APPENDIX C-8

VERIFICATION SURVEYS FOR AREA 9

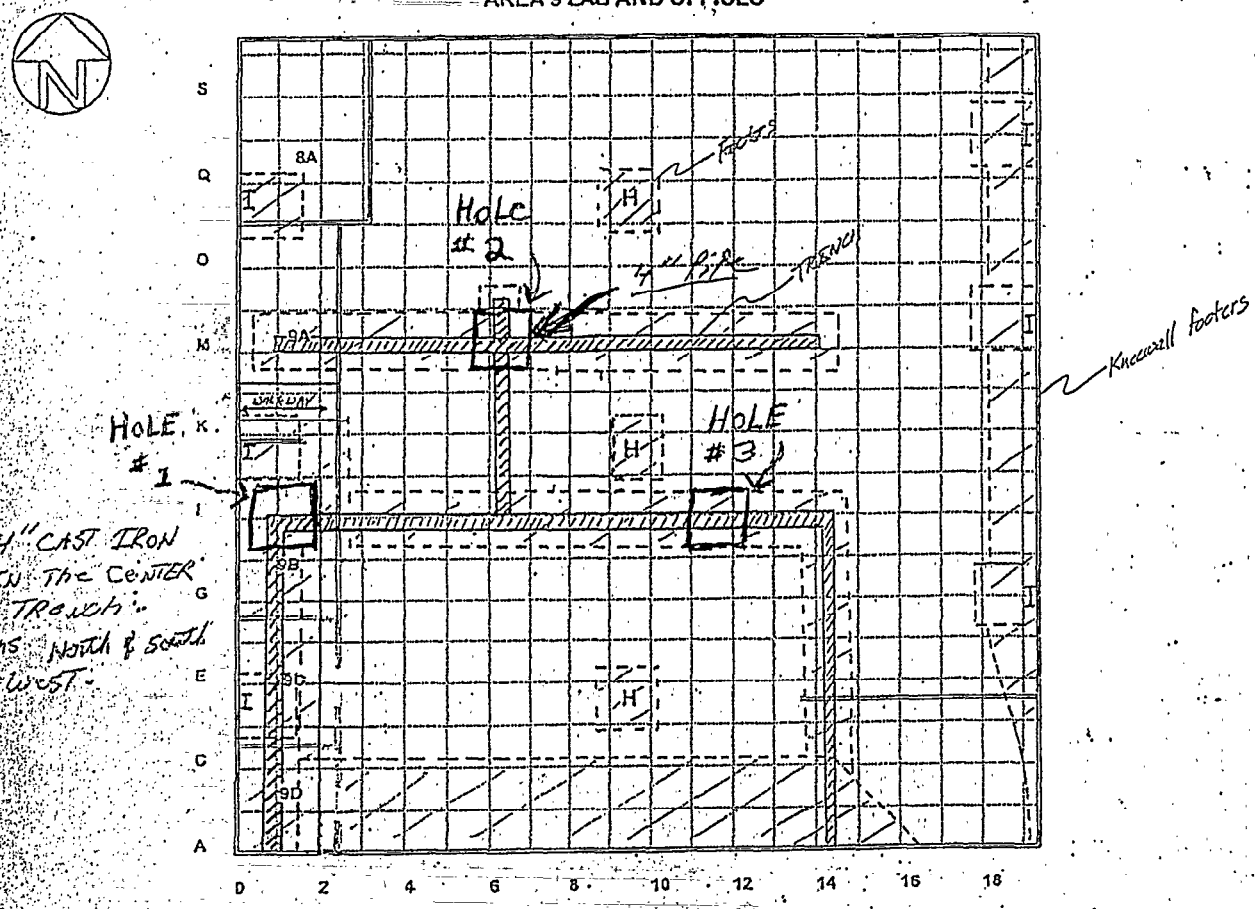
ION TECHNOLOGY, INC.
640 Maple Ave
Saratoga Springs, NY
(518) 584-0166

RADIOLOGICAL SURVEY

Project: Praxair
Area: AREA 9 LAB

Date/Time: 4-1-98 @ 2100	Tech: M. Sigo	Instrument / sn: Ludlum 2221 # 86314 / 44-9 # 069A
Location/ Purpose: AREA - 9 LAB:		Survey # 1291 RWP# 04
TRENCH DeLiNeATION		EFF. - 26% BKd = 63 cpm.

AREA 9 LAB AND OFFICES



1M x 1M GRID.

grid # HOLE #1 — 100 cm²

Loc:	Type	Description	Gross	α dpm	Gross	β dpm
H-0	D.P.	WEST SIDE of TRENCH			500	12,403
H-1	D.P.	EAST SIDE of TRENCH		N/A	900	22,326
J-0	D.P.	NORTH SIDE of TRENCH			1400	34,730
J-1	D.P.	NORTH SIDE of TRENCH			1300	32,250
H-1	D.P.	SOUTH SIDE of TRENCH			1400	34,730
H-0	D.P.	BOTTOM		~	500	12,403

grid # HOLE #2

Loc	Type	Description	Gross	α dpm	Gross	β
M-6	D.P.	NORTH SIDE of TRENCH		N/A	160	3
M-6	D.P.	SOUTH SIDE of TRENCH			120	2
M-6	D.P.	BOTTOM of TRENCH		~	120	2

Type: s = smearable, dp = direct probe

Comments: NOTE: All TRENCH HOLES HAVE A 4" Pipe IN THE CENTER. BOTTOMS ARE NOT ACCESSABLE.

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

Review:

#1418

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

Survey Date: 5-14-98
Location: BLDG 14, Area 9
Description: Ceiling

VERIFICATION

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

	alpha	beta-gamma
Instrument Model & s/n:	ESP1/3028	2224/89648
Detector Model & s/n:	43-65/88812	44-9/45272
Calibration Date:	8-22-97	12-30-97
Efficiency [Tc99] [SY90] [Th230]	14.8%	0.26%
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	2	39
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

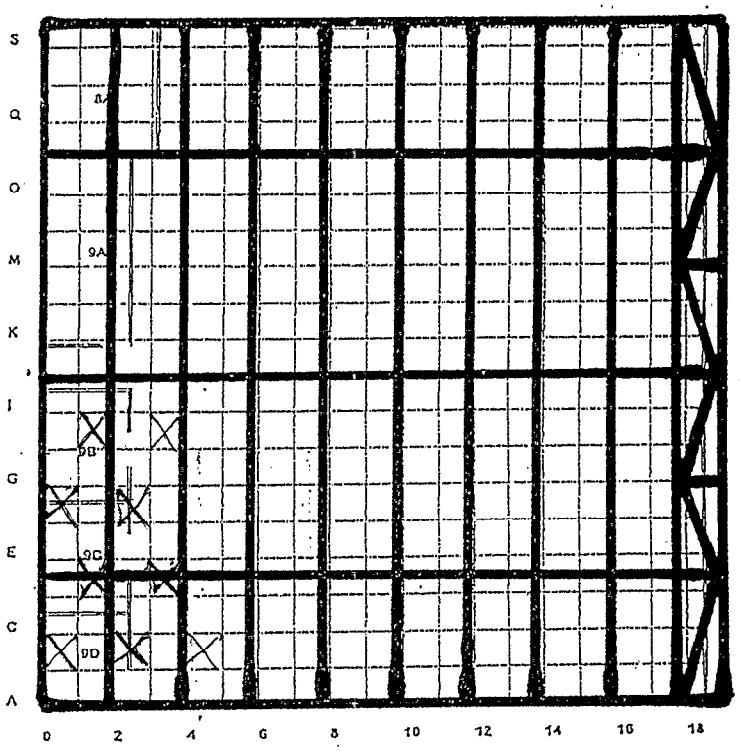
RP Technician: D. PITMAN

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	B-0	A	CEILING Beam		148
2		B	BEAM		119
3		C	Crete Plank		120
4		D	Crete Plank		141
5		E	CRETE PLANK		125
6	E-0	A	BEAM		75
7		B	BEAM		90
8		C	Crete PLANK		164
9		D	Crete PLANK		151
10		E	Crete PLANK		140
11	D-1	A	Crete PLANK		111
12		B	Beam		80
13		C	Beam		76
14		D	Crete PLANK		116
15		E	BEAM		104
16	H-1	A	Crete PLANK		128
17		B	Crete PLANK		133
18		C	Beam		76
19		D	Beam		107
20		E	Crete PLANK		112
21	B-2	A	Beam	4	67
22		B	Beam	2	64
23		C	Crete PLANK	0	145
24		D	Crete PLANK	1	150
25		E	Crete PLANK	3	137
26		E	DUPLICATE "	2	142
27	E-2	A	CEILING Beam		68
28		B	Beam		81
29		C	Crete PLANK		127
30		D	Crete PLANK		131
31		E	Crete PLANK		125
32	D-3	A	Crete PLANK		108
33		B	Beam		83
34		C	Beam		80
35		D	Crete PLANK		105
36		E	Beam		50
37	H-3	A	Crete PLANK		136
38		B	Crete PLANK		127
39		C	Beam		90
40		D	Beam		86
41		E	Crete PLANK		107
42	B-4	A	Beam	1	91
43		B	Beam	0	103
44		C	Crete Plank	2	120
45		D	Crete Plank	4	131
46		E	Crete Plank	0	135
47		E	DUPLICATE	1	127
48					
49					
50					

Insert area map or sketch below

I-BEAMS

AREA 9 LAB AND OFFICES



1M x 1M Gi

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1429

Survey Date: 5-12-98
Location: BLDG 14 AREA 9
Description: ceiling

VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	L2221 #86314
Detector Model & s/n:	43-65 #88912	44-9 #063A
Calibration Date:	8-22-97	1-28-98
Efficiency [Tc99] [SY90] [Th230]	.148	.26
Detector Area (CM2)	50	15.5

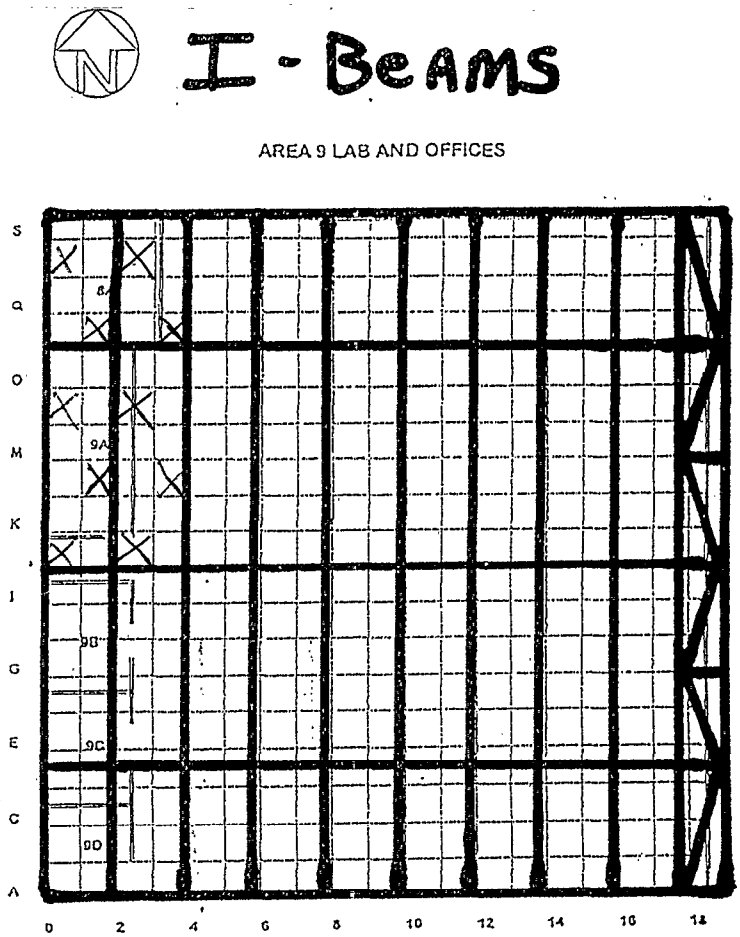
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scalar measurements

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

RP Technician: W.

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	R-0	A	CEILING I BEAM		~~149~~ 109
2		B	CEILING		149
3		C	STEEL		66
4		D	CEILING		174
5		E	CEILING		168
6	N-0	A	CEILING		183
7		B	I BEAM		71
8		C	PIPE		54
9		D	I BEAM		59
10		E	CEILING		166
11	J-0	A	I BEAM		83
12		B	I BEAM		107
13		C	CEILING		155
14		D	PIPE		111
15		E	ANGLE IRON		92
16	R-1	A	I BEAM		67
17		B	I BEAM		78
18		C	CEILING		191
19		D	PIPE		96
20		E	I BEAM		61
21	L-1	A	CEILING	6	143
22		B	I BEAM	1	94
23		C	STEEL	0	56
24		D	I BEAM	1	77
25		E	CEILING	7	139
26		E	DUPLICATE	8	151
27	R-2	A	CEILING CEILING		175
28		B	I BEAM		116
29		C	PIPE		123
30		D	I BEAM		68
31		E	CEILING		144
32	N-2	A	CEILING		157
33		B	I BEAM		88
34		C	PIPE		60
35		D	I BEAM		101
36		E	CEILING		168
37	J-2	A	CEILING		171
38		B	PIPE		53
39		C	I BEAM		104
40		D	STEEL		69
41		E	CEILING		168
42	R-3	A	STEEL		55
43		B	ANGLE IRON		73
44		C	CEILING		144
45		D	I BEAM		68
46		E	CEILING		196
47	L-3	A	PIPE	1	59
48		B	I BEAM	0	83
49		C	CEILING	7	153
50		D	I BEAM	1	66
		E	STEEL	1	56
		E	DUPLICATE	1	61

Insert area map or sketch below



1M x 1M GI

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1430

Survey Date: 5-14-98
Location: BLDG 14 AREA 9
Description: CEILING

VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESH03028 ~~1-28-98~~ LUAL #86314	
Detector Model & s/n:	43-65 #089 ~~LUAL #86314~~ 44.9 #0634	
Calibration Date:	8-22-97	1-28-98
Efficiency [Tc99] [SY90] [Th230]	.148	.26
Detector Area (CM2)	50	15.5

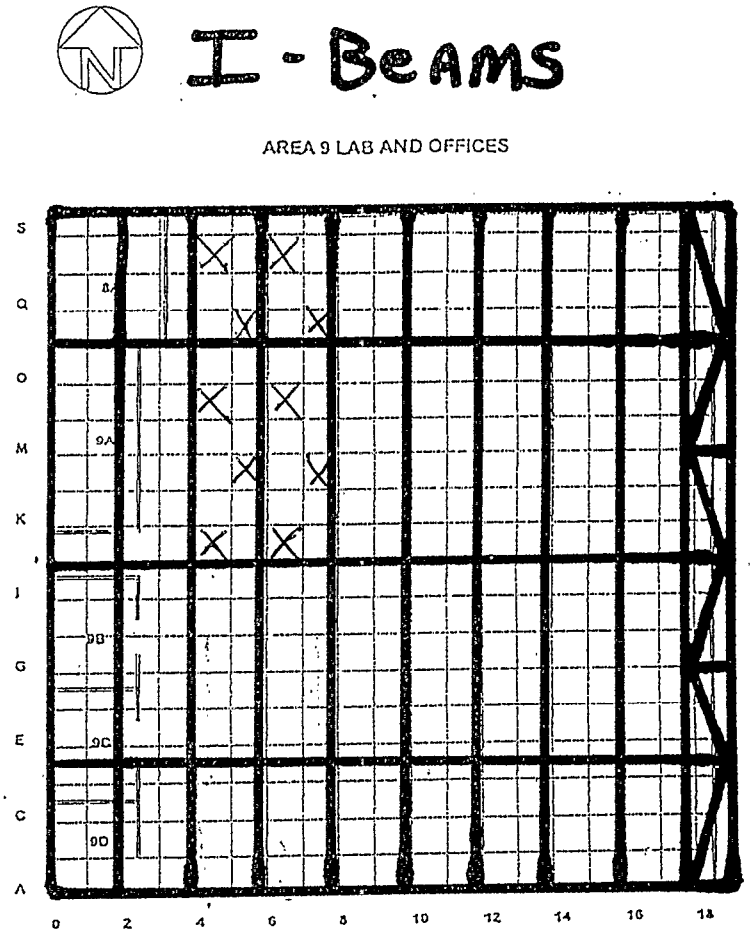
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

RP Technician: [signature]

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	R-4	A	CEILING I BEAM		104
2		B	CEILING		169
3		C	PIPE		136
4		D	~~CEILING BEAM~~		147
5	↓	E	CEILING		163
6	N-4	A	I BEAM		114
7		B	CEILING		131
8		C	I BEAM		62
9		D	STEEL		87
10	↓	E	CEILING		181
11	J-4	A	I BEAM		66
12		B	PIPE		74
13		C	I BEAM		101
14		D	CEILING		139
15	↓	E	STEEL		61
16	R-5	A	CEILING		157
17		B	I BEAM		73
18		C	PIPE		60
19		D	I BEAM		68
20	↓	E	CEILING		143
21	L-5	A	I BEAM	1	71
22		B	PIPE	1	63
23		C	I BEAM	1	122
24		D	CEILING	4	133
25		E	↓ PIPE	1	95
26	↓	E	DUPLICATE		110
27	R-6	A	CEILING I BEAM		59
28		B	CEILING		174
29		C	I BEAM		69
30		D	STEEL		53
31	↓	E	PIPE		58
32	N-6	A	I BEAM		102
33		B	CEILING		149
34		C	PIPE		77
35		D	STEEL		86
36	↓	E	CEILING		185
37	J-6	A	I BEAM		69
38		B	CEILING		158
39		C	I BEAM		83
40		D	PIPE		128
41	↓	E	CEILING		168
42	P-7	A	CEILING		195
43		B	I BEAM		64
44		C	~~PIPE~~ STEEL		81
45		D	I BEAM		94
46	↓	E	CEILING		169
47	L-7	A	CEILING	9	174
48		B	I BEAM	1	79
49		C	CEILING	8	156
50		D	I BEAM	2	58
		E	↓ CEILING	7 ~~186~~	186
	↓	E	DUPLICATE	8 ~~192~~	192

Insert area map or sketch below



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1431

Survey Date: 5-14-98
Location: BLDG 14 AREA 9
Description: CEILING

VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #33028	CIII #86314
Detector Model & s/n:	43-68 #089844-9	#0638
Calibration Date:	8-22-98	1-28-98
Efficiency [Tc99] [SY90] [Th230]	.148	.26
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 scalar measurements

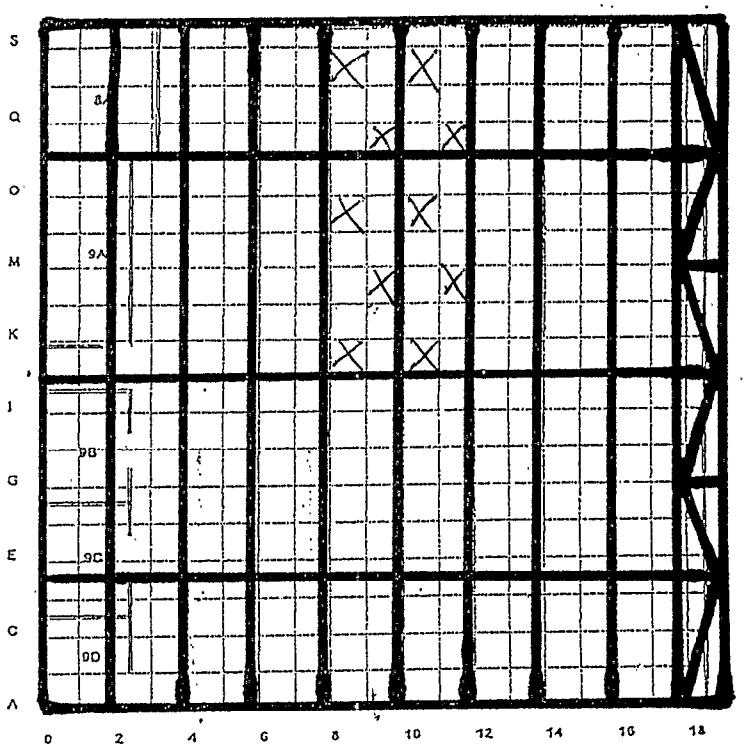
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	R-8	A	CEILING I BEAM		61
2		B	CEILING		146
3		C	I BEAM		122
4		D	PIPE		93
5	↓	E	CEILING		184
6	N-8	A	I BEAM		97
7		B	CEILING		162
8		C	I BEAM		114
9		D	CEILING		137
10	↓	E	CEILING		158
11	J-8	A	I BEAM	1	67
12		B	PIPE	0	82
13		C	I BEAM	1	67
14		D	STEEL	1	94
15	↓	E	CEILING	6	151
16	P-9	A	CEILING		163
17		B	I BEAM		58
18		C	I BEAM		93
19		D	I BEAM		55
20	↓	E	I BEAM		68
21	L-9	A	CEILING		142
22		B	I BEAM		85
23		C	STEEL		66
24		D	PIPE		59
25		E	↓ I BEAM		97
26	↓	E	DUPLICATE		152
27	R-10	A	CEILING I BEAM		84
28		B	PIPE		51
29		C	I BEAM		70
30		D	CEILING		165
31	↓	E	STEEL		59
32	N-10	A	I BEAM	1	68
33		B	PIPE	1	107
34		C	STEEL	1	91
35		D	I BEAM	0	78
36	↓	E	CEILING	5	155
37	J-10	A	I BEAM		123
38		B	STEEL		118
39		C	I BEAM		136
40		D	CEILING		147
41	↓	E	I BEAM		99
42	P-11	A	I BEAM		119
43		B	CEILING		173
44		C	STEEL		115
45		D	I BEAM		84
46	↓	E	CEILING		161
47	L-11	A	I BEAM		63
48		B	STEEL		101
49		C	PIPE		107
50		D	I BEAM		116
		E	↓ CEILING		151
	↓	E	DUPLICATE		142

Insert area map or sketch below

I - BEAMS

AREA 9 LAB AND OFFICES



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SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1432

Survey Date: 5-19-98
Location: BLDG 14 AREA 9
Description: CEILING

VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #3008	L2221 #86314
Detector Model & s/n:	43-65 #08911	44A # 0634
Calibration Date:	8-22-98	1-22-98
Efficiency [Tc99] [SY90] [Th230]	.148	.26
Detector Area (CM2)	50	15.5

RP Technician:

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

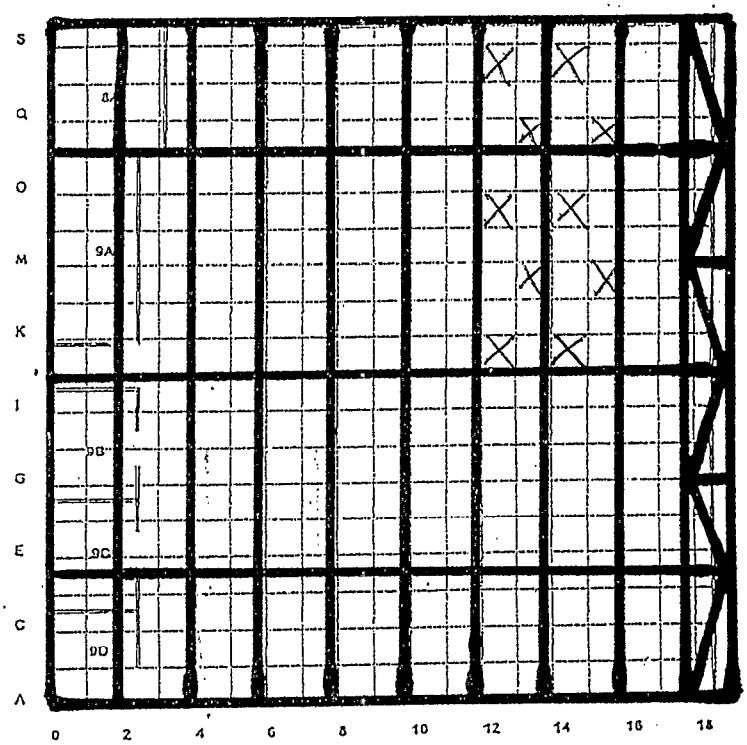
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

*	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	R-12 A	CEILING I BEAM		9 ~~129~~
2	B	CEILING		137
3	C	PIPE		68
4	D	I BEAM		71
5	E	I BEAM		56
6	N-12 A	CEILING		142
7	B	I BEAM		~~[illegible]~~ 102
8	C	PIPE		71
9	D	CEILING		141
10	E	I BEAM		57
11	J-12 A	I BEAM		58
12	B	CEILING		145
13	C	PIPE		52
14	D	STEEL		81
15	E	I BEAM		52
16	P-13 A	STEEL		69
17	B	PIPE		71
18	C	CEILING		153
19	D	I BEAM		102
20	E	I BEAM		107
21	L-13 A	PIPE	1	58
22	B	CEILING	7	137
23	C	STEEL	1	51
24	D	I BEAM	2	63
25	E	I BEAM	0	86
26	E	DUPLICATE	0	97
27	R-14 A	CEILING I BEAM		63
28	B	CEILING		147
29	C	STEEL		82
30	D	CEILING		128
31	E	PIPE		84
32	N-14 A	I BEAM		51
33	B	CEILING		139
34	C	I BEAM		104
35	D	PIPE		95
36	E	I BEAM		110
37	J-14 A	CEILING		156
38	B	I BEAM		92
39	C	STEEL		98
40	D	I BEAM		53
41	E	I BEAM		60
42	P-15 A	CEILING		120
43	B	PIPE		56
44	C	I BEAM		68
45	D	STEEL		50
46	E	CEILING		136
47	L-15 A	I BEAM		84
48	B	I BEAM		65
49	C	PIPE		59
50	D	CEILING		140
	E	I BEAM		52
	E	DUPLICATE		50

Insert area map or skatch below

I - BEAMS

AREA 9 LAB AND OFFICES



1M x 1M GI

Review

SURVEY01.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1433

ANALYSIS DATE: 5-20-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	B-0	Ceiling	A	8				A			
21	B-0		BG	48				BG			
22	F-0		A	2				A			
22	F-0		BG	60				BG			
23	D-1		A	1				A			
23	D-1		BG	54				BG			
24	H-1		A	2				A			
24	H-1		BG	44				BG			
25	B-2		A	0				A			
25	B-2		BG	55				BG			
26	F-2		A	2				A			
26	F-2		BG	55				BG			
27	D-3		A	2				A			
27	D-3		BG	72				BG			
28	H-3		A	2				A			
28	H-3		BG	53				BG			
29	B-4		A	1				A			
29	B-4		BG	62				BG			
30	F-4		A	2				A			
30	F-4		BG	65				BG			
31	D-5		A	1				A			
31	D-5		BG	58				BG			
32	H-5		A	2				A			
32	H-5		BG	47				BG			
33	B-6		A	3				A			
33	B-6		BG	44				BG			
34	F-6		A	2				A			
34	F-6		BG	68				BG			
35	D-7		A	4				A			
35	D-7		BG	55				BG			
36	H-7		A	0				A			
36	H-7		BG	47				BG			
37	B-8		A	3				A			
37	B-8		BG	51				BG			
38	F-8		A	1				A			
38	F-8		BG	72				BG			
39	D-9		A	1				A			
39	D-9		BG	64				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.36 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	520	800	0.65	5-20-98
Beta-Gamma	44044	800	55	5-20-98

SWIPE.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

#1434

Survey Date: 5-20-98
Location: BLDG 14 AREA 9
Description: CEILING

VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/3028	2221/89648
Detector Model & s/n:	43-65/59812	449/48272
Calibration Date:	8-22-97	12-30-97
Efficiency [Tc99] [SY90] [Th230]	14.8%	26%
Detector Area (CM2)	50	15.5

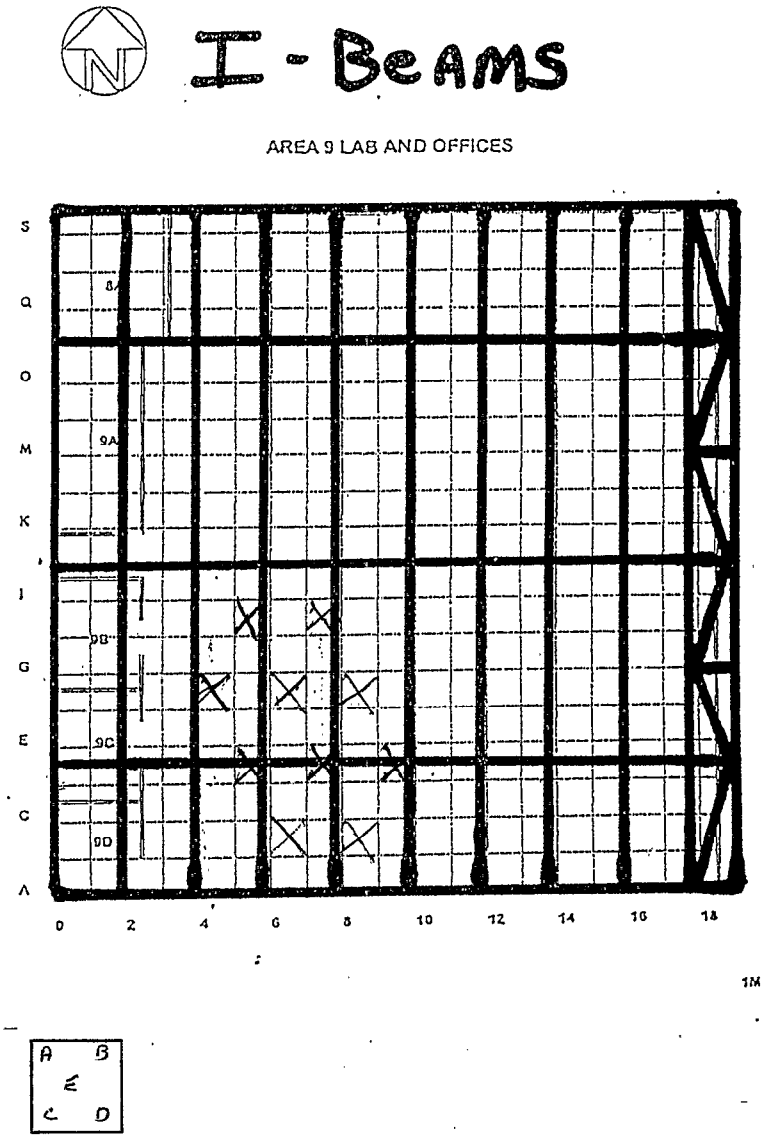
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scalar measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	1	40
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
1	F-4	A	Ceiling Beam		81
2		B			88
3		C	CRETE PLANK		112
4		D			121
5		E			117
6	D-5	A			129
7		B	Beam		54
8		C			40
9		D			68
10		E			76
11	H-5	A	CRETE PLANK		141
12		B			135
13		C	Beam		101
14		D			105
15		E	CRETE PLANK		132
16	B-6	A	Beam		68
17		B			72
18		C	CRETE PLANK		148
19		D			151
20		E			143
21	F-6	A	Beam	4	44
22		B		4	73
23		C	CRETE PLANK	3	124
24		D		2	128
25		E		1	119
26		E	DUPLICATE	0	125
27	D-7	A	Ceiling Beam		56
28		B			72
29		C			97
30		D			89
31		E	CRETE PLANK		128
32	H-7	A			92
33		B			110
34		C	Beam		56
35		D			65
36		E	CRETE PLANK		111
37	B-8	A	Beam		76
38		B			83
39		C	CRETE PLANK		136
40		D			127
41		E			129
42	F-8	A	Beam		70
43		B			79
44		C	CRETE PLANK		124
45		D			131
46		E			140
47	D-9	A	Beam	3	70
48		B		0	69
49		C		2	75
50		D		2	72
		E	CRETE PLANK	1	126
		E	DUPLICATE	0	133

Insert area map or sketch below



SURVEY01.XLS

~~#1135~~

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

Survey Date: 5-20-98
Location: BLDG 14 Area 9
Description: Ceiling

VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1/3028	2221/89648
Detector Model & s/n:	43-65/89812	44-9/48272
Calibration Date:	8-22-97	12-30-97
Efficiency [Tc99] [SY90] [Th230]	14.8%	26%
Detector Area (CM2)	50	15.5

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

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	1	40
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

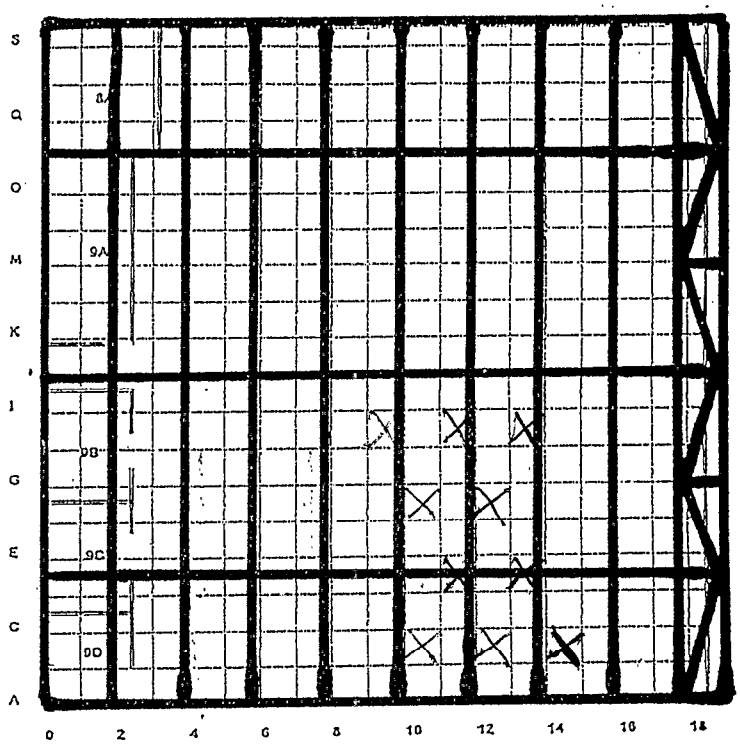
RP Technician: D. PITMAN

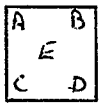
#	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	H-9 A	CEILING CRATE PLANK		99
2	B			112
3	C			117
4	D	Beam		50
5	E			67
6	B-10 A			77
7	B			80
8	C	CRATE PLANK		104
9	D			113
10	E			120
11	F-10 A	Beam		72
12	B			68
13	C	CRATE PLANK		99
14	D			115
15	E			111
16	D-11 A	Beam		61
17	B			57
18	C			55
19	D			64
20	E	CRATE PLANKS		115
21	H-11 A		0	114
22	B		1	131
23	C		1	125
24	D	Beam	1	70
25	E		0	66
26	E	DUPLICATE	1	69
27	B-12 A	CEILING		68
28	B			75
29	C	CRATE PLANK		161
30	D			154
31	E			167
32	F-12 A	Beam		70
33	B			79
34	C	CRATE PLANK		132
35	D			137
36	E			129
37	D-13 A	Beam		63
38	B			68
39	C			67
40	D			72
41	E	CRATE PLANK		132
42	H-13 A			112
43	B			102
44	C			117
45	D	Beam		47
46	E			57
47	B-14 A		2	50
48	B		5	65
49	C	CRATE PLANK	2	112
50	D		1	107
	E		5	121
	E	DUPLICATE	3	129

Insert area map or sketch below

I-BEAMS

AREA 9 LAB AND OFFICES





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#1436

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

Survey Date: 5-20-98
Location: BLDG 14 Area 9
Description: Ceilings

VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP1/3028	2221/89648
Detector Model & s/n:	43-65/88812	44-9/48272
Calibration Date:	8-22-97	12-30-97
Efficiency [Tc99] [SY90] [Th230]	14.8%	26%
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

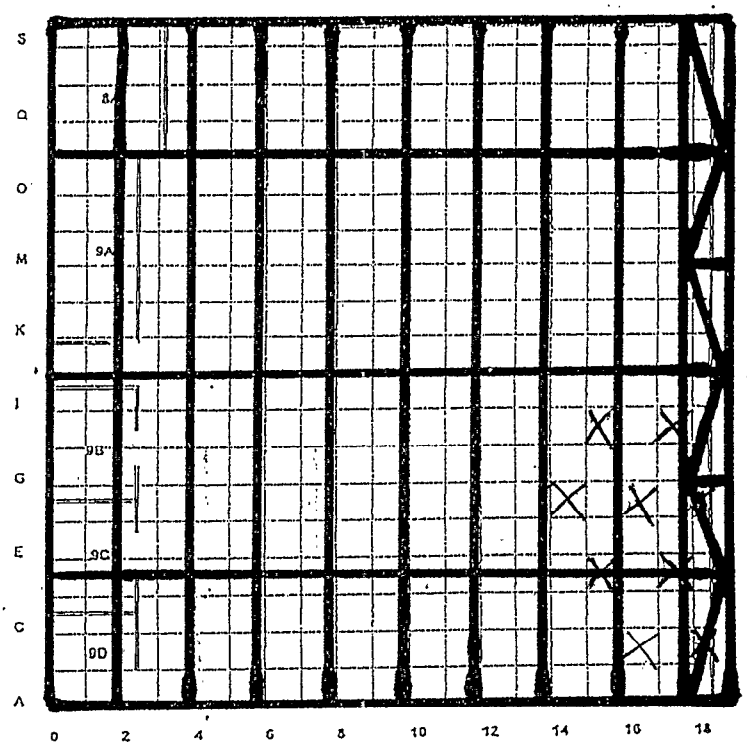
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	1	40
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

#	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	F-14 A	CEILING BEAM		68
2	B	BEAM		72
3	C	CRETE PLANK		135
4	D	crete Plank		140
5	E	Crete PLANK		147
6	D-15 A	Beam		55
7	B	BEAM		48
8	C	Beam		35
9	D	Beam		48
10	E	crete Plank		148
11	H-15 A			101
12	B			99
13	C			117
14	D	Beam		59
15	E			57
16	B-16 A			56
17	B			67
18	C	crete Plank		96
19	D			109
20	E			112
21	F-16 A	Beam	0	41
22	B		0	54
23	C	crete Plank	0	56
24	D		1	53
25	E		2	61
26	E	DUPLIZATE	4	79
27	D-17 A	CEILING Beam		59
28	B			64
29	C			47
30	D			58
31	E	Crete Plank		68
32	H-17 A			107
33	B			113
34	C			125
35	D	Beam		67
36	E			63
37	B-18 A			34
38	B			72
39	C	Crete Plank		108
40	D			113
41	E			123
42	F-18 A	Beam	0	120
43	B		1	97
44	C		1	169
45	D		2	107
46	E	Crete Plank	2	130
47	E	DUPLIZATE	2	133
48				
49				
50				

Insert area map or sketch below

I-BEAMS

AREA 9 LAB AND OFFICES



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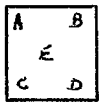


ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1441

ANALYSIS DATE: 5-14-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	H-9	Ceiling	A	3				A			
21	H-9		BG	51				BG			
22	B-10		A	1				A			
22	B-10		BG	65				BG			
23	F-10		A	0				A			
23	F-10		BG	43				BG			
24	D-11		A	1				A			
24	D-11		BG	49				BG			
25	H-11		A	1				A			
25	H-11		BG	56				BG			
26	B-12		A	1				A			
26	B-12		BG	53				BG			
27	F-12		A	2				A			
27	F-12		BG	58				BG			
28	D-13		A	1				A			
28	D-13		BG	68				BG			
29	H-13		A	3				A			
29	H-13		BG	52				BG			
30	B-14		A	3				A			
30	B-14		BG	49				BG			
31	F-14		A	0				A			
31	F-14		BG	57				BG			
32	D-15		A	0				A			
32	D-15		BG	54				BG			
33	H-15		A	2				A			
33	H-15		BG	63				BG			
34	B-16		A	1				A			
34	B-16		BG	65				BG			
35	F-16		A	0				A			
35	F-16		BG	62				BG			
36	D-17		A	2				A			
36	D-17		BG	55				BG			
37	H-17		A	1				A			
37	H-17		BG	64				BG			
38	B-18		A	4				A			
38	B-18		BG	61				BG			
39	F-18		A	2				A			
39	F-18		BG	48				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.33	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.28	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	315	800	0.39	5-14-98
Beta-Gamma	43253	800	54	5-14-98

SWIPE.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1447

Survey Date: 5-26-98
Location: BLDG 14 AREA 9
Description: CEILING

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

VERIFICATION

	alpha α	beta-gamma β
Instrument Model & s/n:	ESP-1 #3028	L2221 #863A
Detector Model & s/n:	43-68 #1491A	44-9 #063A
Calibration Date:	8-22-97	1-28-98
Efficiency [Tc99] [SY90] [Th230]	.148	.26
Detector Area (CM2)	50	15.5

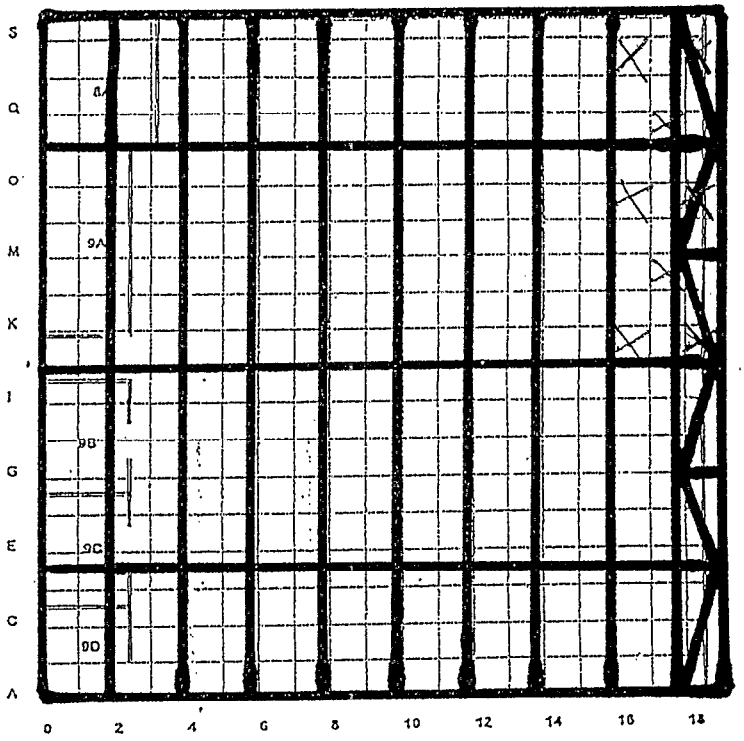
	α alpha	β beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

RP Technician: W

Insert area map or sketch below

I - BEAMS

AREA 9 LAB AND OFFICES



1M x 1M GI

#	GRID		DESCRIPTION	α alpha GROSS COUNTS	β beta-gamma GROSS COUNTS
1	R-16	A	CEILING PIPE		64
2		B	CEILING		137
3		C	I BEAM		56
4		D	I BEAM		63
5	↓	E	I BEAM		87
6	N-16	A	PIPE		60
7		B	CEILING		123
8		C	I BEAM		56
9		D	I BEAM		51
10	↓	E	PIPE		73
11	J-16	A	I BEAM		50
12		B	PIPE		69
13		C	I BEAM		110
14		D	I BEAM		103
15	↓	E	CEILING		116
16	P-17	A	CEILING		141
17		B	I BEAM		107
18		C	PIPE		60
19		D	I BEAM		52
20	↓	E	I BEAM		71
21	L-17	A	I BEAM	1	85
22		B	PIPE	1	64
23		C	CEILING	2	158
24		D	I BEAM	0	111
25		E	↓ PIPE	0	53
26	↓	E	DUPLICATE	1	59
27	R-18	A	CEILING CEILING		151
28		B	I BEAM		171
29		C	I BEAM		164
30		D	I BEAM		62
31	↓	E	I BEAM		103
32	N-18	A	CEILING		161
33		B	I BEAM		129
34		C	I BEAM		104
35		D	PIPE		68
36	↓	E	I BEAM		126
37	J-18	A	PIPE	1	59
38		B	CEILING	2	125
39		C	I BEAM	0	180
40		D	I BEAM	0	154
41		E	↓ I BEAM	1	61
42	↓	E	DUPLICATE	1	69
43					
44					
45					
46					
47					
48					
49					
50					

REVIEW

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

ANALYSIS DATE: 5-26-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 LAB
Verification Survey #1448

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	R-0	1314 AREA 9 LAB OVERHEAD	A	3				A			18
21	R-0		BG	60				BG			153
22	N-0		A	3				A			
22	N-0		BG	51				BG			
23	S-0		A	0				A			
23	S-0		BG	48				BG			
24	P-1		A	1				A			
24	P-1		BG	62				BG			
25	L-1		A	0				A			
25	L-1		BG	60				BG			
26	R-2		A	5				A			
26	R-2		BG	70				BG			
27	N-2		A	1				A			
27	N-2		BG	51				BG			
28	S-2		A	2				A			
28	S-2		BG	58				BG			
29	P-3		A	3				A			
29	P-3		BG	64				BG			
30	L-3		A	2				A			
30	L-3		BG	55				BG			
31	R-4		A	2				A			
31	R-4		BG	56				BG			
32	N-4		A	0				A			
32	N-4		BG	59				BG			
33	S-4		A	2				A			
33	S-4		BG	56				BG			
34	P-5		A	5				A			
34	P-5		BG	51				BG			
35	L-5		A	0				A			
35	L-5		BG	57				BG			
36	R-6		A	1				A			
36	R-6		BG	50				BG			
37	N-6		A	1				A			
37	N-6		BG	53				BG			
38	S-6		A	1				A			
38	S-6		BG	49				BG			
39	P-7		A	1				A			
39	P-7		BG	50				BG			
40	L-7		A	1				A			
40	L-7		BG	63				BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	.27	cpm / dpm based on S/Y90
Efficiency A (Alpha):	.34	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	2792	5170	.54	5/26/98
Beta-Gamma	355016	5170	69	5/26/98

SWIPE.XLS

~~PAGE 2~~
PAGE 1 OF 3

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

ANALYSIS DATE: 5-26-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 LAB
Verification Survey #1448

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	R-8	B14 AREA 9 LAB OVERHEAD	A	2				A			18
21	R-8		BG	56				BG			153
22	N-8		A	1				A			
22	N-8		BG	51				BG			
23	T-8		A	0				A			
23	T-8		BG	56				BG			
24	P-9		A	6				A			
24	P-9		BG	56				BG			
25	L-9		A	7				A			
25	L-9		BG	60				BG			
26	R-10		A	3				A			
26	R-10		BG	64				BG			
27	N-10		A	3				A			
27	N-10		BG	52				BG			
28	T-10		A	0				A			
28	T-10		BG	53				BG			
29	P-11		A	1				A			
29	P-11		BG	54				BG			
30	L-11		A	1				A			
30	L-11		BG	60				BG			
31	R-12		A	1				A			
31	R-12		BG	54				BG			
32	N-12		A	1				A			
32	N-12		BG	55				BG			
33	T-12		A	0				A			
33	T-12		BG	58				BG			
34	P-13		A	1				A			
34	P-13		BG	49				BG			
35	L-13		A	0				A			
35	L-13		BG	59				BG			
36	R-14		A	4				A			
36	R-14		BG	57				BG			
37	N-14		A	2				A			
37	N-14		BG	62				BG			
38	T-14		A	6				A			
38	T-14		BG	59				BG			
39	P-15		A	2				A			
39	P-15		BG	53				BG			
40	L-15		A	2				A			
40	L-15		BG	48				BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	.27 cpm / dpm based on S/Y90
Efficiency A (Alpha):	.34 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	2792	5170	.54	5/26/98
Beta-Gamma	355016	5170	69	5/26/98

SWIPE.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

ANALYSIS DATE: 5-26-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 LAB
Verification Survey #1448

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	R-16	B14 AREA 9 LAB OVERHEAD	A	3				A			18
21	R-16		BG	55				BG			153
22	N-16		A	6				A			
22	N-16		BG	59				BG			
23	J-16		A	2				A			
23	J-16		BG	61				BG			
24	P-17		A	4				A			
24	P-17		BG	61				BG			
25	L-17		A	3				A			
25	L-17		BG	60				BG			
26	R-18		A	5				A			
26	R-18		BG	59				BG			
27	N-18		A	5				A			
27	N-18		BG	52				BG			
28	J-18		A	3				A			
28	J-18		BG	54				BG			
29			A					A			
29			BG					BG			
30			A					A			
30			BG					BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	.27	cpm / dpm based on S/Y90
Efficiency A (Alpha):	.34	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	2792	5170	.54	5/26/98
Beta-Gamma	355016	5170	69	5/26/98

SWIPE.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1504

ANALYSIS DATE: 6-3-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 NORTH WALL (Verification Survey)

D. Pitman

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	0-AA	BLOCK	A	0				A			
21	0-AA		BG	53				BG			
22	1-BB		A	1				A			
22	1-BB		BG	46				BG			
23	2-AA	DOOR-9A	A	1				A			
23	2-AA		BG	42				BG			
24	3-BB	BLOCK	A	1				A			
24	3-BB		BG	43				BG			
25	4-AA		A	1				A			
25	4-AA		BG	47				BG			
26	5-AB		A	0				A			
26	5-BB		BG	57				BG			
27	6-AA		A	0				A			
27	6-AA		BG	60				BG			
28	7-BB		A	0				A			
28	7-BB		BG	56				BG			
29	8-AA		A	0				A			
29	8-AA		BG	45				BG			
30	9-BB		A	4				A			
30	9-BB		BG	53				BG			
31	10-AA	DOOR-To Area 10	A	3				A			
31	10-AA		BG	59				BG			
32	11-BB		A	1				A			
32	11-BB		BG	55				BG			
33	12-AA	BLOCK	A	1				A			
33	12-AA		BG	55				BG			
34	13-BB		A	0				A			
34	13-BB		BG	54				BG			
35	14-AA		A	1				A			
35	14-AA		BG	54				BG			
36	15-BB		A	0				A			
36	15-BB		BG	57				BG			
37	16-AA		A	0				A			
37	16-AA		BG	50				BG			
38	17-BB		A	2				A			
38	17-BB		BG	50				BG			
39	18-AA		A	0				A			
39	18-AA		BG	59				BG			
40	19-BB		A	1				A			
40	19-BB		BG	39				BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.37 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	328	800	0.41	6-3-98
Beta-Gamma	43151	800	54	6-3-98

MAIN

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY # MAIN 1505

Survey Date: 6-3-98 2100
Location: BLDG 14 AREA 9 NORTH WALL
Description: VERIFICATION

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

	alpha α	beta-gamma β/γ
Instrument Model & s/n:	ES-1 #93058	L2221 #86314
Detector Model & s/n:	43-68 #088844	44-9 #063A
Calibration Date:	8-22-97	1-28-98
Efficiency [Tc99] [SY90] [Th230]	.148	.26
Detector Area (CM2)	50	15.5

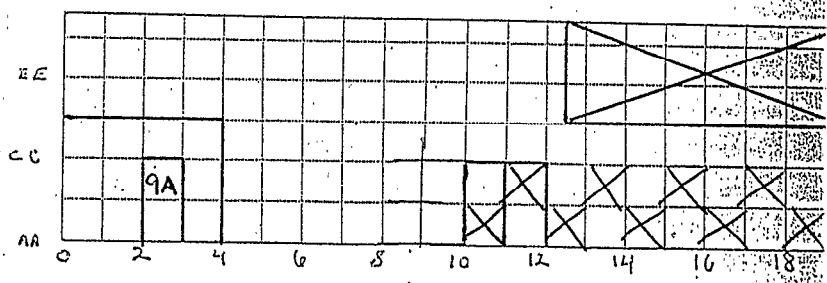
	alpha α	beta-gamma β/γ
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

RP Technician: William W. Jeske

#	GRID	DESCRIPTION	alpha α GROSS COUNTS	beta-gamma β/γ GROSS COUNTS
1	10-AA A	DOOR TO AREA 10		53
2	B			60
3	C			54
4	D			51
5	E			62
6	11-BB A			67
7	B			54
8	C			97
9	D			51
10	E			62
11	12-AA A	BLOCK		93
12	B			81
13	C			62
14	D			59
15	E			101
16	13-BB A			87
17	B			56
18	C			69
19	D			73
20	E			88
21	14-AA A		1	52
22	B		1	66
23	C		2	55
24	D		1	70
25	E		0	93
26	E	DUPLICATE	1	88
27	15-BB A	BLOCK		63
28	B			76
29	C			50
30	D			91
31	E			69
32	16-AA A			80
33	B			93
34	C			74
35	D			58
36	E			98
37	17-BB A			102
38	B			56
39	C			63
40	D			71
41	E			80
42	18-AA A			80
43	B			94
44	C			67
45	D			74
46	E			85
47	19-BB A		1	98
48	B		1	93
49	C		0	72
50	D		1	65
	E		2	57
	E	DUPLICATE	1	87

BLDG 14 AREA 9

NORTH WALL



Review Mat 4/4/98

SURVEY01.XLS

PAGE

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1549

ANALYSIS DATE: 6-17-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9B

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	AA-0	NORTH WALL 9B	A	1				A			
21	AA-0		BG	55				BG			
22	CC-0		A	1				A			
22	CC-0		BG	63				BG			
23	BB-1		A	1				A			
23	BB-1		BG	63				BG			
24	AA-2		A	0				A			
24	AA-2		BG	59				BG			
25	CC-2		A	1				A			
25	CC-2		BG	37				BG			
26	BB-2	SOUTH WALL	A	1				A			
26	BB-2		BG	49				BG			
27	AA-1		A	0				A			
27	AA-1		BG	45				BG			
28	CC-1		A	0				A			
28	CC-1		BG	62				BG			
29	BB-0		A	1				A			
29	BB-0		BG	50				BG			
30			A					A			
30			BG					BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90
Efficiency A (Alpha):	

Background	Counts	Ct Time (min)	Rb	Date
Alpha	349	800	0.44	6-17-98

REVIEW

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1550

ANALYSIS DATE: 6-17-98
LOCATION: Prevair, Tonawanda, NY
Bldg. 14, Area 9-B

Verification Survey

D. Pitman

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	F-0	FLOOR 9-B	A					A			
21	F-0		BG					BG			
22	G-1		A					A			
22	G-1		BG					BG			
23	H-0		A					A			
23	H-0		BG					BG			
24	H-2		A					A			
24	H-2		BG					BG			
25	I-1		A					A			
25	I-1		BG					BG			
25	G-0	CEILING 9B	A	1				A			
26	G-0		BG	55				BG			
27	I-0		A	0				A			
27	I-0		BG	50				BG			
28	F-1		A	2				A			
28	F-1		BG	52				BG			
29	H-1		A	1				A			
29	H-1		BG	51				BG			
30	G-2		A	1				A			
30	G-2		BG	60				BG			
31	BB-F	WEST WALL 9B	A	0				A			
31	BB-F		BG	57				BG			
32	AA-G		A	1				A			
32	AA-G		BG	46				BG			
33	CC-G		A	1				A			
33	CC-G		BG	64				BG			
34	BB-H		A	1				A			
34	BB-H		BG	54				BG			
35	AA-I		A	0				A			
35	AA-I		BG	66				BG			
36	CC-I	EAST WALL 9B	A	0				A			
36	CC-I		BG	55				BG			
37	BB-H		A	2				A			
37	BB-H		BG	56				BG			
38	AA-G		A	0				A			
38	AA-G		BG	52				BG			
39	CC-G		A	2				A			
39	CC-G		BG	49				BG			
40	BB-F		A	1				A			
40	BB-F		BG	52				BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90

Background	Counts	Ct Time (min)	Rb	Date
Alpha	349	500	0.44	6-17-98

9D

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1551

ANALYSIS DATE: 6-17-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9-D

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	AA-0	NORTH WALL 9-D	A	4				A			
21	AA-0		BG	59				BG			
22	CC-0		A	0				A			
22	CC-0		BG	45				BG			
23	BB-1		A	1				A			
23	BB-1		BG	54				BG			
24	AA-2		A	1				A			
24	AA-2		BG	57				BG			
25	CC-2		A	0				A			
25	CC-2		BG	68				BG			
25	BB-2	SOUTH WALL 9-D	A	0				A			
26	BB-2		BG	58				BG			
27	AA-1		A	0				A			
27	AA-1		BG	49				BG			
28	CC-1		A	1				A			
28	CC-1		BG	60				BG			
29	BB-0		A	0				A			
29	BB-0		BG	64				BG			
30	A-0	FLOOR 9-D	A					A			
30	A-0		BG					BG			
31	C-0		A					A			
31	C-0		BG					BG			
32	B-1		A					A			
32	B-1		BG					BG			
33	A-2		A					A			
33	A-2		BG					BG			
34	C-2		A					A			
34	C-2		BG					BG			
35	B-0	CEILING 9-D	A	0				A			
35	B-0		BG	48				BG			
36	A-1		A	0				A			
36	A-1		BG	37				BG			
37	C-1		A	0				A			
37	C-1		BG	58				BG			
38	B-2		A	0				A			
38	B-2		BG	51				BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	349	800	0.44	6-17-98
Beta-Gamma	[illegible]		[illegible]	

.ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1552

9D

ANALYSIS DATE: 6-17-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9-D
Verification Survey

D.P. TIMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	AA-0	WEST WALL	A	1				A			
21	AA-0		BG	64				BG			
22	CC-0		A	1				A			
22	CC-0		BG	42				BG			
23	BB-1		A	0				A			
23	BB-1		BG	46				BG			
24	AA-2		A	0				A			
24	AA-2		BG	74				BG			
25	CC-2		A	0				A			
25	CC-2		BG	62				BG			
26	BB-2	EAST WALL	A	0				A			
26	BB-2		BG	63				BG			
27	AA-1		A	1				A			
27	AA-1		BG	50				BG			
28	CC-1		A	3				A			
28	CC-1		BG	51				BG			
29	BB-0		A	0				A			
29	BB-0		BG	56				BG			
30			A					A			
30			BG					BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90
Efficiency A (Alpha):	

Background	Counts	Ct Time (min)	Rb	Date
Alpha	349	800	0.44	6-17-98

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1553

South wall-main

ANALYSIS DATE: 6-17-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 - SOUTH WALL (Verification Survey) D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	AA-0	SOUTH WALL	A	0				A			
21	AA-0	BLOCK	BG	55				BG			
22	BB-1		A	2				A			
22	BB-1		BG	64				BG			
23	AA-2		A	0				A			
23	AA-2		BG	64				BG			
24	BB-3		A	0				A			
24	BB-3		BG	57				BG			
25	AA-4	DOOR	A	1				A			
25	AA-4		BG	36				BG			
26	BB-5		A	4				A			
26	BB-5		BG	53				BG			
27	AA-6	BLOCK	A	1				A			
27	AA-6		BG	52				BG			
28	BB-7		A	0				A			
28	BB-7		BG	45				BG			
29	AA-8		A	1				A			
29	AA-8		BG	65				BG			
30	BB-9		A	1				A			
30	BB-9		BG	60				BG			
31	AA-10		A	1				A			
31	AA-10		BG	49				BG			
32	BB-11		A	2				A			
32	BB-11		BG	53				BG			
33	AA-12		A	0				A			
33	AA-12		BG	59				BG			
34	BB-13		A	0				A			
34	BB-13		BG	46				BG			
35	AA-14		A	0				A			
35	AA-14		BG	57				BG			
36	BB-15		A	0				A			
36	BB-15		BG	42				BG			
37	AA-16		A	1				A			
37	AA-16		BG	68				BG			
38	BB-17		A	0				A			
38	BB-17		BG	69				BG			
39	AA-18		A	1				A			
39	AA-18		BG	42				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90

Background	Counts	Ct Time (min)	Rb	Date
Alpha	349	800	0.44	6-17-98

MRZ Jones

MAIN

HILBE. .SSOCIATES, INC.

SMEAR MEASURE...NT ANALYSIS REPORT

#1554

SAMPLE DATE: 6-17-98 West Wall-Main
ANALYSIS DATE:
LOCATION: BLDG 14 Area 9 WEST WALL : VERIFICATION D.PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION(1)	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (PER 100CM2)		ERROR (95% LEVEL)	MDA (PER 100CM2)
1	A-AA	BLOCK	A	0						+/-		
1	A-AA		BG	56						+/-		
2	B-BB	DOOR - 9D	A	3						+/-		
2	B-BB		BG	58						+/-		
3	C-AA	BLOCK	A	1						+/-		
3	C-AA		BG	52						+/-		
4	D-BB	BLOCK	A	1						+/-		
4	D-BB		BG	41						+/-		
5	E-AA	DOOR 9C	A	2						+/-		
5	E-AA		BG	51						+/-		
6	F-BB	BLOCK	A	1						+/-		
6	F-BB		BG	70						+/-		
7	G-AA	BLOCK	A	0						+/-		
7	G-AA		BG	55						+/-		
8	H-BB	DOOR 9B	A	1						+/-		
8	H-BB		BG	59						+/-		
9	I-AA	BLOCK	A	1						+/-		
9	I-AA		BG	58						+/-		
10	J-BB	DOOR SMALL HALLWAY	A	0						+/-		
10	J-BB		BG	50						+/-		
11	K-AA	BLOCK	A	2						+/-		
11	K-AA		BG	55						+/-		
12	L-BB	BLOCK	A	0						+/-		
12	L-BB		BG	64						+/-		
13	M-AA	BLOCK	A	3						+/-		
13	M-AA		BG	48						+/-		
14	N-BB	BLOCK	A	0						+/-		
14	N-BB		BG	45						+/-		
15	O-AA	BLOCK	A	1						+/-		
15	O-AA		BG	58						+/-		
16	P-BB	BLOCK	A	0						+/-		
16	P-BB		BG	60						+/-		
17	Q-AA	BLOCK	A	0						+/-		
17	Q-AA		BG	56						+/-		
18	R-BB	BLOCK	A	1						+/-		
18	R-BB		BG	41						+/-		
19	S-AA	BLOCK	A	0						+/-		
19	S-AA		BG	34						+/-		
20			A							+/-		
20			BG							+/-		

Should be row 2 because of mistake on field work plan.

Instrument Model & s/n:	M2929 S/N 50718
Detector Model & s/n:	M 43-10-1 S/N 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	RD	Date
Alpha	349	600	0.44	6-17-98
Beta-Gamma	15283	600	54	6-17-98

ENCL-C1.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#-1555

East Wall

ANALYSIS DATE: 6-17-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 EAST WALL (Verification Survey)

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	A - AA	EAST WALL	A	0				A			
21	A - AA	BLOCK	BG	60				BG			
22	B - BB		A	1				A			
22	B - BB		BG	55				BG			
23	C - AA		A	1				A			
23	C - AA		BG	49				BG			
24	D - BB		A	1				A			
24	D - BB		BG	54				BG			
25	E - AA		A	0				A			
25	E - AA		BG	70				BG			
26	F - BB		A	1				A			
26	F - BB		BG	56				BG			
27	G - AA		A	0				A			
27	G - AA		BG	56				BG			
28	H - BB		A	0				A			
28	H - BB		BG	62				BG			
29	I - AA		A	1				A			
29	I - AA		BG	59				BG			
30	J - BB		A	1				A			
30	J - BB		BG	32				BG			
31	K - AA		A	0				A			
31	K - AA		BG	47				BG			
32	L - BB		A	1				A			
32	L - BB		BG	59				BG			
33	M - AA		A	0				A			
33	M - AA		BG	49				BG			
34	N - BB		A	0				A			
34	N - BB		BG	42				BG			
35	O - AA		A	1				A			
35	O - AA		BG	51				BG			
36	P - BB		A	1				A			
36	P - BB		BG	41				BG			
37	Q - AA		A	0				A			
37	Q - AA		BG	68				BG			
38	R - BB		A	0				A			
38	R - BB		BG	52				BG			
39	S - AA		A	0				A			
39	S - AA		BG	46				BG			
39			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.29	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35	cpm / dpm based on Th230

Background	Counts	Ct. Time (min)	Rb	Date
Alpha	349	800	0.44	6-17-98
Beta-Gamma	43283	800	54	6-17-98

NHA

MAIN

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1567

See survey #1505 For Map

ANALYSIS DATE: 6-18-98
LOCATION: Frenair, Tonawanda, NY
Bldg. 14, Area 9 North WALL Verification Survey
MAIN
W. JOSKE

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	AA-0	BLOCK	A	3				A			
21	AA-0		BG	57				BG			
22	BB-1		A	0				A			
22	BB-1		BG	62				BG			
23	AA-2	DOOR - 9A	A	0				A			
23	AA-2		BG	43				BG			
24	BB-3	BLOCK	A	2				A			
24	BB-3		BG	47				BG			
25	AA-4		A	0				A			
25	AA-4		BG	64				BG			
26	BB-5		A	1				A			
26	BB-5		BG	58				BG			
27	AA-6		A	1				A			
27	AA-6		BG	56				BG			
28	BB-7		A	1				A			
28	BB-7		BG	58				BG			
29	AA-8		A	0				A			
29	AA-8		BG	50				BG			
30	BB-9		A	0				A			
30	BB-9		BG	54				BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n: M.2929 s/n 50718
Detector Model & s/n: M.43-10-1 s/n 041713
Calibration Date: 10-9-97
Efficiency BG (Beta/Gamma): 0.29 cpm / dpm based on S/Y90

Background	Counts	Ct Time (min)	Eff	Date
Alpha	2008	5185	0.270	6-22-98
			54	

ION TECHN OGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1597

9 LAB

ANALYSIS DATE: 6-24-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 A

Verification Survey

W. JESKE

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
K 21	A-A-K	West Wall	A	0				A			
K 21	AA-K		BG	49				BG			
L 22	BB-L		A	0				A			
L 22	BB-L		BG	56				BG			
M 23	AA-M		A	0				A			
M 23	AA-M		BG	62				BG			
N 24	BB-N		A	1				A			
N 24	BB-N		BG	58				BG			
O 25	AA-O		A	1				A			
O 25	AA-O		BG	65				BG			
K 26	BB-K	EAST WALL	A	1				A			
K 26	BB-K		BG	63				BG			
L 27	AA-L		A	1				A			
L 27	AA-L		BG	43				BG			
M 28	BB-M		A	0				A			
M 28	BB-M		BG	50				BG			
N 29	AA-N		A	0				A			
N 29	AN-N		BG	41				BG			
O 30	BB-O		A	0				A			
O 30	BB-O		BG	64				BG			
31	K-0	FLOOR	A					A			
31	K-0		BG					BG			
32	K-2		A					A			
32	K-2		BG					BG			
33	L-1		A					A			
33	L-1		BG					BG			
34	M-0		A					A			
34	M-0		BG					BG			
35	M-2		A					A			
35	M-2		BG					BG			
36	N-1		A					A			
36	N-1		BG					BG			
37	O-0		A					A			
37	O-0		BG					BG			
38	O-2		A					A			
38	O-2		BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.28	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.21	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	335	600	0.42	6-30-98
Beta-Gamma	447.03	600	[illegible]	6-30-98

...OR TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

MAIN

SURVEY # 1598

Survey Date: 6/22/98
Location: BLDG 14 AREA 9 EAST WALL
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 #03028	L2221 #86308
Detector Model & s/n:	43-65 #99916	44-9 #77683
Calibration Date:	8-22-97	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	155

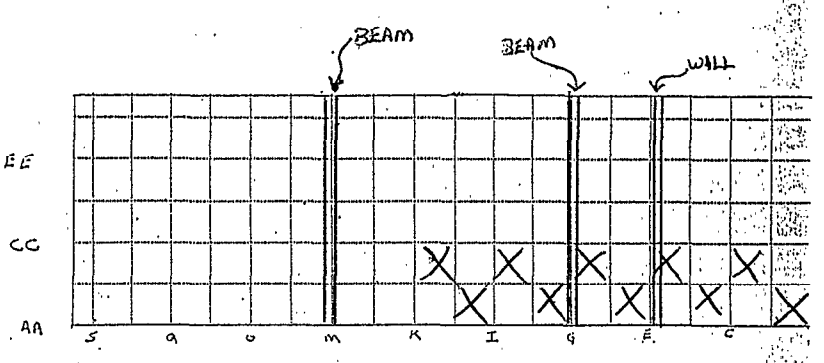
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

RP Technician: W. [illegible]

GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A-18	AA A	BLOCK (EAST WALL)		87
	B			92
	C			73
	D			106
	E			81
B-18	BB A			86
	B			76
	C			99
	D			94
	E			102
C-18	AA A			63
	B			84
	C			90
	D			71
	E			89
D-18	BB A			56
	B			68
	C			103
	D			92
	E			88
E-18	AA A		1	75
	B		1	59
	C		1	95
	D		0	67
	E		0	94
	E	DUPLICATE		88
F-18	BB A	BLOCK		85
	B			91
	C			107
	D			74
	E			83
G-18	AA A			65
	B			73
	C			97
	D			99
	E			55
H-18	BB A			107
	B			82
	C			51
	D			70
	E			93
I-18	AA A			69
	B			89
	C			96
	D			109
	E			54
J-18	BB A			62
	B			74
	C			79
	D			103
	E			85
	E	DUPLIZATE		91

N ←

BLDG 14 AREA 9
EAST WALL



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1599 9A

Survey Date: 6/22/98
Location: Area 9 Room 9A EAST + WEST WALLS
Description: VERIFICATION

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

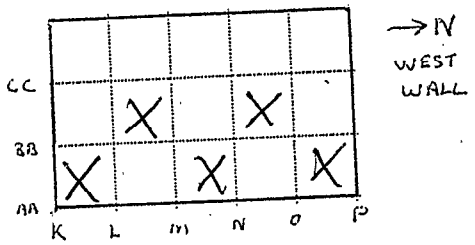
	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	12221 #86318
Detector Model & s/n:	43-65 #0495	44-9 #32688
Calibration Date:	8-12-98	1-25-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

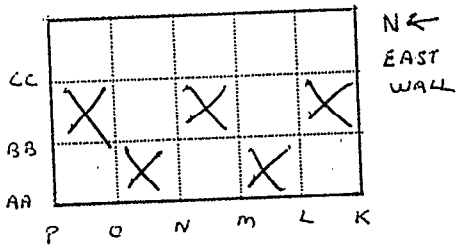
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

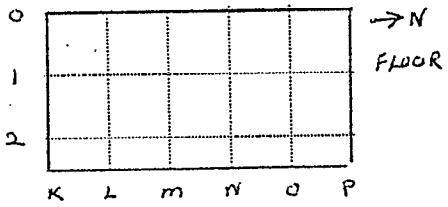
RP Technician: W.

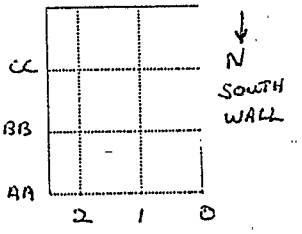
BLDG 14 AREA 9
ROOM 9A

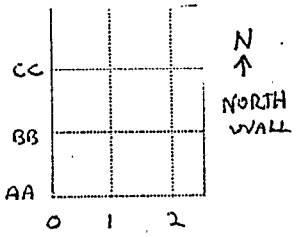
#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
KO	K-AA	A	Area 9 Room 9A		69
		B	WEST WALL		56
		C			73
		D			86
		E			92
LO	-BB	A			114
		B			118
		C			81
		D			79
		E			73
MO	-AA	A			82
		B			97
		C			107
		D			58
		E			66
NO	-BB	A			75
		B			70
		C			84
		D			73
		E			89
OO	-AA	A		1	85
		B		0	93
		C		0	111
		D		1	123
		E		1	104
		E	DUPLICATE	1	109
K2	K-BB	A	Area 9 Room 9A		88
		B	EAST WALL		92
		C			96
		D			87
		E			115
L2	-AA	A			121
		B			104
		C			101
		D			80
		E			61
M2	-BB	A			55
		B			73
		C			106
		D			100
		E			101
N2	-AA	A			64
		B			71
		C			84
		D			96
		E			68
O2	-BB	A		0	95
		B		0	66
		C		0	78
		D		1	94
		E		1	88
		E	DUPLICATE	1	88











SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

9A

SURVEY # 1600

Survey Date: 6/22/98
Location: BLDG 14 Area 9 Room 9A NORTH & SOUTH WALL
Description: Verification

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

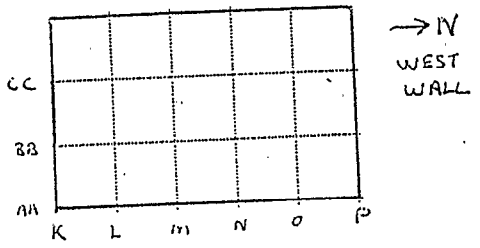
	alpha	beta-gamma
Instrument Model & s/n:	ESP/# 13028	L2221 #86308
Detector Model, & s/n:	43-65 #59894	44-9 #37683
Calibration Date:	8-22-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

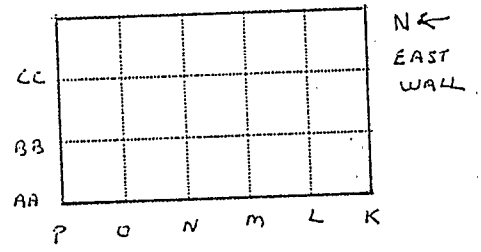
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 min.	1 min.
SAMPLE COUNT TIME (MIN)	1 min.	1 min.

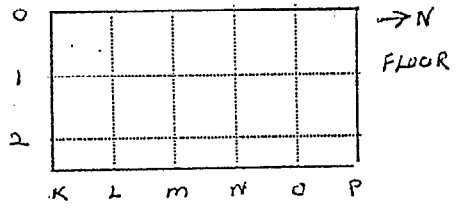
RP Technician: [signature]

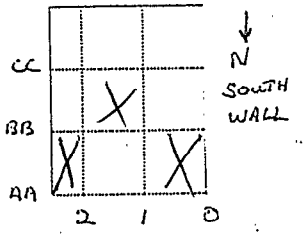
BLDG 14 AREA 9
Room 9A

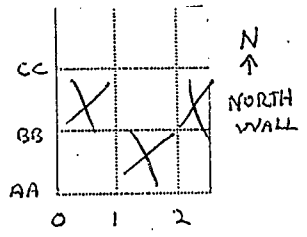
#	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
80	AA-9 A	SOUTH WALL		89
80	B			111
	C			116
	D			79
	E			81
82	AA-9 A			60
82	B			68
	C			77
	D			89
	E			96
81	BB-9 A		0	115
81	B		0	124
	C		1	101
	D		1	80
	E		0	64
	E	DUPLICATE	0	68
79	AA-9 A	NORTH WALL		73
	B			70
	C			72
	D			100
	E			85
78	BB-9 A			69
	B			84
	C			93
	D			106
	E			122
77	BB-9 A			114
	B			102
	C			61
	D			84
	E			97
				76 (Q)
				79 (Q)
				38 (Q)
				23 (Q)











SURVEY01.XLS

MAIN

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1601

Survey Date: 6/23/98
Location: BLDG 14 AREA 9 WEST WALL
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 #03018	LLRM #96308
Detector Model & s/n:	43-65 #088850	44-9 #37698
Calibration Date:	8-12-97	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.79
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 min.	1 min.
SAMPLE COUNT TIME (MIN)	1 min.	1 min.

RP Technician: [signature]

	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A	0-AA A	BLOCK (WEST WALL)		82
	B			74
	C			63
	D			78
	E			84
B	BB A	DOOR 9D		69
	B			109
	C			74
	D			62
	E			97
C	0-AA A	BLOCK		68
	B			76
	C			101
	D			68
	E			77
D	0-BB A	BLOCK	0	84
	B		1	116
	C		1	79
	D		0	71
	E		1	66
	E	DUPLICATE	0	74
E	0-AA A	DOOR - 9C		104
	B			91
	C			121
	D			94
	E			101
F	0-BB A	BLOCK		78
	B			61
	C			86
	D			111
	E			128
G	0-AA A	BLOCK		75
	B			93
	C			89
	D			60
	E			95
H	0-BB A	DOOR - 9B	1	92
	B		1	60
	C		1	90
	D		1	94
	E		1	63
	E	DUPLICATE	0	70
I	0-AA A	BLOCK		73
	B			110
	C			82
	D			118
	E			70
J	0-BB A	DOOR - HALLWAY		83
	B			61
	C			85
	D			102
	E			

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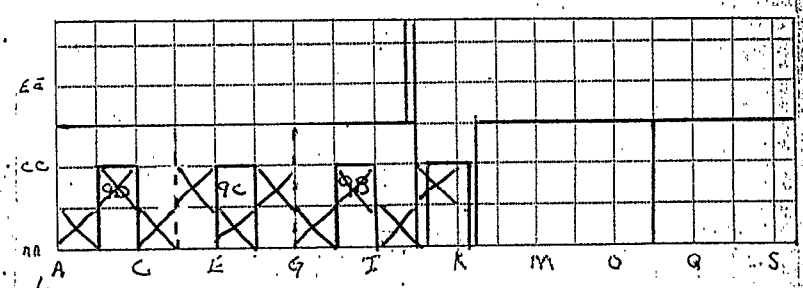
BLDG 14 AREA 9
WEST WALL



West wall of Main area 9 LAB AREA NOT small offices

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

MAIN

SURVEY # 1602

Survey Date: 6/23/98
Location: BLDG 14 AREA 9 EAST WALL
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 #03025	L2221 #96308
Detector Model & s/n:	44-65 #[illegible]	44-9 #97683
Calibration Date:	8-22-97	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1min	1min
SAMPLE COUNT TIME (MIN)	1min	1min

RP Technician:

GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
K 18	AA A	BLOCK (EAST WALL)		81
	B			74
	C			67
	D			91
	E			99
L 18	BB A			86
	B			52
	C			109
	D			122
	E			115
M 18	AA A			81
	B			69
	C			74
	D			76
	E			73
N 18	BB A			58
	B			50
	C			53
	D			62
	E			75
O 18	AA A		1	89
	B		1	59
	C		0	78
	D		1	66
	E		1	81
	E	DUPLICATE		70
P 18	BB A	BLOCK		52
	B			65
	C			77
	D			84
	E			70
Q 18	AA A			68
	B			85
	C			79
	D			54
	E			75
R 18	BB A			60
	B			80
	C			58
	D			78
	E			64
S 18	AA A		0	64
	B		0	86
	C		1	79
	D		1	79
	E		0	73
	E	DUPLICATE	1	81

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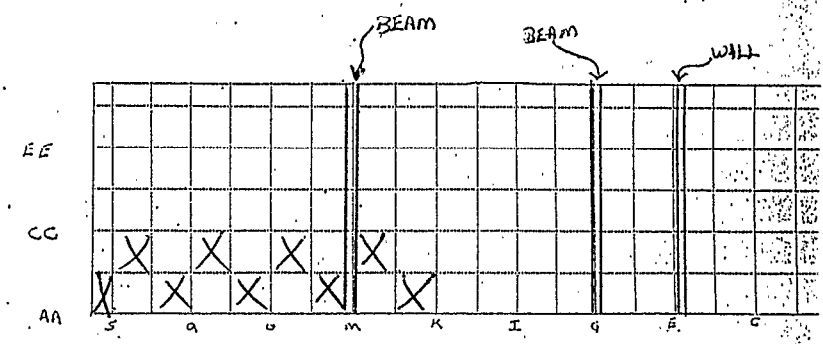
BLDG 14 AREA 9
EAST WALL



ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

~~#1597~~ #1603

9A 9 LAB

ANALYSIS DATE: 6-24-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9A

Verification Survey

W. Jostre

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	AA-0	SOUTH WALL	A	0				A			
21	AA-0		BG	55				BG			
22	AA-2		A	0				A			
22	AA-2		BG	48				BG			
23	BB-1		A	1				A			
23	BB-1		BG	49				BG			
24	AA-1	NORTH WALL	A	0				A			
24	AA-1		BG	61				BG			
25	BB-0		A	0				A			
25	BB-0		BG	57				BG			
26	BB-2		A	1				A			
26	BB-2		BG	45				BG			
27			A					A			
27			BG					BG			
28			A					A			
28			BG					BG			
29			A					A			
29			BG					BG			
30			A					A			
30			BG					BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.28 cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.32 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	335	800	0.42	6-30-98
Beta-Gamma	[illegible]	800	[illegible]	[illegible]

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1605

9C

9 LAB

ANALYSIS DATE: 6-24-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9-C

Verification Survey

W. JESKE

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	C-0	FLOOR 9-C	A					A			
21	C-0		BG					BG			
22	E-0		A					A			
22	E-0		BG					BG			
23	D-1		A					A			
23	D-1		BG					BG			
24	F-1		A					A			
24	F-1		BG					BG			
25	E-2		A					A			
25	E-2		BG					BG			
26	D-0	CEILING 9-C	A	2				A			
26	D-0		BG	43				BG			
27	F-0		A	1				A			
27	F-0		BG	60				BG			
28	C-1		A	1				A			
28	C-1		BG	53				BG			
29	E-1		A	1				A			
29	E-1		BG	52				BG			
30	D-2		A	1				A			
30	D-2		BG	50				BG			
C 21 -	AA-E	WEST WALL 9-C	A	1				A			
C 21 -	AA-E		BG	69				BG			
C 22 -	CC-E		A	1				A			
C 22 -	CC-E		BG	56				BG			
D 23 -	BB-E		A	1				A			
D 23 -	BB-E		BG	60				BG			
E 24 -	AA-E		A	0				A			
E 24 -	AA-E		BG	56				BG			
E 25 -	CC-E		A	1				A			
E 25 -	CC-E		BG	55				BG			
E 26 -	BB-E	EAST WALL 9-C	A	0				A			
E 26 -	BB-E		BG	55				BG			
E 27 -	AA-E		A	2				A			
E 27 -	AA-E		BG	54				BG			
E 28 -	CC-E		A	0				A			
E 28 -	CC-E		BG	56				BG			
D 29 -	BB-E		A	0				A			
D 29 -	BB-E		BG	54				BG			
C 30 -	AA-E		A	1				A			
C 30 -	AA-E		BG	66				BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.28 cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.32 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	335	800	0.42	6-30-98
Beta-Gamma	[illegible]	[illegible]	[illegible]	[illegible]

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1606

9C

9 LAB

ANALYSIS DATE: 6-24-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9-C (Verification Survey) W. Boske

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
F01 -	AA-Q	NORTH WALL	A	0				A			
F01 -	AA-Q		BG	40				BG			
F02 -	CC-Q		A	2				A			
F02 -	CC-Q		BG	49				BG			
F03 -	BB-X		A	0				A			
F03 -	BB-X		BG	55				BG			
F04 -	AA-2		A	1				A			
F04 -	AA-2		BG	62				BG			
F05 -	CC-2		A	1				A			
F05 -	CC-2		BG	65				BG			
C06 -	BB-2	SOUTH WALL	A	3				A			
C06 -	BB-2		BG	61				BG			
C07 -	AA-X		A	1				A			
C07 -	AA-X		BG	43				BG			
C08 -	CC-X		A	2				A			
C08 -	CC-X		BG	47				BG			
C09 -	BB-Q		A	0				A			
C09 -	BB-Q		BG	50				BG			
30			A					A			
30			BG					BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.28 cpm / dpm based on S/Y90
Efficiency A (Alpha):	[illegible]

Background	Counts	Ct Time (min)	Rb	Date
Alpha	335	800	0.42	6-30-98
	1442		55	

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

MAIN

SURVEY # 1624

Survey Date: 6/24/98 LAB V
Location: BLDG 14 Area 9 SOUTH WALL
Description: VERIFICATION

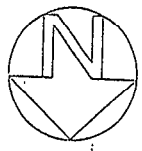
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #93028	L2221 #86308
Detector Model & s/n:	43-65 #089012	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

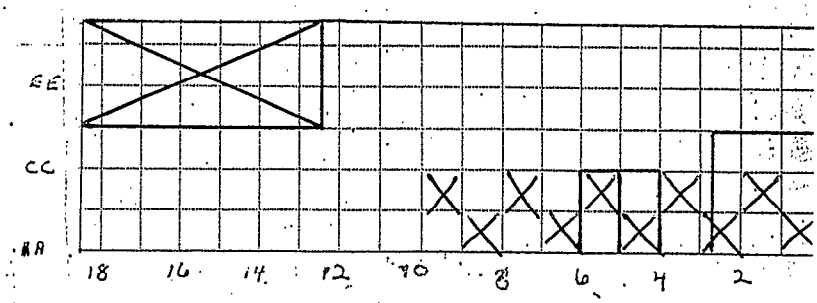
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1MIN.	1MIN.
SAMPLE COUNT TIME (MIN)	1MIN.	1MIN.

RP Technician: [illegible]

GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A-0-AA A	BLOCK - South Wall		78
B			81
C			102
D			115
E			109
A-1-BB A			91
B			83
C			64
D			62
E			73
A-2-AA A			85
B			96
C			101
D			75
E			89
A-3-BB A			107
B			88
C			91
D			122
E			114
A-4-AA A	DOOR-Lg. HALLWAY	1	91
B		1	88
C		1	72
D		0	65
E		0	67
E	DUPLICATE	1	75
A-5-BB A	DOOR Lg HALLWAY		89
B			97
C			109
D			118
E			111
A-6-AA A	BLOCK		71
B			80
C			82
D			74
E			86
A-7-BB A			69
B			75
C			99
D			97
E			114
A-8-AA A			63
B			91
C			66
D			82
E			79
A-9-BB A		0	78
B		0	91
C		0	79
D		1	96
E		0	128
E	DUPLICATE	0	119



BLDG 14 AREA 9
SOUTH WALL



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

MAIN WALLS

SURVEY #1625

Survey Date: 6/24/98 LAB
Location: BLDG 14 Area 9A NORTH WALL
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:	ESRI #03028	1221 #86304
Detector Model & s/n:	43-65 #189982	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency [Tc99] [SY90] [TH230]	.148	.29
Detector Area (CM2)	50	15.5

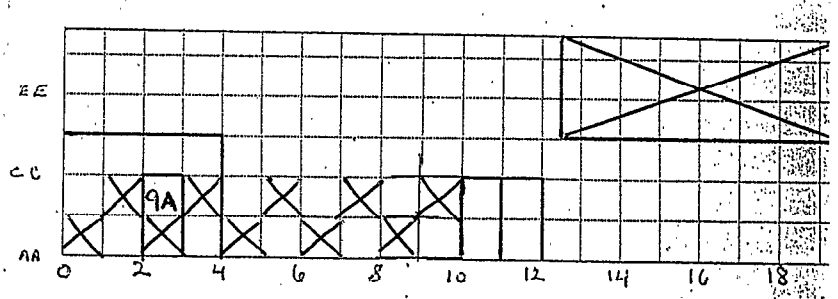
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

RP Technician:

	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	0-AA A	Block - N. Wall		86
2	B			63
3	C			72
4	D			94
5	E			112
6	1-BB A			123
7	B			104
8	C			84
9	D			73
10	E			86
11	2-AA A	Door - 9A		80
12	B			72
13	C			65
14	D			54
15	E			69
16	3-BB A	Block		114
17	B			120
18	C			98
19	D			111
20	E			88
21	4-AA A		1	76
22	B		1	84
23	C		1	93
24	D		0	100
25	E		0	87
26	E	Duplicate	0	93
27	5-BB A	Block		64
28	B			79
29	C			62
30	D			55
31	E			58
32	6-AA A			67
33	B			84
34	C			73
35	D			109
36	E			115
37	7-BB A			66
38	B			59
39	C			71
40	D			85
41	E			95
42	8-AA A			103
43	B			121
44	C			118
45	D			72
46	E			85
47	9-BB A		0	76
48	B		1	112
49	C		1	80
50	D		0	94
	F		1	118
	E	Duplicate	1	124

BLDG 14 AREA 9

NORTH WALL



SURVEY01.XLS

PAGE

MAIN

...OLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY # 1626

Date: 6/24/98 LAB

Location: BLDG 14 AREA 9 WEST WALL

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 #3505	C227 #86308
Detector Model & s/n:	43-65 #38982	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 min	1 min
SAMPLE COUNT TIME (MIN)	1 min.	1 min

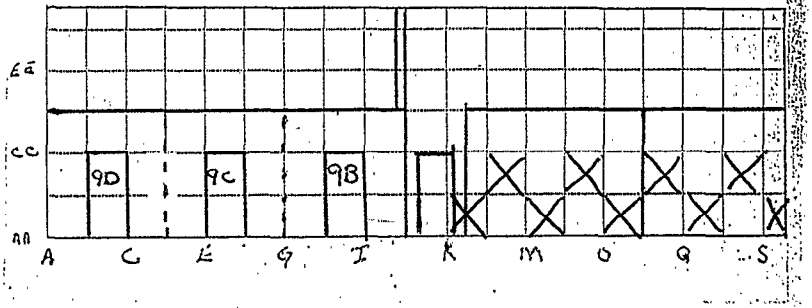
RP Technician: [illegible]

GRID			DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
L	BB	A	BLOCK W. Wall		86
		B			59
		C			83
		D			72
		E			66
L	AA	A			51
		B			78
		C			104
		D			117
		E			123
M	AA	A			100
		B			81
		C			97
		D			86
		E			103
N	BB	A		1	70
		B		0	81
		C		0	96
		D		1	122
		E		0	75
		E	DUPLICATE	0	67
O	AA	A	BLOCK		78
		B			99
		C			69
		D			64
		E			68
P	BB	A			83
		B			62
		C			54
		D			88
		E			77
Q	AA	A			68
		B			87
		C			112
		D			64
		E			73
R	BB	A		1	85
		B		1	101
		C		8	74
		D			88
		E		0	92
		E	DUPLICATE	1	84
S	AA	A	BLOCK		97
		B			85
		C			63
		D			57
		E			56

N →

BLDG 14 AREA 9

WEST WALL



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

9D

SURVEY # 1627

Survey Date: 6/24/98
Location: BLDG 14 AREA 9-D LAB NORTH/SOUTH WALLS
Description: Verification

	alpha	beta-gamma
Instrument Model & s/n:	ESA-1 #03028	L2221 #86308
Detector Model & s/n:	43-65 #089812	44-9 #37683
Calibration Date:	8-22-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.48 .29	.29
Detector Area (CM2)	50	15.5

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

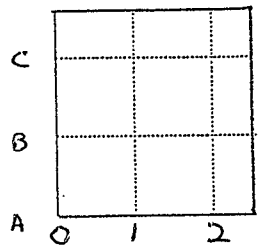
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

RP Technician: [signature]

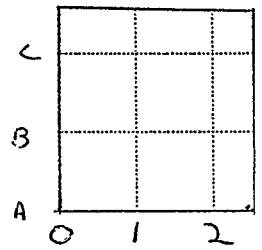
BLDG 14 AREA 9-D

	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
C-0	AA-0	A	NORTH WALL		111
		B			102
		C			83
		D			96
		E			78
C-0	CC-0	A			85
		B			99
		C			122
		D			91
		E			80
C-1	BB-1	A			74
		B			77
		C			87
		D			77
		E			79
C-2	AA-2	A			69
		B			112
		C			120
		D			58
		E			86
C-2	CC-2	A		1	71
		B		1	91
		C		0	84
		D		2	93
		E		1	101
		E	DUPLICATE	0	109
A-0	BB-2	A	SOUTH WALL		83
		B			67
		C			62
		D			65
		E			56
A-1	AA-1	A			61
		B			51
		C			82
		D			94
		E			119
A-1	CC-1	A			100
		B			72
		C			68
		D			79
		E			52
A-2	BB-0	A		0	66
		B		2	90
		C		0	102
		D		1	71
		E		1	64
		E	Duplicate	0	72

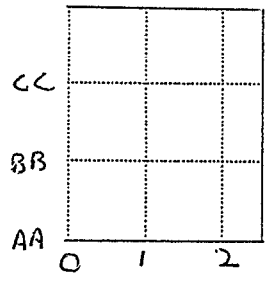
FLOOR



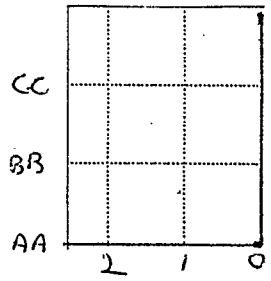
CEILING



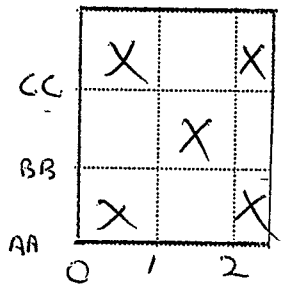
W. WALL



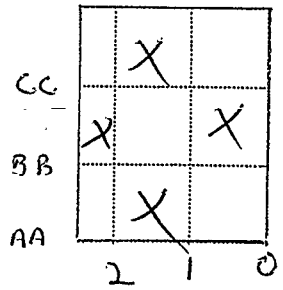
E. WALL



N. WALL



S. WALL



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

9D

SURVEY #1628

Survey Date: 6/25/98
Location: BLDG 14 Area 9-D LAB EAST/WEST WALLS
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 #03027	L2221 #86308
Detector Model & s/n:	43-65 #08982	44-9 #37683
Calibration Date:	8-22-97	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

RP Technician: [signature]

BLDG 14 AREA 9-D

#	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A-	AA-0 A	West wall		94
	B			81
	C			121
	D			118
	E			111
A-	CC-0 A			76
	B			79
	C			75
	D			84
	E			59
B-	BB-1 A			63
	B			67
	C			61
	D			69
	E			84
C-	AA-2 A			102
	B			93
	C			85
	D			72
	E			66
C-	CC-2 A		1	57
	B		0	89
	C		0	92
	D		0	84
	E		0	92
	E	DUPLICATE	1	109
C-	BB-2 A	EAST WALL		115
	B			83
	C			65
	D			97
	E			104
B-	AA-1 A			82
	B			71
	C			64
	D			112
	E			93
B-	CC-1 A			54
	B			68
	C			71
	D			94
	E			102
A-	BB-0 A		0	102
	B		0	88
	C		0	97
	D		0	66
	E		0	76
	E	Duplicate	1	84
				93

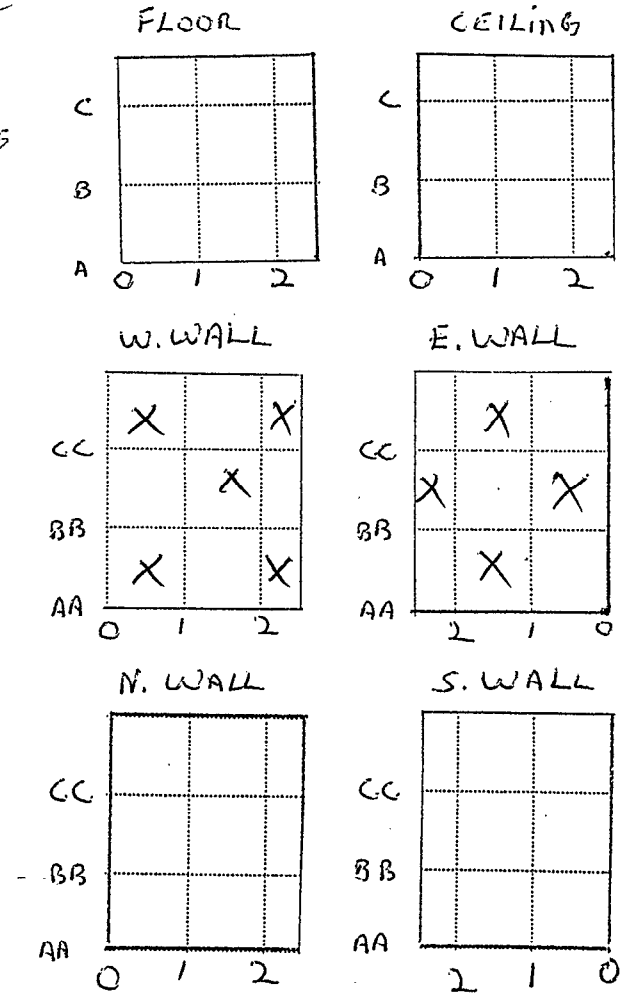
NK 7/9/98

AO-AA

AO-CC

BO-BB

CO-AA



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

MAIN

SURVEY # 1629

Survey Date: 6/25/98 LAB
Location: BLDG 14 AREA 9A SOUTH WALL
Description: VERIFICATION

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

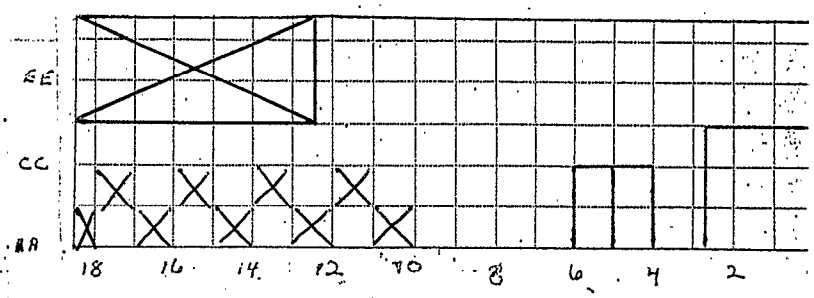
	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #93028	LB221 #86308
Detector Model & s/n:	43-65 #089872	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

RP Technician: W.

GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A-10-AA A	BLOCK S. Wall		73
B			96
C			102
D			114
E			59
A-11-BB A			61
B			58
C			73
D			85
E			122
A-12-AA A			114
B			61
C			87
D			73
E			98
A-13-BB A			92
B			101
C			109
D			56
E			63
A-14-AA A		2	118
B		0	80
C		0	71
D		1	92
E		1	81
E	DUPLICATE	1	90
A-15-BB A			88
B			62
C			112
D			97
E			101
A-16-AA A			94
B			77
C			89
D			57
E			55
A-17-BB A			88
B			62
C			67
D			65
E			123
A-18-AA A		1	89
B		0	54
C		0	76
D		1	63
E		1	99
E	DUPLICATE	2	111

BLDG 14 AREA 9
SOUTH WALL



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

9B

SURVEY # 1634

Survey Date: 6/25/98
Location: BLDG 14 AREA 9-B WEST/EAST WALLS
Description:

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

VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	L2221 #86308
Detector Model, & s/n:	43-65 #08982	44-9 #37683
Calibration Date:	8-12-98	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

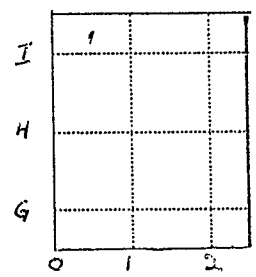
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1min.	1min.
SAMPLE COUNT TIME (MIN)	1min.	1min.

RP Technician:

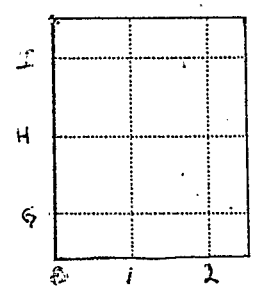
BLDG 14 AREA 9-B

GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
0 BB-F	A	W. WALL		73
	B			86
	C			92
	D			82
	E			54
0 AA-G	A			58
	B			65
	C			74
	D			83
	E			129
0 CC-G	A			101
	B			93
	C			86
	D			55
	E			62
0 BB-H	A			75
	B			84
	C			91
	D			98
	E			72
0 AA-I	A		0	78
	B		0	84
	C		0	93
	D		1	71
	E		0	65
	E	DUPLICATE	1	53
2 CC-I	A	E. WALL		86
	B			97
	C			87
	D			74
	E			83
2 BB-H	A			58
	B			62
	C			74
	D			96
	E			71
2 AA-G	A			118
	B			63
	C			81
	D			75
	E			118
2 CC-G	A			104
	B			96
	C			122
	D			77
	E			89
2 BB-F	A		1	92
	B		0	81
	C		0	66
	D		2	64
	E		1	68
	E	DUPLICATE	1	73

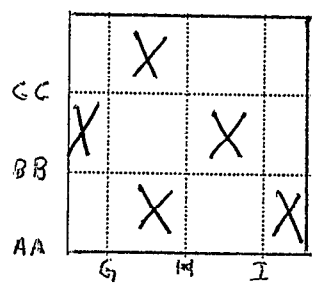
FLOOR



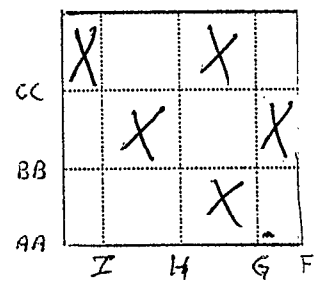
CEILING



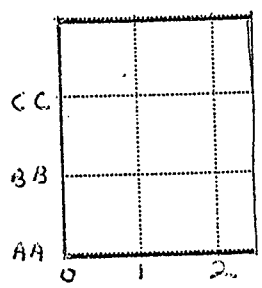
W. WALL



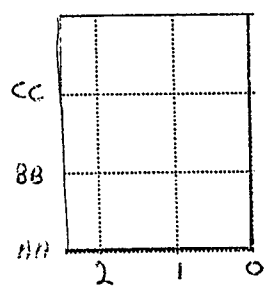
E. WALL



N. WALL



S. WALL



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

9B

SURVEY # 1635

Survey Date: 6/25/98
Location: BLDG 14 AREA 9-B NORTH/SOUTH WALLS
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP1 #03228	L2221 #86308
Detector Model & s/n:	43-65 #088912	44-9 #39683
Calibration Date:	8-22-97	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

RP Technician: WY

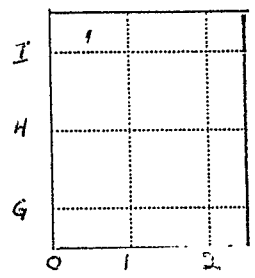
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

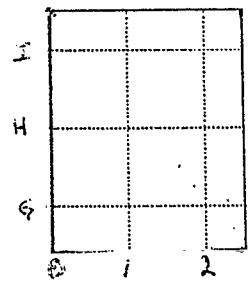
BLDG 14 AREA 9-B

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	AA-0	A	NORTH WALL		93
		B			121
		C			80
		D			79
		E			94
2	CC-0	A			86
		B			100
		C			82
		D			101
		E			80
3	BB-1	A			56
		B			62
		C			68
		D			73
		E			81
4	AA-2	A			97
		B			107
		C			116
		D			120
		E			94
5	CC-2	A		1	83
		B		0	72
		C		2	68
		D		1	63
		E		0	91
		E	DUPLICATE	0	111
6	BB-2	A	SOUTH WALL		81
		B			92
		C			114
		D			57
		E			64
7	AA-1	A			58
		B			58
		C			93
		D			100
		E			91
8	CC-1	A			84
		B			81
		C			75
		D			70
		E			78
9	BB-0	A		2	69
		B		1	82
		C		0	95
		D		0	80
		E		1	65
		E	DUPLICATE	1	59
					53

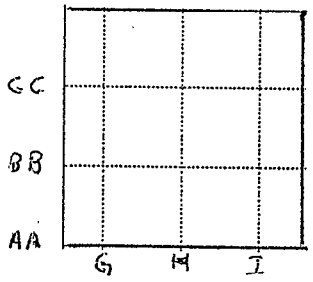
FLOOR



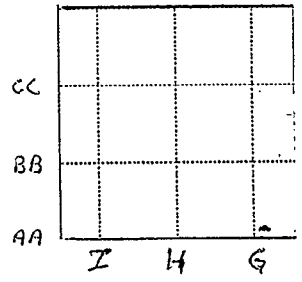
CEILING



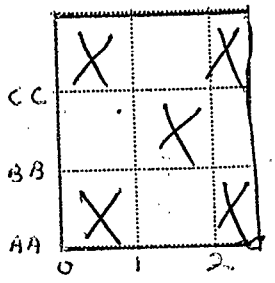
W. WALL



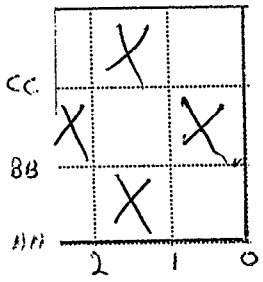
E. WALL



N. WALL



S. WALL



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

9C

SURVEY #1636

Survey Date: 6/29/98
Location: BLDG 14 AREA 9-C WEST/EAST WALLS
Description: VERIFICATION

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

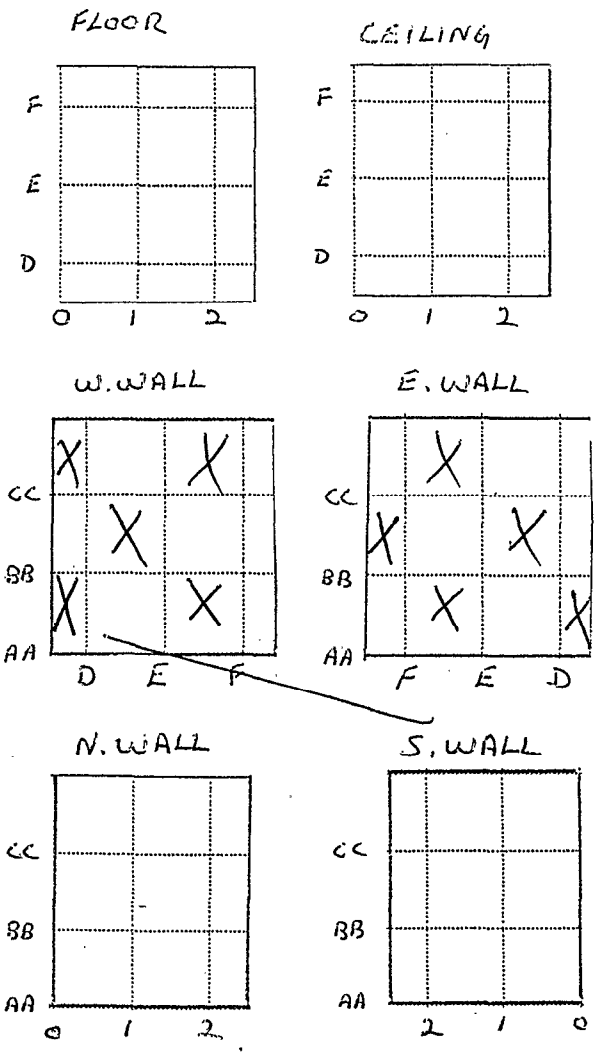
	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	LB121 #86308
Detector Model & s/n:	43-65 #08982	44-9 #37683
Calibration Date:	8-22-97	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	155

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician:

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
0	AA-C	A	WEST WALL		84
		B			61
		C			73
		D			92
		E			101
0	CC-C	A			110
		B			51
		C			59
		D			86
		E			87
0	BB-D	A			93
		B			99
		C			95
		D			105
		E			81
0	AA-E	A			79
		B			72
		C			68
		D			74
		E			81
0	CC-E	A		2	69
		B		0	56
		C		1	61
		D		2	59
		E		1	83
		F	DUPLICATE	1	71
2	BB-F	A	EAST WALL		92
		B			89
		C			79
		D			85
		E			116
2	AA-E	A			80
		B			71
		C			83
		D			122
		E			86
2	CC-E	A			69
		B			73
		C			120
		D			111
		E			99
2	BB-D	A			102
		B			80
		C			94
		D			63
		E			96
2	AA-C	A		0	81
		B		0	85
		C		0	52
		D		1	106
		E		1	104
		F	DUPLICATE	1	110

BLDG 14 AREA 9-C



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1637 9C

Survey Date: 6/29/98
Location: BLDG 14 Area 9-C NORTH/SOUTH WALLS
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:	ESA1 #9308	L2221 #86308
Detector Model & s/n:	43-65 #089812	44-9 #37693
Calibration Date:	8-22-98	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.27
Detector Area (CM2)	50	155

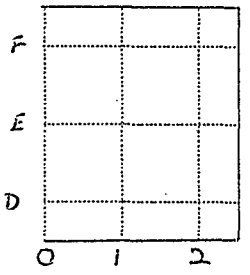
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS		
BACKGROUND COUNT TIME (MIN)		
SAMPLE COUNT TIME (MIN)		

RP Technician: V.

BLDG 14 AREA 9-C

S	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
E	AA-2	A	NORTH WALL		51
		B			67
		C			93
		D			81
		E			96
E	CC-0	A			94
		B			81
		C			87
		D			85
		E			98
E	BB-1	A			71
		B			82
		C			68
		D			68
		E			76
E	AA-2	A			78
		B			76
		C			104
		D			79
		E			56
E	CC-2	A		1	62
		B		1	84
		C		0	93
		D		2	101
		E		1	90
		E	DUPLICATE	1	86
C	BB-2	A	SOUTH WALL		79
		B			59
		C			64
		D			78
		E			84
C	AA-1	A			91
		B			115
		C			122
		D			68
		E			77
C	CC-1	A			80
		B			118
		C			87
		D			92
		E			51
C	BB-0	A		3	69
		B		0	91
		C		0	119
		D		1	111
		E		1	95
		E	DUPLICATE	0	82

FLOOR



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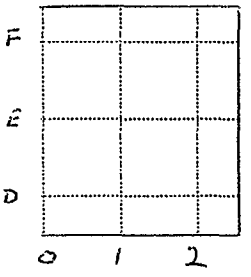
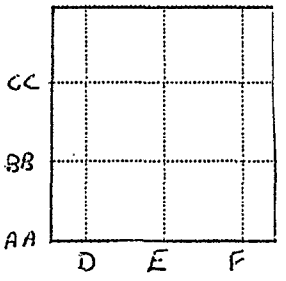
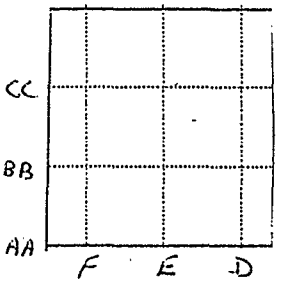


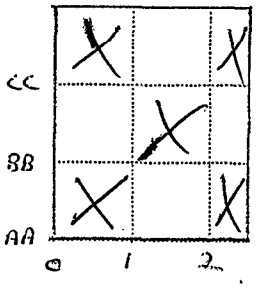
W. WALL



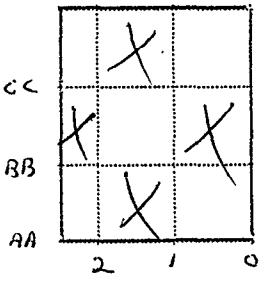
E. WALL



N. WALL



S. WALL



SURVEY01.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1638

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9A

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	K-0	FLOOR - 9A	A	0				A			
21	K-0		BG	68				BG			
22	K-2		A	0				A			
22	K-2		BG	47				BG			
23	L-1		A	2				A			
23	L-1		BG	41				BG			
24	M-0		A	2				A			
24	M-0		BG	51				BG			
25	M-2		A	1				A			
25	M-2		BG	67				BG			
26	N-1		A	1				A			
26	N-1		BG	58				BG			
27	O-0		A	1				A			
27	O-0		BG	56				BG			
28	O-2		A	0				A			
28	O-2		BG	46				BG			
29			A					A			
29			BG					BG			
30			A					A			
30			BG					BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n: M.2929 s/n 50718
Detector Model & s/n: M.43-10-1 s/n 041713
Calibration Date: 10-9-97
Efficiency BG (Beta/Gamma): 0.29 cpm / dpm based on S/Y90

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

1639

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9-B

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	F-0	FLOOR 9-B	A	0				A			
21	F-0		BG	55				BG			
22	G-1		A	0				A			
22	G-1		BG	51				BG			
23	H-0		A	1				A			
23	H-0		BG	52				BG			
24	H-2		A	0				A			
24	H-2		BG	51				BG			
25	I-1		A	1				A			
25	I-1		BG	60				BG			
26			A					A			
26			BG					BG			
27			A					A			
27			BG					BG			
28			A					A			
28			BG					BG			
29			A					A			
29			BG					BG			
30			A					A			
30			BG					BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	10.00	0.37	7-2-98

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1640

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9C

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	C-0	FLOOR - 9C	A	2				A			
21	C-0		BG	56				BG			
22	E-0		A	0				A			
22	E-0		BG	49				BG			
23	D-1		A	0				A			
23	D-1		BG	48				BG			
24	F-1		A	1				A			
24	F-1		BG	57				BG			
25	E-2		A	1				A			
25	E-2		BG	51				BG			
26			A					A			
26			BG					BG			
27			A					A			
27			BG					BG			
28			A					A			
28			BG					BG			
29			A					A			
29			BG					BG			
30			A					A			
30			BG					BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	60/60	0.37	17-2-98

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1641

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9D

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	A-0	FLOOR 9D	A	1				A			
21	A-0		BG	56				BG			
22	C-0		A	1				A			
22	C-0		BG	58				BG			
23	B-1		A	0				A			
23	B-1		BG	54				BG			
24	A-2		A	1				A			
24	A-2		BG	52				BG			
25	C-2		A	0				A			
25	C-2		BG	60				BG			
26			A					A			
26			BG					BG			
27			A					A			
27			BG					BG			
28			A					A			
28			BG					BG			
29			A					A			
29			BG					BG			
30			A					A			
30			BG					BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1642

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR (Verification Survey) D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	A-0	FLOOR	A	0				A			
21	A-0		BG	42				BG			
22	A-2		A	0				A			
22	A-2		BG	46				BG			
23	A-4		A	2				A			
23	A-4		BG	41				BG			
24	A-6		A	1				A			
24	A-6		BG	66				BG			
25	A-8		A	0				A			
25	A-8		BG	47				BG			
26	A-10		A	1				A			
26	A-10		BG	54				BG			
27	A-12		A	0				A			
27	A-12		BG	56				BG			
28	A-14		A	0				A			
28	A-14		BG	56				BG			
29	A-16		A	0				A			
29	A-16		BG	39				BG			
30	A-18		A	1				A			
30	A-18		BG	60				BG			
31	B-1		A	1				A			
31	B-1		BG	58				BG			
32	B-3		A	0				A			
32	B-3		BG	70				BG			
33	B-5		A	3				A			
33	B-5		BG	48				BG			
34	B-7		A	0				A			
34	B-7		BG	63				BG			
35	B-9		A	0				A			
35	B-9		BG	71				BG			
36	B-11		A	0				A			
36	B-11		BG	56				BG			
37	B-13		A	0				A			
37	B-13		BG	55				BG			
38	B-15		A	1				A			
38	B-15		BG	63				BG			
39	B-17		A	0				A			
39	B-17		BG	54				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.29	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98
Beta-Gamma	[illegible]	[illegible]	[illegible]	7-2-98

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1643

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR

Verification Survey

D. BITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	C-0	FLOOR	A	1				A			
21	C-0		BG	44				BG			
22	C-2		A	0				A			
22	C-2		BG	77				BG			
23	C-4		A	0				A			
23	C-4		BG	66				BG			
24	C-6		A	0				A			
24	C-6		BG	47				BG			
25	C-8		A	0				A			
25	C-8		BG	62				BG			
26	C-10		A	1				A			
26	C-10		BG	55				BG			
27	C-12		A	1				A			
27	C-12		BG	69				BG			
28	C-14		A	0				A			
28	C-14		BG	44				BG			
29	C-16		A	0				A			
29	C-16		BG	57				BG			
30	C-18		A	0				A			
30	C-18		BG	55				BG			
31	D-1		A	0				A			
31	D-1		BG	49				BG			
32	D-3		A	1				A			
32	D-3		BG	58				BG			
33	D-5		A	1				A			
33	D-5		BG	45				BG			
34	D-7		A	0				A			
34	D-7		BG	53				BG			
35	D-9		A	0				A			
35	D-9		BG	53				BG			
36	D-11		A	0				A			
36	D-11		BG	42				BG			
37	D-13		A	0				A			
37	D-13		BG	49				BG			
38	D-15		A	1				A			
38	D-15		BG	50				BG			
39	D-17		A	0				A			
39	D-17		BG	50				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.29	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.32	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98
Beta-Gamma	35576	660	54	7-2-98

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1644

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR

Verification Survey

D. BITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	E-0	FLOOR	A	0				A			
21	E-0		BG	65				BG			
22	E-2		A	0				A			
22	E-2		BG	53				BG			
23	E-4		A	0				A			
23	E-4		BG	52				BG			
24	E-6		A	1				A			
24	E-6		BG	48				BG			
25	E-8		A	0				A			
25	E-8		BG	53				BG			
26	E-10		A	1				A			
26	E-10		BG	60				BG			
27	E-12		A	0				A			
27	E-12		BG	48				BG			
28	E-14		A	1				A			
28	E-14		BG	40				BG			
29	E-16		A	0				A			
29	E-16		BG	58				BG			
30	E-18		A	0				A			
30	E-18		BG	58				BG			
31	F-1		A	0				A			
31	F-1		BG	59				BG			
32	F-3		A	0				A			
32	F-3		BG	50				BG			
33	F-5		A	0				A			
33	F-5		BG	61				BG			
34	F-7		A	0				A			
34	F-7		BG	53				BG			
35	F-9		A	1				A			
35	F-9		BG	50				BG			
36	F-11		A	1				A			
36	F-11		BG	65				BG			
37	F13		A	1				A			
37	F-13		BG	65				BG			
38	F-15		A	1				A			
38	F-15		BG	52				BG			
39	F-17		A	0				A			
39	F-17		BG	52				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	600	0.37	7-2-98
Beta-Gamma	35525	600	54	7-2-98

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1645

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR

Verification Survey

D.P. ITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	G-0	FLOOR	A	2				A			
21	G-0		BG	55				BG			
22	G-2		A	0				A			
22	G-2		BG	44				BG			
23	G-4		A	0				A			
23	G-4		BG	59				BG			
24	G-6		A	0				A			
24	G-6		BG	76				BG			
25	G-8		A	1				A			
25	G-8		BG	54				BG			
26	G-10		A	0				A			
26	G-10		BG	47				BG			
27	G-12		A	0				A			
27	G-12		BG	40				BG			
28	G-14		A	0				A			
28	G-14		BG	78				BG			
29	G-16		A	0				A			
29	G-16		BG	39				BG			
30	G-18		A	0				A			
30	G-18		BG	63				BG			
31	H-1		A	0				A			
31	H-1		BG	52				BG			
32	H-3		A	1				A			
32	H-3		BG	56				BG			
33	H-5		A	1				A			
33	H-5		BG	45				BG			
34	H-7		A	0				A			
34	H-7		BG	49				BG			
35	H-9		A	1				A			
35	H-9		BG	50				BG			
36	H-11		A	0				A			
36	H-11		BG	54				BG			
37	H-13		A	1				A			
37	H-13		BG	57				BG			
38	H-15		A	0				A			
38	H-15		BG	56				BG			
39	H-17		A	0				A			
39	H-17		BG	48				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.29	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.33	cpm / dpm based on Th230

Background	Counts	Ct. Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98
Beta-Gamma	35578	660	54	7-2-98

SWIPE.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1646

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR (Verification Survey)

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	I-0	FLOOR	A	1				A			
21	I-0		BG	51				BG			
22	I-2		A	0				A			
22	I-2		BG	59				BG			
23	I-4		A	0				A			
23	I-4		BG	54				BG			
24	I-6		A	1				A			
24	I-6		BG	54				BG			
25	I-8		A	0				A			
25	I-8		BG	63				BG			
26	I-10		A	2				A			
26	I-10		BG	67				BG			
27	I-12		A	2				A			
27	I-12		BG	56				BG			
28	I-14		A	0				A			
28	I-14		BG	52				BG			
29	I-16		A	0				A			
29	I-16		BG	56				BG			
30	I-18		A	0				A			
30	I-18		BG	45				BG			
31	J-1		A	0				A			
31	J-1		BG	64				BG			
32	J-3		A	1				A			
32	J-3		BG	56				BG			
33	J-5		A	0				A			
33	J-5		BG	58				BG			
34	J-7		A	0				A			
34	J-7		BG	59				BG			
35	J-9		A	1				A			
35	J-9		BG	53				BG			
36	J-11		A	0				A			
36	J-11		BG	67				BG			
37	J-13		A	0				A			
37	J-13		BG	48				BG			
38	J-15		A	1				A			
38	J-15		BG	61				BG			
39	J-17		A	1				A			
39	J-17		BG	62				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.29	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98
Beta-Gamma	35578	660	54	7-2-98

SWIPE.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#.1647

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR (Verification Survey)

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	K-0	FLOOR	A	0				A			
21	K-0		BG	52				BG			
22	K-2		A	0				A			
22	K-2		BG	57				BG			
23	K-4		A	0				A			
23	K-4		BG	65				BG			
24	K-6		A	1				A			
24	K-6		BG	49				BG			
25	K-8		A	0				A			
25	K-8		BG	38				BG			
26	K-10		A	1				A			
26	K-10		BG	49				BG			
27	K-12		A	0				A			
27	K-12		BG	53				BG			
28	K-14		A	0				A			
28	K-14		BG	60				BG			
29	K-16		A	0				A			
29	K-16		BG	50				BG			
30	K-18		A	0				A			
30	K-18		BG	38				BG			
31	L-1		A	1				A			
31	L-1		BG	53				BG			
32	L-3		A	0				A			
32	L-3		BG	56				BG			
33	L-5		A	0				A			
33	L-5		BG	82				BG			
34	L-7		A	0				A			
34	L-7		BG	62				BG			
35	L-9		A	0				A			
35	L-9		BG	43				BG			
36	L-11		A	0				A			
36	L-11		BG	57				BG			
37	L-13		A	0				A			
37	L-13		BG	45				BG			
38	L-15		A	1				A			
38	L-15		BG	54				BG			
39	L-17		A	0				A			
39	L-17		BG	44				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.29	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98
Beta-Gamma	35578	660	54	7-2-98

SWIPE.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1648

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR (Verification Survey)

D. RITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	M-0	FLOOR	A	0				A			
21	M-0		BG	54				BG			
22	M-2		A	1				A			
22	M-2		BG	57				BG			
23	M-4		A	0				A			
23	M-4		BG	46				BG			
24	M-6		A	0				A			
24	M-6		BG	59				BG			
25	M-8		A	0				A			
25	M-8		BG	48				BG			
26	M-10		A	0				A			
26	M-10		BG	62				BG			
27	M-12		A	0				A			
27	M-12		BG	42				BG			
28	M-14		A	0				A			
28	M-14		BG	52				BG			
29	M-16		A	0				A			
29	M-16		BG	43				BG			
30	M-18		A	1				A			
30	M-18		BG	53				BG			
31	N-1		A	1				A			
31	N-1		BG	44				BG			
32	N-3		A	0				A			
32	N-3		BG	50				BG			
33	N-5		A	1				A			
33	N-5		BG	51				BG			
34	N-7		A	0				A			
34	N-7		BG	64				BG			
35	N-9		A	0				A			
35	N-9		BG	51				BG			
36	N-11		A	0				A			
36	N-11		BG	57				BG			
37	N-13		A	0				A			
37	N-13		BG	62				BG			
38	N-15		A	0				A			
38	N-15		BG	44				BG			
39	N-17		A	1				A			
39	N-17		BG	47				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.29	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98
Beta-Gamma	35578	660	54	7-2-98

SWIPE.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1649

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	O-0	FLOOR	A	1				A			
21	O-0		BG	54				BG			
22	O-2		A	1				A			
22	O-2		BG	52				BG			
23	O-4		A	0				A			
23	O-4		BG	46				BG			
24	O-6		A	0				A			
24	O-6		BG	46				BG			
25	O-8		A	0				A			
25	O-8		BG	58				BG			
26	O-10		A	2				A			
26	O-10		BG	58				BG			
27	O-12		A	0				A			
27	O-12		BG	45				BG			
28	O-14		A	0				A			
28	O-14		BG	51				BG			
29	O-16		A	1				A			
29	O-16		BG	50				BG			
30	O-18		A	1				A			
30	O-18		BG	58				BG			
31	P-1		A	0				A			
31	P-1		BG	54				BG			
32	P-3		A	0				A			
32	P-3		BG	56				BG			
33	P-5		A	0				A			
33	P-5		BG	59				BG			
34	P-7		A	0				A			
34	P-7		BG	59				BG			
35	P-9		A	0				A			
35	P-9		BG	50				BG			
36	P-11		A	0				A			
36	P-11		BG	53				BG			
37	P-13		A	0				A			
37	P-13		BG	44				BG			
38	P-15		A	1				A			
38	P-15		BG	53				BG			
39	P-17		A	1				A			
39	P-17		BG	48				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98
Beta-Gamma	35578	660	54	7-2-98

SWIPE.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1650

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR

Verification Survey

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	Q-0	FLOOR	A	1				A			
21	Q-0		BG	38				BG			
22	Q-2		A	0				A			
22	Q-2		BG	65				BG			
23	Q-4		A	0				A			
23	Q-4		BG	58				BG			
24	Q-6		A	0				A			
24	Q-6		BG	52				BG			
25	Q-8		A	1				A			
25	Q-8		BG	60				BG			
26	Q-10		A	1				A			
26	Q-10		BG	49				BG			
27	Q-12		A	0				A			
27	Q-12		BG	49				BG			
28	Q-14		A	0				A			
28	Q-14		BG	58				BG			
29	Q-16		A	1				A			
29	Q-16		BG	58				BG			
30	Q-18		A	0				A			
30	Q-18		BG	60				BG			
31	R-1		A	1				A			
31	R-1		BG	45				BG			
32	R-3		A	0				A			
32	R-3		BG	52				BG			
33	R-5		A	0				A			
33	R-5		BG	54				BG			
34	R-7		A	0				A			
34	R-7		BG	47				BG			
35	R-9		A	0				A			
35	R-9		BG	49				BG			
36	R-11		A	1				A			
36	R-11		BG	35				BG			
37	R-13		A	0				A			
37	R-13		BG	67				BG			
38	R-15		A	1				A			
38	R-15		BG	37				BG			
39	R-17		A	0				A			
39	R-17		BG	57				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.29 cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35 cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98
Beta-Gamma	35578	660	54	7-2-98

SWIPE.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

#1651

ANALYSIS DATE: 7-1-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area 9 FLOOR Verification Survey D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (MIN)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	S-0	FLOOR	A	1				A			
21	S-0		BG	53				BG			
22	S-2		A	0				A			
22	S-2		BG	54				BG			
23	S-4		A	1				A			
23	S-4		BG	68				BG			
24	S-6		A	0				A			
24	S-6		BG	51				BG			
25	S-8		A	1				A			
25	S-8		BG	46				BG			
26	S-10		A	0				A			
26	S-10		BG	60				BG			
27	S-12		A	1				A			
27	S-12		BG	51				BG			
28	S-14		A	0				A			
28	S-14		BG	53				BG			
29	S-16		A	1				A			
29	S-16		BG	57				BG			
30	S-18		A	2				A			
30	S-18		BG	55				BG			
31			A					A			
31			BG					BG			
32			A					A			
32			BG					BG			
33			A					A			
33			BG					BG			
34			A					A			
34			BG					BG			
35			A					A			
35			BG					BG			
36			A					A			
36			BG					BG			
37			A					A			
37			BG					BG			
38			A					A			
38			BG					BG			
39			A					A			
39			BG					BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718	
Detector Model & s/n:	M.43-10-1 s/n 041713	
Calibration Date:	10-9-97	
Efficiency BG (Beta/Gamma):	0.29	cpm / dpm based on S/Y90
Efficiency A (Alpha):	0.35	cpm / dpm based on Th230

Background	Counts	Ct Time (min)	Rb	Date
Alpha	244	660	0.37	7-2-98
Beta-Gamma	35578	660	54	7-2-98

SWIPE.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY # 1660D

Survey Date: 6/30/98
Location: BLDG 14 Area 9 FLOOR
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	L2221 #86308
Detector Model, & s/n:	43-65 #09980	44-9 #37283
Calibration Date:	8-28-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

RP Technician: W.

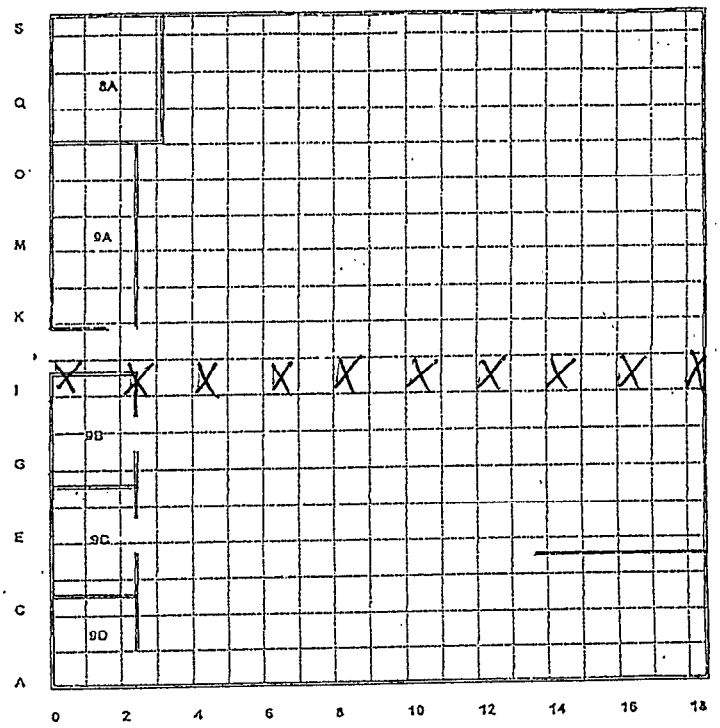
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
L-0	A	FLOOR		97
	B			135
	C			151
	D			114
	E			102
L2	A			76
	B			82
	C			140
	D			83
	E			128
L4	A			86
	B			131
	C			84
	D			99
	E			124
L6	A			130
	B			139
	C			129
	D			150
	E			138
L8	A		3	141
	B		1	124
	C		0	83
	D		2	97
	E		2	117
	E	DUPLICATE	2	112
L10	A	FLOOR		109
	B			101
	C			89
	D			75
	E			122
L12	A			143
	B			116
	C			95
	D			87
	E			93
L14	A			69
	B			77
	C			131
	D			142
	E			118
L16	A			135
	B			79
	C			68
	D			86
	E			91
L18	A		1	131
	B		1	122
	C		1	98
	D		2	117
	E		2	86
	E	DUPLICATE	2	93

Insert area map or sketch below

AREA 9 LAB AND OFFICES



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SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1661

Survey Date: 6/30/98
Location: BLDG 14 AREA 9 FLOOR
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #3325	L221 #86308
Detector Model & s/n:	43-63 #108982	44-9 #37683
Calibration Date:	8-22-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	0.29 .148	1-29-98 .29
Detector Area (CM2)	50	15.5

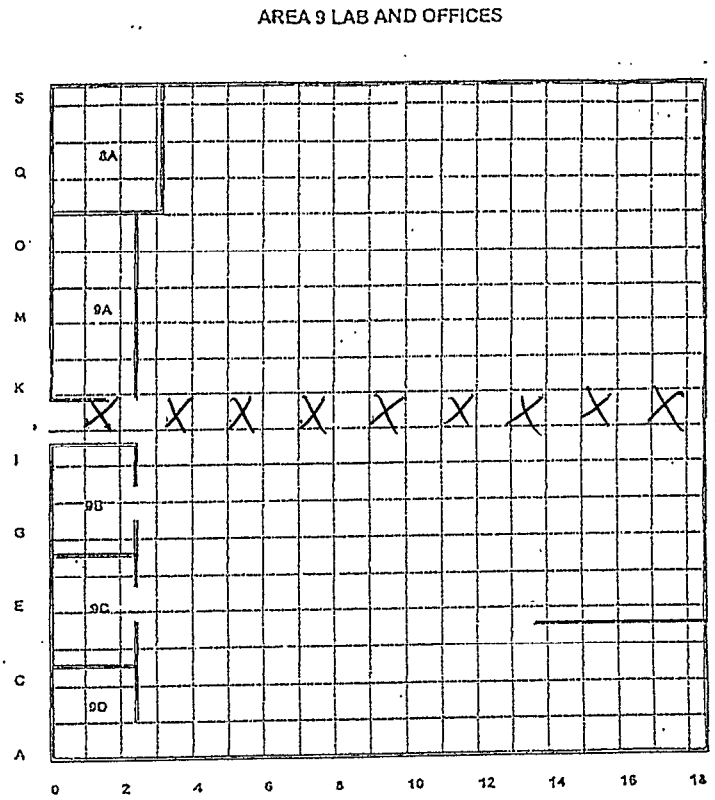
RP Technician: W

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

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
	J-1	A	FLOOR		97
		B			83
		C			149
		D			128
		E			161
	J 3	A			141
		B			133
		C			142
		D			93
		E			99
	J 5	A			114
		B			126
		C			149
		D			151
		E			122
	J 7	A			79
		B			86
		C			92
		D			77
		E			136
	J 9	A		3	118
		B		1	125
		C		0	95
		D		0	91
		E		1	80
		E	DUPLICATE	1	109
	J 11	A	FLOOR		119
		B			101
		C			87
		D			72
		E			78
	J 13	A			99
		B			132
		C			129
		D			114
		E			100
	J 15	A			83
		B			97
		C			89
		D			82
		E			121
	J 17	A		1	118
		B		1	105
		C		1	116
		D		0	95
		E		0	89
		E	DUPLICATE	1	101

Insert area map or sketch below



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SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY #1662

Survey Date: 6/30/98
Location: BLDG 14 AREA 9 FLOOR
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 #43028	L221 #80308
Detector Model & s/n:	43-65 #MP9812	44-9 #37683
Calibration Date:	8-22-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

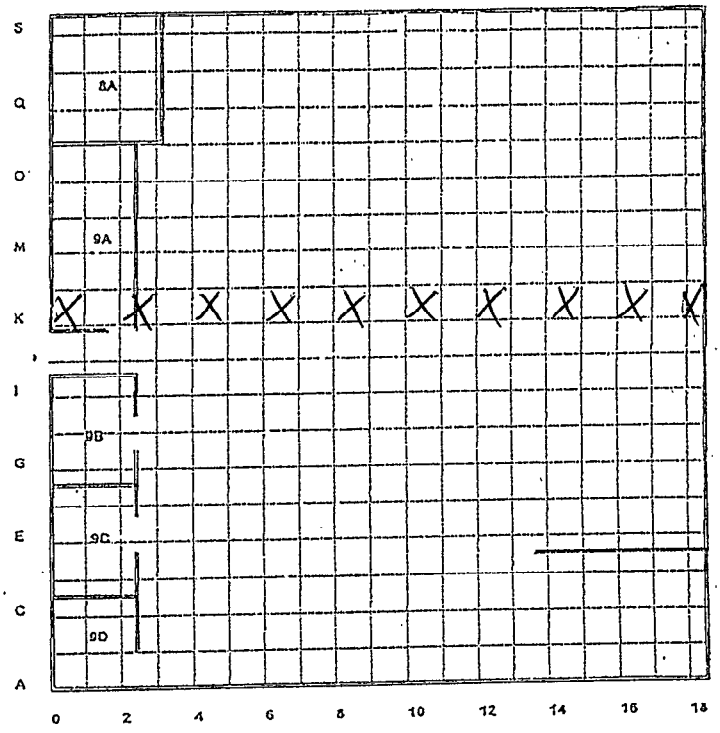
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: W.

Insert area map or sketch below

GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
K0	A	FLOOR		121
	B			80
	C			99
	D			133
	E			141
K2	A			56
	B			79
	C			68
	D			156
	E			81
K4	A			97
	B			142
	C			93
	D			69
	E			131
K6	A			71
	B			79
	C			88
	D			159
	E			147
K8	A		2	138
	B		0	65
	C		1	95
	D		1	82
	E		1	111
	E	DUPLICATE	1	100
K10	A	FLOOR		130
	B			148
	C			92
	D			112
	E			127
K12	A			119
	B			135
	C			92
	D			74
	E			83
K14	A			96
	B			67
	C			58
	D			135
	E			81
K16	A			93
	B			69
	C			106
	D			79
	E			72
K18	A		1	68
	B		1	84
	C		0	90
	D		3	138
	E		2	101
	E	DUPLICATE	1	107

AREA 9 LAB AND OFFICES



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SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY # 1663

Survey Date: 6/30/98
Location: BLDG 14 Area 9 FLOOR
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESA #03028	2221 #86308
Detector Model & s/n:	43-65 #088812	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

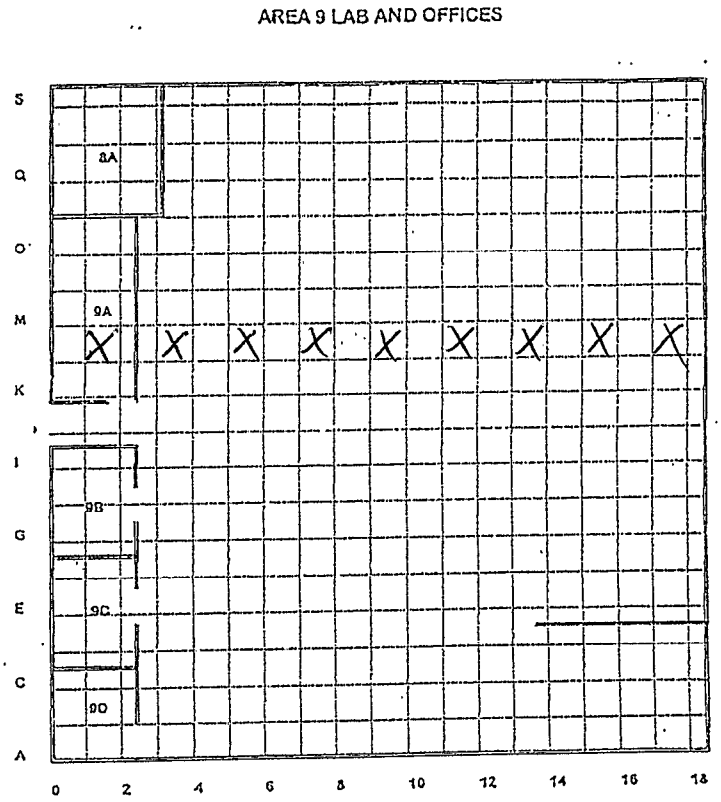
RP Technician: [signature]

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	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
	L1	A	FLOOR		109
		B			112
		C			86
		D			97
		E			88
	L3	A			67
		B			79
		C			104
		D			131
		E			129
	L5	A			126
		B			151
		C			107
		D			146
		E			107
	L7	A			127
		B			118
		C			91
		D			82
		E			79
	L9	A		1	68
		B		0	74
		C		3	123
		D		2	115
		E		0	95
		E	DUPLICATE	1	81
	L11	A	FLOOR		73
		B			116
		C			127
		D			136
		E			94
	L13	A			109
		B			138
		C			121
		D			95
		E			82
	L15	A			68
		B			75
		C			81
		D			79
		E			88
	L17	A		1	96
		B		1	102
		C		1	108
		D		2	147
		E		1	151
		E	DUPLICATE	0	146

Insert area map or sketch below



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SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY # 1664

Survey Date: 7/1/98
Location: BLDG 14 AREA 9 FLOOR
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	L2221 #86308
Detector Model & s/n:	43-65 #08882	44-9 #37653
Calibration Date:	8-22-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

RP Technician:

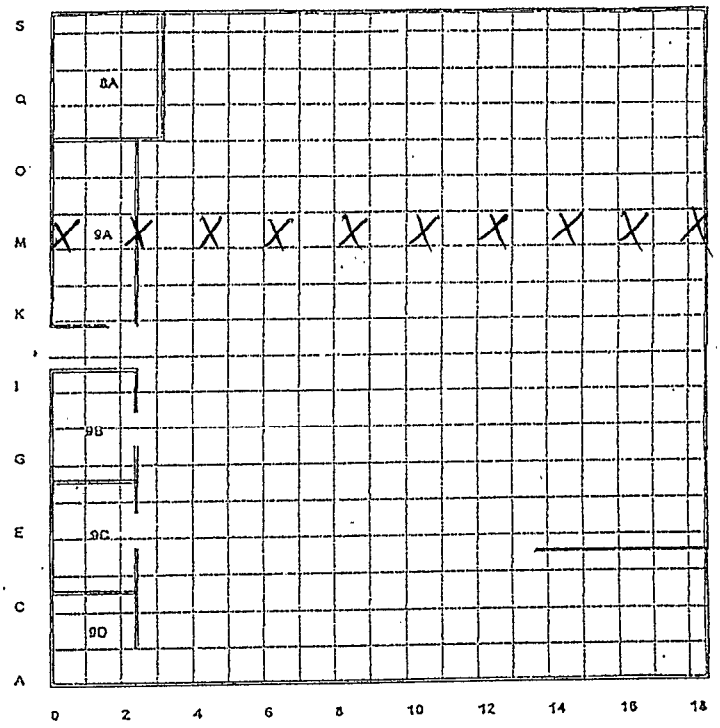
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
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
	M0 A	FLOOR		82
	B			93
	C			93
	D			128
	E			116
	M2 A			141
	B			109
	C			92
	D			83
	E			81
	M4 A			86
	B			86
	C			97
	D			78
	E			134
	M6 A			141
	B			134
	C			104
	D			94
	E			116
	M8 A		1	98
	B		1	81
	C		0	97
	D		1	82
	E		1	90
	E	DUPLICATE	1	99
	M10 A	FLOOR		86
	B			59
	C			74
	D			63
	E			100
	M12 A			68
	B			132
	C			128
	D			101
	E			114
	M14 A			91
	B			127
	C			74
	D			82
	E			67
	M16 A			81
	B			123
	C			69
	D			114
	E			134
	M18 A		2	89
	B		1	107
	C		0	131
	D		3	148
	E		1	112
	E	DUPLICATE	1	121

AREA 9 LAB AND OFFICES



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SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY #1665

Survey Date: 7/1/98
Location: BLDG 14 AREA 9 FLOOR
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:	580-1 #03028	L2221 #86308
Detector Model, & s/n:	43-65 #188812	44-9 #37693
Calibration Date:	8-22-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

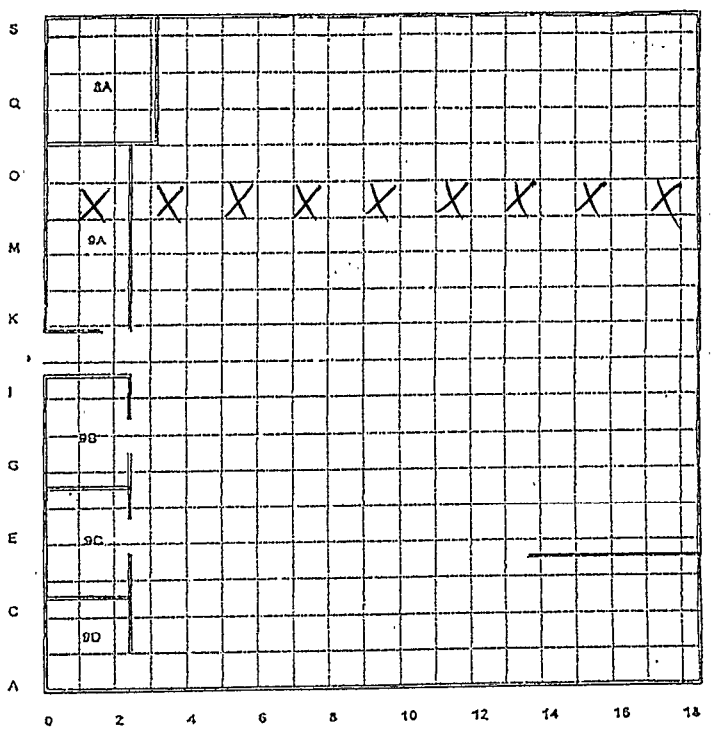
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: W

GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
N1	A	FLOOR		59
	B			112
	C			139
	D			83
	E			87
N3	A			95
	B			143
	C			156
	D			67
	E			92
N5	A			128
	B			136
	C			102
	D			126
	E			143
N7	A			135
	B			109
	C			92
	D			107
	E			164
N9	A		1	89
	B		1	78
	C		3	62
	D		0	71
	E		2	95
	E	DUPLICATE	1	102
N11	A	FLOOR		123
	B			148
	C			96
	D			85
	E			88
N13	A			80
	B			91
	C			76
	D			65
	E			73
N15	A			82
	B			97
	C			116
	D			104
	E			88
N17	A			77
	B		0	84
	C		1	73
	D		1	64
	E		1	129
	E	DUPLICATE	1	122

Insert area map or sketch below

AREA 9 LAB AND OFFICES



1M x 1M GF

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY #1666

Survey Date: 7/4/98
Location: BLDG 14 Area 9 FLOOR
Description: Verification

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	L2221 #86308
Detector Model, & s/n:	43-65 #089177	44-9 #37683
Calibration Date:	8-22-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	155

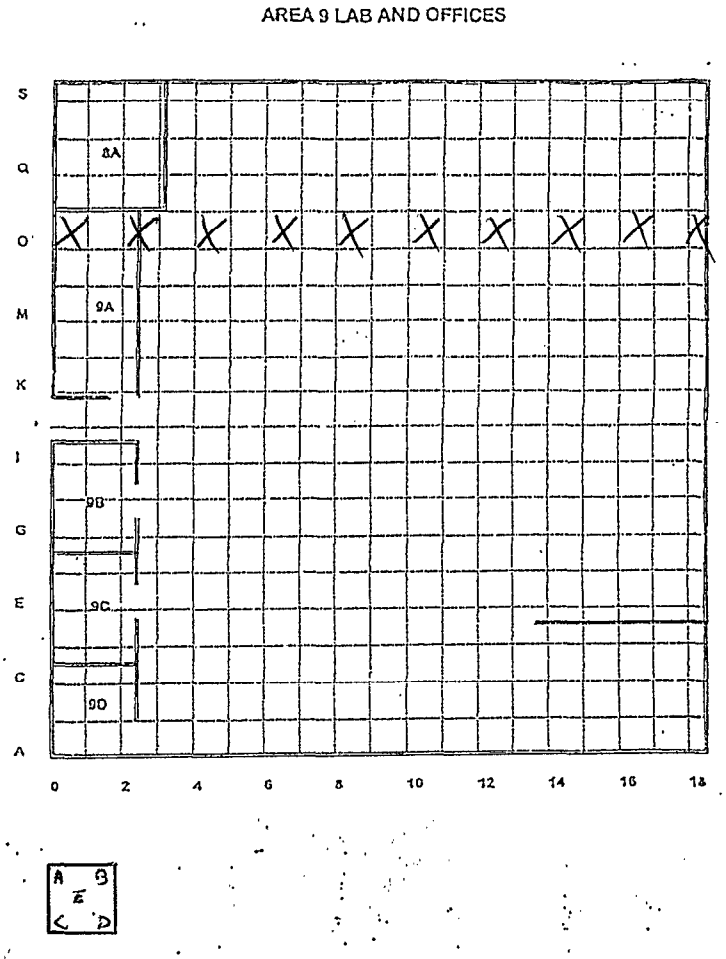
RP Technician: [illegible]

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	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
00 A	FLOOR		120
B			83
C			92
D			83
E			142
02 A			77
B			101
C			84
D			123
E			76
04 A			141
B			115
C			86
D			92
E			97
06 A			161
B			158
C			105
D			77
E			97
08 A		1	125
B		2	103
C		1	81
D		1	74
E		0	140
E	DUPLICATE	0	88
10 A	FLOOR		94
B			122
C			106
D			85
E			109
12 A			126
B			68
C			89
D			99
E			89
14 A			78
B			145
C			76
D			143
E			116
16 A			75
B			107
C			93
D			144
E			150
18 A		2	54
B		2	148
C		1	127
D		2	98
E		1	136
E	DUPLICATE	1	149

Insert area map or sketch below



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY # 1667

Survey Date: 7/1/98
Location: BLDG 14 Area 9 FLOOR
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #030298	LB2124 #86305
Detector Model, & s/n:	43-65 #[illegible]	44-9 #37683
Calibration Date:	8-12-97	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

RP Technician: W

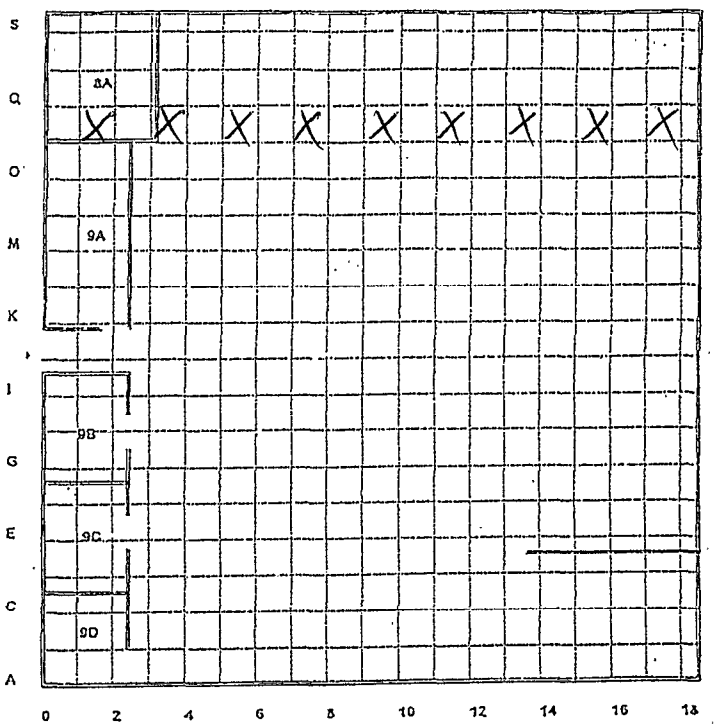
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
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
P1	A	FLOOR		83
	B			107
	C			115
	D			129
	E			86
P3	A			73
	B			58
	C			134
	D			146
	E			139
P5	A			72
	B			88
	C			65
	D			151
	E			52
P7	A			135
	B			122
	C			160
	D			97
	E			88
P9	A		2	102
	B		1	131
	C		1	156
	D		0	102
	E		2	75
	E	DUPLICATE	1	63
P11	A	FLOOR		79
	B			122
	C			136
	D			70
	E			87
P13	A			111
	B			90
	C			109
	D			116
	E			72
P15	A			94
	B			88
	C			77
	D			83
	E			141
P17	A		1	154
	B		1	86
	C		0	137
	D		2	80
	E		1	73
	E	DUPLICATE	1	81

AREA 9 LAB AND OFFICES



1M x 1M GR

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SCRUBBY #1668

Survey Date: 7/2/98
Location: BLDG 14 Area 9 FLOOR
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 #030278	LP7221 #F6308
Detector Model & s/n:	43-65 #088910	44-9 #32683
Calibration Date:	8-22-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

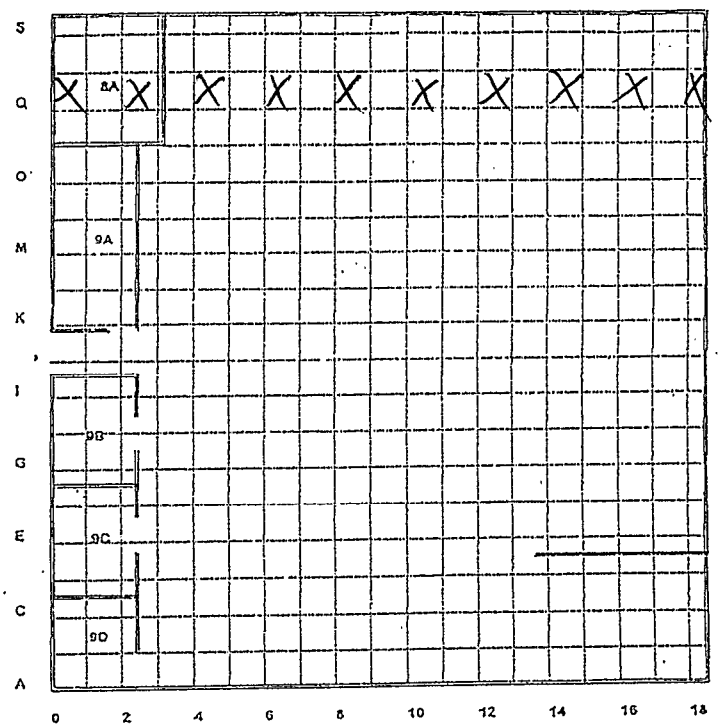
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: [illegible]

Insert area map or sketch below

GRID			DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
Q0	A		FLOOR		~~68~~
	B				~~94~~
	C				~~72~~
	D				~~131~~
	E				~~84~~
Q2	A				~~120~~
	B				~~107~~
	C				~~69~~
	D				~~132~~
	E				~~114~~
Q4	A				~~159~~ 156
	B				111
	C				146
	D				96
	E				96
Q6	A				149
	B				107
	C				108
	D				97
	E				95
Q8	A			2	74
	B			3	155
	C			1	76
	D			1	72
	E			1	107
	E		DUPLIZATE	1	103
Q10	A		FLOOR		94
	B				132
	C				116
	D				135
	E				78
Q12	A				86
	B				99
	C				83
	D				142
	E				149
Q14	A				94
	B				146
	C				121
	D				134
	E				178
Q16	A				61
	B				81
	C				67
	D				71
	E				55
Q18	A			1	58
	B			0	62
	C			1	59
	D			0	55
	E			0	63
	F		DUPLICATE	0	~~97~~ 65

AREA 9 LAB AND OFFICES



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SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

SURVEY # 1669

Survey Date: 7/2/98
Location: BLDG 14 AREA 9 FLOOR
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 #73028	LB221 #86318
Detector Model & s/n:	48-65 #DR9A	44-9 #37683
Calibration Date:	8-22-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

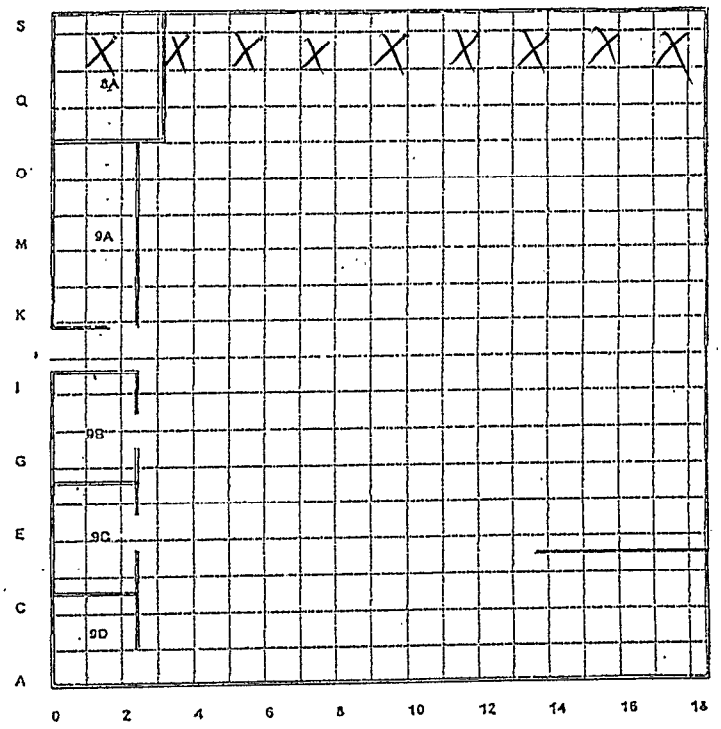
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician:

Insert area map or sketch below

GRID			DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
R1	A		FLOOR		77
	B				89
	C				102
	D				125
	E				144
R3	A				139
	B				148
	C				152
	D				109
	E				72
R5	A				86
	B				53
	C				67
	D				123
	E				88
R7	A				95
	B				69
	C				74
	D				102
	E				133
R9	A			0	141
	B			1	129
	C			0	80
	D			0	96
	E			1	87
	E		DUPLICATE	0	129
R11	A		FLOOR		138
	B				121
	C				153
	D				147
	E				108
R13	A				87
	B				76
	C				92
	D				98
	E				121
R15	A				149
	B				158
	C				136
	D				162
	E				96
R17	A			1	149
	B			1	~~168~~ 168
	C			3	85
	D			2	159
	E			1	95
	E		DUPLICATE	1	103

AREA 9 LAB AND OFFICES



1M x 1M GF

SURVEY01.XLS

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

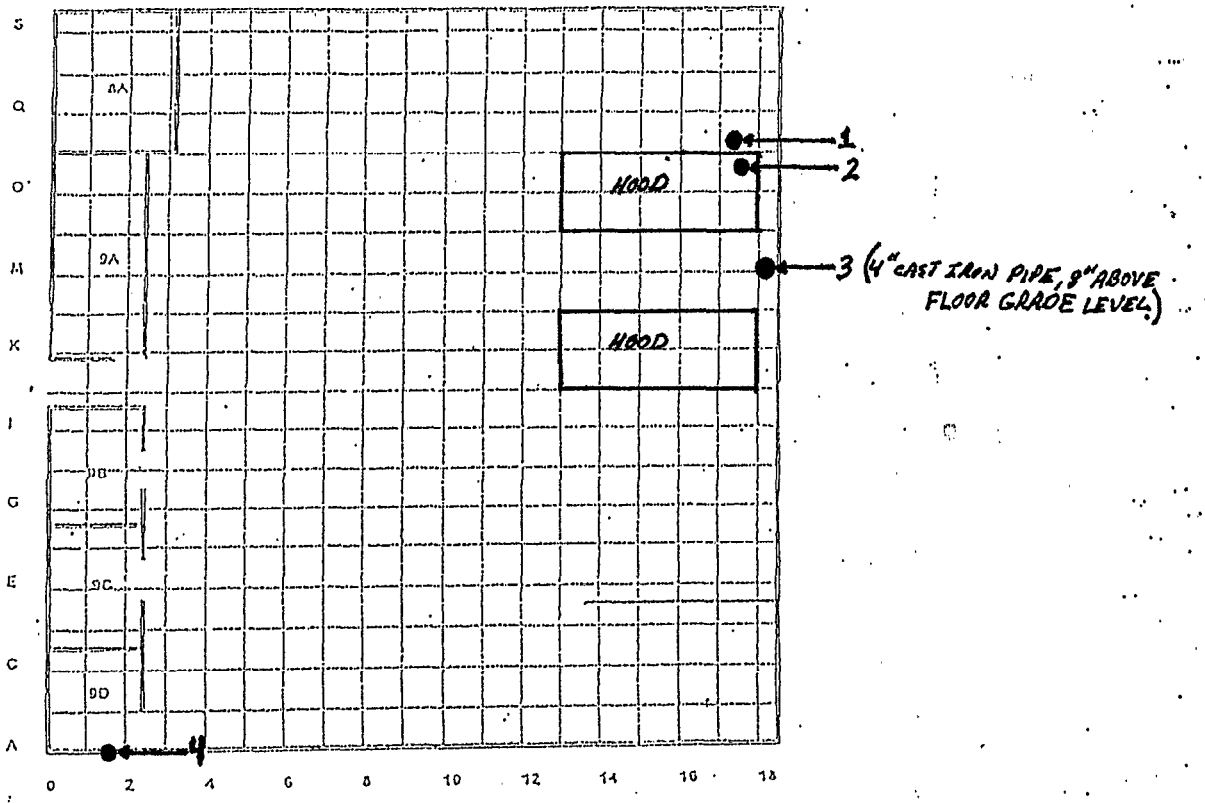
RADIOLOGICAL SURVEY

Project: PRAXAIR SITE
Area: B14 AREA 9 LAB

EFF=.29
BKGD=50cpm

Date/Time 2330 7/2/98	Tech William W. Jack	Instrument / sn L2221 #86308 w/44-9 #37683 CAL. DATE: 1-29-98	
Location/ Purpose PRAXAIR SITE B14 AREA 9 LAB "SUPPLEMENTAL" STANDARD SURVEY		Survey # 1670	RWP# 02

AREA 9 LAB AND OFFICES



DRAIN #

~~Loc~~	Type	Description	~~Gross α dpm~~	Gross	β.dpm / 100 cm²	Loc	Type	Description	Gross	α dpm	Gross	β.dpm
1	D.P.	DRAIN PIPE @ GRID: P-17	INTERNAL	270	4,890							
2	↓	0-17	↓	1,000	21k							
3	↓	M-18	↓	250	4,500							
4	↓	A-1	↓	1,700	37k							
3	D.P.	DRAIN PIPE @ GRID: M-18	EXTERNAL	550	11k							
		N/A						N/A				

Type: s = smearable, dp = direct probe

Comments:

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

Review: [signature]

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

Survey # 7683

Survey Date: 7/6/98
Location: BLDG 14 Area 9 FLOOR
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #73025	LRA21 #86398
Detector Model, & s/n:	43-65 #089812	44-9 #37683
Calibration Date:	8-12-97	1-29-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

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

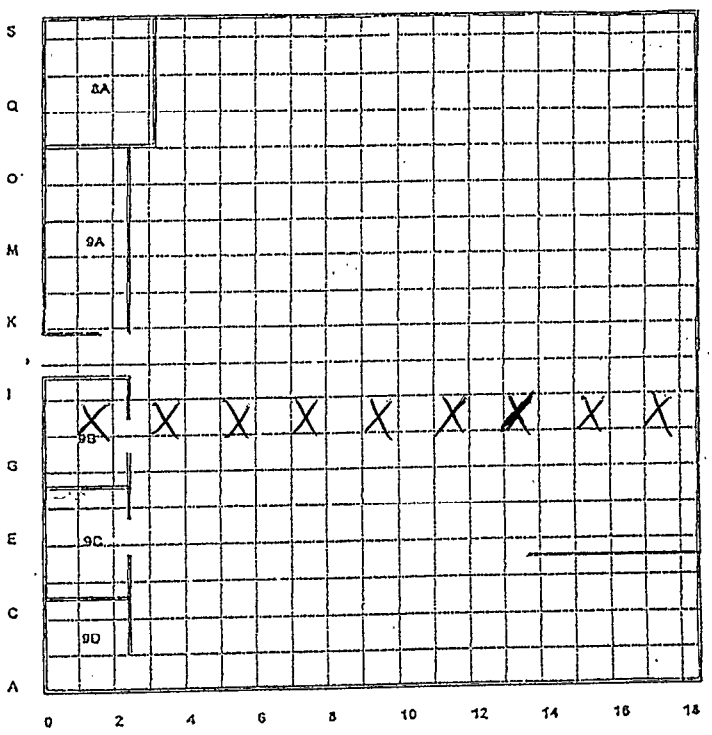
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	5
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: [signature]

GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
H1	A	FLOOR		149
	B			136
	C			167
	D			122
	E			93
H3	A			101
	B			114
	C			106
	D			84
	E			112
H5	A			136
	B			147
	C			152
	D			143
	E			125
H7	A			104
	B			111
	C			86
	D			69
	E			75
H9	A		1	62
	B		1	93
	C		1	116
	D		0	121
	E		0	115
	E	DUPLICATE	1	122
H11	A	FLOOR		106
	B			121
	C			118
	D			92
	E			85
H13	A			69
	B			141
	C			136
	D			125
	E			112
H15	A			86
	B			64
	C			81
	D			99
	E			108
H17	A		2	112
	B		1	130
	C		1	107
	D		0	124
	E		1	116
	E	DUPLICATE	1	125

Insert area map or sketch below

AREA 9 LAB AND OFFICES



1M x 1M GF

REVIEW [signature]

SURVFY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

Survey # 1684

Survey Date: 7/6/98
Location: BLDG 14 AREA 9 FLOOR
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	LB 327 #86208
Detector Model & s/n:	42-65 #88812	44-9 #37683
Calibration Date:	8-12-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.48	.29
Detector Area (CM2)	50	15.5

RP Technician: [illegible]

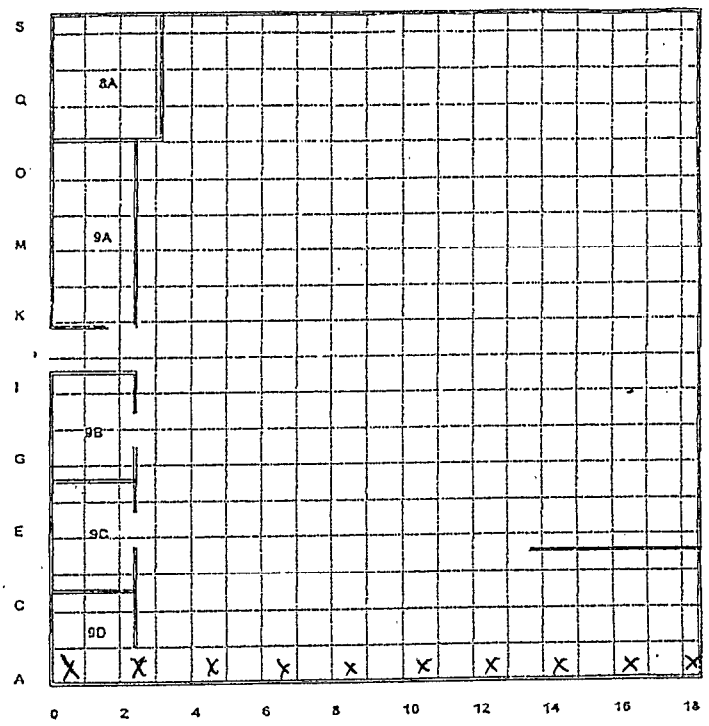
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	51
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-0	A	FLOOR		136
	B			199
	C			151
	D			143
	E			161
A-2	A			153
	B			157
	C			171
	D			162
	E			111
A-4	A		N/A	140
	B			87
	C			41
	D			94
	E			105
A-6	A			56
	B			59
	C			73
	D			79
	E			81
A-8	A		1	94
	B		2	115
	C		0	128
	D		1	87
	E		1	132
	E	DUPLICATE	1	140
A-10	A	FLOOR		122
	B			101
	C			96
	D			88
	E			94
A-12	A			102
	B			72
	C			78
	D			61
	E		N/A	68
A-14	A			55
	B			53
	C			69
	D			124
	E			130
A-16	A			125
	B			118
	C			121
	D			116
	E			100
A-18	A		1	96
	B		1	74
	C		2	87
	D		0	102
	E		1	81
	E	DUPLICATE	1	92

AREA 9 LAB AND OFFICES



1M x 1M GRID

Review [illegible]

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

Survey # 1685

Survey Date: 7/6/98
Location: BLDG 14 Area 9 FLOOR
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 #03038	L2221 #86308
Detector Model & s/n:	43-65 #08882	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.24
Detector Area (CM2)	50	15.5

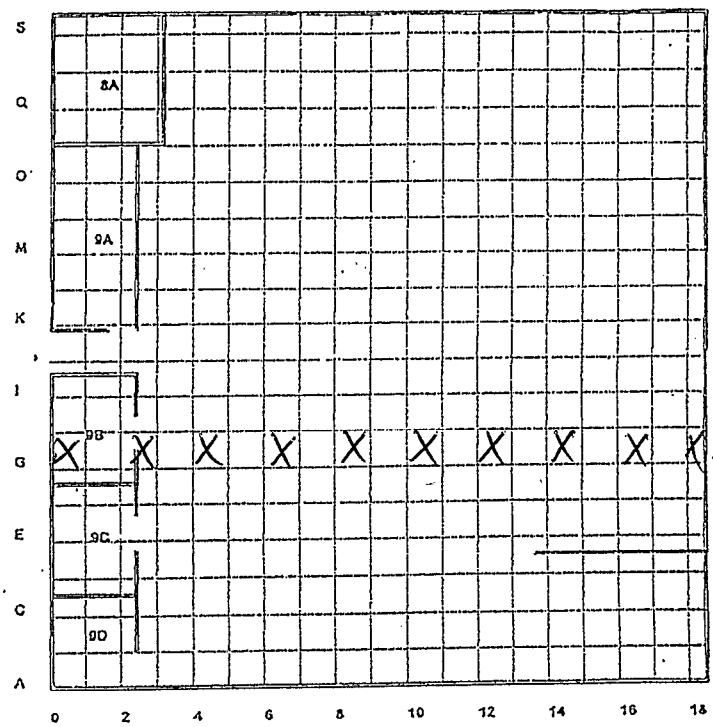
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	51
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: [illegible]

Insert area map or sketch below

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
	60	A	FLOOR		109
		B			116
		C			124
		D			84
		E			97
	62	A			66
		B			72
		C			81
		D			92
		E			106
	64	A			132
		B			145
		C			156
		D			149
		E			102
	66	A			80
		B			85
		C			107
		D			93
		E			127
	65	A		2	135
		B		2	114
		C		1	109
		D		0	55
		E		0	64
		E	DUPLICATE	0	69
	610	A	FLOOR		73
		B			58
		C			110
		D			72
		E			88
	612	A			156
		B			173
		C			142
		D			87
		E			155
	614	A			93
		B			171
		C			51
		D			99
		E			74
	616	A			111
		B			117
		C			101
		D			90
		E			84
	618	A		1	68
		B		1	170
		C		0	~~[illegible]~~ 142
		D		0	78
		E		2	86
		E	DUPLICATE	1	99

AREA 9 LAB AND OFFICES



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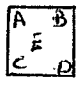


Review [illegible]

SURVFY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1686

Survey Date: 7/1/98
Location: BLDG 14 Area 9 FLOOR
Description: VERIFICATION

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

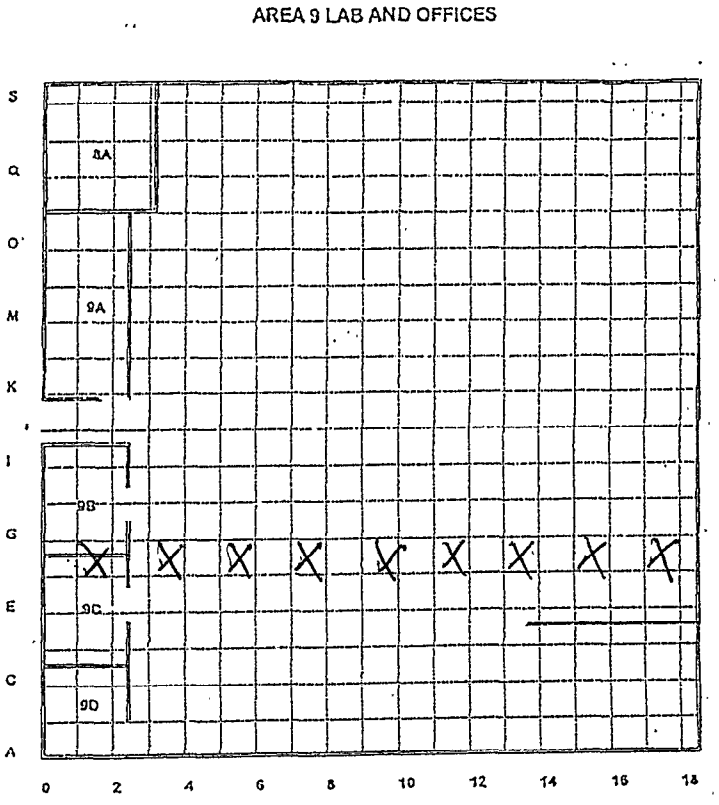
	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	L2221 #86398
Detector Model, & s/n:	43-65 #059882	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.24
Detector Area (CM2)	50	15.5

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician:

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
	F-1	A	FLOOR		101
		B			128
		C			136
		D			104
		E			96
	F3	A			85
		B			102
		C			69
		D			25
		E			81
	F5	A			136
		B			139
		C			131
		D			131
		E			120
	F7	A			156
		B			162
		C			107
		D			118
		E			106
	F9	A		2	87
		B		1	98
		C		0	126
		D		0	89
		E		1	89
		E	DUPLICATE	1	101
	F11	A	FLOOR		127
		B			103
		C			68
		D			74
		E			108
	F13	A			136
		B			114
		C			122
		D			171
		E			104
	F15	A			86
		B			74
		C			92
		D			102
		E			81
	F17	A		4	67
		B		4	73
		C		1	59
		D		0	63
		E		0	141
		E	DUPLICATE	0	148

Insert area map or sketch below



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REVIEW

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY #1687

Survey Date: 7/8/98
Location: BLDG 14 AREA 9-B FLOOR/CEILING
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 #03228	L2221 #86308
Detector Model & s/n:	43-65 #08918	44-9 #37683
Calibration Date:	8-22-98	1-20-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

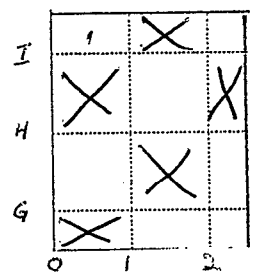
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	57
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician:

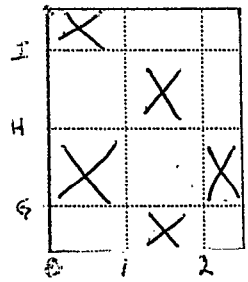
BLDG 14 AREA 9-B

GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
F-0 A	FLOOR		72
B			68
C			51
D			136
E			125
G-1 A			72
B			89
C			165
D			84
E			151
H-0 A		N/A	122
B			118
C			88
D			70
E			160
H-2 A			145
B			97
C			139
D			152
E			114
I-1 A		1	123
B		0	82
C		1	117
D		1	104
E		2	166
E	DUPLICATE	2	171
G-0 A	CEILING		95
B			91
C			80
D			76
E			85
I-0 A			69
B			143
C			~~169~~ 128
D		N/A	120
E			102
F-1 A			115
B			124
C			108
D			85
E			112
H-1 A			85
B			56
C			80
D			93
E			74
G-2 A		1	178
B		1	101
C		1	151
D		0	139
E		0	96
E	DUPLICATE	1	100

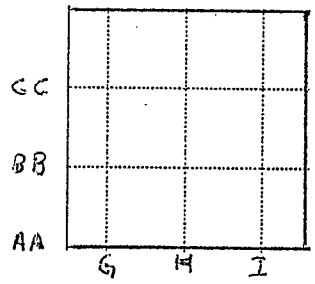
FLOOR



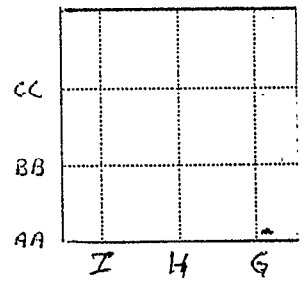
CEILING



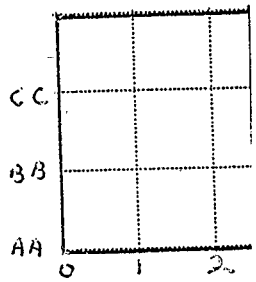
W. WALL



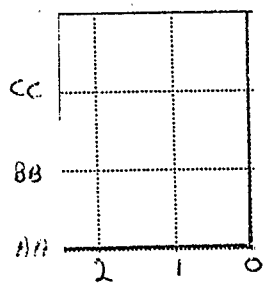
E. WALL



N. WALL



S. WALL



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

Survey #1688

Survey Date: 7/2/98
Location: BLDG 14 Area 9-C FLOOR/CEILING
Description:
VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #103025	LUDL #86308
Detector Model & s/n:	43-65 #089882	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

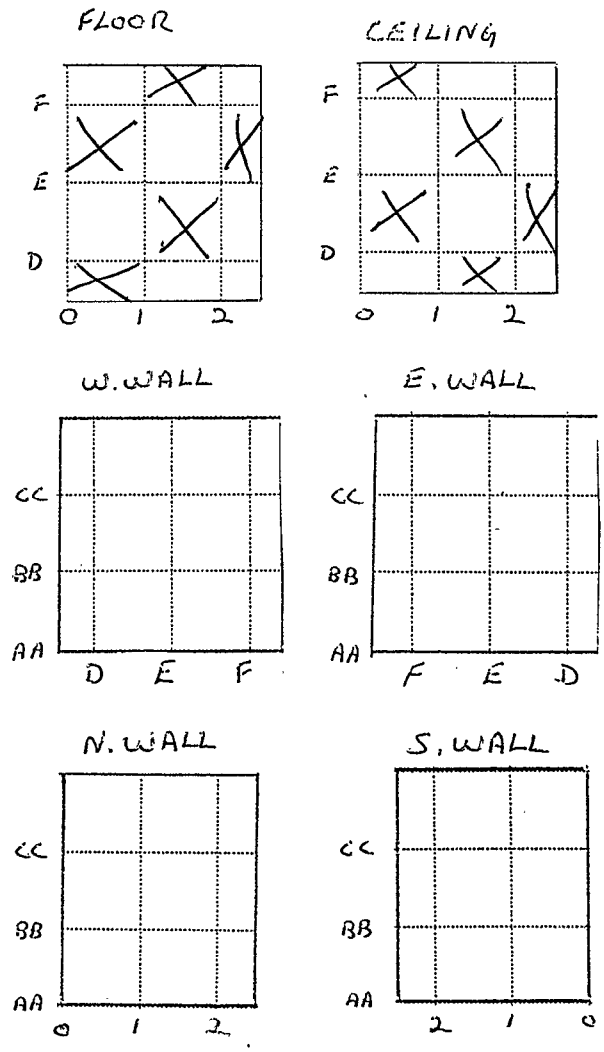
RP Technician:

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	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

BLDG 14 AREA 9-C

#	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	E-0 A	FLOOR		104
2	B			87
3	C			161
4	D			92
5	E			106
6	E-0 A			171
7	B			145
8	C			128
9	D			94
10	E			107
11	D-1 A			171
12	B			167
13	C			142
14	D			153
15	E			72
16	E-1 A			85
17	B			110
18	C			75
19	D			114
20	E			86
21	E-2 A		1	89
22	B		1	83
23	C		0	75
24	D		1	64
25	E		0	78
26	E	DUPLICATE	1	78
27	D-0 A	CEILING		126
28	B			131
29	C			111
30	D			107
31	E			81
32	F-0 A			69
33	B			114
34	C			84
35	D			67
36	E			99
37	C-1 A			72
38	B			94
39	C			88
40	D			78
41	E			91
42	E-1 A			63
43	B			76
44	C			82
45	D			88
46	E			114
47	D-2 A		1	102
48	B		1	115
49	C		0	105
50	D		0	73
51	E		1	92
52	E	DUPLICATE	1	86



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1689

Survey Date: 7/7/98
Location: BLDG 14 AREA 9 FLOOR
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	L2221 #37683
Detector Model & s/n:	43-65 #089812	44-9 #089812
Calibration Date:	8-22-98	1-28-98
Efficiency (Tc99) (SY90) (Th230)	.148	.29
Detector Area (CM2)	50	15.5

RP Technician:

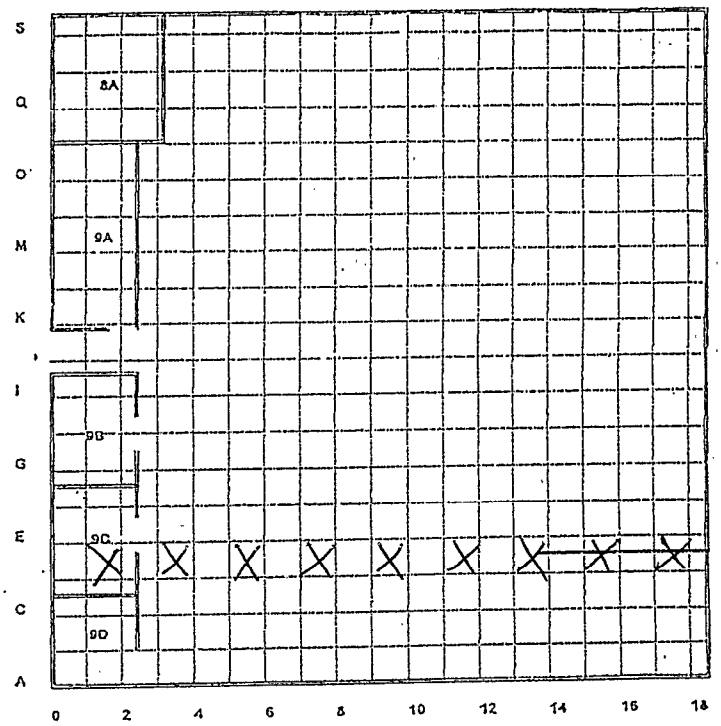
RADIATION MEASUREMENT: Alpha & Beta-Gamma
RESULTS REPORTED UNITS: gross cpm per probe area
MEASUREMENT TYPE: direct scaler measurements

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	51
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
D-1	A	FLOOR		88
	B			161
	C			158
	D			168
	E			132
D-3	A			101
	B			82
	C			97
	D			56
	E			131
D-5	A			109
	B			121
	C			79
	D			72
	E			83
D-7	A			83
	B			104
	C			116
	D			129
	E			121
D-9	A		1	171
	B		1	158
	C		1	132
	D		0	120
	E		1	~~90~~ 109
	E	DUPLICATE	1	136
D-11	A	FLOOR		87
	B			92
	C			66
	D			69
	E			107
D-13	A			125
	B			115
	C			88
	D			124
	E			111
D-15	A			143
	B			81
	C			107
	D			64
	E			77
D-17	A		0	153
	B		0	114
	C		1	93
	D		0	81
	E		1	111
	E	DUPLICATE	1	102

AREA 9 LAB AND OFFICES



1M x 1M GR

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1690

Survey Date: 7/8/98
Location: BLDG 14 AREA 9 FLOOR
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 #3028	LB221 #8638
Detector Model, & s/n:	43-65 #[illegible]	44-9 #32683
Calibration Date:	8-22-98	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

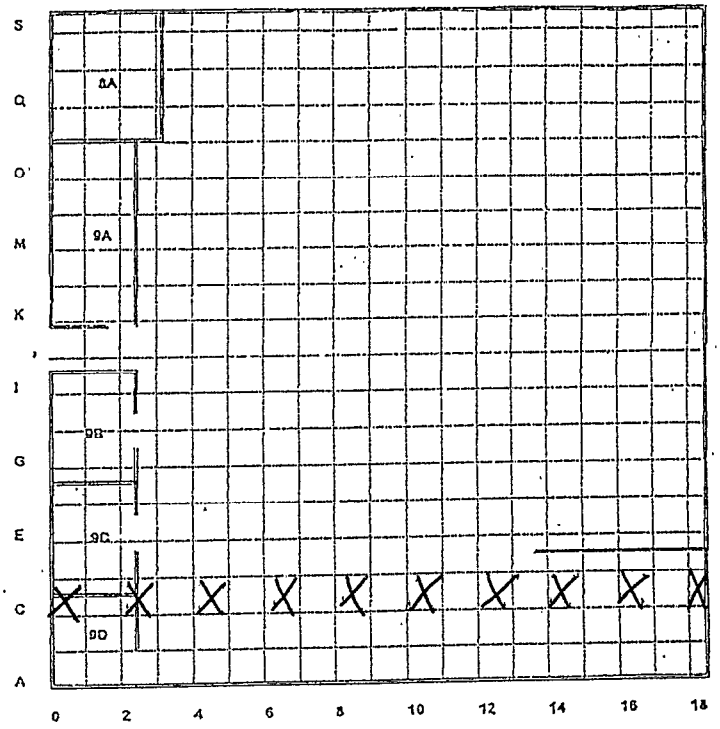
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	59
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician:

GRID			DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
C-0	A		FLOOR		97
	B				104
	C				151
	D				163
	E				140
C-2	A				93
	B				115
	C				69
	D				62
	E				159
C-4	A				64
	B				109
	C				100
	D				110
	E				123
C-6	A				96
	B				102
	C				67
	D				132
	E				121
C-8	A				165
	B				81
	C				79
	D				88
	E				76
	E		DUPLICATE		173
C-10	A		FLOOR		171
	B				105
	C				92
	D				~~109~~ 107
	E				95
C-12	A				129
	B				138
	C				106
	D				86
	E				99
C-14	A				74
	B				77
	C				68
	D				107
	E				157
C-16	A				130
	B				128
	C				93
	D				85
	E				62
C-18	A				95
	B				67
	C				58
	D				61
	E				~~50~~ 54
	E		DUPLICATE		58

Insert area map or sketch below

AREA 9 LAB AND OFFICES



1M x 1M GF

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 169

Survey Date: 7/8/98
Location: BLDG 14 AREA 9 FLOOR
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #03028	L2221 #86308
Detector Model, & s/n:	43-65 #088812	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	155

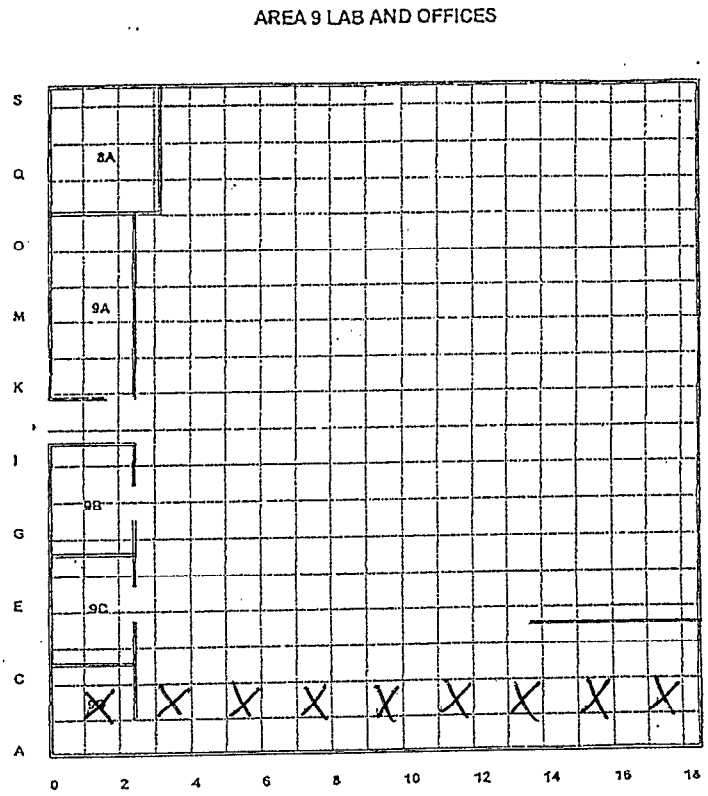
RP Technician: [illegible]

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

#	GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
	B-1	A	FLOOR		104
		B			97
		C			166
		D			65
		E			151
	B-3	A			84
		B			69
		C			193
		D			114
		E			75
	B-5	A			62
		B			80
		C			144
		D			120
		E			148
	B-7	A			99
		B			169
		C			155
		D			96
		E			135
	B-9	A			126
		B			78
		C			90
		D			62
		E			173
		E	DUPLICATE		154
	B-11	A	FLOOR		111
		B			72
		C			89
		D			164
		E			125
	B-13	A			117
		B			148
		C			66
		D			93
		E			115
	B-15	A			77
		B			81
		C			72
		D			86
		E			107
	B-17	A		1	74
		B		2	128
		C		1	67
		D		0	103
		E		2	151
		E	DUPLICATE	2	140

Insert area map or sketch below



SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY #1692

Survey Date: 7/2/98
Location: BLDG 14 AREA 9-D FLOOR + CEILING
Description: VERIFICATION

	alpha	beta-gamma
Instrument Model & s/n:	ESP1 #03028	L2221 #86308
Detector Model & s/n:	43-65 #08882	44-9 #27683
Calibration Date:	8-22-98	7-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

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

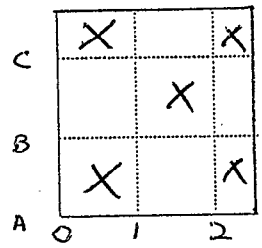
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

BLDG 14 AREA 9-D

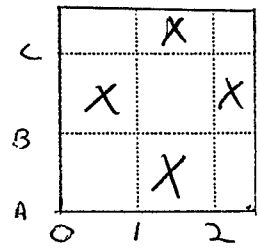
RP Technician:

GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A-0 A	FLOOR		147
B			168
C			109
D			87
E			93
C-0 A			108
B			151
C			174
D			102
E			67
B-1 A			53
B			72
C			66
D			163
E			85
A-2 A			137
B			117
C			126
D			151
E			146
C-2 A		1	86
B		1	62
C		0	75
D		1	66
E		1	89
E	DUPLICATE	0	100
B-0 A	CEILING		83
B			107
C			84
D			102
E			67
A-1 A			61
B			88
C			75
D			61
E			82
C-1 A			66
B			90
C			73
D			78
E			66
B-2 A		2	97
B		1	80
C		0	74
D		0	79
E		0	86
E	DUPLICATE	1	98

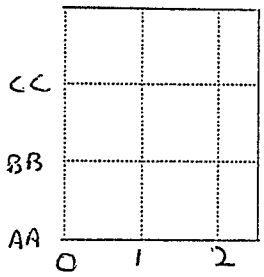
FLOOR



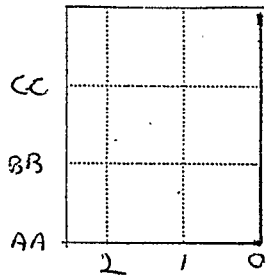
CEILING



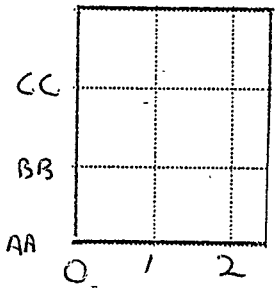
W. WALL



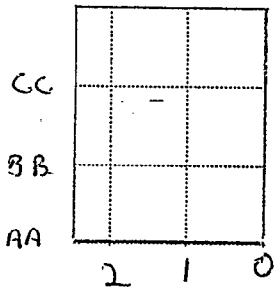
E. WALL



N. WALL



S. WALL



ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT
(scaler measurement)

SURVEY # 1683

Survey Date: 7/1/98
Location: BLDG 14 AREA 9 Room 9A FLOOR
Description: VERIFICATION

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

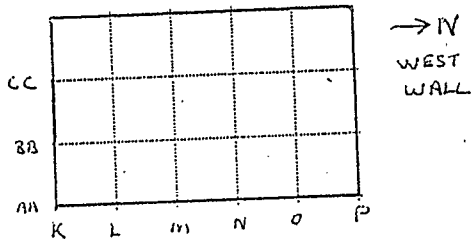
	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 #98028	L222 #86308
Detector Model,& s/n:	43-65 #088512	44-9 #37683
Calibration Date:	8-22-98	1-29-98
Efficiency [Tc99] [SY90] [Th230]	.148	.29
Detector Area (CM2)	50	15.5

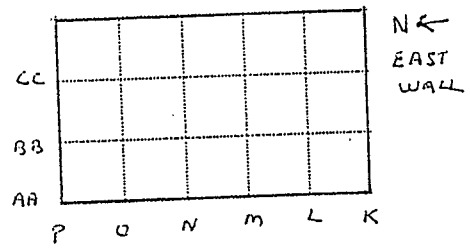
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	0	50
BACKGROUND COUNT TIME (MIN)	1 MIN.	1 MIN.
SAMPLE COUNT TIME (MIN)	1 MIN.	1 MIN.

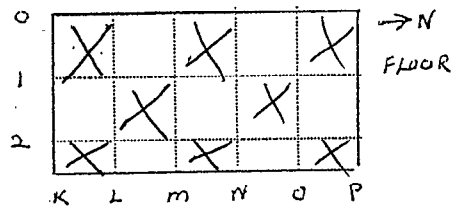
RP Technician: W

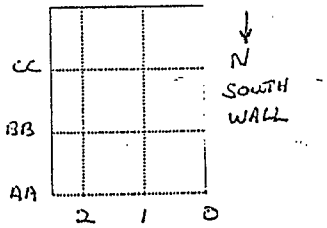
#	GRID	DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
1	K0 A	FLOOR		79
	B			66
	C			70
	D			135
	E			75
	K2 A			86
	B			74
	C			128
	D			90
	E			97
	L1 A			89
	B			143
	C			114
	D			80
	E			129
	M0 A			78
	B			151
	C			126
	D			104
	E			152
	M2 A		2	137
	B		0	99
	C		0	110
	D		1	104
	E		1	120
	E	DUPLICATE	1	116
	N1 A	FLOOR		89
	B			62
	C			77
	D			151
	E			145
	O0 A			93
	B			150
	C			81
	D			144
	E			128
	O2 A		1	132
	B		0	68
	C		1	107
	D		0	111
	E		1	122
	E	DUPLICATE	1	130

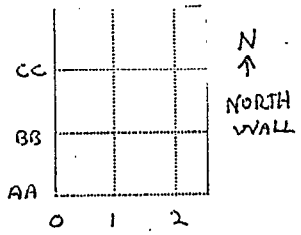
BLDG 14 AREA 9
Room 9A











ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

Survey# 1711

Survey Date: 7-13-98
Location: BLDG 14 AREA 9
Description: Verification of Decon of IVC identified Areas

'Post IVC 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:	ESP1/3023	2221/86308
Detector Model & s/n:	43-68/89812	449/37683
Calibration Date:	8-22-97	1-29-98
Efficiency (Tc99) (SY90) (Th230)	15%	29%
Detector Area (CM2)	50 cm²	15.5 cm²

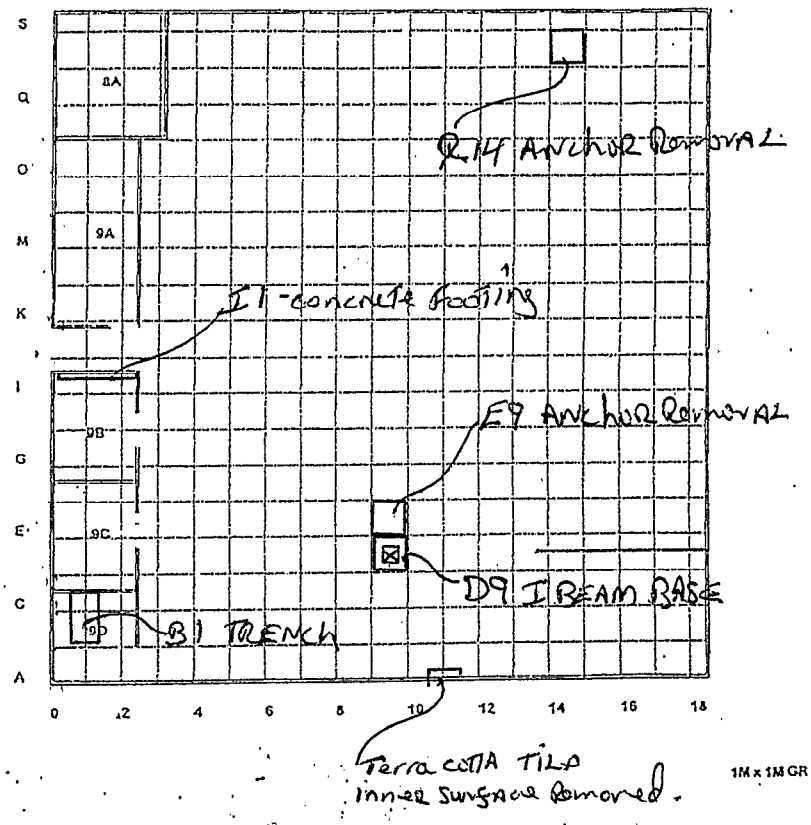
	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	5	73
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

RP Technician: D. PITMAN

GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
B1	A	8m 9D TRENCH-SOIL		106
	B			105
	C	SOIL SAMPLE TAKEN		88
	D	COIC #914		123
	E			98
D9	A	I-BEAM BASE	3	91
	B	- CONCRETE	0	68
	C		1	75
	D		1	63
	E		5	88
E9	A	ANCHOR REMOVAL		66
	B	FROM CONCRETE FLOOR		75
	C			104
	D			71
	E			85
I1	A	CONCRETE FOOTING		65
	B	BELOW WALL		74
	C	(WALL Removed)		80
	D			94
	E			110
R14	A	Anchor Removed	4	80
	B	From Concrete Floor	1	90
	C		3	74
	D		0	91
	E		5	69
A11-B3	A	Terra-COTA TILE	0	91
	B	BLOCK on WALL		72
	C	WALL		101
	D	WALL		90
	E	FLOOR		187

Insert area map or sketch below

AREA 9 LAB AND OFFICES



Review

SURVEY01.XLS

ION TECHNOLOGY, INC.

SMEAR MEASUREMENT ANALYSIS REPORT

Survey # 1712

ANALYSIS DATE: 7-14-98
LOCATION: Praxair, Tonawanda, NY
Bldg. 14, Area Room 8A (Verification Survey)

D. PITMAN

RADIATION MEASUREMENT: Alpha and Beta-gamma
RESULTS REPORTED UNITS: dpm per 100cm2
MEASUREMENT TYPE: Removable Contamination

SAMPLE #	LOCATION CODE	LOCATION DESCRIPTION	RADIATION TYPE	GROSS SAMPLE (COUNTS)	COUNT TIME (Min)	MDCR (CPM)	NET SAMPLE COUNT RATE (CPM)	RADIATION TYPE	RESULTS (DPM/100CM2)	ERROR (95% LEVEL)	MDA (DPM/100CM2)
21	AO-AA	NORTH WALL	A	0	TO-AA	Corrected HAC 9/9/98		A			
21	AO-AA		BG	57				BG			
22	A1-BB		A	0	T1-BB			A			
22	A1-BB		BG	53				BG			
23	A2-CC		A	1	T2-CC			A			
23	A2-CC		BG	51				BG			
24	A2-CC	SOUTH WALL	A	0	P2-CC			A			
24	A2-CC		BG	66				BG			
25	A1-BB		A	0	P1-BB			A			
25	A1-BB		BG	63				BG			
26	AO-AA		A	0	PO-AA			A			
26	AO-AA		BG	59				BG			
27	PO-AA	WEST WALL	A	2				A			
27	PO-AA		BG	67				BG			
28	QO-BB		A	2				A			
28	QO-BB		BG	58				BG			
29	RO-CC		A	1				A			
29	RO-CC		BG	50				BG			
30	S3-AA	EAST WALL	A	0				A			
30	S3-AA		BG	59				BG			
31	R3-CC		A	0				A			
31	R3-CC		BG	64				BG			
32	Q3-BB		A	0				A			
32	Q3-BB		BG	57				BG			
33	P3-AA		A	0				A			
33	P3-AA		BG	68				BG			
34	PO	FLOOR	A	0				A			
34	PO		BG	50				BG			
35	RO		A	0				A			
35	RO		BG	49				BG			
36	Q1		A	0				A			
36	Q1		BG	56				BG			
37	S1		A	0				A			
37	S1		BG	64				BG			
38	P2		A	0				A			
38	P2		BG	48				BG			
39	R2		A	0				A			
39	R2		BG	57				BG			
40			A					A			
40			BG					BG			

Instrument Model & s/n:	M.2929 s/n 50718
Detector Model & s/n:	M.43-10-1 s/n 041713
Calibration Date:	10-9-97
Efficiency BG (Beta/Gamma):	0.28 cpm / dpm based on S/Y90

Background	Counts	Ct Time (min)	Rb	Date
Alpha	1297	4530	0.40	7-20-98

8A

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

Survey # 1715 8A

Survey Date: 7-14-98
Location: BLDG 14 Room 8A - 9 LAB
Description: VERIFICATION SURVEY

	alpha	beta-gamma
Instrument Model & s/n:	2221/3528	2221/86358
Detector Model & s/n:	43-65/88912	44-9/37683
Calibration Date:	8-[illegible]-97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	0.15	0.29
Detector Area (CM2)	50 cm²	15.5 cm²

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

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	5	71
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

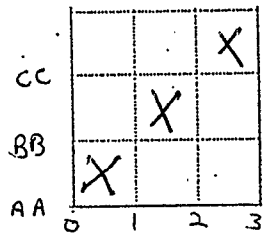
RP Technician: D. PITMAN

Insert area map or sketch below

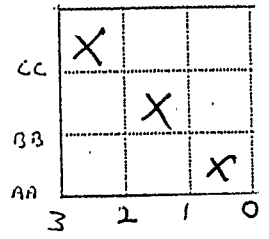
GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
A0-AA	A	NORTH WALL		110
	B			97
	C			86
	D			111
	E			72
A1-BB	A			101
	B			99
	C			106
	D			105
	E			95
A2-CC	A			121
	B			115
	C			98
	D			99
	E			107
A2-CC	A	SOUTH WALL		86
	B			71
	C			63
	D			65
	E			69
A1-BB	A			87
	B			92
	C			76
	D			74
	E			83
A0-AA	A			68
	B			75
	C			91
	D			84
	E			96
P0-AA	A	WEST WALL		62
	B			75
	C			73
	D			77
	E			67
Q0-BB	A			60
	B			83
	C			70
	D			72
	E			85
R0-CC	A		5	100
	B		0	97
	C		4	68
	D		4	78
	E		5	69
	E	DUPLICATE	2	74

T0-AA → T1-BB → T2-CC → P2-CC → P1-BB → P0-AA

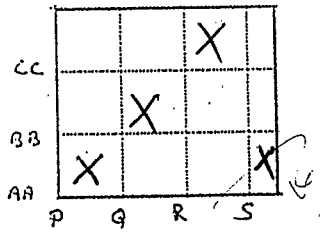
Corrected 9/9/98



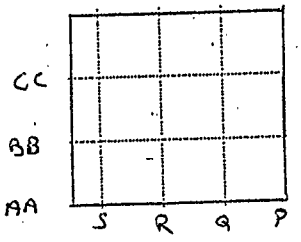
NORTH WALL



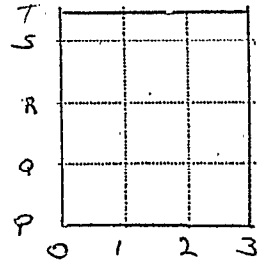
SOUTH WALL



WEST WALL



EAST WALL



FLOOR

SURVEY01.XLS

ION TECHNOLOGY, INC.

DIRECT SURFACE MEASUREMENT ANALYSIS REPORT

(scaler measurement)

Survey # 1716 8A

Survey Date: 7-14-98
Location: BLDG 14 Room 8A
Description: Verification Survey

	alpha	beta-gamma
Instrument Model & s/n:	ESP-1 / 7028	2221 / 86303
Detector Model & s/n:	43-65 / 39812	44-9 / 37683
Calibration Date:	8- -97	1-29-98
Efficiency [Tc99] [SY90] [Th230]	0.15	0.29
Detector Area (CM2)	50 cm²	15.5 cm²

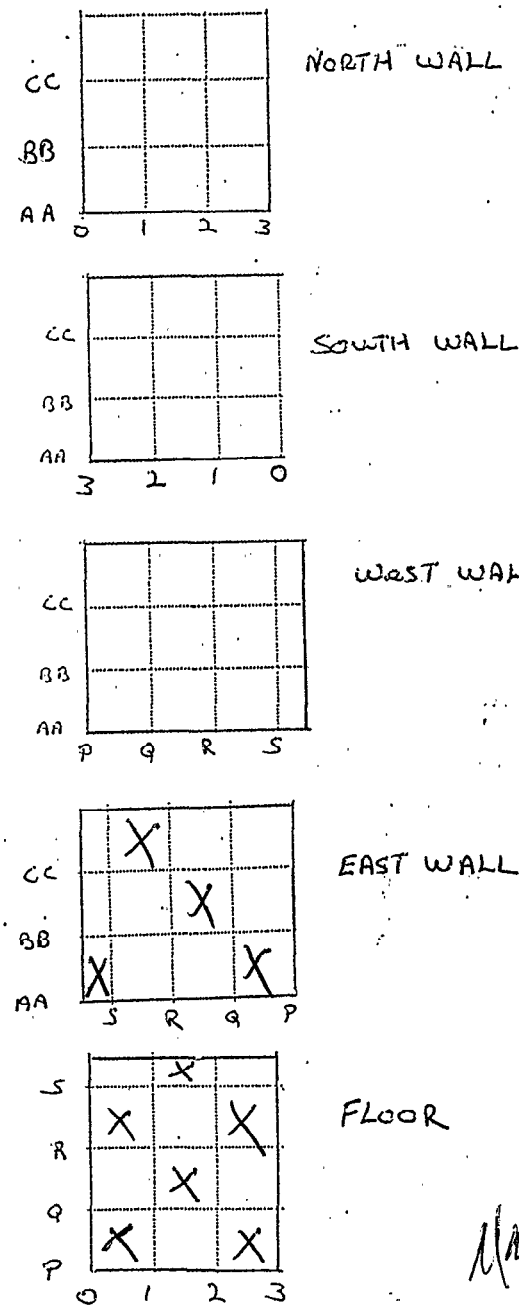
RP Technician:

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

	alpha	beta-gamma
TOTAL BACKGROUND COUNTS	5	71
BACKGROUND COUNT TIME (MIN)	1	1
SAMPLE COUNT TIME (MIN)	1	1

GRID		DESCRIPTION	alpha GROSS COUNTS	beta-gamma GROSS COUNTS
S3-AA	A	EAST WALL		56
	B			68
	C			55
	D			71
	E			62
R3-CC	A			73
	B			69
	C			57
	D			63
	E			65
Q3-BB	A			80
	B			79
	C			66
	D			66
	E			52
P3-AA	A			77
	B			71
	C			68
	D			75
	E			63
P0	A	FLOOR		100
	B			92
	C			105
	D			87
	E			85
R0	A			110
	B			104
	C			96
	D			101
	E			89
Q1	A			62
	B			67
	C			97
	D			104
	E			108
S1	A			115
	B			105
	C			93
	D			98
	E			117
P2	A			100
	B			112
	C			103
	D			95
	E			87
R2	A		5	96
	B		5	92
	C		0	107
	D		4	110
	E		1	108
	E	DUPLICATE	3	102

Insert area map or sketch below



SURVEY01.XLS