APPENDIX C-10

VERIFICATION SURVEYS FOR AREA 14 NORTH

ION TECHNOLOGY, INC.
640 Maple Ave
Saratoga Springs, NY
(518) 584-0166

RADIOLOGICAL SURVEY

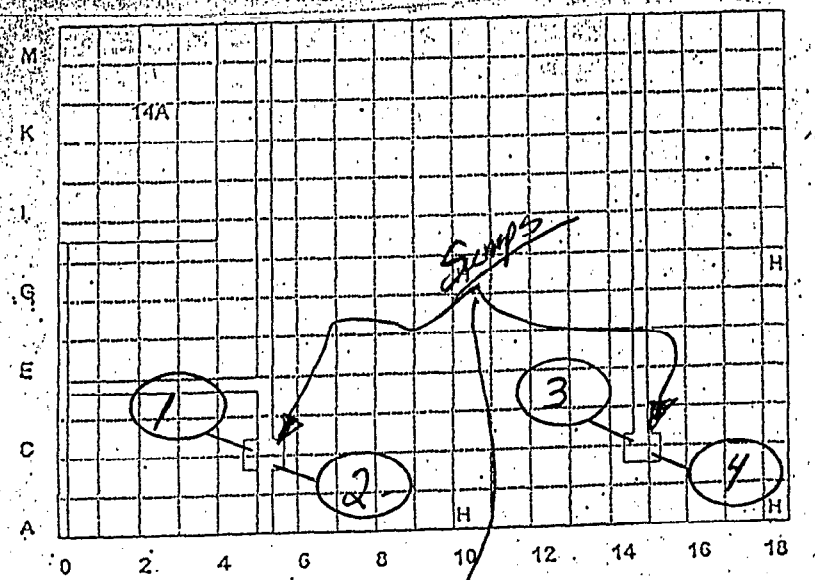
Project: PRAXAIR SITE
Area: AREA 14 NORTH & SOUTH

CAL DUE: 2-7-98
EFF. = .20
BKGD = 50 CPM BX

Date/Time 11/13/97 2130 HRS.	Tech [illegible]
Instrument / sn L2221 #86308 #144-9 #48267 ACTIVE AREA FOR DETECTOR = 15.	
Location/Purpose PRAXAIR SITE B14 AREA 14 NORTH & SOUTH	Survey # 1040
RWP# 04	

DRAIN LINE (INTERNALS) DELINEATION SURVEY

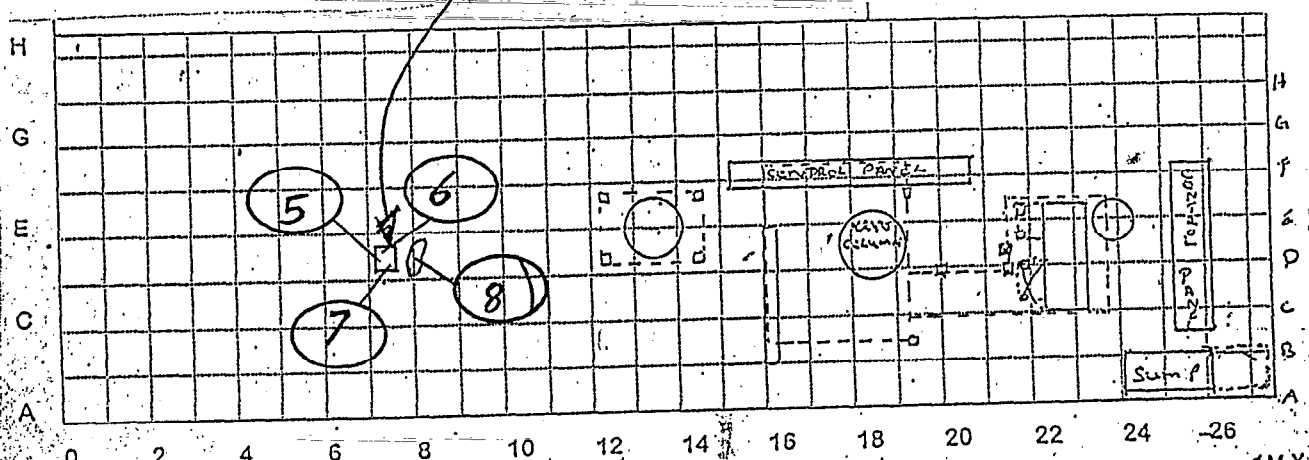
AREA 14 NORTH



NOTE: *DRAIN LINE INTERNALS: ALL MEASUREMENTS RECORDED, WERE TAKEN @ TOP & SIDES NOT BOTTOM DUE TO WATER, DEBRIS, & SLUDGE BEING PRESENT.

KEY: # = DIRECT PROBE MEASUREMENT LOCATION (1 MIN. COUNT TIME IN CPM BX)

AREA 14 SOUTH



K = 1000 X DPM/100cm²

1M X 1M GRID

Loc	Type	Description	Gross	α dpm	Gross	β dpm	Loc	Type	Description	Gross	α dpm	Gross	β.d
1	D.P.	DRAIN LINE INT.			1,100	34k							
2		↓			640	19k							
3		EXT. OF DRAIN (CAPPED)			3,200	102k							
4		DRAIN LINE INT.	N		1,650	52k							
5				A	1,920	60k							
6					1,340	48k			N				
7					420	12k			A				
8	↓	FLOOR SURFACE: TOP PAVE UNDER	TOP on concrete		2k TO 5k	63k - 160k							
		N A											

Type: s = smearable, dp = direct probe

Scalar S/N		BKD	EFF	MDA
CT=	DATE N	α:		
Tech A		β:		

Comments:

Review: [illegible]

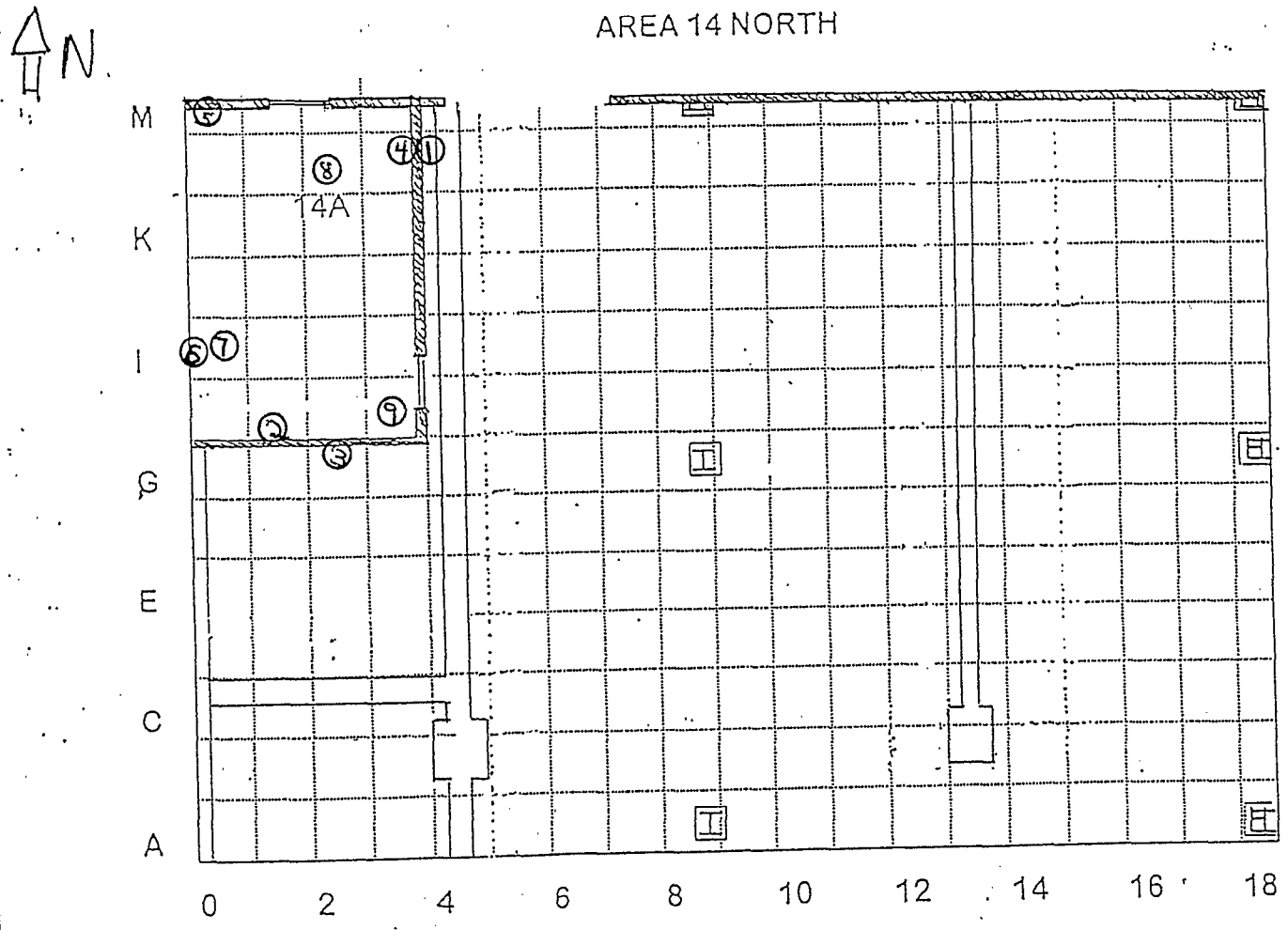
ION TECHNOLOGY, INC.
640 Maple Ave
Saratoga Springs, NY
(518) 584-0166

RADIOLOGICAL SURVEY

Project: PRAXAIR
Area: BLDG 14

Date/Time 11-19-97	Tech D. PITMAN	Instrument / sn 2221 / 89648	
Location/ Purpose Area 14 A - Removal Verification		Survey # 1057	RWP# 02

AREA 14 NORTH



Loc.	Type	Description	Gross	α dpm	Gross	β dpm	Loc	Type	Description	Gross	α dpm	Gross	β dp
1	S	14N W.WALL GRID AA/L	1	2	69	29							
2	S	14A S.WALL GRID AA/1	0	0	57	-14							
3	S	14N N.WALL GRID AA/2	0	0	52	-32							
4	S	14A E.WALL GRID AA/2	0	0	52	-32							
5	S	14A N.WALL GRID AA/0	2	5	59	-7							
6	S	14A W.WALL GRID AB/T	1	2	69	29							
7	S	14A CEILING GRID T/0	0	0	55	-21							
8	S	14A CEILING GRID L/2	0	0	61	0							
9	S	14A CEILING GRID L/3	0	0	71	36							

Type:s = smearable, dp = direct probe

Comments:

		BKD	EFF	MDA
Scalar S/N 91234				
CT= 1	DATE 11-19-97 α:	207/770 .27	0.33	16
Tech D. PITMAN	β:	46684/770 61	0.28	139

Review:

Encl 3.3 to HSP 210

#1058

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

Survey Date: 11-19-97
Location: BLDG 14 Area 14A
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/3027	2221/89648
Detector Model, & s/n:	43-5/88097	449/33041
Calibration Date:	2-10-97	2-7-97
Efficiency [Tc99] [SY90] [Th230]	0.12	0.20
Detector Area (CM2)	50	15.5

RP Technician: D. PITMAN

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

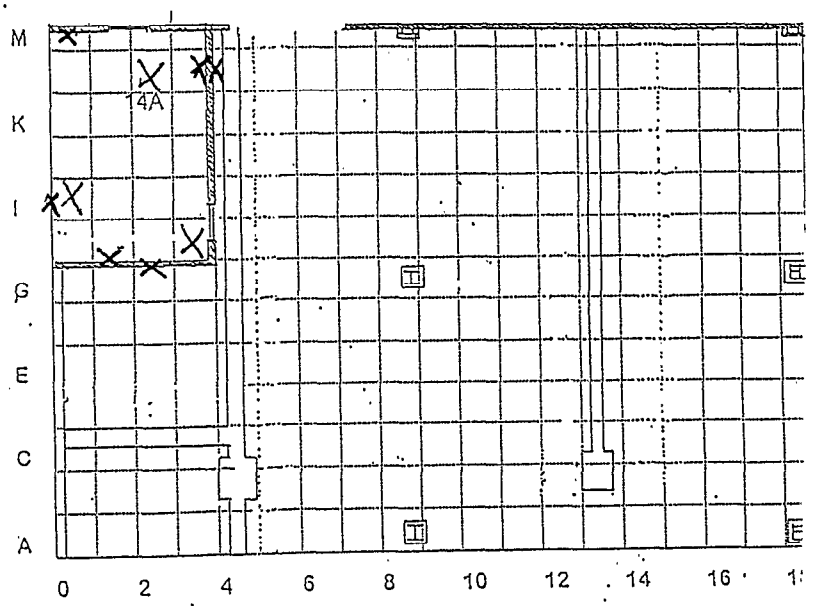
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	47
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

GRID			DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
AA	L	A	14N W. WALL		35
		B			60
		C			68
		D			72
		E			43
AA	1	A	14A S. WALL		52
		B			64
		C			65
		D			38
		E			40
AA	2	A	14N N. WALL		47
		B			52
		C			48
		D			40
		E			46
AA	1	A	14A E. WALL	2	34
		B		1	30
		C			47
		D		2	49
		E		0	43
		F	DUPLICATE	1	39
AA	0	A	14A N. WALL		55
		B			44
		C			61
		D			53
		E			40
BB	L	A	14A W. WALL		48
		B			35
		C			39
		D			50
		E			52
L	0	A	14A Ceiling		59
		B			49
		C			63
		D			48
		E			55
L	1	A	14A Ceiling	2	50
		B		3	74
		C		2	68
		D		2	65
		E		1	57
H	3	F	DUPLICATE		62
H	3	A	14A Ceiling		64
		B			59
		C			48
		D			76
		E			

Insert area map or sketch below

VERIFICATION

AREA 14 NORTH



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REVIEW

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1082

Survey Date: PRAXAIR SITE B14 AREA 14 NORTH OVERHEAD
Location: 12-4-97
Description: VERIFICATION SURVEY

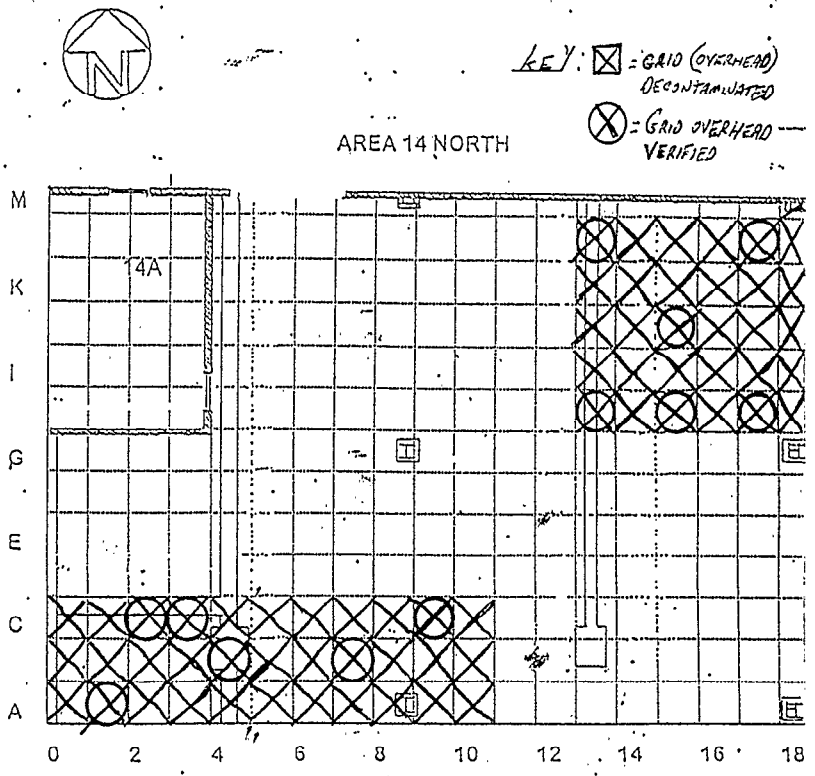
	alpha	beta-gamma
Instrument Model & s/n:	ESP1/03027	L2221/89648
Detector Model, & s/n:	43-5/088097	44-9/33041
Calibration Date:	2-10-97	2-7-97
Efficiency [Tc99] [SY90] [Th230]	.12	.20
Detector Area (CM2)	50	15.5

RP Technician: [signature] William W. Jeske

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	α alpha	βγ beta-gamma
TOTAL BACKGROUND COUNTS	1 CPM	49 CPM
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

Insert area map or sketch below



#	GRID	DESCRIPTION	alpha GROSS COUNTS α	beta-gamma GROSS COUNTS βγ
1	C-4	A B14 14N. OVERHEAD	3	123
2		B	2	128
3		C	1	103
4		D	2	120
5		E	3	124
6	B-5	A		100
7		B		48
8		C		128
9		D		124
10		E		71
11	A-2	A		55
12		B		36
13		C		136
14		D		87
15		E		49
16	C-3	A		112
17		B		199
18		C		142
19		D		60
20		E		132
21	B-7	A		131
22		B	N	143
23		C	A	69
24		D		81
25		E		110
26	C-9	A		101
27		B		119
28		C		123
29		D		125
30		E		117
31	L-13	A		128
32		B		68
33		C		95
34		D		142
35		E		131
36	B-13	A	1	57
37		B	1	153
38		C	3	101
39		D	1	75
40		E	2	61
41	L-17	A		88
42		B		73
43		C		86
44		D		164
45		E		97
46	J-15	A	N	64
47		B	A	81
48		C		123
49		D		165
50		E		104

#	GRID	DESCRIPTION	alpha GROSS COUNTS α	beta-gamma GROSS COUNTS βγ
51	H-15	A B14 14N. OVERHEAD	2	77
52		B	2	74
53		C	1	93
54		D	0	116
55		E	2	66
56	H-17	A		114
57		B		136
58		C	N	150
59		D	A	83
60		E		54
		N A		
*DUP 20	C-3	E B14 14N. OVERHEAD	N	141
40	B-13	E		64
60	H-17	E	A	49
		N		
		A		

REVIEW [signature]

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

#1103

Survey Date: 12-18-97
Location: BLDG 14 Area 14N - CEILING
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/3027	2221/89648
Detector Model & s/n:	43-5/38097	44-9/33041
Calibration Date:	2-10-97	2-7-97
Efficiency [Tc99] [SY90] [Th230]	0.12	0.20
Detector Area (CM2)	50.0 cm	15.5

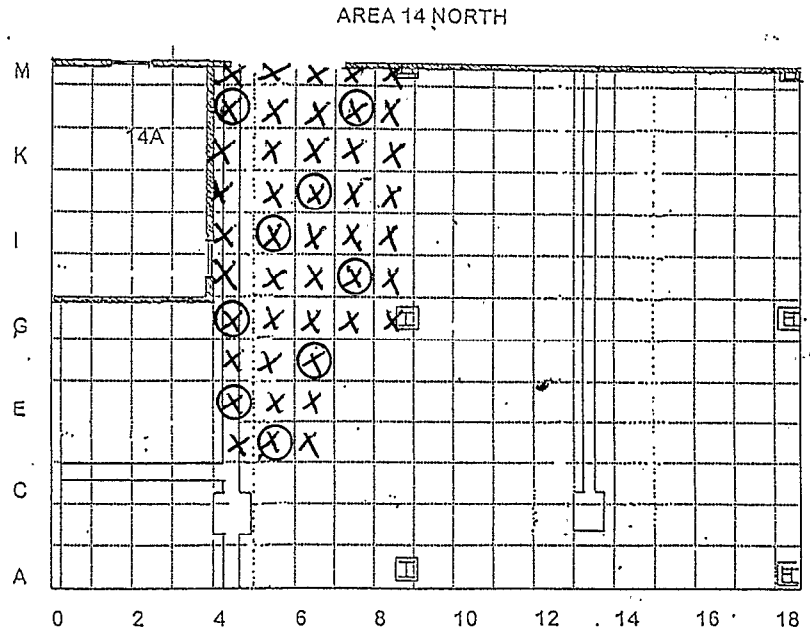
RP Technician: D. PITMAN

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	47
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
G	4	A	CEILING		109
		B			117
		C			95
		D			70
		E			81
D	5	A	CEILING		23
		B			49
		C			43
		D			35
		E			49
F	6	A	CEILING		112
		B			64
		C			40
		D			97
		E			88
E	4	A	CEILING	1	88
		B		1	56
		C		2	169
		D		1	44
		E		1	56
		E	DUPLICATE	0	53
I	7	A	CEILING		79
		B			112
		C			87
		D			121
		E			40
H	7	A	CEILING		115
		B			104
		C			130
		D			76
		E			99
L	4	A	CEILING		103
		B			90
		C			122
		D			125
		E			63
K	6	A	CEILING	0	91
		B		1	89
		C		1	67
		D		0	120
		E		2	105
		E	DUPLICATE	1	97
J	5	A	CEILING		131
		B			62
		C			110
		D			118
		E			72

Insert area map or sketch below



X = DECONNED & Surveyed CLEAN
(X) = VERIFIED

REVIEWED

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SURVEY01.XLS

Saratoga Springs, ...
518) 584-0166

WEST WALL

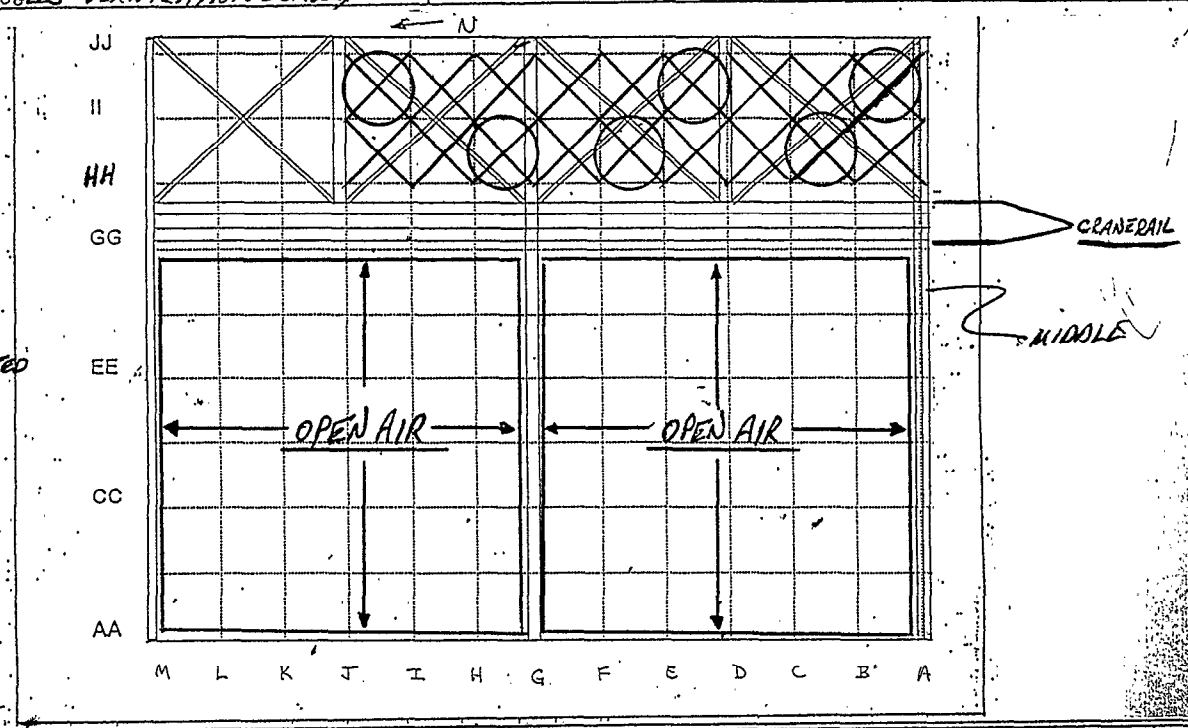
Date/Time 12-15-97 2300 HRS	Tech William W.	Instrument / sn L2221
Location/ Purpose CENTER CRANERAILS / WEST FACE		Survey # 1104 RWP# 02
814 14N CROSS ANGLES-VERIFICATION SURVEY		

"VERIFICATION"

KEY:

☒ = GRID DECOTAMINATED

⊠ = GRID VERIFIED CLEAN



Loc	Type	Description	Gross	α dpm	Gross	β dpm	Loc	Type	Description	Gross	α dpm	Gross	β dpm
~~A-II~~ 1	D.P.	A GRID A-II			68		19	D.P.	D GRID E-HH	N		118	
2		B			75		20		E		A	132	
3		C			84		21		A G-HH	1		90	
4		D			64		22		B	0		85	
5		E			73		23		C	1		73	
6		A B-H			81		24		D	2		69	
7		B	N		104	N	25		E	1		97	N
8		C		A	99	A	26		A I-II			76	A
9		D			92		27		B			112	
10		E			97		28		C	N		68	
11		A D-II			116		29		D		A	59	
12		B			71		30		E			81	
13		C			114		31		E *DUP.			74	
14		D			109								
15		E			126								
16		A E-HH			94				N				
17		B			133				A				
18		C			101								

Type:s = smearable, dp = direct probe

Comments: * BY EFF. = .20 BY BKGD. = 52 cpm 15.5cm
α EFF. = .12 α BKGD. = 0 cpm

Scalar S/N L2221 # 89648 W/44-9 # 38041	BKD	EFF	MDA
CT= 1 min. α/BY DATE 12-15-97 α:	N		
Tech William W. β:		A	

α ESP-1 # 03027 W/43-5 # 088097

Review: [signature]

Encl 3.4 to HSP 210

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1105

EAST WALL

Survey Date: 12-18-97
Location: PRAXAIR SITE B14 14N. X CROSS ANGLE IRONS
Description: VERIFICATION SURVEY

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha α	beta-gamma βγ
Instrument Model & s/n:	ESP.1 #13027	L2221 #86314
Detector Model & s/n:	43-5 #48097	44-9 #48266
Calibration Date:	2-10-97	12-3-97
Efficiency [Tc99] [SY90] [Th230]	.12	.20
Detector Area (CM2)	50	15.5

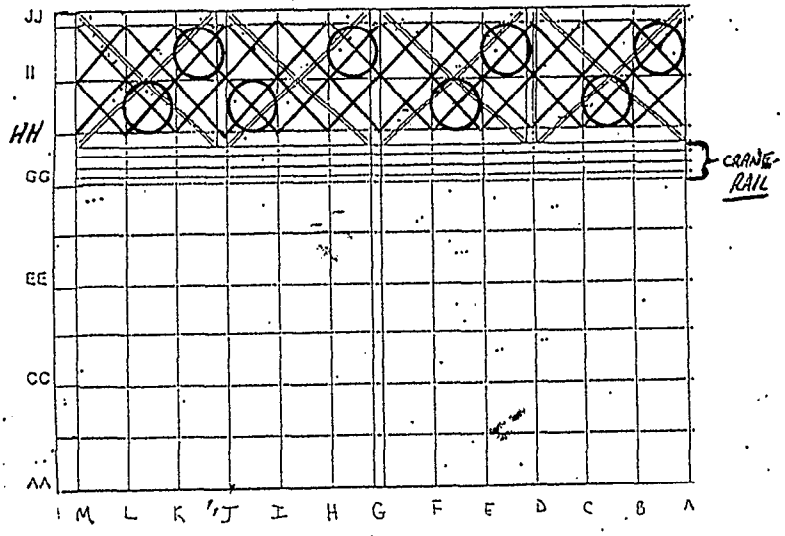
	α alpha	βγ beta-gamma
TOTAL BACKGROUND COUNTS	1 CPM	54 CPM
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

~~Insert area map or sketch below~~

P Technician: William W.

#	GRID	DESCRIPTION	α alpha GROSS COUNTS	βγ beta-gamma GROSS COUNTS
1	A-II	A B14 14N. X-CROSS ANGLE IRON		68
2		B		72
3		C		104
4		D		116
5		E		92
6	B-HH	A		69
7		B		73
8		C	N	96
9		D	A	85
10		E		88
11	D-II	A		89
12		B		112
13		C		126
14		D		137
15		E		112
16	E-HH	A	0	109
17		B	1	87
18		C	0	76
19		D	1	59
20		E	2	162
21	G-II	A		88
22		B		74
23		C		97
24		D		118
25		E		101
26	I-HH	A		122
27		B		136
28		C		82
29		D		74
30		E		81
31	J-II	A		68
32		B	N	71
33		C	A	96
34		D		132
35		E		74
36	K-HH	A		147
37		B		81
38		C		67
39		D		79
40		E		88
41	E-HH	E * DUP.		149
42	K-HH	E * DUP.		97
43				
44				
45				
46				
47		N		
48		A		
49				
50				

AREA 14 NORTH (EAST WALL)



KEY: ☒ = GRID DECONTAMINATED.

⊗ = GRID VERIFIED CLEAN.

REVIEW

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

#1113

Survey Date: 12-24-97
Location: B14 A14N W-CEILING
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/3027	2221/36314
Detector Model & s/n:	43-5/58097	44-9/48266
Calibration Date:	2-10-97	12-3-97
Efficiency [Tc99] [SY90] [Th230]	0.12	0.20
Detector Area (CM2)	500	15.5

RP Technician: D. PITMAN

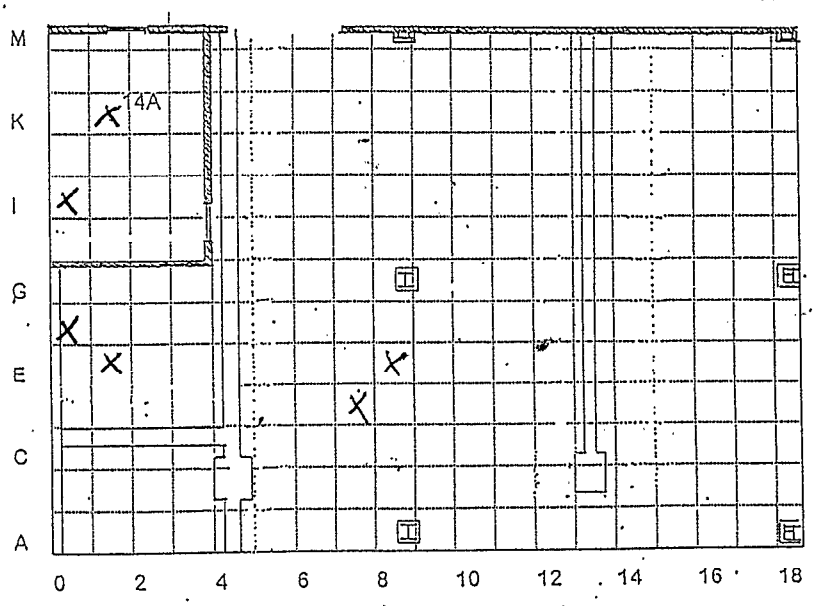
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	66
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

GRID			DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
D	7	A	CEILING		45
		B			131
		C			127
		D			96
		E			79
E	8	A	CEILING		45
		B			88
		C			104
		D			56
		E			120
F	0	A	CEILING		116
		B			59
		C			48
		D			50
		E			42
K	1	A	CEILING	2	59
		B		1	68
		C		1	68
		D		2	75
		E		1	36
		E	DUPLICATE	0	49
F	0	A	CEILING		76
		B			112
		C			159
		D			117
		E			123
E	1	A	CEILING		44
		B			59
		C			56
		D			141
		E			68

Insert area map or sketch below

AREA 14 NORTH



REVIEW

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SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

#1114

Survey Date: 12-24-97
Location: B14 A14 N WEST WALL
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/3027	2221/86314
Detector Model & s/n:	43-5/88097	449/48266
Calibration Date:	2-10-97	12-3-97
Efficiency [Tc99] [SY90] [Th230]	0.12	0.20
Detector Area (CM2)	50.0	15.5

RP Technician: D. PITMAN

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

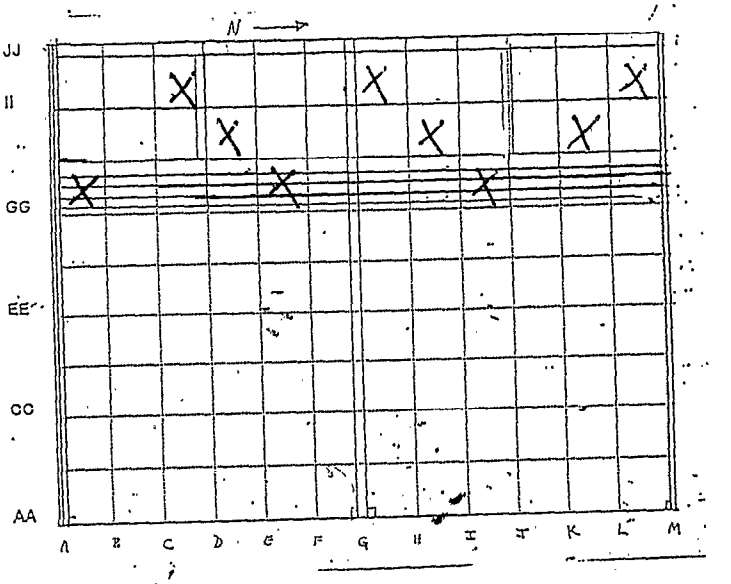
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	66
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

Insert area map or sketch below

→ ALL 'Ø'

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
AØ-66					
A	GG	A	WALL - BRICK		67
		B			82
		C			75
		D			76
		E			80
C	II	A	WALL - BRICK		59
		B			63
		C			68
		D			76
		E			90
D	HH	A	WALL - METAL		46
		B			59
		C			51
		D			49
		E			38
E	GG	A	WALL - BRICK	1	97
		B		1	86
		C		1	81
		D		0	75
		E		2	94
		E	DUPLICATE	1	89
G	II	A	WALL - BRICK		102
		B			95
		C			91
		D			82
		E			87
H	HH	A	WALL - METAL		57
		B			66
		C			48
		D			43
		E			55
I	GG	A	WALL - BRICK		77
		B			75
		C			88
		D			76
		E			90
K	HH	A	WALL - METAL	0	70
		B		1	53
		C		0	62
		D		2	49
		E		2	47
		E	DUPLICATE	1	46
L	II	A	WALL - BRICK		85
		B			91
		C			99
		D			78
		E			75

AREA 14 NORTH



REVIEW

PAGE

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

#1115

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

Survey Date: 12-24-97
Location: B14 A14N W. WALL
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP1/3027	2221/86314
Detector Model & s/n:	43-5/88097	44-9/48266
Calibration Date:	2-10-97	12-3-97
Efficiency [Tc99] [SY90] [Th230]	0.12	0.20
Detector Area (CM2)	50.0	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	66
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

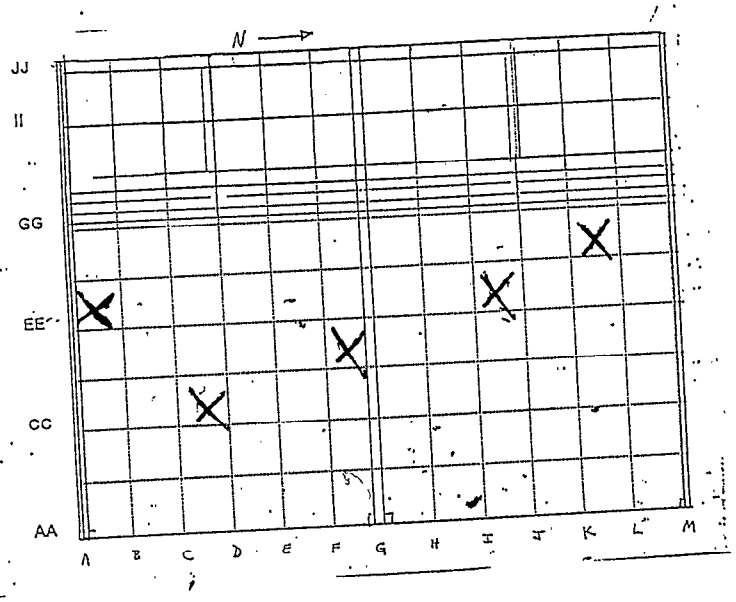
Insert area map or sketch below

RP Technician: D. PITMAN

→ALL 0

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
K	FF	A	WALL - BLOCK		52
		B			59
		C			69
		D			58
		E			70
I	EE	A	WALL - BLOCK		67
		B			64
		C			71
		D			56
		E			55
F	DD	A	WALL - BLOCK	3	89
		B		2	85
		C		0	76
		D		1	58
		E		0	67
		E	DUPLICATE	0	71
C	CC	A	WALL - BLOCK		62
		B			75
		C			80
		D			49
		E			57
A	EE	A	WALL - BLOCK		67
		B			73
		C			66
		D			81
		E			79

AREA 14 NORTH
WEST WALL



REVIEW

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1120

Survey Date: 12-23-99
Location: PRAXAIR SITE B14 14N OVERHEAD
Description: VERIFICATION SURVEY

	alpha α	beta-gamma βγ
Instrument Model & s/n:	ESR1 #03087	L2221 #86308
Detector Model & s/n:	43-5 #088077	44-9 #48267
Calibration Date:	2-10-87	2-7-99
Efficiency [Tc99] [SY90] [Th230]	.12	.20
Detector Area (CM2)	50	15.5

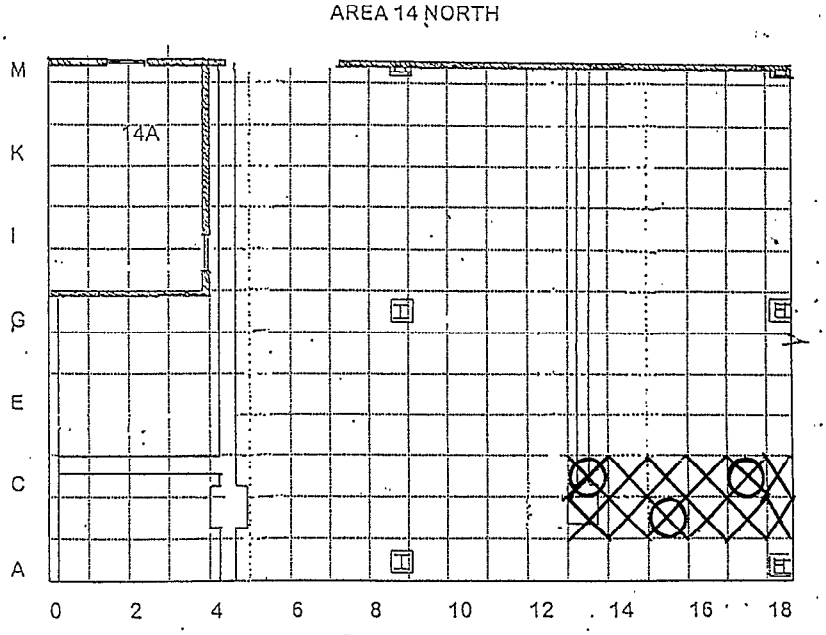
RP Technician: William W. Jake

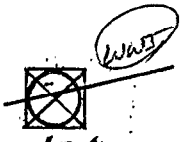
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	α alpha	βγ beta-gamma
TOTAL BACKGROUND COUNTS	10 CPM	51 CPM
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

#	GRID	DESCRIPTION	α alpha GROSS COUNTS	βγ beta-gamma GROSS COUNTS
1	C-13	A B14 14N OVERHEAD		68
2		B		87
3		C	N	91
4		D	A	79
5		E		104
6	B-15	A	1	92
7		B	3	183
8		C	1	146
9		D	2	74
10		E	2	108
11	C-17	A		141
12		B		161
13		C	N	127
14		D	A	109
15		E		162
			N	
			A	

Insert area map or sketch below





KEY:

= GRID VERIFIED CLEAN

= GRID DECONTAMINATED

REVIEW

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY #126

Survey Date: 12-30-97
Location: RM AREA 14 NORTH
Description: NORTH WALL

VERIFICATION

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/103027	1221/86308
Detector Model & s/n:	143-5/88097	144-4/48267
Calibration Date:	2-10-97	2-7-97
Efficiency [Tc99] [SY90] [Th230]	0.12	0.20
Detector Area (CM2)	50	15.5

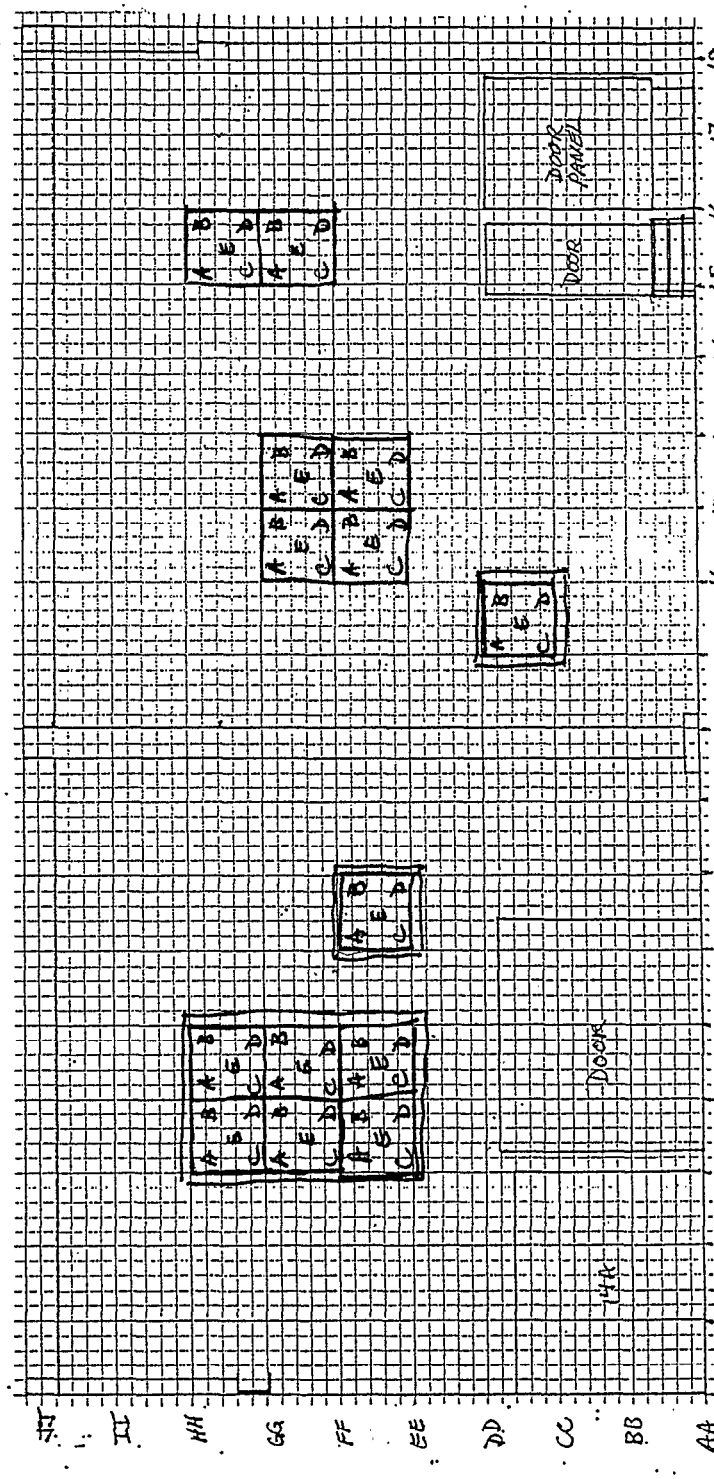
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	1	46
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: G. HAHAM/[illegible]

Insert area map or sketch below

#	GRID (ALL M)	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
	M3-EE			
1	3/EE	A-WALL		70
2		B		59
3		C	N A	83
4		D		95
5		E		101
6	3/FF	A-WALL		59
7		B		80
8		C	N A	82
9		D		77
10		E		84
11	3/GG	A-WALL		67
12		B		91
13		C	N A	80
14		D		71
15		E		80
16	4/EE	A-WALL	1	65
17		B	2	72
18		C	0	68
19		D	1	73
20		E	4	73
21	4/EE	E-WALL - DUPLICATE	2	81
22	4/FF	A WALL		84
23		RM 12-30-97		95
24		C	N A	82
25		D		79
26		E		83
27	4/GG	A-WALL		67
28		B		70
29		C	N A	72
30		D		81
31		E		78
32	6/EE	A-WALL		57
33		B		67
34		C	N A	73
35		D		94
36		E		81
37	10/CC	A-WALL		77
38		B		81
39		C		65
40		D	N A	75
41		E		59
42	10/CC	E-WALL-DUPLICATE		82

AREA 14 NORTH NORTH WALL



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY # 1127

Survey Date: 12-30-97
Location: B14 AREA 14 NORTH
Description: NORTH WALL

VERIFICATION

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/03027	1224/86308
Detector Model & s/n:	43-5/88017	44-4/48267
Calibration Date:	2-10-97	2-7-97
Efficiency [Tc99] [SY90] [Th230]	0.12	0.20
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	1	46
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

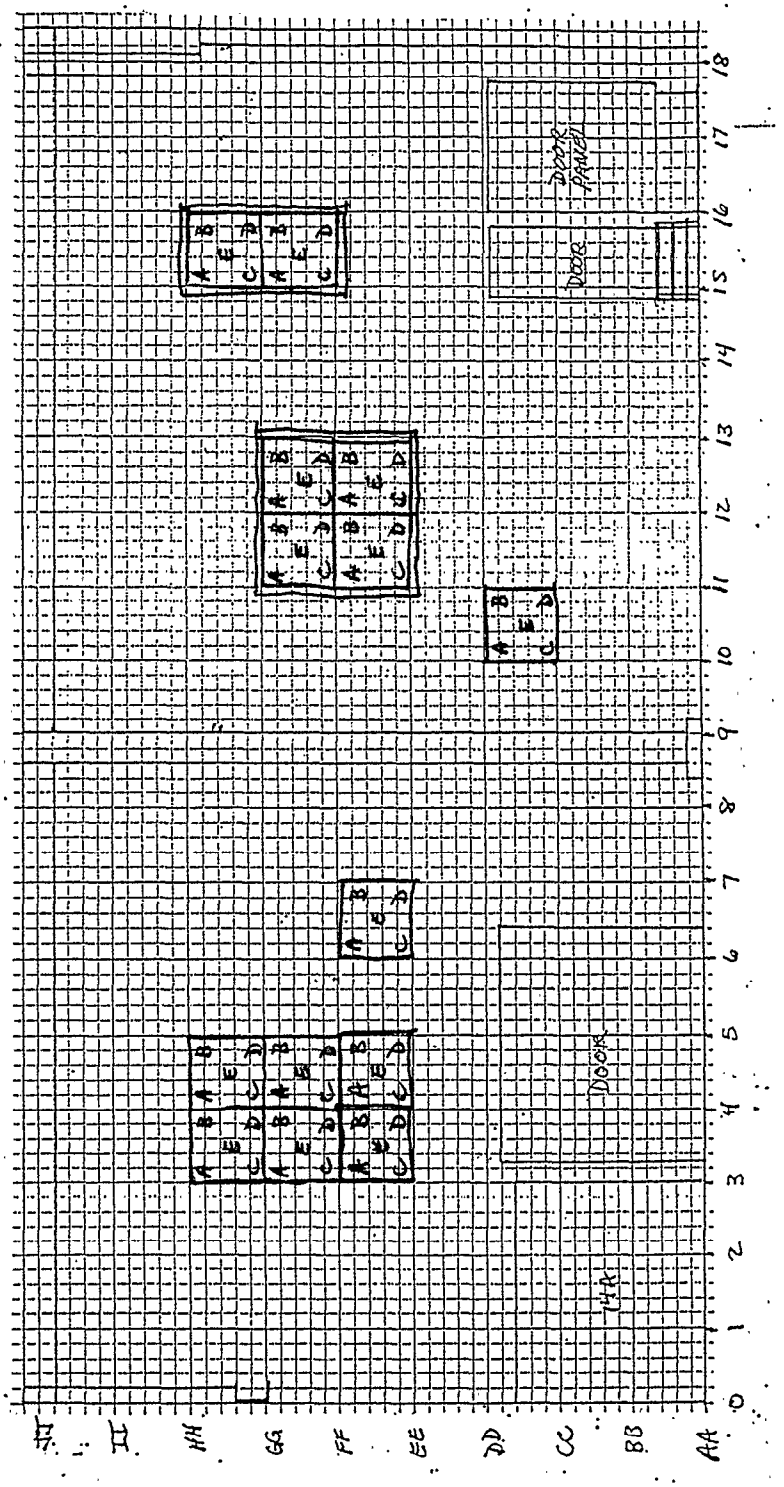
RP Technician: G. HAHAM / [illegible]

	GRID (ALL M)	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
	M 11-EE			
1	11/EE	A-WALL		90
2		B	A	91
3		C		102
4		D	N	87
5		E		83
6	11/FF	A-WALL		68
7		B	A	67
8		C		71
9		D	N	74
10		E		80
11	12/EE	A-WALL		85
12		B	A	74
13		C		69
14		D	N	86
15		E		86
16	12/FF	A-WALL	1	77
17		B	2	90
18		C	5	76
19		D	0	90
20		E	1	82
21	12/FF	E-WALL - DUPLICATE	2	88
22	15/FF	A-WALL		71
23		B	A	69
24		C		73
25		D	N	73
26		E		72
27	15/GG	A-WALL		90
28		B	A	82
29		C		87
30		D	N	69
31		E		61
32	15/GG	E-WALL - DUPLICATE		68
33	M 12-30-97			
34	M 12-30-97			

A
N

AREA 14 NORTH NORTH WALL

Insert area map or sketch below



SURVEY01.XLS

EAST WALL

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1128

Survey Date: 12-29-97
Location: ~~314 AREA~~ 14 NORTH
Description: EAST WALL

VERIFICATION

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/03027	L2221/86308
Detector Model & s/n:	L43-5/85097	L44-9/~~48267~~ 48267
Calibration Date:	2-10-97	2-7-97
Efficiency [Tc99] [SY90] [Th230]	0.12	0.20
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	51
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

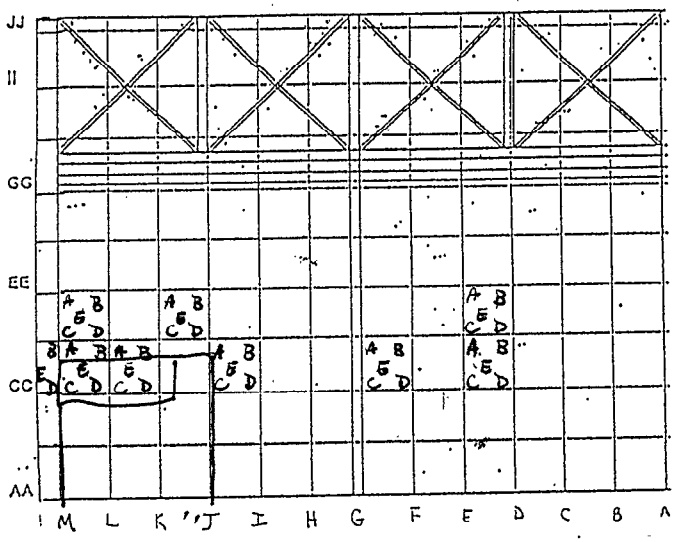
RP Technician: C. HAHAM/C Hah

Insert area map or sketch below

ALL 18

#	GRID D18-CC	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	D/CC	A WALL		94
2		B	A	90
3		C	N	84
4		D		102
5		E		81
6	D/DD	A WALL		82
7		B	A	87
8		C	N	69
9		D		89
10		E		81
11	F/CC	A WALL		83
12		B	A	97
13		C	N	78
14		D		81
15		E		79
16	I/CC	A WALL		68
17		B		91
18		C		86
19		D		96
20		E		76
21	I/CC	E WALL-DUPLICATE		65
22	J/DD	A WALL		91
23		B	A	67
24		C	N	90
25		D		65
26		E		77
27	K/CC	A WALL		89 ~~81~~ 12-29-97
28		B	A	91 ~~93~~ 12-29-97
29		C	N	47 ~~83~~ 12-29-97
30		D		50 ~~87~~ 12-29-97
31		E		42 ~~78~~ 12-29-97
32	L/CC	A WALL	12-29-97	~~102~~ 94
33		B	A 12-29-97	~~92~~ 87
34		C	N 12-29-97	~~78~~ 58
35		D	12-29-97	~~49~~ 47
36		E	12-29-97	~~81~~ 52
37	L/DD	A WALL		69
38		B	A	49
39		C	N	57
40		D		68
41		E		74
42	L/DD	E WALL-DUPLICATE		62
43	M/CC	B WALL	A	88
44		D	N	104
45		E		87
46	M/CC	E WALL-DUPLICATE		82

AREA 14 NORTH (EAST WALL)



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1129

Survey Date: 1-7-98 2300 HRS.
Location: B14 14N EAST CRANERAIL
Description: VERIFICATION SURVEY

	alpha α	beta-gamma βγ
Instrument Model & s/n:	ESP-1 # 03027	L2221 # 89648
Detector Model, & s/n:	43-5 # 058097	44-9 # 048272
Calibration Date:	2-10-97	12-30-97
Efficiency [Tc99] [SY90] [Th230]	.12	.20
Detector Area (CM2)	50	15.5

RP Technician: William W. Gelp

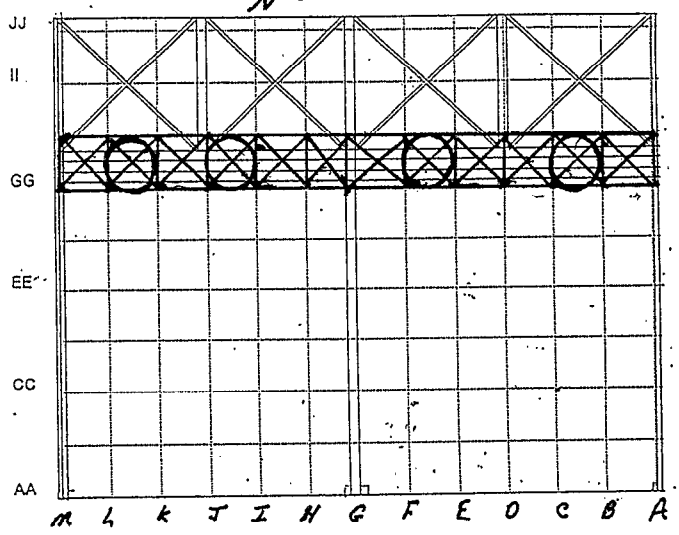
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	α alpha	βγ beta-gamma
TOTAL BACKGROUND COUNTS	1 CPM	51 CPM
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

Insert area map or sketch below

#	GRID	DESCRIPTION	α alpha GROSS COUNTS	βγ beta-gamma GROSS COUNTS
1	B-GG	B14 14N E. CRANERAIL		62
2	B			92
3	C		N	131
4	D		A	84
5	E			95
6	E-GG	A	1	121
7	B		3	143
8	C		2	86
9	D		1	79
10	E		2	108
11	I-GG	A		129
12	B			84
13	C			76
14	D			71
15	E			85
16	K-GG	A	N	106
17	B		A	69
18	C			93
19	D			52
20	E			136
21	K-GG	E DUP		121
			N	
			A	

AREA 14 NORTH
EAST SIDE CRANRAIL
N



KEY:

= GRID DECONTAMINATED

= GRID VERIFIED CLEAN

SURVEY01.XLS

SURVEY # 1130

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

Survey Date: 1-7-98 2130 HRS.
Location: 814 14N CENTER (EAST SIDE) CRANRAIL
Description: VERIFICATION SURVEY

	alpha α	beta-gamma βγ
Instrument Model & s/n:	ESP-1 #03027	L2221 #89648
Detector Model, & s/n:	43-5 #[illegible]	44-9 #048272
Calibration Date:	2-10-97	12-30-97
Efficiency [Tc99] [SY90] [Th230]	.12	.20
Detector Area (CM2)	50	15.5

RP Technician: William W. [illegible]

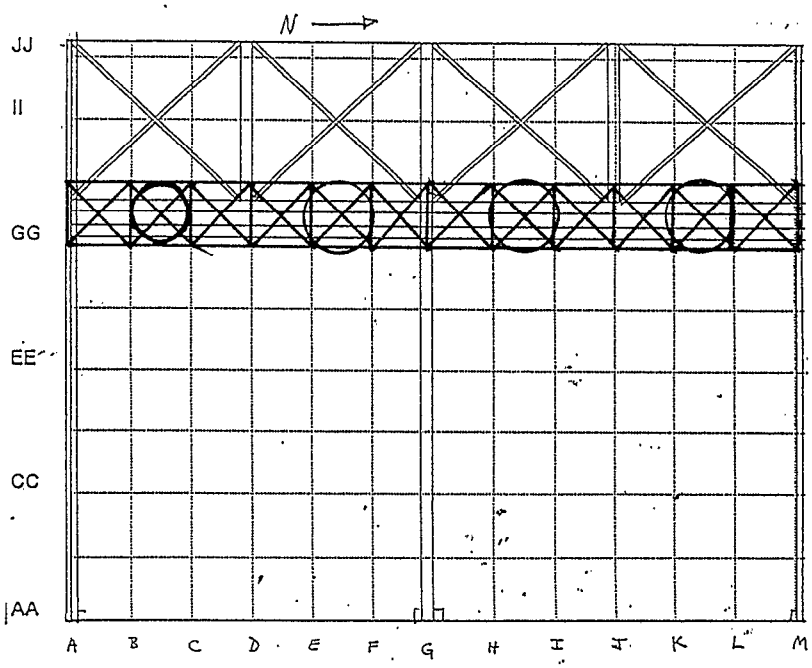
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	α alpha	βγ beta-gamma
TOTAL BACKGROUND COUNTS	1 CPM	51 CPM
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

#	GRID	DESCRIPTION	alpha α GROSS COUNTS	beta-gamma βγ GROSS COUNTS
1	B-GG	A 814 14N. CENTERLINE RAIL-E. SIDE		89
2		B		58
3		C	N	123
4		D	A	74
5		E		146
6	E-GG	A	4	152
7		B	1	101
8		C	1	81
9		D	2	97
10		E	1	86
11	H-GG	A		123
12		B		139
13		C		102
14		D		74
15		E		92
16	K-GG	A	N	114
17		B	A	81
18		C		96
19		D		128
20		E		102
21	L-GG	E * DUP.		111
			N	
			A	

Insert area map or sketch below

AREA 14 NORTH



KEY:

= GRID DECONTAMINATED

= GRID VERIFIED CLEAN

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT SURVEY #1135

(scaler measurement)

Survey Date: 1-8-98
Location: PRAXAIR SITE B14 14N. OVERHEAD
Description: VERIFICATION SURVEY

	alpha α	beta-gamma βγ
Instrument Model & s/n:	ESP-1 #03027	L2221 #86313
Detector Model & s/n:	43-6 #058007	44-9 #048207
Calibration Date:	2-10-97	12-29-97
Efficiency [Tc99] [SY90] [Th230]	.12	.20
Detector Area (CM2)	50	15.5

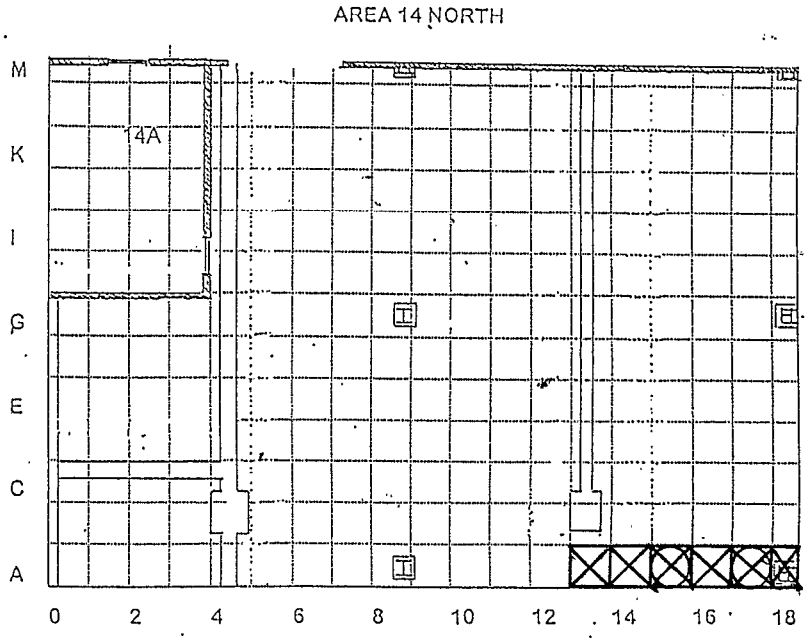
RP Technician: William W. [illegible]

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	α alpha	βγ beta-gamma
TOTAL BACKGROUND COUNTS	1 CPM	50 CPM
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

#	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	A-15	A B14 14N. OVERHEAD	1	131
2		B	1	93
3		C	3	87
4		D	1	69
5		E	1	128
6	A-17	A		104
7		B		143
8		C	N	95
9		D	A	82
10		E		146
				78
		N A		

Insert area map or sketch below



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

#1136

Survey Date: 1-7-98
Location: B2DS 14 AREA 14 NORTH
Description: CRANE FRAME VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/3027	2221/89648
Detector Model & s/n:	43-5/88097	44-9/48272
Calibration Date:	2-10-97	12-30-97
Efficiency [Tc99] [SY90] [Th230]	0.12	0.20
Detector Area (CM2)	500	15.5

RP Technician: D. PITMAN

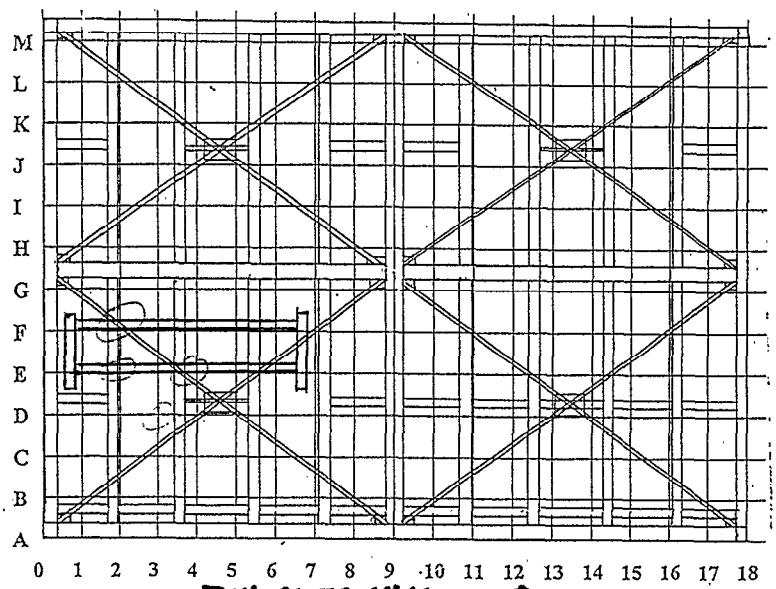
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	1	54
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

Insert area map or sketch below

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
F	2	A	CRANE BEAM		61
		B			65
		C			59
		D			70
		E			68
E	4	A	CRANE FRAME		50
		B			56
		C			63
		D			72
		E			67
E	2	A	CRANE FRAME		102
		B			75
		C			73
		D			61
		E			68
D	3	A	CRANE FRAME	0	56
		B		0	74
		C		0	69
		D		1	83
		E		0	74
		E	DUPLICATE	1	68

AREA 14 NORTH



B14 AREA 14N OVHD

REVIEW

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

West Wall
Survey #1141

Survey Date: 1-12-98
Location: BLDG 14 Area 14 NORTH
Description: Crane Rail
Verification

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/3027	2221/89648
Detector Model & s/n:	43-5/88097	44-9/48272
Calibration Date:	2-10-97	12-30-97
Efficiency [Tc99] [SY90] [Th230]	0.13	0.20
Detector Area (CM2)	50	15.5

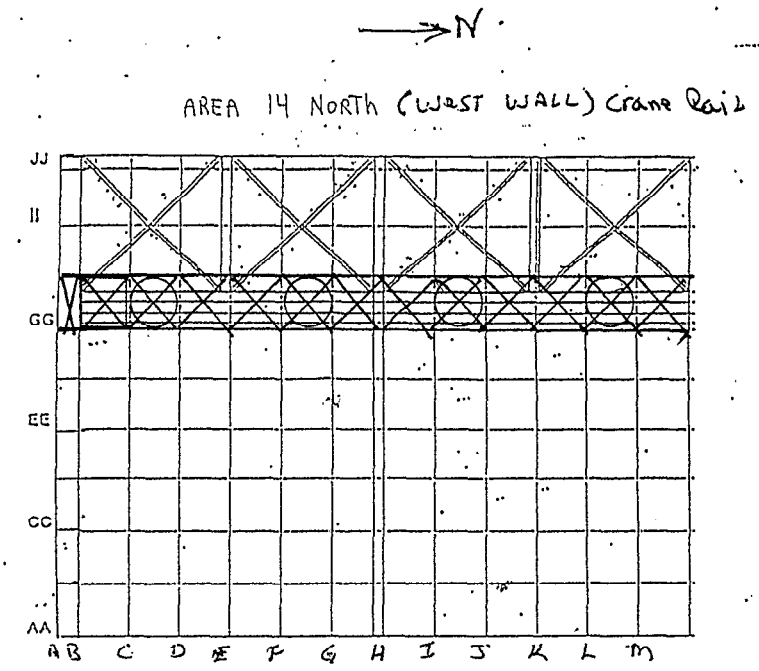
RP Technician: D. Pittman

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	57
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

Insert area map or sketch below

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
GG	C	A	Crane Rail		92
		B			98
		C			107
		D			105
		E			89
GG	F	A	Crane Rail		120
		B			119
		C			127
		D			140
		E			118
GG	I	A	CRANE Rail		111
		B			92
		C			99
		D			106
		E			125
GG	L	A	Crane Rail	1	133
		B		1	124
		C		1	139
		D		0	119
		E		1	117
		E	DUPLICATE	1	124



Grid verified Clean

Grid Decontaminated

Review

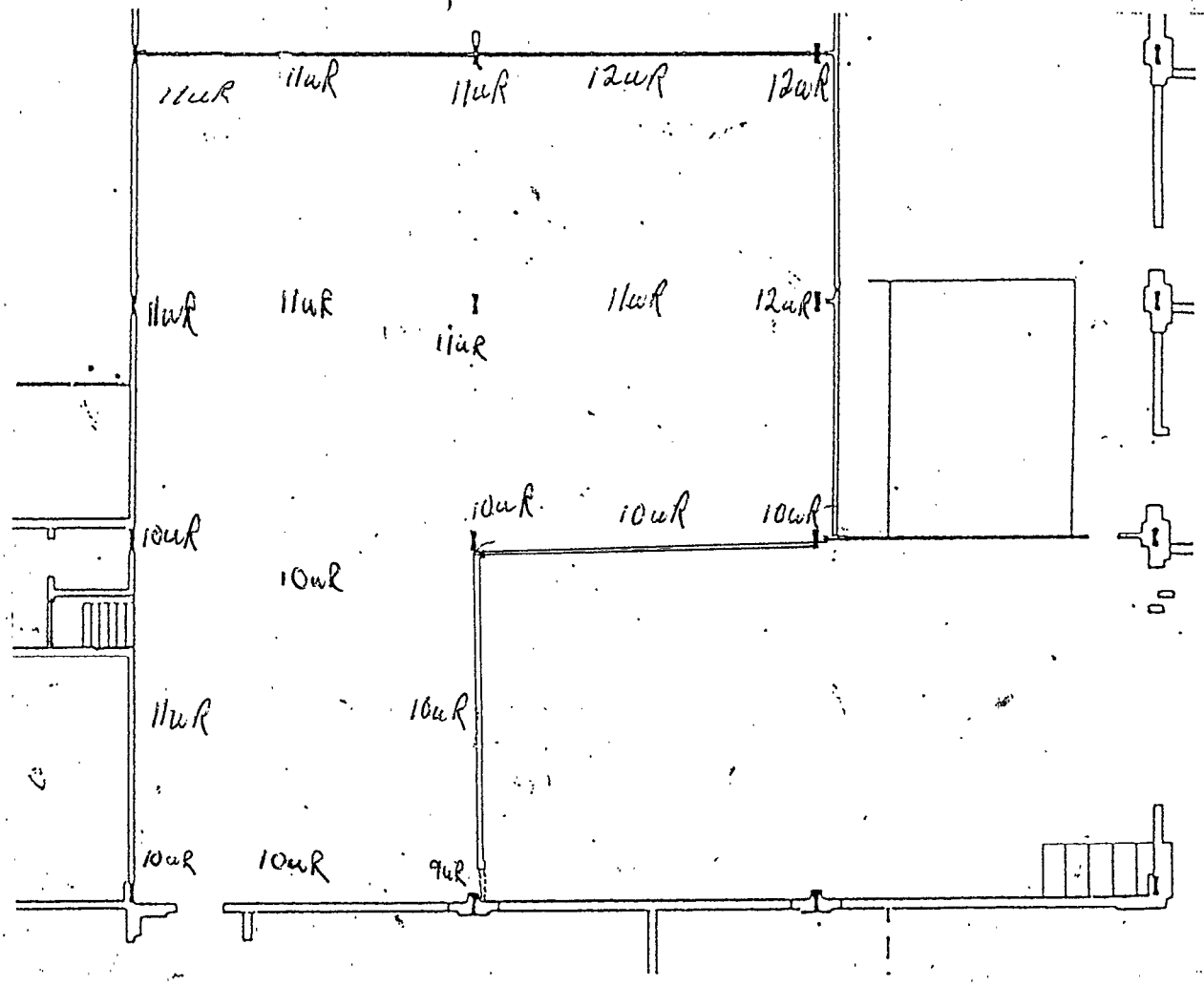
SURVEY01.XLS

ION TECHNOLOGY, INC.
640 Maple Ave
Saratoga Springs, NY
(518) 584-0166

RADIOLOGICAL SURVEY

Project: PRAXAIR BLDG 14
Area: 14

Date/Time 1-22-98	Tech D. PITMAN	Instrument / sn 2221 / 86313	
Location/ Purpose Area 14 NORTH		Survey # 1165	RWP# N/A
Verification Rad Survey			



Loc	Type	Description	Gross	α dpm	Gross	β dpm	Loc	Type	Description	Gross	α dpm	Gross	β dpm

Type:s = smearable, dp = direct probe

Comments: All readings at waste High

Scalar S/N		BKD	EFF	MDA
CT=	DATE α:			
Tech	β:			

Review: [signature]

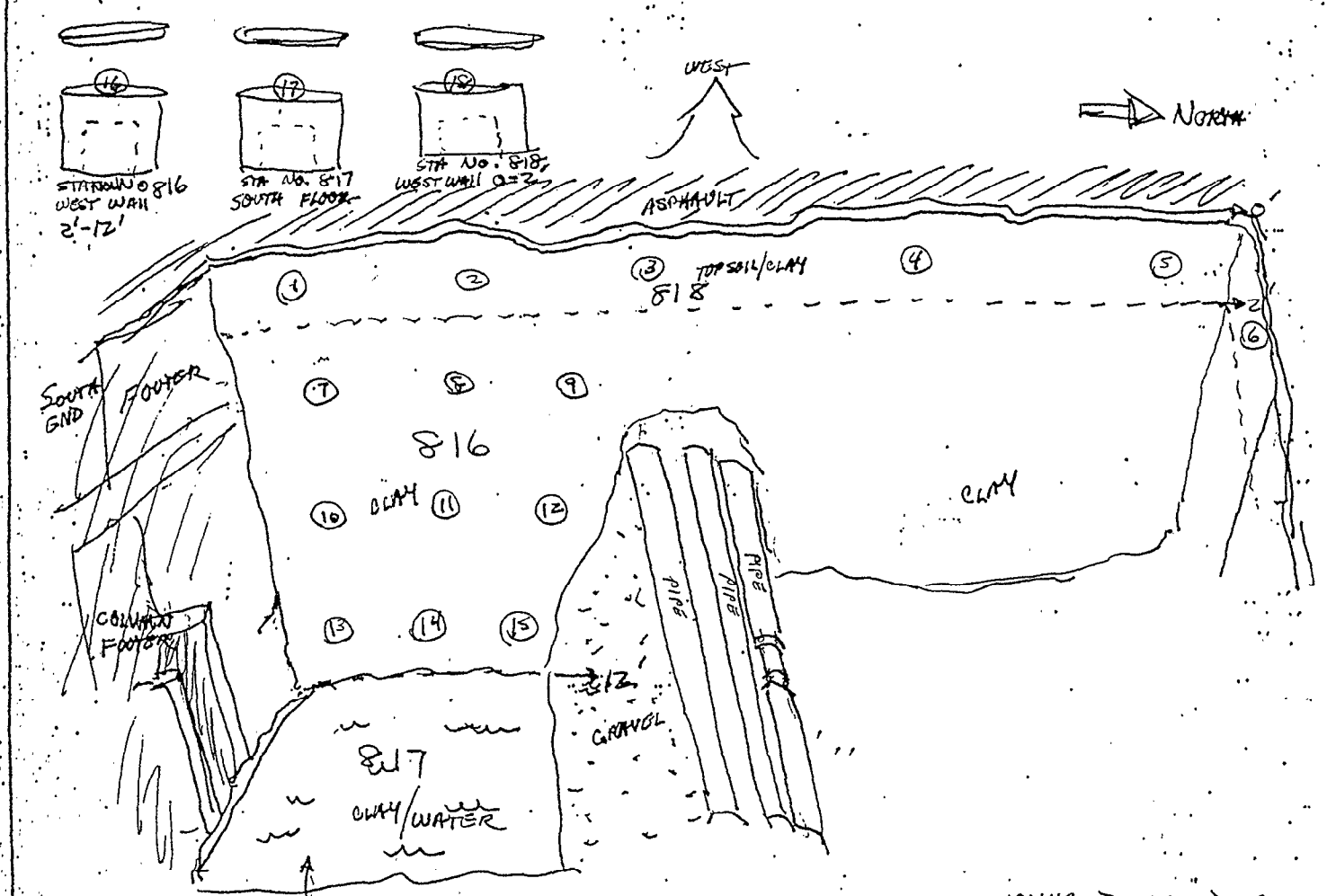
Encl 3.3 to HSP 210

ION TECHNOLOGY, INC.
640 Maple Ave
Saratoga Springs, NY
(518) 584-0166

RADIOLOGICAL SURVEY

Project: PRAHAR BLDG 14
Area: 21

Date/Time 1-22-98 / 2230	Tech C. HAMAN / [illegible]	Instrument / sn L2221 / 87448 L49.9 / 048072 CEF = 0.20 BKGD = 45 cpm
Location/ Purpose AREA 21 WEST TANK PIT / PRE-SAMPLE SURVEY		Survey # 1179 RWP# 08
		N/A



Loc.	Type	Description	Gross	α dpm	Gross	β dpm	Loc	Type	Description	Gross	α dpm	Gross	β dpm
1	DP	SAMPLE LOCATION SOIL - 0 - 2' DEPTH			480	14032	10	DP	SAMPLE LOCATION SOIL 2'-12' DEPTH			70	77
2				A	220	5645	11				A	120	23
3					160	3710	12					110	20
4			N		350	9839	13			N		80	10
5					270	7285	14					120	23
6					310	8215	15					100	17
7	DP	SAMPLE LOCATION SOILY 2'-12' DEPTH		A	80	1085	16	DP	TOP OF SAMPLE		A	90	13
8			N		150	3255	17			N		80	10
9					210	5115	18					265	6

Type: s = smearable, dp = direct probe, ○ = SURVEY LOCATION / SAMPLE

Scalar S/N		BKD	EFF / MDA
CT= DATE	α:		
Tech	β:		

1-22-98 LL
~~Comments:~~ LOCATION
N/A

Review: [signature]

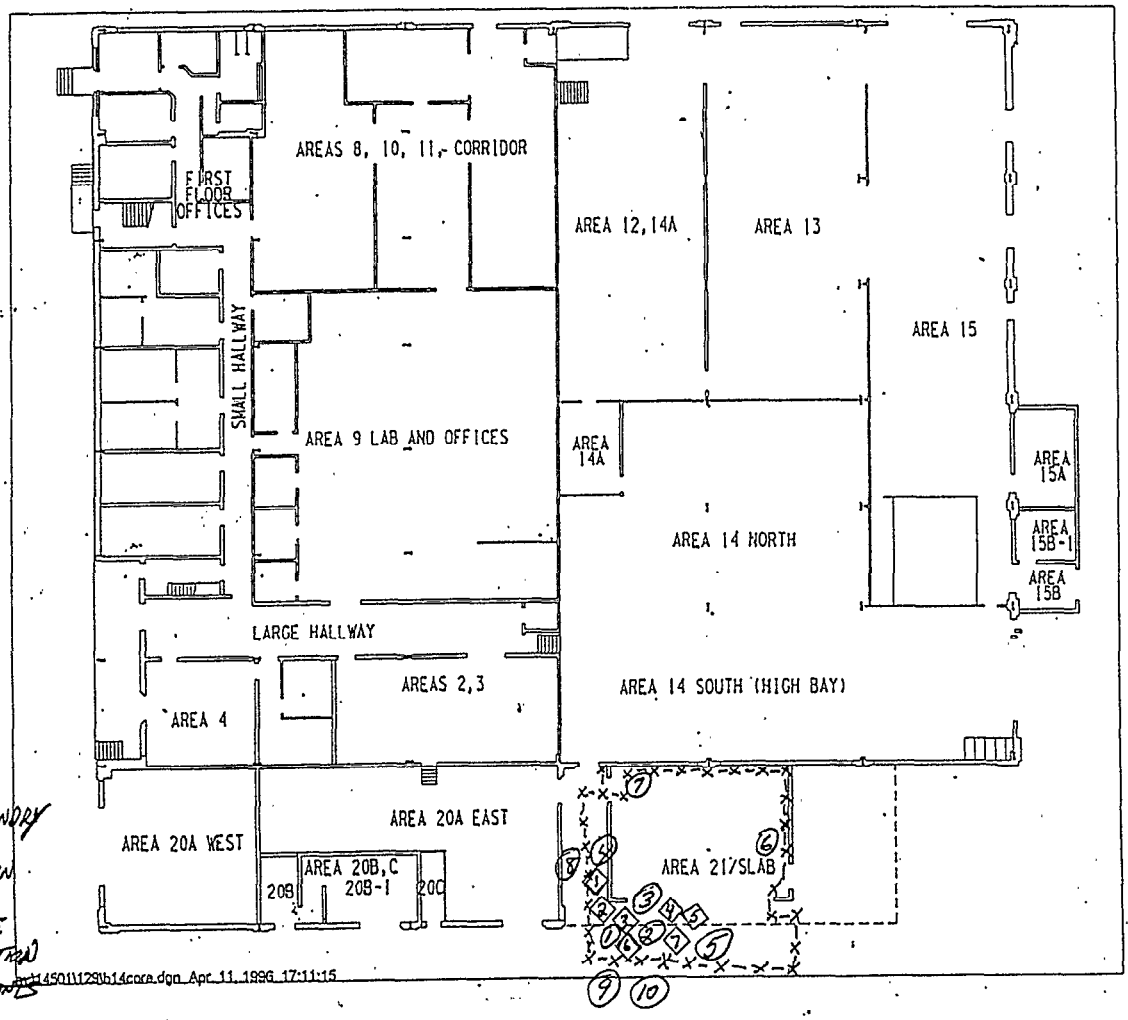
Encl 3.3 to HSP 210

ION TECHNOLOGY, INC.
640 Maple Ave
Saratoga Springs, NY
(518) 584-0166

RADIOLOGICAL SURVEY

Project: PRAX AIR SITE
Area: 21

Date/Time 1-29-98	Tech William W. [signature]	Instrument / sn L2221 # 86313 W/44-9 # 048267 CAL DATE: 12-29-97
Location/ Purpose PRAXAIR SITE B14 AREA 21		Survey # 1187 EFF. = .20 BKGD = 45 cpm BY RWP# 08
DAILY - PRE COLLAPSE OF RAD ZONE @ S.W. AREA		



KEY:
X-X-X = RAD BOUNDRY
(#) = SWIPE LOCATION
(#) = DIRECT PROBE READING LOCATION
(BY) ~~GROSS COUNTS~~

Loc.	Type	Description	Gross	α dpm	Gross	β dpm	Loc	Type	Description	Gross	α dpm	Gross	β dpm
1	S	SEE ABOVE	0	-1	66	21	10	S	SEE ABOVE	2	6	76	57
2			0	-1	51	-32			N A				
3			0	-1	59	-4	1	D.P.	SEE ABOVE			48	97
4			2	6	52	-28	2					56	354
5			0	-1	69	32	3					64	613
6			0	-1	47	-46	4			N		51	194
7			1	3	67	25	5				A	73	903
8			0	-1	56	-14	6					47	~~64~~ 6
9			0	-1	64	14	7					59	45

Type: s = smearable, dp = direct probe

Comments:

		BKD	EFF	MDA
Scalar S/N L2929 # 91234				
CT= 1 min. DATE 1-29-98	α:	42/240 = .18	.33	14
Tech William W. [signature]	β:	14413/240 = 60	.28	138

Review: [signature]

Encl 3.3 to HSP 210

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

Survey # 1246

EAST WL
changed to wall grids

Survey Date: 3-2-98 1500
Location: PROXAIR SITE B14 14N. WALL & FLOOR INTERFACE
Description: VERIFICATION SURVEY
GRIDS: A-18 THRU J-18

	α alpha	βγ beta-gamma
Instrument Model & s/n:	ESP-1 #93027	L2221 #86308
Detector Model, & s/n:	43-5 #088097	44-9 #37683
Calibration Date:	1-30-98	2-7-98
Efficiency [Tc99] [SY90] [Th230]	.12	.29
Detector Area (CM2)	50	15.5

RP Technician: W

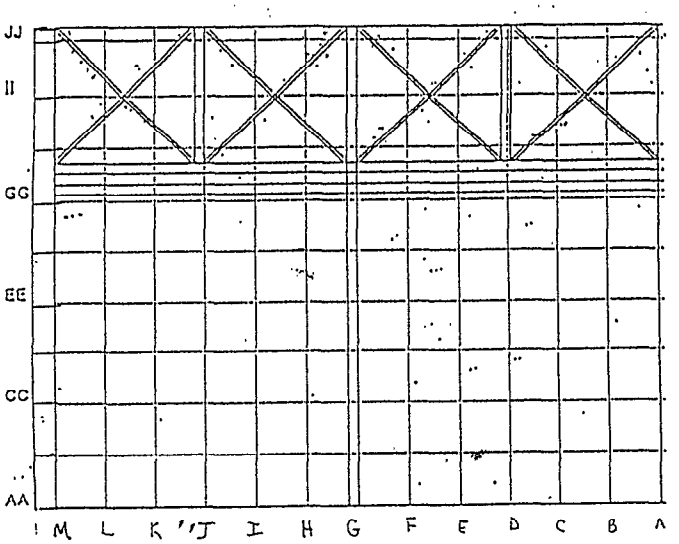
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	α alpha	βγ beta-gamma
TOTAL BACKGROUND COUNTS	0 CPM α	53 CPM βγ
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

Insert area map or sketch below

#	GRID	DESCRIPTION (ADD AA TO GRID ID'S)	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
	A-18	A SEE GRID MAP	0	103
		B	6	146
		C	6	122
		D	3	96
		E	2	181
	B-18	A		124
		B		133
		C		97
		D		88
		E	N	106
	C-18	A	A	151
		B		136
		C		142
		D		103
		E		85
	D-18	A	2	136
		B	1	147
		C	4	116
		D	2	122
		E	1	89
	E-18	A		~~93~~ N/A
		B		
		C		N
		D		A
		E		
	F-18	A		93
		B		84
		C	N	191
		D	A	174
		E		156
	G-18	A		94
		B		176
		C		124
		D		112
		E		115
	H-18	A	2	127
		B	2	133
		C	1	151
		D	4	142
		E	3	154
	I-18	A		108
		B		114
		C		126
		D		120
		E	N	140
	J-18	A	A	81
		B		76
		C		109
		D		95
		E		136

AREA 14 NORTH (EAST WALL)



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1247

EAST WALL

Survey Date: 3/2/98 1500
Location: PRAXAIR SITE B-14 14N. WALL & FLOOR INTERFACE
Description: VERIFICATION SURVEY
GRIDS: K-18 THRU M-18

	α alpha	βγ beta-gamma
Instrument Model & s/n:	ESP-1 #03027	L2221 #26308
Detector Model & s/n:	43-5 #088697	44-9 #37683
Calibration Date:	1-30-98	2-2-98
Efficiency [Tc99] [SY90] [Th230]	.12	.29
Detector Area (CM2)	50	15.5

RP Technician: W

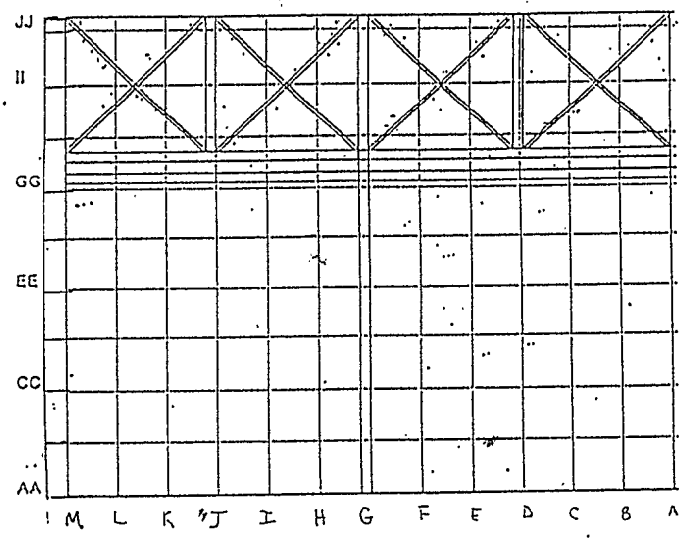
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	α alpha	βγ beta-gamma
TOTAL BACKGROUND COUNTS	0 cpm α	53 cpm βγ
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

#	GRID	DESCRIPTION	α alpha GROSS COUNTS	βγ beta-gamma GROSS COUNTS
	K-18	A SEE GRID MAP	1	89
		B	2	103
		C	4	160
		D	3	148
		E	1	152
	L-18	A		101
		B		116
		C	N	138
		D	A	133
		E		149
	M-18	A	1	102
		B	1	78
		C	3	106
		D	6	123
		E	3	118
		N/A		

Insert area map or sketch below

AREA 14 NORTH (EAST WALL)



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1248

CHANGED TO WALL GRIDS

Survey Date: 3-2-98
Location: Bldg 14, Area 14 North - North Floor & Wall Interface
Description: Verification

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
Instrument Model & s/n:	E3P/1/3551	2221/86314
Detector Model & s/n:	43-5/88097	44-9/63A
Calibration Date:	1-30-98	1-28-98
Efficiency [Tc99] [SY90] [Th230]	0.12	
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	65
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

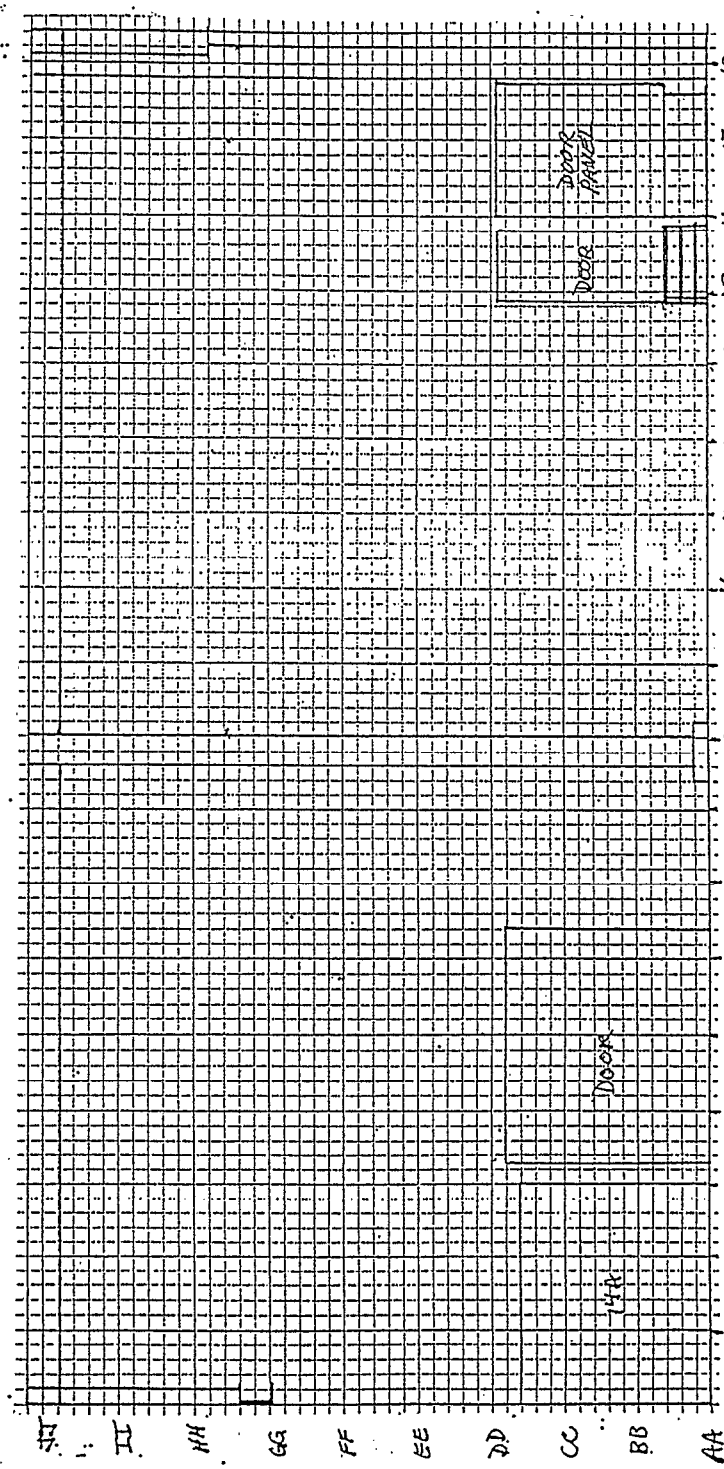
RP Technician: D. PITMAN

ADD AA TO ALL AK

	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A	M/0	Concrete Floor		55
B				50
C				76
D				108
E				72
A	M/1			59
B				63
C				80
D				88
E				43
A	M/2			51
B				56
C				89
D				63
E				83
A	M/3		0	55
B			9	64
C			6	39
D			5	77
E			4	84
E		DUPLICATE	8	92
A	M/4	Concrete Floor		68
B				134
C				152
D				82
E				64
A	M/5			80
B				67
C				83
D				75
E				76
A	M/6			59
B				80
C				61
D				80
E				75
A	M/7		1	83
B			2	104
C			4	72
D			16	84
E			3	100
E		DUPLICATE	6	91
A	M/8	Concrete Floor		72
B				36
C				128
D				76
E				68

AREA 14 NORTH
NORTH WALL

Insert area map or sketch below



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY #1249

CHANGED TO WALL GRIDS

Survey Date: 3-2-98
Location: BLDG 14, Area 14 NORTH - NORTH FLOOR & WALL INTERFACE
Description: VENTILATION

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

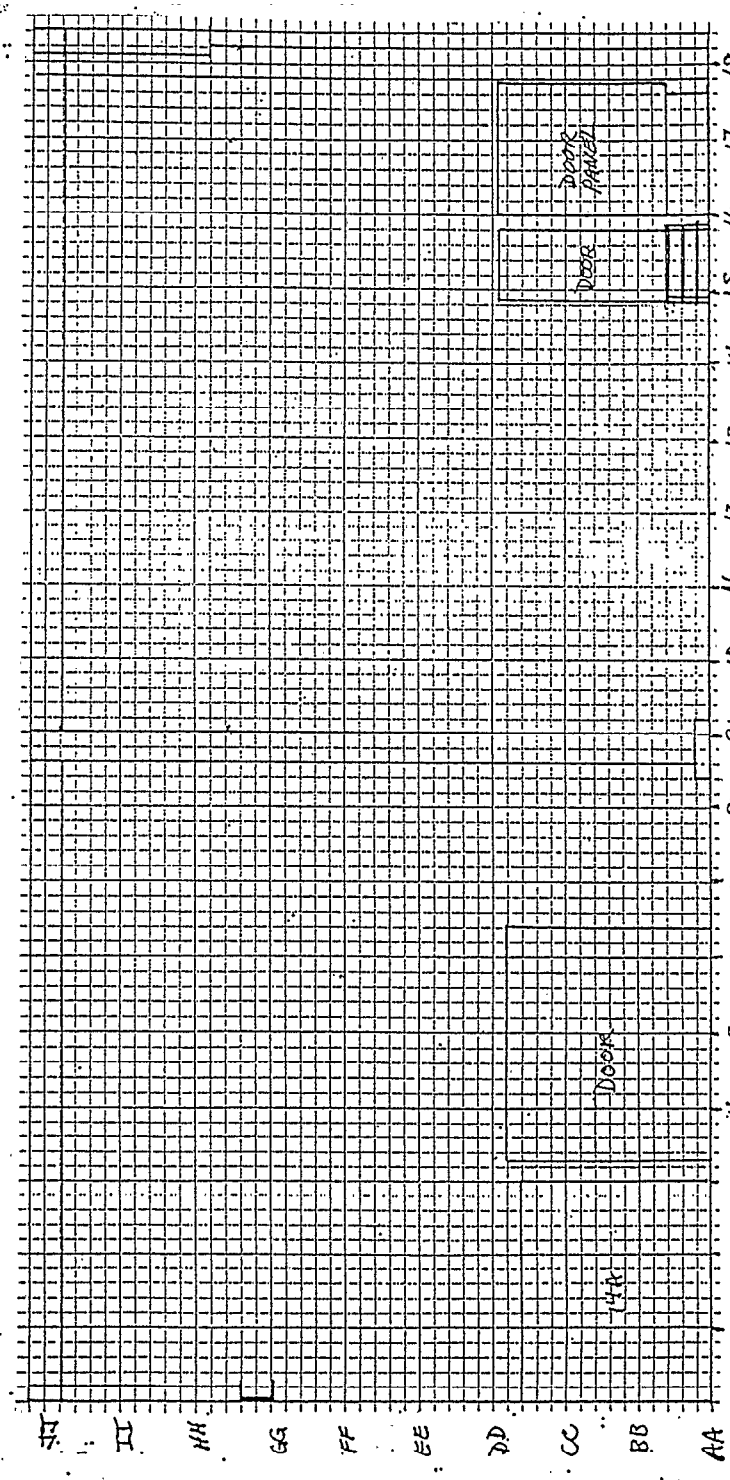
	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/5537	2221/56314
Detector Model & s/n:	43-5/80097	44-9/63A
Calibration Date:	1-30-98	1-28-98
Efficiency [Tc99] [SY90] [Th230]	0.12	0.26
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	65
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: D. PITMAN

	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A	M/9	CONCRETE FLOOR		109
B				89
C				57
D				137
E				124
A	M/10			83
B				81
C				137
D				100
E				96
A	M/11		0	104
B			3	79
C			2	156
D			1	63
E			1	48
E		DUPLICATE	2	63
A	M/12	CONCRETE FLOOR		67
B				92
C				52
D				71
E				66
A	M/13			99
B				95
C				77
D				64
E				81
A	M/14			72
B				67
C				121
D				117
E	~~M/15~~			109
A	M/15		1	71
B				67
C				80
D				68
E				80
E		DUPLICATE		96
A	M/16	CONCRETE FLOOR		78
B				159
C				88
D				69
E				128
A	M/17			91
B				151
C				55
D				52
E	~~M/18~~			110
A	M/18			40
B				49
C				32
D				43
E				68

AREA 14 NORTH NORTH WALL



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1250

Survey Date: 3-3-98
Location: BLDG 14, Area 14N, WEST Knee WALL
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP/3027	2221/86308
Detector Model & s/n:	43.5/[illegible]	44.9/37683
Calibration Date:	1-30-98	1-29-98
Efficiency [Tc99] [SY90] [Th230]	~~.0046~~ .096	0.29
Detector Area (CM2)	50	15.5

RP Technician: D. PITMAN

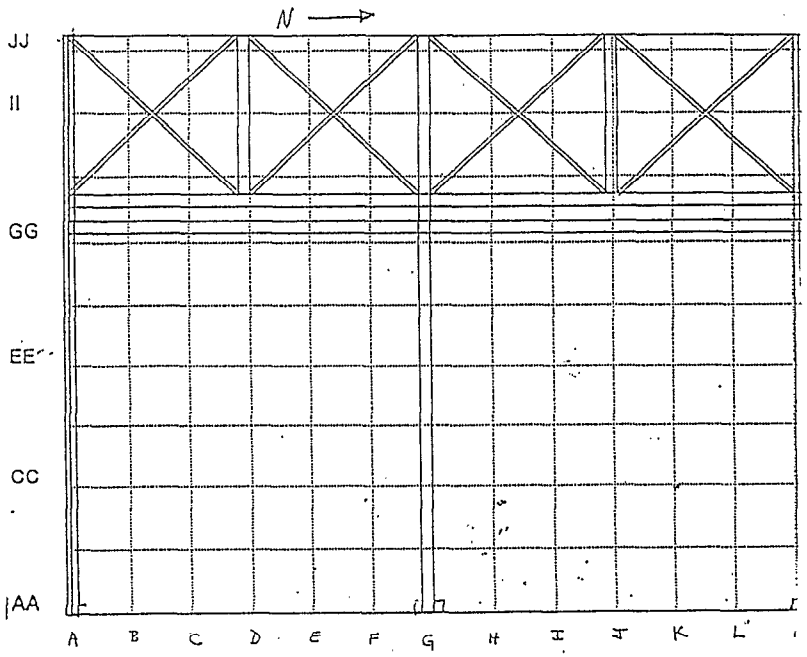
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	57
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

Insert area map or sketch below

#	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A	-AA/O/H	Knee WALL		64
B				84
C				87
D				79
E				75
A	-AA/O/I			77
B				70
C				75
D				79
E				68
A	-AA/O/J	JO-(-AA)		52
B				59
C				56
D				72
E				89
A	-AA/O/K	KO-(-AA)	4	100
B			2	68
C			3	100
D			4	120
E			5	99
E		DUPLICATE	1	131
A	-AA/O/L	Knee WALL		91
B				83
C				80
D				115
E				68

AREA 14 NORTH
WEST WALL



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

#1256

Survey Date: 2-26-98
Location: BLDG 14 Area 14 North - West Knee WALL
Description: Verification

	alpha	beta-gamma
Instrument Model & s/n:	ESP1/3027	2221/29648
Detector Model & s/n:	43-5/35097	44-9/48272
Calibration Date:	1-30-98	12-30-97
Efficiency (Tc99) (SY90) (Th230)	0.12	0.18 → .26
Detector Area (CM2)	50	15.5

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

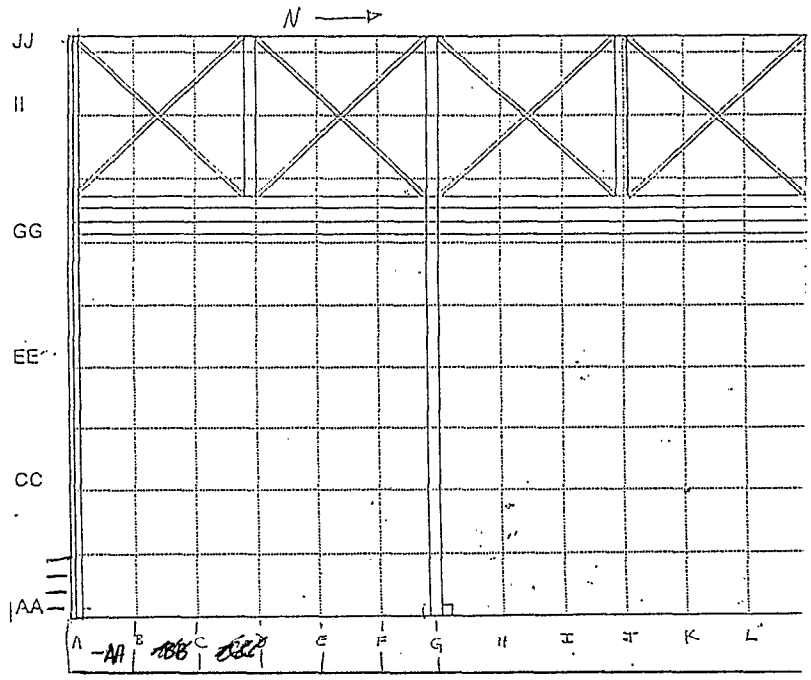
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	53
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: D. Pitman West Lower Knee wall

Insert area map or sketch below

#	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A	-AA/A/0	Vert wall		59
B		Vert wall		41
C		Horiz. Foot		87
D		Horiz. Foot		137
E		Vert wall		65
A	-AA/B/0	Vert wall		51
B		Vert. wall		54
C		Horiz. Foot		67
D		Horiz Foot		56
E		Vert wall		57
A	-AA/C/0	Vert wall		76
B		Vert wall		43
C		Horiz Foot		80
D		Horiz Foot		83
E		Vert wall		55
A	-AA/D/0	Vert wall	2	60
B		Vert wall	0	65
C		Horiz Foot	0	67
D		Horiz Foot	1	85
E		Vert wall	2	72
E		Duplicate	1	84
A	-AA/E/0	Vert wall		68
B		Vert wall		52
C		Horiz Foot		100
D		Horiz Foot		97
E		Vert wall		68
A	-AA/F/0	Vert wall		63
B		Vert wall		48
C		Horiz Foot		63
D		Horiz Foot		87
E		Vert wall		76
A	-AA/G/0	Vert wall		52
B		Vert wall		50
C		Horiz wall		55
D		Horiz wall		109
E		Vert wall		95
A	-AA/H/0	Vert wall	0	86
B		Vert wall	1	87
C		Horiz Foot	0	110
D		Horiz Foot	0	103
E		Vert wall	0	69
E		Duplicate	1	77
A	-AA/I/0	Vert wall		
B		Vert wall		
C		Horiz Foot		
D		Horiz Foot		
E		Vert wall		
A	-AA/J/0	Vert wall		
B		Vert wall		
		Horiz. Foot		
		Horiz. Foot		
		Vert wall		

AREA 14 NORTH



NOTE -AA DENOTES 1ST GRID UNDER grade/slab

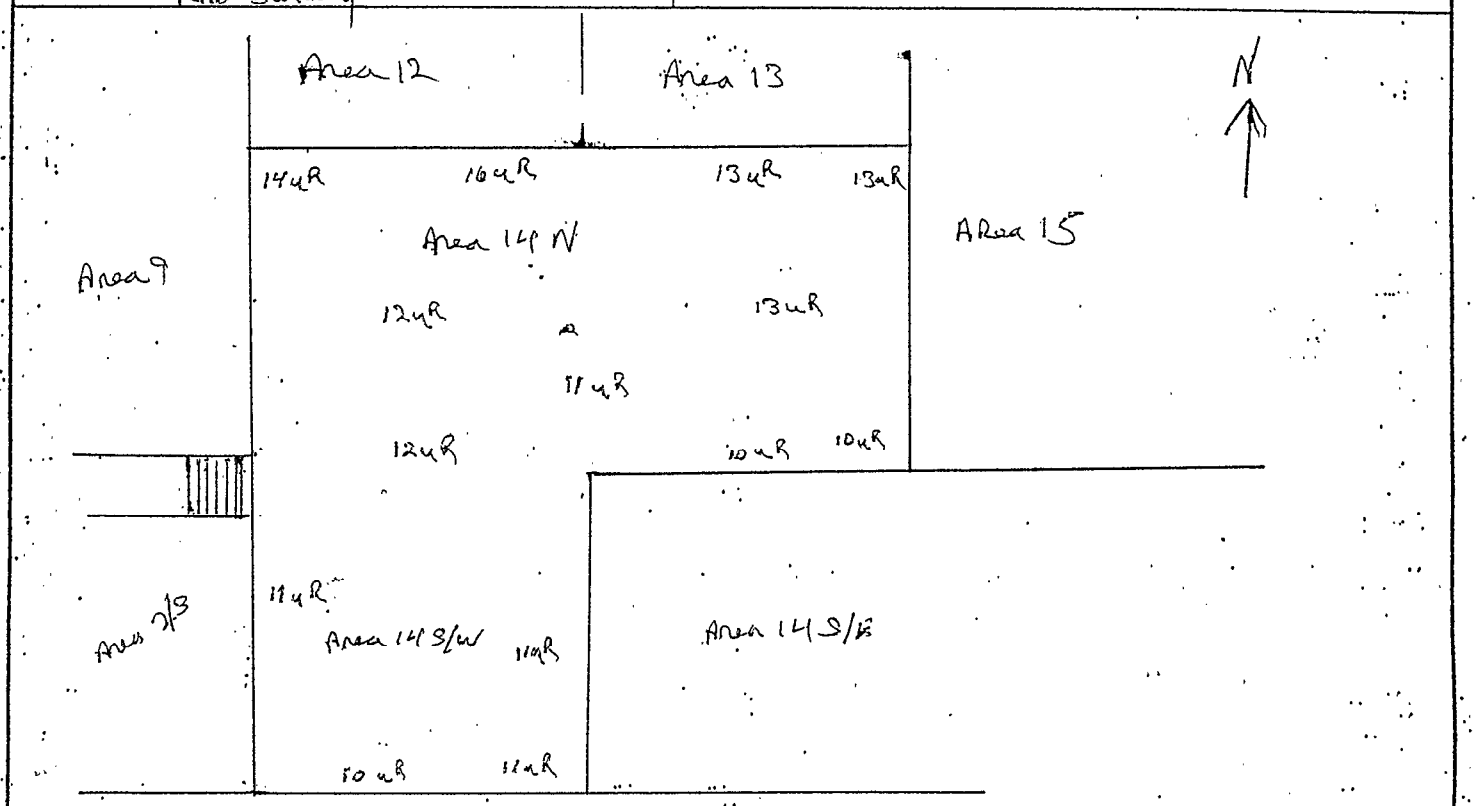
SURVEY01.XLS

ION TECHNOLOGY, INC.
640 Maple Ave
Saratoga Springs, NY
(518) 584-0166

RADIOLOGICAL SURVEY

Project: PRAXAIR
Area: BLDG 14

Date/Time 8-12-98	Tech D. POTMAN	Instrument / sn ~~278~~ M19 109994	
Location/ Purpose Area 14N, 14S-W		Survey # 1265	RWP# N/A
RAD survey			



NOTE All Dose RATES Recorded IN uR/hr @ waist Level and Represent General Area Readings.

Loc.	Type	Description	Gross	α dpm	Gross	β dpm	Loc	Type	Description	Gross	α dpm	Gross	β dpm

Type:s = smearable, dp = direct probe	Scalar S/N	BKD	EFF	MDA
Comments:	CT= DATE α:			
	Tech β:			

Review: _____

Encl 3.3 to HSP 210

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

#1266

Survey Date: 3-5-98
Location: Bldg 14, Area 14 South
Description: Verification

POST IVC VERIFICATION TO COMPLETE 14N/5N

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

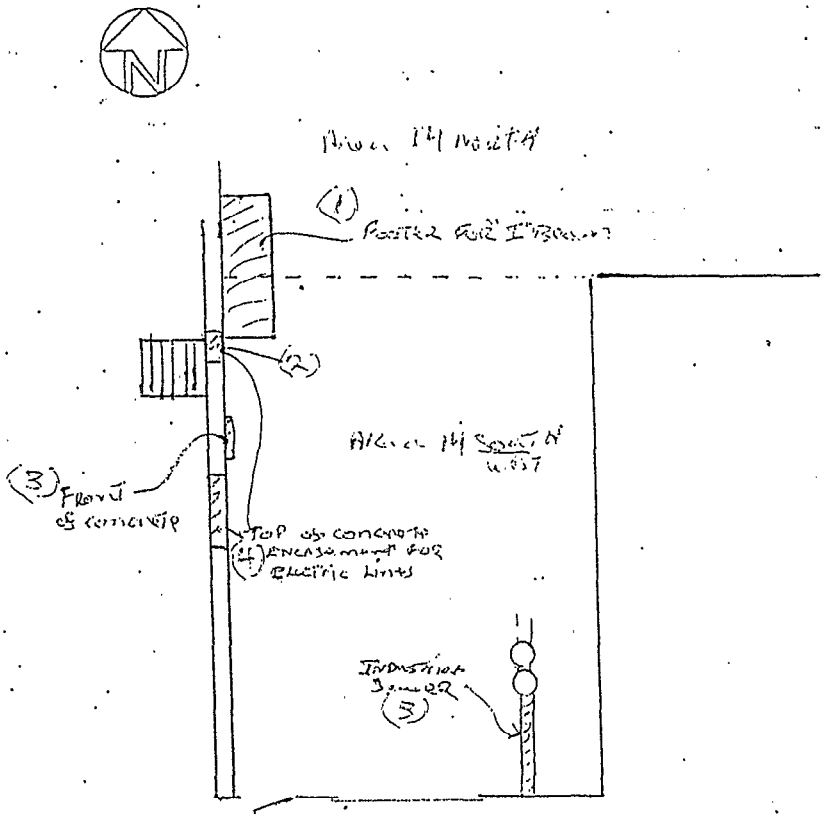
	alpha	beta-gamma
Instrument Model & s/n:	[illegible]	[illegible]
Detector Model & s/n:	[illegible]	[illegible]
Calibration Date:	1-30-98	1-25-98
Efficiency [Tc99] [SY90] [Th230]	0.096	0.24
Detector Area (CM2)	~~0.096~~ 50	~~0.24~~ 15.3

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	1	53
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: D. Pittman

	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A	1	I"Beam Footer	3	55
B			0	62
C			1	75
D			1	68
E			2	59
A	2	Top of concrete		70
B				85
C				77
D				76
E				90
A	3	Front of concrete		118
B				99
C				120
D				115
E				116
A	4	Top of concrete		48
B				56
C				38
D				45
E				50
A	5	Industr. Sewer		104
B				95
C				108
D				107
E				165

Insert area map or sketch below



Review and Approved

PAGE

SURVEY01.XLS

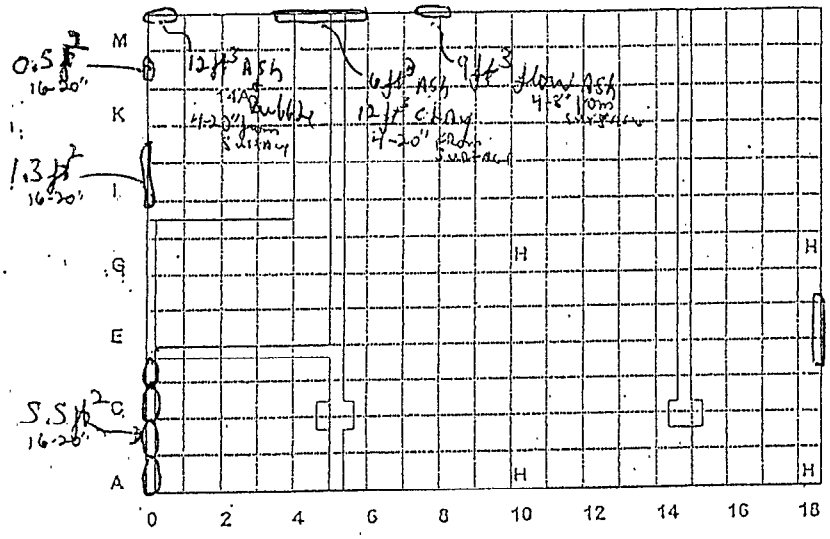
ION TECHNOLOGY, INC.
640 Maple Ave
Saratoga Springs, NY
(518) 584-0166

RADIOLOGICAL SURVEY

Project: PRAXAIR
Area: BLDG 14

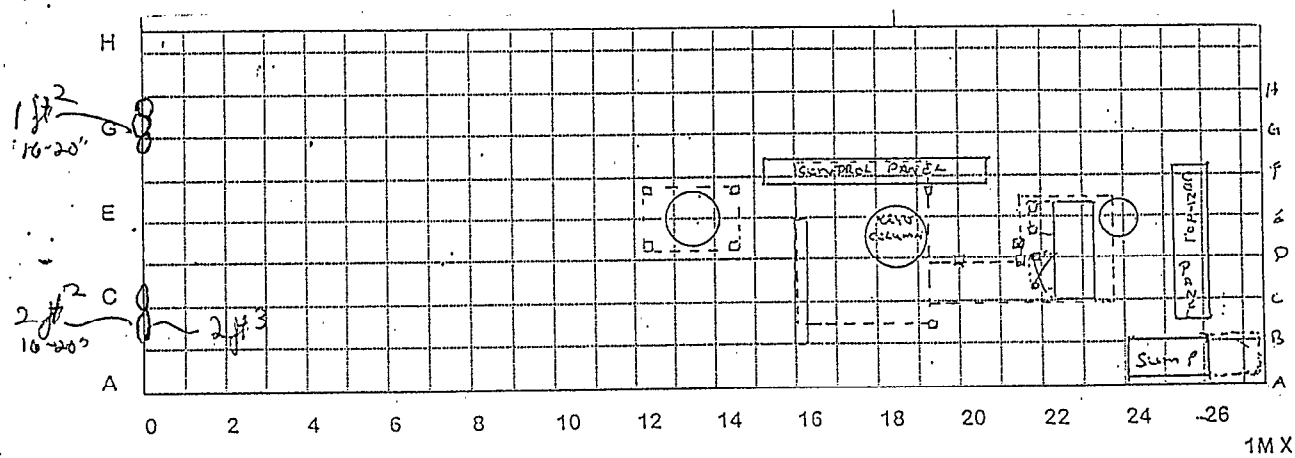
Date/Time 3-5-98	Tech D. PITMAN	Instrument / sn 2221/89648	
Location/ Purpose Area 14 NORTH; 14 SOUTH-WOST Verification		Survey # 1267	RWP# 02

AREA 14 NORTH



FLOOR-SubSurface Identification of contaminated areas AFTER Remediation Effort...

AREA 14 SOUTH



1M X 1M GRID

Loc.	Type	Description	Gross	α dpm	Gross	β dpm
AA/E15	DP	14N CONCRETE UNDER WALL			2-300	600-985
AA/M9		BLACK FILL			2-1600	600-5985 985-
AA/M3		BLACK FILL/CLAY			300-4K	15215
AA/M0		CONCRETE/RUBBLE			400-3100	1364-11754
AA/L0		CONCRETE FOOTING			2-300	600-985
AA/E0					350-1500	1177-5600
AA/D0		CONCRETE FOOTING + CONDUIT			900-5000	3292-19062
AA/C0		CONCRETE + CONDUIT			700-3100	3292-11754
AA/B0					600-2000	2138-7523

Loc	Type	Description	Gross	α dpm	Gross	β dpm
AA/A0	DP	14N CONCRETE + CONDUIT			6-1400	2138-5215
AA/B0	DP	14S CONCRETE, SOIL + CONDUIT			2-300	600-985
AA/C0	DP	14S CONCRETE/SOIL			3-500	985-1754
AA/G0	DP	14S KNEE WALL BY STEPS			400	7369
AA/G0	DP	14S KNEE WALL/FOOT INTERSECT FOOTING, FACE			6000	2138
AA/G0	DP	14S			250	792

Type:s = smearable, dp = direct probe

Comments:

Scalar S/N 89648	BKD	EFF	MDA
CT= 1 DATE 3-5-98 α:	44	026	1.29
Tech D. PITMAN β:			

Review:

Encl 3.3 to HSP 210

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

4109

Survey Date: 3-2-98
Location: BLDG 14, Area 14 NORTH - NORTH FLOOR
Description: Verification

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/3527	2221/86314
Detector Model & s/n:	43-5/80097	44-9/63A
Calibration Date:	1-30-98	1-28-98
Efficiency [Tc99] [SY90] [Th230]	0.12	.26
Detector Area (CM2)	50	15.5

RP Technician: D. Pittman

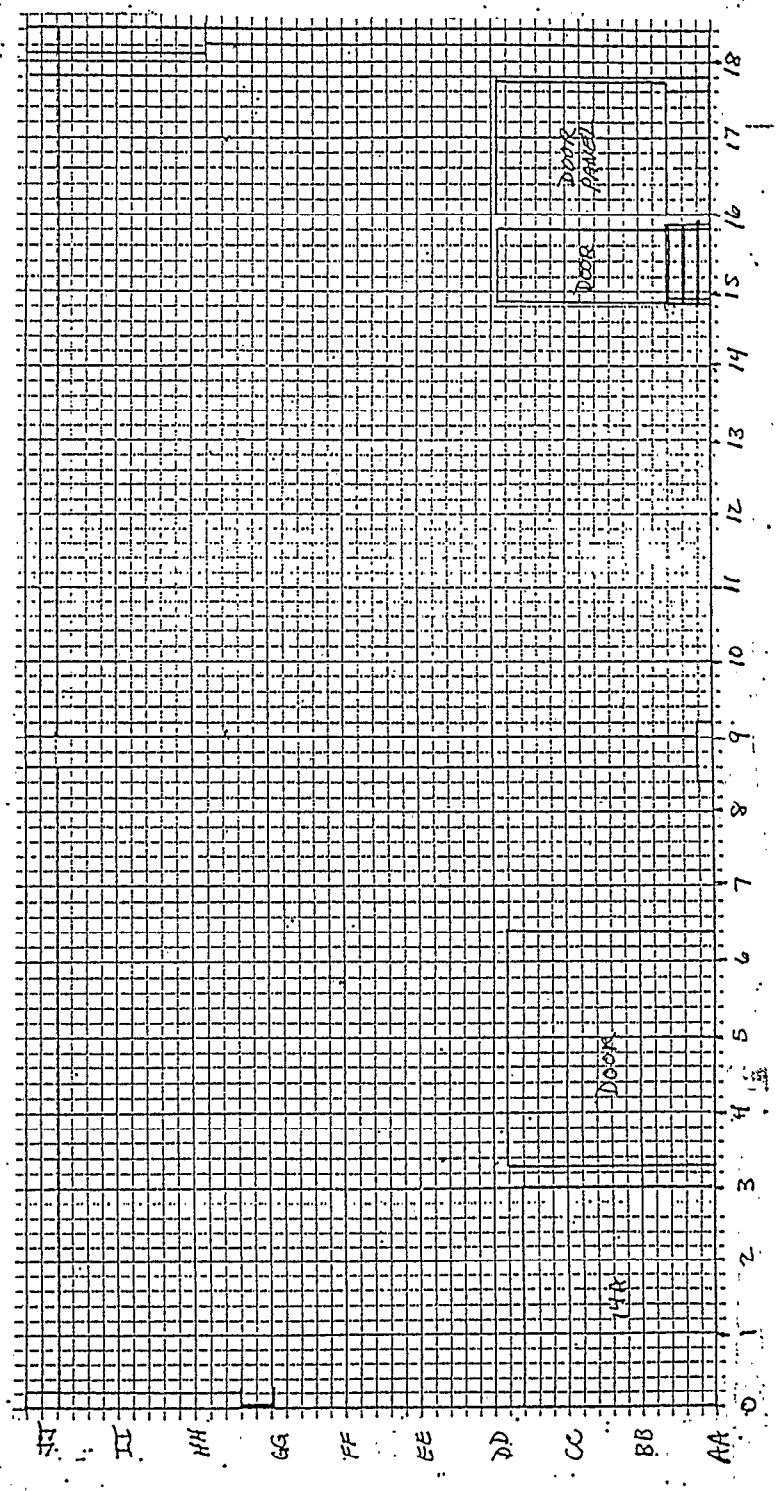
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	65
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A	M/9	Concrete Floor		109
B				89
C				57
D				137
E				124
A	M/10			83
B				81
C				137
D				100
E				96
A	M/11		0	104
B			3	79
C			2	156
D			1	63
E			1	48
E		Duplicate	2	63
A	M/12	Concrete Floor		67
B				92
C				52
D				71
E				66
A	M/13			99
B				95
C				77
D				64
E				81
A	M/14			72
B				67
C				121
D				117
E	~~M/15~~			
A	M/16			
B				
C				
D				
E				
E		Duplicate		
A	M/11	Concrete Floor		78
B				
C				
D				
E				
A	M/17			91
B				151
C				55
D				52
E	~~M/18~~			110
A	M/18			40
B				49
C				33
D				43
E				68

AREA 14 NORTH NORTH WALL

Insert area map or sketch below



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ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

#4110

Survey Date: 3-2-98
Location: Bldg 14, Area 14 North - North Floor/Wall Interface
Description: Verification

RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

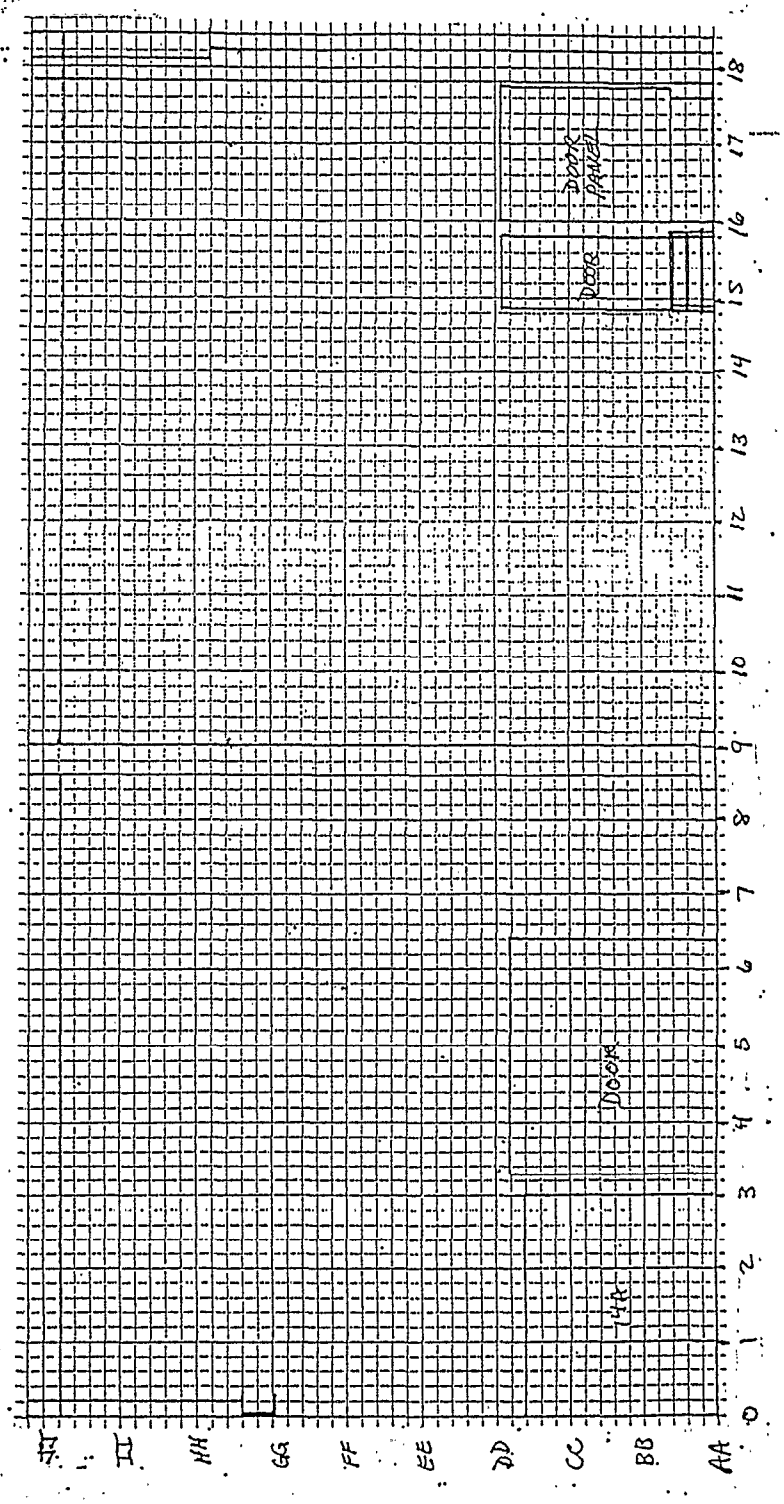
	alpha	beta-gamma
Instrument Model & s/n:	ESP/1/3057	2221/86314
Detector Model & s/n:	43-5/88097	44-9/63A
Calibration Date:	1-30-98	1-28-98
Efficiency [Tc99] [SY90] [Th230]	0.12	.26
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	65
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: D. Pitman

	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A	M/0	Concrete Floor		
B				
C				
D				
E				
A	M/1			59
B				63
C				80
D				88
E				43
A	M/2			51
B				56
C				89
D				63
E				83
A	M/3		0	55
B			9	64
C			6	59
D			5	77
E			4	84
E		DUPLICATE	8	92
A	M/4	Concrete Floor		68
B				134
C				152
D				82
E				64
A	M/5			80
B				67
C				83
D				75
E				76
A	M/6			59
B				80
C				61
D				80
E				75
A	M/7		1	83
B			2	104
C			4	72
D			16	84
E			3	100
E		DUPLICATE	6	91
A	M/8	Concrete Floor		72
B				36
C				128
D				76
E				68

Insert area map or sketch below



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