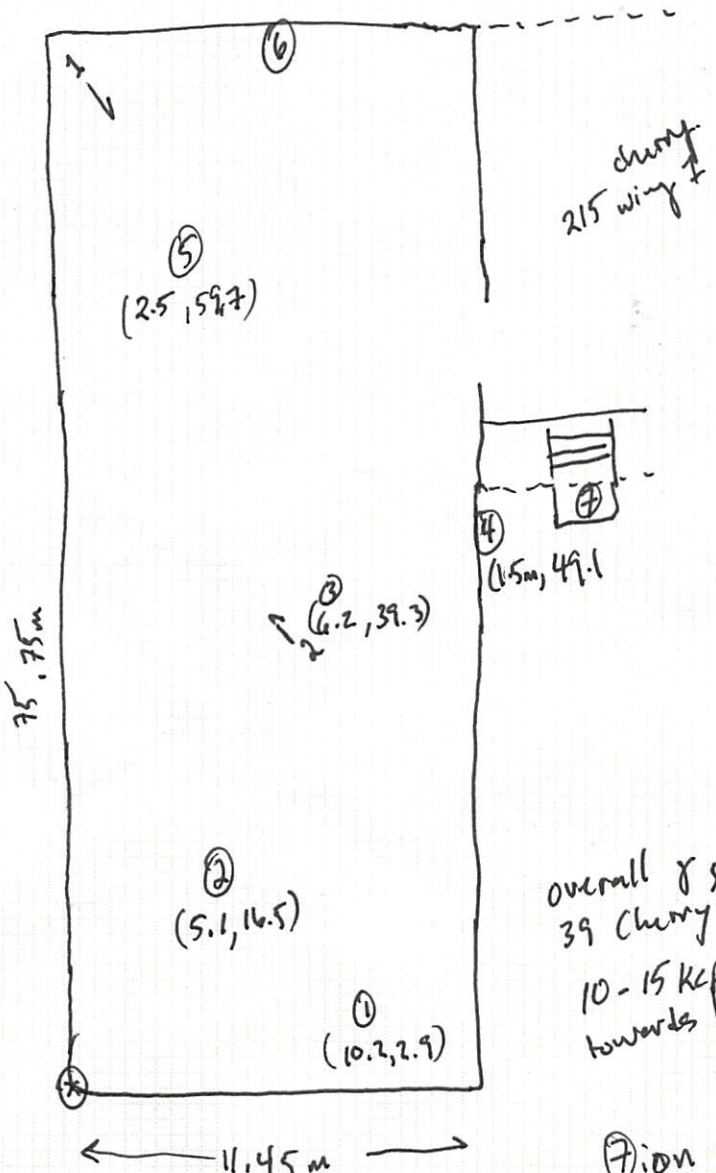
OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION
Managed by ORAU for DOE

SITE: Waterbury	AREA: 39 Cherry St.	DATE: 4/29/16	TIME: 14:13
SURVEYOR(S): NAA TCB		PURPOSE: site visit	

TYPE:	INSTRUMENT:	DETECTOR:	BACKGROUND:
2221 / 44-10	590	908	10 to 15 kcpm
2221 / 44-10a2	1143	920	N/A
192	1127	N/A	8 - 14 μR/hr

2nd Floor

N



#	γ (cpm)	β (cpm)	X contact/1m (MR/hr)
1	10,418	379	8.5/8.5
2	9,147	370	8/8.5
3	10,282	405	9/9
4	13,959	603	15/11
5	11,173	397	11.5/12
6	15,402	696	14/11
7	41,584	1,610	35/18.5 R0009

overall γ scan range for 39 Cherry:
10 - 15 kcpm (higher towards brick walls)

(7) ion stor landing between 2nd and 3rd floor. location was marked with orange paint.

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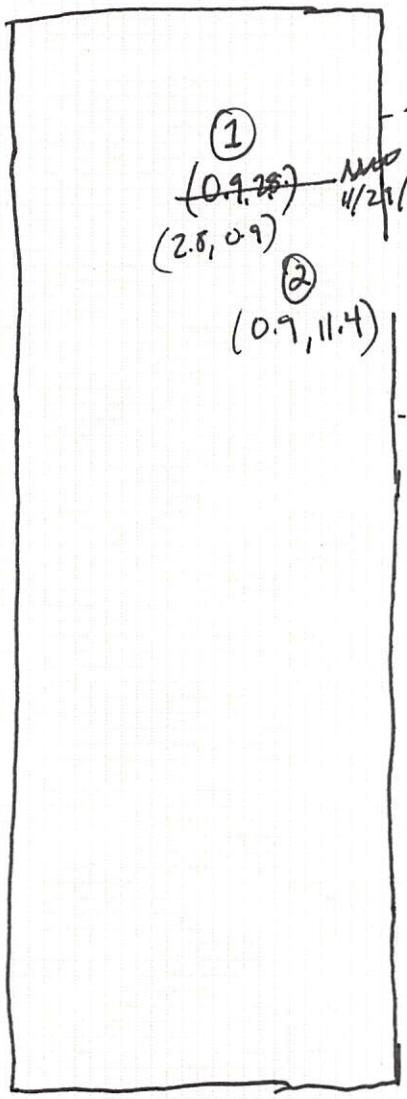
SITE: Waterbury	AREA: 39 Cherry St	DATE: 11/29/16 NMS 1/24/16	TIME: ~~13:30~~ 15:30
SURVEYOR(S): NMS TLB		PURPOSE: Site Visit	

TYPE:	INSTRUMENT:	DETECTOR:	BACKGROUND:
2221 / 44-10	590	908	N/A
2221 / ~~1143~~ 44-142	1143	920	N/A
192 RE 01/26/17	1127	N/A	N/A

4th Floor



215 cherry wing 1

#	γ (cpm)	β (cpm)	X contact/1cm (MR/hr)
R0010 ①	42,537	1971	40/17.5
R0011 ②	48,440	6745	39.5/16.5

γ scan of floor on Northend was 16 to 50 kcpm.

5289 Radium Program

11/29/16

Reviewed by: 02/16/17

OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION
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SITE: 232 N. Elm St	AREA: Basement	DATE: 12/1/16	TIME: 20:00
SURVEYOR(S): UAH TCB		PURPOSE: Site Visit.	

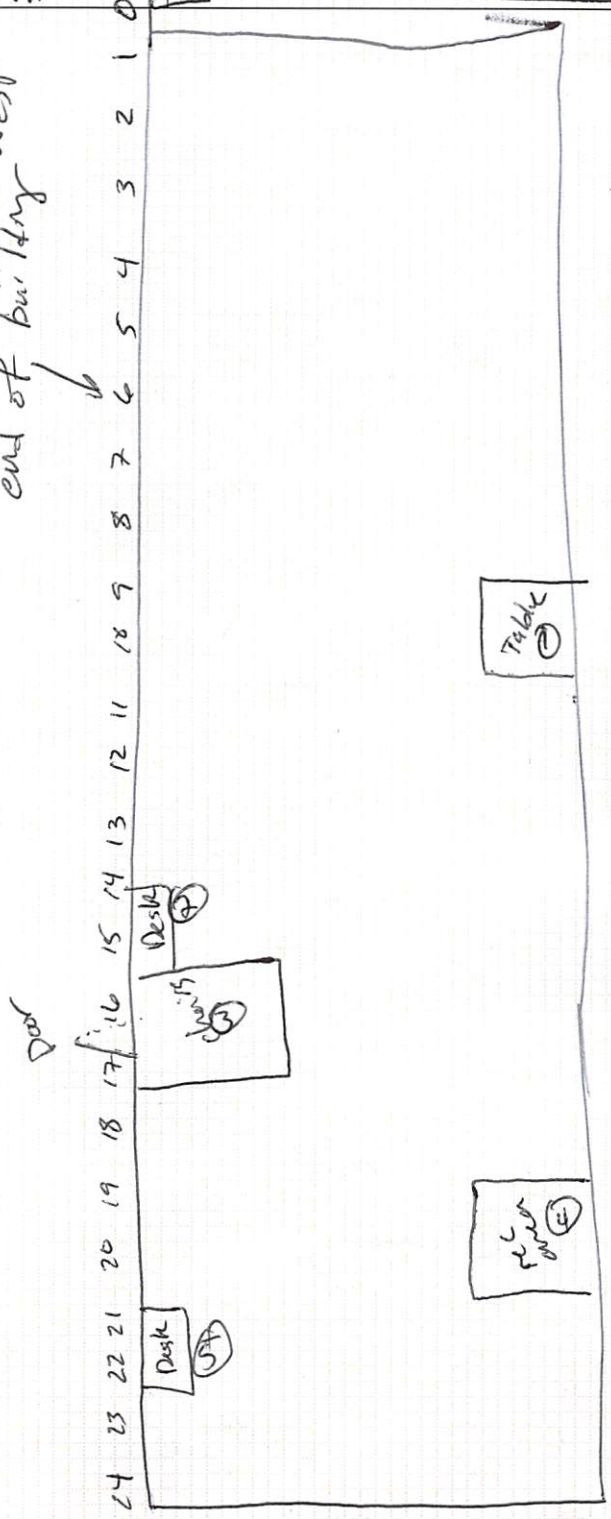
TYPE:	INSTRUMENT:	DETECTOR:	BACKGROUND:
2221/14470	590	508	9 to 22 kcpm.
192	1127	NA	8 to 12 μR/hr
NA			

KS 01/26/17

Basement

Note: Numbers represent number of floor joists referenced from west end of building

#	X (μR/hr @ 1m
1.	9
2	11
3	10
4.	9
5.	10



Exposure rate ranged from 8 to 12 μR/hr

Gamma scan ranged from 9 to 22 kcpm. Higher end was noted around building support pillars. This appears to be a different type of concrete.

N

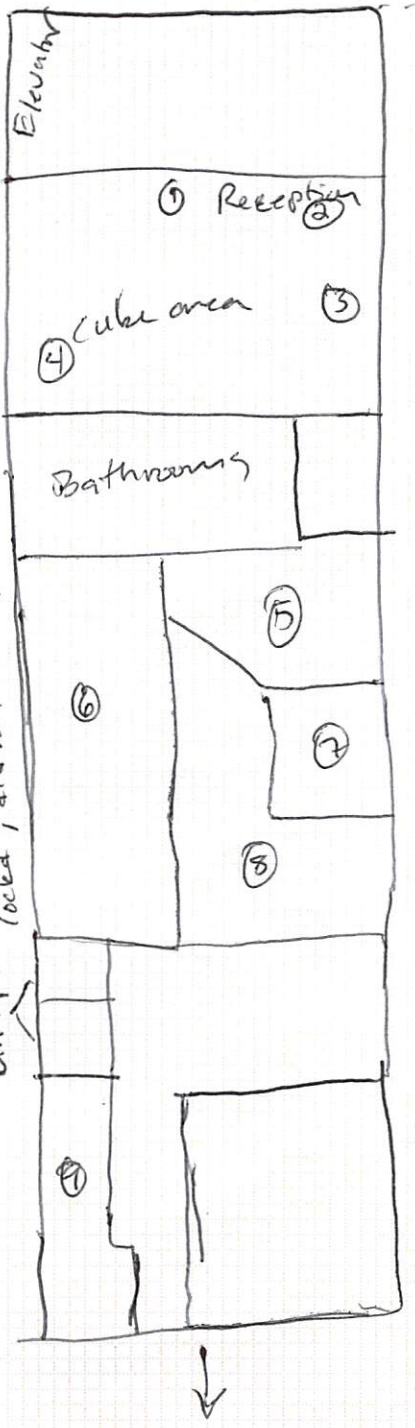
Reviewed by: Kaitlin Snell 02/16/17

OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION
Managed by ORAU for DOE

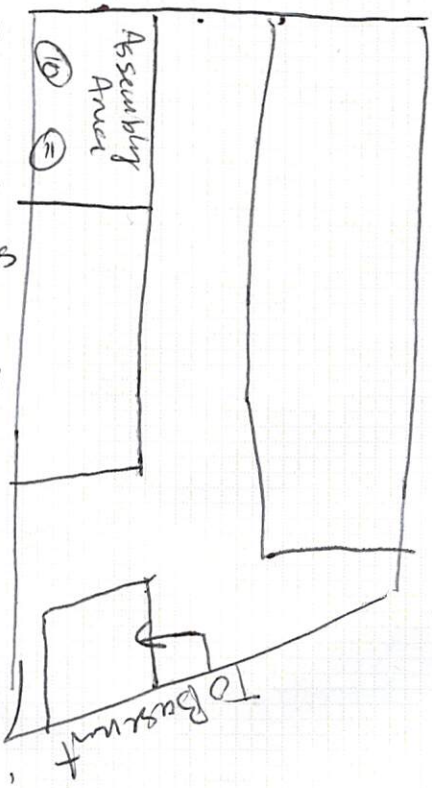
N.

SITE: 232 Elm St	AREA: 1st Floor Office	DATE: 12/1/16	TIME: 17:00
SURVEYOR(S): NAA, TCB		PURPOSE: Site Visit	

TYPE:	INSTRUMENT:	DETECTOR:	BACKGROUND:
2221/44-10	590	908	6-14 kcpm,
192	1127	NA	7-10 μR/hr
NA		NA 01/26/17	



most of this floor is used for storage of various office furniture very little occupied spaces except front reception area and assembly area.



#	(μR/hr)	#	(μR/hr)
1.	7		
2	7		
3	9		
4	6		
5	7		
6	5		
7	8		
8	9		
9	7		
10	10		
11	9		

General area x was 5 to 10 μR/hr; no anomalies identified.

General area γ scan ranged from 6 to 14 kcpm.

Reviewed by: Kaitlin Snell 02/16/17

12/1/16

OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION
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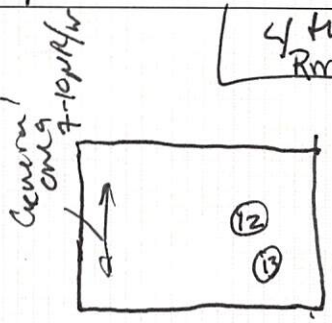
SITE: Waterbury	AREA: 232 N. Elm St	DATE: 11/29/16	TIME: 18:45
SURVEYOR(S): NAH TLB		PURPOSE: S.A. Visit	

TYPE:	INSTRUMENT:	DETECTOR:	BACKGROUND:
2221 / 44-10	590	908	~~7~~ to 14 kcpm
2221 / 44-142	1143	920	N/A
192	1127	N/A	8 to 10 μR/hr

4th Floor Rm 426



work areas

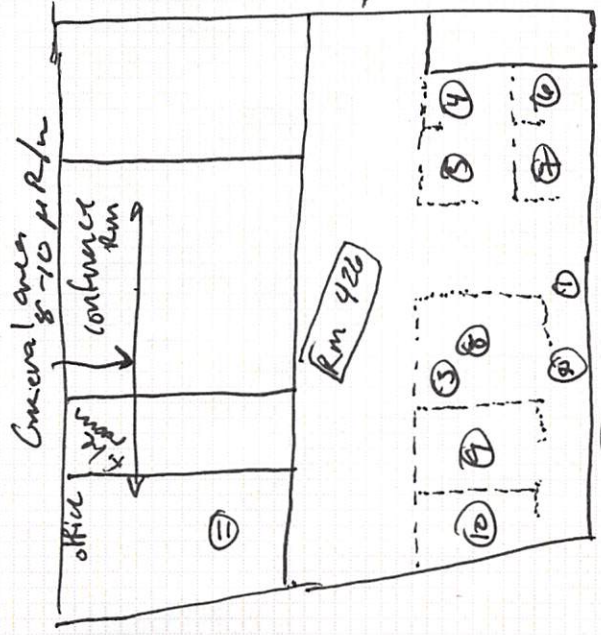
N

#	ẋ (μR/hr) at waist
4	15
5	17
6	22
7	22
8	23 R0012 at desk.
9	19
10	15
11	15

Floor (contact)

#	β (cpm)	γ (cpm)
1	3,444	73,521
3	13,082	228,975
12	5438	132,436
13	6333	179350
14	2741	52,814

R0013 19.9m



#	ẋ (μR/hr) Floor	Mid	Ceiling (~2.3m)
1	60	40	85
2	26.5	32.5	120 R0014
3	~~75~~ NAA 11/29/16 200	15	18 - mid through desk.
12	165	15	10
13	170	25	11
14	38	9	6

R0015 collected from window sill above 1.

γ: 7 to 230 kcpm

ẋ: 8 to 200 μR/hr

---- Delineates Cubicles

1 of 1 KEE 02/16/17

Nicholas Hall 11/29/16

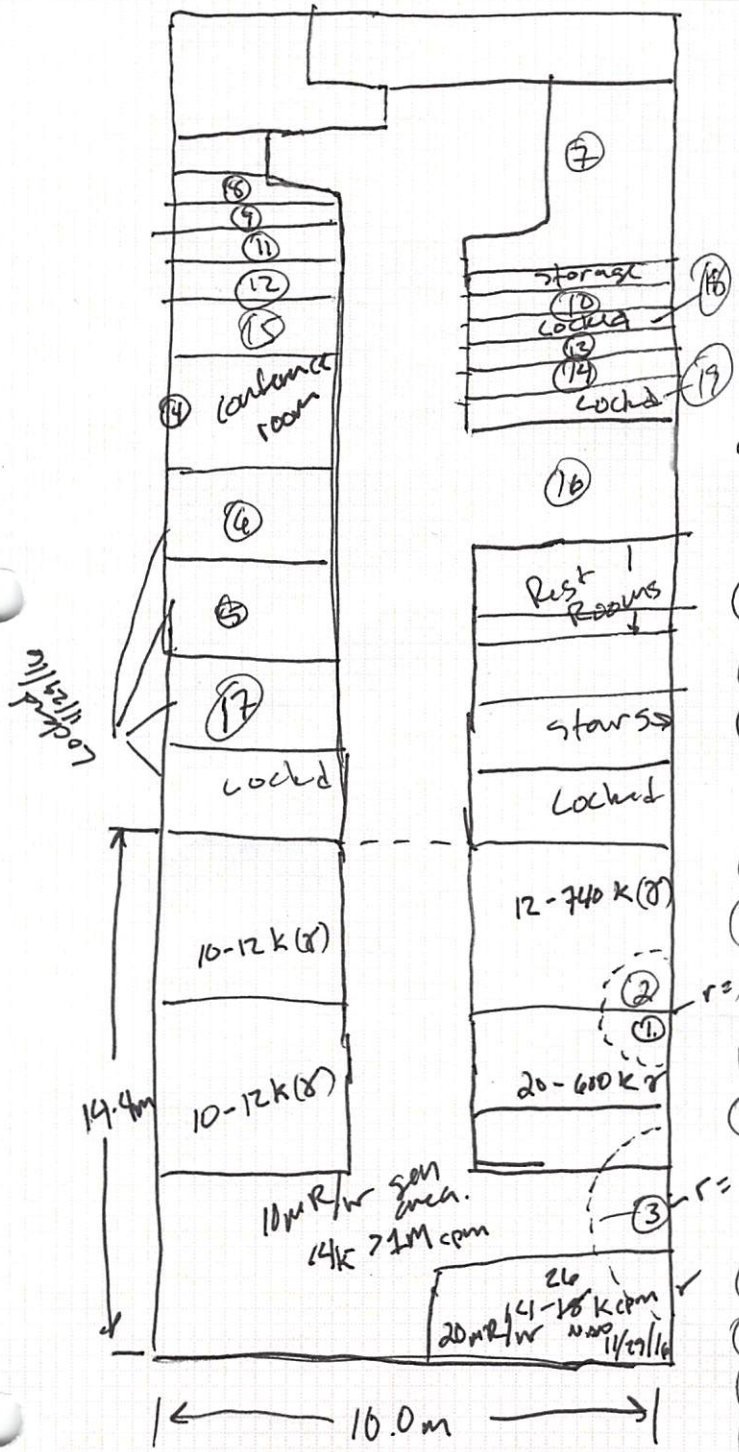
Reviewed by: Kaitlin Snyder 02/16/17

OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION
Managed by ORAU for DOE

NMO 11/29/16

SITE: Waterbury	AREA: 232 N. Elm St	DATE: 11/29/16	TIME: ~~15~~ 17:30
SURVEYOR(S): NAH TLB		PURPOSE: Site Visit	

TYPE:	INSTRUMENT:	DETECTOR:	BACKGROUND:
2221/44-10	590	908	6 to 14k cpm
2221/44-142	1143	920 N/A	N/A
192	1127		6-8 MR/hr



#	γ (cpm)	β (cpm)	Ẋ contact / 1m (MR/hr)
1	620,287	98,767	750/75
2	738,587	72,032	950/75
3	>1M	356,369	4,000/210
4	21,241	514	17/10.5
5	—	—	40/10
6	—	—	7*
7	—	—	6*
8	—	—	8
9	—	—	6
10	—	—	7
11	—	—	6
12	—	—	6
13	—	—	7
14	—	—	6
15	—	—	6
16	—	—	8
17	—	—	7
18	—	—	6
19	—	—	7

③ = 2.9 M cpm γ

--- denotes area >40 MR/hr
↳ total, including bkg.

γ: 6K to >1M cpm
Ẋ: 5 to 4,000 MR/hr.

Reviewed by: Karla S 02/14/17

NAH 11/29/16

KLC 02/14/17

E-PERM Radon Measurement Field Form

Site: 232 N. Elm St. (NOW)

Deployed by: N. Alli / T. Jackson.

Electret Reader S/N: 0540

Collected by: N. Alli / O. Bailey

No.	Location	Exposure Rate (μR/hr)	Electret						
			Serial No.	Deploy Date	Deploy Time	Initial Voltage (V)	Retrieval Date	Retrieval Time	Final Voltage (V)
1	3rd Floor Office Next to T. Hirst	20.0	SJM 767	12/16/16	17:10	768	12/18/16	17:22	752
2	Dup of 1	20.0	SJM 764	"	17:10	769	"	17:22	751
3	5th Flr. "Rec Rm" Ph. I	11.5	SJM649	"	17:20	766	"	17:32	747
4	Dup of 3	11.5	SJM730	"	17:20	776	"	17:32	754
5	5th floor hot spot Closed.	3,500	SJM709	"	N/A	775	"	17:33	754
6	4th fl. Madre Latina	17.0	SJM 691	"	17:38	761	"	17:52	752
7	Dup of 6	17.0	SJM 814	"	17:38	768	"	17:52	758
8	Rm 426; ~~W. End~~ ~~E. End~~ W. End.	20.0	SJM 736	"	17:49	775	"	17:48	763
9	Dup of 8	20.0	SJM 653	"	17:49	765	"	17:48	758
10	Rm 426; ~~W. End~~ ~~E. End~~	15.0	SJM 761	"	17:53	772	"	17:50	763
11	Dup of 10	15.0	SJM 611	"	17:53	777	"	17:50	~~766~~
12	Blank @ 8 and 9	20.0	SJM 633	"	18:02	767	"	17:48	766
13	4th fl. W. End Waiting Rm	13.5	SJM 818	"	18:11	766	"	17:42	754
14	Dup of 13	13.5	SJM 796	"	18:11	755	"	17:42	746
15	Phase II 4th floor Fatherhood	13.5	SJM 710	"	18:22	775	"	17:55	764
16	Dup of 15	13.5	SJM 738	"	~~18:22~~ ~~18:27~~ 12/16/16	772	"	17:55	753
									12/16/16

Completed by: N. Alli

Reviewed by: Kathleen S

E-PERM Radon Measurement Field Form

Site: 232 N. Elm St. (NAW)

Deployed by: N. Altic / T. Jackson

Electret Reader S/N: 0540

Collected by: O. Bailey / N. Altic

No.	Location	Exposure Rate (µR/hr)	Electret						
			Serial No.	Deploy Date	Deploy Time	Initial Voltage (V)	Retrieval Date	Retrieval Time	Final Voltage (V)
17	5th fl. Phase I; center	7.5	SJM663	12/16/16	19:03	768	12/18/16	17:36	761
18	Dup of 17	7.5	SJM606		19:03	766		17:36	761
19	5th fl. Phase I; W. End	8.0	SJM640		19:12	763		17:39	754
20	Dup of 19.	8.0	SJM628		19:12	766		17:39	759
21	4th fl. Phase I; center	7.0	SJM690		19:27	757		17:45	749
22	Dup of 21	7.0	SJM ~~679~~ 803 redo 12/16/16		19:27	764		17:45	758
23	3rd fl. center, kitchen	5.5	SJM825		19:36	777		18:05	775
24	Dup of 23	5.5	SJM662		19:36	780		18:05	769
25	1st floor; Phase I; W. End	6.0	SJM667		19:45	784		18:08	780
26	Dup of 25	6.0	SJM ~~667~~ 835 redo 12/16/16		19:45	768		18:08	759
27	3rd floor Ph I; W. End	7.0	SJM757		~~19:54~~ 19:53 redo 12/16/16	761		18:03	757
28	Dup of 27	7.0	SJM907		19:53	755		18:03	753
29	3rd floor Ph I; center	5.0	SJM744		20:00	771		18:02	764
30	Dup of 29	5.0	SJM892		20:00	768		18:02	764
31	3rd floor Ph I; E. end	7.0	SJM688		20:04	781		18:00	776
32	Dup of 32	7.0	SJM677		20:04	771		18:00	763
33	2nd floor Ph II; MR; Blank	5.0	SJM641		20:12	771		18:12	775

Completed by: [signature]

Reviewed by: Kaitlyn

E-PERM Radon Measurement Field Form

Site: 232 N. Elm St. (NOW)

Deployed by: N. Altic / T. Jackson.

Electret Reader S/N: 0540

Collected by: N. Altic / O. Bailey.

No.	Location	Exposure Rate (µR/hr)	Electret						
			Serial No.	Deploy Date	Deploy Time	Initial Voltage (V)	Retrieval Date	Retrieval Time	Final Voltage (V)
34	Same as 33	5.0	SJM 782	12/16/16	20:12	762	12/18/16	18:12	757
35	Dup of 34	5.0	SJM ~~782~~ 675	MAP 12/16/16	20:12	761	"	18:12	756
36	1st fl. Ph II w/thr office	9.0	SJM 824	"	20:25	775	"	18:16	763
37	Dup of 36	9.0	SJM 811	"	20:25	770	"	18:16	754

Completed by: [signature]

Reviewed by: Kaitlin Ezell