



Memorandum

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Paul Goldhagen, U.S. Department of Homeland Security
Prepared by: Nicholas Berliner, Cabrera Services, Inc.
Reviewed by: Gregory Hisel, Cabrera Services, Inc.
Date: February 29, 2008
Re: Western Half of 201 Varick Street Fifth Floor EML Space, Revision 2

This memo is intended to summarize final status survey data collected from U.S. Department of Homeland Security (DHS) Environmental Measurements Laboratory (EML) space within the western half of the fifth floor. This memorandum merely summarizes the information that will be contained in the forthcoming Final Status Survey (FSS) Report. Surveys were performed during two separate mobilizations, spanning from March 4 to March 27, 2007, and October 8 to November 30, 2007. The following survey units were completed within the western half of the fifth floor:

- Class 1 Survey Units 536 (inner room) and 554-B2
- Class 2 Survey Unit 5-W (includes Rooms 503, 536, 556-A, 556-B, and 556-C)
- Class 3 Survey Unit 5-W3 (includes all remaining rooms on western half of fifth floor except Rooms 555-A, 555-B, 555-C, 559-A, and 559-C, and excluding stairs, utility closets, pipe chases and other inaccessible areas)

Survey data are presented on the following sheets attached to document:

- Systematic measurement locations (i.e., direct measurements and smears locations for removable radioactivity)
- Systematic measurement data
- Scan measurement data sheets to document surfaces scanned for total radioactivity

Systematic measurement location data sheets use a coordinate system based on feet, in which "X" denotes an axes for each survey unit in an approximately west to east orientation, and "Y" denotes an axes for each survey unit in an approximately south to north orientation. The coordinate system varies for each different survey unit Class as follows:

- Class 1 Survey Units utilizes a coordinate system starting at the point 0,0 in the southwest corner of each room (i.e., each individual room comprises its own survey unit)



- Class 2 Survey Unit 5-W utilizes a coordinate system starting at the point 0,0 in the southwest corner of Room 503
- Class 3 Survey Unit 5-W3 utilizes a coordinate system starting at the point 0,0 at the southwest corner of the Fifth floor (i.e., the southwest corner of Room 502-D)

This document also includes the demobilization survey for Room 508 where radiological instrument and check source storage occurred during final status survey operations including daily instrument quality control measurements, and Rooms 508-B and 508-I where radiologically-contaminated materials were stored during the course of remedial and final status survey operations. These materials were relocated to Room 544, a location where final status surveys have yet to be completed and where additional remedial work is anticipated, in the eastern portion of the fifth floor immediately prior to demobilization. Systematic measurement data sheets present data in disintegrations per minute (dpm) per 100 square centimeters (cm²) converted from raw measurement data collected in counts per minute (cpm). These data were converted into dpm / 100 cm² using background counts from non-impacted reference material of the same composition as the material surfaces being surveyed, the detectors' intrinsic efficiencies for alpha and beta radioactivity, and the active area of the window of each detector. These conversions were performed utilizing the following equation:

$$\text{activity} \left(\frac{\text{dpm}}{100 \text{ cm}^2} \right) = \frac{\left(\left(\frac{\text{sample counts}}{\text{count time (minutes)}} \right) - \left(\frac{\text{background counts}}{\text{count time (minutes)}} \right) \right) \times 100}{\text{efficiency (unitless)} \times \text{detector area (cm}^2\text{)}}$$

A spreadsheet listing the different instruments used, their empirically-calculated detector intrinsic efficiencies for alpha and beta radioactivity, and the active area of the window of each detector is included on page 4 of this document; and a series of sheets listing background count data collected from non-impacted reference materials are included in this document.

Scan measurement data sheets describe direct scan survey measurements on floors, walls, and other surfaces within survey units. Please note that different survey unit classes received different percent scan coverages as follows:

- Class 1 survey units received 100% scan coverage of floors and lower walls (i.e., surfaces below two meters) and a minimum of 25% scan coverage of upper walls and ceilings (i.e., surfaces above two meters)
- Class 2 survey units received a minimum of 25% scan coverage of floors and lower walls (i.e., surfaces below two meters) and a minimum of 10% scan coverage of upper walls and ceilings (i.e., surfaces above two meters)
- Class 3 survey units received a minimum of 10% scan coverage scan survey of all surfaces



Scan measurement data sheets present scan survey results as raw cpm data, which can be converted into dpm / 100 cm² using the equation presented above. For example, an average beta scan rate of 500 cpm with the Ludlum model 2360 (serial number 193675) with model 43-37 detector (serial number PR 216984) on painted cinder block would be compared to the average of the five one-minute background beta measurements collected on the same material (refer to page 8: 467 + 478 + 438 + 484 + 431) ÷ 5 = 459.6 cpm; the intrinsic efficiencies for beta radioactivity (0.1862) and the area of the window of the detector (582 cm²) are all plugged into the equation above as follows:

$$\text{activity (dpm / 100 cm}^2\text{)} = \frac{\left(\left(\frac{500 \text{ sample counts}}{1 \text{ minute}} \right) - \left(\frac{459.6 \text{ background counts}}{1 \text{ minute}} \right) \right) \times 100}{(0.1862) \times (582 \text{ cm}^2)}$$

= 37 dpm / 100 cm² for beta radioactivity

The scan measurement data sheets also contain exposure rate measurements conducted using a Bicron MicroRem detector (serial number 1490) and listed in units of microrem per hour (µrem/hr).

The results of these surveys were compared to the surface activity derived concentration guideline levels (DCGLs) as noted in Table 3.1 of the Final Status Survey Plan (Cabrera, 2007). This table is presented below:

Surface Activity DCGLs for DHS EML FSS

Agency / Reference	Alpha (dpm/100 cm ²)		Beta/Gamma (dpm/100 cm ²)	
	Total	Removable	Total	Removable
NRC 10 CFR 20.1402	Total dose to the public after decommissioning of not more than 25 millirem/year			
NYCDOH § 175.03 – Release of Materials or Facilities	2,500 Max 500 Average	100	0.2 mR/hr ^b	1,000
DOE 10 CFR 835 Appendix D	500 ^a	20 ^a	1,000 ^a	200 ^a
<i>Chosen DCGL For DHS EML FSS</i>	<i>500^a</i>	<i>20^a</i>	<i>1,000^a</i>	<i>200^a</i>

Notes: a. Averaged over 1 m², provided no 100 cm² area exceeds 3 times the specified limit

b. Measured at 1 centimeter (cm) from the surface

None of the scan survey results, systematic measurement results, or smears results for removable radioactivity exceed the Chosen DCGLs for the DHS EML FSS. These Chosen DCGLs for the DHS EML FSS were reviewed by EML and the U.S. Army Joint Munitions Command prior to performance of final status surveys.



Systematic Measurement and Direct Scan Survey Measurement Instruments

Counting Instrument: Ludlum 2360 S/N 184938	Detector: Ludlum 43-37 S/N PR216984
Alpha Efficiency: 0.066332	Beta Efficiency: 0.175338
Active area of the window of the detector: 582 cm ²	
Counting Instrument: Ludlum 2360 S/N 193675	Detector: Ludlum 43-37 S/N PR178371
Alpha Efficiency: 0.137181	Beta Efficiency: 0.18623
Active area of the window of the detector: 582 cm ²	
Counting Instrument: Ludlum 2224 S/N 183048	Detector: Ludlum 43-68 S/N PR161781
Alpha Efficiency: 0.178325	Beta Efficiency: 0.24131
Active area of the window of the detector: 126 cm ²	
Counting Instrument: Ludlum 2224 S/N 110002	Detector: Ludlum 43-89 S/N PR164832
Alpha Efficiency: 0.15586	Beta Efficiency: 0.083547
Active area of the window of the detector: 125 cm ²	

Smear/Removable Activity Measurement Instrument

Counting Instrument: Ludlum 2929 S/N 200051	Detector: Ludlum 43-10-1 S/N PR215948
Alpha Efficiency: 0.355889	Beta Efficiency: 0.24375
Active area of the window of the detector: 100 cm ²	



Reference Material Surveys

Radiation Background Levels

Radiation Background Levels

Survey Meter	
Manufacturer:	Ludlum
Model:	2224
Serial No.:	183048

Detector	
Manufacturer:	Ludlum
Model:	43-68
Serial No.:	PR1611781

Date Data Collected: 10/12/07

By: RLS

[illegible]

Comments:

Radiation Background Levels

Survey Meter	
Manufacturer:	Cushman
Model:	2360
Serial No.:	193675

Detector	
Manufacturer:	Ludlum
Model:	43-37
Serial No.:	PR 216984

Date Data Collected: 10/12/07

By: NMB

[illegible]

Comments:



Room 508 Demobilization Surveys

Location: Room 508

Site: DHS EMI

RWP#

EML-02

Survey #

EML-24

Survey Type:

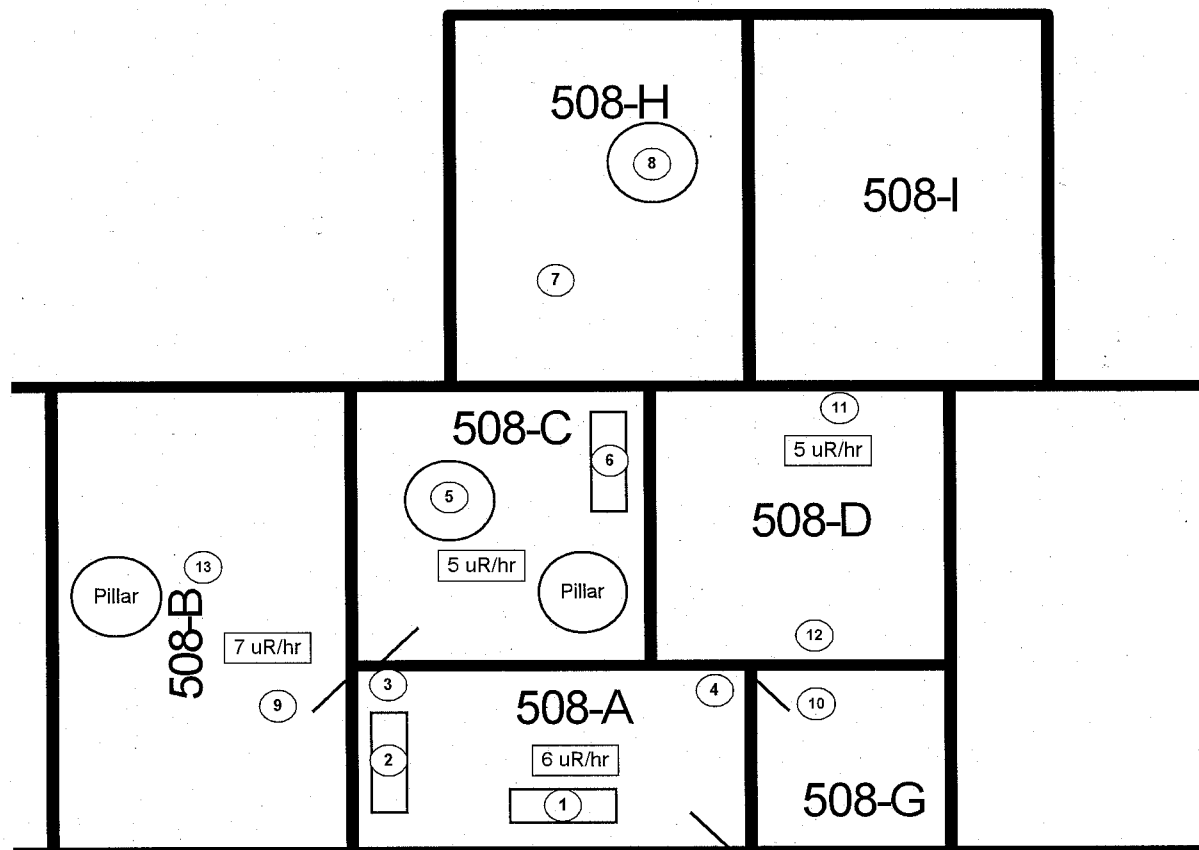
Demobilization

Page 11 of 62

Smear (CPM/100 cm²)
Direct Count (CPM/Direct Frisk)

circle one

No.	α	β	No.	α	β
1	0	30	26		
2	0	28	27		
3	0	35	28		
4	0	41	29		
5	0	38	30		
6	0	33	31		
7	1	26	32		
8	0	27	33		
9	1	36	34		
10	0	35	35		
11	1	29	36		
12	0	33	37		
13	1	23	38		
14			39	N	
15			40		A
16			41		
17			42		
18			43		
19			44		
20	N		45		
21		A	46		
22			47		
23			48		
24			49		
25			50		



Comments	Surveyed By:	Date:	Instrument	Serial #	α Eff.	β Eff.	α Bkg.	β Bkg.	γ Bkg.	Cal. Due	Key
	<i>[Signature]</i>	11/29/2007	2929	142645	—	—	—	—	—	9/21/2008	
		11/29/2007	43-10-1	PR 156519	0.349	0.182	0.35	31.7	—	9/21/2008	■ A/S Location
		11/29/2007	MicroRem	1490	—	—	—	—	5 uR/hr	10/3/2008	*- Boundary
											○ Smear
											□ Dose Rate /hr
											* Direct Reading CPM/direct frisk
											△ Grab Sample
	Reviewed By:	Date:									
	<i>[Signature]</i>	11/29/07									

Revision 2		OP-001-02 Radiological Survey Sheet				Radiological Surveys			
Location: Room 508		RWP#		Survey #		Survey Type:		Page 1 of 1	
Site: DHS EML		EML-02		EML-25		Demobilization		Page 12 of 62	
Smear (DPM/100 cm ²)		<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">circle one</div> </div>							
Direct Count (CPM/Direct Frisk)									
No.	α/β								
508-B 1	29.84								
508-B 2	38.83								
508-B 3	32.28								
508-B 4	34.53								
508-B 5	42.68								
508-B 6	21.39								
508-I 1	49.76								
508-I 2	28.36								
508-I 3	58.93								
508-I 4	65.75								
508-I 5	36.84								
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<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>		<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>							
<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>		<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>							
<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>		<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>							
<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>		<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>							
<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>		<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>							
<div style="display: flex; justify-content: space-between;"> <div>N</div> <div>A</div> </div>									

Cabrera Swipe Samples

Protocol #: 1 Name: Gross A/B RSP-1 11-Dec-2007 19:05
 Region A: LL-UL= 2.0-2000 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region B: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Time = 60.00 QIP = tsIE ES Terminator = Count
 Conventional DPM
 Nuclide 1 = 199312

S#	TIME	CPMA	A:2S%	DPM1	tsIE	FLAG
1	60.00	28.35	4.84	67.77	654.-	BL-1
2	60.00	30.95	4.64	97.61	476.	508B-1
3	60.00	29.57	4.74	106.60	420.-	508B-2
4	60.00	29.23	4.77	100.05	440.	508B-3
5	60.00	27.07	4.96	102.30	403.-	508B-4
6	60.00	28.23	4.85	110.45	391.-	508B-5
7	60.00	30.22	4.69	89.16	509.-	508B-6
5 missing vials)						
13	60.00	27.78	4.89	65.20	670.-	BL-2
14	60.00	26.57	5.00	114.96	361.	508I-1
15	60.00	27.08	4.96	93.56	436.-	508I-2
16	60.00	26.72	4.99	124.13	341.-	508I-3
17	60.00	28.37	4.84	130.95	343.-	508-I4
18	60.00	28.83	4.80	102.04	427.-	508-I5



**Class 1 Survey Units:
536 (inner room) and 554-B2 Final
Status Survey Data Sheets**



Survey Unit 5-536 (inner), Class 1, 5th Floor

Class 1 536 (inner)

X Coord	Y Coord	Z Coord	Label	Date	Systematic Data (dpm/100 cm ²)		Smear Data (dpm/100 cm ²)		Surface
					alpha	beta	alpha	beta	
3.7145	2.9297	0	5-536 (inner)-1	3/19/2007	8	104	2	-19	Floor
10.2757	2.9297	0	5-536 (inner)-2	3/19/2007	4	41	0	1	Floor
0.4339	8.6118	0	5-536 (inner)-3	3/19/2007	4	71	0	-48	Floor
6.9951	8.6118	0	5-536 (inner)-4	3/19/2007	12	88	0	22	Floor
13.5563	8.6118	0	5-536 (inner)-5	3/19/2007	4	91	0	-27	Floor
3.7145	14.294	0	5-536 (inner)-6	3/19/2007	16	85	0	-3	Floor
10.2757	14.294	0	5-536 (inner)-7	3/19/2007	0	93	0	-3	Floor
2.3561	0	2.0958	5-536 (inner)-8	3/19/2007	4	49	0	22	Wall 4
8.9173	0	2.0958	5-536 (inner)-9	3/19/2007	12	85	0	-27	Wall 4
15.4784	0	2.0958	5-536 (inner)-10	3/19/2007	0	137	0	6	Wall 4
16.15	5.8896	2.0958	5-536 (inner)-11	3/19/2007	0	44	0	-11	Wall 3
16.15	12.4508	2.0958	5-536 (inner)-12	3/19/2007	0	-66	0	-35	Wall 3
12.7681	15.63	2.0958	5-536 (inner)-13	3/19/2007	0	-22	0	14	Wall 2
6.2069	15.63	2.0958	5-536 (inner)-14	3/19/2007	12	-27	0	55	Wall 2
0	15.2758	2.0958	5-536 (inner)-15	3/19/2007	0	80	0	-15	Wall 1
0	8.7146	2.0958	5-536 (inner)-16	3/19/2007	8	47	2	10	Wall 1
0	2.1534	2.0958	5-536 (inner)-17	3/19/2007	12	107	0	1	Wall 1

Static Counting Instrument: Ludlum 2224 S/N 183048

Alpha Efficiency: 0.198483149

Detector: Ludlum 43-68 S/N PR161781

Beta Efficiency: 0.2891

Smear Counting Instrument: Ludlum 2929 S/N 200051

Alpha Efficiency: 0.355889311

Detector: Ludlum 43-10-1 S/N PR215948

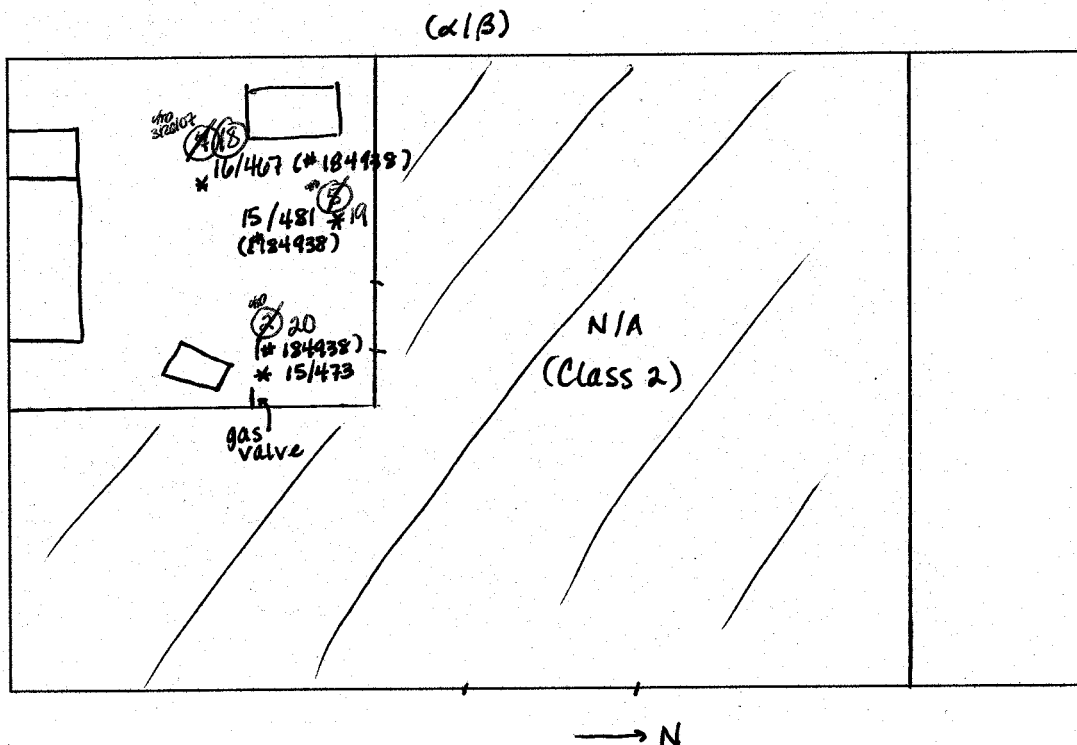
Beta Efficiency: 0.2437

Scan Information Sheet

SU/Room: 5-536 / 536 (Inner)Class: ITech Init.: GB, NB, MD

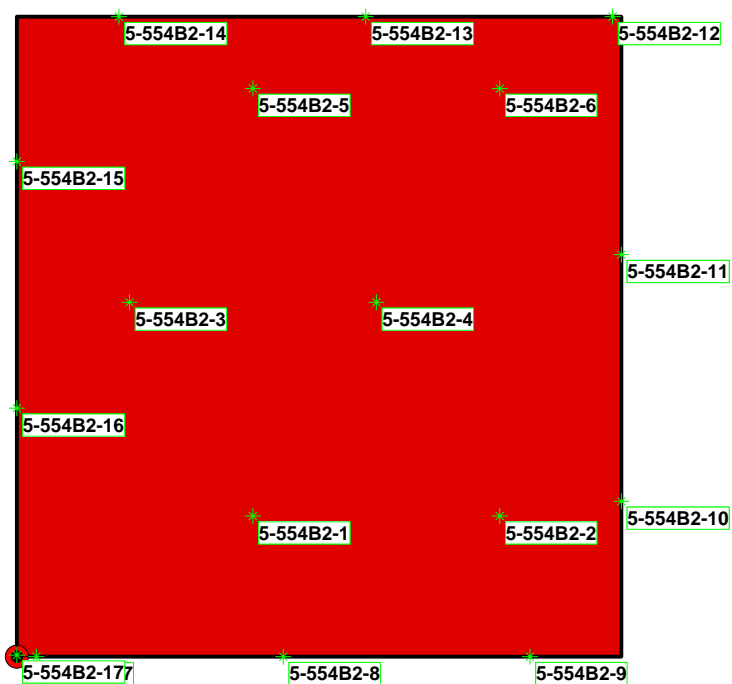
- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm

- Floor - VAT, ^SW walls painted cinderblock, N/E walls metal with glass windows.
- Floors were swept prior to survey.
- Dose was 7-8 $\mu\text{R/hr}$
- Statics were taken on floor (biased), but no bias smears were collected. (systematics later collected)

Notes: Floor survey (43-37/2360, #184938) γ -survey: \leq bkgd α -survey: \leq bkgd. β avg: ~~400 cpm~~ 450 cpm
 β max: 600 cpm

(443/2221, #163673)

Wall survey (43-37/2360, #143675) α -survey: \leq bkgd β avg: 450 cpm
 β max: 500 cpm450 cpm } high ceilings
500 cpm } and top of lights.Tech Signature: Michelle DillDate: 3/13/07



Survey Unit 554B2, Class 1, 5th Floor

Class 1 554B2

X Coord	Y Coord	Z Coord	Label	Date	Systematic Data		Smear Data		Surface
					(dpm/100 cm ²)		(dpm/100 cm ²)		
					alpha	beta	alpha	beta	
6.9143	4.1213	0	5-554B2-1	11/2/2007	0	-39	0	-22	Floor
14.1443	4.1213	0	5-554B2-2	11/2/2007	13	59	5	11	Floor
3.2993	10.3826	0	5-554B2-3	11/2/2007	13	-36	8	-27	Floor
10.5293	10.3826	0	5-554B2-4	11/2/2007	4	62	0	-22	Floor
6.9143	16.644	0	5-554B2-5	11/2/2007	4	13	0	6	Floor
14.1443	16.644	0	5-554B2-6	11/2/2007	0	-237	0	28	Floor
0.5718	0	1.8232	5-554B2-7	11/2/2007	13	184	0	-22	Wall 4
7.8018	0	1.8232	5-554B2-8	11/2/2007	13	303	0	-60	Wall 4
15.0318	0	1.8232	5-554B2-9	11/2/2007	4	237	0	-16	Wall 4
17.71	4.5518	1.8232	5-554B2-10	11/2/2007	13	-36	0	44	Wall 3
17.71	11.7818	1.8232	5-554B2-11	11/2/2007	4	-132	0	-5	Wall 3
17.4482	18.75	1.8232	5-554B2-12	11/2/2007	9	-335	0	11	Wall 2
10.2182	18.75	1.8232	5-554B2-13	11/2/2007	4	171	0	22	Wall 2
2.9882	18.75	1.8232	5-554B2-14	11/2/2007	0	194	0	-5	Wall 2
0	14.5082	1.8232	5-554B2-15	11/2/2007	13	303	0	22	Wall 1
0	7.2783	1.8232	5-554B2-16	11/2/2007	0	355	0	-33	Wall 1
0	0.0483	1.8232	5-554B2-17	11/2/2007	27	257	0	17	Wall 1

Static Counting Instrument: Ludlum 2224 S/N 183048

Alpha Efficiency: 0.1783255

Detector: Ludlum 43-68 S/N PR161781

Beta Efficiency: 0.2413

Smear Counting Instrument: Ludlum 2929 S/N 142645

Alpha Efficiency: 0.3486588

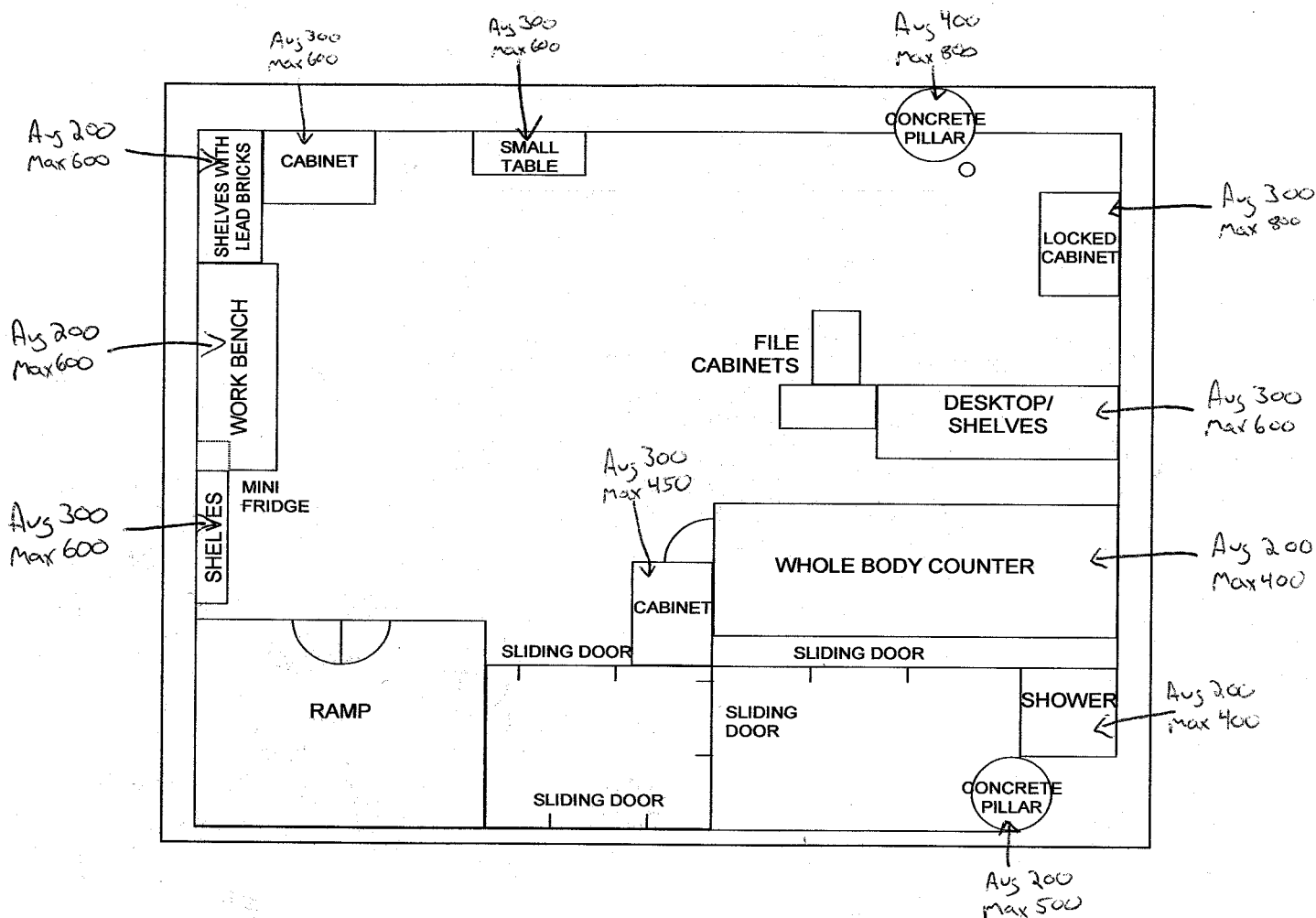
Detector: Ludlum 43-10-1 S/N PR156519

Beta Efficiency: 0.1815

Scan Information Sheet

SU/Room: 554-B2Class: 1Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β average: 400 β maximum: 800

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

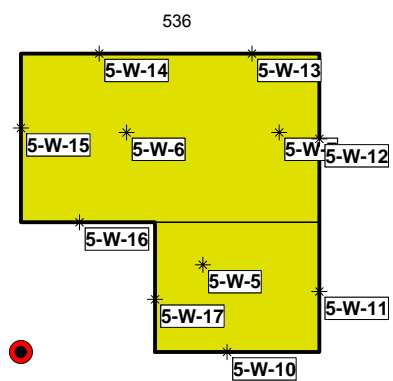
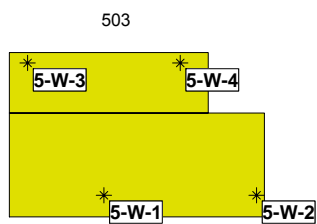
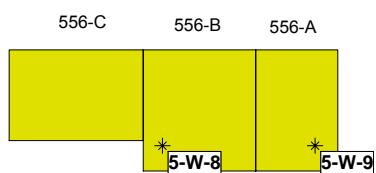
 α -survey: \leq background β average: 500 β maximum: 900

The lead pig, one instrument (possible LUI), and various rad material from the locked cabinet (e.g. tuna cans, ThNO_3 , Kr^{85} cylinder) were removed due to elevated activity observed on these items. A 43-2 detector was also removed because it was in a bag labeled "Contaminated Mylar & Cap." All these items will be surveyed individually.

Tech Signature: Robert [Signature] Date: 10/31/07



Class 2 Survey Unit: 5-W Final Status Survey Data Sheets



Class 2 5-W 5th Floor

X Coord	Y Coord	Z Coord	Label	Date	Systematic Data (dpm/100 cm ²)		Smear Data (dpm/100 cm ²)		Surface
					alpha	beta	alpha	beta	
10.9321	2.4949	0	5-W-1	3/16/2007	-4	126	-1	4	Floor
28.5891	2.4949	0	5-W-2	3/16/2007	4	99	-1	12	Floor
2.1035	17.7863	0	5-W-3	3/16/2007	0	107	-1	16	Floor
19.7606	17.7863	0	5-W-4	3/16/2007	-4	121	2	-12	Floor
134.5314	33.0778	0	5-W-5	3/16/2007	0	99	-1	-29	Floor
125.7028	48.3692	0	5-W-6	3/16/2007	0	113	-1	-29	Floor
143.3599	48.3692	0	5-W-7	3/16/2007	0	154	-1	29	Floor
99.2173	155.4093	0	5-W-8	3/16/2007	0	102	-1	21	Floor
116.8743	155.4093	0	5-W-9	3/16/2007	-4	143	-1	86	Floor
137.3218	23	2.2656	5-W-10	3/16/2007	4	165	-1	37	Wall 7
148	29.9788	2.2656	5-W-11	3/16/2007	8	398	-1	-33	Wall 6
148	47.6358	2.2656	5-W-12	3/16/2007	0	288	-1	-25	Wall 5
140.2071	57.5	2.2656	5-W-13	3/16/2007	0	620	-1	-66	Wall 4
122.5501	57.5	2.2656	5-W-14	3/16/2007	-4	288	-1	-45	Wall 4
113.5	48.893	2.2656	5-W-15	3/16/2007	-4	44	-1	-12	Wall 3
120.264	38	2.2656	5-W-16	3/16/2007	4	19	-1	41	Wall 2
129	29.079	2.2656	5-W-17	3/16/2007	4	44	-1	12	Wall 1

Static Counting Instrument: Ludlum 2224 S/N 183048
Alpha Efficiency: 0.1984831

Detector: Ludlum 43-68 S/N PR161781
Beta Efficiency: 0.2891

Smear Counting Instrument: Ludlum 2929 S/N 200051
Alpha Efficiency: 0.3558893

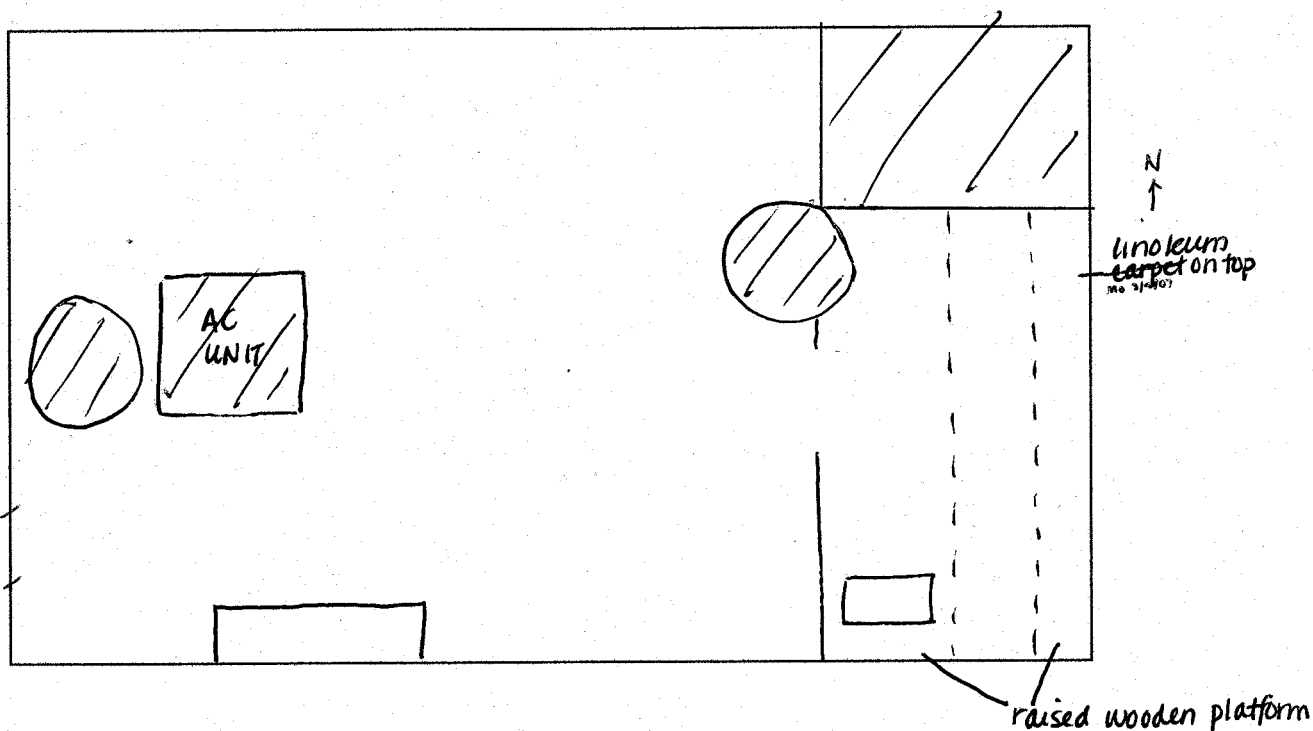
Detector: Ludlum 43-10-1 S/N PR215948
Beta Efficiency: 0.2437

Scan Information Sheet

SU/Room: 5-W/503Class: 2Tech Init.: PR, GB, MD

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm

walls- metal except for S wall, which is
cinder block
floors- VAT

Notes: Floor Survey (43-37/2360, #184938) α -survey: \leq bkgd.
 β avg: 400 cpm
 β max: 500 cpm

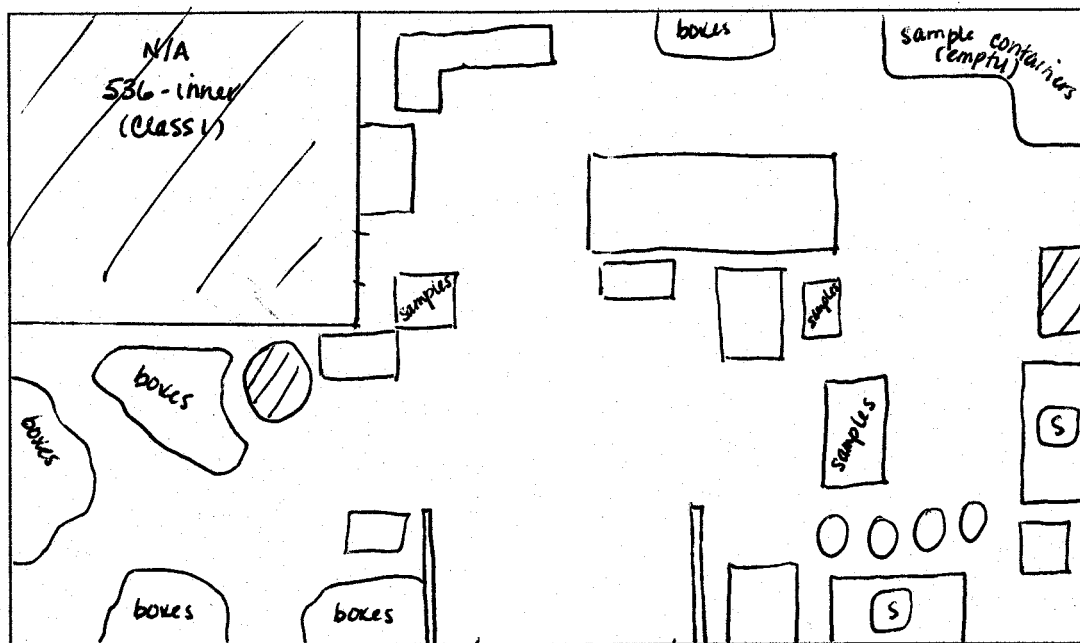
 γ -survey ⁴⁴⁻³ ~~43-3~~ / 2221,
 \leq bkgd. ₃₁₋₄₀₇ #163673)
Wall Survey (43-68/2224, #161781) α -survey: \leq bkgd.
 β avg: 210 cpm
 β max: 250 cpm
Tech Signature: Michelle DillDate: 3/9/07

Scan Information Sheet

SU/Room: S-W/536Class: 2Tech Init.: PR, GB, MD

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm

-Floor VAT, walls PCB except dividers for inner room, which are metal.



Notes: Floor Survey (43-37/2360, #184438) γ -survey: \leq bkqd.
 α -survey: \leq bkqd. β avg: 450 cpm β max: 600 cpm (43-3/2221, #163673)
 44-3 PR 3/12/07

Wall Survey (43-37/2360, #193675)
 α -survey: \leq bkqd. β avg: 400cpm β max: 600 cpm

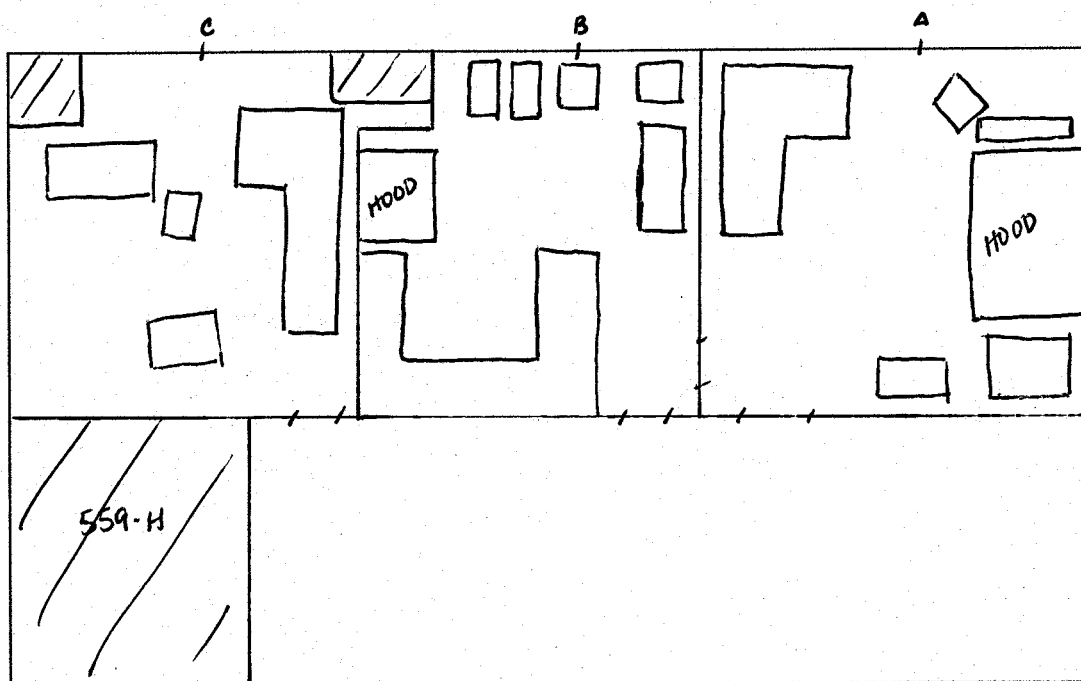
Tech Signature: Michael DillsDate: 3/12/07

Scan Information Sheet

SU/Room: 5-W / 550-A-CClass: 2Tech Init.: PR, GB, MD

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm

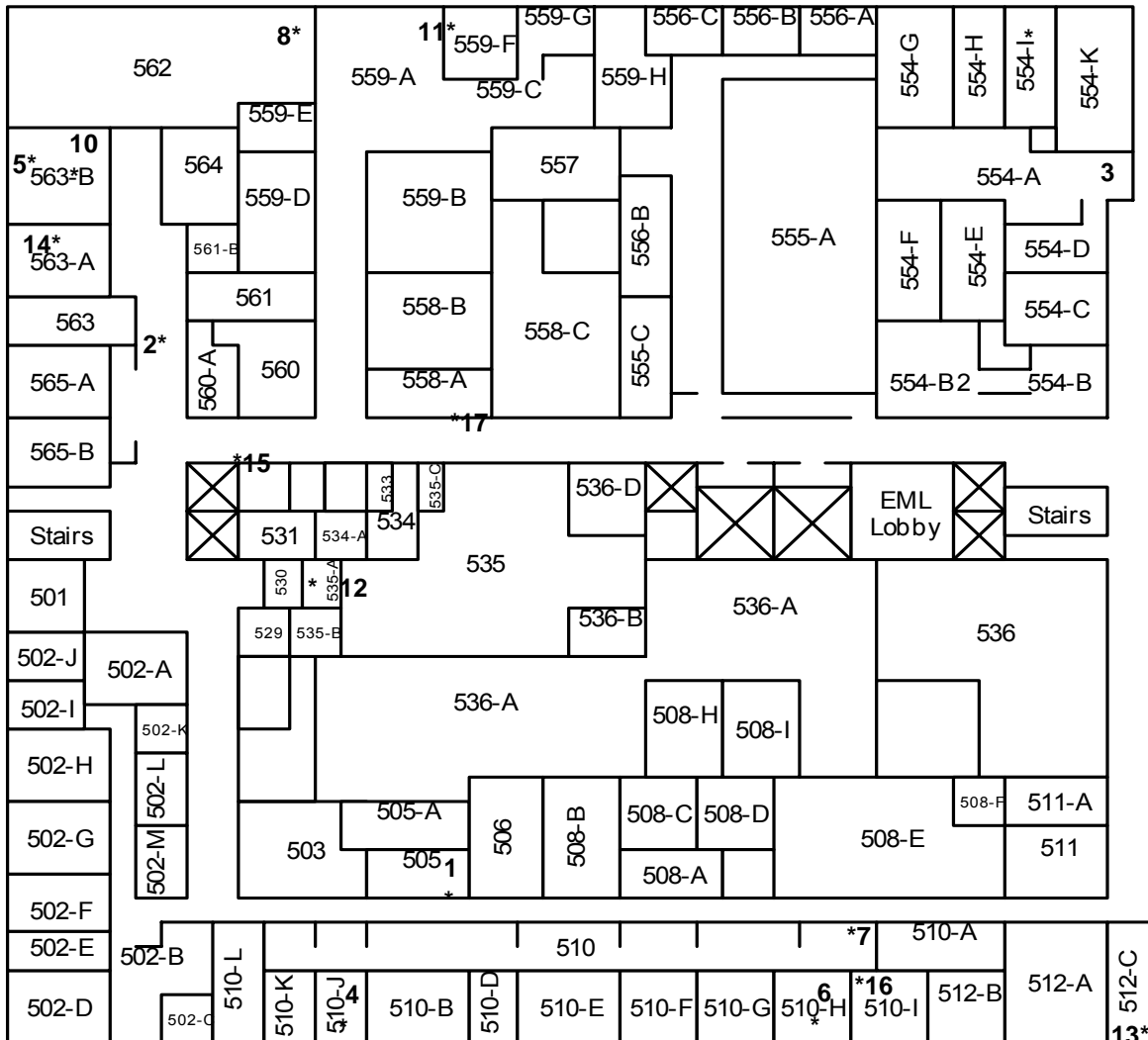
- Private offices
- Floor VAT, walls PCB (Painted Cinderblock)

Notes: Floor Survey (43-37/2360, #184938)γ-survey: ≤ bkgd.α-survey: ≤ bkgd.βavg: 400 cpm
βmax: 500 cpm(43-3/2221, #163673)
44-3 floorWall Survey (43-68, #161781)α-survey: ≤ bkgd.βavg: 150 cpm
βmax: 200 cpmTech Signature: Michael DillDate: 3/9/07



Class 3 Survey Unit: 5-W3 Final Status Survey Data Sheets

Systematic Measurement Locations

SU/Room: 5th Floor Western Hallways (Survey Unit 5-W3)Class: 3

Class 3 5-W3 5th Floor

X Coord	Y Coord	Z Coord	Label	Date	Systematic Data		Smear Data		Surface
					(dpm/100 cm ²)		(dpm/100 cm ²)		
					alpha	beta	alpha	beta	
89.6	44.5	0	5-W3-1	11/7/2007	4	224	2	15	Floor
48.0	135.7	0	5-W3-2	11/7/2007	9	49	-1	37	Floor
200.3	174.2	0	5-W3-3	11/7/2007	9	109	-1	-1	Floor
77.6	22.7	0	5-W3-4	11/7/2007	13	197	2	-23	Floor
25.4	162.8	0	5-W3-5	11/7/2007	0	43	-1	4	Floor
139.5	22.0	0	5-W3-6	11/7/2007	0	105	-1	-51	Floor
141.7	36.9	0	5-W3-7	11/7/2007	13	164	-1	4	Floor
64.3	183.7	0	5-W3-8	11/7/2007	-4	53	-1	15	Floor
182.1	183.7	0	5-W3-9	11/7/2007	9	115	-1	-23	Floor
37.0	162.1	0	5-W3-10	11/7/2007	4	-23	-1	-29	Floor
84.3	184.5	0	5-W3-11	11/7/2007	9	148	-1	10	Floor
69.2	90.1	0	5-W3-12	11/7/2007	4	145	-1	-18	Floor
184.4	13.4	0	5-W3-13	11/7/2007	18	49	-1	-34	Floor
31.3	150.0	0	5-W3-14	11/7/2007	9	-23	-1	-40	Floor
60.3	105.1	0	5-W3-15	11/7/2007	13	174	-1	-23	Floor
143.5	28.0	0	5-W3-16	11/7/2007	13	69	2	37	Floor
88.4	119.7	0	5-W3-17	11/7/2007	9	3	-1	-12	Floor

Static Counting Instrument: Ludlum 2224 S/N 183048

Alpha Efficiency: 0.1783255

Detector: Ludlum 43-68 S/N PR161781

Beta Efficiency: 0.2413

Smear Counting Instrument: Ludlum 2929 S/N 142645

Alpha Efficiency: 0.3486588

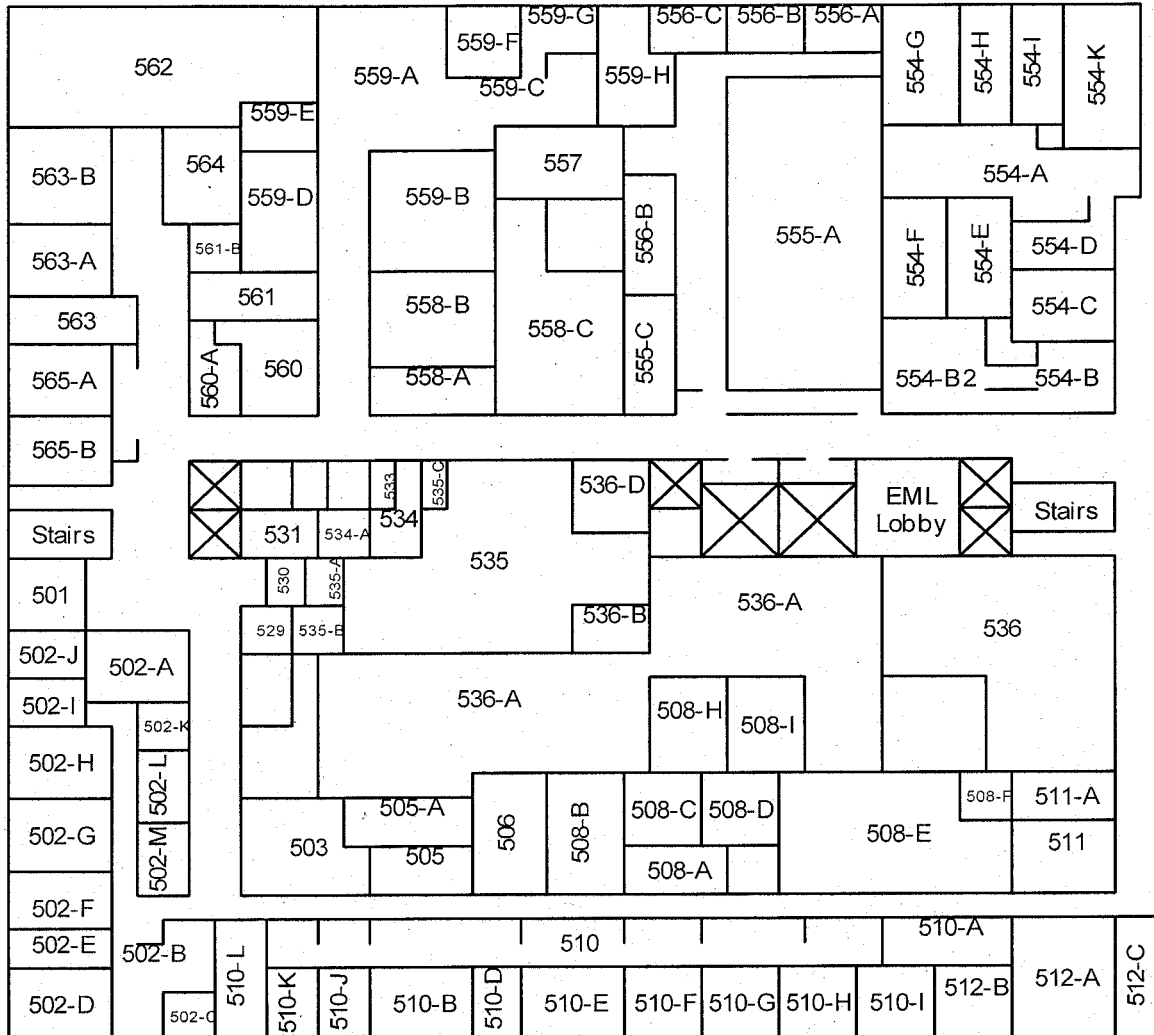
Detector: Ludlum 43-10-1 S/N PR156519

Beta Efficiency: 0.1815

Scan Information Sheet

SU/Room: 5th Floor Western HallwaysClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 300
 γ -survey: 5 β_{maximum} : Vinyl-Asbestos Tile: 600

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

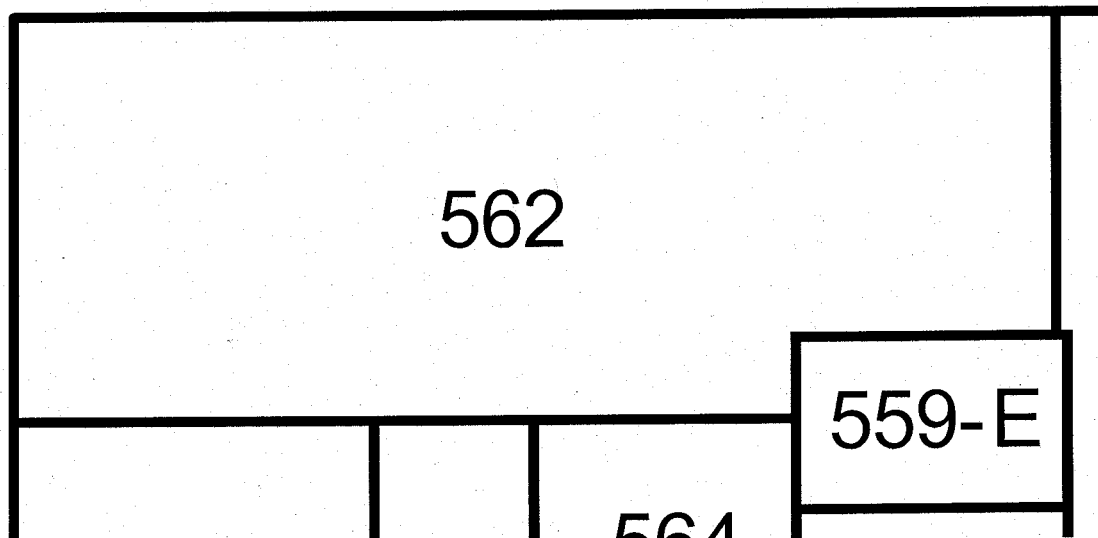
α -survey: \leq background β_{average} : Painted Metal: 300 Painted Cinder Block: 400
 γ -survey: 5 β_{maximum} : Painted Metal: 600 Painted Cinder Block: 800
 β_{average} : Painted Brick: 600 Painted Sq. Cinder Block: 800
 β_{maximum} : Painted Brick: 1,200 Painted Sq. Cinder Block: 1,200

Tech Signature: Date: 10/15/07

Scan Information Sheet

SU/Room: 562, 559-EClass: 3Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background	β_{average} : Vinyl-Asbestos Tile: 400 Carpeted Flooring: 300
γ -survey: <u>6</u>	β_{maximum} : Vinyl-Asbestos Tile: 500 Carpeted Flooring: 500

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

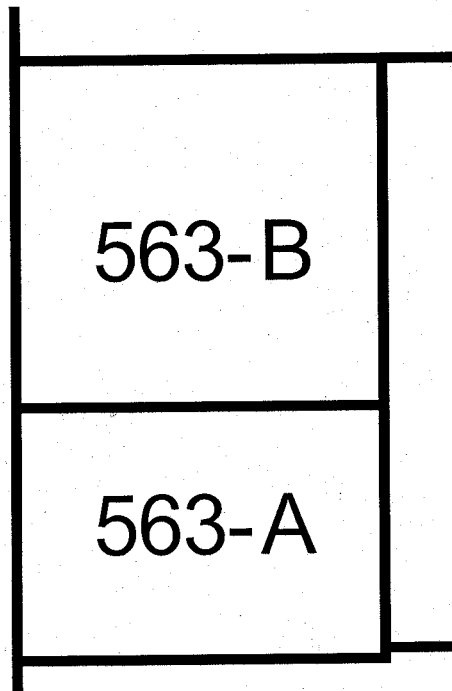
α -survey: \leq background	β_{average} : Painted Metal: 350	Painted Concrete: 500
γ -survey: <u>6</u>	β_{maximum} : Painted Metal: 500	Painted Concrete: 600
	β_{average} : Wall Paper: 400	Wood Paneling: 350
	β_{maximum} : Wall Paper: 600	Wood Paneling: 400

Tech Signature: Nicholas M. BerkeDate: 10/17/07

Scan Information Sheet

SU/Room: 563-A, 563-BClass: 3Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Carpeted Flooring: 400 γ -survey: 6 β_{maximum} : Carpeted Flooring: 600

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Wall Paper: 400 Wood Paneling: 400 γ -survey: 6 β_{maximum} : Wall Paper: 500 Wood Paneling: 500Tech Signature: Date: 10/17/07

Nicholas McBelin

Scan Information Sheet

SU/Room: 563Class: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



563

Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Carpeted Flooring: 400 γ -survey: 5 β_{maximum} : Carpeted Flooring: 600

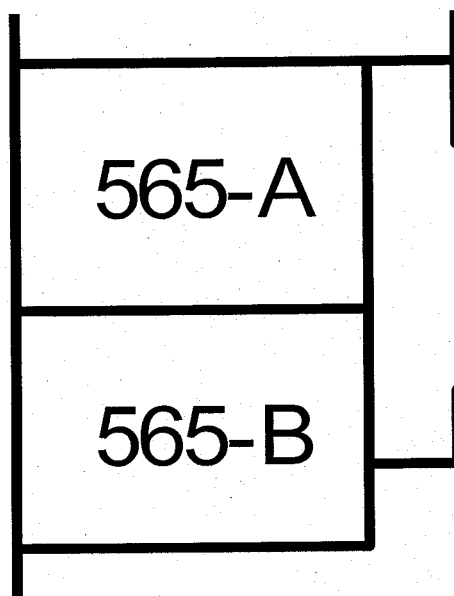
Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Wall Paper: 300 γ -survey: 5 β_{maximum} : Wall Paper: 600Tech Signature: Date: 10/18/07

Scan Information Sheet

SU/Room: 565-A, 565-BClass: 3Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background	β_{average} : Carpeted Flooring: 350
γ -survey: <u>5</u>	β_{maximum} : Carpeted Flooring: 500

Wall Survey (2360 S/N 184938 with 43-37 S/N PR 178371/2360 S/N 193675 with 43-37 S/N PR 216984)

α -survey: \leq background	β_{average} : Wall Paper: 400	Wood Paneling: 350
γ -survey: <u>5</u>	β_{maximum} : Wall Paper: 500	Wood Paneling: 400
	β_{average} : Painted Concrete: 400	Painted Drywall: 300
	β_{maximum} : Painted Concrete: 600	Painted Drywall: 500
	β_{average} : Painted Metal: 300	Painted Brick: 700
	β_{maximum} : Painted Metal: 600	Painted Brick: 1,000

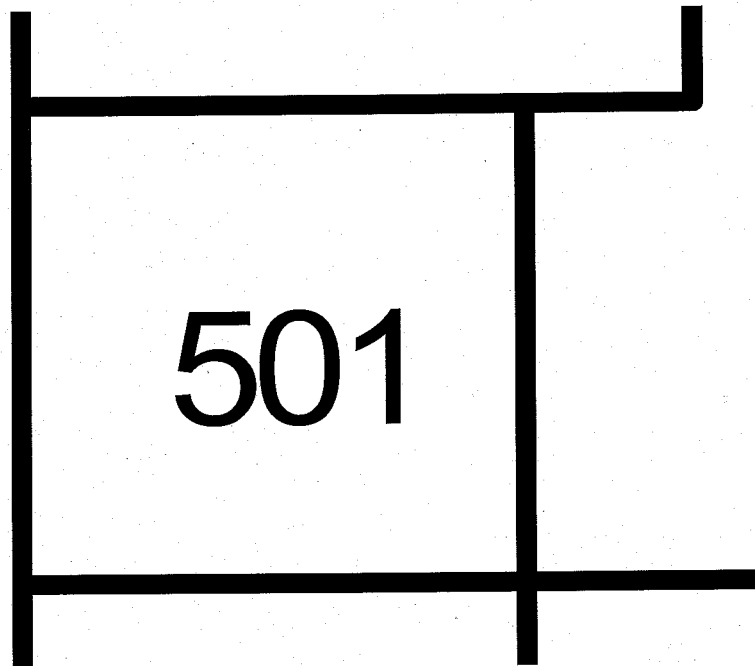
Tech Signature: Date: 10/18/07

Nicholas M. Berke

Scan Information Sheet

SU/Room: 501
 Class: 3
 Tech Init.: NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background	β_{average} :	Carpeted Flooring: 350
γ -survey: 6	β_{maximum} :	Carpeted Flooring: 500

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

α -survey: \leq background	β_{average} :	Painted Drywall: 400	Painted Concrete: 450
γ -survey: 6	β_{maximum} :	Painted Drywall: 600	Painted Concrete: 600
	β_{average} :	Painted Brick: 600	
	β_{maximum} :	Painted Brick: 900	

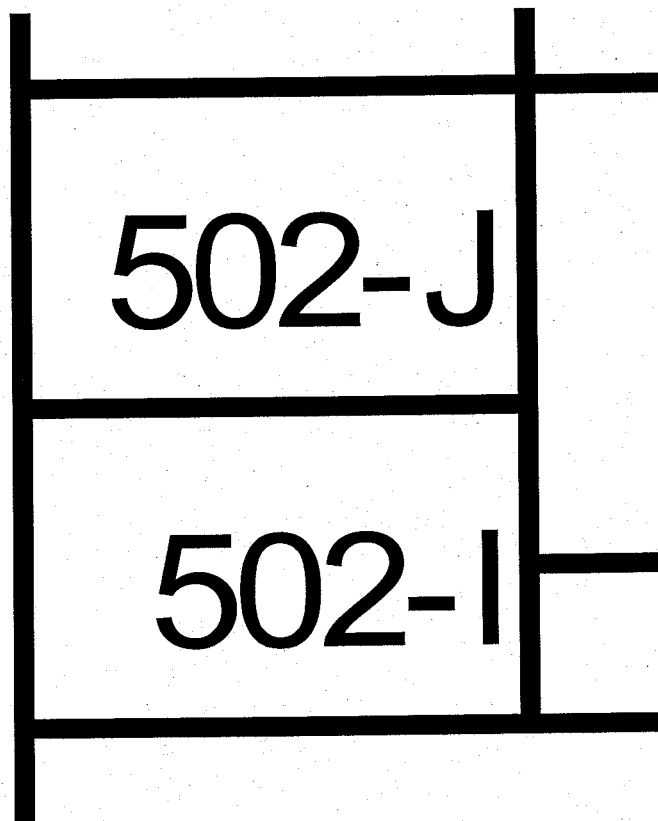
Tech Signature: Michael M. Blum

Date: 10/25/07

Scan Information Sheet

SU/Room: 502-I, 502-JClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400 γ -survey: 4 β_{maximum} : Vinyl-Asbestos Tile: 800

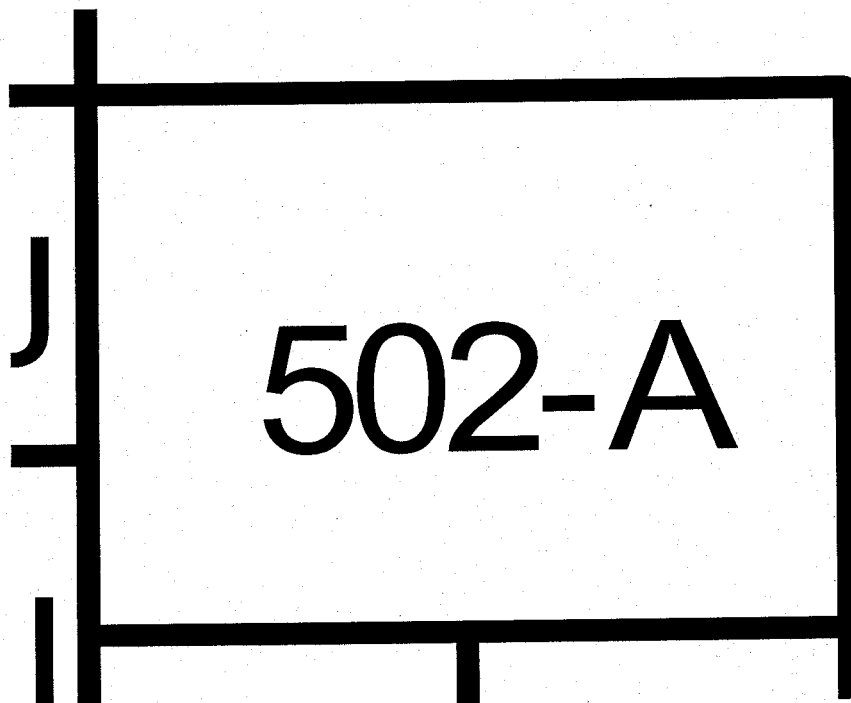
Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Painted Drywall: 400 Painted Metal: 300 γ -survey: 4 β_{maximum} : Painted Drywall: 700 Painted Metal: 600 β_{average} : Painted Concrete: 400 β_{maximum} : Painted Concrete: 800Tech Signature: Date: 10/15/07

Scan Information Sheet

SU/Room: 502-AClass: 3Tech Init.: RLS

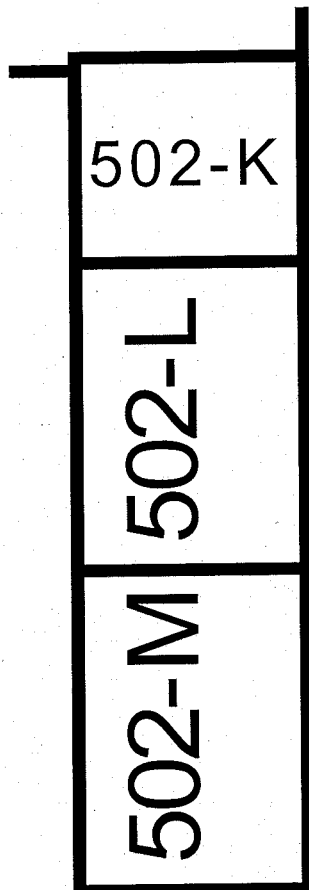
- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm

Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371) α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 300 γ -survey: 5 β_{maximum} : Vinyl-Asbestos Tile: 800Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984) α -survey: \leq background β_{average} : Painted Drywall: 400 Painted Metal: 300 γ -survey: 5 β_{maximum} : Painted Drywall: 900 Painted Metal: 800 β_{average} : Painted Concrete: 500 β_{maximum} : Painted Concrete: 1,000Tech Signature: Date: 10/15/07

Scan Information Sheet

SU/Room: 502-K, 502-L, 502-MClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400 γ -survey: 4 β_{maximum} : Vinyl-Asbestos Tile: 700

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Painted Drywall: 400

Painted Metal: 300

 γ -survey: 4 β_{maximum} : Painted Drywall: 800

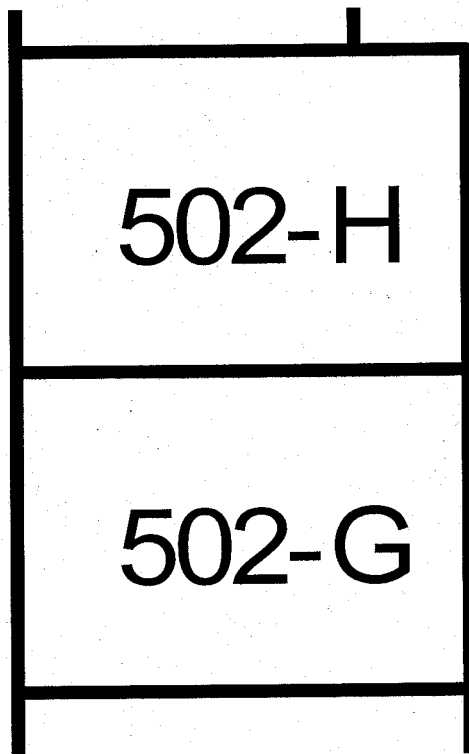
Painted Metal: 600

Tech Signature: Date: 10/15/07

Scan Information Sheet

SU/Room: 502-G, 502-HClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Carpeted Flooring: 300 γ -survey: 5 β_{maximum} : Carpeted Flooring: 600

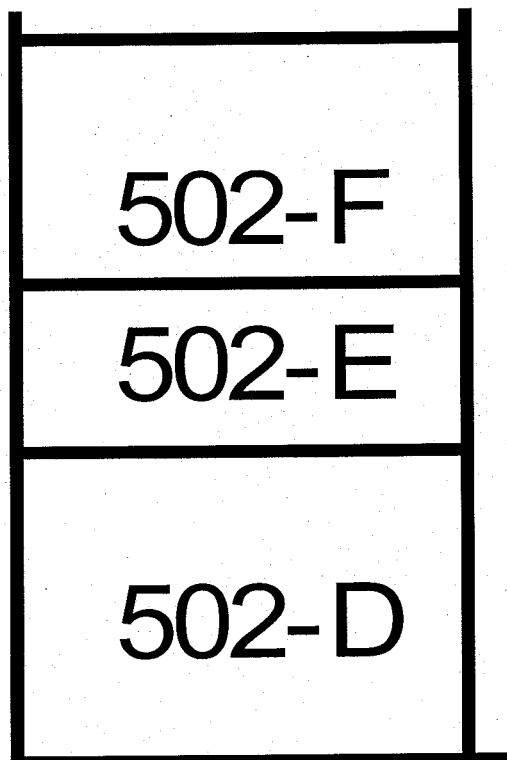
Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Painted Drywall: 400 Painted Concrete: 500 γ -survey: 5 β_{maximum} : Painted Drywall: 700 Painted Concrete: 800 β_{average} : Painted Metal: 300 β_{maximum} : Painted Metal: 700Tech Signature: Date: 10/15/07

Scan Information Sheet

SU/Room: 502-D, 502-E, 502-FClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm

Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background	β_{average} : Carpeted Flooring: 300 Vinyl-Asbestos Tile: 400
γ -survey: <u>6</u>	β_{maximum} : Carpeted Flooring: 600 Vinyl-Asbestos Tile: 700

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

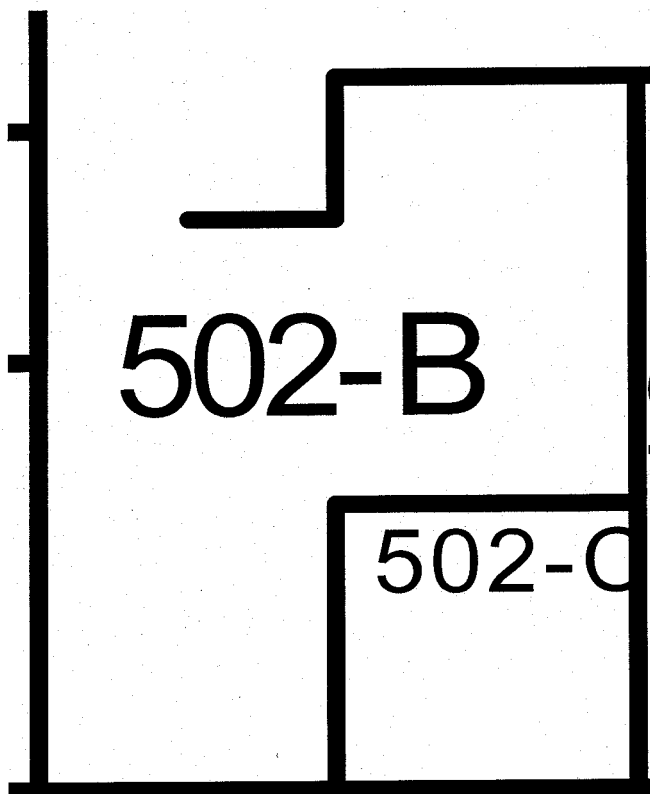
α -survey: \leq background	β_{average} : Painted Drywall: 400 Painted Concrete: 500
γ -survey: <u>6</u>	β_{maximum} : Painted Drywall: 800 Painted Concrete: 900
	β_{average} : Painted Metal: 400
	β_{maximum} : Painted Metal: 600

Tech Signature: Date: 10/15/07

Scan Information Sheet

SU/Room: 502-B, 502-CClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400 γ -survey: 6 β_{maximum} : Vinyl-Asbestos Tile: 800

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Painted Drywall: 400 Painted Metal: 400 γ -survey: 6 β_{maximum} : Painted Drywall: 800 Painted Metal: 700 β_{average} : Painted Concrete: 600 Painted Cinder Block: 600 β_{maximum} : Painted Concrete: 900 Painted Cinder Block: 1,200Tech Signature: Date: 10/15/07

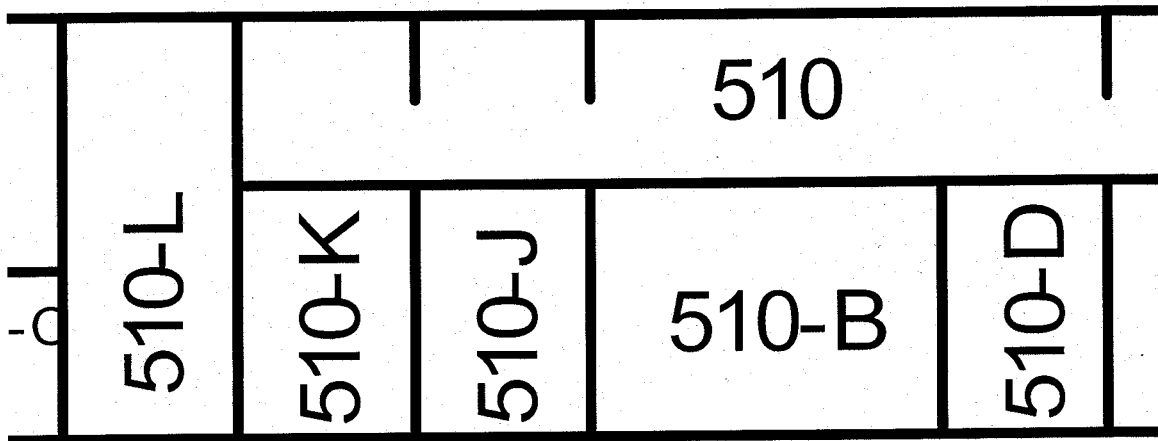
Scan Information Sheet

SU/Room: 510, 510-B, 510-D,
510-J, 510-K, 510-L

Class: 3

Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400

γ -survey: 8 β_{maximum} : Vinyl-Asbestos Tile: 800

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

α -survey: \leq background β_{average} : Painted Drywall: 500 Painted Metal: 400

γ -survey: 8 β_{maximum} : Painted Drywall: 800 Painted Metal: 800

β_{average} : Painted Concrete: 600 Painted Cinder Block: 600

β_{maximum} : Painted Concrete: 900 Painted Cinder Block: 1,200

β_{average} : Painted Wood Panelingd Bare Drywall: 400

β_{maximum} : Painted Wood Panelin Bare Drywall: 700

Tech Signature: 

Date: 10/15/07

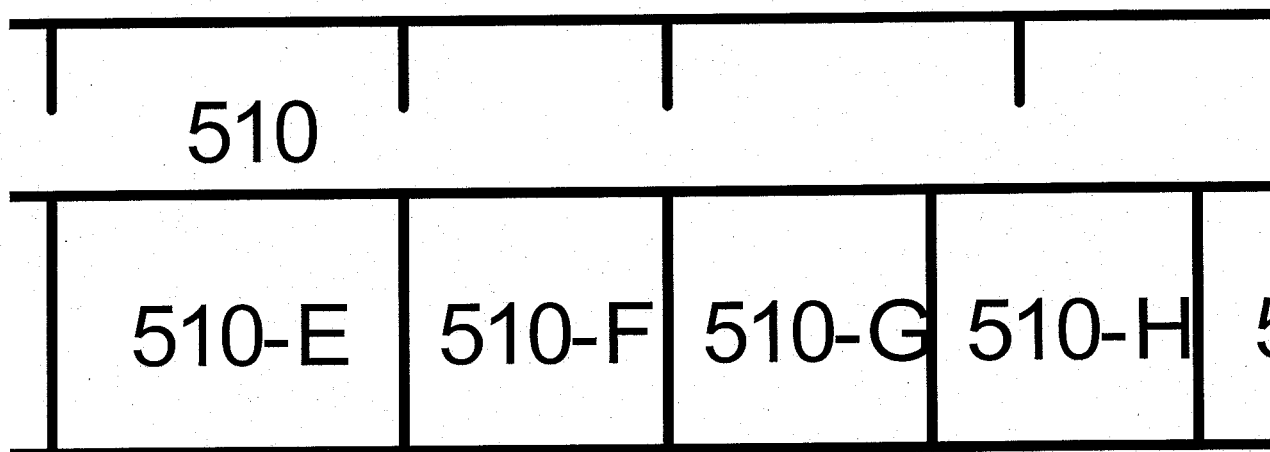
Scan Information Sheet

SU/Room: 510, 510-E, 510-F, 510-G, 510-H

Class: 3

Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background

β_{average} : Vinyl-Asbestos Tile: 400

γ -survey: 7

β_{maximum} : Vinyl-Asbestos Tile: 1,000

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

α -survey: \leq background

β_{average} : Painted Metal: 500

Painted Cinder Block: 600

γ -survey: 7

β_{maximum} : Painted Metal: 800

Painted Cinder Block: 1,000

β_{average} : Painted Concrete: 600

β_{maximum} : Painted Concrete: 1,000

Tech Signature: 

Date: 10/15/07

Scan Information Sheet

SU/Room: 510-A, 510-I, 512-A, 512-BClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm

	510-A		512-A	512-C
-H	510-I	512-B		

Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey:	\leq background	$\beta_{average}$:	Vinyl-Asbestos Tile: 400 Carpeted Flooring: 400
γ -survey:	5	$\beta_{maximum}$:	Vinyl-Asbestos Tile: 800 Carpeted Flooring: 800

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

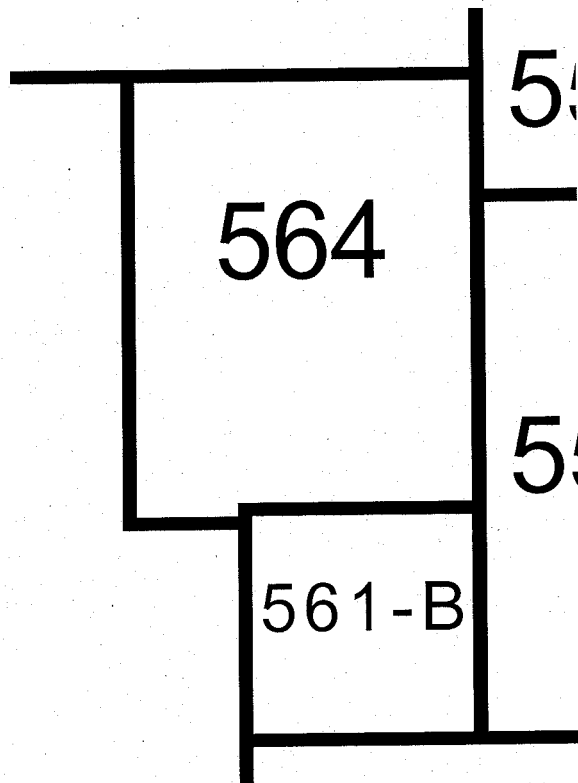
α -survey:	\leq background	$\beta_{average}$:	Painted Metal: 300	Painted Concrete: 600
γ -survey:	5	$\beta_{maximum}$:	Painted Metal: 900	Painted Concrete: 900
		$\beta_{average}$:	Painted Cinder Block: 60	Painted Drywall: 400
		$\beta_{maximum}$:	Painted Cinder Block: 90	Painted Drywall: 700

Tech Signature: Date: 10/15/07

Scan Information Sheet

SU/Room: 564, 561-BClass: 3Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background	β_{average} :	Vinyl-Asbestos Tile: 400	Carpeted Flooring: 300
γ -survey: <u>5</u>	β_{maximum} :	Vinyl-Asbestos Tile: 600	Carpeted Flooring: 500

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

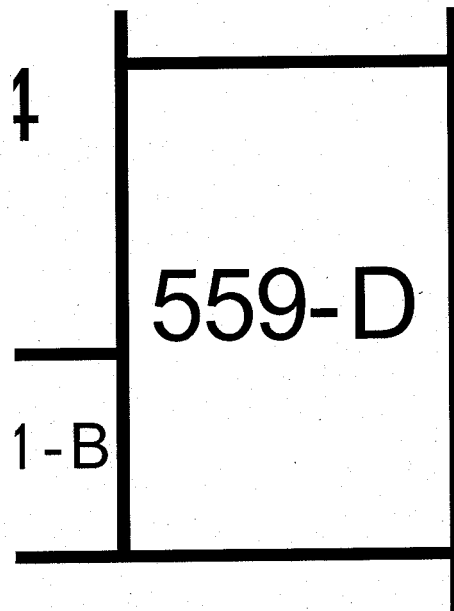
α -survey: \leq background	β_{average} :	Painted Metal: 300	Painted Concrete: 400
γ -survey: <u>5</u>	β_{maximum} :	Painted Metal: 400	Painted Concrete: 500
	β_{average} :	Painted Drywall: 300	Wood Paneling: 350
	β_{maximum} :	Painted Drywall: 500	Wood Paneling: 400
	β_{average} :	Wall Paper: 400	
	β_{maximum} :	Wall Paper: 600	

Tech Signature: Date: 10/17/07

Scan Information Sheet

SU/Room: 559-DClass: 3Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400 γ -survey: 6 β_{maximum} : Vinyl-Asbestos Tile: 500

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Painted Metal: 350 γ -survey: 6 β_{maximum} : Painted Metal: 400Tech Signature: Date: 10/17/07

Nicholas M. Miller

Scan Information Sheet

SU/Room: 561Class: 3Tech Init.: NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



561

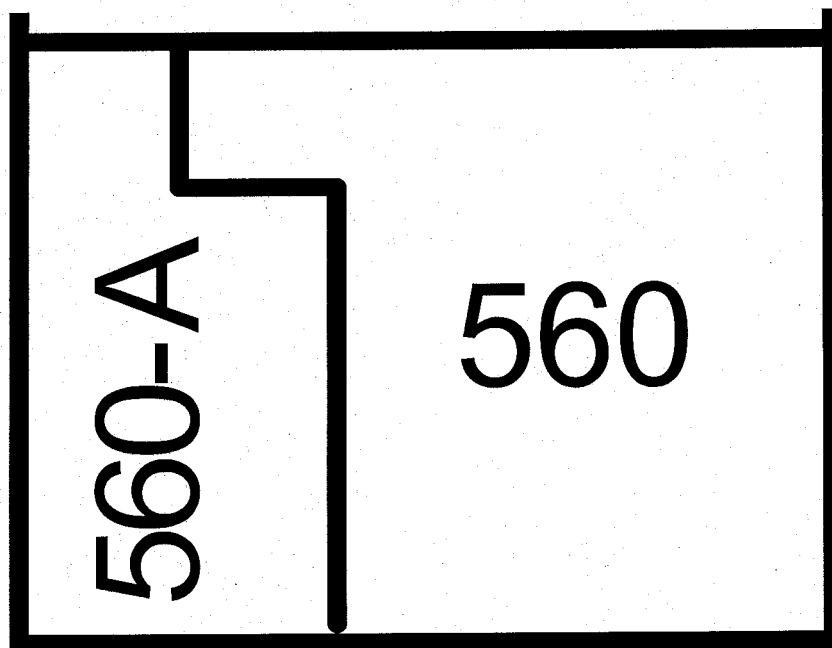
Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371) α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400 γ -survey: 5 β_{maximum} : Vinyl-Asbestos Tile: 600Wall Survey (2360 S/N 184938 with 43-37 S/N PR 178371) α -survey: \leq background β_{average} : Painted Drywall: 350 γ -survey: 5 β_{maximum} : Painted Drywall: 400Tech Signature: Nicholas M. BenDate: 10/18/07

Scan Information Sheet

SU/Room: 561Class: 3Tech Init.: RLS, NMB

Note:

1. On map: draw dimensions and characters
2. Record scan data for different surfaces
3. Mark all areas > Action Level (include sample ID)
4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} :

Vinyl-Asbestos Tile: 500 Carpeted Flooring: 350

 γ -survey: 6 β_{maximum} :

Vinyl-Asbestos Tile: 600 Carpeted Flooring: 500

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} :

Painted Metal: 300

Wall Paper: 400

 γ -survey: 6 β_{maximum} :

Painted Metal: 600

Wall Paper: 600

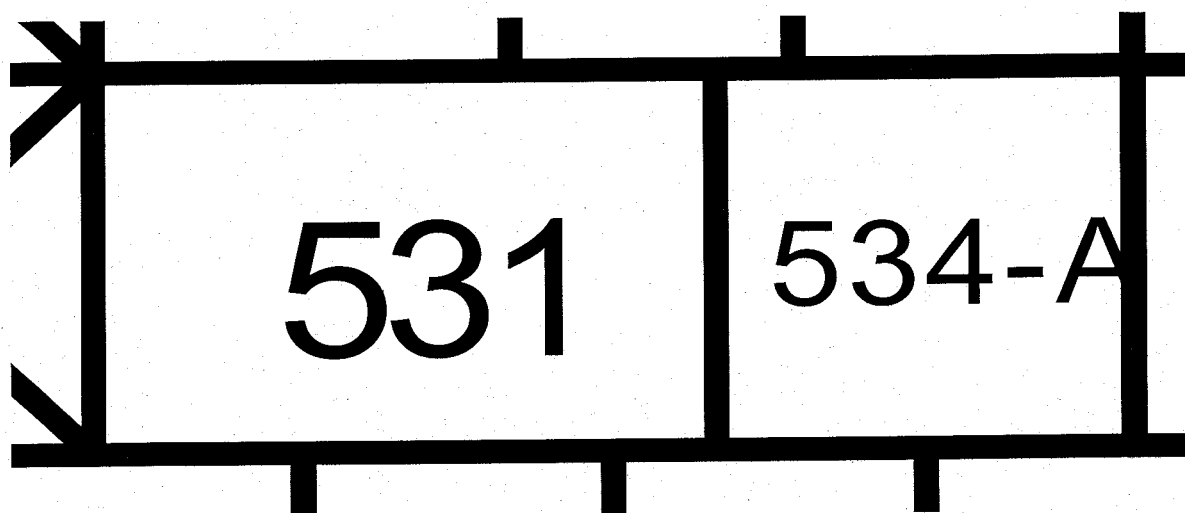
Tech Signature: Date: 10/17/07, 10/18/07

Nicholas

Scan Information Sheet

SU/Room: 531, 534-AClass: 3Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm

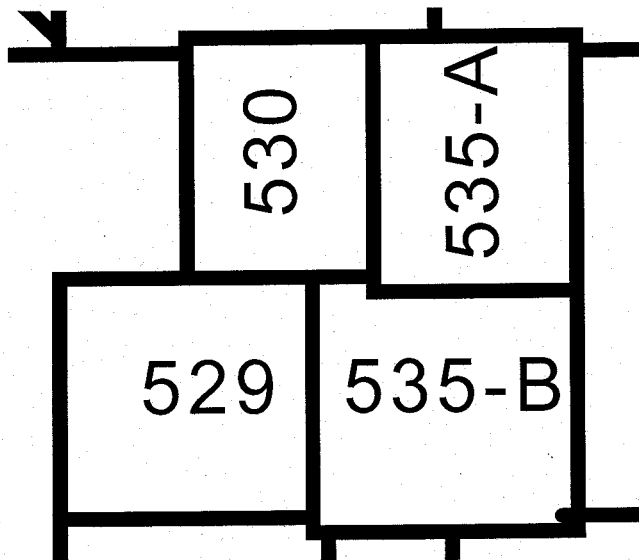
Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371) α -survey: \leq background β_{average} : UCT: 850 γ -survey: 6 β_{maximum} : UCT: 1,200Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984) α -survey: \leq background β_{average} : GCT: 1,100 Painted Drywall: 300 γ -survey: 6 β_{maximum} : GCT: 1,600 Painted Drywall: 600 β_{average} : Painted Cinder Block: 500 β_{maximum} : Painted Cinder Block: 1,200Tech Signature: Date: 10/18/07

Nicholas M. Di

Scan Information Sheet

SU/Room: 529, 530, 535-A, 535-EClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400 γ -survey: 6 β_{maximum} : Vinyl-Asbestos Tile: 700

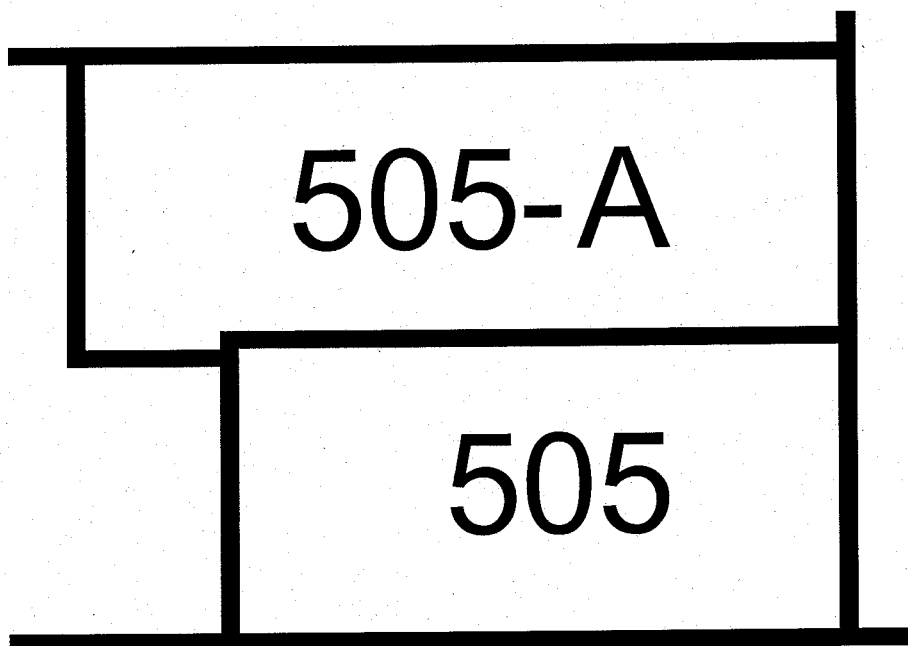
Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Painted Cinder Block: 800 γ -survey: 6 β_{maximum} : Painted Cinder Block: 1,400 β_{average} : Painted Sq. Cinder Block: 1,000 β_{maximum} : Painted Sq. Cinder Block: 1,600Tech Signature: Date: 10/17/07

Scan Information Sheet

SU/Room: 505, 505-AClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400 γ -survey: 7 β_{maximum} : Vinyl-Asbestos Tile: 900

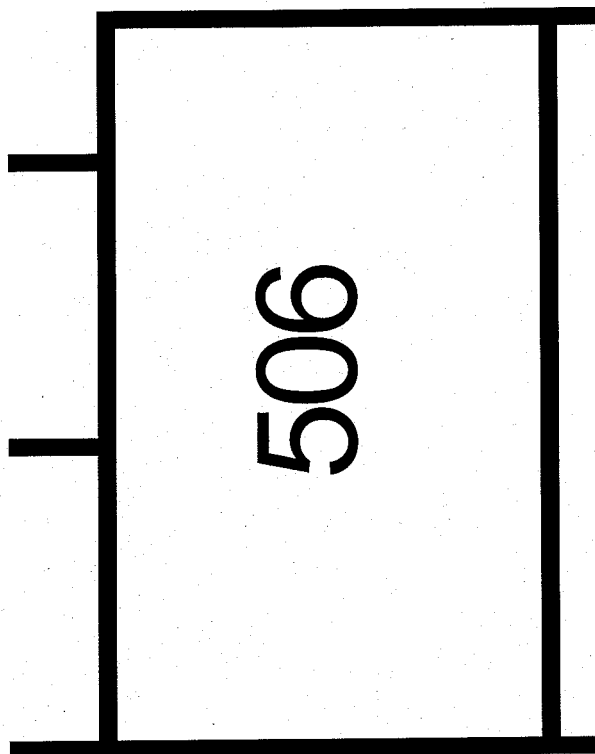
Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Painted Metal: 400 Painted Concrete: 500 γ -survey: 7 β_{maximum} : Painted Metal: 600 Painted Concrete: 800 β_{average} : Painted Cinder Block: 600 β_{maximum} : Painted Cinder Block: 900Tech Signature: Date: 10/17/07, 10/18/07

Scan Information Sheet

SU/Room: 506Class: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm

Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371) α -survey: \leq background β_{average} : Painted Concrete: 500 γ -survey: 6 β_{maximum} : Painted Concrete: 900Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984) α -survey: \leq background β_{average} : Painted Cinder Block: 5C Painted Concrete: 500 γ -survey: 6 β_{maximum} : Painted Cinder Block: 9C Painted Concrete: 800Tech Signature: Date: 10/17/07, 10/18/07

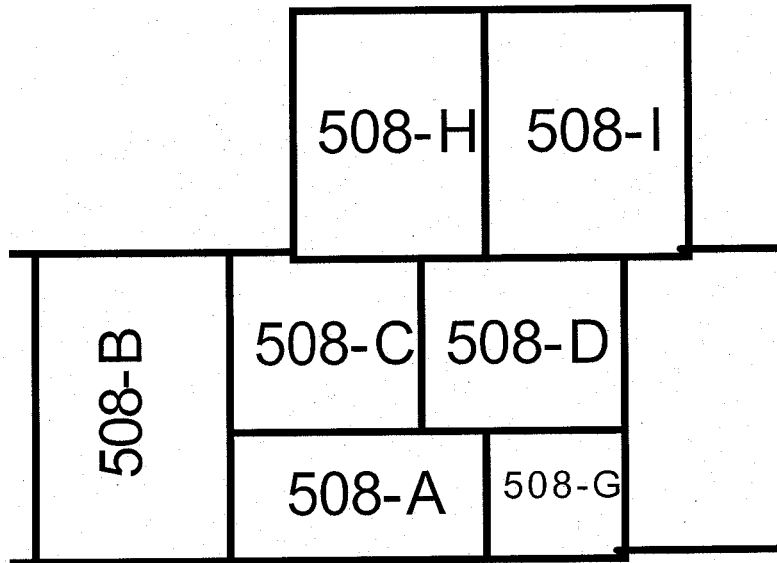
Scan Information Sheet

SU/Room: 508-A, 508-B, 508-C, 508-D,
508-G, 508-H, 508-I

Class: 3

Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400

γ -survey: 6 β_{maximum} : Vinyl-Asbestos Tile: 700

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

α -survey: \leq background β_{average} : Painted Cinder Block: 500

γ -survey: 6 β_{maximum} : Painted Cinder Block: 700

β_{average} : Painted Concrete: 450 Painted Metal: 350

β_{maximum} : Painted Concrete: 500 Painted Metal: 500

Tech Signature: 

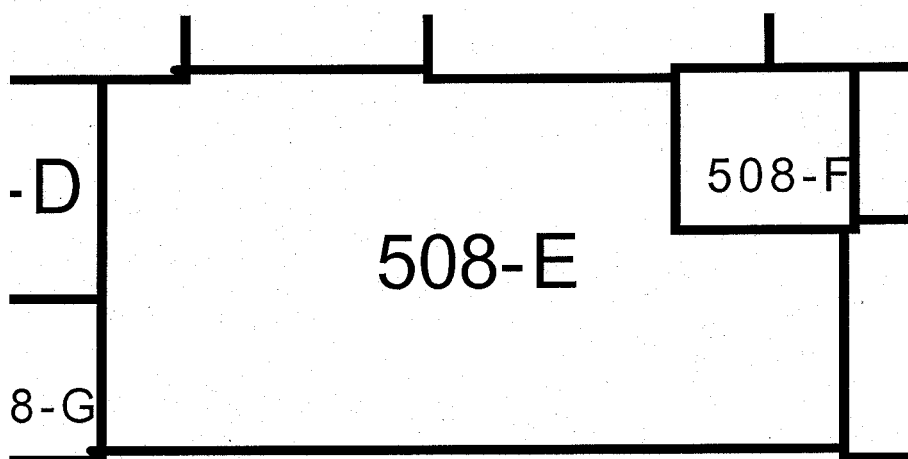
Date: 10/18/07

Nicholas A. For

Scan Information Sheet

SU/Room: 508-E, 508-FClass: 3Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Formica Tiles: 400 γ -survey: 6 β_{maximum} : Formica Tiles: 800

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

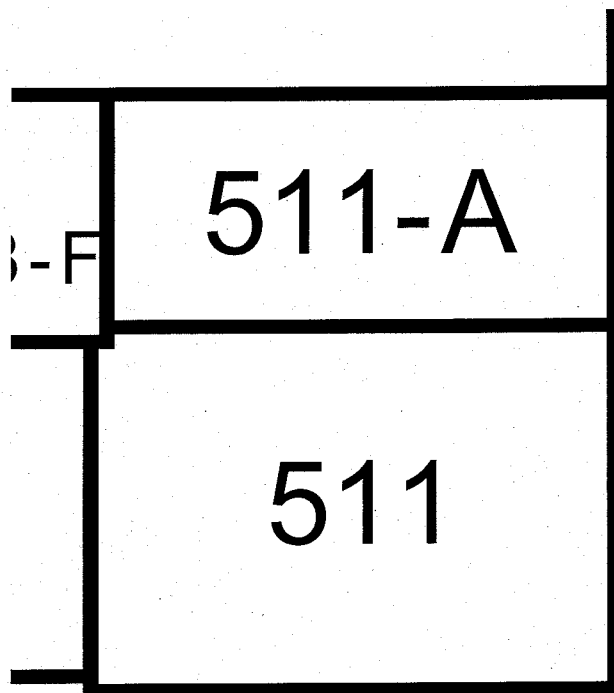
 α -survey: \leq background β_{average} : Painted Cinder Block: 500 γ -survey: 6 β_{maximum} : Painted Cinder Block: 900 β_{average} : Painted Concrete: 500 β_{maximum} : Painted Concrete: 800Tech Signature: Date: 10/18/07

Nicholas Miller

Scan Information Sheet

SU/Room: 511, 511-AClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 450 γ -survey: 6 β_{maximum} : Vinyl-Asbestos Tile: 600

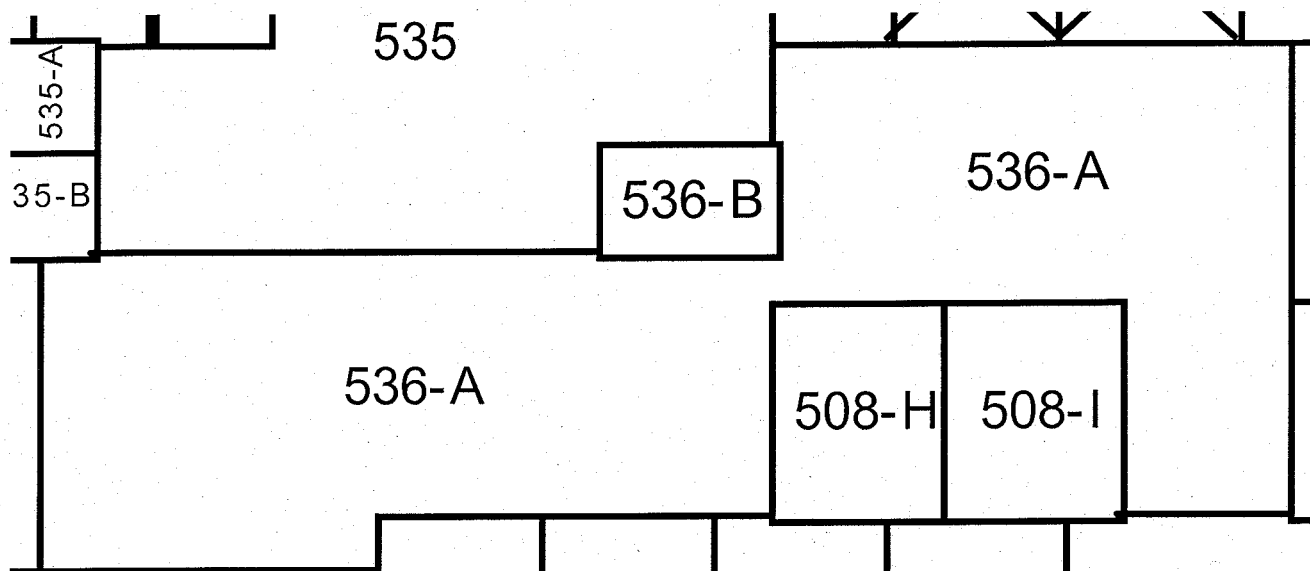
Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Painted Cinder Block: 500 γ -survey: 6 β_{maximum} : Painted Cinder Block: 750 β_{average} : Painted Concrete: 350 Painted Metal: 350 β_{maximum} : Painted Concrete: 600 Painted Metal: 600Tech Signature: Date: 10/22/07

Scan Information Sheet

SU/Room: 536-AClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

 α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 300 γ -survey: 6 β_{maximum} : Vinyl-Asbestos Tile: 800

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

 α -survey: \leq background β_{average} : Painted Concrete: 500 Painted Cinder Block: 600 γ -survey: 6 β_{maximum} : Painted Concrete: 900 Painted Cinder Block: 1,000 β_{average} : Painted Metal: 400 Painted Sq. Cinder Block: 1,000 β_{maximum} : Painted Metal: 600 Painted Sq. Cinder Block: 1,800Tech Signature: Date: 10/16/07

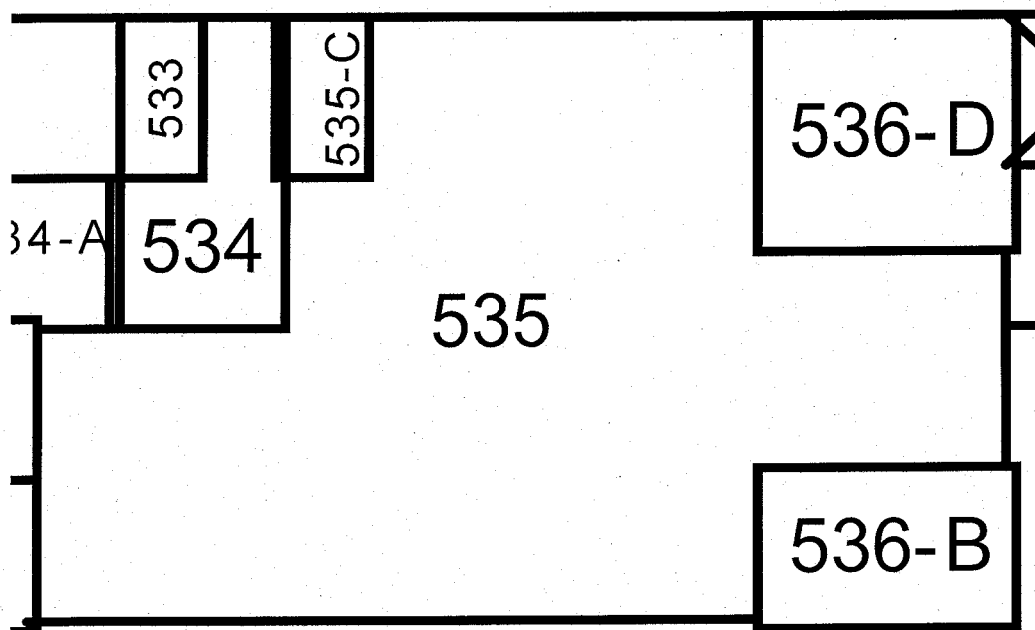
Scan Information Sheet

SU/Room: 533, 534, 535, 535-C,
536-B, 536-D

Class: 3

Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 400

γ -survey: 7 β_{maximum} : Vinyl-Asbestos Tile: 800

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

α -survey: \leq background β_{average} : Painted Concrete: 500 Painted Cinder Block: 600

γ -survey: 7 β_{maximum} : Painted Concrete: 900 Painted Cinder Block: 1,200

β_{average} : Painted Drywall: 300 Painted Sq. Cinder Block: 1,000

β_{maximum} : Painted Drywall: 600 Painted Sq. Cinder Block: 1,600

β_{average} : Wood Paneling: 350

β_{maximum} : Wood Paneling: 500

Tech Signature: 

Date: 10/16/06, 10/18/07, 10/23/07

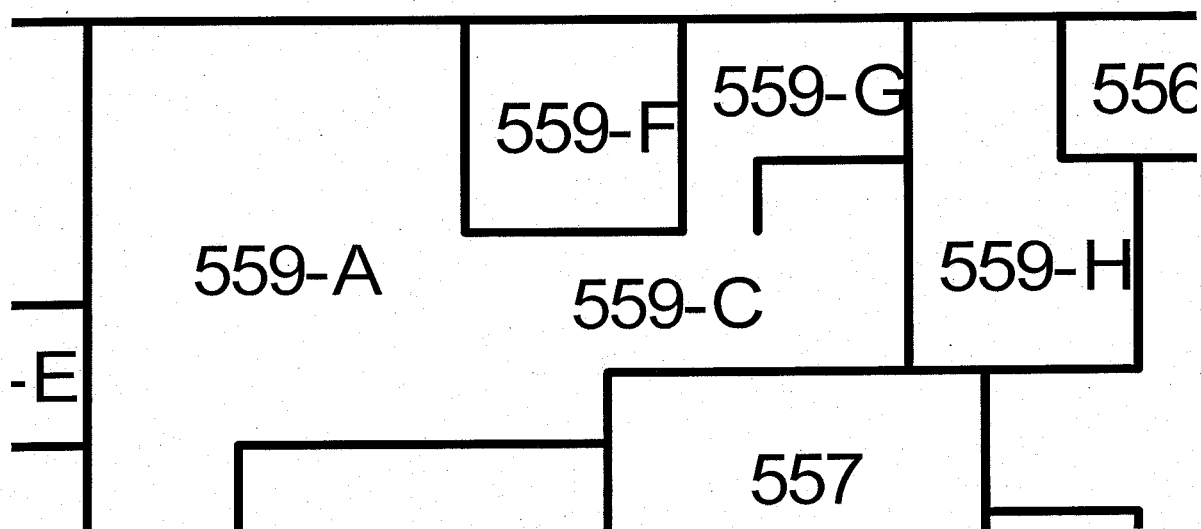
Scan Information Sheet

SU/Room: 559-A, 559-C, 559-F,
559-G, 559-H

Class: 3

Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background	β_{average} : Vinyl-Asbestos Tile: 400
γ -survey: <u>5</u>	β_{maximum} : Vinyl-Asbestos Tile: 500

Wall Survey (2360 S/N 184938 with 43-37 S/N PR 178371 and 2360 S/N 193675 with 43-37 S/N PR 2)

α -survey: \leq background	β_{average} : Painted Drywall: 450	Painted Metal: 400
γ -survey: <u>5</u>	β_{maximum} : Painted Drywall: 700	Painted Metal: 600
	β_{average} : Painted Concrete: 400	Painted Cinder Block: 600
	β_{maximum} : Painted Concrete: 1,000	Painted Cinder Block: 800

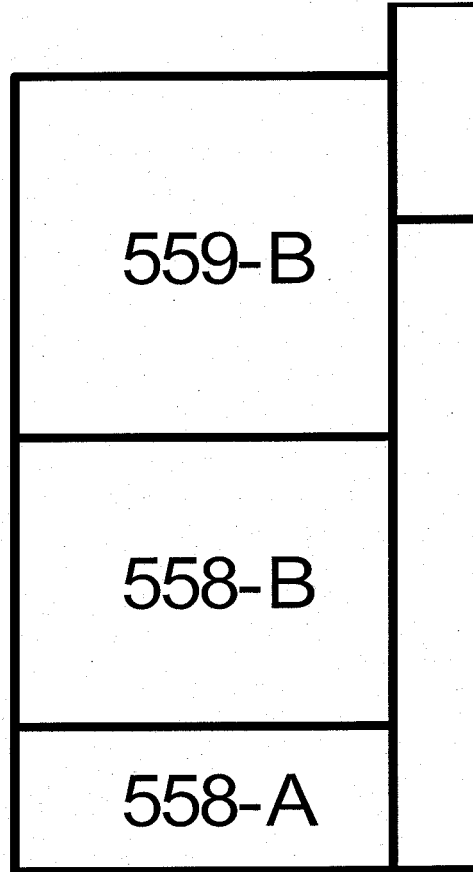
Tech Signature: 

Date: 10/22/07

Scan Information Sheet

SU/Room: 558-A, 558-B, 559-BClass: 3Tech Init.: RLS

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background	β_{average} : Vinyl-Asbestos Tile: 400
γ -survey: <u>4</u>	β_{maximum} : Vinyl-Asbestos Tile: 700

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

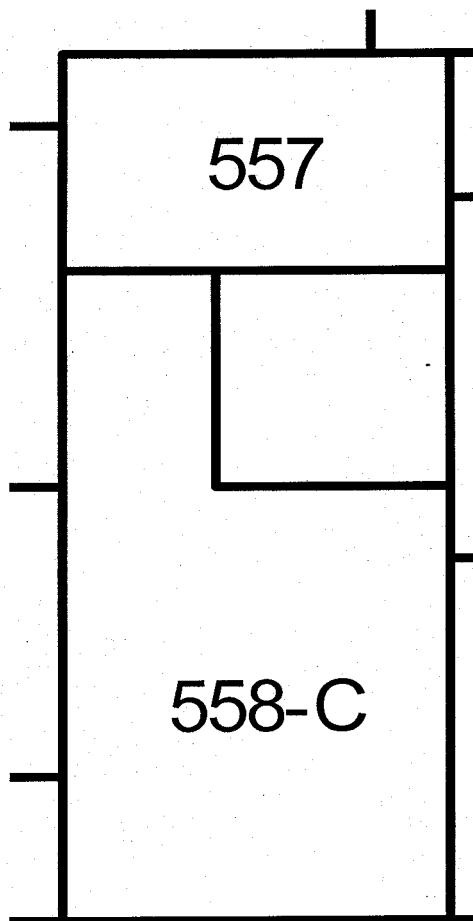
α -survey: \leq background	β_{average} : Painted Metal: 300	Painted Concrete: 500
γ -survey: <u>4</u>	β_{maximum} : Painted Metal: 700	Painted Concrete: 900
	β_{average} : Painted Cinder Block: 600	
	β_{maximum} : Painted Cinder Block: 900	

Tech Signature: Date: 10/17/07

Scan Information Sheet

SU/Room: 557, 558-CClass: 3Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background	β_{average} : Vinyl-Asbestos Tile: 400 Painted Concrete: 450
γ -survey: <u>5</u>	β_{maximum} : Vinyl-Asbestos Tile: 500 Painted Concrete: 600

Wall Survey (2360 S/N 193675 with 43-37 S/N PR 216984)

α -survey: \leq background	β_{average} : Painted Metal: 300	Painted Concrete: 500
γ -survey: <u>5</u>	β_{maximum} : Painted Metal: 700	Painted Concrete: 900

β_{average} : Painted Cinder Block: 600
β_{maximum} : Painted Cinder Block: 1,100

Tech Signature: Date: 10/17/07, 10/18/07

Nicholas Miller

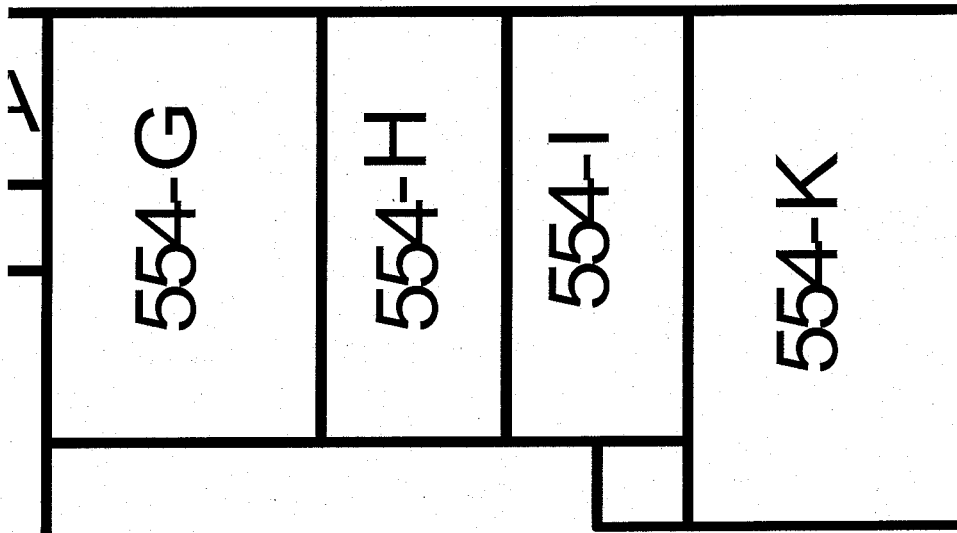
Scan Information Sheet

SU/Room: 554-G, 554-H, 554-I,
554-K

Class: 3

Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background	β_{average} : Carpeted Flooring: 400 Vinyl-Asbestos Tile: 500
γ -survey: 7	β_{maximum} : Carpeted Flooring: 600 Vinyl-Asbestos Tile: 800

Wall Survey (2360 S/N 184938 with 43-37 S/N PR 178371 and 2360 S/N 193675 with 43-37 S/N PR 2)

α -survey: \leq background	β_{average} : Painted Concrete: 500 Painted Cinder Block: 650
γ -survey: 7	β_{maximum} : Painted Concrete: 900 Painted Cinder Block: 1,000

β_{average} : Painted Drywall: 400
β_{maximum} : Painted Drywall: 800

Tech Signature:

Nicholas M. Berber

Date: 10/18/07

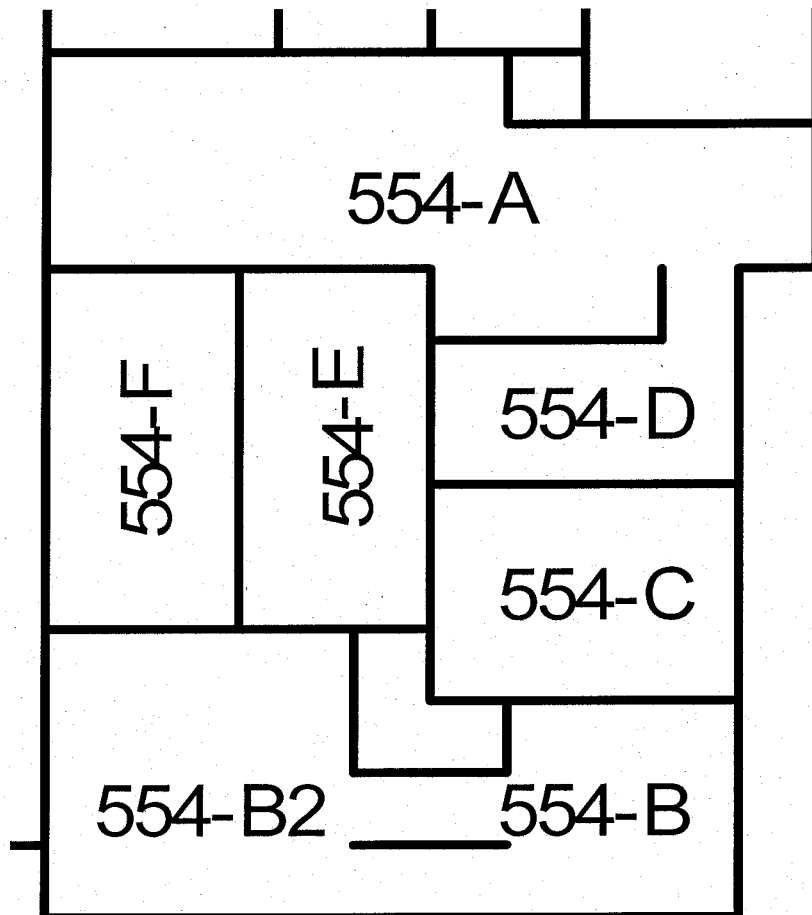
Scan Information Sheet

SU/Room: 554-A, 554-B, 554-C,
554-D, 554-E, 554-F

Class: 3

Tech Init.: RLS, NMB

- Note:
1. On map: draw dimensions and characters
 2. Record scan data for different surfaces
 3. Mark all areas > Action Level (include sample ID)
 4. Record avg and max observed cpm



Notes: Floor Survey (2360 S/N 184938 with 43-37 S/N PR 178371)

α -survey: \leq background β_{average} : Vinyl-Asbestos Tile: 500

γ -survey: 7 β_{maximum} : Vinyl-Asbestos Tile: 700

Wall Survey (2360 S/N 184938 with 43-37 S/N PR 178371 and 2360 S/N 193675 with 43-37 S/N PR 2)

α -survey: \leq background β_{average} : Painted Concrete: 400 Painted Cinder Block: 650

γ -survey: 7 β_{maximum} : Painted Concrete: 800 Painted Cinder Block: 1,100

β_{average} : Painted Drywall: 400

β_{maximum} : Painted Drywall: 700

Tech Signature: 

Date: 10/18/07

Nicholas M. Benician