
8	237	10	7	1153
3	262	9	8	1155
11	232	10	10	1157
7	227	11	10	1158
~~10~~ 5 min	249	8	9	1159
1	273	8	8	1201
13	249	10	10	1203
2	234	8	8	1205
4	219	9	8	1206
6	239	10	9	1207
14	207	8	8	1209

Basement Floor

Jurell cont

poured concrete

Donakowski

point	cpm 43-83	μR/hr 235050	μR/hr 245026	time
1	75	4	4	1211
13	81	4	4	1213
8	74	4	4	1215
10	67	4	5	1217
11	77	4	5	1218
5	81	5	5	1219
6	88	4	4	1220
7	90	6	5	1222
4	76	5	6	1223
3	73	4	4	1224
14	72	5	6	1226
12	69	5	5	1227
9	68	4	4	1229
2	79	4	4	1230

Basement Wall

Jurell cont

concrete block

Donakowski

point	cpm 43-83	μR/hr 235050	μR/hr 245026	time
13	118	8	8	1232
11	127	8	8	1234
4	69	6	8	1236
14	120	8	7	1238
8	123	8	10	1240
9	116	6	8	1241
2	107	8	8	1242
3	73	5	5	1244
12	69	5	5	1245
10	91	5	5	1246
5	78	4	4	1248
6	61	6	5	1249
1	59	4	4	1251
7	64	5	5	1253

→ June 11 cont

- Background study completed in Building 1205. This building was chosen as a reference background area based on non-impacted past use as the Military Prep-teadaming.

Material: Laminate Tile, Ceramic Tile Painted poured concrete, Painted block concrete.

We chose 3 rooms which contained our reference material and laid out 14 random locations in a grid to collect one min counts. We took 14 measurements per material per detector. We did this for ALL of our Meters.

- Moved to building 2540 to start griding & sampling one of the class 1 areas.

PRE POST

Building 2540 SU 1 ~1650

June 11th cont

275713 pre SU1 w/ 43-37

	α	β
bkg	~~6~~ 1	668
Tc	5	3157
Th	4832	2203

	α	β
bkg	9	793
Tc	15	3233
Th	5257	2288

13825.1 pre SU1 w/ 43-37-1

	α	β
bkg	20	980
Tc	18	4953
Th	6021	2450

	α	β
bkg		
Tc		
Th		

275724 pre SU1 w/ 43-37

	α	β
bkg	13	782
Tc	13	4694
Th	4307	1975

	α	β
bkg	11	~~84~~ 841
Tc	21	4631
Th	4378	2104

245026 μR meter

bkg - 10	bkg - 11
cs - 70	cs - 75

~~245~~ 20 253050 μR meter

bkg - 10	bkg - 9
cs - 75	cs - 70

→June 11th cont.

- We started in Survey unit #1 in building 2540. This is called the "radiation room" on floor plans.

- Downloaded all background data from each instrument and started to calculate average material specific backgrounds for each instrument.

- We completed the 30 random measurement locations in Survey Unit #1. Our extra swipes will arrive on Wednesday or Thursday, so we cannot collect Low Energy β swipes until then.

- Will use floor monitor for 100% scanning in SU #1 tomorrow morning.

→June 11th cont

237350 w/ 43-93

bkg 100

Tc 1749

End day @1715

June 12th, 2012

Arrive on site ~0700. Cloudy and overcast, potential for storms.

Begin QC checks @ ~0715

w/ 43-37

275713

pre		α	β
bkg		20	795
α	Tc	28	3270
β	Th	5335	2111

post check

	α	β
bkg	16	816
Tc	19	3304
Th	5324	2169

275724 w/ 43-37

pre	α	β
bkg	20	825
Tc	38	4671
Th	4224	2204

post check

	α	β
bkg	28	726
Tc	33	4751
Th	4353	2132

138251 w/ 43-37-1

pre	α	β
bkg	23	1138
Tc	45	5156
Th	6114	2663

post check

	α	β
bkg	24	1165
Tc	43	5019
Th	6281	2642

6/12/12

19-245026 μR meter

bkg 8 pre check
cs 65

bkg 12 post check
cs 80

19-253050 NOT USED
bkg 9 pre check
cs 70

43-93 311206 NOT USED
bkg 121 pre check
tc 1831

245026 μR meter

S41 Bins - 35 α 979 β
w/ 275724 12 μR/hr

S42 Bins - 34 α 1026 β
w/ 275724 18 μR/hr

Building 2540 SU2 - Duplicates (NTM)

point	meter	α	β	μR	time
13D	275713	27	1016	13	1105
12D	275713	29	1038	15	1107
8D	275713	29	1098	16	1109
6D	275713	19	1083	14	1111

6/12/12

Begin survey of SU2 at ~0845

Floors are laminate tile

245026

point	meter	α	β	μR	time
1	275713	41	1199	16	~~0845~~ 0850
~~2~~	~~275713~~	~~39~~	~~1177~~	~~18~~	~~0848~~
3	275713	39	1139	15	0853
4	275713	40	1091	16	0855
5	275713	22	1126	15	0901
6	275713	38	1081	14	0903
7	275713	34	1070	15	0905
8	275713	32	1072	16	0907
9	275713	38	1094	15	0909
10	275713	33	1067	12	0912
11	275713	42	1105	14	0914
12	275713	35	1120	13	0916
13	275724	35	1078	14	0911
14	275724	26	1021	14	0909
15	275724	26	1059	15	0907
16	275724	37	1089	14	0905
17	275724	29	1015	16	0859
18	275224	33	1029	15	0857
19	275724	33	999	15	0851
20	275724	30	1081	15	0848
21	275724	45	1008	15	0846
2	275713	37	1179	19	0852

Nothing significant noted during static counts.

Begin wall scans @ ~0930

Watters + ~~Dantowski~~ surveyors.

All walls poured concrete.

543

point	meter	α	β	μR	time
1	275713	32	1031	16	0933
2	275713	34	1093	14	0955
3	275713	35	1169	20	0957
4	275713	37	1127	18	0958
5	275713	46	1005	16	1000
6	275713	39	1011	15	1002
7	275713	31	1004	20	1004
8	275713	24	985	14	1006
9	275713	33	981	15	1009
10	275713	31	913	15	1011
11	275713	27	818	15	1014
12	275713	26	783	15	1017
13	275713	33	810	15	1020
14	275713	29	999	15	1028
15	275713	29	959	12	1030
16	275713	29	926	14	1032
17	275713	29	871	12	1035
18	275713	29	852	12	1037

36 862

point	meter	α	β	μR	time
19*	275713	~~43~~ 39	~~808~~ 938	11	~~1051~~ 1056
20	275713	39	910	15	1054
21	275713	38	937	13	1058
22	275713	48	950	14	1101
23	275713	38	992	16	~~1025~~ 1103
24	275724	39	1017	15	1023
25	275724	38	931	12	1021
26	275724	50	968	12	1019
27	275724	50	932	13	1017
28	275724	42	1037	15	1015
29	275724	54	1029	15	~~1007~~ 1013
30	275724	51	1001	17	1005
31	275724	50	1002	16	1003
32	275724	52	970	15	1001
33	275724	37	993	16	0959
34	275724	46	1030	15	0957
35	275724	40	1026	15	0955
36	275724	38	1033	15	0953
37	275724	50	907	14	0951
38	275724	47	1025	14	0949
39	275724	47	936	13	0947
40	275724	34	844	10	0946
41	275724	51	867	10	0944
42	275724	47	855	12	0941

* toe board done initially low for α

point	meter	α	β	uR	time
43	275724	46	991	15	0938
44	275724	43	932	14	0937
45	275724	55	968	12	0935
46	275724	43	1052	16	0933
47	275724	49	942	14	0931
2D	275713	40	1140	15	0959
8D	275713	38	984	15	1008
13D	275713	31	838	14	1025
41D	275724	42	843	13	1026
44D	275724	58	976	12	1027
33D	275724	58	1034	15	1029

6/12/12 SH-12 poured concrete

Donakowski begin dose rate survey in SH 12

Meter # 253050

point	meter	α	β	uR	time
1	275713	4	539	5	1445
2	275713	3	533	5	1447
3	275713	5	617	4	1449
4	275713	#5	~~569*~~ 624	4	~~1436~~
5	275713	5	596	4	1430
6	275713	4	569	3	1436
7	275713	6	596	4	1438
8	275713	6	638	5	1440
9	275713	3	600	4	1425
10	275713	6	588	4	1423
11	275713	5	600	4	1421
12	275713	5	564	4	1419
13	275713	4	614	4	1451
14	275713	4	589	5	1453
15	275713	7	565	4	1454
16	275713	7	624	5	1455
17	275713	5	589	4	1456
18	275713	2	567	5	1457
19	275713	5	592	4	1459
~~20~~	275724	13	587	5	1450
#21	275724	6	483	5	1422

*624 β @ 4

point	meter	α	β	qR	Hinc
22	275713	6	571	4	1503
23	275724	8	633	4	1447
24	275724	13	620	5	1440
↓25	275724	10	491	4	1419
↓26	275724	~~470~~ 9	~~4~~ 470	4	1418
27	275724	3	649	3	1449
28	275724	7	653	3	1438
↓29	275724	~~47~~ 6 JD	~~6~~ 471 JD	4	1420
30	275724	6	608	5	1451
31	275724	13	474	5	1436
5D	275713	7	~~7~~ 549	4	1433
24D	275724	13	582	5	1442
9D	275713	6	575	4	1444
32	275724	5	651	5	1446

6/12/2012

Break for lunch @ ~1300

Return to Building 2540 @ ~1340. Slight rain.

Switch gas cylinder for 275724 + 275713

Begin QC checks @ 1345

@ 1650

275724 pre

	α	β
bkg	7	823
Tc	~~5~~ 15	~~3300~~ 4752
Th	5386	2207

post

	α	β
bkg	5	529
Tc	17	4481
Th	4237	1807

275713 pre

	α	β
bkg	3	821
Tc	5	3300
Th	4260	2138

JD

post

	α	β
bkg	2	411
Tc	3	2941
Th	5061	1935

138251 pre

	α	β
bkg	15	957
Tc	13	4733
Th	6058	2475

post

	α	β
bkg	9	1166
Tc	20	5078
Th	6255	2645

SU 13 walls JD concrete block

* 20, 36, 37 drywall, ~~34 metal door~~, 38 metal cabinet

point	meter	α	β	μR	time
01	275713	4	541	5	1624
02	275713	7	569	4	1626
03	275713	5	545	4	1628
04	275713	7	545	4	1630
05	275713	4	541	6	1632
06	275713	4	546	5	1634
7	275713	5	570	4	1636
8	275713	3	725	5	1638
9	275713	3	547	5	1640
10	275713	11	538	4	1642
11	275713	6	575	4	1644
12	275724	8	570	4	1644
13	275724	14	535	5	1642
14	275724	10	533	5	1640
15	275724	10	542	5	1638
16	275724	16	589	4	1636
X 17	275724	14	437	3	1634
18	275724	11	523	5	1559
19	275724	10	585	5	1601
20	275724	13	463	4	1520
21	275724	8	561	5	1526
22	275724	14	555	4	1539
22D	275724	10	503	4	1541

point	meter	α	β	μR	time
~~22D~~				5	
23	275724	9	582	4	1543
24	275724	5	501	5	1545
25	275724	5	547	4	1617
26	275724	10	629	5	1620
27	275724	8	537	4	1622
27D	275724	7	525	4	1624
28	275724	13	542	3	1626
29	275724	9	533	5	1628
30	275724	6	580	4	1630
31	275724	11	506	5	1603
32	275724	8	526	3	1605
33	275724	4	612	5	1607
~~34~~	275724	9	577	4	1609
~~35 JD~~	~~275724~~	~~12~~	~~466~~	~~5~~	~~1522~~
~~35D~~	~~275724~~	~~7~~	~~504~~	~~4~~	~~1524~~
36	275724	7	477	3	1557
37	275724	15	470	3	1555
38	275724	9	421	3	1553
39	275724	12	469	4	1551
40	275724	8	614	4	1547
40D	275724	7	568	4	1549
~~JD 41~~					
JD 42					
~~35~~	275724	13	522	5	1611
35D	275724	11	573	4	1613

JD

~~Points 34 and 35 were plotted in both the small server room and main room. 34 and 35 are from small server room and 41 and 42 are located at 34 and 35 in large room.~~

Point locations identified and colrected.

Finish scans at 1645, nothing significant noted.

o 1, 2, 3, 4, 5 & 6 are poured concrete walls

x 17 is a metal door.

Neil Miller completed walkover scan of floor.

6/12/2012

1650 start end of day QC checks.

~~258~~ 253050
bkg 10 cs 75

245026
bkg 10 cs 70

1720 end of day, leave site. Weather still overcast with light rain.

Neil has imported data.

Tomorrow continue building 2540.

6/13/2012

Pre Floor Monitor (SN 138251)
Tile: α-10 β-913
Carpet: α-13 β-1157

Post Tile: α β
Carpet: α-6 β-960

QC Check - Post SU06 walkover

	α	β
Bkg	10	1208
Tc99	29	4957
Th-230	6105	2704

End of day.

6/14/12

Arrive on site ~0700. Sunny.
Mike and Hans on site.

NRC will be visiting today.

Begin QC checks at 0730.

245026 exposure rate meter
bkg 12 bkg 9
cs137 65 cs137 75

253050 exposure rate meter
bkg 10 bkg 10
cs137 70 cs137 70

311206 α/β meter
bkg 127 bkg 131
tc99 1924 tc99 1780

275713 w/ 43-37 post AM

	α	β
bkg	7	794
t_c 99	6	3072
th230	5018	2123

	α	β
bkg	5	928
t_c 99	10	3167
th232	5462	2166

275724 w/ 43-37 post AM

	α	β
bkg	6	669
t_c 99	10	4607
th230	4065	2106

	α	β
bkg	3	857
t_c 99	4	4683
th230	4315	2121

E38251 w/ 43-37-1 Post SU08 QC

	α	β
bkg	5	1078
t_c 99	13	4940
th230	6391	2496

	α	β
Bkg	4	1185
T_c 99	13	4966
Th230	6071	2675

275724 appeared to have a bad cable. Replaced cable and instrument response returned to normal.

SU7 Drywall (office) α 13 β 1157
43-37-1

6/14/12

Begin exposure rate surveys in SU7.

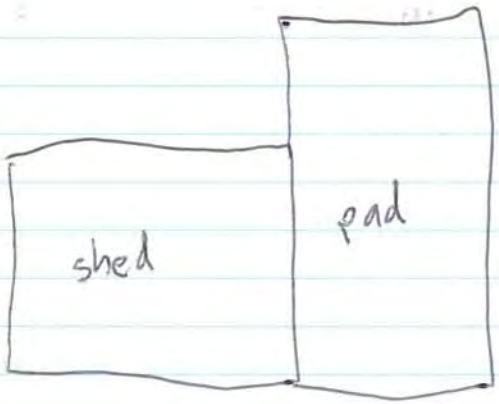
location	x	meter
1	10	253050
2	11	
3	8	
4	7	
5	6	
6	7	
7	9	
8	7	
9	7	
10	8	
11	9	
12	9	
13	9	
14	6	
15	8	
16	7	
17	8	
18	11	
19	9	
20	6	
21	6	
22	7	

location	X	meter
23	5	253050
24	7	
25	6	
26	6	
27	7	
28	8	
29	7	
30	6	
31	9	
32	8	
33	9	
34	8	
35	6	
36	7	
37	7	
38	8	
39	10	
40	9	
41	8	
42	7	
43	6	
44	6	
45	7	
46	9	
47	7	
32D	8	

location	X	meter
48	5	253050
49	7	253050
10D	8	
15D	8	
23D	5	

Laminate Tile Ambient α-4 B-542
in SV08 w/ Ludlum 43-37-1
SN 138251 (2360)

2nd Ambient 1.5 hr later
α-6 B-562



6/14/2012 cont.

Begin SH 14 @ 1235

powered concrete

ambient background one minute counts

pad 275713
α: 1
β: 459

shed 275724
α: 4
β: 533

location	meter	α	β	ΔR	time
1	275713	51	668	4	1240
2	275713	55	767	5	1242
3	275713	69	757	5	1244
4	275713	56	711	4	1245
5	275713	45	693	3	1247
6	275713	44	739	4	1248
7	275713	38	723	5	1250
8	275713	51	745	4	1252
9	275724	12	528	4	1253
10	275724	7	555	4	1254
11	275724	9	581	4	1256
12	275724	13	609	4	1249
13	275724	11	510	4	1246
14	275724	14	580	4	1245
15	275724	18	591	5	1241
16	275724	12	571	3	1243

6/14/12

location	meter	α	β	MR	time
17	275724	10	574	3	1244
18	275724	14	535	6	~~1252~~ 1256
19	275724	8	488	5	~~1254~~ 1258
20	275724	9	534	5	1300
21	275724	7	492	3	1302
21D	275724	9	496	3	1304
22	275713	5	444	5	1305
23	275713	9	502	5	1304
24	275713	10	541	4	1302
25	275713	7	686	4	~~1254~~ 1301
26*	275713	7	365	3	~~1252~~ 1259
27	275713	4	509	4	~~1254~~ 1258
5D	275713	52	627	3	1250
13D	275724	12	584	5	1248

#1-8 were pad locations and seemed to be a different kind of concrete.

#18-27 were walls, painted concrete blocks.

*#26 is painted metal door

6/14/12

· Exposure rates taken w/ 245026

Finish, begin QC @ 1300

275713

	α	β
bkg	2	747
tc99	6	3232
th232	5	2216

275724

	α	β
bkg	10	~~827~~
~~tc99~~	15	4729
th232	4199	2141

13825

	α	β
bkg		
α		
β		

NOT USED

253050 exposure rate meter

bkg	9
cs137	75

245026 exposure rate meter

bkg	8
cs137	70

Break for lunch @ 1345

Return @ 1445

275713

	α	β
bkg	1	693
tc99	1	3083
th230	4950	2247

Post QC @ 1705

	α	β
bkg	4	745
tc99	3	3157
th230	4983	2119

275724

	α	β
bkg	4	812
tc99	13	4767
th230	4256	2073

	α	β
bkg	8	845
tc99	12	4753
th230	4279	2135

PRE 138251 (4337-1)

	α	β
bkg	5	1148
tc99	22	5099
th230	6405	2724

Post QC

	α	β
Bkg	10	1198
Tc99	26	5297
th230	6361	2777

253050 exposure rate meter
bkg 10
cs 137 70

245026 exposure rate meter
bkg 11
cs 137 70

2360 Data lost for SU07 & SU14
data comprimized during transfer
and software crashed.

For SU14 the room ambient background
used for metal door background subtraction
—MM

SU14 with floor/wall scaner
ambient 1min count = 3α | 604β
2360 SN 138251

1730 - Leave site for the
day, Weather is sunny and
warm.

6/15/12

0700 Arrive @ site. Sunny and mild.

0710 Begin instrument QC checks.

245026 exposure rate meter
bkg 10
cs 137 75

253050 exposure rate meter
bkg 10
cs137

311206 43 -93 α/β meter
bkg
tc 99

AM QC

275713

	α	β
bkg	7	712
tc99	3	3241
th230	2103	4979

30

275724

	α	β
bkg	10	695
tc99	14	4773
th230	4026	2136

138251

	α	β
bkg	15	1076
tc99	18	5112
th230	6245	2603

Post AM QC

	α	β
bkg	~~2~~	820
tc99	5	3265
th230	5212	2199

	α	β
bkg	13	763
tc99	15	4740
th230	4306	2143

	α	β
bkg	7	1031
tc99	12	4981
th230	6174	2556

6/18/12

- Arrive on site (Donakowskie Miller) @ ~0700. Eric Barbour will be on site today.

Weather is sunny and mild.

Begin instrument QC checks.

253050 exposure rate meter
bkg 10
cs137 75

245026
bkg 11
cs 137 80

311206 α/β probe
bkg 108
tc99 1834

6/18/2012

275713 ~1 43-37

Pre QC	α	β
bkg	5	768
tc99	3156	8
th230	5163	2138

Post QC	α	β
Bkg	2	783
Tc99	2	3255
Th230	5332	2152

275724 ~1 43-37 * needs to have gas flow

	α	β
bkg	10	829
tc99	14	4763
th230	4211	2128

longer	α	F
Bkg	11	884
Tc99	14	4843
Th230	4426	1974

138251 ~1 43-37-1

	α	β
bkg	13	1036
tc99	11	4936
th230	6122	2568

Post QC	α	F
Bkg	10	1205
Tc99	29	5096
Th230	6268	2749

Guard cell - (848) 248-3194

6/18/12

Miller and Dountas, Li begin wall scanning of machine shop walls.

Leave site @ ~1245

Return to site @~1325

Begin after noon QC

275713

	α	β
bkg	5	814
tc99	3	3283
th230	5545	2142

275724

	α	β
bkg	4	809
tc99	12	4919
th230	4198	2025

138251

	α	β
bkg		
tc99		
th230		

6/18/12

1510 Drinkwater + Waters begin SU4 and SU5

SU4 - laminate tile

↑ 253050 meter

location	meter	α	β	χ	time
1	275724	6	967	14	1607
2	275724	10	947	14	1609
3	275724	7	855	10	1611
4	275724	5	761	9	1613
5	275724	6	818	10	1615
6	275724	14	759	8	1617
7	275724	11	822	11	1605
8	275724	8	853	8	1157
9	275724	7	831	10	1601
10	275724	6	819	10	1603
11	275724	10	853	10	1556
12	275724	11	747	9	1554
13	275724	11	855	10	1553
14	275724	10	851	9	1551
15	275724	12	833	12	1544
16	275724	10	816	10	1546
17	275724	9	843	10	1549
18	275724	6	820	8	1550
19	275724	12	829	10	1542
20	275724	10	860	10	1541
21	275724	7	827	9	1539

location	meter	α	β	χ	time
22	275724	12	816	8	1537
23	275724	10	818	12	1530
24	275724	9	852	9	1531
25	275724	8	871	10	1534
26	275724	7	812	9	1535
27	275724	14	824	10	1526
28	275724	8	857	10	1524
29	275724	8	853	9	1520
30	275724	18	836	8	1518
29D	275724	4	832	9	1522
SU4-B1	275724	8	825	10	1528
24D	275724	6	871	9	1532
16D	275724	7	833	10	1547
8D	275724	10	860	8	1559

275713 meter

SU5 drywall + metal doors

location	meter	α	β	χ	time
10	275713	7	921	15	1514
2	275713	7	728	14	1516
3*	275713	10	528	10	1518
4	275713	6	616	9	1520
5	275713	4	607	10	1522
6	275713	4	552	9	1524
7	275713	6	692	10	1526
8*	275713	0	569	8	1528
9	275713	2	658	9	1530
10*	275713	7	774	8	1531
11	275713	4	688	13	1532
12	275713	2	686	12	1534
13	275713	2	594	12	1535
14	275713	3	708	10	1537
15	275713	2	695	11	1538
16	275713	3	689	14	1539
17*	27513	6	630	12	1541
18 0	275713	7	964	13	1542
19 0	275713	9	891	15	1544
20	275713	3	685	11	1545
21	275713	7	670	10	1546
23	275713	5	444	7	1548
23	275713	3	658	10	1550

location	meter	α	β	χ	time
24	275713	4	569	8	1553
25	275713	#4	~~797~~ 504	7	1554
26	275713	2	479	8	1556
27	275713	5	569	8	1557
28	275713	3	673	10	1559
29	275713	3	694	8	1601
30	275713	4	682	11	1603
31	275713	3	686	11	1604
32	275713	1	670	11	1608
33	275713	7	651	10	1610
34	275713	5	610	12	1611
35*	275713	4	663	10	1613
36	275713	2	761	10	1606
SU5-B1	275713	2	620	7	1551
16D	275713	1	629	14	1615
7D	275713	5	643	10	1617
11D	275713	5	670	12	1619
29D	275713	3	693	8	1621

Ambient w/ 275713 — α 6, β 749

0 1, 18 & 19 are poured concrete

* 3, 8, 10, 17 & 35 are metal doors

6/19/12

Lunch @ 1200

Return to site @ 1245

Afternoon QC checks

275713

	α	β		α	β
bkg	2	788	bkg		
tc99	2	3136	tc99		
th230	5318	2099	th230		

275724

	α	β		α	β
bkg	9	789	bkg		
tc99	16	4702	tc99		
th230	4219	2136	th230		

1255 Begin static counts in SGs 10 + 11

Exposure rates w/ 253058

6/19/12 SG-10 paved concrete

location	meter	α	β	x̄	time
1	275713	9	621	4	1258
2	275713	7	563	5	1300
3	275713	~~5~~ 4	567	4	1304
4	275713	10	648	5	1306
5	275713	10	601	4	1308
6	275713	11	676	4	1310
7	275713	3	668	5	1312
8	275713	7	~~663~~ 649 50	5	1314
9	275713	8	772	6	1316
10	275713	6	736	3	1319
11	275713	6	645	4	1320
12	275713	3	630	4	1324
13	275713	7	623	5	1326
14	275713	8	634	5	1328
15	275713	9	616	5	1330
16	275713	8	632	5	1332
17	275713	5	638	4	1334
18	275713	10	654	6	1336
19	275713	3	667	5	1338
20	275713	5	639	5	1340
21	275713	8	560	5	1342
22	275713	11	674	6	1346
23	275713	9	689	5	1348
24	275713	9	729	6	1350

6/19/13

location	meter	α	β	x	time
2D	275713	5	629	5	1302
ambient	275713	3	542	4	1354
9D	275713	7	704	5	1317
10Bing-1	275713	6	657	5	1322
21D	275713	8	594	4	1344
24D	275713	6	679	4	1352

SG-11 concrete block ~~floor~~ paint

location	meter	α	β	x	time
*1	275724	8	402	5	1257
2	275724	5	484	6	1259
3	275724	11	598	4	1301
4	275724	11	538	4	1303
5	275724	8	573	5	1305
6	275724	8	699	4	1307
7	275724	10	581	5	1309
8	275724	9	573	4	1311
9	275724	11	506	4	1313
10	275724	15	552	3	1315
11	275724	14	514	5	1317
12	275724	6	530	4	1319
13	275724	13	495	4	1321
14	275724	7	509	5	1323
15	275724	3	546	5	1325
16	275724	11	530	4	1327
17	275724	5	546	4	1329
18	275724	5	520	5	1331
19*	275724	9	418	4	1333
20	275724	6	502	5	1335
21	275724	9	503	4	1337
22	275724	12	630	5	1339
23	275724	9	663	5	1341
24	275724	13	555	5	1343

*1 is metal door, 19 is metal door

6/19/12

location	meter	α	β	χ	time
25	275724	11	477	4	1345
26	275724	11	613	5	1347
27	275724	10	517	4	1349
28	275724	11	538	5	1351
29	275724	8	483	6	1353
30	275724	12	519	5	1355
31	275724	13	553	4	1357
32	275724	7	480	5	1401
33	275724	13	574	5	1403
34	275724	10	505	4	1411
35	275724	13	569	4	1413
36	275724	11	517	4	1415
37	275724	12	501	4	1417
38	275724	12	503	4	1419
39	275724	12	472	5	1418
ambient	275724	4	545	5	1306
11 Bias-1	275724	13	494	5	1359
40	275724	9	529	5	1405
41	275724	8	510	5	1407
42	275724	9	549	4	1409
23D	275724	13	646	6	1422
20D	275724	5	530	4	1424
2D	275724	10	522	6	1426
12D	275724	8	535	4	1428
6D	275724	10	661	6	1430

SU7 - Machine Shop Bias 2
meter - 275724
time - 1435
α - 33 5 minute count
β - 3084
χ - 8

SU14 - Back shed Bias 1
meter - 275724
time - 1445
α - 11
β - 598
χ - 4

6/21/12

Arrive on site @ 0700.

Begin QC checks.

245026 exposure rate 253050 exposure rate
bkg 9 bkg 9
csm 65 csm 70

6/21/12

311206 α/β
bkg 110
tc99 1787

275713 w/ 43-37

	α	β
bkg	3	757
tc99	3	3162
th230	5248	2167

275724 w/ 43-37

	α	β
bkg	7	851
tc99	13	4702
th230	4289	2155

138251 w/ 43-37-1

	α	β
bkg	6	1191
tc99	36	4927
th230	6168	2656

6/21/12

Dave, Wayne + Joseph head to Squire Hall to sample drains @ 0830

283 253050 exposure rate meter

	Ẋ
Point 6 @ 0913	3
Point 25 @ 0915	5
Point 12 @ 0918	4
Point 17 @ 0925	6
Point 18 @ 0930	5
Point 30 @ 0936	10
Point 28 @ 0940	10
Floor drain next to 28 Room 102 0943	5 ~~3μR/~~
Point 26 @ 0949	9
Point 8 @ 0952	15 - drain grouted in, no sample taken
Point 10 @ 0955	14
Point 2 @ 0958	14
Point 1 @ 1000	10
Floor drain next to 1 @1002 - 1004 wet and dry smears	5 μR/hr
Point 19 @ 1003	11
Point 5 @ 1005	9
Point 14 @ 1007	10

	X
Point 3 @ 1010	10
Point 21 @ 1012	11

Leave Square @ 1030

★ Survey Unit 6 & 7 Ambient ★

5 min Counts

	α	β
275724	43	3675

	α	β
275713	25	3417

Leave site @ 1745 ← 6121/12

CONTENTS

PAGE	REFERENCE	DATE

Rite in the Rain
ALL-WEATHER WRITING PAPER

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JOURNAL
FIELD BOOK

Name _____

Address _____

Phone _____

Project Fort Monmouth Radiological Survey
Field Book #2

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RiteintheRain.com

June 11th, 2012

Building 1205 - Reference Background Area

Laminate Tile (E-W Hallway)
X = 4.8' Y = 289'

	X	Y
1-	0	151
2-	1	185
3-	4	65
4-	4	179
5-	0	174
6-	0	11
7-	4	94
8-	4	112
9-	4	166
10-	1	45
11-	4	32
12-	4	64
13-	1	17
14-	3	226

Ceramic Tile (Cafeteria - Windows to Column)
X = 48.6' Y = 21.1'

	X	Y
1-	7	5
2-	28	20
3-	4	4
4-	~~4~~ 32	~~7~~ 16
5-	2	12
6-	31	13
7-	4	7
8-	4	3
9-	40	0
10-	6	7
11-	4	5
12-	~~4~~ 25	3
13-	13	9
14-	44	12

Painted Poured Concrete (Basement Room B-5)

X = 56.6' Y = 21.6'

	X	Y
1-	47	1
2-	55	3
3-	14	9
4-	8	7
5-	18	17
6-	19	12
7-	1	9
8-	52	13
9-	25	6
10-	47	7
11-	52	16
12-	14	20
13-	49	5
14-	2	20

Painted Block Concrete Wall (B-5)

X = 56.5 Y = 6'

	X	Y
1-	7	4
2-	23	1
3-	17	0
4-	33	5
5-	12	3
6-	12	5
7-	3	4
8-	27	4
9-	26	2
10-	14	4
11-	49	4
12-	14	3
13-	46	1
14-	30	3

Ceramic Tile Results (Handheld SLCTXX)

	α	β	Time	α	β
1	28	1563	11:50	21	1261
2	40	1669	11:44	20	1244
3	30	1579	12:07	18	1270
4	25	1525	11:40	19	1253
5	24	1643	12:~~12~~	20	1230
6	20	1470	11:43	19	1314
7	39	1641	12:04	16	1282
8	31	1582	12:09	12	1255
9	34	1543	11:37	18	1341
10	26	1593	11:51	15	1288
11	22	1630	12:06	18	1328
12	30	1600	11:46	23	1277
13	29	1571	11:48	15	1318
14	35	1602	1138	14	1193

43-37-1 SN 136361
w SN 138251
"Big"

43-37 SN 092501
w/ SN 275724
"Small"

Painted Poured Concrete (Handheld SLPPCXX)

	α	β	Time	α	β
1-	4	527	1237	4	468
2-	8	622	1248	9	510
3-	9	507	1230	8	448
4-	11	540	1228	6	472
5-	11	463	1234	14	461
6-	12	562	1238	11	466
7-	8	588	12:24	11	534
8-	6	611	1244	8	469
9-	7	593	1235	7	485
10-	11	561	1239	12	448
11-	7	532	1246	3	459
12-	13	453	1232	12	426
13-	8	512	1242	9	440
14-	14	526	12:26	7	452

43-37-1 SN 136361
w/ SN 138251
"BIG"

43-37 SN 092501
w/ SN 275724
"SMALL"

Painted Block Concrete (B-5 wall)

	α	β	Time
1	13	522	1318
2	10	893	1307
3	12	547	1309
4	10	846	1302
5	7	583	1317
6	12	533	1315
7	13	455	1320
8	15	912	1304
9	15	875	1306
10	10	509	1311
11	12	868	1255
12	2	496	1313
13	13	931	1258
14	9	898	1259

~~43-37-1~~ SN 136361
w/ SN 138251
"Big"

α	β
5	499

α	β
11	388
8	692
6	443
4	649
9	410
4	421
5	414
7	720
9	716
17	445
15	706
7	442
11	652
12	685

43-37 SW02501
w/ SN 275724

α	β
12	410

6/11/2012 PM

Survey unit 1 in Building 2540 was gridded and measurement points identified at ~1600.

Measurements on laminate tile and at 1m for exposure rates

43-37 SW093166 ⇒ 245026

location	probe	α	β	μR	time
1	275713	17	1031	14	1613
2	275713	21	1024	16	1615
3	275713	17	945	15	1617
4	275713	13	907	15	1619
5	275713	20	1146	14	1621
6	275713	13	982	16	1623
7	275713	25	955	15	1625
8	275713	16	976	13	1627
9	275713	17	1023	15	1628
10	275713	17	975	15	1630
11	275713	12	959	11	1632
12	275713	24	1001	14	1633
13	275713	21	946	13	1635
14	275713	17	1016	15	1636
15	275713	22	964	16	1638
16	275713	19	912	15	1639
16D	275713	20	988	15	1641

4357 SN# 092501

988

245026

Location	probe	α	β	cpm/hr	time
17	275713	21	~~1089~~ 970	12	1640
18	275724	17	1080	15	1640
19	275724	24	900	13	1638
20	275724	17	947	14	1636
21	275724	23	956	14	1635
22	275724	27	893	14	1633
23	275724	21	1087	14	1632
24	275724	24	904	13	1630
25	275724	27	820	14	1628
26	275724	26	790	12	1627
27	275724	17	983	10	1625
28	275724	18	810	13	1623
29	275724	21	828	12	1621
30	275724	19	800	10	1619
31	275724	16	820	11	1617
32	275724	16	935	12	1615
19D	275724	19	936	12	1691
3D	275713	17	978	14	1643

Surveyed by Watters + Domkowski

6/13/12

Arrive on site @ ~0700.
Weather cloudy w/ some light rain.

Begin gas flow in meters and QC checks.

Need to finish walls SQ 13.

245026 exposure rate meter
bkg 9
cs 70

253050 exposure rate mtr.
bkg 10
cs 70

311206 43-93 α/β
bkg 123
Tc-99 1864

275713 pre

	α	β
bkg	6 ~~4~~ 3D	~~632~~ 3D 821
tc	3	3280
th	4978	2262

* gas low on 1st background, allowed gas to flow + recounted

275724 pre

	α	β
bkg	3D ~~4~~ 9	~~748~~ 841
tc	13	4724
th	~~4040~~ 3D 4270	~~2128~~ 3D 2127

* gas low on 1st background, allowed gas t. flow and recounted

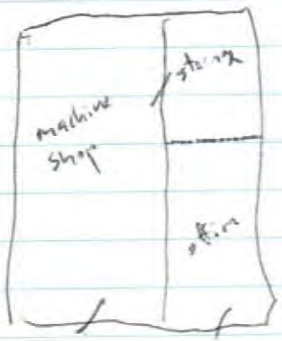
~~27~~ 138251 pre

	α	β
bkg	25 ~~13~~ 3D	~~811~~ 3D 1133
tc	20	5138
th	6089	2505

s406

* gas low on 1st background, allowed gas to flow + recounted

o gas low during count, allowed gas t. flow and recounted



6/13/12

Begin static counting in 546 @ 0900 Carpet 1, 2, 3, 6, 7, 8

5 minute counts

location	probe	α	β	μR	time
bkg carpet	275713	32	3417	10	0900 ring
bkg carpet	275724	28	3366	10	0900 ring
1	275713	45	3352	10	0910 ring
2	275713	41	3636	7	0920 ring
3	275713	52	3448	7	0927 ring
4	275724	46	3855	6	1001 tile
5	275724	49	3803	8	1007 tile
6	275724	58	3676	10	0926 ring
7	275724	71	3435	10	0911 ring
8	275724	49	3412	9	0920 ring
80	275724	66	3364	9	0933 ring
bkg tile	275713	17	3263	8	~~0946~~ 0959 tile
bkg tile	275724	34	3503	8	~~0944~~ 0950 tile
9	275724	58	3689	8	0955 tile
10	275724	3D ~~3~~ 48	4745	7	1012 tile
11	275724	49	3828	7	1018 tile
12	275724	44	3539	6	~~1024~~ 1037 tile
13	275724	62	3513	7	1043 tile
14	275724	45	3607	7	1050 tile
15	275724	44	3929	8	1100 tile
150	275724	47	3918	8	1105 tile

6/13/12

Backgrounds taken in each room as ambient background, i.e. probe pointing at ceiling instead of in contact w/ surface.

location	probe	α	β	ER	time
16	275724	60	3738	7	1111 t.le
17	275724	55	3522	6	1117 t.le
18	275724	47	3612	6	1123 t.le
19	275713	25	3713	7	1127 t.le
20	275713	21	3735	7	1121 t.le
21D	275713	28	3710	9	1109 t.le
22	275713	23	3491	6	1104 t.le
23	275713	39	3668	6	1058 t.le
24	275713	32	4002	8	1023 t.le
25	275713	45	3816	8	1038 t.le
26	275713	35	3693	9	1044 t.le
27	275713	26	3562	7	1050 t.le
28	275713	33	3987	8	1017 t.le
29	275713	38	3939	8	1011 t.le
30	275724	63	3839	9	0944 t.le
31	275713	23	3506	7	1006 t.le
32	275713	38	3657	6	0946 t.le
32D	275713	37	3674	6	0951 t.le
21D	275713	33	3761	9	1115 t.le

SU06 Post QC

275713

	α 2	β 795
Bkg	3	
Tc99	3	3122
Th230	5126	2249

275724

	α 2	β 5
Bkg	6	764
Tc99	9	4879
Th230	4083	2009

SU03 (will scan Post QC)

138251

	α 6	β 1207
Bkg		
Tc99	19	5042
Th230	6196	2649

Break for lunch. Raining.

1st PreQC before SU06 walkover,

138251

	α	β
Bkg	9	1229
Tc99	21	4906
Th230	5968	2660

Post QC

138251

	α	β
Bkg	10	1208
Tc99	29	4957
Th230	6105	2704

275724

	α	β
bkg	7	868
tc99	15	4900
th230	4143	2142

275724

	α	β
Bkg	12	802
Tc99	11	4793
Th230	4312	2064

275713

	α	β
bkg	7	748
tc99	1	3296
th230	5152	2243

275713

	α	β
bkg	~~2~~ 1	732
Tc99	4	3041
Th230	5303	2103

2' × .75

.8 ft²

6/13/12

1415 Begin floor scanning in SU6 w/ 43-7-1.

One minute ambient background (i.e. detector facing ceiling, not in contact w/ surface) counts taken on tile and carpet

JD

~~Carpet background~~

Tile β ~~9~~ 913 α 10 } w/ 43-37-1
rug β 1159 α 13 }

Begin wall static counts in SU7. Walls are drywall.

location	probe	α	β	μR	time
1	w2 ~~093966~~ 275713	26	3515	10	0845 14 June
2	~~C43966~~ 275713 w2	29	3590	11	0855 14 June
3	275724	51	4250	8	0911 14 June
4	275724	34	2928	7	0917 14 June
5	JD ~~093966~~ JD	~~29~~	JD ~~3282~~	JD ~~6~~	JD ~~0902 14 June~~
6	275724	40	2867	7	1628
7	275724	38	2873	9	1622
8	275724	40	3034	7	1555
9	275724	26	3174	7	1535

location	probe	α	β	NR	time
10	275724	38	3408	8	1510
10D	275724	33	3599	8	~~1510~~ 1517
11	275724	40	3526	9	1446
12	275724	40	3288	9	1440
13	275713	20	3039	9	1539
14	275713	15	3590	6	1557
15	275713	~~29~~	3282	8	~~0911~~ 0902 14 June
15D	275713	27	3510	8	0920 14June
16	275713	23	2442	7	0957 14June
17	275713	26	3461	8	1005 14June
18 o	275724	41	4382	11	1017 14June
19	275724	42	3047	9	1009 14June
20	275724	36	2772	6	0959 14June
21	275724	43	2682	6	0948 14June
22	275724	33	2810	7	1635
23	275724	52	2645	5	1605
23D	275724	35	2631	5	1610
24	275724	38	2828	7	~~1604~~ 1600
25	275724	49	3075	6	1328
26	275724	41	3344	6	1502
27	275724	58	3252	7	1454
28*	275713	18	2772	8	1638
29	275713	17	2131	7	1545
30*	275713	19	2739	6	1043 14June

*28 is a metal door

location	probe	α	β	NR	time
31	275713	13	3175	6	0950 14June
32	275713	17	3257	9	0935 14June
32D	275713	12	3512	8	0940 14June
33	275713	15	3161	9	0927 14June
34*	275724	49	2807	8	0926 14 June
35	275715	14	3201	6	1056 14June
36	275713	18	3019	7	1050 14Jun
37	275724	39	2945	7	1045 14Jun
38	~~275724~~ 275713	28	3419	8	0910 14June
39	275724	37	3452	10	1104 Jun
40	275713	19	3181	9	1010 14Jun
41	275724	32	3480	8	1027 14Jun
42	275713	19	3066	7	1020 14Jun
43	275724	44	3054	6	1036 14Jun
44	275713	11	2923	6	1617
45	275713	15	2619	7	1623
46 *	275724	38	2969	9	0932 14Jun
47	275713	13	3278	7	1054 14Jun
48	275713	13	3026	5	1103 14Jun
49	275724	38	2742	7	~~1045~~ loss 14Jun
5	275724	42	2937	6	0939 14June

*34 + 46 are metal doors, 30 is metal door
o 18 is poured concrete block

~1715 Finish QC checks, will resume wall scans of SU7 tomorrow.

Hans Honerlah on route, will be in in the evening.

NRC will be on site tomorrow.

Leave site ~1730.

- SU7-1 drywall
- SU8-1 laminate tile
- SU8-2 laminate tile
- SU3-1 poured concrete wall
- SU6-1 laminate tile
- SU6-2 laminate tile
- SU12-1 poured concrete floor
- SU12-2 poured concrete floor
- SU13-1 concrete brick wall
- SU8-3 laminate tile

bias sample material list 6/13

SU8 tile ambient	275713		275724	
	α	10	α	30
	β	1979	β	2247

~~6/13/12~~ 6/14/12

WR SN: 245026

~1500 Begin bias sampling.

Location	meter	α	β	μR	time
~~SU7~~					
SU7-1	275713	27	2789	10	1520 - 5min
~~SU83-1~~	275724	35	917	14	1521 - 1min
SU06-1	275724	49	~~3135~~ 3385*	8	1524 - 5min
SU06-2	275713	~~22~~	3164	7	1526 - 5min
~~SU08-1~~	~~275713~~	~~11~~	~~608~~	~~4~~	~~1534 - 5min~~
~~SU08-2~~	~~275713~~			~~4~~	~~1540~~
SU12-1	275724	10	600	4	1534
SU12-2	275724	15	803	4	1536
SU13-1	275724	10	540	4	~~1540~~
SU8-1	275713	11	2002	5	1534 - 5min
SU8-2	275713	13	2052	5	1540 - 5min
SU8-3	275713	10	1979	4	1631 - 5min

*3885 α

6/14/12   μR 245026

Begin S48   laminate tile

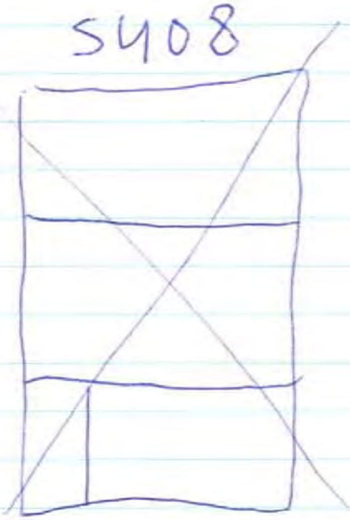
location	meter	α	β	N μR	time
1	275724	28	2410	4	1541
2	275724	50	2370	4	1547
3	275724	36	2302	4	1621
4	275724	35	2271	4	1609
5	275724	34	2320	3	1615
6	275724	30	2153	4	0843-6/15
7	275724	37	2175	4	0851-6/15
8	275724	40	2334	4	1552
9	275724	44	2363	4	1557
10	275724	29	2327	3	1650
11	275724	40	2253	3	1644
12	275724	37	2291	3	1633
13	275724	43	1781	4	~~0851-6/15~~ 0906-6/15
14	275724	33	1746	3	0912-6/15
15	275724	23	1537	4	0917-6/15
16	275724	34	2325	5	1603
17	275713	13	2136	4	1600
18	275713	9	1922	5	1642
19	275713	11	1998	4	1649
*20	275713	14	1803	3	1657
21	275713	10	2207	4	0927-6/15
22	275713	20	2214	4	0922-6/15

*20 is counter top

6/14/12   6/15/12

location	meter	α	β	μR	time
23	275713	5	2049	4	1548
24	275713	14	2004	5	1554
25	275713	9	2072	3	1607
26	275713	13	2011	4	1613
27	275713	13	1965	4	1620
28	275713	18	2350	4	0905 6/15
29	275713	22	2265	4	0856 6/15
30	275713	18	2160	4	0844 6/15
25D	275713	14	2017	4	1626
5D	275724	32	2269	4	1627
30D	275713	14	2144	4	0850 6/15
6D	275724	38	1942	4	0857 6/15
S48B2	275713	12	2383	5	1449 6/18
S48B-1	275724	31	2391	4	1452 6/18
S48B-3	275713	23	2318	3	1455 6/18

S408



6/15/12

· Begin floor static counts in S408 @ ~0840. Will then perform wall statics in JD ~~S48~~ S49 Donatkowski surveying.

location	meter	α	β	$\bar{x}$	time
1	275713	9	1987	4	1539
2	275713	29	2305	5	1448
3	275713	17	2399	5	1415
4	275713	17	1997	4	1425
5	275713	29	2091	5	1012
6	275713	30	2287	4	1021
7	275713	34	2375	5	1027
8	~~275724~~	~~64~~	~~2128~~		~~1050~~
9	275713	52	2922	4	0916
10	275713	42	2608	4	0935
11	275713	18	2764	4	0941
12	275713	25	2634	4	0949
13	275713	32	3145	4	0957
14	275713	15	2614	5	~~1633~~ 1433
15	275713	23	2471	4	1439
16	275713	29	2473	4	1530
17	275713	30	2516	4	1523
18	275713	36	2565	3	1517
19	275713	38	3456	3	1501
19D	275713	37	3333	3	1509

location	meter	α	β	x	time
20	275713	24	3011	4	1455
21	275713	17	2080	4	1025 6/18
22	275713	22	2174	3	1107 6/18
23	275713	21	2248	4	1100 6/18
24	275713	24	2218	3	1212 6/18
25	275713	25	2158	4	1402 6/18
26	275713	26	~~3010~~ 1801	4	
27	275713	30	3130	4	1037
28	275713	28	2355	4	1046
28D	275718	33	2290	5	1078
29	275713	40	2570	4	1053
30	275713	32	2586	4	1850
31	275713	26	2420	5	1101
31D	275713	22	2419	5	1129
32	275713	30	2471	4	1620
33	275713	9	1695	4	1419
34	275713	33	2692	4	1204 6/18
35	275713	14	3344	4	1158 6/18
36	275713	27	2010	3	0951 6/18
37	275713	57	3180	4	0945 6/18
38	275713	49	2633	5	0957 6/18
39	275713	26	2722	4	1007 6/18
40	275713	42	2865	3	1017 6/18
41	275713	33	2312	4	1058 6/18

location	meter	α	β	x	time
42	275713	39	2295	3	1044 6/18
42D	275713	34	2282	3	1051 6/18
43	275713	34	2205	3	1038 6/18
44	275713	22	1887	4	1032 6/18
45	275713	16	2217	4	1150 6/18
46	275713	26	2233	4	1136 6/18
46D	275713	26	2255	4	1143 6/18
47	275713	13	2341	4	1130 6/18
48	275713	17	1986	4	1123 6/18
49	275724	34	2131	4	1212
50	275724	61	2236	3	1205
51	~~275734~~	63	2286	3	1200
52	275724	47	2294	3	1150
53	275724	59	2236	4	1408 6/18
54	275724	39	2287	4	1111
55	275724	55	2212	4	1119
56	275724	41	2282	4	1127
57	275724	61	2286	5	1400 6/18
58	275724	43	2224	4	1418 6/18
58D	275724	61	2295	3	1424 6/18
59	275713	34	2279	3	1425 6/18
60	275724	44	2252	4	1043
61	275724	39	2413	5	1515
61D	275724	45	2565	5	1522

continued on pg 30

SU 9 material list

1 metal door
2 drywall
3 drywall
4 metal door
5 drywall
6 drywall
7 dry wall
8 metal conduit
9 concrete block
10 concrete block
11 concrete block
12 concrete block
13 Concrete block
14 concrete block
15 concrete block
16 concrete block
17 concrete block
18 Concrete block
19 concrete block
20 concrete block
21 metal door
22 drywall
23 drywall
24 drywall
25 metal door
26 metal door
27 concrete block
28 concrete block
29 concrete block
30 concrete block
31 Concrete block
32 concrete blocks
33 ~~concrete block~~ frame hood
34 Concrete block
35 Concrete blocks
36 glass window
37 Concrete block
38 concrete block
39 Concrete block
40 concrete block
41 dry wall
42 dry wall
43 dry wall
44 metal door
45 dry wall
46 dry wall

47 drywall
48 metal door
49 frame hood plastic
50 drywall
51 drywall
52 drywall
53 drywall
54 drywall
55 drywall
56 drywall
57 drywall
58 dry wall
59 dry wall
60 dry wall
61 drywall
62 drywall
63 metal door
64 dry wall
65 dry wall
66 metal door
67 metal cabinet
68 metal cabinet
69 metal cabinet
70 dry wall
71 dry wall
72 dry wall
73 dry wall
74 dry wall
75 dry wall
76 metal conduit
77 metal conduit
78 metal conduit
79 dry wall
80 dry wall

SU 9B dry wall

check data file?

location	meter	α	β	x	time
62	275724	53	2512	4	1507
63	275724	55	2199	5	1527
64	275724	41	2365	4	~~1616~~1414
65	275724	42	2621	4	1425
66	275724	43	2231	3	1434
67	275724	34	2131	4	1454
68	275724	?33	2124	3	1447
69	275724	46	2285	3	1441
70	275724	78	2373	4	1436 6/18
70D	275724	56	2292	4	1442 6/18
~~70~~ 71	275724	38	2175	5	0955
72	275724	44	2250	5	1010
73	275724	34	2140	4	1004
74	275724	35	2185	3	0931
75	275724	29	2263	5	0940
76	275724	46	2023	4	1020
77	275724	64	2128	4	1050
78	275724	58	2098	3	1026
79	275724	36	2158	4	0948
80	275724	43	2222	4	1057
80D	275724	49	2250	4	~~10~~1104
8	275713	41	1826	4	1441 6/18
8~~9~~B	275713	43	2215	5	1435 6/18

6/15/12 Afternoon QC

~~257~~ 275713 ~ 143-37 Post

B	α	β
bkg	1	804
tc99	8	3255
th230	5246	2152

	α	β
bkg	0	750
tc99	7	3135
th230	5324	2234

275724 ~ 143-37

	α	β
bkg	6	851
tc99	7	4818
th230	4357	2152

	α	β
bkg	4	850
~~tc99~~	10	4798
th230	4413	2062

138251 ~ 143-37-1

	α	β
bkg	3	1080
tc99	22	4935
th230	6012	2614

	α	β
bkg	9	1172
tc99	17	5181
th230	6396	2780

Begin surveys @ ~~8~~ 1415
Donatowski + Watkins

Perform post survey QC checks at 1600.

Leave site @ 1630

Perform QC checks @ 1635

253050 exposure rate meter
bkg 8
cs 137 70

~~25~~ 245026 exposure rate meter
bkg 8
cs137 65

311206 α / β probe
bkg 130
tc99 180

275713 ~ / 43-37

	α	β
bkg	2	771
tc99	1	3182
th230	5333	2177

275724 ~ / 43-37

	α	β
bkg	9	820
tc99	14	4796
th230	4290	2060

315 ra-226 dpm

~~27~~ 138251

	α	β
bkg	7	1216
tc99	27	5275
th230	6242	2795

Leave site @ 1730

6/19/12

Arrive on site @ 0700.
Cloudy and overcast.

Begin QC checks.

311206 α/β probe
bkg 111
tc99 1713

245026 exposure rate meter
bkg 9
cs137 75

253650 exposure rate meter
bkg 8
cs137 75

6/19/12

275713 w/ 43-37

	α	β
bkg	17	806
Tc99	8	3220
th230	5315	2061

275724 w/ 43-37

	α	β
bkg	9	846
Tc99	13	4807
th230	4065	2168

138251 w/ 43-37-1

	α	β
bkg	23	1045
Tc99	26	5203
th230	6292	2604

0845 Begin surveys in 2541
Domkowski & Miller.

Exposure rates w/ 253050.

Backgrounds seem high for alpha-potential radon?

2541 - 541 - poured concrete floor

location	meter	α	β	t	time
1	275713	8	653	4	0857
2	275713	13	696	5	0857
3	275713	14	682	5	0856
4	275713	20	694	4	0854
5	275713	15	640	5	0852
6	275713	34	730	4	0900
7	275713	33	767	4	0901
8	275713	20	683	5	0903
9	275713	17	639	4	0904
10	275713	15	668	4	0906
11	275713	10	706	4	0907
12	275713	15	784	4	0909
13	275713	14	650	4	0910
14	275713	17	663	3	0912
15	275713	18	697	3	0913
16	275713	11	647	3	0915
17	275713	14	679	4	0916
~~18~~	~~275713~~	~~2041~~	~~827~~	~~5~~	~~0918~~
19	275713	41	827	4	0918
20	275713	16	731	5	0920
21	275713	16	675	4	0921
22	275713	8	687	3	0923
23	275713	15	728	3	0924
24	275713	16	728	4	0926

6/19/12

location	meter	α	β	x	time
25	275713	24	673	4	0930
26	275713	17	684	3	0932
27	275713	10	712	4	0933
28	275713	20	697	3	0934
29	275713	14	695	3	0935
30	275713	14	706	3	0937
18	275713	36	752	5	0929
19D	275713	36	742	5	0939
7D	275713	52	782	5	0941
3D	275713	17	760	4	0942
SW2B	275713	10	725	4	0944

2541 SW2 - metal

reading	meter	α	β	x	time
1	275724	10	459	5	0851
2	275724	21	433	3	0853
3	275724	13	415	3	0855
4	275724	8	410	3	0856
5	275724	10	449	3	0858
6	275724	5	398	4	0859
7	275724	5	406	5	0900
8	275724	10	430	4	0902
9	275724	13	422	4	0903
10	275724	14	434	4	0905
11	275724	6	400	5	0906
12	275724	8	403	3	0908
13	275724	8	404	4	0909
14	275724	16	413	4	0911
15	275724	20	429	3	0913
16	275724	16	419	4	0914
17	275724	10	398	3	0916
18	275724	20	461	4	0917
19	275724	9	421	3	0919
20	275724	16	401	4	0920
21	275724	14	402	4	0922
22	275724	20 ~~8~~ 14	37 ~~6~~ → 427	4	~~0923~~ 0927
23	275724	7	408	4	0929
24	275724	8	420	3	0931

6/19/2012

Location	meter	α	β	x	time
25	275724	12	434	3	0933
26	275724	15	404	4	0934
27	275724	6	454	4	0935
28	275724	7	405	4	0937
29	275724	10	384	4	0938
30	275724	18	404	4	0940
29D	275724	7	409	4	0941
10D	275724	11	434	4	0943
25D	275724	5	408	4	0944
542 B	275724	13	390	4	0946

6/19/2012

Building 2541 - ambient α/β

2360 SN 275724 α = 6
43-37 #092501 β = 525

2360 SN 275713 α = 2
43-37 #093966 β = 500

6/19/2012 Post QC

275713

	α	β
bkg	2	854
tc99	4	3097
th230	5360	2058

Leave Site @ 1700

275724

	α	β
bkg	9	822
tc99	6	4770
th230	4297	2059

138251

	α	β
bkg	13	1253
tc99	32	5210
th230	6254	2759

6/20/2012

25713	Pre QC α	Pre QC β	Post QC α	Post QC β
Bkg	2	747	13	800
Tc99	4	3191	11	3160
Th230	5017	2158	5242	2310

275724	α	β	α	β
Bkg	9	800	26	861
Tc99	7	4786	23	4773
Th230	4015	2047	4244	2091

138251	α	β	α	β
Bkg	12	1130		
Tc99	15	5190		
Th230	6219	2808		

0950 Head to Squire Hall to perform static counts on points with carpet removed.

Weather is sunny and hot.

NRC will be on Site today.

6/20/12

283 Squire Hall under carpet survey

253050

location	meter	∠	β	x	time
x28	275724	13	643	10	1021
x 1 *	275724	11	853	10	1141
x 2	275724	20	859	14	1132
x 3	275724	23	800	9	1112
x 4					
x 5	275724	29	878	11	1117
x 6	275724	18	571	4	1053
7					
x 8 *	275724	19	819	10	1127
9					
x 10	275724	17	852	12	1130
11					
x 12	275724	25	506	4	1050
13					
14					
x 15	275724	29	965	12	1155
16					
x 17	275724	21	641	6	1047
x 18	275724	30	584	6	1048
X 19	275724	~~24~~ 17	~~878~~ 894	10	1120
20	~~275~~				

* discovered drain under carpet

6/20/12

location	meter	∠	β	x	time
21					
22					
x 23	275724	22	806	10	1108
24					
x 25	275724	16	615	5	1056
x 26	275724	17	836	~~836~~ 11	1028
27					
29					
x 30	275724	11	642	9	1034
~~x 20~~ 26D	275724	16	792	11	1030
x 18D	275724	22	593	5	1042
x 19D	275724	20	828	11	1122
x 1D	275724	25	799	11	1147
x 15D	275724	23	870	12	1157

6/20/2012

Leave Squire Hall @ 1210.

Leave for lunch @ 1330.

Return to site @ 1400.

253050

Donchenski begin surveying admin area @ 1430. Tile and carpet. Ambient is post-283 QC checks.

location	meter	α	β	χ	time
1	275724	8	922	15	1451
2	275713	5	465	7	1506
3	275724	16	1018	12	1442
4	275713	12	1014	13	1453
5	275713	11	1038	12	1445
6	275724	17	1007	12	1446
7	275724	15	527	5	1509
8	~~275713~~ ~~275724~~	9	1076	10	1448
9	275724	22	1051	14	1449
10	275713	5	434	4	1508
11	275713	16	968	14	1434
12	275713	15	1178	12	1451
13	275724	14	1112	13	1510
14	275724	14	939	10	1457
15	275724	8	492	4	1504

*: nearest to mural/CF-252 room
o: farthest from mural/CF-252 room

location	meter	α	β	χ	time
16	275724	18	482	7	1507
17	275713	6	809	10	1502
18	275713	14	1068	12	1441
19	275713	24	1083	13	1439
20	275713	8	869	13	1504
21	275724	12	888	10	1502
22	275724	20	1171	14	1444
23	275724	14	991	12	1501
24	275724	7	969	9	1505
25	275724	15	980	12	1455
26	275713	13	855	11	1500
27	275724	13	1019	13	1453
28	275724	23	1009	11	1500
29	275713	10	901	13	1457
30	275724	24	1062	10	1440
11D	275713	15	1001	12	1436
8D	275713	12	1102	10	1449
4D	275713	16	1025	12	1455
15-Bing-Hall	275724	9	496	7	1610
carp Amb	275713	13	800	} used these values for carpet background in spreadsheet TMM	
carp Amb	275724	26	861		
tile Amb*	275713	6	734		
tile Amb*	275724	14	762		
tile Amb o	275713	4	450		
tile Amb o	275724	11	483		

SU 15 materials list

1 carpet
2 blue tile
3 carpet
4 carpet
5 carpet
6 carpet
7 blue tile
8 carpet
9 carpet
10 blue tile
11 carpet
12 carpet
13 carpet
14 carpet
15 blue tile
16 blue tile
17 white tile
18 carpet
19 carpet
20 white tile
21 white tile
22 carpet
23 carpet

24 white tile
25 carpet
26 carpet
27 carpet
28 carpet
29 carpet
30 carpet
bias - blue tile

275715 w/ 43-37

	α	β
bkg	65	790
tc	6	3334
th	5306	2115

275724 w/ 43-37

	α	β
bkg	9	896
tc	14	4840
th	4278	2049

245026
bkg 9
cs 75

253050
bkg 10
cs 70

6120/12

13825 | ~143-37-1

	α	β
bkg	12	1377
to 214	31	5216
th 230	6187	2811

SU 6 Ambient

	α	β
275713	1	625
275724	9	746