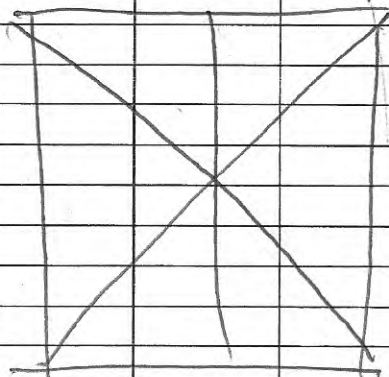


Dade Moeller
Radiological Survey Report

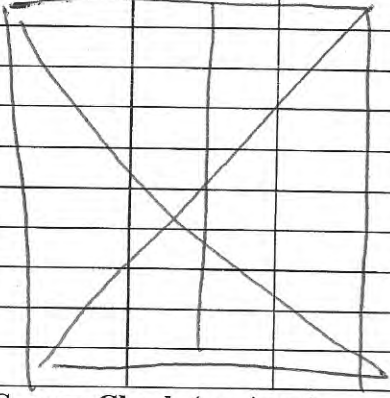
Laboratory Description: <u>PNPF</u>				Date: <u>6/10/2020</u>			
Purpose of Survey: <u>Stair case - 1-1 Floor</u>				Performed By: <u>Clark Barton</u> Print: <u>Clark Barton</u> Sign: <u>Clark Barton 6/10/2020</u>			
Sketch of Area Stair treads and flights noted, starting at top as FIT1. 8 flights, Landings numbered from the top. Unit Scanned 100% at Landings & treads picked random spots if no potential elevation found Nat scans done when main floor areas done				Direct Results cpm/100cm ²			
				Direct #	Beta	Alpha	
				FIT5-1	138	0	
				FIT9-2	145	6	
				F2T3-3	144	3	
				F2T6-4	171	7	
				F3T7-5	155	2	
				F3L3-6	138	4	
				F4T2-7	109	5	
				F4T5-8	140	5	
				F5T5-9	127	6	
				F5L5-10	105	6	
				F6T1-11	113	4	
				F6T8-12	141	3	
				F7T4-13	103	9	
				F7L7-14	109	4	
				F8T4-15	120	7	
				F8T7-16	128	4	
Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location							
Instrumentation				Source Check (pre/post)			
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units	
43-68	260445	0.42 1496	232/29.36	14-236	434/376	CPM	Pre
"	"	"	"	1-129	404/414	CPM	Post
Comments, including corrective actions if any:							
Critical values 102 3046							

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	Stair Case Floor CSS	Instrument Model:	2929
		Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	54
Background	Background Count #2	1	52
1	See Direct Survey Form 	0	60
2		0	47
3		0	59
4		0	52
5		0	49
6		1	68
7		0	43
8		0	54
9		1	64
10		0	60
11		1	52
12		0	52
13		0	61
14		0	60
15		0	62
16		0	59
 			
Additional Comment:		Ludlum 6/10/2020	
Analyzed by/date: (name/date)			

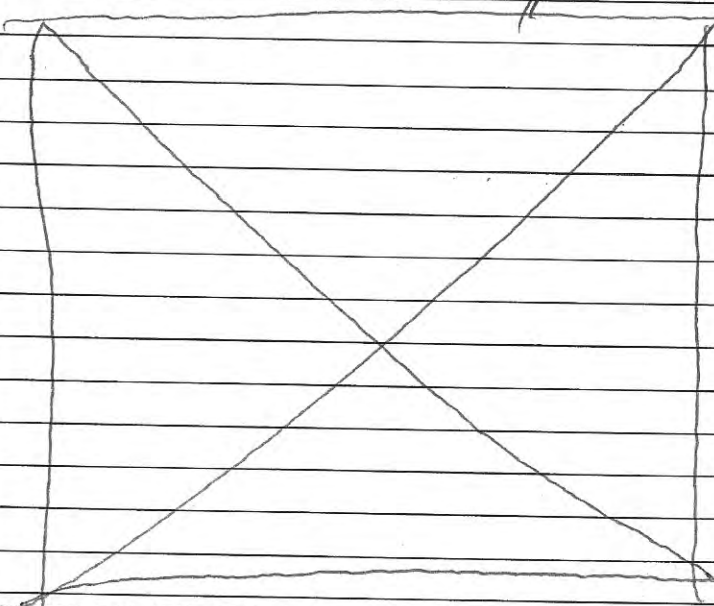
Dade Moeller
Radiological Survey Report

Laboratory Description: <u>PNPF</u>				Date: <u>6/10/2020</u>		
Purpose of Survey: <u>Rx Stair Wall - 1-1</u>				Performed By:		
				Print: <u>Clark Barton</u>		
				Sign: <u>[Signature]</u> 6/14/2020		
Sketch of Area Wall of Stair well, sections numbered from top to bottom from top to bottom. Surveyed 100% of reachable wall for first 2 meters, picked random spot if no potential elevation. NAI scans done when wet - Main wall areas done				Direct Results cpm/100cm ²		
				Direct #	Beta	Alpha
				1-1	185	4
				1-2	188	3
				2-3	157	4
				2-4	117	1
				3-5	181	1
				3-6	162	3
				4-7	119	7
				4-8	136	4
				5-9	181	1
				5-10	170	3
				6-11	111	7
				6-12	103	2
				7-13	157	3
				7-14	161	7
				8-15	121	9
				8-16	86	5
Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location						
Instrumentation				Source Check (pre/post)		
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
43-68	260445	0.42 / 1493	23% / 29.3%	Th 230 / 1-129	439 / 376	cpm
11	11	11	11	11	404 / 414	cpm
Comments, including corrective actions if any: _____ _____ _____						

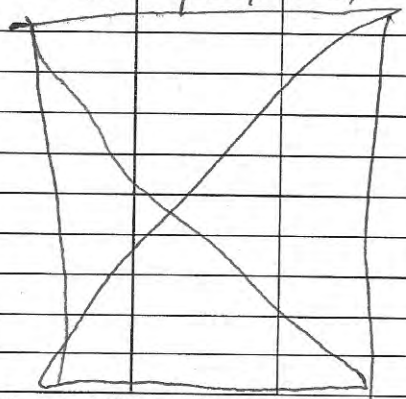
pre
post

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	Staircase Wall CSS	Instrument Model:	2929
		Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

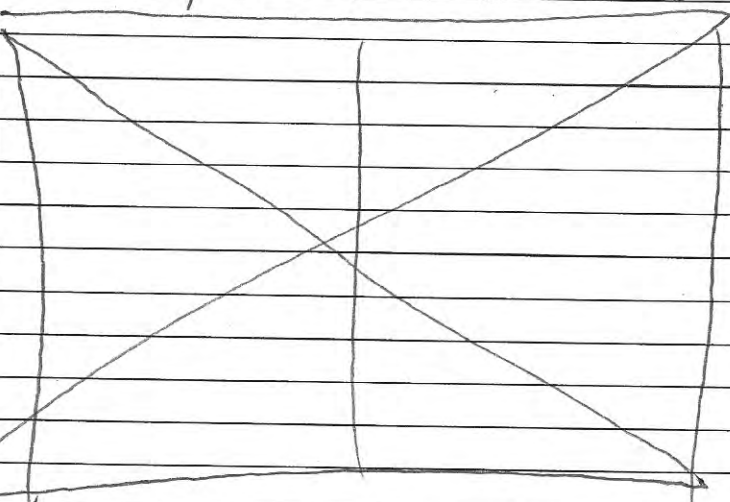
DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	69
Background	Background Count #2	0	80
1		2	52
2		1	52
3		1	48
4		0	46
5		0	51
6		0	42
7		0	52
8		0	53
9		0	59
10		0	48
11		0	51
12		1	59
13		0	45
14		0	48
15		1	65
16		1	64
Additional Comment:			
Analyzed by/date: (name/date)		C. H. 6/10/2020	

Dade Moeller
Radiological Survey Report

Laboratory Description: <u>PNUF</u> Purpose of Survey: <u>Spiral Stair</u>				Date: <u>6/9/2020</u> Performed By: <u>Clark Barton</u> Print: <u>Clark Barton</u> Sign: <u>[Signature]</u> 6/10/2020																																																								
Sketch of Area Stairs are in poor condition, only surveyed what can be reached without getting on stairs. S6 level - everything is wet no scan 79 level - everything damp but not as bad Surveyed 100% of reachable surfaces, picked random spots if no elevated areas identified. Nail done when main floors & walls done.				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Direct Results cpm/100cm²</th> </tr> <tr> <th>Direct #</th> <th>Beta</th> <th>Alpha</th> </tr> </thead> <tbody> <tr><td>1</td><td>129</td><td>3</td></tr> <tr><td>2</td><td>114</td><td>2</td></tr> <tr><td>3</td><td>119</td><td>6</td></tr> <tr><td>4</td><td>167</td><td>7</td></tr> <tr><td>5</td><td>109</td><td>2</td></tr> <tr><td>6</td><td>172</td><td>7</td></tr> <tr><td>7</td><td>168</td><td>4</td></tr> <tr><td>8</td><td>109</td><td>2</td></tr> <tr><td>9</td><td>164</td><td>8</td></tr> <tr><td>10</td><td>203</td><td>4</td></tr> <tr><td>11</td><td>173</td><td>1</td></tr> <tr><td>12</td><td>169</td><td>2</td></tr> <tr><td>13</td><td>118</td><td>3</td></tr> <tr><td>14</td><td>134</td><td>4</td></tr> <tr><td>15</td><td>159</td><td>5</td></tr> <tr><td>16</td><td>129</td><td>6</td></tr> </tbody> </table> 			Direct Results cpm/100cm ²			Direct #	Beta	Alpha	1	129	3	2	114	2	3	119	6	4	167	7	5	109	2	6	172	7	7	168	4	8	109	2	9	164	8	10	203	4	11	173	1	12	169	2	13	118	3	14	134	4	15	159	5	16	129	6
Direct Results cpm/100cm ²																																																												
Direct #	Beta	Alpha																																																										
1	129	3																																																										
2	114	2																																																										
3	119	6																																																										
4	167	7																																																										
5	109	2																																																										
6	172	7																																																										
7	168	4																																																										
8	109	2																																																										
9	164	8																																																										
10	203	4																																																										
11	173	1																																																										
12	169	2																																																										
13	118	3																																																										
14	134	4																																																										
15	159	5																																																										
16	129	6																																																										
Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">Instrumentation</th> <th colspan="3">Source Check (pre/post)</th> </tr> <tr> <th>Model #</th> <th>Serial #</th> <th>Background</th> <th>Efficiency</th> <th>Isotope</th> <th>Reading</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>43-68</td> <td>260445</td> <td>0.42, 149p</td> <td>23% / 29.3p</td> <td>Tl-230</td> <td>439 / 376</td> <td>Cpm</td> </tr> <tr> <td>11</td> <td>11</td> <td>11</td> <td>11</td> <td>11</td> <td>404 / 414</td> <td>Cpm</td> </tr> </tbody> </table>			Instrumentation				Source Check (pre/post)			Model #	Serial #	Background	Efficiency	Isotope	Reading	Units	43-68	260445	0.42, 149p	23% / 29.3p	Tl-230	439 / 376	Cpm	11	11	11	11	11	404 / 414	Cpm																										
Instrumentation				Source Check (pre/post)																																																								
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units																																																						
43-68	260445	0.42, 149p	23% / 29.3p	Tl-230	439 / 376	Cpm																																																						
11	11	11	11	11	404 / 414	Cpm																																																						
Comments, including corrective actions if any: _____ _____ _____																																																												

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	Spiral Staircase CSS	Instrument Model:	2929
		Instrument S/N:	121 877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

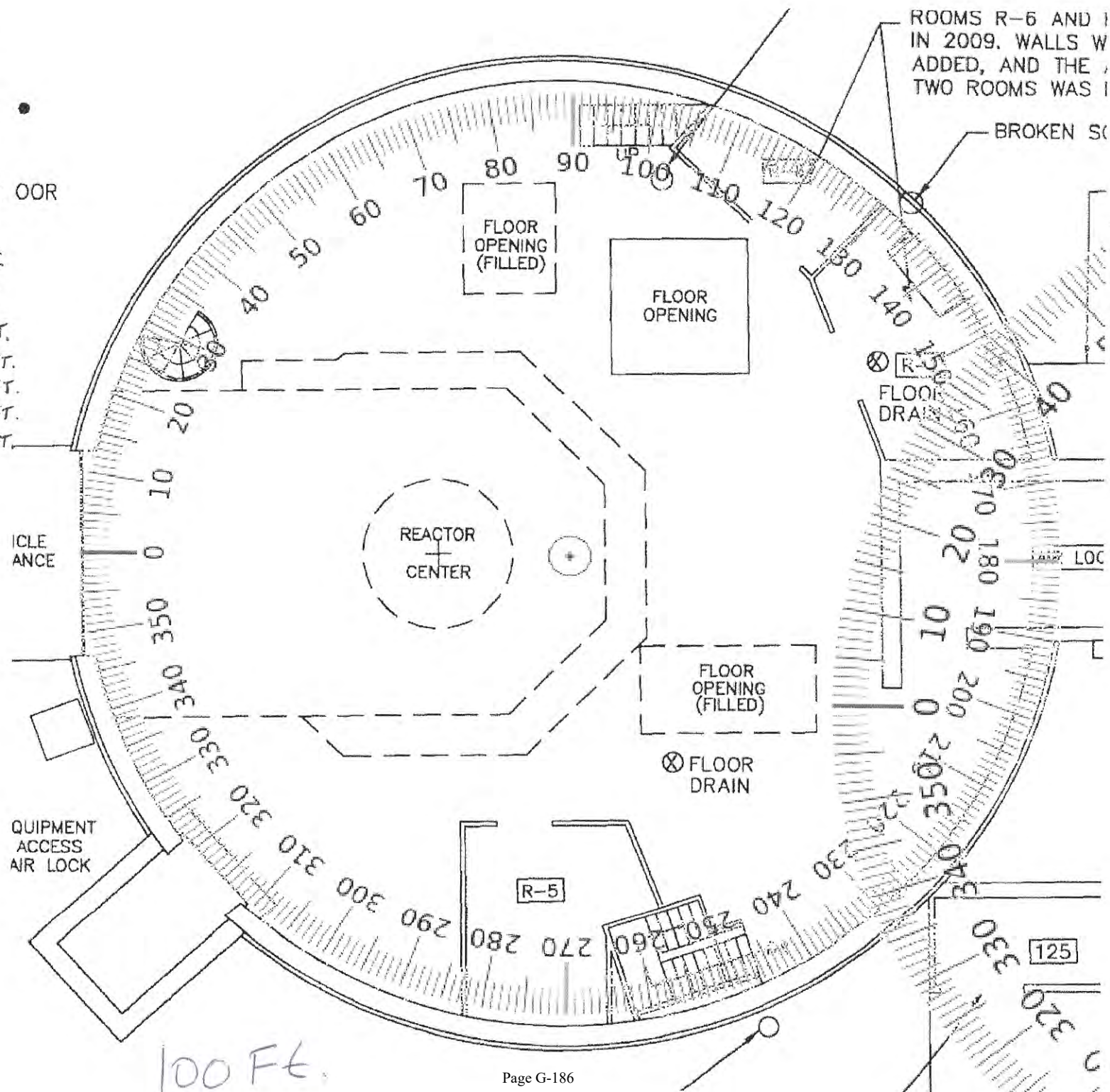
DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	0	61
Background	Background Count #2	0	53
1	see Direct Survey FORM 	0	51
2		1	54
3		1	45
4		0	53
5		1	62
6		0	59
7		0	64
8		0	61
9		1	65
10		0	55
11		0	60
12		0	66
13		0	50
14		0	58
15		0	48
16		0	61
Additional Comment:			
Analyzed by/date: (name/date)			

Dade Moeller
Radiological Survey Report

[illegible]

PL 1/3 JAL

1. 12° 50 FT.
2. 23° 8.6 FT.
3. 68° 40 FT.
4. 102° 35 FT.
5. 113° 55 FT.
6. 136° 24 FT.
7. 158° 3.5 FT. OOR
8. 192° 11 FT.
9. 203° 32 FT.
10. 226° 1 FT.
11. 248° 63 FT.
12. 282° 58 FT.
13. 293° 16 FT.
14. 316° 48 FT.
15. 338° 27 FT.



Pg. 2/3 JLM

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	Piqua	Instrument Model:	2929
		Instrument S/N:	121817
	100 Outside Dome	Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

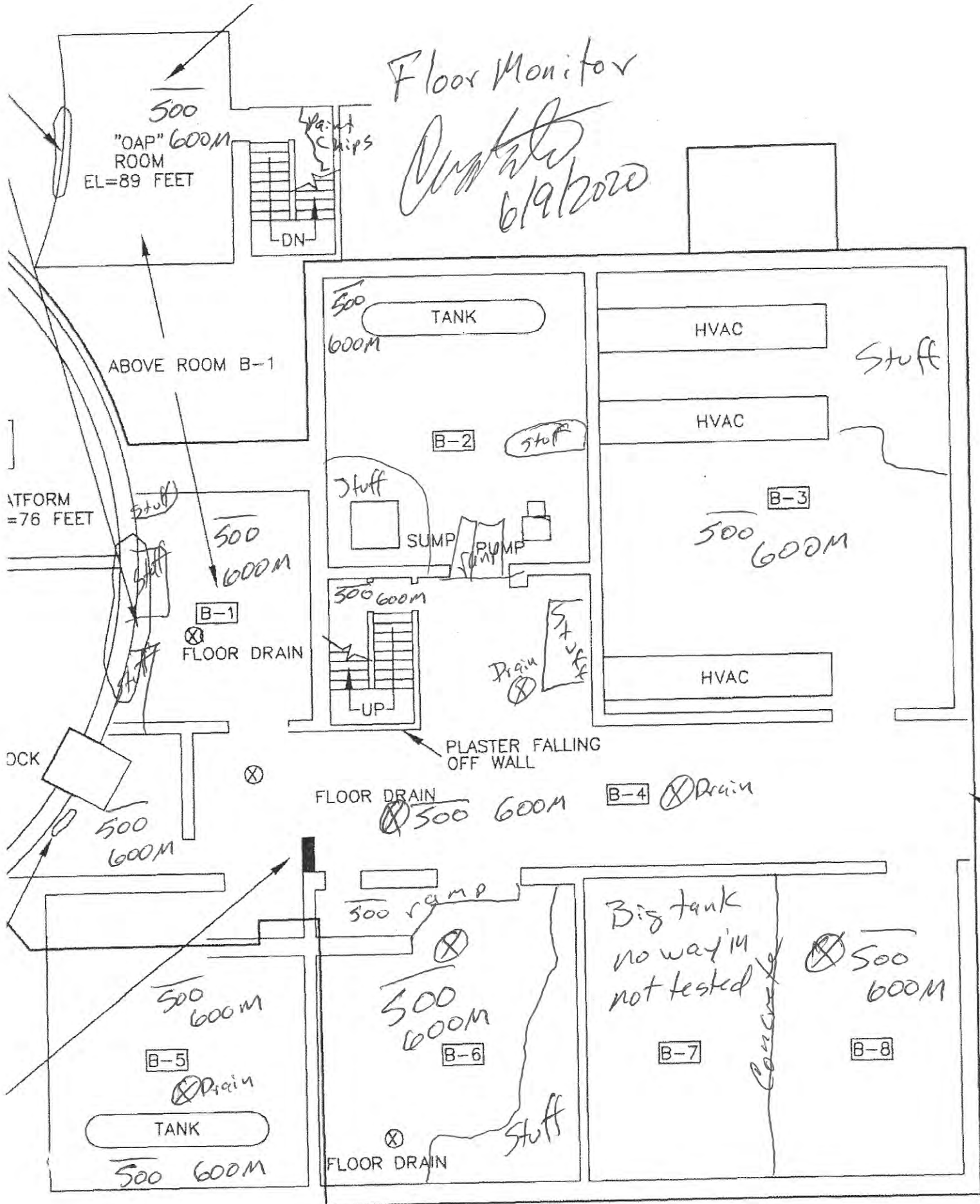
DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	0	66
Background	Background Count #2	0	63
1	See map with Direct Survey	1	57
2		8	57
3		8	57
4		2	68
5		1	72
6		0	56
7		3	57
8		6	66
9		0	54
10		0	50
11		0	60
12		0	41
13		0	48
14		1	44
15		4	48
Additional Comment:		Critical Values = 92.4 Bq & 4.3 d	
Analyzed by/date: (name/date)		C. G. S. 6/3/2020	

Dade Moeller
Radiological Survey Report

Laboratory Description: <u>PNPF</u>				Date: <u>6/9/2020</u>		
Purpose of Survey: <u>79AF-1-1 Floor Mon.</u>				Performed By:		
<u>-1-2 F</u>				Print: <u>Clark Barton</u>		
<u>-1-3 NaI</u>				Sign: <u>[Signature]</u> <u>6/9/2020</u>		
Sketch of Area				Direct Results cpm/100cm ²		
See attached Maps NaI includes wall So 79AW-1-1 -1-2 -1-3 -1-4 -1-5				Direct #		
				Beta		
				Alpha		
Legend: # - Direct Measurement						
# - Scan Direct Measurement						
⊕ - Smear Location						
Instrumentation				Source Check (pre/post)		
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
239-1F	187246	576670	N/A	Th 230	101917	Cpm
44-10	251999	4000	N/A	Cs137	280000	Cpm
Comments, including corrective actions if any:						

Floor Monitor

6/9/2020



PLAN - 79 FOOT LEVEL

SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN CONTAINMENT STRUCTURE

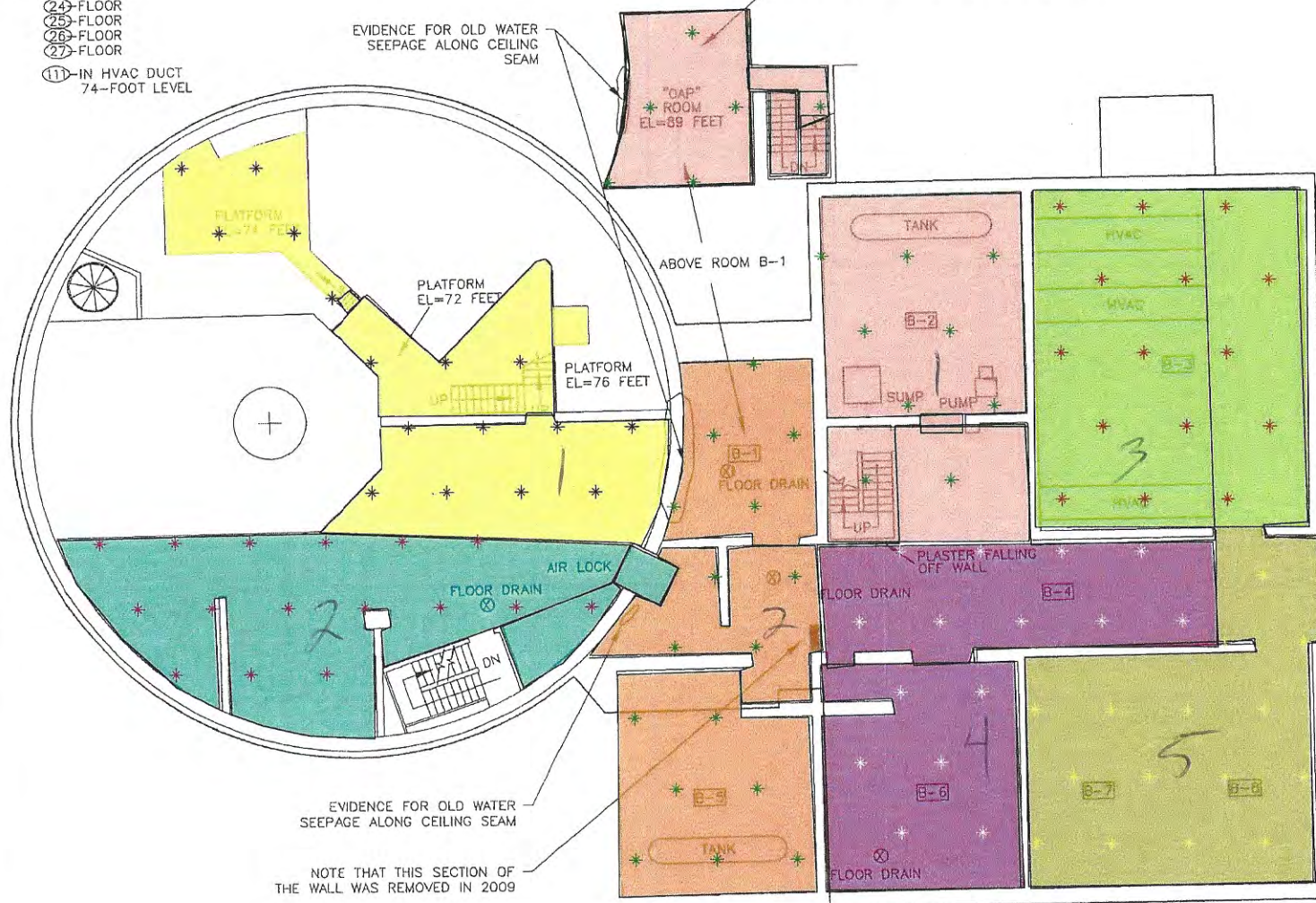
- (24)-FLOOR
- (25)-FLOOR
- (26)-FLOOR
- (27)-FLOOR
- (11)-IN HVAC DUCT
74-FOOT LEVEL

EVIDENCE FOR OLD WATER
SEEPAGE ALONG CEILING
SEAM

"OAP" (OPERATING AIR PRESSURE) ROOM REMODELED IN
2009. PAINTED AND SHELVES WERE ADDED.

KEY:

- NO. = GENERAL AREA
- (NO) = SMEAR/DIRECT
- R-4 = ROOM NUMBER



SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN AUX. BLDG.

- (51)-FLOOR
- (52)-FLOOR
- (53)-FLOOR
- (54)-ON DRAIN
- (55)-FLOOR
- (56)-FLOOR
- (57)-FLOOR
- (58)-ON DRAIN
- (59)-FLOOR
- (60)-FLOOR
- (61)-ON DRAIN
- (62)-ON SUMP COVER
- (63)-PUMP
- (64)-FLOOR UNDER TANK
- (65)-FLOOR
- (66)-FLOOR
- (67)-INSIDE HVAC ON FLOOR
- (68)-FLOOR
- (69)-FLOOR-89' LEVEL OF

15 7.5

RA

2019 A
PI
DATE PRE
APRIL

PLAN - 79 FOOT LEVEL

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Laboratory Description: <u>79AF-1-1</u>				Date: <u>6/11/2026</u>						
Purpose of Survey: <u>CSS</u>				Performed By: _____						
				Print: <u>JEFF GAGNE</u>						
				Sign: <u>[Signature]</u>						
Sketch of Area <u>-SEE ATTACHED PAGE FOR SKETCH</u>				Direct Results cpm/100cm ²						
				Direct #	Beta	Alpha				
				1	186	0				
				2	177	0				
				3	143	2				
				4	143	1				
				5	171	2				
				6	151	4				
				7	157	2				
				8	151	2				
				9	151	0				
				10	167	0				
				11	144	5				
				12	152	1				
				13	140	4				
				14	128	3				
				15	166	3				
/										
Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location				Source Check (pre/post)						
				Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
				2224	162850	1α/122B		Ta-230/I-129	318α/2941B	CPM
								POST	288α/297B	CPM
Comments, including corrective actions if any: <u>N/A</u>										

SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN CONTAINMENT STRUCTURE

- (24)-FLOOR
- (25)-FLOOR
- (26)-FLOOR
- (27)-FLOOR
- (11)-IN HVAC DUCT
74-FOOT LEVEL

EVIDENCE FOR OLD WATER
SEEPAGE ALONG CEILING
SEAM

PLATFORM
EL=72 FEET

PLATFORM
EL=76 FEET

NOTE THAT THIS SECTION OF
THE WALL WAS REMOVED IN 2009

EVIDENCE FOR OLD WATER
SEEPAGE ALONG CEILING
SEAM

"OAP" (OPERATING AIR PRESSURE) ROOM REMODELED IN
2009. PAINTED AND SHELVES WERE ADDED.

KEY:

- NO = GENERAL AREA
- NO = SMEAR/DIRECT
- R-4 = ROOM NUMBER

SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN AUX. BLDG.

- (51)-FLOOR
- (52)-FLOOR
- (53)-FLOOR
- (54)-ON DRAIN
- (55)-FLOOR
- (56)-FLOOR
- (57)-FLOOR
- (58)-ON DRAIN
- (59)-FLOOR
- (60)-FLOOR
- (61)-ON DRAIN
- (62)-ON SUMP COVER
- (63)-PUMP
- (64)-FLOOR UNDER TANK
- (65)-FLOOR
- (66)-FLOOR
- (67)-INSIDE HVAC ON FLOOR
- (68)-FLOOR
- (69)-FLOOR-89' LEVEL OF

ROLL-UP
DOOR

15 7.5

RA

U.S. ENVIRONMENTAL PROTECTION AGENCY
2019 APRIL
DATE PREPARED
APRIL

PLAN - 79 FOOT LEVEL

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Dade Moeller

Bench Counter Worksheet

Client Name:	PNDF	Instrument Make:	Lodum
Client Address:	79AF-1-1 CSS	Instrument Model:	2929
		Instrument S/N:	118411
		Calibration Date:	4/22/2020
		Calibration Due Date:	4/22/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	50
Background	Background Count #2	1	43
1	See attached map	1	44
2		0	35
3		0	48
4		0	54
5		1	43
6		0	38
7		0	47
8		1	34
9		0	54
10		2	43
11		0	46
12		0	47
13		0	41
14		0	34
15		0	40
Additional Comment:			
Analyzed by/date: (name/date)		6/11/2020	

Dade Moeller
Radiological Survey Report

Laboratory Description: 79AF-1-2				Date: 6/11/2020		
Purpose of Survey: CSS				Performed By: SEFF GAGNE		
				Print: SEFF GAGNE		
				Sign: [Signature]		
Sketch of Area - SEE ATTACHED PAGE FOR SKETCH				Direct Results		
				cpm/100cm ²		
				Direct #	Beta	Alpha
				1	141	6
				2	128	1
				3	149	3
				4	154	6
				5	130	5
				6	180	3
				7	135	3
				8	126	1
				9	158	4
				10	147	2
				11	154	4
				12	128	6
				13	160	8
				14	141	2
				15	128	0
				16	148	2
				/		
Legend: # - Direct Measurement						
# - Scan Direct Measurement						
⊕ - Smear Location						
Instrumentation				Source Check (pre/post)		
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
2224	162850	1 α / 122 B	/	Tl-230/I-129	318 α / 294 B	CPM
				POST	288 α / 297 B	CPM
Comments, including corrective actions if any: N/A						

PG. 213 JPH

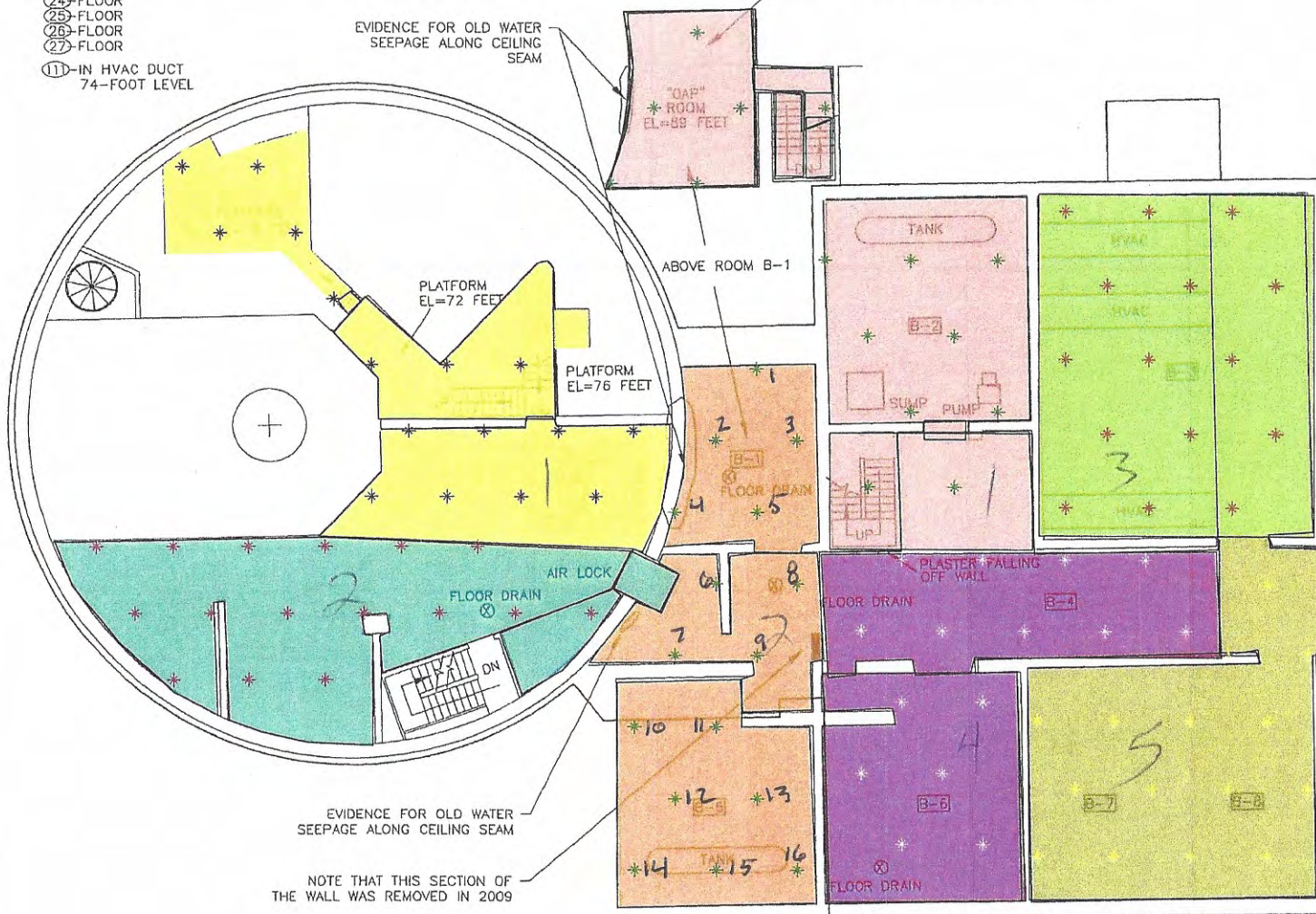
SMEAR/DIRECT LOCATIONS ON THE 79-FOOT LEVEL IN CONTAINMENT STRUCTURE

- (24)-FLOOR
- (25)-FLOOR
- (26)-FLOOR
- (27)-FLOOR
- (11)-IN HVAC DUCT 74-FOOT LEVEL

"OAP" (OPERATING AIR PRESSURE) ROOM REMODELED IN 2009. PAINTED AND SHELVES WERE ADDED.

KEY:

- NO. = GENERAL AREA
- (NO) = SMEAR/DIRECT
- R-4 = ROOM NUMBER



SMEAR/DIRECT LOCATIONS ON THE 79-FOOT LEVEL IN AUX. BLDG.

- (31)-FLOOR
- (32)-FLOOR
- (33)-FLOOR
- (34)-ON DRAIN
- (35)-FLOOR
- (36)-FLOOR
- (37)-FLOOR
- (38)-ON DRAIN
- (39)-FLOOR
- (40)-FLOOR
- (41)-ON DRAIN
- (42)-ON SUMP COVER
- (43)-PUMP
- (44)-FLOOR UNDER TANK
- (45)-FLOOR
- (46)-FLOOR
- (47)-INSIDE HVAC ON FLOOR
- (48)-FLOOR
- (49)-FLOOR-89' LEVEL OF

15 7.5

RA

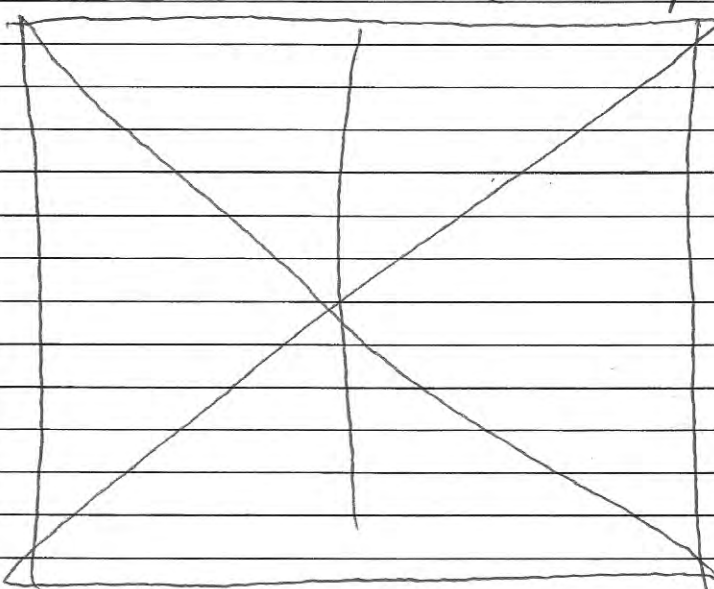
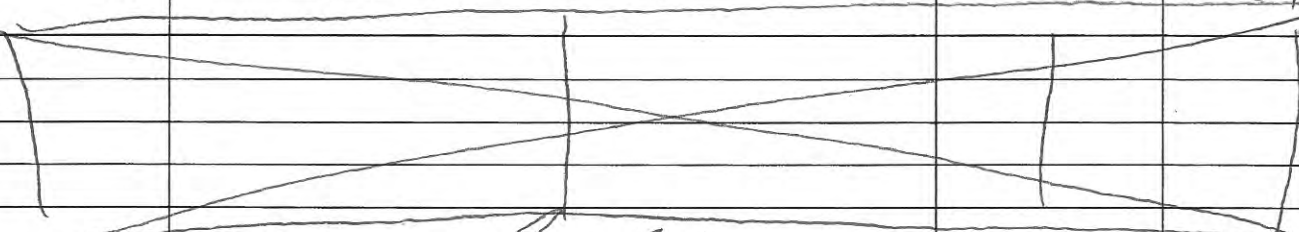
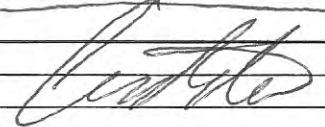
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2019 A
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DATE PRE APRIL

PLAN - 79 FOOT LEVEL

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Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	79AF-1-2 CSS	Instrument Model:	2929
		Instrument S/N:	121 877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	64
Background	Background Count #2	1	56
1	See attached map 	3	55
2		2	52
3		3	52
4		2	54
5		0	57
6		0	33
7		3	51
8		0	60
9		1	43
10		1	47
11		1	48
12		0	61
13		1	48
14		1	44
15		1	59
16		0	51
			
Additional Comment:		 6/11/2020	
Analyzed by/date: (name/date)			

Dade Moeller
Radiological Survey Report

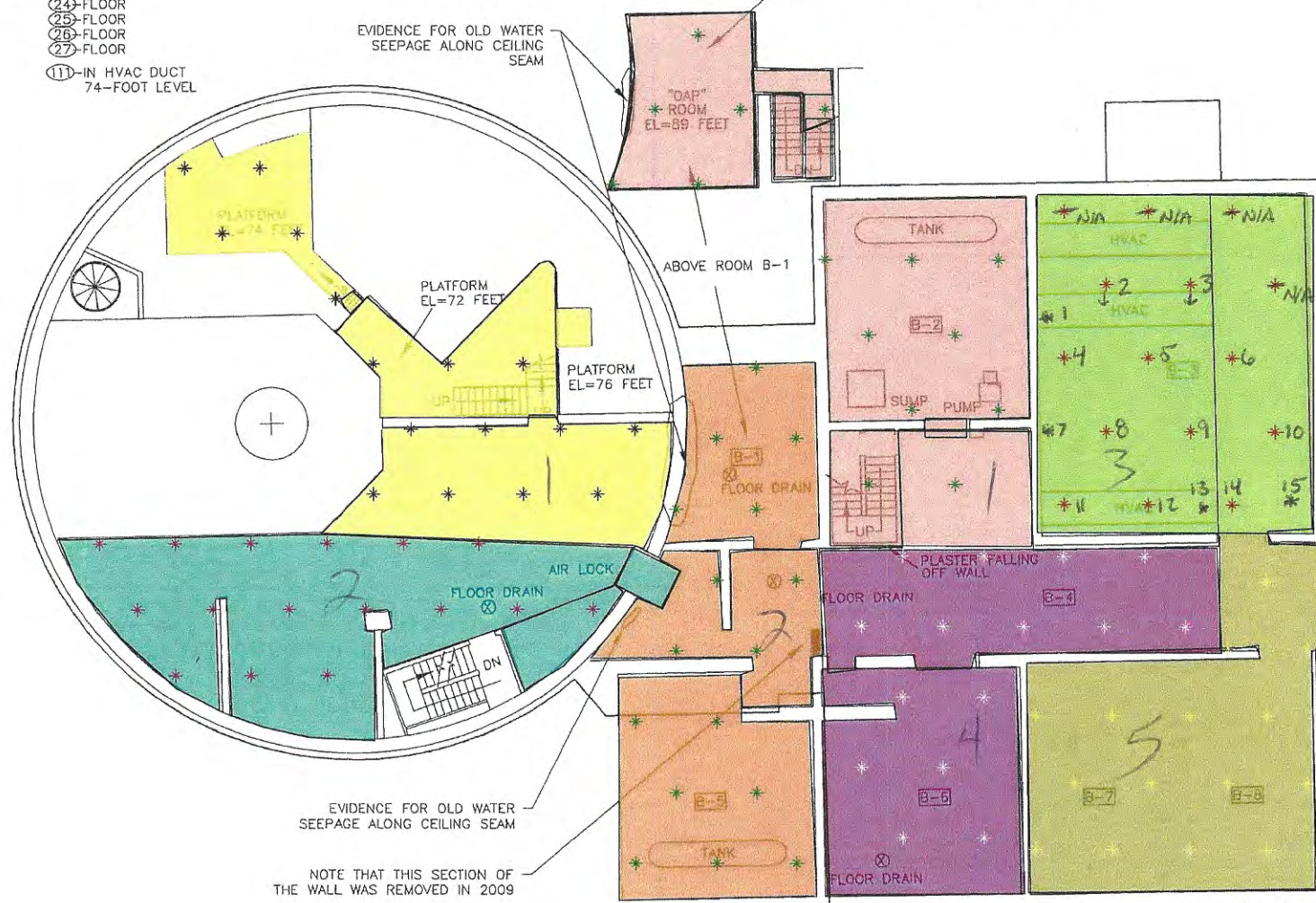
[illegible]

SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN CONTAINMENT STRUCTURE

- (24)-FLOOR
- (25)-FLOOR
- (26)-FLOOR
- (27)-FLOOR
- (11)-IN HVAC DUCT
74-FOOT LEVEL

EVIDENCE FOR OLD WATER
SEEPAGE ALONG CEILING
SEAM

"OAP" (OPERATING AIR PRESSURE) ROOM REMODELED IN
2009. PAINTED AND SHELVES WERE ADDED.



KEY:

- NO = GENERAL AREA
- (NO) = SMEAR/DIRECT
- R-4 = ROOM NUMBER

SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN AUX. BLDG.

- (51)-FLOOR
- (52)-FLOOR
- (53)-FLOOR
- (54)-ON DRAIN
- (55)-FLOOR
- (56)-FLOOR
- (57)-FLOOR
- (58)-ON DRAIN
- (59)-FLOOR
- (60)-FLOOR
- (61)-ON DRAIN
- (62)-ON SUMP COVER
- (63)-PUMP
- (64)-FLOOR UNDER TANK
- (65)-FLOOR
- (66)-FLOOR
- (67)-INSIDE HVAC ON FLOOR
- (68)-FLOOR
- (69)-FLOOR-89' LEVEL OF

15 7.5

RA

U.S. DEP.
OF ENERGY
ENR
2019 A
PI
DATE PRE
APRIL

PLAN - 79 FOOT LEVEL

M:\LTS\111\0027\03\S23518\S2351800.DWG 4/17/2019 9:08:46 AM atencioj

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	79 AF-1-3 (SS)	Instrument Model:	2929
		Instrument S/N:	118411
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	0	34
Background	Background Count #2	1	36
1	See attached map	0	48
2		0	52
3		0	38
4		0	38
5		2	38
6		0	40
7		0	48
8		0	42
9		1	40
10		0	44
11		0	43
12		0	50
13		2	39
14		0	53
15		2	36
Additional Comment:			
Analyzed by/date: (name/date)		Cm/56 6/11/2020	

Dade Moeller
Radiological Survey Report

[illegible]

176. 113 *PM*

SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN CONTAINMENT STRUCTURE

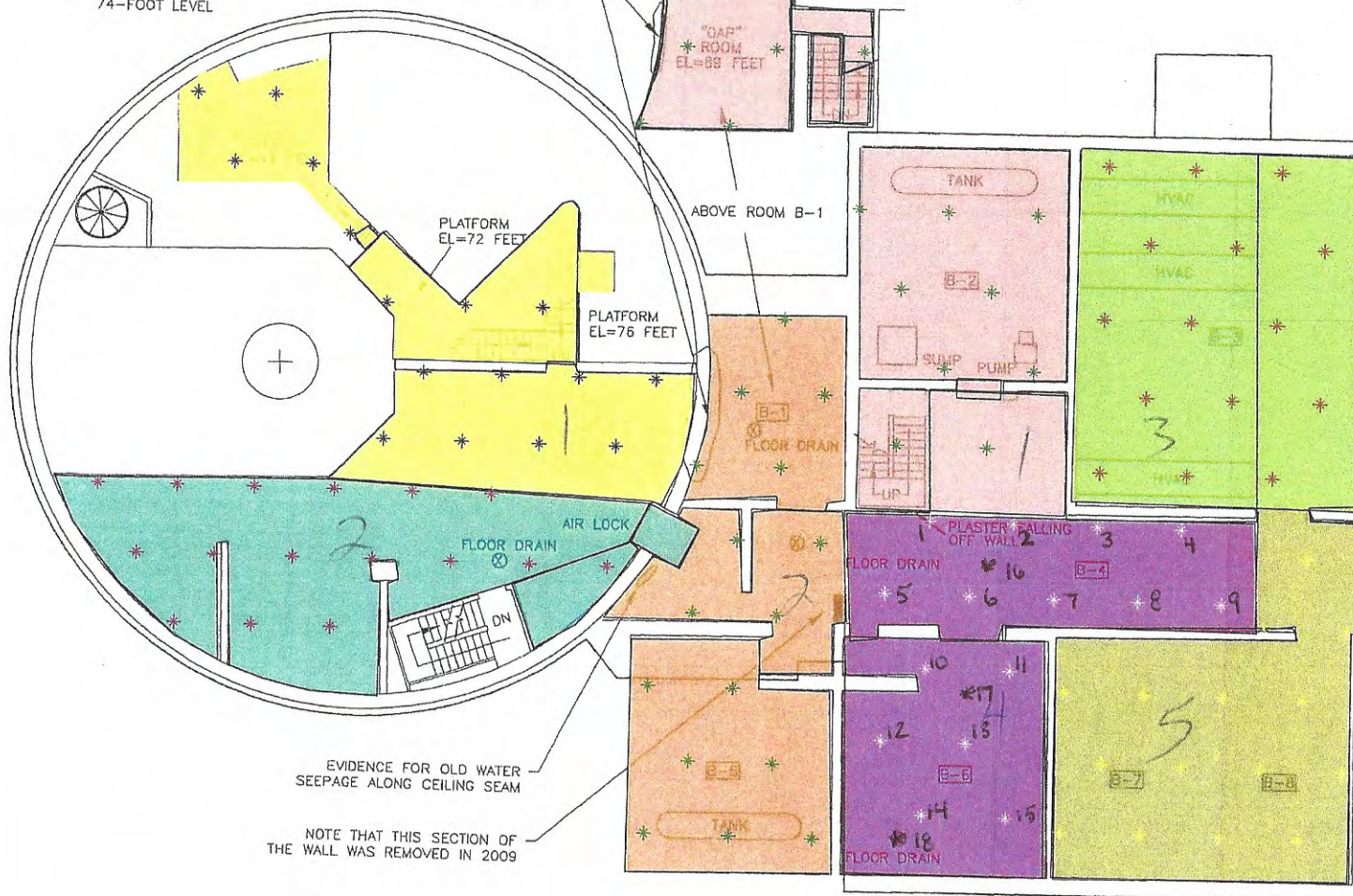
- (24)-FLOOR
- (25)-FLOOR
- (26)-FLOOR
- (27)-FLOOR
- (11)-IN HVAC DUCT
74-FOOT LEVEL

EVIDENCE FOR OLD WATER
SEEPAGE ALONG CEILING SEAM

"OAP" (OPERATING AIR PRESSURE) ROOM REMODELED IN
2009. PAINTED AND SHELVES WERE ADDED.

KEY:

- NO = GENERAL AREA
- NO = SMEAR/DIRECT
- R-4 = ROOM NUMBER



SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN AUX. BLDG.

- (51)-FLOOR
- (52)-FLOOR
- (53)-FLOOR
- (54)-ON DRAIN
- (55)-FLOOR
- (56)-FLOOR
- (57)-FLOOR
- (58)-ON DRAIN
- (59)-FLOOR
- (60)-FLOOR
- (61)-ON DRAIN
- (62)-ON SUMP COVER
- (63)-PUMP
- (64)-FLOOR UNDER TANK
- (65)-FLOOR
- (66)-FLOOR
- (67)-INSIDE HVAC ON FLOOR
- (68)-FLOOR
- (69)-FLOOR-89' LEVEL OF

15 7.5

RA

U.S. DEP.
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DATE PREP
APRIL

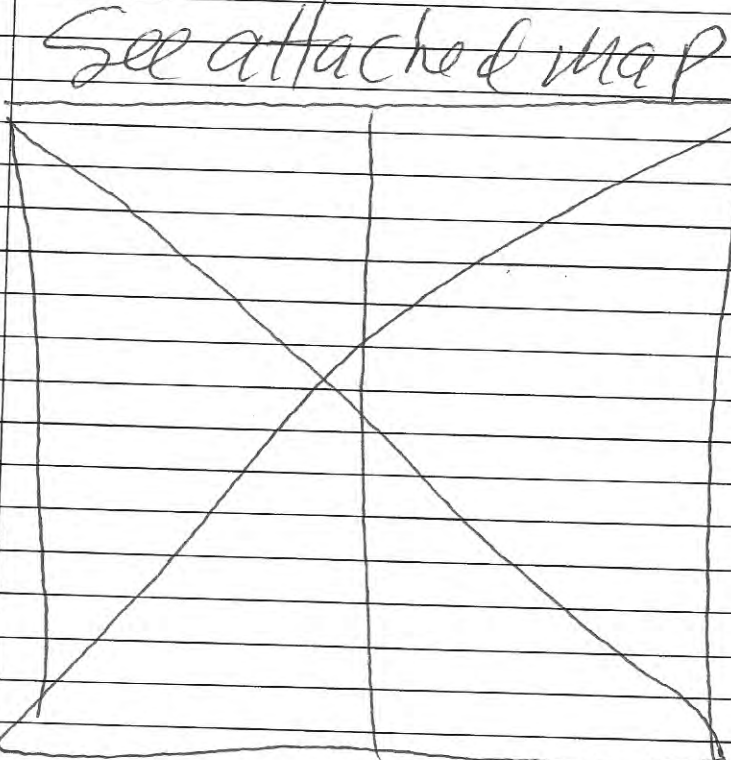
PLAN - 79 FOOT LEVEL

M: \LTS\111\0027\03\S23518\S2351800.DWG 4/17/2019 9:08:46 AM atencioj

PG. 213 JRM

Bench Counter Worksheet

Client Name:	PNDF	Instrument Make:	Wellman
Client Address:	79AF-1-4 ESS	Instrument Model:	2929
		Instrument S/N:	118411
		Calibration Date:	4/22/2020
		Calibration Due Date:	4/22/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	0	48
Background	Background Count #2	0	45
1		1	50
2		1	48
3		0	51
4		1	42
5		1	47
6		0	31
7		0	35
8		0	45
9		0	47
10		0	43
11		1	58
12		1	42
13		0	45
14		0	57
15		0	45
16		0	52
17		0	41
18		0	39
Additional Comment:			
Analyzed by/date: (name/date)		C. Smith 6/11/2020	

Laboratory Description: <u>79AF-1-5</u>				Date: <u>6/11/2020</u>					
Purpose of Survey: <u>CSS</u>				Performed By:					
				Print: <u>JEFF GAGNE</u>					
				Sign: <u>[Signature]</u>					
Sketch of Area				Direct Results					
-SEE ATTACHED PAGE FOR SKETCH				cpm/100cm ²					
				Direct #	Beta	Alpha			
				1	149	6			
				2	157	9			
				3	168	4			
				4	162	3			
				5	185	6			
				6	172	3			
				7	173	6			
				8	158	2			
				9	163	5			
				10	179	5			
				11	124	4			
				12	178	5			
				13	155	7			
				14	153	6			
				15	158	6			
Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location									
Instrumentation				Source Check (pre/post)					
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units			
2224	162850	1α/122β		Tl-230/E-129	318d/294β	CPM			
				POST	288α/297β	CPM			
Comments, including corrective actions if any: <u>N/A</u>									

Page G-204

SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN CONTAINMENT STRUCTURE

- (24)-FLOOR
- (25)-FLOOR
- (26)-FLOOR
- (27)-FLOOR
- (11)-IN HVAC DUCT
74-FOOT LEVEL

EVIDENCE FOR OLD WATER
SEEPAGE ALONG CEILING
SEAM

"OAP" (OPERATING AIR PRESSURE) ROOM REMODELED IN
2009. PAINTED AND SHELVES WERE ADDED.

KEY:

- NO = GENERAL AREA
- (NO) = SMEAR/DIRECT
- R-4 = ROOM NUMBER

SMEAR/DIRECT LOCATIONS ON THE
79-FOOT LEVEL IN AUX. BLDG.

- (51)-FLOOR
- (52)-FLOOR
- (53)-FLOOR
- (54)-ON DRAIN
- (55)-FLOOR
- (56)-FLOOR
- (57)-FLOOR
- (58)-ON DRAIN
- (59)-FLOOR
- (60)-FLOOR
- (61)-ON DRAIN
- (62)-ON SUMP COVER
- (63)-PUMP
- (64)-FLOOR UNDER TANK
- (65)-FLOOR
- (66)-FLOOR
- (67)-INSIDE HVAC ON FLOOR
- (68)-FLOOR
- (69)-FLOOR-89' LEVEL OF

ROLL-UP
DOOR

15 7.5

RA

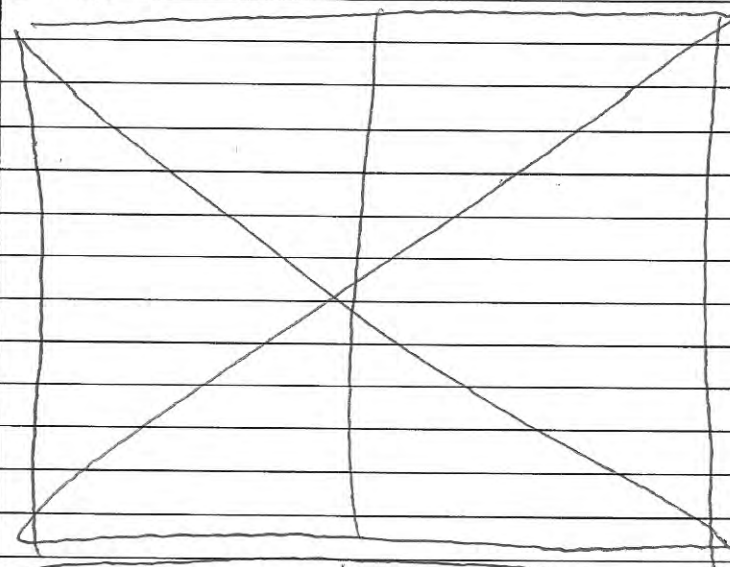
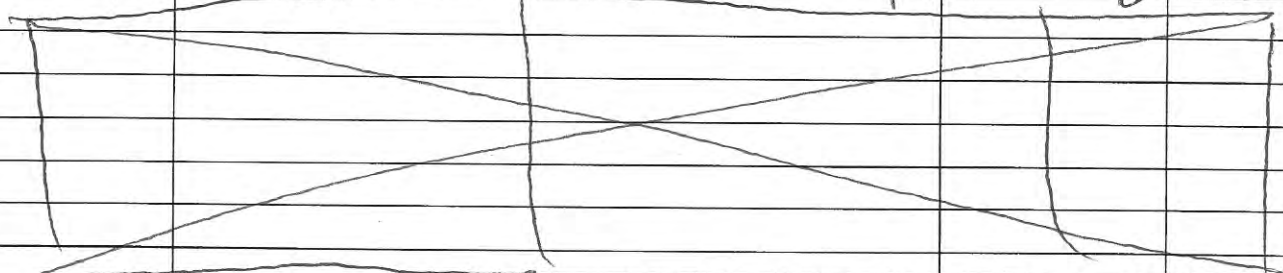
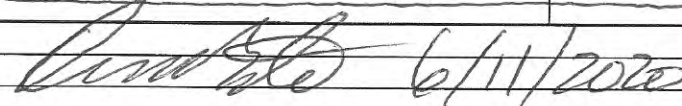
ENR
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DATE PREP APRIL

PLAN - 79 FOOT LEVEL

M: \LTS\111\0027\03\S23518\S2351800.DWG 4/17/2019 9:08:46 AM atencioj

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	79AF-1-5	Instrument Model:	2929
		Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

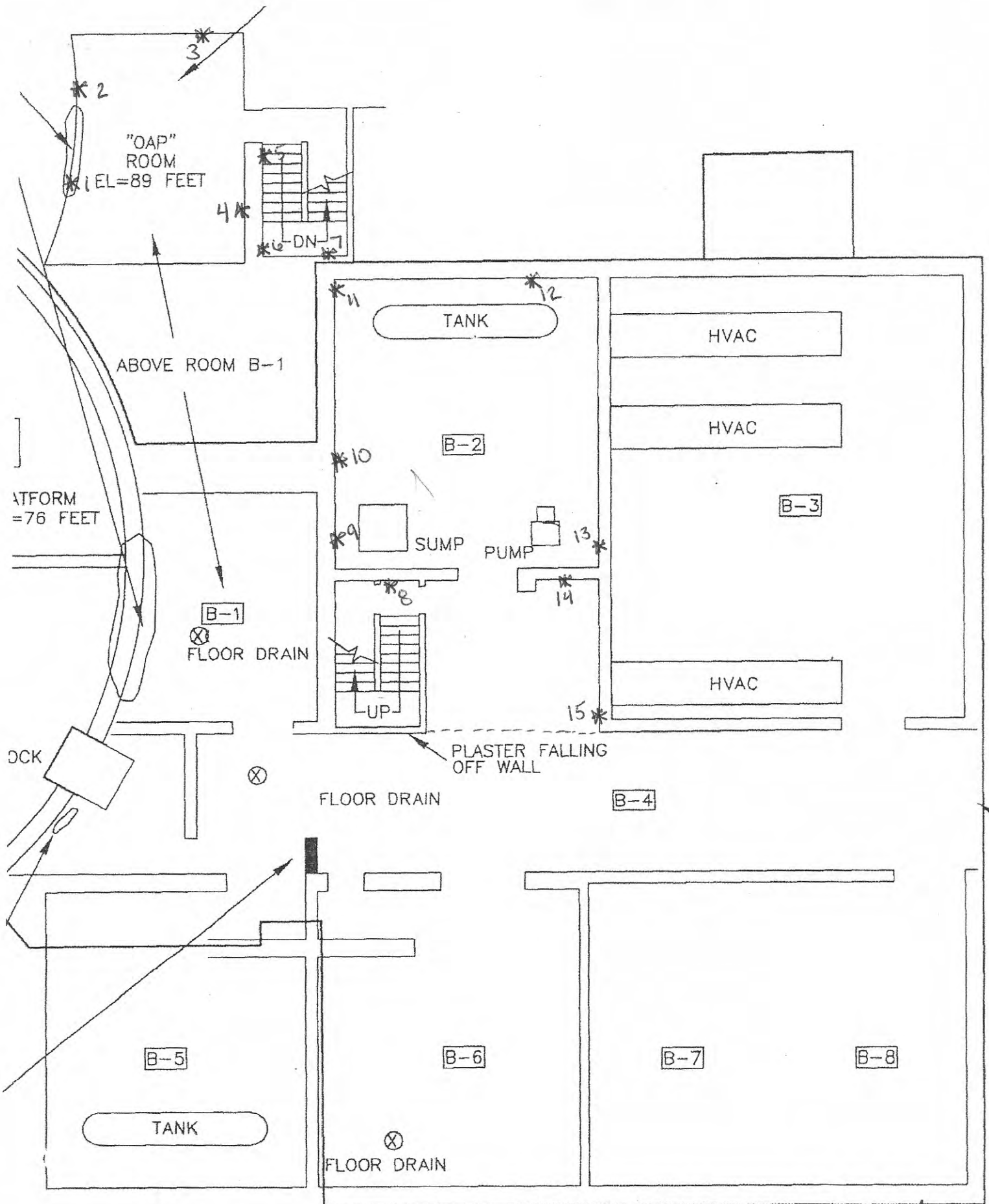
DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	3	52
Background	Background Count #2	1	63
1	See attached map 	0	63
2		1	46
3		1	66
4		1	53
5		2	68
6		1	59
7		0	57
8		0	47
9		0	42
10		0	63
11		0	64
12		3	59
13		0	41
14		1	63
15		0	59
			
Additional Comment:		 6/11/2020	
Analyzed by/date: (name/date)			

Dade Moeller

Radiological Survey Report

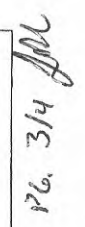
[illegible]

Pl. 1/4 JML



PLAN — 79 FOOT LEVEL

PG. 2/4 JPL



Page G-209



Dade Moeller

Bench Counter Worksheet

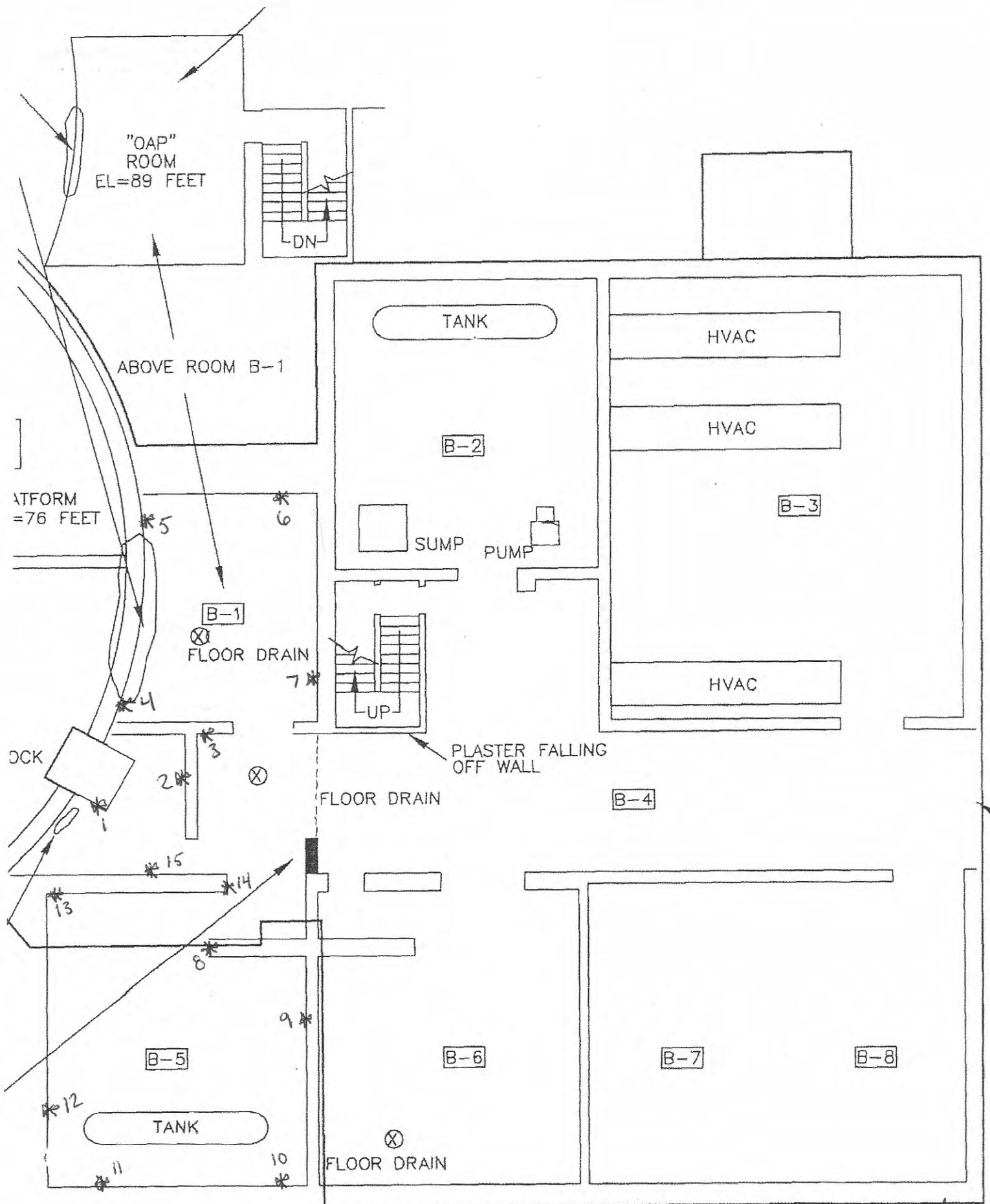
Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	79AW-1-1 CSS	Instrument Model:	2929
		Instrument S/N:	121 877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	2	55
Background	Background Count #2	0	52
1	See attached map	1	54
2		1	60
3		1	56
4		6	56
5		0	51
6		1	37
7		0	44
8		0	48
9		1	54
10		2	54
11		1	54
12		1	65
13		0	45
14		0	48
15		1	56
Additional Comment:			
Analyzed by/date: (name/date)		Dade Moeller 6/11/2020	

Dade Moeller
Radiological Survey Report

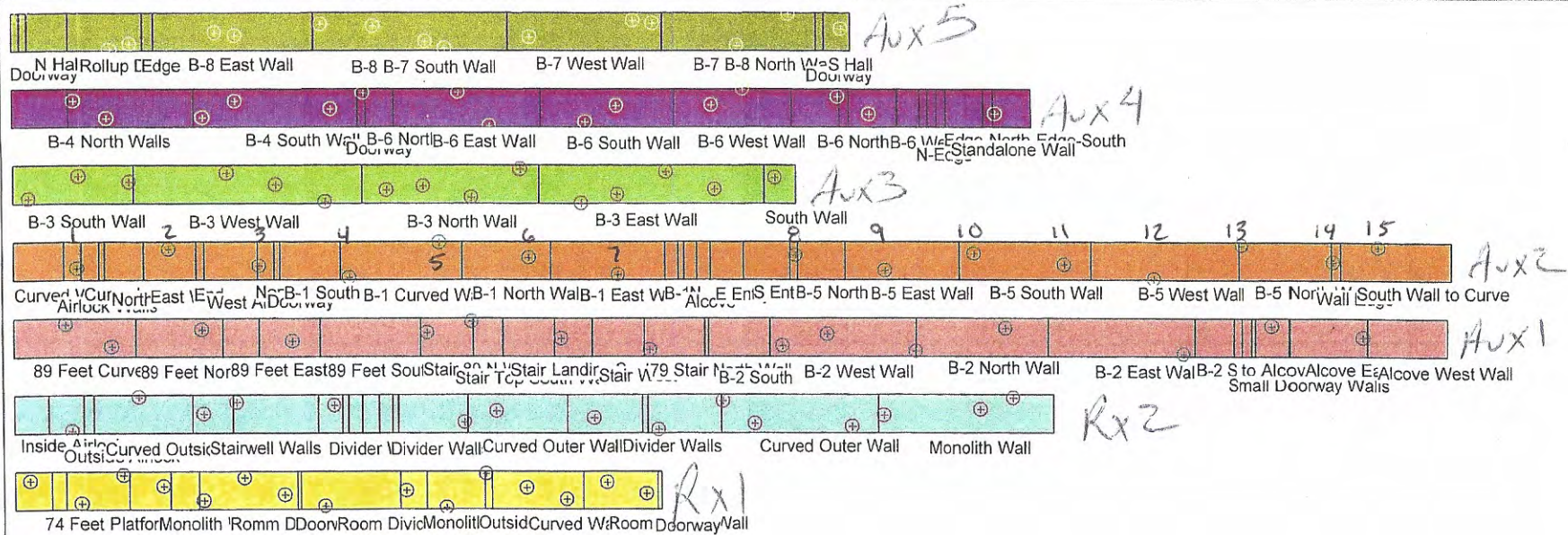
Laboratory Description: 79AW-1-2				Date: 6/10/2020		
Purpose of Survey: CSS				Performed By:		
				Print: JEFF GAGNE		
				Sign: [Signature]		
Sketch of Area				Direct Results cpm/100cm ²		
- SEE ATTACHED PAGES FOR SKETCH - SURVEYED 100% OF ACCESSIBLE WALLS USING 2224.				Direct #	Beta	Alpha
				1	94	5
				2	184	2
				3	151	5
				4	119	4
				5	107	8
				6	155	3
				7	141	5
				8	173	5
				9	159	1
				10	153	1
				11	135	2
				12	161	4
				13	161	2
				14	126	4
15	155	0				
\						
Legend: # - Direct Measurement # - Scan Direct Measurment ⊕ - Smear Location						
Instrumentation				Source Check (pre/post)		
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
2224	162850	0 α / 135 B		Tl-230 / I-129	327 α / 346 B	CPM
				POST	346 α / 286 B	CPM
Comments, including corrective actions if any: N/A						

P6. 1/4 JPL



PLAN — 79 FOOT LEVEL

PG. 2/4 *John*



79 Foot Level walls



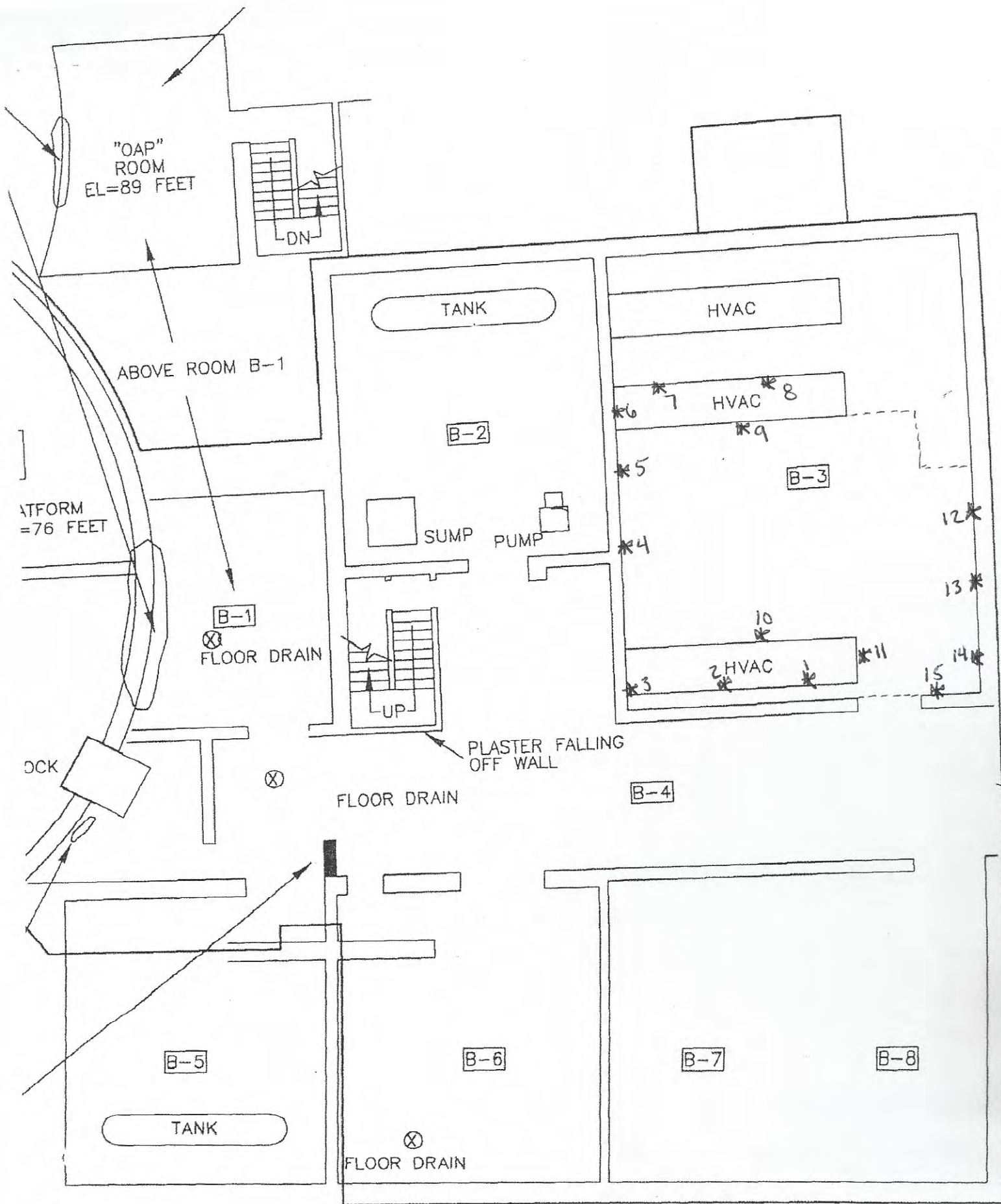
Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	79AW-1-2 CSS	Instrument Model:	2929
		Instrument S/N:	118411
		Calibration Date:	4/22/2020
		Calibration Due Date:	4/22/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	0	45
Background	Background Count #2	0	38
1	See attached map	0	48
2		0	46
3		0	38
4		0	55
5		0	41
6		0	39
7		0	51
8		0	49
9		0	33
10		0	40
11		1	36
12		0	46
13		1	55
14		0	42
15		2	37
Additional Comment:			
Analyzed by/date: (name/date)		Cup/SB 6/11/2020	

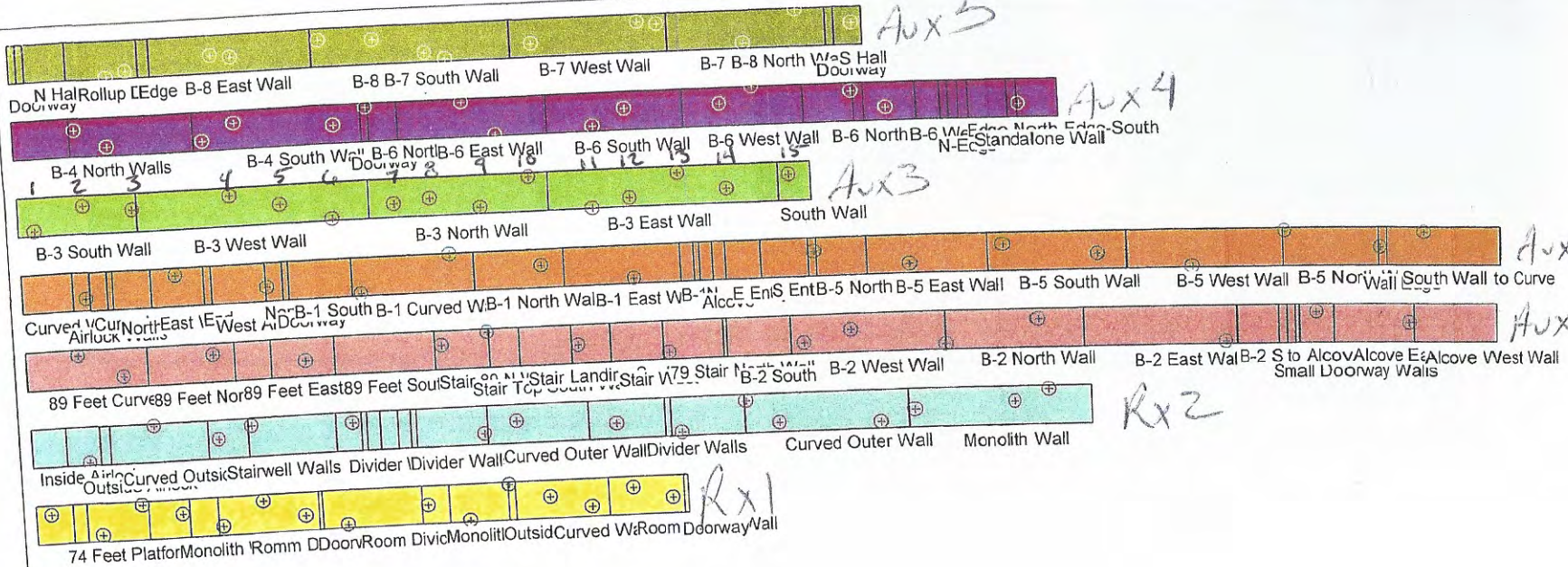
Dade Moeller
Radiological Survey Report

[illegible]



PLAN - 79 FOOT LEVEL

PG. 2/4 *JML*



PG. 3/4 JPL

79 Foot Level walls



Dade Moeller

Bench Counter Worksheet

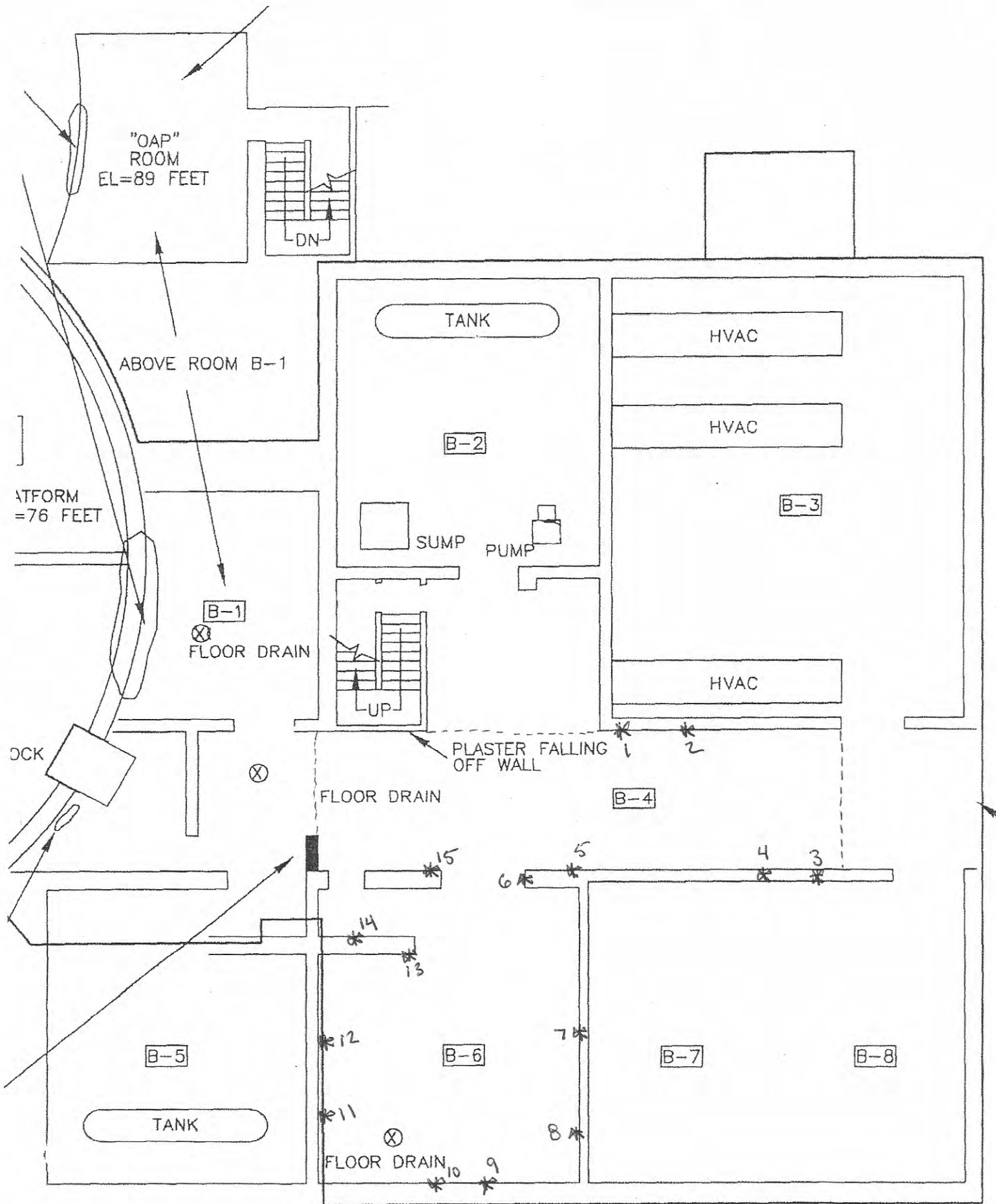
Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	794W-1-3 CSS	Instrument Model:	2929
		Instrument S/N:	118411
		Calibration Date:	4/22/2020
		Calibration Due Date:	4/22/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	3	41
Background	Background Count #2	0	51
1	See attached map	1	55
2		0	40
3		0	42
4		0	52
5		0	59
6		0	45
7		1	54
8		1	40
9		0	47
10		0	39
11		0	46
12		1	46
13		6	34
14		0	55
15		0	29
Additional Comment:			
Analyzed by/date: (name/date)		Curtis 6/11/2020	

Dade Moeller
Radiological Survey Report

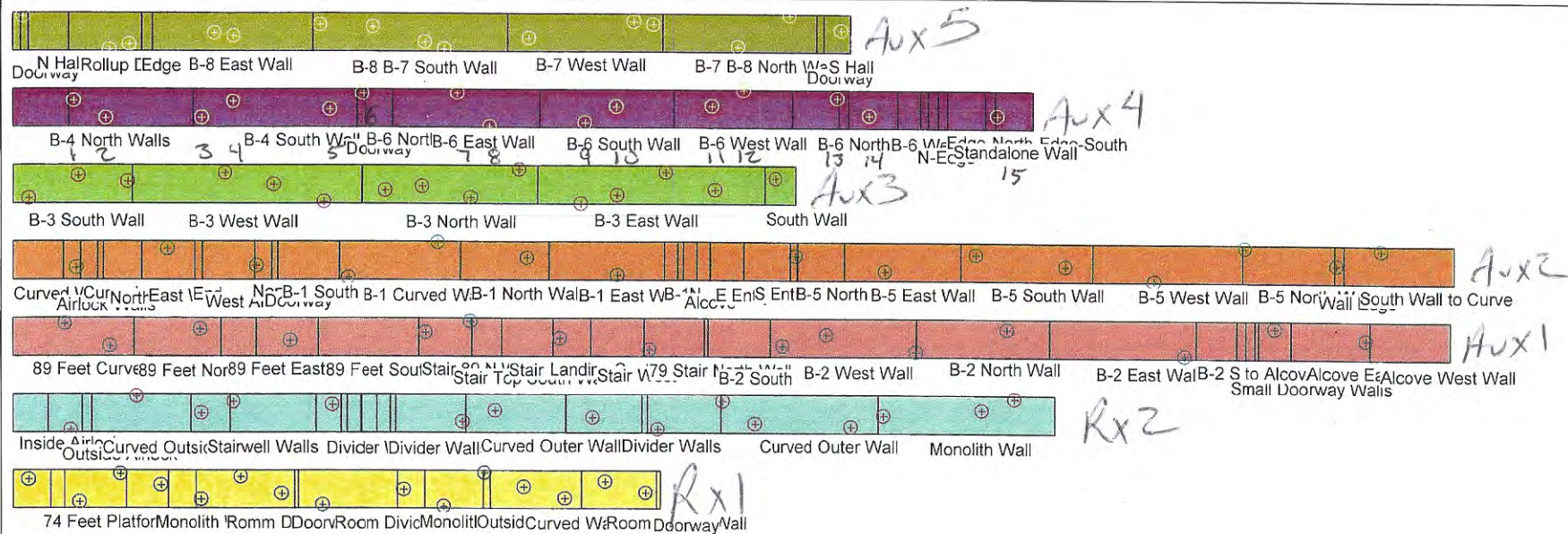
[illegible]

P6 1/4 DM



PLAN — 79 FOOT LEVEL

PG. 2/4 *AM*



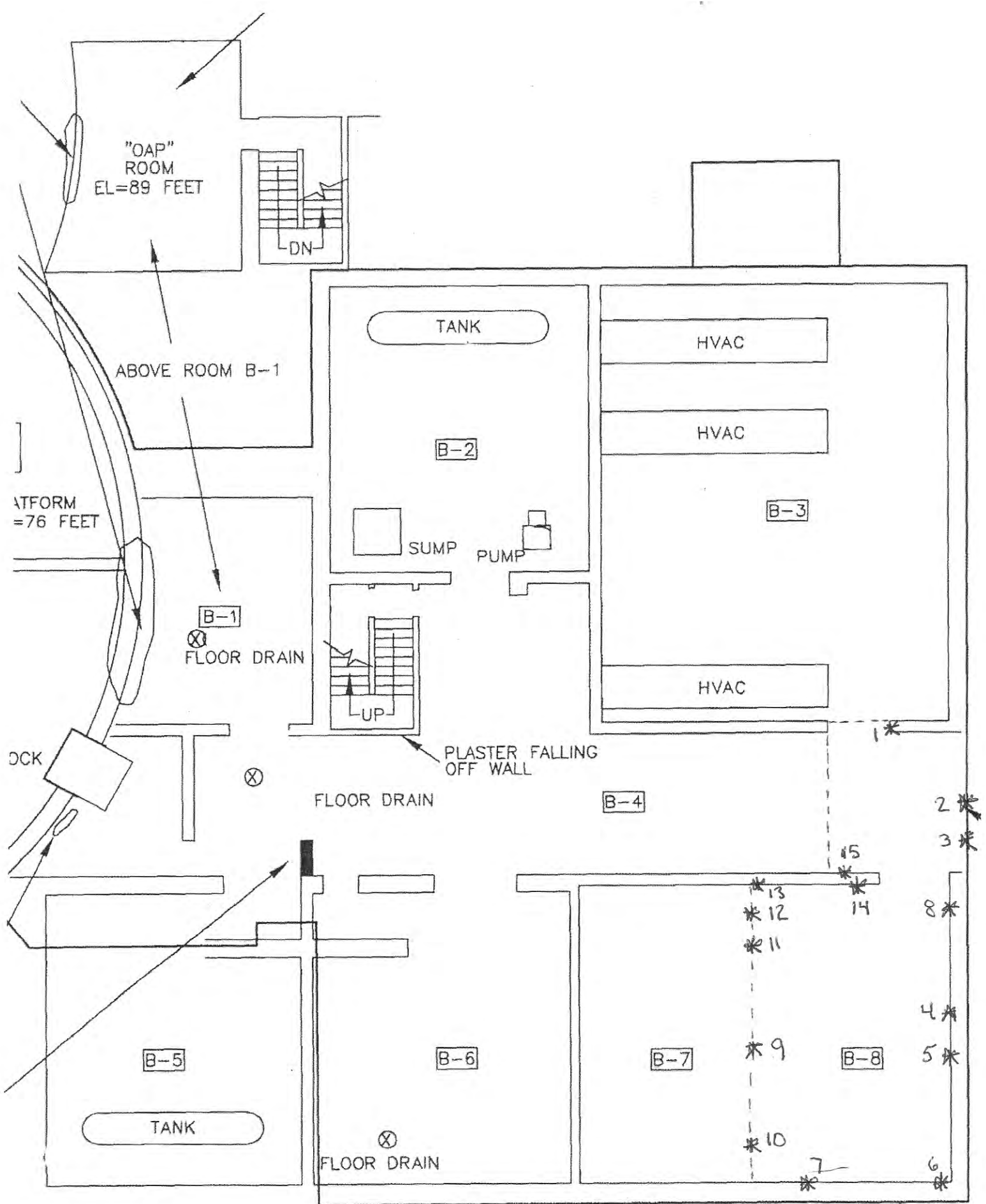
Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	794W-1-4 CSS	Instrument Model:	2929
		Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	60
Background	Background Count #2	0	36
1	See attached map	1	56
2		1	50
3		0	60
4		2	74
5		0	69
6		2	64
7		0	54
8		2	52
9		1	63
10		0	57
11		1	59
12		3	42
13		0	42
14		0	67
15		0	60
Additional Comment:		Cured 6/11/2020	
Analyzed by/date: (name/date)			

Dade Moeller
Radiological Survey Report

Laboratory Description: <u>79AW-1-5</u>				Date: <u>6/11/2020</u>		
Purpose of Survey: <u>CSS</u>				Performed By:		
				Print: <u>JEFF GAGNE</u>		
				Sign: <u>[Signature]</u>		
Sketch of Area - SEE ATTACHED PAGES FOR SKETCH - SURVEYED 100% OF ACCESSIBLE WALLS USING 2224.				Direct Results cpm/100cm ²		
				Direct #	Beta	Alpha
				1	133	8
				2	155	11
				3	125	10
				4	148	4
				5	173	4
				6	161	3
				7	140	2
				8	175	10
				9	173	4
				10	204	3
				11	161	2
				12	136	3
				13	145	2
				14	152	7
				15	185	3
				Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location		
Instrumentation				Source Check (pre/post)		
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
2224	162850	1α/122B		Tl-230/I-129	318α/294B	CPM
				POST	288α/297B	CPM
Comments, including corrective actions if any: <u>N/A</u>						

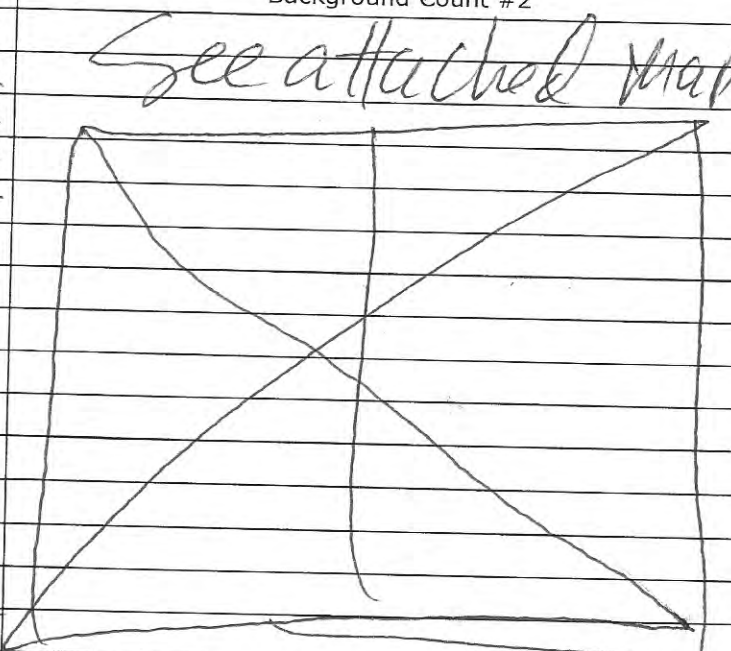
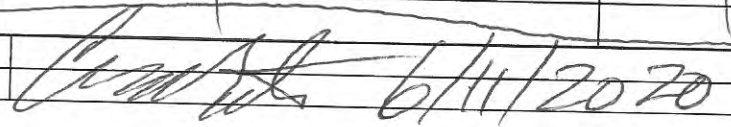


PLAN - 79 FOOT LEVEL

PG. 2/4 *for*

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	794W-1-5 CSS	Instrument Model:	2929
		Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	56
Background	Background Count #2	1	50
1		0	52
2		2	76
3		0	53
4		2	64
5		1	60
6		0	59
7		0	52
8		0	59
9		1	60
10		0	49
11		0	58
12		0	48
13		0	56
14		0	51
15		1	58
Additional Comment:			
Analyzed by/date: (name/date)		 6/11/2020	

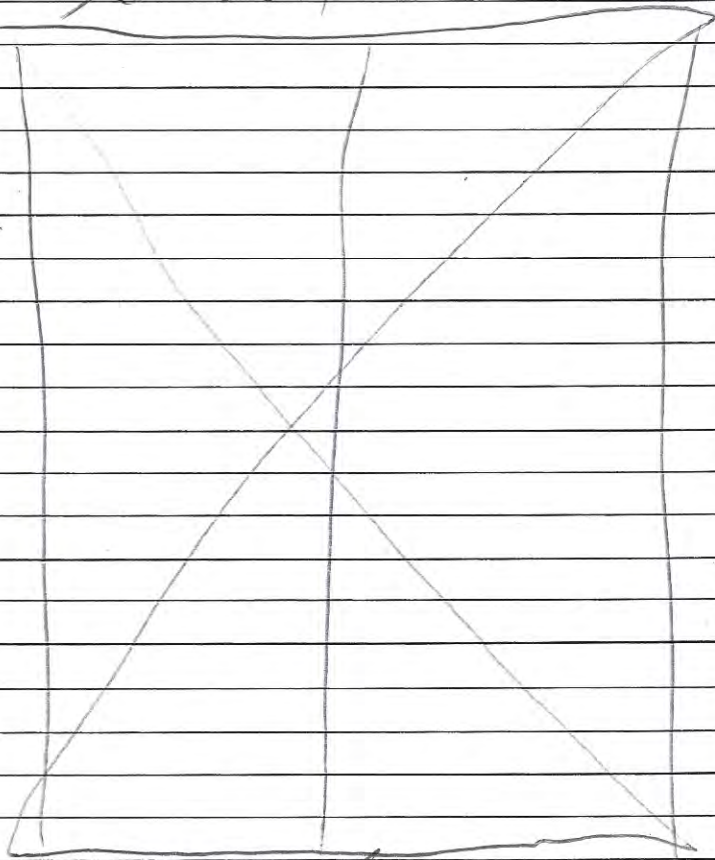
Dade Moeller
Radiological Survey Report

Laboratory Description: <u>PNPF</u>				Date: <u>6/11/2020</u>		
Purpose of Survey: <u>100-1124W-3-1 CSS</u>				Performed By:		
				Print: <u>Clark Barton</u>		
				Sign: <u>[Signature]</u>		
Sketch of Area <u>See attached maps</u> <u>1-5 121 level</u> <u>6-10 111 level</u> <u>11-25 100 level</u> <u>Each point had 1 square meter scanned, direct & smear taken at any potential elevated area.</u>				Direct Results cpm/100cm ²		
				Direct #	Beta	Alpha
				1	120	2
				2	147	1
				3	119	3
				4	144	1
				5	146	0
				6	124	4
				7	121	1
				8	126	1
				9	159	1
				10	163	3
				11	166	1
				12	160	2
				13	141	1
				14	155	1
				15	150	0
				16	129	3
				17	143	1
				18	152	5
				19	155	0
				20	162	1
				21	136	5
				22	150	5
				23	129	1
				24	170	2
				25	147	1
Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location						
Instrumentation				Source Check (pre/post)		
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
43-68	260445	0.42/149.6	230/29.36	Th232	314/380	Cpm
"	"	"	"	"	409/	Cpm
Comments, including corrective actions if any:						
<u>Critical value 102 304.6</u>						

pre
post

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	100-1/2 AW-3-1 Ccs 121	Instrument Model:	2929
		Instrument S/N:	121 877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	0	66
Background	Background Count #2	0	58
1	See attached map 	0	43
2		0	68
3		0	58
4		3	64
5		1	54
6		1	54
7		2	46
8		0	52
9		0	55
10		2	56
11		0	49
12		1	53
13		2	57
14		0	60
15		1	47
16		0	51
17		1	51
18		0	67
19		0	66
20		1	49
21		0	58
22		0	57
Additional Comment:			
Analyzed by/date: (name/date)		Purvis 6/11/2020	

Critical values: 4.3 & 82 B

1/2

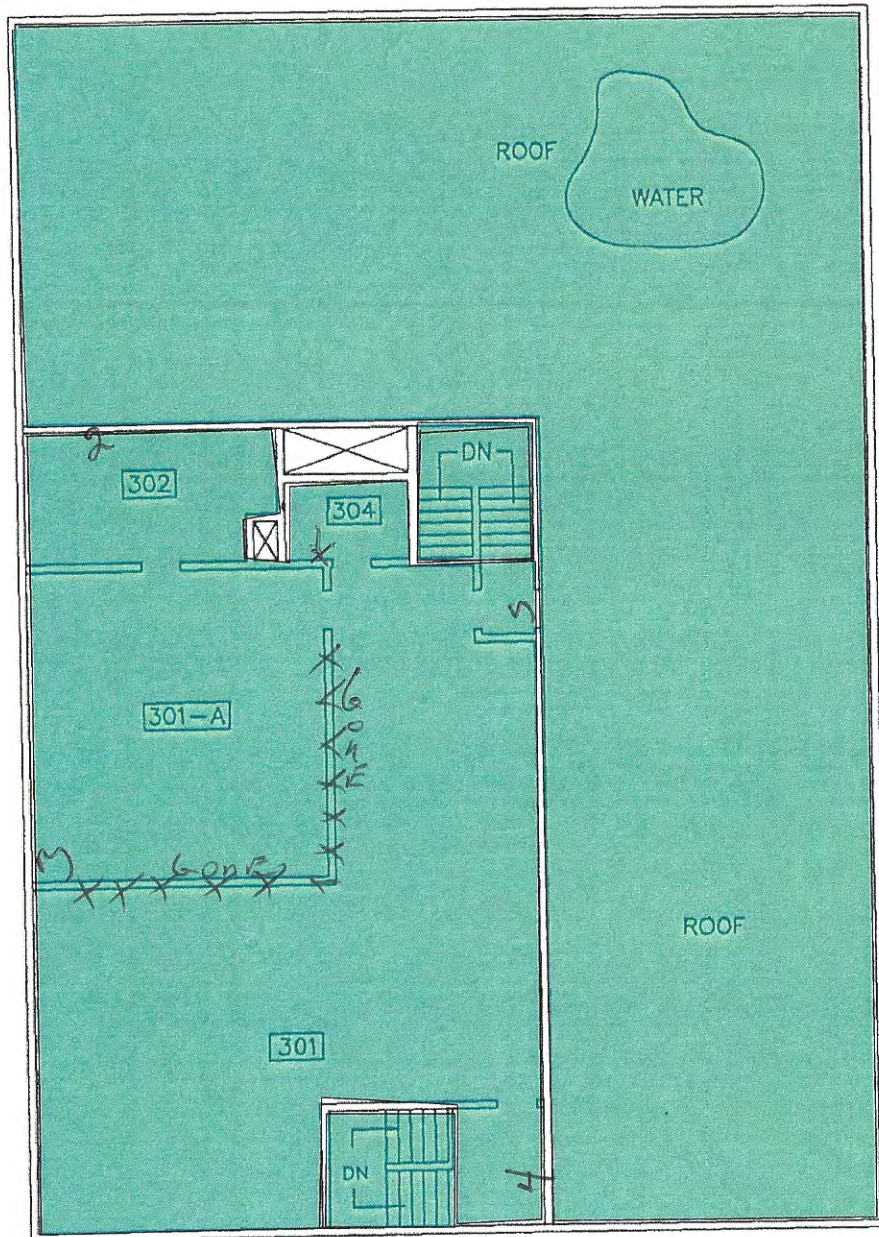
Continuation Sheet Form HS-003

Location: 100-121 AW-3-1 CSS	Date: 6/11/2020	Survey # PNPF
---------------------------------	--------------------	------------------

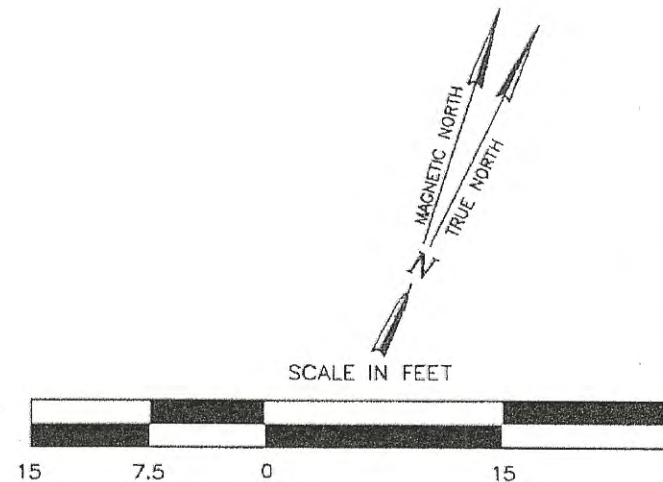
Smear Measurements for Alpha and Beta Contamination

[illegible]

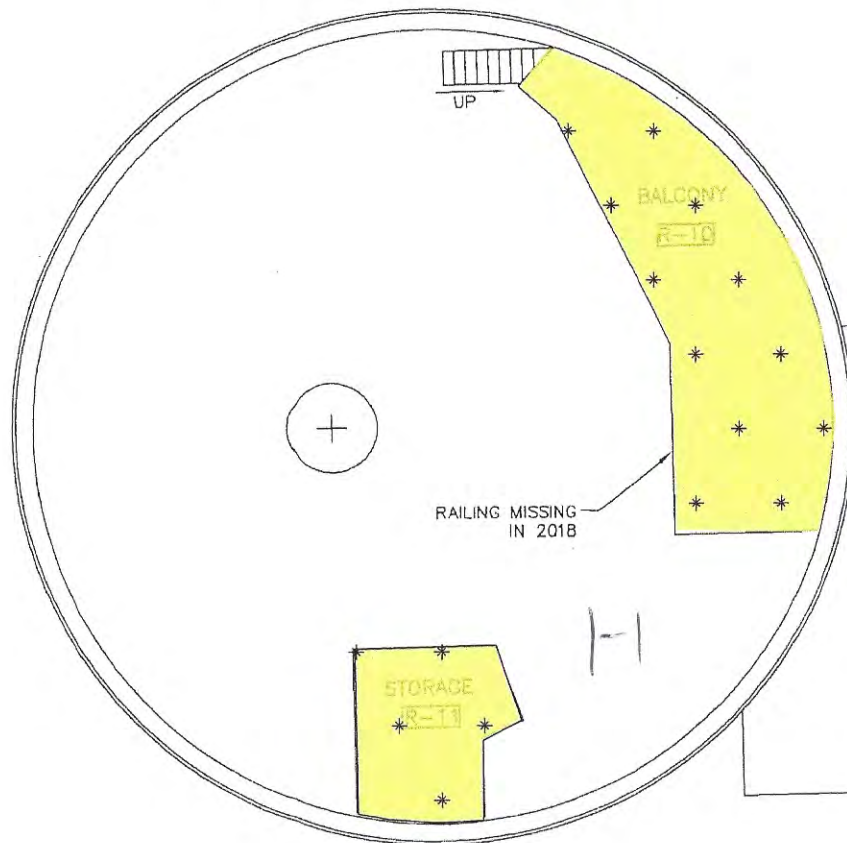
6/11/2020 2/2



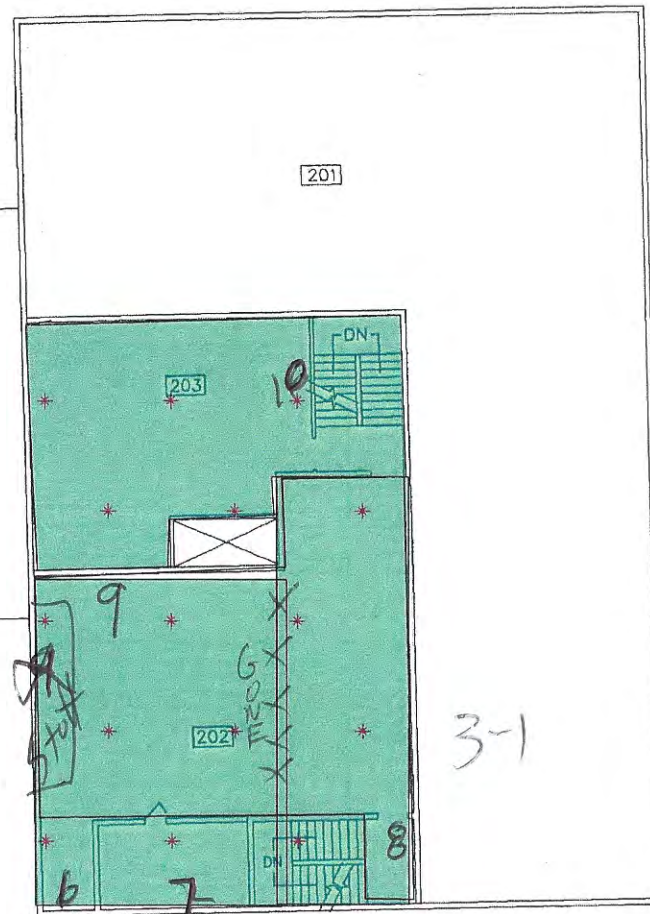
12 level



ANNUAL INSPECTION AND
RADIOLOGICAL SURVEY CONDUCTED
MARCH 27, 2019



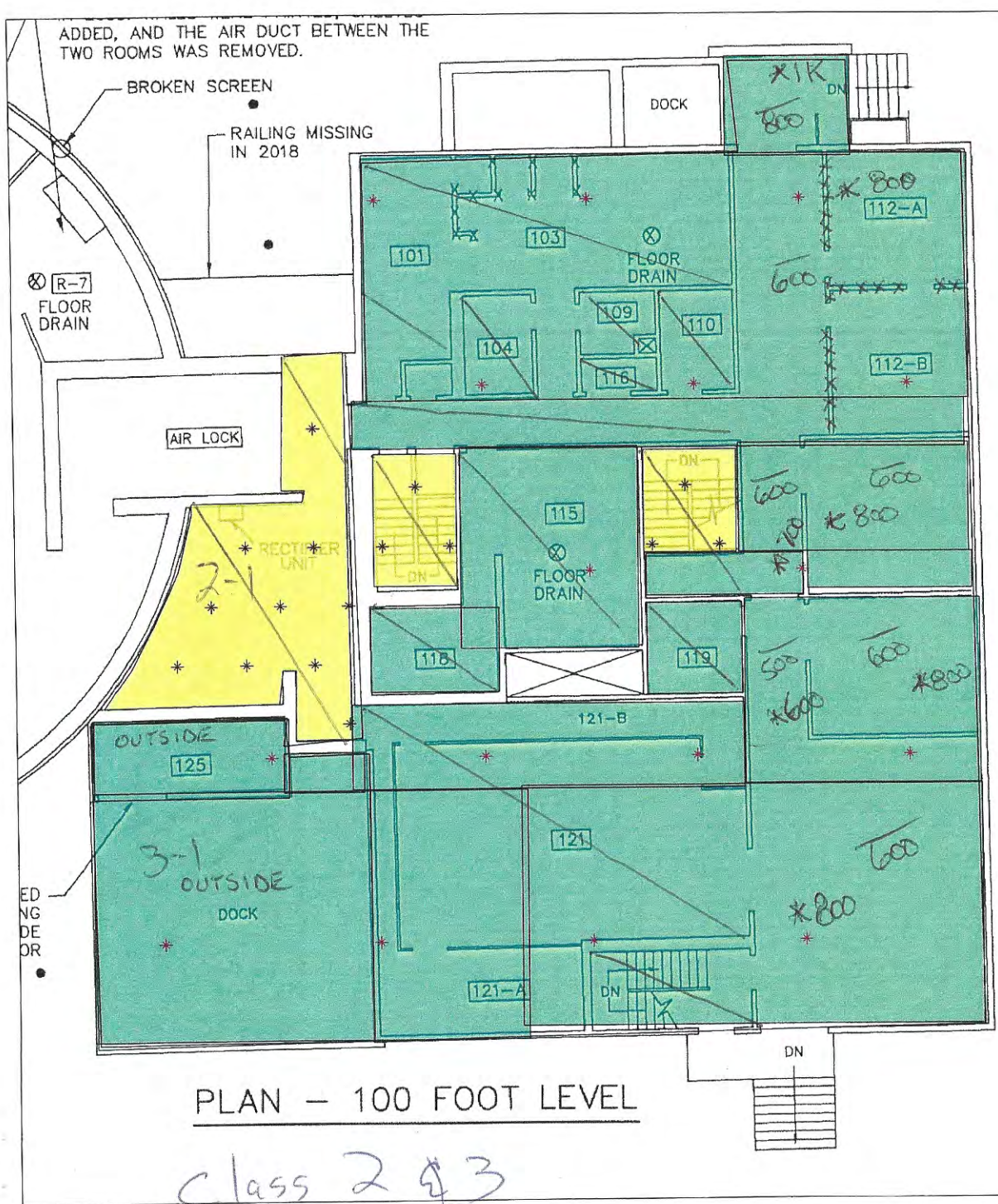
PLAN - 111 FOOT LEVEL



Dade Moeller
Radiological Survey Report

Laboratory Description: <u>PMPF 100AF-24</u>				Date: <u>6/2/2020</u>		
Purpose of Survey: <u># 100AF-3-1</u>				Performed By:		
				Print: <u>JEFF GAGNE</u>		
				Sign: <u>[Signature]</u>		
Sketch of Area <i>See attached maps</i> - * = MAX READING - = AVG. READING - NO ELEVATED WALL READINGS UNLESS OTHERWISE NOTED.				Direct Results cpm/100cm ²		
				Direct #	Beta	Alpha
				Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location		
Instrumentation				Source Check (pre/post)		
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
12	251999	2.6K	22.9% / 32.5%	Cs-137	260K	CPM
239-IF	187246	3x/SSIP		Tk230/1-129	85/799	CPM
Comments, including corrective actions if any: <u>N/A</u>						

Page G-234



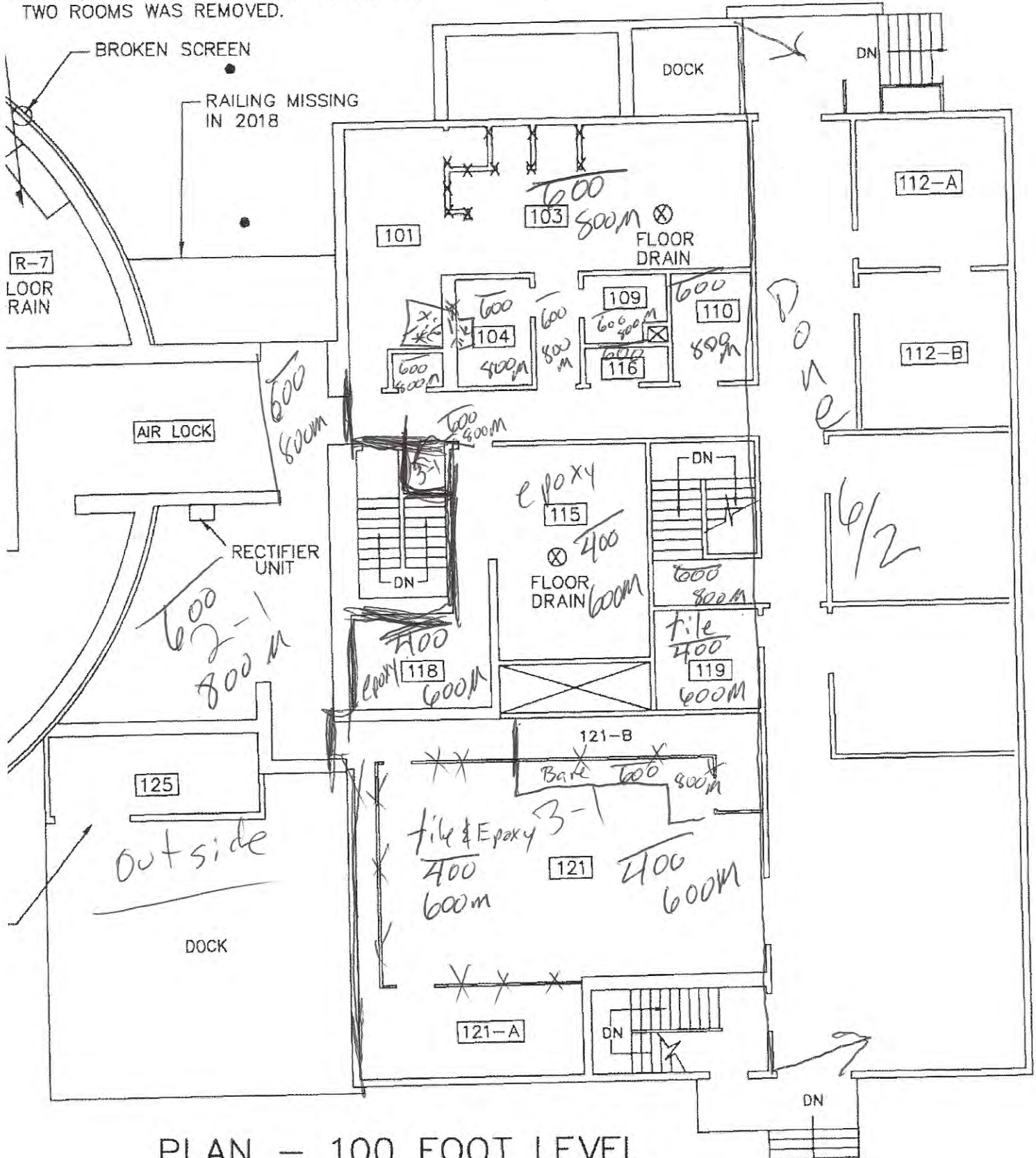
pg. 3/3 JPH

239-1F

pg. 2/3 JPH 6/2/2020

[illegible]

ADDED, AND THE AIR LOCK BETWEEN THE TWO ROOMS WAS REMOVED.



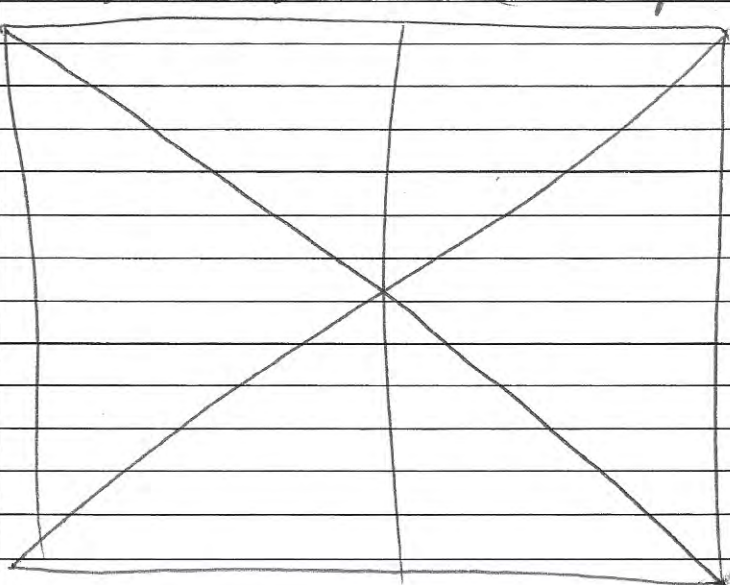
PLAN — 100 FOOT LEVEL
1* tile ~ 1100cpm

Dade Moeller
Radiological Survey Report

[illegible]

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	100 AF-3-1	Instrument Model:	2929
	CSS	Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	52
Background	Background Count #2	1	49
1	See Attached Map 	0	65
2		0	65
3		0	59
4		2	57
5		1	62
6		0	53
7		0	55
8		0	44
9		0	65
10		0	60
11		1	57
12		0	73
13		0	43
14		1	62
15		1	54
16		1	48
Additional Comment:			
Analyzed by/date: (name/date) <i>Crit 6/4/2020</i>			

Crit level 4.32, 82 B

Dade Moeller
Radiological Survey Report

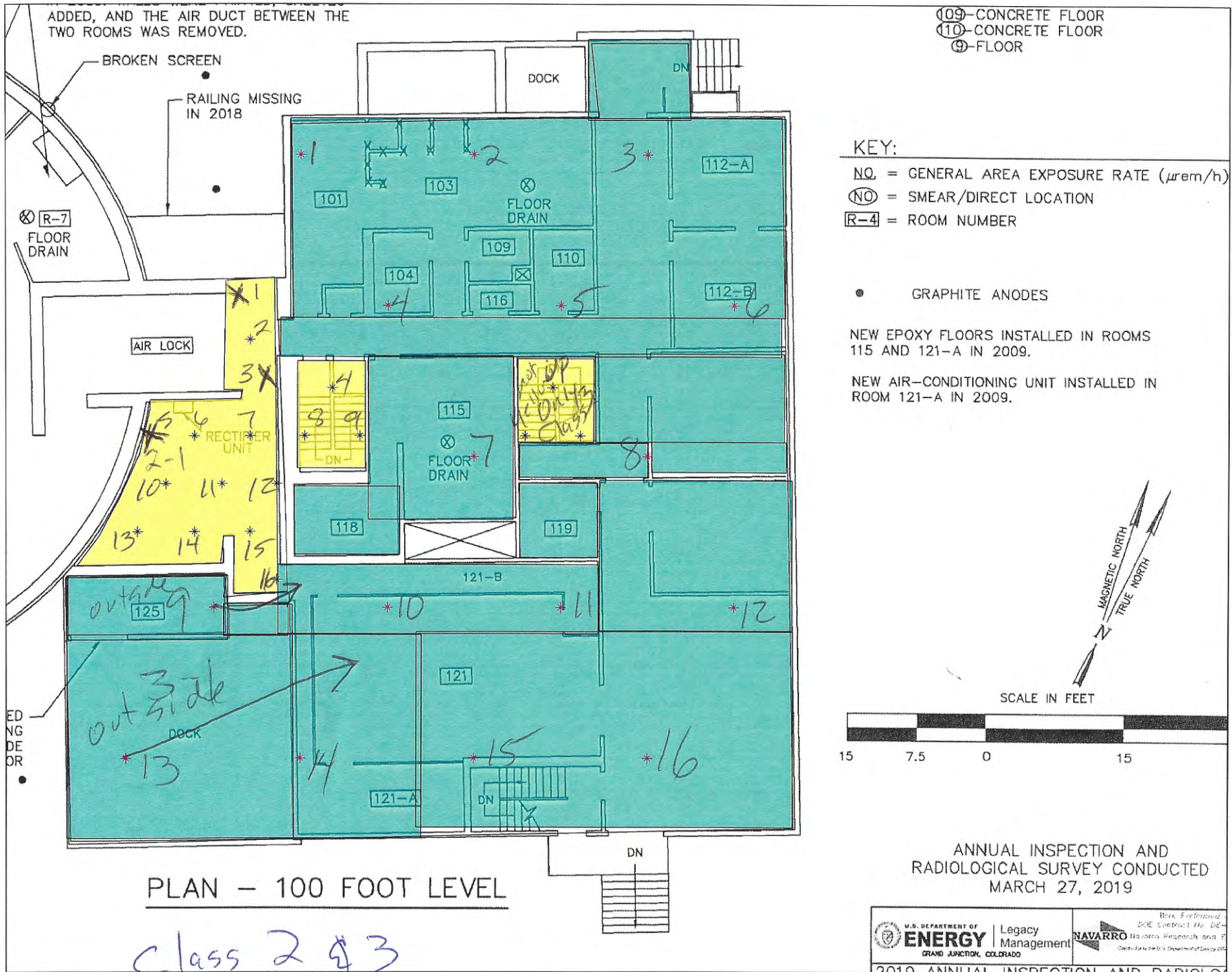
[illegible]

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	100 AF-2-1	Instrument Model:	2929
		Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/21
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	48
Background	Background Count #2	0	53
1	See attached Map	1	55
2		0	49
3		0	64
4		1	53
5		1	78
6		0	59
7		1	58
8		0	50
9		0	54
10		0	57
11		1	58
12		1	74
13		0	48
14		1	75
15		0	60
16		0	45
Additional Comment:			
Analyzed by/date: (name/date)		Curtis 6/4/2020	

Critical level 4.32, 82β



Dade Moeller
Radiological Survey Report

Laboratory Description: DNPF

Purpose of Survey: 100 AW- 2-1 CSS

Date: 6/10/2020

Performed By:

Print: Clark Barton

Sign: [Signature] 6/10/2020

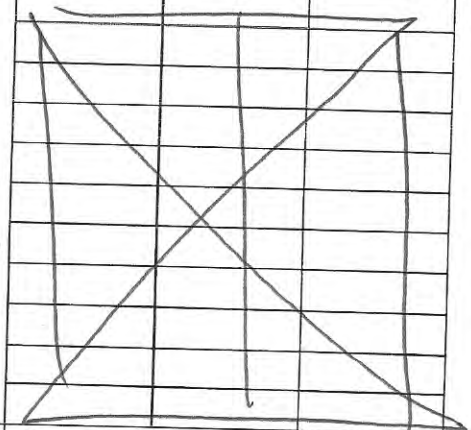
Sketch of Area

See attached map. ~~10070~~
1 square meter around each
survey point scanned, direct
& smear taken at highest
area.

Direct Results
cpm/100cm²

Direct #	Beta	Alpha
1	97	0
2	134	1
3	95	1
4	122	1
5	169	0
6	179	3
7	181	1
8	150	1
9	185	0
10	159	2
11	136	0
12	140	2
13	172	0
14	160	1
15	112	0

Legend: # - Direct Measurement
- Scan Direct Measurement
⊕ - Smear Location



Instrumentation

Model #	Serial #	Background	Efficiency
43-68	260445	0.42 / 1498	25.2 / 29.3 %
11	11	11	11

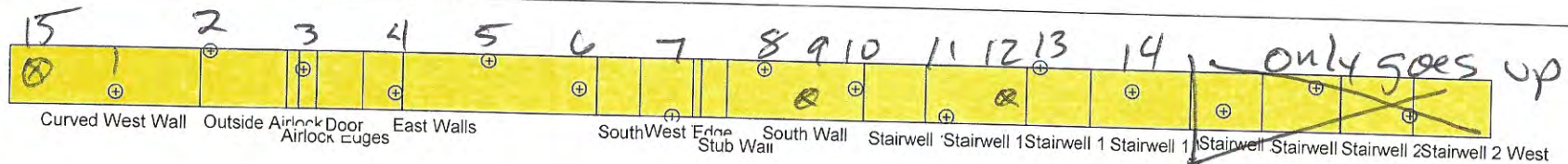
Source Check (pre/post)

Isotope	Reading	Units
Th 230	450 / 416	Cpm
1-129	427 / 310	Cpm

Pre
Post

Comments, including corrective actions if any:

Critical value 10 x 304



Crystal
6/10/2020

100 Ft. Class 2

Bench Counter Worksheet

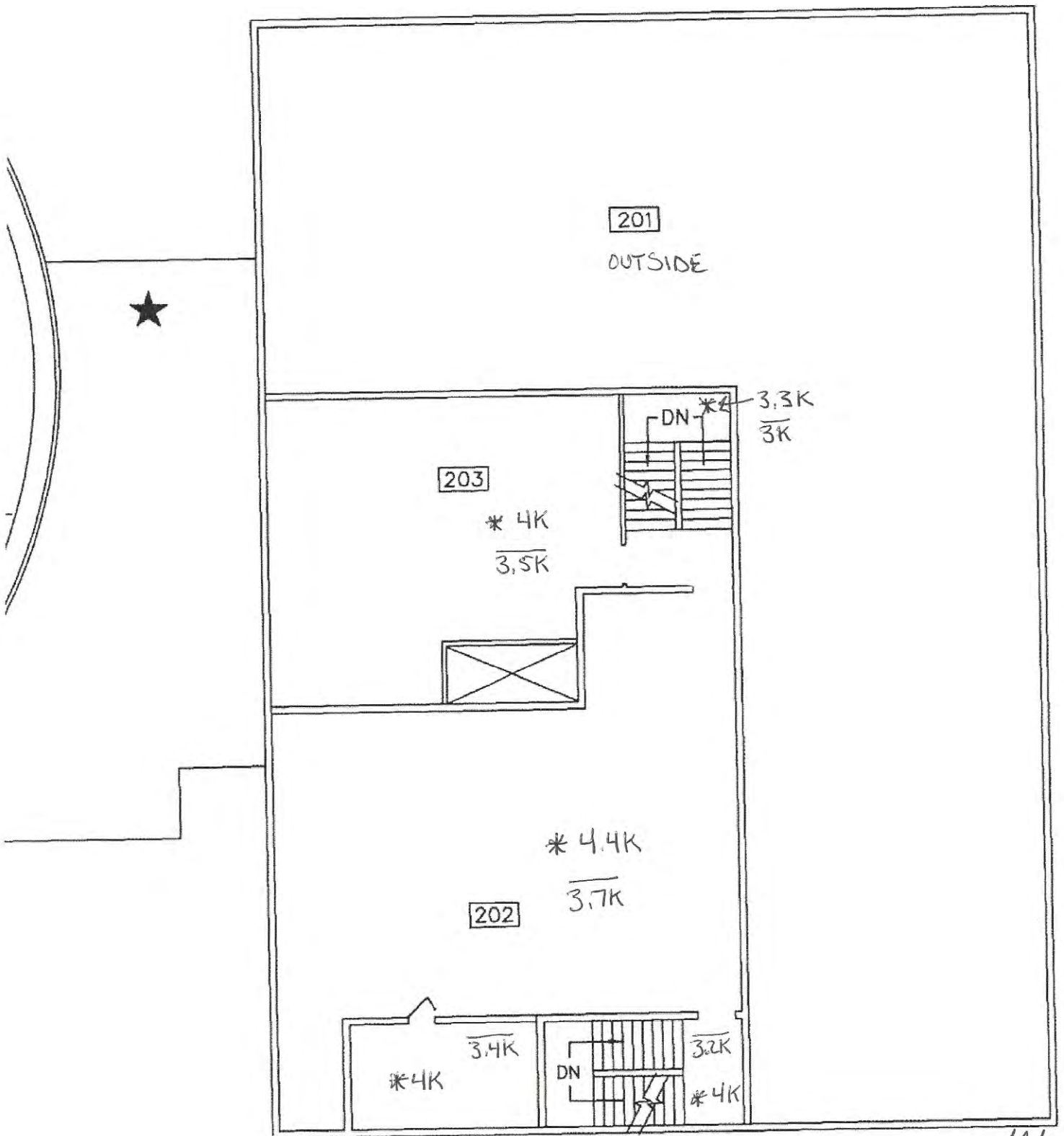
Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	100AW-2-1 CSS	Instrument Model:	2929
		Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	0	53
Background	Background Count #2	0	74
1	See attached map	0	44
2		0	51
3		0	45
4		0	53
5		0	70
6		0	67
7		0	51
8		0	54
9		0	52
10		0	49
11		0	58
12		0	52
13		0	53
14		0	57
15		0	41
Additional Comment:			
Analyzed by/date: (name/date)		C. J. [Signature] 6/10/2020	

Dade Moeller
Radiological Survey Report

[illegible]

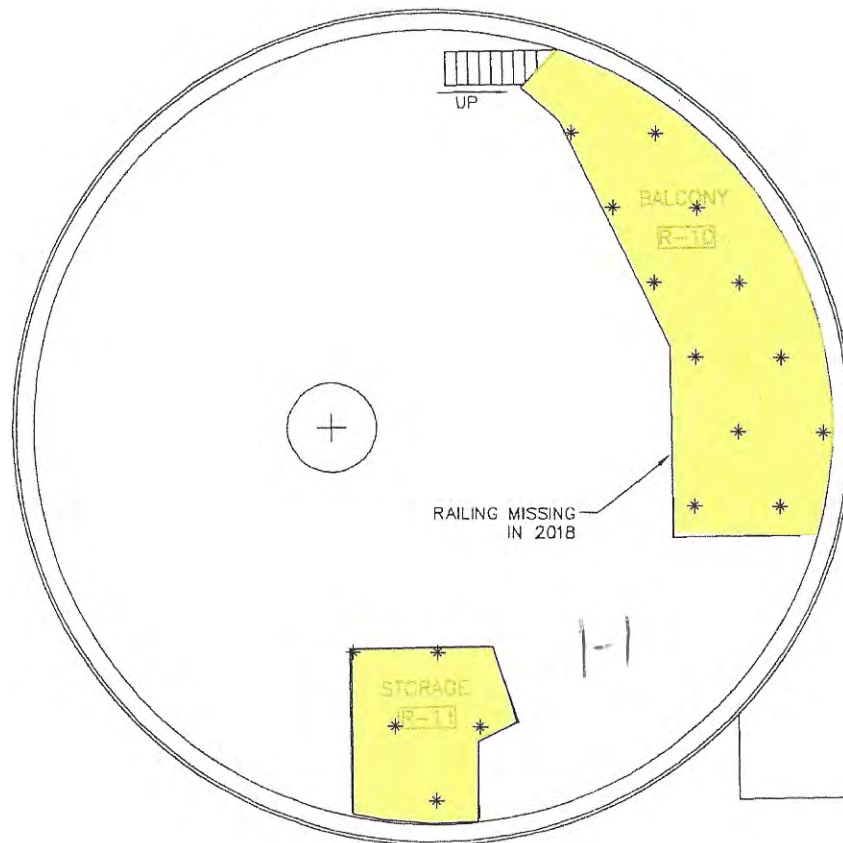
PG. 1/2 JML



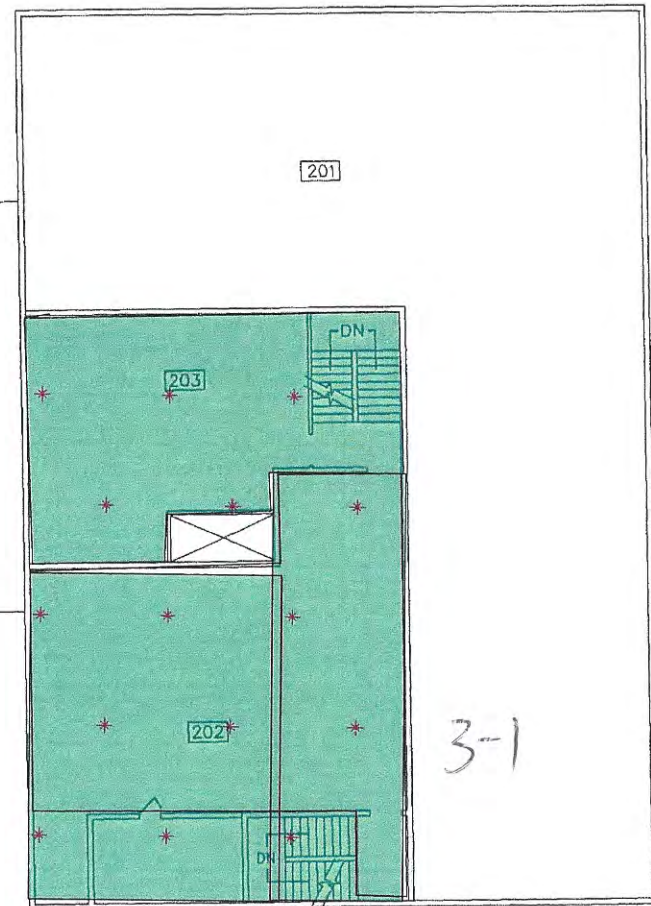
P6. 2/2 JPL

111 Foot

Laboratory Description: <u>X2 IIAF-3-1</u> Purpose of Survey: <u>Floor Monitor</u> 				Date: <u>6/8/2020</u> Performed By: _____ Print: <u>Clark Barton</u> Sign: <u>[Signature]</u>																	
Sketch of Area See attached map				Direct Results cpm/100cm² <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Direct #</th> <th style="width: 33%;">Beta</th> <th style="width: 33%;">Alpha</th> </tr> </thead> <tbody> <tr><td colspan="3" rowspan="10" style="text-align: center; vertical-align: middle;"> X </td> </tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> </tbody> </table>			Direct #	Beta	Alpha	X											
Direct #	Beta	Alpha																			
X																					
Legend: # - Direct Measurement # - Scan Direct Measurement Ⓢ - Smear Location																					
Instrumentation				Source Check (pre/post)																	
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units															
<u>239-1F</u>	<u>187246</u>	<u>2.82 / 551B</u>	<u>22.9% / 32.5B</u>	<u>Th232</u> <u>1-129</u>	<u>108 / 774</u>	<u>CPM</u>															
Comments, including corrective actions if any: <u>Critical Values 102, 663p</u>																					

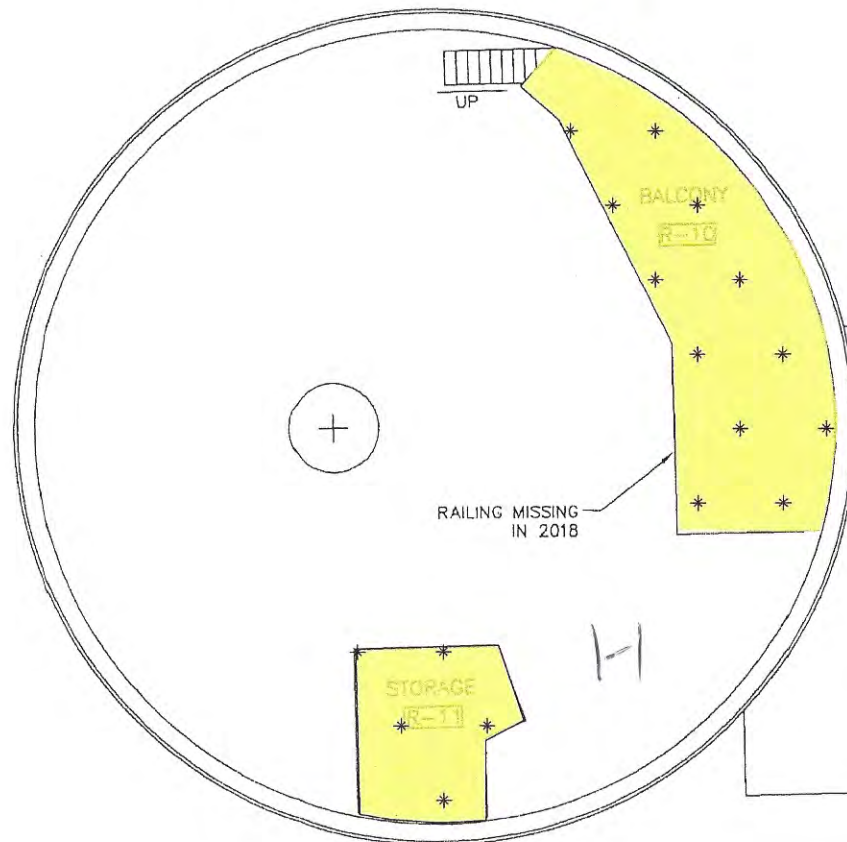


PLAN - 111 FOOT LEVEL

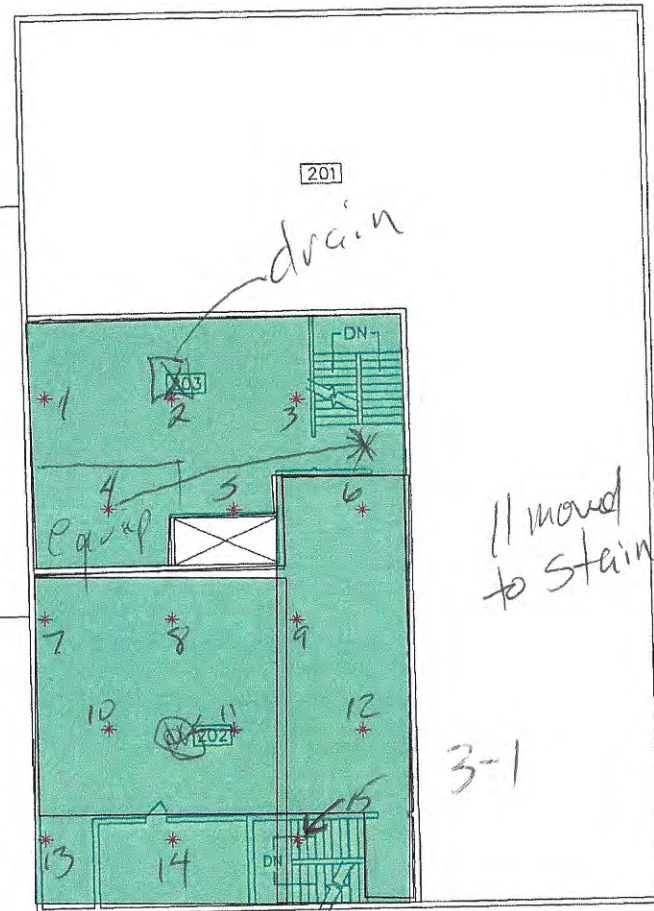


Dade Moeller
Radiological Survey Report

[illegible]



PLAN - 111 FOOT LEVEL

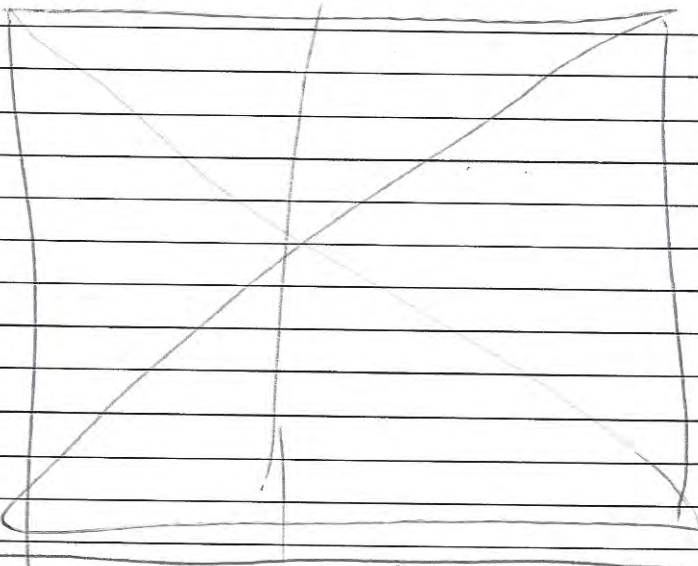


Class 1 & 3

[Handwritten signature]
6/4/2020

Bench Counter Worksheet

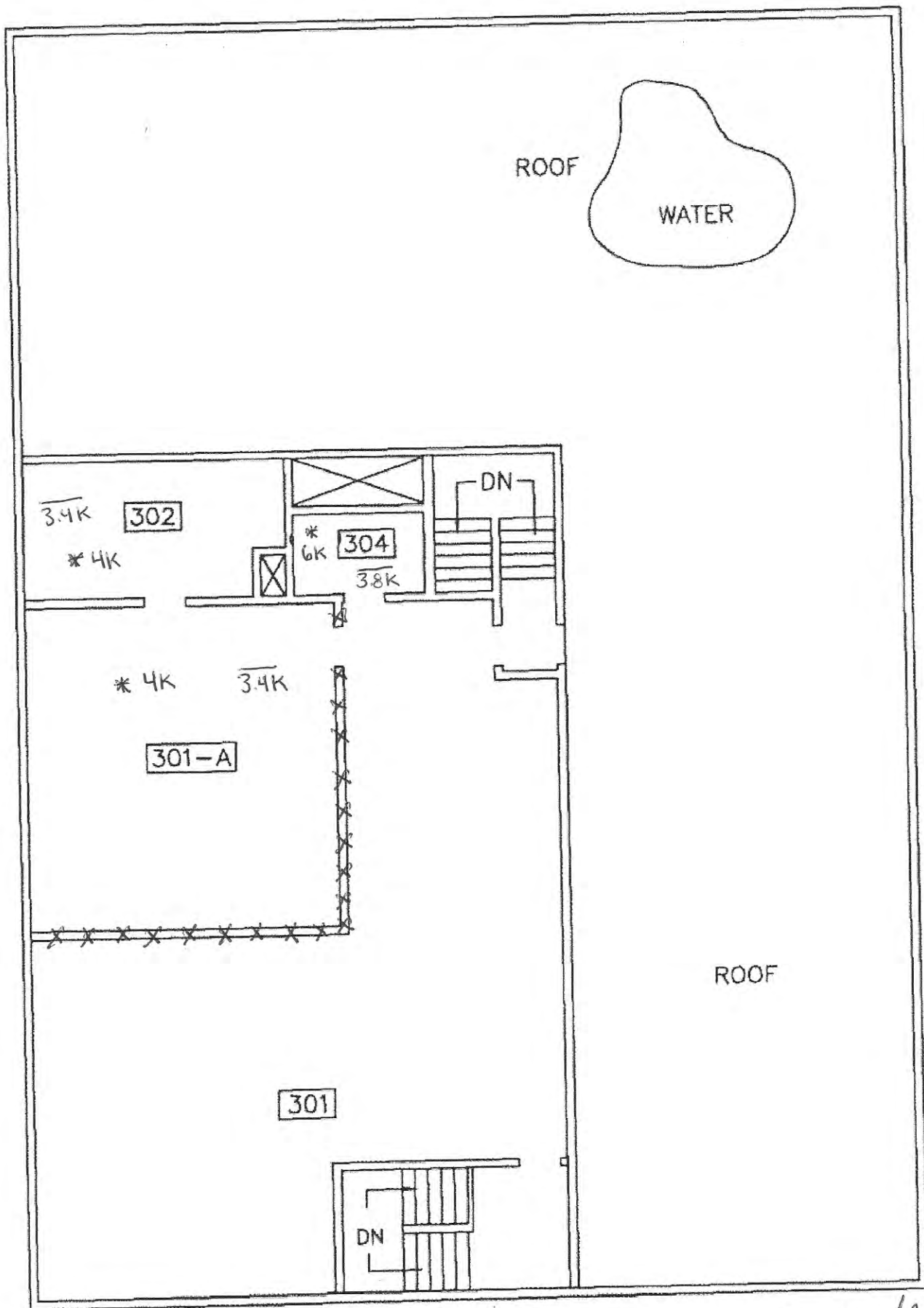
Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	111 AF - 3-1 CSS	Instrument Model:	2929
		Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	60
Background	Background Count #2	2	61
1	See attached map 	1	49
2		1	64
3		0	56
4		0	66
5		0	49
6		0	48
7		0	42
8		0	53
9		1	57
10		0	61
11		0	63
12		0	72
13		0	56
14		0	61
15		0	44
Additional Comment:		Analyzed by/date: (name/date)	
		Cynthia 6/8/2020	

Critical Values: 4.3 & 82.0

[illegible]

PG. 1/2 JAL 6/2/20

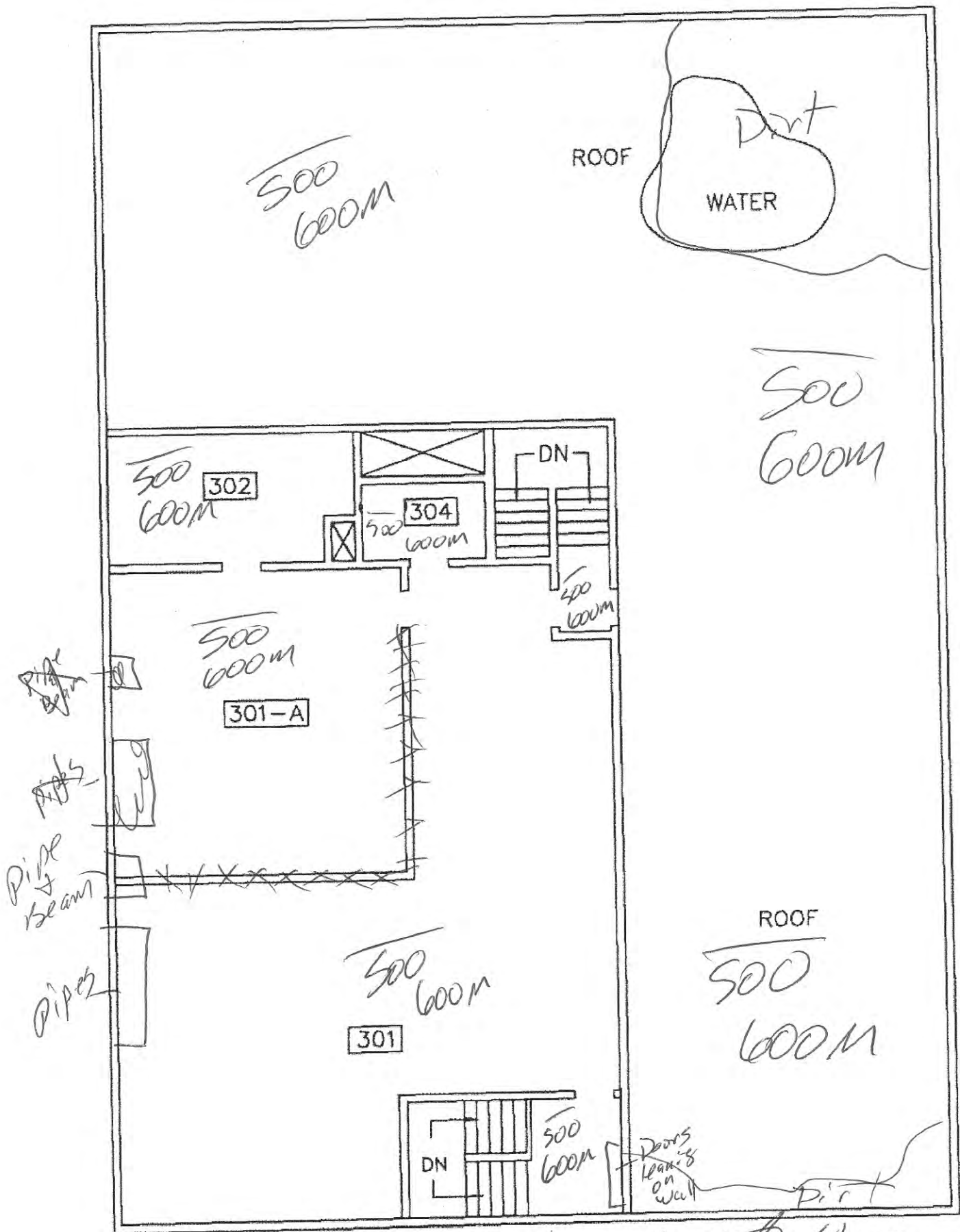


121 Foot

Pg. 2/2 JPL

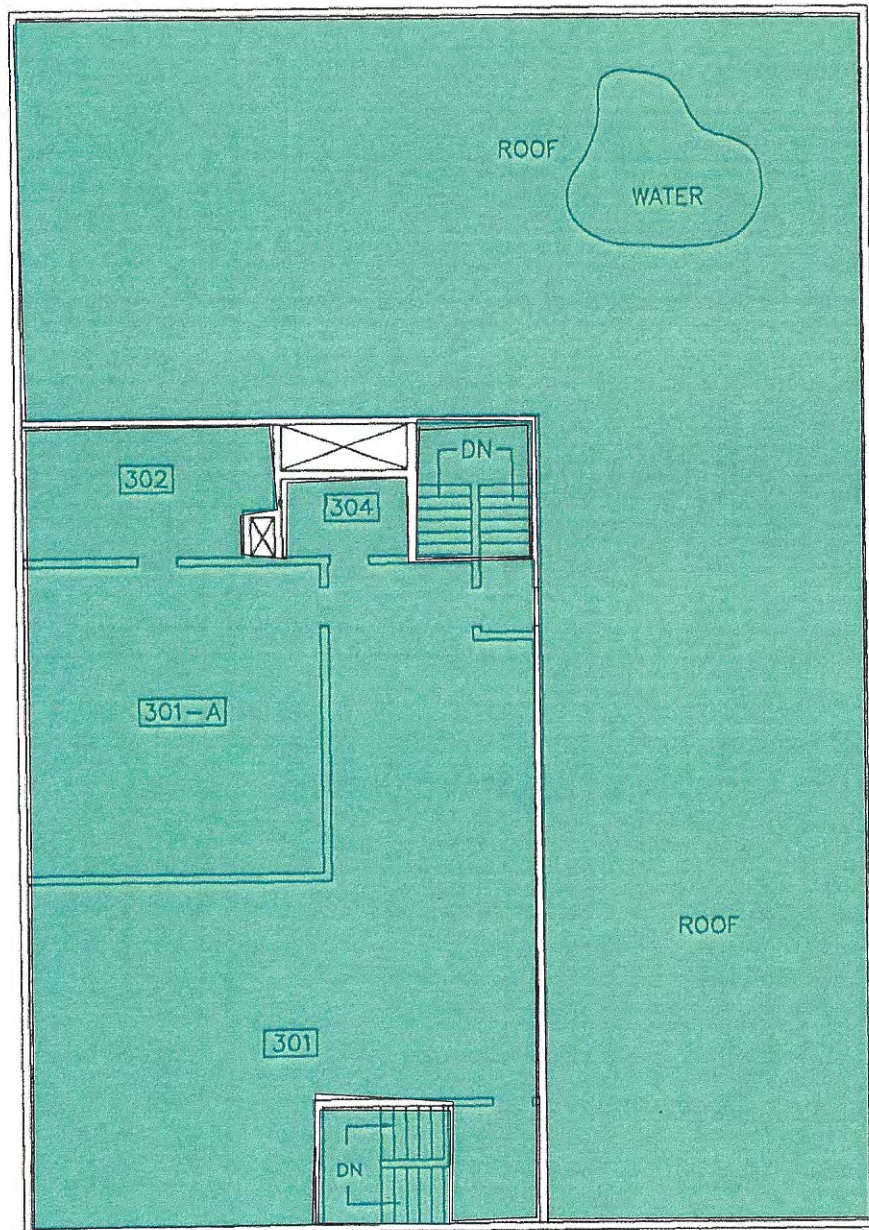
Dade Moeller
Radiological Survey Report

Laboratory Description: <u>121AF-3-1</u>				Date: <u>6/8/2020</u>					
Purpose of Survey: <u>Floor monitor</u>				Performed By:					
				Print: <u>Clark Benton</u>					
				Sign: <u>[Signature]</u>					
Sketch of Area See attached map				Direct Results cpm/100cm ²					
				Direct #	Beta	Alpha			
							Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location		
Instrumentation				Source Check (pre/post)					
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units			
<u>239-1F</u>	<u>187246</u>	<u>2.42/510</u>	<u>22.92</u> <u>3256</u>	<u>1230</u> <u>1129</u>	<u>108/114</u>	<u>CPM</u>			
Comments, including corrective actions if any: <u>Critical Values: 1300, 6630</u>									

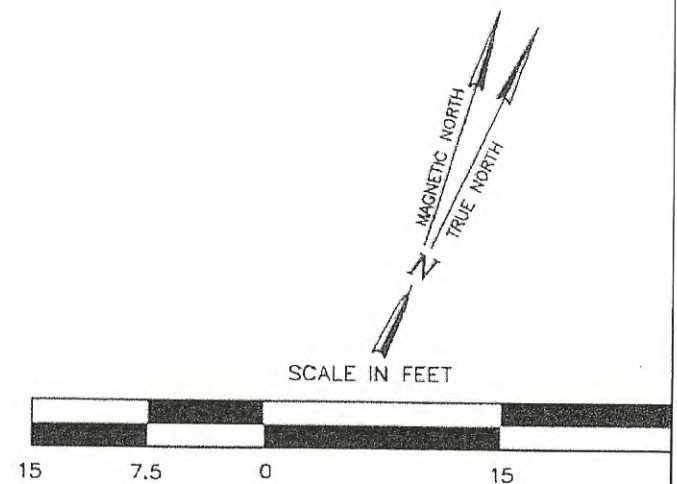


121 Foot

06/20/2020



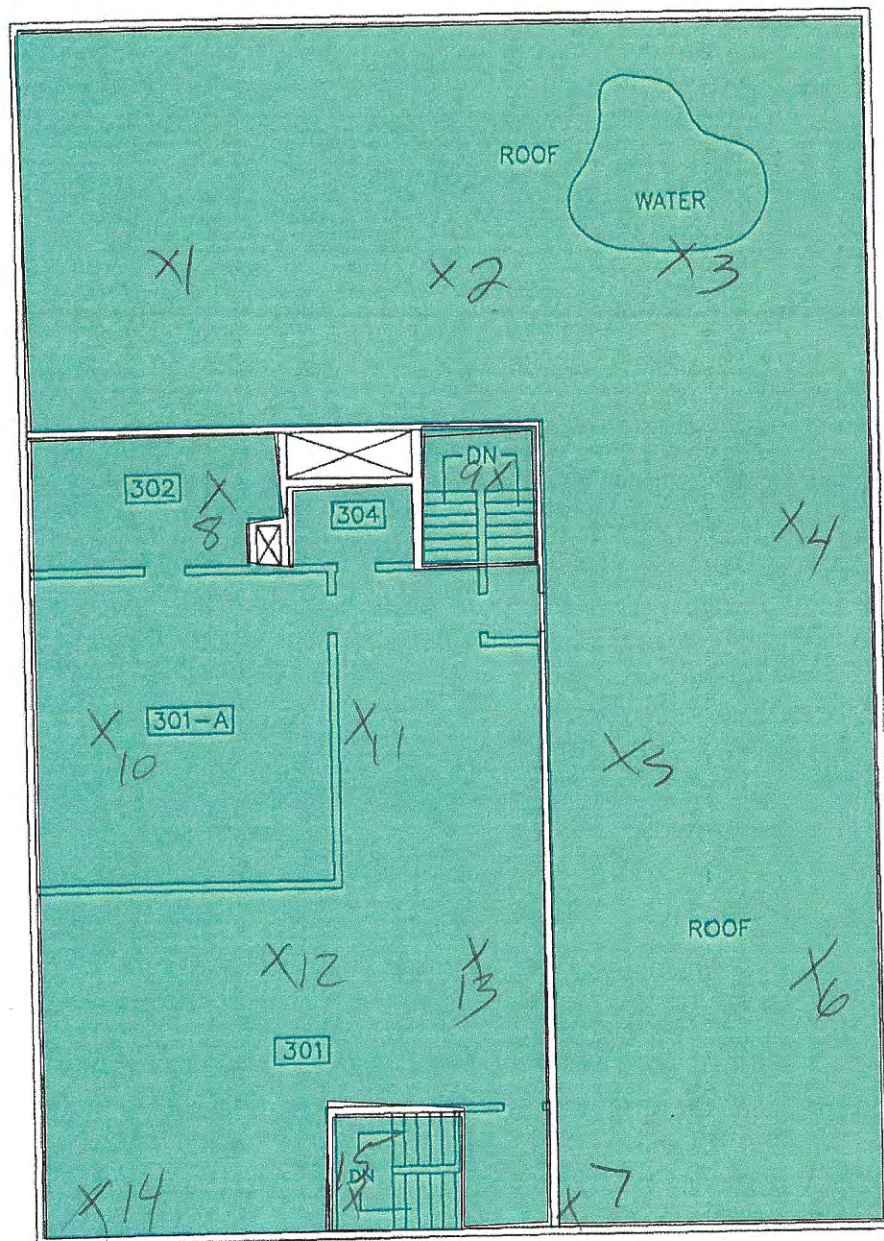
12 level



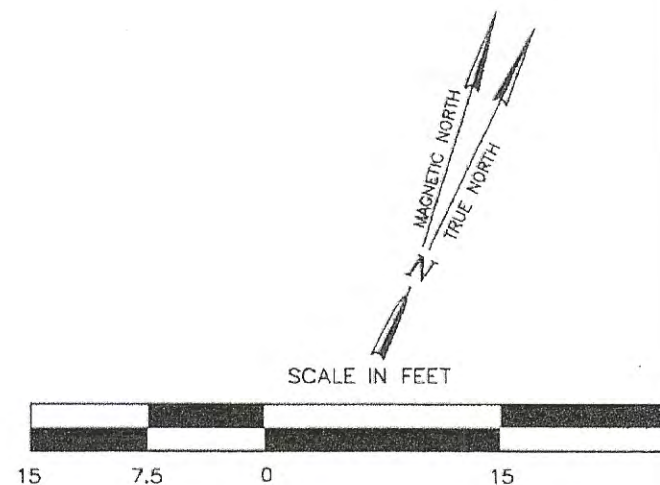
ANNUAL INSPECTION AND
RADIOLOGICAL SURVEY CONDUCTED
MARCH 27, 2019

Dade Moeller
Radiological Survey Report

Laboratory Description: <u>121AF-3-1</u>				Date: <u>6/8/2020</u>		
Purpose of Survey: <u>CSS</u>				Performed By: <u>Clark Barton</u>		
Sketch of Area <u>See attached map</u> <u>#3 in dirt from puddle</u> <u>Rubber Roofing</u> } <u>Bare Cement</u> }				Direct Results cpm/100cm ²		
				Direct #	Beta	Alpha
				1	179	12
				2	241	13
				3	166	7
				4	204	7
				5	198	12
				6	232	16
				7	237	18
				8	293	0
				9	233	3
				10	203	2
				11	236	2
				12	237	2
				13	211	4
				14	240	2
				15	226	4
Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location						
Instrumentation				Source Check (pre/post)		
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
43-68	760445	0.42, 149.6	2302 / 29.3%	Th 230 / 1-129	435 / 316 404 / 425	CPM Pre CPM Post
Comments, including corrective actions if any: <u>Critical Values 100, 304</u> <u>elevated direct alpha appears to be radon, nothing when</u> <u>smears counted after 1+ hours</u>						



121 level



ANNUAL INSPECTION AND
RADIOLOGICAL SURVEY CONDUCTED
MARCH 27, 2019

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	121 AF-3-1	Instrument Model:	2929
	CSS	Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1		
Background	Background Count #2		
1	See attached map rubber roof	1	60
2	" "	1	75
3	" "	1	61
4	" "	1	47
5	" "	1	61
6	" "	2	58
7	" "	1	45
8	" "	1	51
9	Dave concrete	3	51
10	" "	0	62
11	" "	0	42
12	" "	0	49
13	" "	0	49
14	" "	0	53
15	" "	0	55
		0	54
		0	62
Additional Comment:			
Analyzed by/date: (name/date)		C. Smith 6/8/2020	

Critical values: 4.3α 82β

Laboratory Description: <u>AUX EX-3-1</u>				Date: <u>6/3/2020</u>		
Purpose of Survey: <u>CSS</u>				Performed By: _____ Print: <u>JEFF GAGNE</u> Sign: <u>[Signature]</u>		
Sketch of Area - SEE ATTACHED PAGE FOR SKETCH - READINGS #3 AND #5 WERE TAKEN ON ROOF BORDER OF 2ND FLOOR (SAME MATERIAL). - LOCATIONS AND HEIGHTS LISTED ON SKETCH PAGE.				Direct Results cpm/100cm ²		
				Direct #	Beta	Alpha
				1	179	3
				2	199	5
				3	280	29
				4	223	3
				5	315	43
				6	259	5
				7	214	2
				8	204	1
				9	243	1
				10	215	5
				11	206	3
				12	211	2
				13	174	7
14	166	4				
15	189	5				
Legend: # - Direct Measurement # - Scan Direct Measurement ⊕ - Smear Location						
Instrumentation				Source Check (pre/post)		
Model #	Serial #	Background	Efficiency	Isotope	Reading	Units
2224	162850	1.2 / 122B		TR-230/E-120	347.0 / 364.8	CPM
				POST	298.0 / 322B	CPM
Comments, including corrective actions if any: <u>N/A</u>						

PG. 1/4 JMA

TWO ROOMS WAS REMOVED.

BROKEN SCREEN

RAILING MISSING IN 2012

DOCK

DN

112-A

112-B

115

116

118

119

121

121-A

121-B

125

101

103

104

109

110

FLOOR DRAIN

FLOOR DRAIN

LOCK

RECTIFIER UNIT

DN

DN

DN

UP

CEILING IDE FOR

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350

1. 7°	5 FT
2. 29°	35 FT
3. 52°	28 FT
4. 74°	10 FT.
5. 96°	42 FT.
6. 119°	24 FT.
7. 142°	25 FT.
8. 170°	2 FT.
9. 187°	7 FT.
10. 209°	38 FT.
11. 232°	48 FT.
12. 277°	8 FT.
13. 299°	44 FT.
14. 322°	35 FT.
15. 350°	59 FT.

Page G-263

PL 2/4 JPL

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	Piqua	Instrument Model:	121877
		Instrument S/N:	4/28/2020
	100 Aux Outside	Calibration Date:	4/28/2021
		Calibration Due Date:	12/18/21
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	0	66
Background	Background Count #2	0	63
1	See map with Direct Survey	0	43
2		1	65
3		3	52
4		0	66
5		0	66
6		0	49
7		0	44
8		0	57
9		0	64
10		1	47
11		1	64
12		1	53
13		1	60
14		0	45
15		0	54
Additional Comment:		Critical Values = 82.4 B & 4.3 d	
Analyzed by/date: (name/date)		C. J. 6/3/2020	

#5 saved for re-count after decay, see attached Sheet.

Continuation Sheet Form HS-003

Location: PNPF 100 Aux Outside	Date: 6/3/2020	Survey # Recounts
-----------------------------------	-------------------	----------------------

Smear Measurements for Alpha and Beta Contamination

Smear Direct No.	Beta cpm	Alpha cpm	Date	Time	Direct No.	Beta cpm	Alpha cpm
5	66	6	6/3/2020	1543			
"	59	0	" "	1623			
"	44	2	" "	1624			
"	64	5	" "	1625			
"	60	4	" "	1630			
"	62	3	" "	1640			
BKG	67	0	6/4/2020	0838			
BKG	58	0	" "	0850			
Smear 5	68	4	" "	0851			
"	46	1	" "	0852			
Appears that activity was minor Radon/Thoron from the surfaces. Directs were elevated as well, <i>[Signature]</i> 6/4/2020							

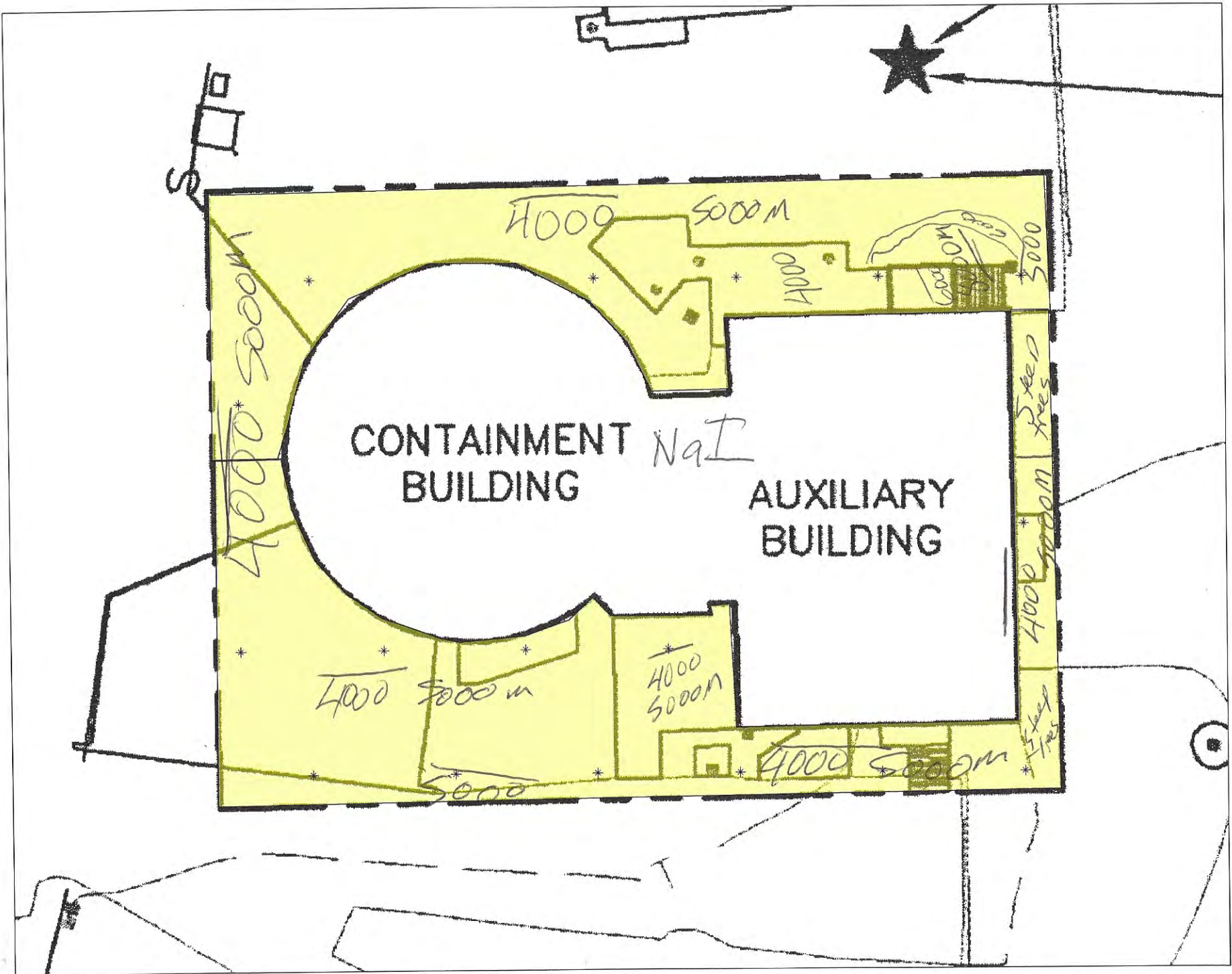
Critical levels = 82.4B & 4.3α

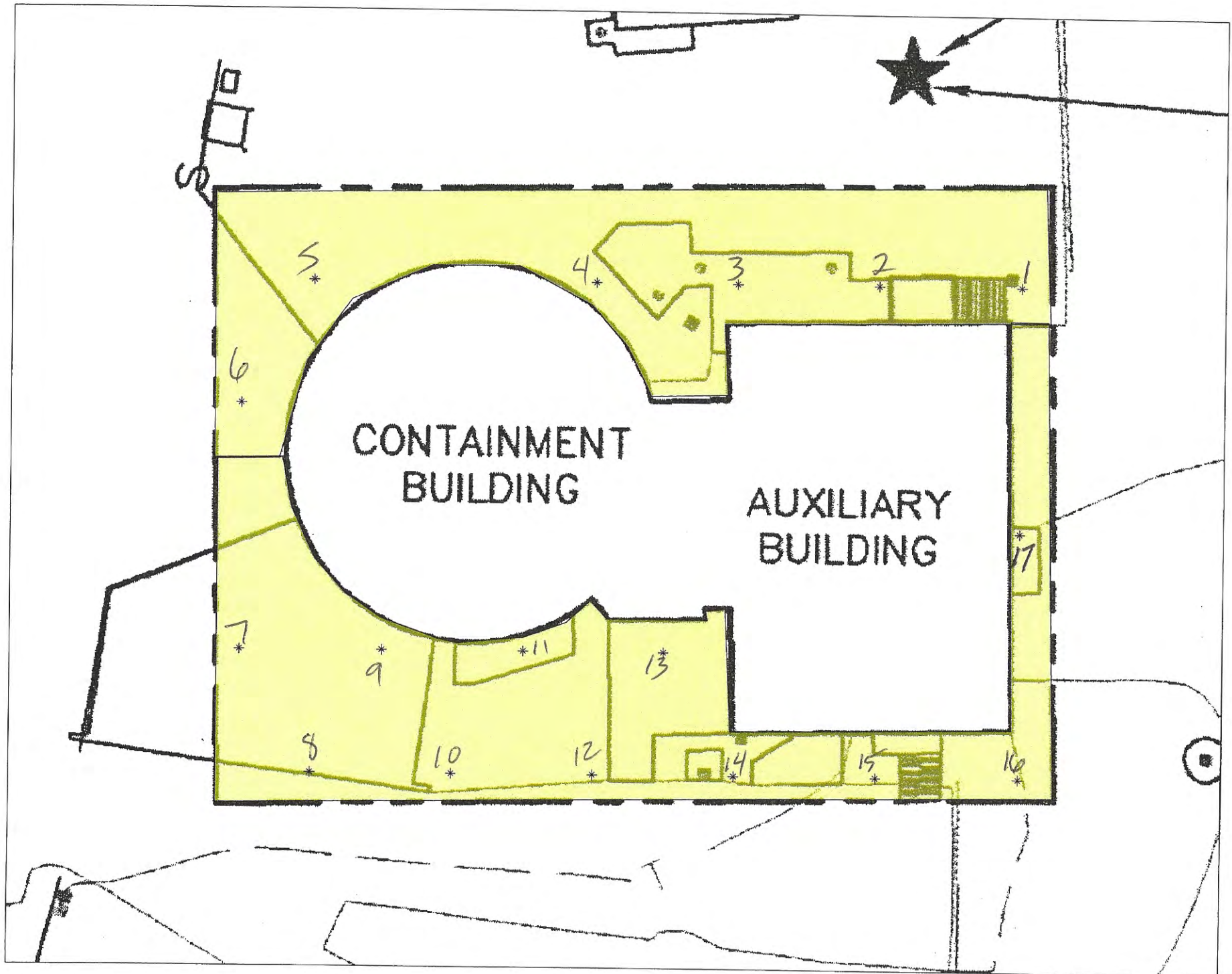
1835 Terminal Drive, Suite 200 | Richland, WA 99354 | www.NV5.com | Office 509.946.0410

CONSTRUCTION QUALITY ASSURANCE - INFRASTRUCTURE - ENERGY - PROGRAM MANAGEMENT - ENVIRONMENTAL

Dade Moeller
Radiological Survey Report

[illegible]







Dade Moeller

Bench Counter Worksheet

Client Name:	PNPF	Instrument Make:	Ludlum
Client Address:	Ground -3-1 CSS	Instrument Model:	2929
		Instrument S/N:	121877
		Calibration Date:	4/28/2020
		Calibration Due Date:	4/28/2021
Phone Number:		Analysis Number:	

DATA FOR 1 -MINUTE COUNTS			
Sample	Description	Alpha	Beta
Background	Background Count #1	1	45
Background	Background Count #2	0	63
1	See attached Map	0	57
2		1	56
3		0	38
4		2	57
5		0	56
6		0	53
7		0	57
8		0	39
9		0	64
10		1	52
11		1	42
12		6	54
13		0	79
14		1	50
15		0	68
16		1	60
17		0	44
Additional Comment:	Cup 6/9/2020		
Analyzed by/date: (name/date)	Cup 6/9/2020		

Critical values 4.3x 82b

Specializing in Occupational and Environmental Health Sciences

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