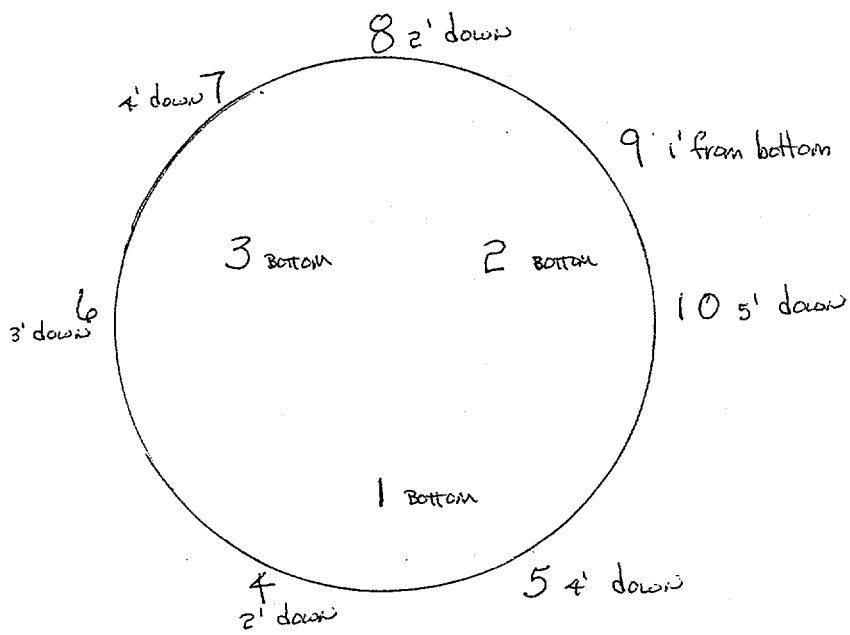


Section 10

Package 16 MCC Panel Area Direct and Removable Beta Results

A0216
04501 SUMP

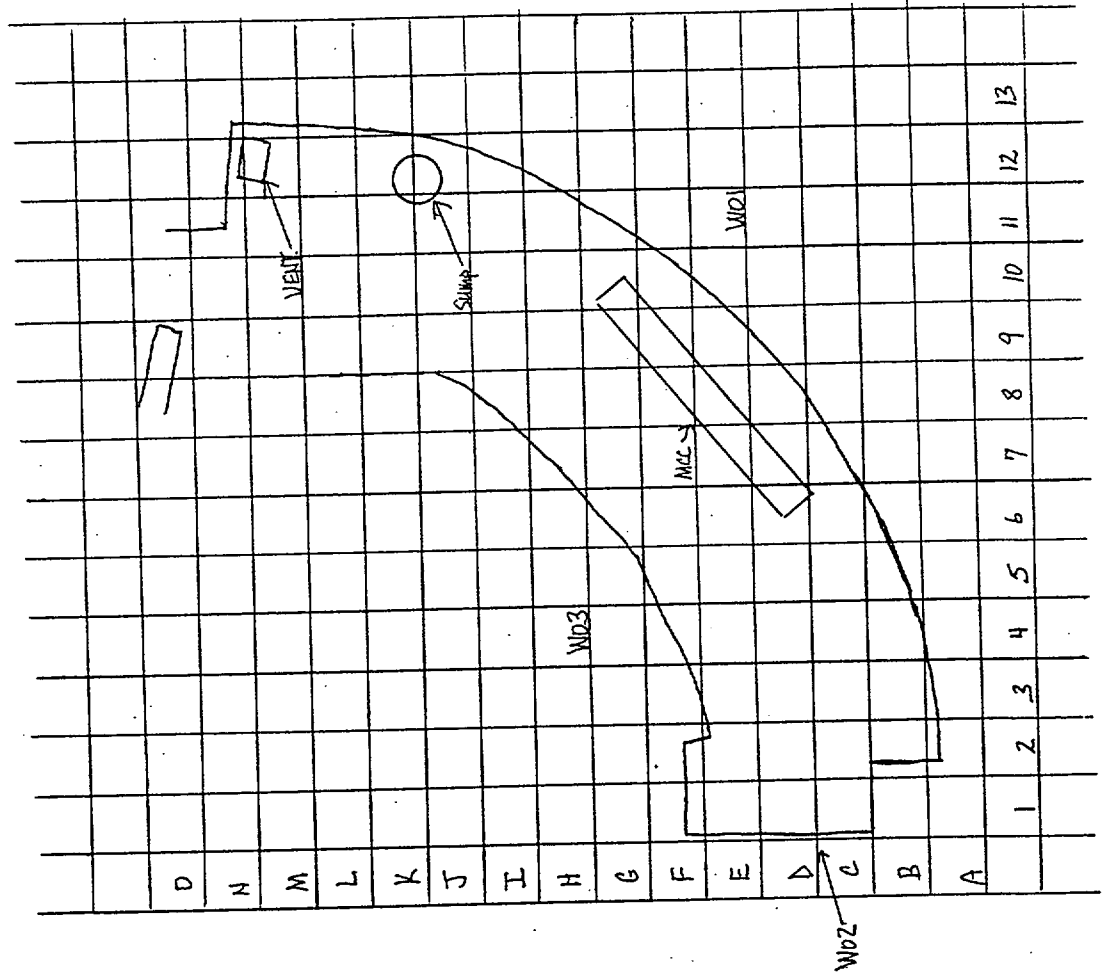


ADZ16

AREA 04

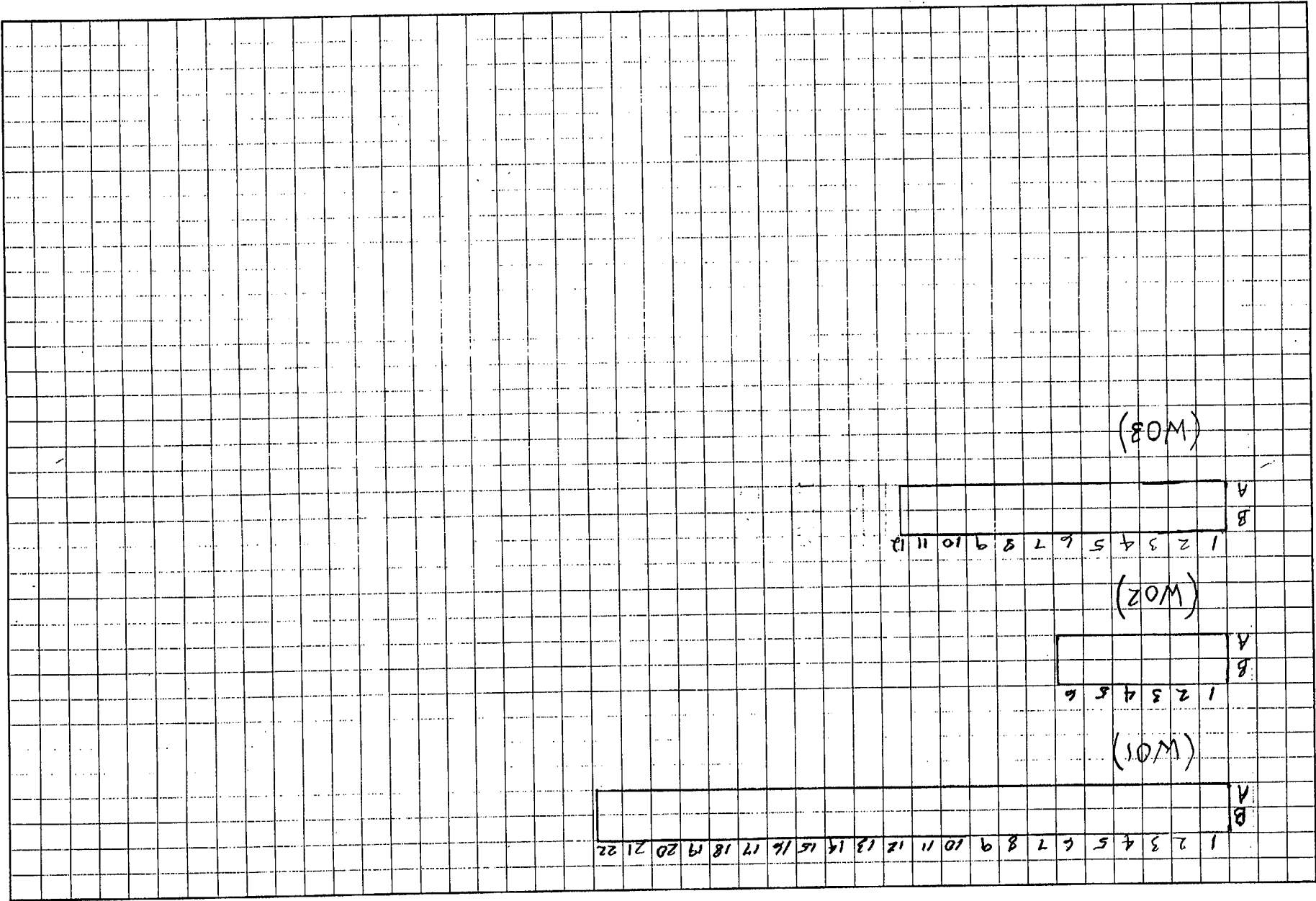
Rx Bldg. BASEMENT

(Floor)



(Walls) Area of Rx Basement

Area



The "net activity" (dpm/100 cm²) presented on the following download report is raw data. It has not been corrected, if required, for the natural radioactivity that may be present in materials of construction. In addition the background used to correct for ambient exposure rates, instrument noise, etc. may need to be adjusted if more than one surface type was included in the download.

See the enclosed spreadsheets for the corrected results.

File #167

ATTACHMENT 6.14
SURVEY DOWNLOAD DATA SHEET

Download Print
 Technician Name: D. Schumaker Signature: [Signature] Station: 2
 File: 167
 Serial No. Verification: Model 2350: Detector: Problems: (See Comments)

Survey Technician(s):
 Print Name: Billy Skjos User ID: BSK0490 Signature: [Signature] Date: 7-5-01
 Print Name: _____ User ID: _____ Signature: _____ Date: _____

Survey Unit Description: A0216 MC Panel Area
 (Example: Survey Package + description i.e. D16, Building 43, Area 09, Room 100, Floor - Grid Locations A1 through A7)

Instrument Model and Serial No.: Model 2350 Model 2350-1 129429
 Instrument and Detector Calibration Due Dates: Survey Meter: 12-6-01 Detector: 12-6-01
 Type Of Survey: Term Survey Characterization Information Only
 Other (explain): _____

Type of Measurement	Detector Serial Number	Detector Model Number	Detector Efficiency	Source Mean BKG Value	Pre & Post Use Info	
					Pre File No.	Post File No.
<input type="checkbox"/> Beta β		43-106B				
<input checked="" type="checkbox"/> Beta β	<u>091050</u>	43-68B	<u>.211</u>	<u>5328 / 410</u>	<u>167</u>	<u>167</u>
<input type="checkbox"/> Alpha α		43-68A				
<input type="checkbox"/> Gamma γ		44-2	N/A			

Local Area Background Measurements

04F01(20003) avg = 496cpm 04F01(20005) avg = 513cpm 04W01 avg = 426cpm

10 Minute β Beta	1	2	3	4	5	6	MEAN Value in cpm
	<u>15052/4908</u>	<u>25180/5068</u>	<u>34551/3976</u>	<u>43809/3869</u>	<u>53573/3540</u>	<u>62451/2508</u>	<u>404</u>
α Alpha	1	2	3	4 avg = 384cpm <small>04W02</small>	5 avg = 356cpm <small>04W03</small>	6 avg = 248cpm <small>04W01</small>	

COMMENTS: _____

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm²

File Number: 167	Survey Description: A0216: RX BUILDING BASEMENT MC PANEL AREA		
Survey Reason: TERMINATION	User ID: BSK0490	Technician name: B.S. Kjos	
Instrument Model: 2350-1	S/N: 129429	Calibration Due: 12/06/01	Group: 2
Detector Model: 43-68B	Detector S/N: 091050	Type: 126 cm ² Gas Proportional Detector, Beta Window	
Background: 404 cpm	Beta Efficiency: .211	Survey Date: 7/05/01	

Pre and Post source checks are included on this download: Yes No
 If No is answered, then list the Download Files which include the Pre and Post source checks.
 Pre File #: _____ Post File #: _____

Technician Review:

I have reviewed this cover sheet and 6 pages of the report, 0 pages of comments, and 1 graph.

I performed this survey: Betty S. Kjos, Betty S. Kjos Date: 7-5-01
 Print name Signature

and,
 I performed this survey: _____ / _____ Date: _____
 Print name Signature

Corrections and Reasons:

Comment Resolution:

Survey Reviewed and Approved by: PAUL JONES, BS Kjos Date: 7/11/01
 Print name Signature

Survey Date: 7/05/01
File: 167

Report Date: 7/05/01

Page: 1
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	03W04	TAT01	02200	Det Cal Due: 12/06/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDBK	B9999	ZZZZZ	00000	4	600	4215	66	
FLDBK	B9999	ZZZZZ	00000	6	600	4051	4	
Group Average:							35	
FLDCT	B9999	A	00004	5	20	159	275	
Group Average:							275	

avg ≠ 413cp

This reading for Grid A4 is missing pt from file # 164.

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	04F01	TAT01	02200	Det Cal Due: 12/06/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDBK	B0003	ZZZZZ	00000	7	600	5052	381	
FLDBK	B0002	ZZZZZ	00000	52	600	5188	432	
FLDBK	B0003	ZZZZZ	00000	100	600	4908	326	
FLDBK	B0002	ZZZZZ	00000	101	600	5068	387	
Group Average:							381	
LDCT	B0003	A	00002	8	20	237	1155	
LDCT	B0003	A	00003	9	20	289	1742	
LDCT	B0003	B	00002	10	20	236	1143	
FLDCT	B0003	B	00003	11	20	237	1155	
FLDCT	B0003	B	00004	12	20	234	1121	
FLDCT	B0003	B	00005	13	20	231	1087	
FLDCT	B0003	B	00006	14	20	232	1098	
FLDCT	B0003	C	00001	15	20	245	1245	
FLDCT	B0003	C	00002	16	20	223	997	
FLDCT	B0003	C	00003	17	20	252	1324	
FLDCT	B0003	C	00004	18	20	229	1064	
FLDCT	B0003	C	00005	19	20	226	1031	
FLDCT	B0003	C	00006	20	20	268	1505	
FLDCT	B0003	C	00007	21	20	252	1324	
FLDCT	B0003	C	00008	22	20	234	1121	
FLDCT	B0003	D	00001	23	20	233	1110	
FLDCT	B0003	D	00002	24	20	233	1110	
FLDCT	B0003	D	00003	25	20	224	1008	
FLDCT	B0003	D	00004	26	20	255	1358	
FLDCT	B0003	D	00005	27	20	224	1008	
FLDCT	B0003	D	00006	28	20	194	670	
FLDCT	B0003	D	00007	29	20	240	1189	
FLDCT	B0003	D	00008	30	20	205	794	
FLDCT	B0003	D	00009	31	20	227	1042	
FLDCT	B0003	E	00001	32	20	234	1121	
FLDCT	B0003	E	00002	33	20	261	1426	
FLDCT	B0003	E	00003	34	20	246	1256	
FLDCT	B0003	E	00004	35	20	231	1087	
FLDCT	B0003	E	00005	36	20	200	737	
FLDCT	B0003	E	00006	37	20	238	1166	
FLDCT	B0003	E	00007	38	20	189	613	
FLDCT	B0003	E	00008	39	20	270	1527	
FLDCT	B0003	E	00009	40	20	225	1019	
FLDCT	B0003	E	00010	41	20	255	1358	
LDCT	B0003	F	00001	42	20	232	1098	
LDCT	B0003	F	00002	43	20	226	1031	
LDCT	B0003	F	00003	44	20	211	861	
FLDCT	B0003	F	00004	45	20	225	1019	
FLDCT	B0003	F	00005	46	20	229	1064	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/05/01
File: 167

Report Date: 7/05/01

Page: 2
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	04F01	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0003	F	00006	47	20	258	1392	
FLDCT	B0003	F	00007	48	20	216	918	
FLDCT	B0003	F	00008	49	20	253	1335	
FLDCT	B0003	F	00009	50	20	188	602	
FLDCT	B0003	F	00010	51	20	289	1742	
FLDCT	B0002	F	00011	53	20	239	1177	
FLDCT	B0003	G	00005	54	20	202	760	
FLDCT	B0003	G	00006	55	20	257	1380	
FLDCT	B0003	G	00007	56	20	237	1155	
FLDCT	B0003	G	00008	57	20	245	1245	
FLDCT	B0003	G	00009	58	20	231	1087	
FLDCT	B0002	G	00010	59	20	246	1256	
FLDCT	B0002	G	00011	60	20	241	1200	
FLDCT	B0003	H	00007	61	20	201	749	
FLDCT	B0003	H	00008	62	20	239	1177	
FLDCT	B0003	H	00009	63	20	241	1200	
FLDCT	B0002	H	00010	64	20	280	1640	
FLDCT	B0002	H	00011	65	20	233	1110	
FLDCT	B0002	H	00012	66	20	238	1166	
FLDCT	B0003	I	00007	67	20	206	805	
FLDCT	B0003	I	00008	68	20	214	895	
FLDCT	B0003	I	00009	69	20	211	861	
FLDCT	B0002	I	00010	70	20	236	1143	
FLDCT	B0003	I	00011	71	20	290	1753	
FLDCT	B0003	I	00012	72	20	258	1392	
FLDCT	B0003	J	00008	73	20	246	1256	
FLDCT	B0003	J	00009	74	20	269	1516	
FLDCT	B0003	J	00010	75	20	253	1335	
FLDCT	B0003	J	00011	76	20	228	1053	
FLDCT	B0002	J	00012	77	20	232	1098	
FLDCT	B0003	K	00009	78	20	269	1516	
FLDCT	B0003	K	00010	79	20	233	1110	
FLDCT	B0003	K	00011	80	20	265	1471	
FLDCT	B0002	K	00012	81	20	283	1674	
FLDCT	B0003	L	00009	82	20	235	1132	
FLDCT	B0003	L	00010	83	20	237	1155	
FLDCT	B0003	L	00011	84	20	232	1098	
FLDCT	B0002	L	00012	85	20	254	1347	
FLDCT	B0002	L	00013	86	20	250	1301	
FLDCT	B0003	M	00009	87	20	215	906	
FLDCT	B0003	M	00010	88	20	222	985	
FLDCT	B0003	M	00011	89	20	248	1279	
FLDCT	B0003	M	00012	90	20	239	1177	
FLDCT	B0003	M	00013	91	20	222	985	
FLDCT	B0003	N	00009	92	20	211	861	
FLDCT	B0003	N	00010	93	20	219	952	
FLDCT	B0003	N	00011	94	20	250	1301	
FLDCT	B0003	N	00012	95	20	253	1335	
FLDCT	B0003	N	00013	96	20	275	1584	
FLDCT	B0003	O	00009	97	20	219	952	
FLDCT	B0003	O	00010	98	20	222	985	
FLDCT	B0003	O	00011	99	20	227	1042	

Group Average: 1157

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/05/01
File: 167

Report Date: 7/05/01

Page: 3
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
A0216	04S01	TAT01	02200		Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00000	188	600	2454	-597	
FLDBK	B9999	ZZZZZ	00000	199	600	2508	-576	

Group Average: -586

FLDCT	B9999	ZZZZZ	00001	189	20	99	-402	
FLDCT	B9999	ZZZZZ	00002	190	20	108	-301	
FLDCT	B9999	ZZZZZ	00003	191	20	93	-470	
FLDCT	B9999	ZZZZZ	00004	192	20	94	-459	
FLDCT	B9999	ZZZZZ	00005	193	20	122	-143	
FLDCT	B9999	ZZZZZ	00006	194	20	118	-188	
FLDCT	B9999	ZZZZZ	00007	195	20	227	1042	
FLDCT	B9999	ZZZZZ	00008	196	20	95	-448	
FLDCT	B9999	ZZZZZ	00009	197	20	78	-639	
FLDCT	B9999	ZZZZZ	00010	198	20	132	-30	

Group Average: -204

Survey Code	L1	L2	L3	L4	Setup Number 0
A0216	04W01	TAT01	02200		Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0001	ZZZZZ	00000	102	600	4551	192	
FLDBK	B0001	ZZZZZ	00000	187	600	3976	-24	

Group Average: 84

FLDCT	B0001	A	00001	103	20	199	726	
FLDCT	B0001	A	00002	104	20	209	839	
FLDCT	B0001	A	00003	105	20	203	771	
FLDCT	B0001	A	00004	106	20	223	997	
FLDCT	B0001	A	00005	107	20	229	1064	
FLDCT	B0001	A	00006	108	20	207	816	
FLDCT	B0001	A	00007	109	20	198	715	
FLDCT	B0001	A	00008	110	20	174	444	
FLDCT	B0001	A	00009	111	20	242	1211	
FLDCT	B0001	A	00010	112	20	195	681	
FLDCT	B0001	A	00011	113	20	208	828	
FLDCT	B0001	A	00012	114	20	189	613	
FLDCT	B0001	A	00013	115	20	191	636	
FLDCT	B0001	A	00014	116	20	183	545	
FLDCT	B0001	A	00015	117	20	214	895	
FLDCT	B0001	A	00016	118	20	200	737	
FLDCT	B0001	A	00017	119	20	187	591	
FLDCT	B0001	A	00018	120	20	166	354	
FLDCT	B0001	A	00019	121	20	214	895	
FLDCT	B0001	A	00020	122	20	209	839	
FLDCT	B0001	A	00021	123	20	215	906	
FLDCT	B0001	A	00022	124	20	235	1132	
FLDCT	B0001	B	00001	125	20	182	534	
FLDCT	B0001	B	00002	126	20	168	376	
FLDCT	B0001	B	00003	127	20	189	613	
FLDCT	B0001	B	00004	128	20	253	1335	
FLDCT	B0001	B	00005	129	20	201	749	
FLDCT	B0001	B	00006	130	20	198	715	
FLDCT	B0001	B	00007	131	20	182	534	
FLDCT	B0001	B	00008	132	20	219	952	
FLDCT	B0001	B	00009	133	20	192	647	
FLDCT	B0001	B	00010	134	20	214	895	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/05/01
File: 167

Report Date: 7/05/01

Page: 4
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	04W01	TAT01	02200	Det Cal Due: 12/06/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDCT	B0001	B	00011	135	20	228	1053	
FLDCT	B0001	B	00012	136	20	184	557	
FLDCT	B0001	B	00013	137	20	200	737	
FLDCT	B0001	B	00014	138	20	189	613	
FLDCT	B0001	B	00015	139	20	183	545	
FLDCT	B0001	B	00016	140	20	181	523	
FLDCT	B0001	B	00017	141	20	202	760	
FLDCT	B0001	B	00018	142	20	224	1008	
FLDCT	B0001	B	00019	143	20	230	1076	
FLDCT	B0001	B	00020	144	20	182	534	
FLDCT	B0001	B	00021	145	20	241	1200	
FLDCT	B0001	B	00022	146	20	183	545	

Group Average: 767

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	04W02	TAT01	02200	Det Cal Due: 12/06/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDBK	B0004	ZZZZZ	00000	147	600	3809	-87	
FLDBK	B0004	ZZZZZ	00000	160	600	3869	-64	

Group Average: -76

FLDCT	B0004	A	00001	148	20	189	613	
FLDCT	B0004	A	00002	149	20	150	173	
FLDCT	B0004	A	00003	150	20	187	591	
FLDCT	B0004	A	00004	151	20	187	591	
FLDCT	B0004	A	00005	152	20	171	410	
FLDCT	B0004	A	00006	153	20	165	342	
FLDCT	B0004	B	00001	154	20	167	365	
FLDCT	B0004	B	00002	155	20	183	545	
FLDCT	B0004	B	00003	156	20	198	715	
FLDCT	B0004	B	00004	157	20	202	760	
FLDCT	B0004	B	00005	158	20	183	545	
FLDCT	B0004	B	00006	159	20	184	557	

Group Average: 517

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	04W03	TAT01	02200	Det Cal Due: 12/06/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDBK	B9999	ZZZZZ	00000	161	600	3573	-176	
FLDBK	B9999	ZZZZZ	00000	186	600	3540	-188	

Group Average: -182

FLDCT	B9999	A	00001	162	20	118	-188	
FLDCT	B9999	A	00002	163	20	125	-109	
FLDCT	B9999	A	00003	164	20	120	-166	
FLDCT	B9999	A	00004	165	20	113	-244	
FLDCT	B9999	A	00005	166	20	105	-335	
FLDCT	B9999	A	00006	167	20	125	-109	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/05/01
File: 167

Report Date: 7/05/01

Page: 5
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	04W03	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B9999	A	00007	168	20	129	-64	
FLDCT	B9999	A	00008	169	20	116	-211	
FLDCT	B9999	A	00009	170	20	126	-98	
FLDCT	B9999	A	00010	171	20	144	105	
FLDCT	B9999	A	00011	172	20	125	-109	
FLDCT	B0001	A	00012	173	20	180	512	
FLDCT	B9999	B	00001	174	20	115	-222	
FLDCT	B9999	B	00002	175	20	122	-143	
FLDCT	B9999	B	00003	176	20	146	128	
FLDCT	B9999	B	00004	177	20	132	-30	
FLDCT	B9999	B	00005	178	20	140	60	
FLDCT	B9999	B	00006	179	20	122	-143	
FLDCT	B9999	B	00007	180	20	127	-87	
FLDCT	B9999	B	00008	181	20	110	-278	
FLDCT	B9999	B	00009	182	20	132	-30	
FLDCT	B9999	B	00010	183	20	121	-154	
FLDCT	B9999	B	00011	184	20	131	-41	
FLDCT	B0001	B	00012	185	20	175	455	

Group Average: -63

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	EZ260	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PRB00	ZZZZZ	ZZZZZ	00000	1	60	5672	19815	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	5912	20718	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	5630	19657	*
Group Average:							20063	
PTB00	ZZZZZ	ZZZZZ	00000	201	60	5313	18465	*
PTB00	ZZZZZ	ZZZZZ	00000	202	60	5886	20620	*
PTB00	ZZZZZ	ZZZZZ	00000	203	60	5654	19747	*

Group Average: 19611

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	ZZZZZ	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PRBBK	ZZZZZ	ZZZZZ	00000	0	600	4102	23	
Group Average:							23	
PTBBK	ZZZZZ	ZZZZZ	00000	200	600	3956	-32	

Group Average: -32

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/05/01
File: 167

Report Date: 7/05/01

Page: 6
Station: 2

Comments

Total Number of Measurements on this Report: 204

NOTE: This report is grouped by:
Package (L1) (Package number)
Setup number (Detector parameters)
 Det Type (L4) (GM pancake-flat surface, Beta 3.5-12" pipe, gamma at 1 m, etc.)
 Reason (L3-345) (Char survey, source check, final survey, etc.)
 Surface Cat (L2) (Wall, floor, drain, penetration, etc.)
 Count Type (L5) (Field count, bkg, pre-, post-, etc.)
 Bkgd Sub (L6) (Material code, i.e., wood, iron, concr, etc.)

GTS:0143 :C:\PDOX35\M2350\TLOGREVU.R2 12-01-97 JPA

L 80 M 03,133

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES
GEORGIA INSTITUTE OF TECHNOLOGY

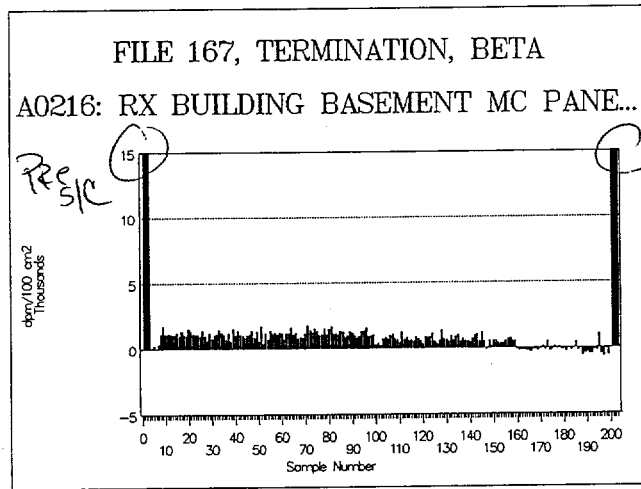
7/05/2001

Graph of File 167

Station: 2

Survey Date: 7/05/2001 Survey Start Time: 07:28:08

Description: A0216: RX BUILDING BASEMENT MC PANEL AREA



Flag set for 2400 dpm/100 cm². Review values greater than this value.
Review this graph for visual outliers.
Mark outliers, source checks and backgrounds on the graph on this page.

		ALPHA				BETA				
SN	RPT	ID	EFF	EFF	EFF	EFF	EFF	EFF	DATE	TIME
			34.97%	34.25%	34.97%	34.25%	34.97%	34.25%		
			Bkg: 0.00 cpm	Bkg: 1.70 cpm	Bkg: 0.00 cpm	Bkg: 1.70 cpm	Bkg: 0.00 cpm	Bkg: 1.70 cpm		
			NDM: 5.17 dpm	NDM: 5.17 dpm	NDM: 5.17 dpm	NDM: 5.17 dpm	NDM: 5.17 dpm	NDM: 5.17 dpm		
			NET CPM	NET CPM	NET CPM	NET CPM	NET CPM	NET CPM		
			DPM	DPM	DPM	DPM	DPM	DPM		
			LIMITS	LIMITS	LIMITS	LIMITS	LIMITS	LIMITS		
			COUNTS	COUNTS	COUNTS	COUNTS	COUNTS	COUNTS		
001	00	1	0	0.00	0.00	2.97	8.66	07-09-2001	07:13:03	
002	00	2	0	0.00	0.00	0.97	2.82	07-09-2001	07:15:02	
003	00	3	0	0.00	0.00	0.97	2.82	07-09-2001	07:17:02	
004	00	4	0	0.00	0.00	-0.37	-1.07	07-09-2001	07:19:02	
005	00	5	0	0.00	0.00	0.30	0.88	07-09-2001	07:21:03	
006	00	6	0	0.00	0.00	2.30	6.72	07-09-2001	07:23:02	
007	00	7	0	0.00	0.00	2.30	6.72	07-09-2001	07:25:02	
008	00	8	0	0.00	0.00	-0.37	-1.07	07-09-2001	07:27:01	
009	00	9	0	0.00	0.00	0.30	0.88	07-09-2001	07:29:00	
010	00	10	0	0.00	0.00	2.30	6.72	07-09-2001	07:30:59	
011	00	11	1	0.67	1.91	0.77	2.24	07-09-2001	07:32:58	
012	00	12	0	0.00	0.00	-1.70	-4.96	07-09-2001	07:34:57	
013	00	13	0	0.00	0.00	0.97	2.82	07-09-2001	07:36:56	
014	00	14	0	0.00	0.00	-0.37	-1.07	07-09-2001	07:38:55	
015	00	15	0	0.00	0.00	2.30	6.72	07-09-2001	07:40:54	
016	00	16	0	0.00	0.00	2.97	8.66	07-09-2001	07:42:53	
017	00	17	0	0.00	0.00	4.30	12.55	07-09-2001	07:44:52	
018	00	18	0	0.00	0.00	1.63	4.77	07-09-2001	07:46:51	
019	00	19	1	0.67	1.91	0.77	2.24	07-09-2001	07:48:50	
020	00	20	0	0.00	0.00	4.30	12.55	07-09-2001	07:50:49	
021	00	21	0	0.00	0.00	0.30	0.88	07-09-2001	07:52:48	
022	00	22	0	0.00	0.00	1.63	4.77	07-09-2001	07:54:47	

Performed By: *[Signature]* Date: 7/19/01
 Reviewed By: *[Signature]* Date: 7/11/01

ALPHA				BETA				DATE	TIME		
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	
001	00	1	1	0.67	1.91		5	1.43	4.19		07-09-2001 08:08:21
002	00	2	0	0.00	0.00		1	-1.03	-3.02		07-09-2001 08:10:20
003	00	3	0	0.00	0.00		7	2.97	8.66		07-09-2001 08:12:20
004	00	4	0	0.00	0.00		3	0.30	0.88		07-09-2001 08:14:20
005	00	5	0	0.00	0.00		3	0.30	0.88		07-09-2001 08:16:20
006	00	6	0	0.00	0.00		15	8.30	24.23		07-09-2001 08:18:21
007	00	7	0	0.00	0.00		5	1.63	4.77		07-09-2001 08:20:20
008	00	8	0	0.00	0.00		0	-1.70	-4.96		07-09-2001 08:22:19
009	00	9	0	0.00	0.00		5	1.63	4.77		07-09-2001 08:24:18
010	00	10	0	0.00	0.00		8	3.63	10.61		07-09-2001 08:26:17
011	00	11	1	0.67	1.91		9	4.10	11.97		07-09-2001 08:28:16
012	00	12	0	0.00	0.00		2	-0.37	-1.07		07-09-2001 08:30:16
013	00	13	0	0.00	0.00		3	0.30	0.88		07-09-2001 08:32:15
014	00	14	0	0.00	0.00		6	2.30	6.72		07-09-2001 08:34:14
015	00	15	1	0.67	1.91		7	2.77	8.08		07-09-2001 08:36:13
016	00	16	0	0.00	0.00		8	3.63	10.61		07-09-2001 08:38:12
017	00	17	0	0.00	0.00		10	4.97	14.50		07-09-2001 08:40:11
018	00	18	0	0.00	0.00		9	4.30	12.55		07-09-2001 08:42:10
019	00	19	0	0.00	0.00		7	2.97	8.66		07-09-2001 08:44:09
020	00	20	0	0.00	0.00		5	1.63	4.77		07-09-2001 08:46:08
021	00	21	0	0.00	0.00		1	-1.03	-3.02		07-09-2001 08:48:08
022	00	22	0	0.00	0.00		1	-1.03	-3.02		07-09-2001 08:50:08

Performed By: MLH Date: 7/9/01
 Reviewed By: SLC Date: 7/11/01

ID	ALPHA				BETA				DATE	TIME
	Eff: 34.97%	Bkg: 0.00 cpm	NDA: 5.17 dpm	Eff: 34.25%	Bkg: 1.70 cpm	NDA: 19.73 dpm				
001 00	1	0	0.00	0.00	2	-0.37	-1.07	07-09-2001	08:54:29	
002 00	2	0	0.00	0.00	10	4.97	14.50	07-09-2001	08:56:27	
003 00	3	0	0.00	0.00	0	-1.70	-4.74	07-09-2001	08:58:28	
004 00	4	1	0.67	1.91	4	0.77	2.24	07-09-2001	09:00:28	
005 00	5	0	0.00	0.00	4	0.97	2.82	07-09-2001	09:02:28	
006 00	6	1	0.67	1.91	10	4.77	13.92	07-09-2001	09:04:28	

Performed By: *Mike* Date: 7/9/01
 Reviewed By: *Steve* Date: 7/11/01

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	1	0.67	1.91		9	4.10	11.97		07-09-2001	09:34:40
002	00	2	0	0.00	0.00		0	-1.70	-4.96		07-09-2001	09:36:40
003	00	3	0	0.00	0.00		4	0.97	2.82		07-09-2001	09:38:40
004	00	4	0	0.00	0.00		3	0.30	0.88		07-09-2001	09:40:39
005	00	5	1	0.67	1.91		3	0.10	0.29		07-09-2001	09:42:39
006	00	6	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	09:44:39

Performed By: *M. M.* Date: 7/9/01

Reviewed By: *PLG* Date: 7/11/01

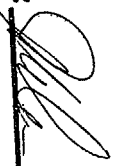

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		7	2.97	8.66		07-09-2001	09:50:39
002	00	2	0	0.00	0.00		3	0.30	0.88		07-09-2001	09:52:38
003	00	3	1	0.67	1.91		3	0.10	0.29		07-09-2001	09:54:38
004	00	4	0	0.00	0.00		10	4.97	14.50		07-09-2001	09:56:38
005	00	5	0	0.00	0.00		6	2.30	6.72		07-09-2001	09:58:37
006	00	6	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	10:00:36
007	00	7	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	10:02:36
008	00	8	0	0.00	0.00		5	1.63	4.77		07-09-2001	10:04:35
009	00	9	0	0.00	0.00		5	1.63	4.77		07-09-2001	10:06:34
010	00	10	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	10:08:33
011	00	11	0	0.00	0.00		3	0.30	0.88		07-09-2001	10:10:32
012	00	12	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	10:12:31

Performed By: *[Signature]* Date: 7/9/01
Reviewed By: *[Signature]* Date: 7/10/01

FINAL SURVEY
PID IP09025 216712

04403 B PIN 16

SN	RPT	ID	ALPHA				BETA			
			Eff: 34.97%	Bkg: 0.00 cpm	MDA: 5.17 dpm	LIMITS	Eff: 34.25%	Bkg: 1.70 cpm	MDA: 19.73 dpm	LIMITS
001	00	1	0	0.00	0.00	0.00	-0.37	-1.07	07-09-2001 10:50:07	
002	00	2	2	1.33	3.81	0	-0.76	-2.23	07-09-2001 10:52:05	
003	00	3	0	0.00	0.00	0	-1.70	-4.96	07-09-2001 10:54:06	
004	00	4	0	0.00	0.00	5	1.63	4.77	07-09-2001 10:56:06	
005	00	5	1	0.67	1.91	2	-0.57	-1.65	07-09-2001 10:58:05	
006	00	6	0	0.00	0.00	9	4.30	12.55	07-09-2001 10:50:05	
007	00	7	0	0.00	0.00	0	-1.70	-4.96	07-09-2001 10:52:04	
008	00	8	0	0.00	0.00	0	-1.70	-4.96	07-09-2001 10:54:03	
009	00	9	0	0.00	0.00	5	1.63	4.77	07-09-2001 10:56:02	
010	00	10	0	0.00	0.00	2	-0.37	-1.07	07-09-2001 10:58:01	
011	00	11	0	0.00	0.00	5	1.63	4.77	07-09-2001 10:40:00	
012	00	12	0	0.00	0.00	2	-0.37	-1.07	07-09-2001 10:41:59	

Performed By:  Date: 7/9/01
 Reviewed By:  Date: 7/11/01

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 3.17 dpm / Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm												
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		4	0.97	2.82		07-09-2001	10:46:02
002	00	2	0	0.00	0.00		0	-1.70	-4.96		07-09-2001	10:48:01
003	00	3	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	10:50:00
004	00	4	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	10:51:59
005	00	5	0	0.00	0.00		3	0.30	0.88		07-09-2001	10:53:58
006	00	6	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	10:55:57
007	00	7	0	0.00	0.00		12	6.30	18.39		07-09-2001	10:57:57
008	00	8	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	10:59:56
009	00	9	0	0.00	0.00		0	-1.70	-4.96		07-09-2001	11:01:55
010	00	10	0	0.00	0.00		4	0.97	2.82		07-09-2001	11:03:54

Performed By: *[Signature]* Date: 7/9/01
 Reviewed By: *[Signature]* Date: 7/11/01

ALPHA					BETA							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		4	0.97	2.82		07-09-2001	11:06:54
002	00	2	0	0.00	0.00		5	1.63	4.77		07-09-2001	11:08:53
003	00	3	0	0.00	0.00		3	0.30	0.88		07-09-2001	11:10:52
004	00	4	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	11:12:51
005	00	5	1	0.67	1.91		3	0.10	0.29		07-09-2001	11:14:50

Performed By: *Mlu* Date: 7/9/01
Reviewed By: *Plag* Date: 7/11/01

FINAL SURVEY
 PIC IPC9025 Z16712

04V01 [Z] PIN 16

		ALPHA				BETA						
		Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm				Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm						
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		4	0.97	2.82		07-09-2001	11:31:20
002	00	2	0	0.00	0.00		13	4.97	20.34		07-09-2001	11:33:20
003	00	3	2	1.33	3.81		21	11.90	34.75		07-09-2001	11:35:20
004	00	4	0	0.00	0.00		10	4.97	14.50		07-09-2001	11:37:21
005	00	5	0	0.00	0.00		16	8.97	26.18		07-09-2001	11:39:21

Performed By: *M. Miller* Date: 7/9/01

Reviewed By: *P. Lopez* Date: 7/11/01

FINAL SURVEY
PIC IPC025 216712

04V02 [2] PIN 16

-----ALPHA-----
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm	Eft: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm								
---COUNTS---	---NET CPM---	---DPM---	---LIMITS---	---LIMITS---	---COUNTS---	---NET CPM---	---DPM---	---LIMITS---	---LIMITS---
---SN---	---RPT---	---ID---							

SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	LIMITS	COUNTS	NET CPM	DPM	LIMITS	LIMITS
001	00	00	1	0.00	0.00	-1.70	-4.96	0	-1.70	-4.96	07-09-2001	11:45:43
002	00	00	2	1.91	0.67	-1.23	-3.60	1	-1.23	-3.60	07-09-2001	11:47:41
003	00	00	3	0.00	0.00	-1.70	-4.96	0	-1.70	-4.96	07-09-2001	11:49:40
004	00	00	4	0.00	0.00	-0.37	-1.07	2	-0.37	-1.07	07-09-2001	11:51:35
005	00	00	5	0.00	0.00	-1.03	-3.02	1	-1.03	-3.02	07-09-2001	11:53:38

Performed By: [Signature] Date: 7/9/01
 Reviewed By: [Signature] Date: 7/11/01

FINAL SURVEY 04EQ1 [Z] PIN 16
 PIC IPC9025 216712

				ALPHA				BETA				
				Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm				Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm				
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		3	0.30	0.88		07-09-2001	12:14:18
002	00	2	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	12:16:18
003	00	3	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	12:18:17
004	00	4	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	12:20:16
005	00	5	0	0.00	0.00		4	0.97	2.82		07-09-2001	12:22:15
006	00	6	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	12:24:14
007	00	7	0	0.00	0.00		5	1.63	4.77		07-09-2001	12:26:14
008	00	8	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	12:28:13
009	00	9	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	12:30:12
010	00	10	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	12:32:11
011	00	11	0	0.00	0.00		0	-1.70	-4.96		07-09-2001	12:34:10
012	00	12	0	0.00	0.00		4	0.97	2.82		07-09-2001	12:36:09
013	00	13	0	0.00	0.00		3	0.30	0.88		07-09-2001	12:38:08
014	00	14	0	0.00	0.00		6	2.30	6.72		07-09-2001	12:40:07
015	00	15	0	0.00	0.00		4	0.97	2.82		07-09-2001	12:42:06

Performed By: *[Signature]* Date: 7/9/01
 Reviewed By: *[Signature]* Date: 7/11/01

		ALPHA			BETA			
Eff:	SKB:	NSA:	Eff:	SKB:	NSA:	Eff:	SKB:	NSA:
34.97%	5.17 dpm	34.25%	2.00 cpm	20.95 dpm				
0	0	0	0	0	0	0	0	0
001 00	0	0	0	0	0	0	0	0
002 00	0	0	0	0	0	0	0	0

Eff:	SKB:	NSA:	Eff:	SKB:	NSA:	Eff:	SKB:	NSA:
34.97%	5.17 dpm	34.25%	2.00 cpm	20.95 dpm				
0	0	0	0	0	0	0	0	0
001 00	0	0	0	0	0	0	0	0
002 00	0	0	0	0	0	0	0	0

Eff:	SKB:	NSA:	Eff:	SKB:	NSA:	Eff:	SKB:	NSA:
34.97%	5.17 dpm	34.25%	2.00 cpm	20.95 dpm				
0	0	0	0	0	0	0	0	0
001 00	0	0	0	0	0	0	0	0
002 00	0	0	0	0	0	0	0	0

Performed By: *[Signature]* Date: 7/6/01
 Reviewed By: *[Signature]* Date: 7/11/01

----- ALPHA ----- BETA -----
| Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | Eff: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm |

SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	2	1	0.67	1.91		3	-0.20	-0.58		07-06-2001	11:33:05
002	00	3	1	0.67	1.91		4	0.47	1.37		07-06-2001	11:35:05
003	00	4	1	0.67	1.91		5	1.13	3.31		07-06-2001	11:37:04
004	00	5	0	0.00	0.00		0	-2.00	-5.84		07-06-2001	11:39:04
005	00	6	0	0.00	0.00		1	-1.33	-3.89		07-06-2001	11:41:04

Performed By: *Miller* Date: 7/6/01
Reviewed By: *Pelagos* Date: 7/11/01

SN	RPT	ID	---	NET CPM	---	DPM	---	LIMITS	---	COUNTS	---	NET CPM	---	DPM	---	LIMITS	---	DATE	---	TIME
001	00	001	0	0.00	0.00	0.00	0.00	0.00	0.00	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	07-06-2001	12:21:15	
002	00	002	0	0.00	0.00	0.00	0.00	0.00	0.00	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	07-06-2001	12:23:14	
003	00	003	0	0.00	0.00	0.00	0.00	0.00	0.00	2	-0.67	-1.95	0.00	0.00	0.00	0.00	0.00	07-06-2001	12:25:14	
004	00	004	0	0.00	0.00	0.00	0.00	0.00	0.00	0	-2.00	-5.94	0.00	0.00	0.00	0.00	0.00	07-06-2001	12:27:14	
005	00	005	0	0.00	0.00	0.00	0.00	0.00	0.00	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	07-06-2001	12:29:13	
006	00	006	0	0.00	0.00	0.00	0.00	0.00	0.00	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	07-06-2001	12:31:13	
007	00	007	0	0.00	0.00	0.00	0.00	0.00	0.00	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	07-06-2001	12:33:13	
008	00	008	0	0.00	0.00	0.00	0.00	0.00	0.00	5	1.33	3.89	0.00	0.00	0.00	0.00	0.00	07-06-2001	12:35:12	

-----ALPHA-----
 Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm ; Eff: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm ;
 -----BETA-----

Performed By: [Signature] Date: 7/6/01
 Reviewed By: [Signature] Date: 7/11/01

----- ALPHA -----										----- BETA -----									
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm										Eff: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm									
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME							
001	00	1	0	0.00	0.00		4	0.67	1.95		07-06-2001	12:38:59							
002	00	2	1	0.67	1.91		4	0.47	1.37		07-06-2001	12:40:58							
003	00	3	0	0.00	0.00		0	-2.00	-5.84		07-06-2001	12:42:58							
004	00	4	0	0.00	0.00		0	-2.00	-5.84		07-06-2001	12:44:58							
005	00	5	0	0.00	0.00		1	-1.33	-3.89		07-06-2001	12:46:58							
006	00	6	0	0.00	0.00		6	2.00	5.84		07-06-2001	12:48:58							
007	00	7	0	0.00	0.00		3	0.00	0.00		07-06-2001	12:50:58							
008	00	8	0	0.00	0.00		4	0.67	1.95		07-06-2001	12:52:57							
009	00	9	0	0.00	0.00		7	2.67	7.79		07-06-2001	12:54:56							

Performed By: *[Signature]* Date: 7/6/01
Reviewed By: *[Signature]* Date: 7/11/01

ALPHA										BETA										
SN	RPT	ID	EFF	34.97%	Bkg	0.00	CPM	MDA	5.17	dpm	EFF	34.25%	Bkg	2.00	CPM	MDA	20.95	DATE	TIME	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
001	00	1	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2	-0.67	-1.95	07-06-2001	12:58:10					
002	00	2	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	3.33	9.73	07-06-2001	13:00:09					
003	00	3	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2	-0.67	-1.95	07-06-2001	13:02:09					
004	00	4	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5	1.33	3.89	07-06-2001	13:04:09					
005	00	5	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3	0.00	0.00	07-06-2001	13:06:08					
006	00	6	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2	-0.67	-1.95	07-06-2001	13:08:07					
007	00	7	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1	-1.33	-3.89	07-06-2001	13:10:06					
008	00	8	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7	2.67	7.79	07-06-2001	13:12:05					
009	00	9	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2	-0.67	-1.95	07-06-2001	13:14:04					
010	00	10	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6	2.00	5.84	07-06-2001	13:16:03					

Performed By: *SMW* Date: *7/6/01*
 Reviewed By: *PLP* Date: *7/11/01*

ALPHA						BETA						
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm						Eff: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm						
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		3	0.00	0.00		07-06-2001	13:24:08
002	00	2	0	0.00	0.00		6	2.00	5.84		07-06-2001	13:26:07
003	00	3	0	0.00	0.00		1	-1.33	-3.89		07-06-2001	13:28:06
004	00	4	0	0.00	0.00		4	0.67	1.95		07-06-2001	13:30:05
005	00	5	0	0.00	0.00		1	-1.33	-3.89		07-06-2001	13:32:04
006	00	6	0	0.00	0.00		1	-1.33	-3.89		07-06-2001	13:34:03
007	00	7	0	0.00	0.00		0	-2.00	-5.84		07-06-2001	13:36:02
008	00	8	0	0.00	0.00		0	-2.00	-5.84		07-06-2001	13:38:01
009	00	9	0	0.00	0.00		5	1.33	3.89		07-06-2001	13:40:00
010	00	10	0	0.00	0.00		4	0.67	1.95		07-06-2001	13:41:59
011	00	11	0	0.00	0.00		3	0.00	0.00		07-06-2001	13:43:58

Performed By: Mulu Date: 7/6/01
Reviewed By: PLAG Date: 7/11/01

-----ALPHA-----
 Etf: 34.47% Bkg: 0.00 cpm MDA: 5.17 dpm | Etf: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm
 -5M-RPT-ID--|--COUNTS--|--NET CPM--|---DPM---|---LIMITS--|---COUNTS--|---NET CPM--|---DPM---|---LIMITS--|---DATE--|--TIME--

ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001 00	5	0.00	0.00	-1.33	1	-2.89	0.00	0.00	07-06-2001	13:47:15
002 00	6	0.00	0.00	2.00	6	5.84	0.00	0.00	07-06-2001	13:49:15
003 00	7	0.00	0.00	0.00	3	0.00	0.00	0.00	07-06-2001	13:51:14
004 00	8	0.00	0.00	-2.00	0	-5.84	0.00	0.00	07-06-2001	13:53:13
005 00	9	0.00	0.00	1.33	5	3.89	0.00	0.00	07-06-2001	13:55:12
006 00	10	0.00	0.00	3.33	8	9.73	0.00	0.00	07-06-2001	13:57:11
007 00	11	0.00	0.00	1.33	5	3.89	0.00	0.00	07-06-2001	13:59:10

Performed By: *[Signature]* Date: 7/6/01
 Reviewed By: *[Signature]* Date: 7/6/01

ALPHA						BETA						
Eff: 34.97% Bkg: 0.00 cpm MDA: 3.17 dpm						Eff: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm						
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	7	0	0.00	0.00		2	-0.67	-1.95		07-06-2001	14:02:12
002	00	8	0	0.00	0.00		3	0.00	0.00		07-06-2001	14:04:11
003	00	9	0	0.00	0.00		4	0.67	1.95		07-06-2001	14:06:10
004	00	10	0	0.00	0.00		3	0.00	0.00		07-06-2001	14:08:09
005	00	11	0	0.00	0.00		5	1.33	3.89		07-06-2001	14:10:08
006	00	12	0	0.00	0.00		1	-1.33	-3.89		07-06-2001	14:12:07

Performed By: *[Signature]* Date: 7/6/01
Reviewed By: *[Signature]* Date: 7/11/01

		ALPHA				BETA			
		Eff: 34.77%	Bkg: 0.00 cpm	MDA: 5.17 dpm	Eff: 34.25%	Bkg: 2.00 cpm	MDA: 20.95 dpm		
ISN	RPT	NET CPM	NET CPM	LIMITS	NET CPM	NET CPM	LIMITS	DATE	TIME
--	--	-	-	-	-	-	-	--	--
001	00	0	0.00	0.00	3	0.00	0.00	07-06-2001	14:15:17
002	00	0	0.00	0.00	4	0.67	1.95	07-06-2001	14:17:16
003	00	0	0.00	0.00	0	-2.00	-5.84	07-06-2001	14:19:15
004	00	0	0.00	0.00	8	3.33	9.73	07-06-2001	14:21:14
005	00	1	0.67	1.91	12	5.80	16.94	07-06-2001	14:23:13
006	00	0	0.00	0.00	1	-1.33	-3.87	07-06-2001	14:25:12

Performed By: *[Signature]* Date: 7/6/01
 Reviewed By: *[Signature]* Date: 7/11/01

I-SR-I-RPT-I	ID	ALPHA				BETA				DATE	TIME
		EFF: 34.97%	Bkg: 0.00 cpm	MDA: 5.17 dpm	LIMITS	EFF: 34.25%	Bkg: 2.00 cpm	MDA: 20.95 dpm	LIMITS		
001	00	9	0	0.00	0.00	4	0.67	1.95	07-06-2001	14:39:40	
002	00	10	0	0.00	0.00	1	-1.33	-3.89	07-06-2001	14:41:39	
003	00	11	1	0.67	1.91	0	-2.20	-4.42	07-06-2001	14:43:38	
004	00	12	0	0.00	0.00	1	-1.33	-3.89	07-06-2001	14:45:37	

Performed By: *[Signature]* Date: 7/6/01
 Reviewed By: *[Signature]* Date: 7/11/01

ALPHA							BETA					
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm							Eff: 34.25% Bkg: 2.00 cpm NDA: 20.95 dpm					
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	9	0	0.00	0.00		2	-0.67	-1.95		07-06-2001	14:49:08
002	00	10	0	0.00	0.00		7	2.67	7.79		07-06-2001	14:51:07
003	00	11	0	0.00	0.00		6	2.00	5.84		07-06-2001	14:53:06
004	00	12	0	0.00	0.00		3	0.00	0.00		07-06-2001	14:55:05
005	00	13	0	0.00	0.00		1	-1.33	-3.89		07-06-2001	14:57:04

Performed By: *[Signature]* Date: 7/6/01
Reviewed By: *[Signature]* Date: 7/11/01

-----ALPHA-----

Eff: 24.97% Bkg: 0.00 cpm MDA: 5.17 dpm | Eff: 24.25% Bkg: 2.00 cpm MDA: 20.95 dpm |

[-SN-] [-RPT-] [-ID] [-COUNTS] [-NET CPM] [-DPM] [-LIMITS] [-COUNTS] [-NET CPM] [-DPM] [-LIMITS] [-DATE] [-TIME]

ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001 00	4	0.67	1.91	1.13	3.21	0.00	0.00	0.00	07-06-2001	15:14:32
002 00	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	07-06-2001	15:16:31
003 00	11	0.00	0.00	-1.33	-3.89	0.00	0.00	0.00	07-06-2001	15:18:30
004 00	12	0.00	0.00	0.67	1.95	0.00	0.00	0.00	07-06-2001	15:20:29
005 00	13	0.00	0.00	-1.33	-3.89	0.00	0.00	0.00	07-06-2001	15:22:28

Performed By: [Signature] Date: 7/6/01
 Reviewed By: [Signature] Date: 7/11/01

-----ALPHA-----
 | E44: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | E44: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm |
 | SN- | RPT- | ID - | COUNTS - | NET CPM - | DPM - | LIMITS - | COUNTS - | NET CPM - | DPM - | LIMITS - | DATE - | TIME - |
 001 00 9 0 0.00 0.00 0 -1.33 -3.89 07-06-2001 15:27:47
 002 00 10 0 0.00 0.00 0 -1.33 -3.89 07-06-2001 15:29:46
 003 00 11 0 0.00 0.00 10 4.67 13.63 07-06-2001 15:31:45
 004 00 12 1 0.67 1.51 3 -0.20 -0.58 07-06-2001 15:33:44
 005 00 13 0 0.00 0.00 4 0.67 1.95 07-06-2001 15:35:43

Performed By: *[Signature]* Date: 7/4/01
 Reviewed By: *[Signature]* Date: 7/11/01

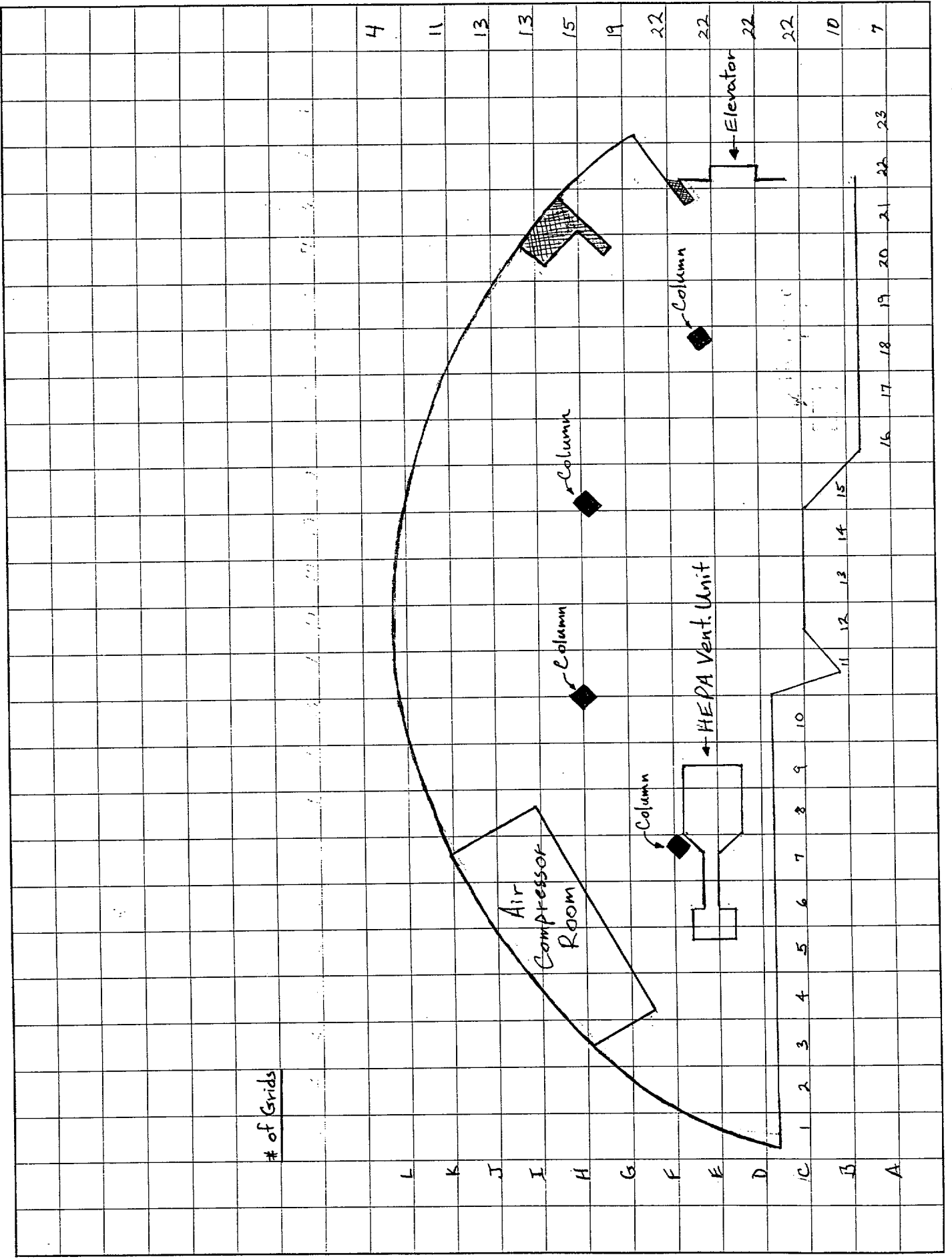
		ALPHA				BETA								
ISN	RPT	ID	NET CPM	DPH	EFF	SKG	MDA	NET CPM	DPH	EFF	SKG	MDA	DATE	TIME
001	00	9	0.67	1.91	34.97%	5.17 dpm	34.25%	2.00 cpm	20.95 dpm	34.25%	5.17 dpm	20.95 dpm	07-06-2001	15:43:12
002	00	10	0.00	0.00				-0.20	-0.58				07-06-2001	15:45:11
003	00	11	0.00	0.00				-0.67	-1.95				07-06-2001	15:47:10

Performed By: *[Signature]* Date: 7/6/01
 Reviewed By: *[Signature]* Date: 7/11/01

Section 11

**Package 16
Basement Stairwell Area
Direct and Removable Beta Results**

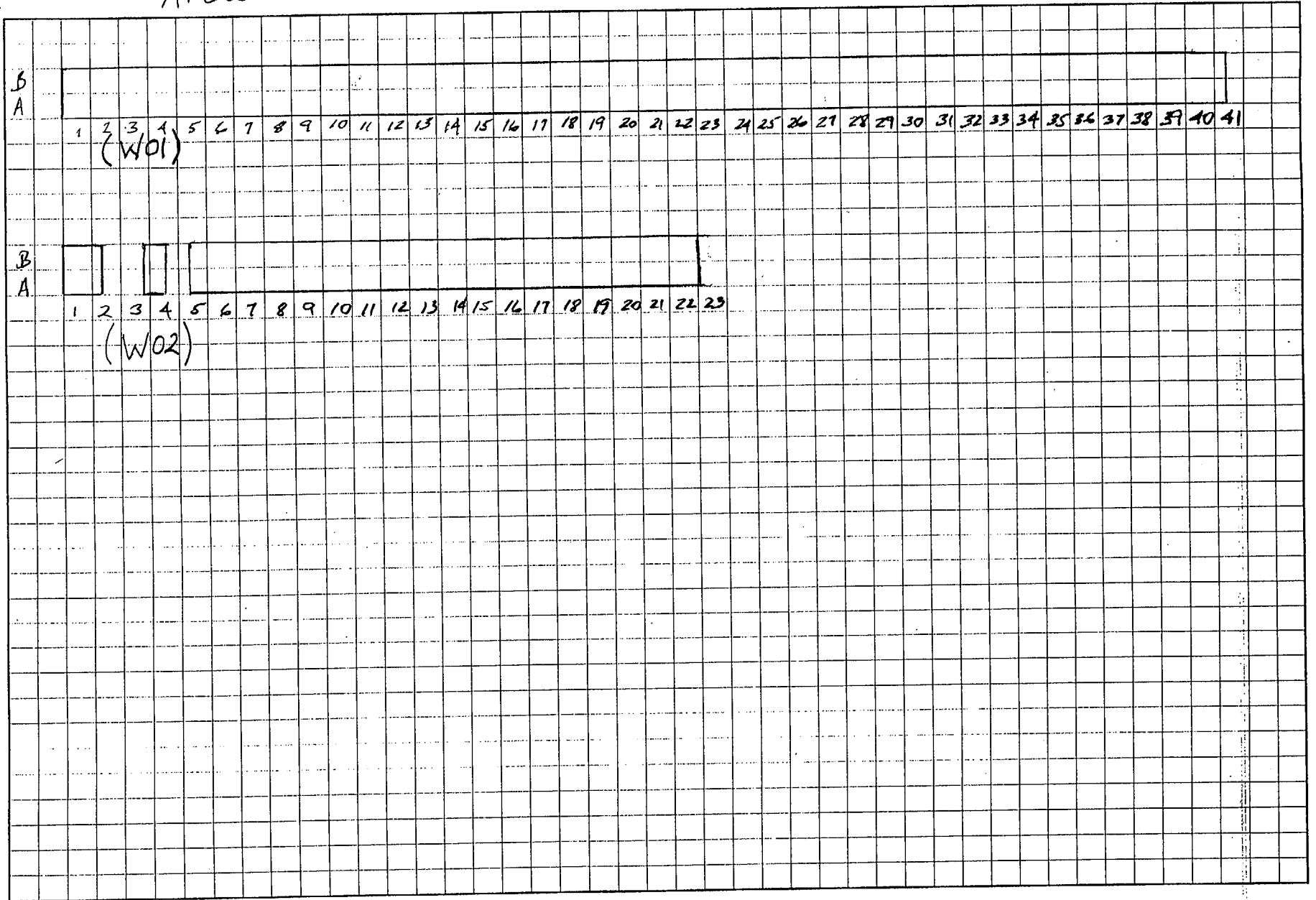
(Floor) 2x. Bldg. Basement Area 05 A0216



of Grids

L	4
K	11
J	13
I	13
H	15
G	19
F	22
E	22
D	22
1C	22
1B	10
A	7

Area 05 Rx Basement



The "net activity" (dpm/100 cm²) presented on the following download report is raw data. It has not been corrected, if required, for the natural radioactivity that may be present in materials of construction. In addition the background used to correct for ambient exposure rates, instrument noise, etc. may need to be adjusted if more than one surface type was included in the download.

See the enclosed spreadsheets for the corrected results.

File #168

ATTACHMENT 6.14
SURVEY DOWNLOAD DATA SHEET

Download Print
Technician Name: D. Schunaker Signature: [Signature] Station: 2
Serial No. Verification: Model 2350: Detector: Problems: (See Comments) File: 168

Survey Technician(s):
Print Name: Betty S. Kos User ID: BSK0490 Signature: [Signature] Date: 7-6-01
Print Name: _____ User ID: _____ Signature: _____ Date: _____

Survey Unit Description: A0216, Basement Area 05 Walls 14 2 Area 4 Vents 04V01 04V02
(Example: Survey Package + description i.e. D16, Building 43, Area 09, Room 100, Floor - Grid Locations A1 through A7)

Instrument Model and Serial No.: Model 2350 Model 2350-1 : 129433

Instrument and Detector Calibration Due Dates: Survey Meter: 10-24-01 Detector: 12-21-01

Type Of Survey: Term Survey Characterization Information Only
 Other (explain):

Type of Measurement	Detector Serial Number	Detector Model Number	Detector Efficiency	Source Mean BKG Value	Pre & Post Use Info	
					Pre File No.	Post File No.
<input type="checkbox"/> Beta β		43-106B				
<input checked="" type="checkbox"/> Beta β	<u>095080</u>	43-68B	<u>.218</u>	<u>5501/399</u>	<u>168</u>	<u>168</u>
<input type="checkbox"/> Alpha α		43-68A				
<input type="checkbox"/> Gamma γ		44-2	N/A			

Local Area Background Measurements ^{04V02 avg = 488cpm 04V01 avg = 456cpm 04S02 avg = 430cpm} MEAN Value in cpm |

ID	Minutes	Beta	1	2	3	4	5	6	
			<u>14830/4937</u>	<u>24535/459A</u>	<u>34252/4330</u>	<u>46568/6189</u>	<u>58638/8590</u>	<u>64112/4210</u>	<u>548</u>
		α Alpha	1	2	3	4	5	6	

COMMENTS: _____

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm²

File Number: 168	Survey Description: A0216: RX BASEMENT AREA 05 WALLS 1&2, AREA 04 VENTS 1&2, 04S02		
Survey Reason: TERMINATION	User ID: BSK0490	Technician name: B.S. Kjos	
Instrument Model: 2350-1	S/N: 129433	Calibration Due: 10/24/01	Group: 2
Detector Model: 43-68	Detector S/N: 095080	Type: 126 cm ² Gas Proportional Detector	
Background: 548 cpm	Beta Efficiency: .218	Survey Date: 7/06/01	

Pre and Post source checks are included on this download: Yes No
 If No is answered, then list the Download Files which include the Pre and Post source checks.
 Pre File #: _____ Post File #: _____

Technician Review:

I have reviewed this cover sheet and 5 pages of the report, 0 pages of comments, and 1 graph.

I performed this survey: Betty S. Kjos / Betty S. Kjos Date: 7-11-01
 Print name Signature

and,
 I performed this survey: _____ / _____ Date: _____
 Print name Signature

Corrections and Reasons:

Comment Resolution:

Survey Reviewed and Approved by: PAUL JONES / Paul Jones Date: 8/1/01
 Print name Signature

Survey Date: 7/06/01
File: 168

Report Date: 7/09/01

Page: 1
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	04S02	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	ZZZZZ	00000	18	600	4252	-447	
FLDBK	B0002	ZZZZZ	00000	24	600	4338	-416	

Group Average: -431

FLDCT	B0002	ZZZZZ	00001	19	20	225	462	
FLDCT	B0002	ZZZZZ	00002	20	20	249	724	
FLDCT	B0002	ZZZZZ	00003	21	20	193	113	
FLDCT	B0002	ZZZZZ	00004	22	20	249	724	
FLDCT	B0002	ZZZZZ	00005	23	20	274	998	

Group Average: 604

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	04V01	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00000	4	600	4535	-344	
FLDBK	B9999	ZZZZZ	00000	10	600	4594	-323	

Group Average: -333

FLDCT	B9999	ZZZZZ	00001	5	20	181	-18	
FLDCT	B9999	ZZZZZ	00002	6	20	221	419	
FLDCT	B9999	ZZZZZ	00003	7	20	203	222	
FLDCT	B9999	ZZZZZ	00004	8	20	218	386	
FLDCT	B9999	ZZZZZ	00005	9	20	178	-51	

Group Average: 191

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	04V02	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00000	11	600	4830	-237	
FLDBK	B9999	ZZZZZ	00000	17	600	4937	-198	

Group Average: -217

FLDCT	B9999	ZZZZZ	00001	12	20	204	233	
FLDCT	B9999	ZZZZZ	00002	13	20	171	-127	
FLDCT	B9999	ZZZZZ	00003	14	20	185	25	
FLDCT	B9999	ZZZZZ	00004	15	20	173	-106	
FLDCT	B9999	ZZZZZ	00005	16	20	191	91	

Group Average: 23

Date: 7/06/01
168

Report Date: 7/09/01

Page: 2
Station: 2

Comments

Survey Code	L1 A0216	L2 05W01	L3 TAT01	L4 02200	Setup Number 0 Det Cal Due: 12/21/01
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L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDBK	B0001	ZZZZZ	00000	25	600	6568	396	
FLDBK	B0004	ZZZZZ	00000	30	600	8638	1150	
FLDBK	B0004	A	00005	31	60	856	1121	
FLDBK	B0004	A	00006	32	60	908	1311	
FLDBK	B0004	A	00007	33	60	858	1129	
FLDBK	B0004	A	00008	34	60	829	1023	
FLDBK	B0004	A	00009	35	60	759	768	
FLDBK	B0004	A	00010	36	60	815	972	
FLDBK	B0004	A	00011	37	60	816	976	
FLDBK	B0004	A	00012	38	60	905	1300	
FLDBK	B0004	A	00013	39	60	898	1274	
FLDBK	B0004	A	00014	40	60	771	812	
FLDBK	B9999	ZZZZZ	00000	75	600	4112	-498	
FLDBK	B0004	B	00005	83	60	913	1329	
FLDBK	B0004	B	00006	84	60	850	1099	
FLDBK	B0004	B	00007	85	60	872	1180	
FLDBK	B0004	B	00008	86	60	843	1074	
FLDBK	B0004	B	00009	87	60	770	808	
FLDBK	B0004	B	00010	88	60	845	1081	
FLDBK	B0004	B	00011	89	60	908	1311	
FLDBK	B0004	B	00012	90	60	917	1343	
FLDBK	B0004	B	00013	91	60	933	1402	
FLDBK	B0004	B	00014	92	60	812	961	
FLDBK	B0001	ZZZZZ	00000	174	600	6189	258	
FLDBK	B0004	ZZZZZ	00000	175	600	8590	1132	
FLDBK	B9999	ZZZZZ	00000	176	600	4210	-462	

Group Average: 933

FLDCT	B0001	A	00001	26	20	256	801	
FLDCT	B0001	A	00002	27	20	288	1150	
FLDCT	B0001	A	00003	28	20	314	1434	
FLDCT	B0001	A	00004	29	20	307	1358	
FLDCT	B0004	A	00005	41	60	1283	2676	*
FLDCT	B0004	A	00006	42	60	1410	3138	*
FLDCT	B0004	A	00007	43	60	1369	2989	*
FLDCT	B0004	A	00008	44	60	1354	2934	*
FLDCT	B0004	A	00009	45	60	1199	2370	*
FLDCT	B0004	A	00010	46	60	1273	2639	*
FLDCT	B0004	A	00011	47	60	1324	2825	*
FLDCT	B0004	A	00012	48	60	1427	3200	*
FLDCT	B0004	A	00013	49	60	1252	2563	*
FLDCT	B0004	A	00014	50	60	1283	2676	*
FLDCT	B0001	A	00015	51	20	268	932	
FLDCT	B0001	A	00016	52	20	225	462	
FLDCT	B0001	A	00017	53	20	238	604	
FLDCT	B0001	A	00018	54	20	241	637	
FLDCT	B0001	A	00019	55	20	240	626	
FLDCT	B0001	A	00020	56	20	240	626	
FLDCT	B0001	A	00021	57	20	232	539	
FLDCT	B0001	A	00022	58	20	230	517	
FLDCT	B0001	A	00023	59	20	237	593	
FLDCT	B0001	A	00024	60	20	225	462	
FLDCT	B0001	A	00025	61	20	238	604	
FLDCT	B0001	A	00026	62	20	242	648	
FLDCT	B0001	A	00027	63	20	232	539	
FLDCT	B0001	A	00028	64	20	267	921	
FLDCT	B0001	A	00029	65	20	208	277	
FLDCT	B0004	A	00030	66	20	209	288	
FLDCT	B0004	A	00031	67	20	219	397	
FLDCT	B0001	A	00032	68	20	180	-29	
FLDCT	B0001	A	00033	69	20	129	-586	
FLDCT	B0001	A	00034	70	20	115	-739	
FLDCT	B0001	A	00035	71	20	102	-881	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/06/01
File: 168

Report Date: 7/09/01

Page: 3
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05W01	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0004	A	00036	72	20	213	331	
FLDCT	B0004	A	00037	73	20	231	528	
FLDCT	B0001	A	00038	74	20	200	189	
FLDCT	B9999	A	00039	76	20	152	-335	
FLDCT	B0001	A	00040	77	20	247	703	
FLDCT	B0001	A	00041	78	20	211	309	
FLDCT	B0001	B	00001	79	20	263	877	
FLDCT	B0001	B	00002	80	20	299	1271	
FLDCT	B0001	B	00003	81	20	241	637	
FLDCT	B0001	B	00004	82	20	309	1380	
FLDCT	B0004	B	00005	93	60	1415	3156	*
FLDCT	B0004	B	00006	94	60	1323	2821	*
FLDCT	B0004	B	00007	95	60	1416	3160	*
FLDCT	B0004	B	00008	96	60	1218	2439	*
FLDCT	B0004	B	00009	97	60	1343	2894	*
FLDCT	B0004	B	00010	98	60	1261	2596	*
FLDCT	B0004	B	00011	99	60	1516	3524	*
FLDCT	B0004	B	00012	100	60	1390	3065	*
FLDCT	B0004	B	00013	101	60	1397	3091	*
FLDCT	B0004	B	00014	102	60	1282	2672	*
FLDCT	B0001	B	00015	103	20	290	1172	
FLDCT	B0001	B	00016	104	20	255	790	
FLDCT	B0001	B	00017	105	20	264	888	
FLDCT	B0001	B	00018	106	20	287	1140	
FLDCT	B0001	B	00019	107	20	230	517	
FLDCT	B0001	B	00020	108	20	229	506	
FLDCT	B0001	B	00021	109	20	240	626	
FLDCT	B0001	B	00022	110	20	254	779	
FLDCT	B0001	B	00023	111	20	261	856	
FLDCT	B0001	B	00024	112	20	263	877	
FLDCT	B0001	B	00025	113	20	298	1260	
FLDCT	B0001	B	00026	114	20	232	539	
FLDCT	B0001	B	00027	115	20	212	320	
FLDCT	B0001	B	00028	116	20	237	593	
FLDCT	B0001	B	00029	117	20	236	582	
FLDCT	B0004	B	00030	118	20	240	626	
FLDCT	B0004	B	00031	119	20	245	681	
FLDCT	B0001	B	00032	120	20	192	102	
FLDCT	B0001	B	00033	121	20	114	-750	
FLDCT	B0001	B	00034	122	20	127	-608	
FLDCT	B0001	B	00035	123	20	108	-815	
FLDCT	B0004	B	00036	124	20	224	451	
FLDCT	B0004	B	00037	125	20	234	561	
FLDCT	B0001	B	00038	126	20	175	-84	
FLDCT	B9999	B	00039	127	20	137	-499	
FLDCT	B0001	B	00040	128	20	168	-160	
FLDCT	B0001	B	00041	129	20	220	408	

Group Average: 1059

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05W02	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0001	A	00001	130	20	188	58	
FLDCT	B0001	A	00002	131	20	213	331	
FLDCT	B0001	A	00003	132	20	199	178	
FLDCT	B0001	A	00004	133	20	270	954	
FLDCT	B0001	A	00005	134	20	243	659	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/06/01
File: 168

Report Date: 7/09/01

Page: 4
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05W02	TAT01	02200	Det Cal Due: 12/21/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDCT	B0001	A	00006	135	20	235	572	
FLDCT	B0001	A	00007	136	20	250	735	
FLDCT	B0001	A	00008	137	20	224	451	
FLDCT	B0001	A	00009	138	20	245	681	
FLDCT	B0001	A	00010	139	20	239	615	
FLDCT	B0004	A	00011	140	20	217	375	
FLDCT	B0004	A	00012	141	20	200	189	
FLDCT	B0004	A	00013	142	20	238	604	
FLDCT	B0004	A	00014	143	20	215	353	
FLDCT	B0004	A	00015	144	20	202	211	
FLDCT	B0004	A	00016	145	20	227	484	
FLDCT	B0004	A	00017	146	20	220	408	
FLDCT	B0004	A	00018	147	20	207	266	
FLDCT	B0004	A	00019	148	20	240	626	
FLDCT	B0004	A	00020	149	20	242	648	
FLDCT	B0004	A	00021	150	20	247	703	
FLDCT	B0004	A	00022	151	20	254	779	
FLDCT	B0001	B	00001	152	20	216	364	
FLDCT	B0001	B	00002	153	20	223	441	
FLDCT	B0001	B	00003	154	20	107	-826	
FLDCT	B0001	B	00004	155	20	202	211	
FLDCT	B0001	B	00005	156	20	224	451	
FLDCT	B0001	B	00006	157	20	248	714	
FLDCT	B0001	B	00007	158	20	261	856	
FLDCT	B0001	B	00008	159	20	269	943	
FLDCT	B0001	B	00009	160	20	256	801	
FLDCT	B0001	B	00010	161	20	251	746	
FLDCT	B0004	B	00011	162	20	239	615	
FLDCT	B0004	B	00012	163	20	232	539	
FLDCT	B0004	B	00013	164	20	245	681	
FLDCT	B0004	B	00014	165	20	201	200	
FLDCT	B0004	B	00015	166	20	223	441	
FLDCT	B0004	B	00016	167	20	220	408	
FLDCT	B0004	B	00017	168	20	234	561	
FLDCT	B0004	B	00018	169	20	245	681	
FLDCT	B0004	B	00019	170	20	245	681	
FLDCT	B0004	B	00020	171	20	216	364	
FLDCT	B0004	B	00021	172	20	238	604	
FLDCT	B0004	B	00022	173	20	228	495	

Group Average: 497

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	EZ260	TAT01	02200	Det Cal Due: 12/21/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
PRB00	ZZZZZ	ZZZZZ	00000	1	60	5860	19339	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	5931	19597	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	5908	19514	*

Group Average: 19483

PTB00	ZZZZZ	ZZZZZ	00000	178	60	5837	19255	*
PTB00	ZZZZZ	ZZZZZ	00000	179	60	6025	19940	*
PTB00	ZZZZZ	ZZZZZ	00000	180	60	5986	19798	*

Group Average: 19664

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/06/01
File: 168

Report Date: 7/09/01

Page: 5
Station: 2

Comments

Survey Code	L1 ZZZZZ	L2 ZZZZZ	L3 TAT01	L4 02200	Setup Number 0 Det Cal Due: 12/21/01
-------------	-------------	-------------	-------------	-------------	---

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
PRBBK	ZZZZZ	ZZZZZ	00000	0	600	3985	-544	
Group Average:							-544	
PTBBK	ZZZZZ	ZZZZZ	00000	177	600	4448	-376	
Group Average:							-376	

Total Number of Measurements on this Report: 181

NOTE: This report is grouped by:
 Package (L1) (Package number)
 Setup number (Detector parameters)
 Det Type (L4) (GM pancake-flat surface, Beta 3.5-12" pipe, gamma at 1 m, etc.)
 Reason (L3-345) (Char survey, source check, final survey, etc.)
 Surface Cat (L2) (Wall, floor, drain, penetration, etc.)
 Count Type (L5) (Field count, bkg, pre-, post-, etc.)
 Bkgd Sub (L6) (Material code, i.e., wood, iron, concr, etc.)

GTS:0143 :C:\PDOX35\M2350\TLOGREVU.R2 12-01-97 JPA

L 80 M 03,133

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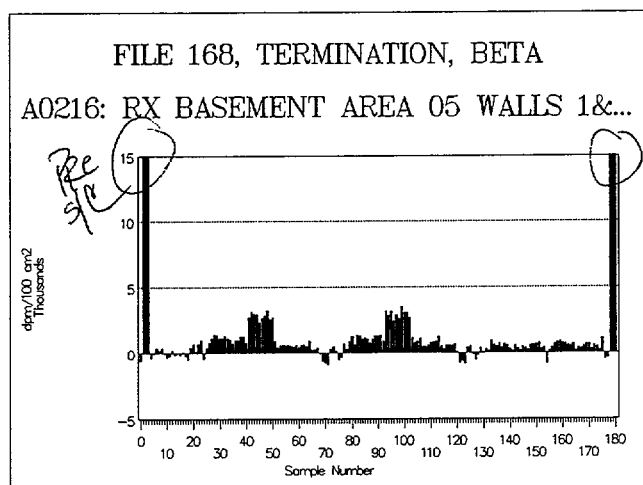
7/09/2001

Graph of File 168

Station: 2

Survey Date: 7/06/2001 Survey Start Time: 08:57:10

Description: A0216: RX BASEMENT AREA 05 WALLS 1&2, AREA 04 VENTS 1&2, 04S02

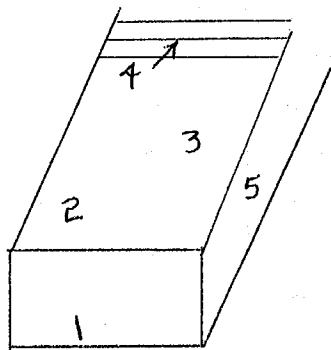


Flag set for 2400 dpm/100 cm². Review values greater than this value.

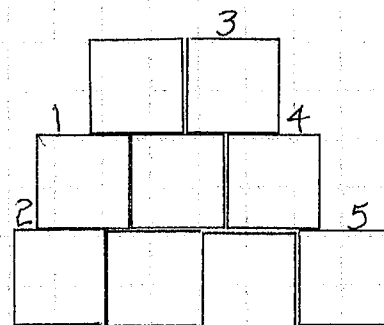
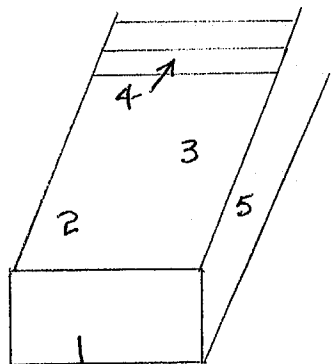
Review this graph for visual outliers.

Mark outliers, source checks and backgrounds on the graph on this page.

A0216
04V01
Rx Vent Duct



A0216
04V02
Air Cond. Vent



A0216
04S02

(All points are inside vents)

The "net activity" (dpm/100 cm²) presented on the following download report is raw data. It has not been corrected, if required, for the natural radioactivity that may be present in materials of construction. In addition the background used to correct for ambient exposure rates, instrument noise, etc. may need to be adjusted if more than one surface type was included in the download.

See the enclosed spreadsheets for the corrected results.

File #169

ATTACHMENT 6.14
SURVEY DOWNLOAD DATA SHEET

Download Print
 Technician: Name: D. Schumaker Signature: [Signature] Station: 2
 File: 169
 Serial No. Verification: Model 2350: Detector: Problems: (See Comments)

Survey Technician(s):
 Print Name: R.A. LEIGH User ID: RAL 7103 Signature: [Signature] Date: 7-6-01
 Print Name: _____ User ID: _____ Signature: _____ Date: _____

Survey Unit Description: A0216 BASEMENT STRUCTURES 05501-THRU 05505
 (Example: Survey Package + description i.e. D16, Building 43, Area 09, Room 100, Floor - Grid Locations A1 through A7)

Instrument Model and Serial No.: Model 2350 Model 2350-1 : 129429

Instrument and Detector Calibration Due Dates: Survey Meter: 12-6-01 Detector: 12-6-01

Type Of Survey: Term Survey Characterization Information Only
 Other (explain): _____

Type of Measurement	Detector Serial Number	Detector Model Number	Detector Efficiency	Source Mean BKG Value	Pre & Post Use Info	
					Pre File No.	Post File No.
<input type="checkbox"/> Beta β		43-106B				
<input checked="" type="checkbox"/> Beta β	<u>091050</u>	43-68B	<u>.206</u>	<u>5190 / 377</u>	<u>169</u>	<u>169</u>
<input type="checkbox"/> Alpha α		43-68A				
<input type="checkbox"/> Gamma γ		44-2	N/A			

Local Area Background Measurements						MEAN Value in cpm !	
10 Minutes	1	2	3	4	5	6	
β Beta	<u>14648/4609</u>	<u>2468A/49A2</u>					<u>472</u>
α Alpha							

COMMENTS: _____

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm2

File Number: 169		Survey Description: A0216: RX BASEMENT AREA 05 STRUCTURES 1-5		
Survey Reason: TERMINATION		User ID: RAL7103	Technician name: R.A. Leigh	
Instrument Model: 2350-1	S/N: 129429	Calibration Due: 12/06/01	Group: 2	
Detector Model: 43-68B	Detector S/N: 091050	Type: 126 cm2 Gas Proportional Detector, Beta Window		
Background: 472 cpm	Beta Efficiency: .206			Survey Date: 7/06/01

Pre and Post source checks are included on this download: Yes No
 If No is answered, then list the Download Files which include the Pre and Post source checks.
 Pre File #: _____ Post File #: _____

Technician Review:

I have reviewed this cover sheet and 3 pages of the report, 30^{RA2} pages of comments, and 1 graph.

I performed this survey: R.A. LEIGH / R.A. Leigh Date: 7-10-01
Print name Signature

and,
 I performed this survey: _____ / _____ Date: _____
Print name Signature

Corrections and Reasons:

Comment Resolution:

Survey Reviewed and Approved by: PAUL JONES / Paul Jones Date: 7/18/01
Print name Signature

Survey Date: 7/06/01
File: 169

Report Date: 7/06/01

Page: 1
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05S01	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0001	ZZZZZ	00000	4	600	4648	-28	
FLDBK	B0001	ZZZZZ	00000	26	600	4689	-12	

Group Average: -20

FLDCT	B0001	ZZZZZ	00001	5	20	161	42	
FLDCT	B0001	ZZZZZ	00001	6	20	172	170	
FLDCT	B0001	ZZZZZ	00002	7	20	247	1036	
FLDCT	B0001	ZZZZZ	00003	8	20	164	77	
FLDCT	B0001	ZZZZZ	00004	9	20	241	967	
FLDCT	B0001	ZZZZZ	00005	10	20	232	863	

Group Average: 526

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05S02	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0001	ZZZZZ	00001	11	20	212	632	
FLDCT	B0001	ZZZZZ	00002	12	20	187	343	
FLDCT	B0001	ZZZZZ	00003	13	20	202	516	
LDCT	B0001	ZZZZZ	00004	14	20	222	747	
LDCT	B0001	ZZZZZ	00005	15	20	179	250	

Group Average: 498

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05S03	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0001	ZZZZZ	00001	16	20	230	840	
FLDCT	B0001	ZZZZZ	00002	17	20	229	828	
FLDCT	B0001	ZZZZZ	00003	18	20	203	528	
FLDCT	B0001	ZZZZZ	00004	19	20	201	505	
FLDCT	B0001	ZZZZZ	00005	20	20	229	828	

Group Average: 706

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05S04	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0001	ZZZZZ	00001	21	20	259	1175	
FLDCT	B0001	ZZZZZ	00002	22	20	229	828	
FLDCT	B0001	ZZZZZ	00003	23	20	241	967	
LDCT	B0001	ZZZZZ	00004	24	20	232	863	
LDCT	B0001	ZZZZZ	00005	25	20	170	146	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/06/01
File: 169

Report Date: 7/06/01

Page: 2
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05S04	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
Group Average:							796	

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05S05	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00000	27	600	4684	-14	
FLDBK	B9999	ZZZZZ	00000	43	600	4842	47	
Group Average:							17	

FLDCT	B9999	ZZZZZ	00001	28	20	195	435	
FLDCT	B9999	ZZZZZ	00002	29	20	170	146	
FLDCT	B9999	ZZZZZ	00003	30	20	151	-73	
FLDCT	B9999	ZZZZZ	00004	31	20	170	146	
FLDCT	B9999	ZZZZZ	00005	32	20	165	89	
FLDCT	B9999	ZZZZZ	00006	33	20	159	19	
FLDCT	B9999	ZZZZZ	00007	34	20	166	100	
FLDCT	B9999	ZZZZZ	00008	35	20	167	112	
FLDCT	B9999	ZZZZZ	00009	36	20	182	285	
FLDCT	B9999	ZZZZZ	00010	37	20	182	285	
FLDCT	B9999	ZZZZZ	00011	38	20	200	493	
FLDCT	B9999	ZZZZZ	00012	39	20	150	-85	
FLDCT	B9999	ZZZZZ	00013	40	20	184	308	
FLDCT	B9999	ZZZZZ	00014	41	20	137	-235	
FLDCT	B9999	ZZZZZ	00015	42	20	149	-96	
Group Average:							129	

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	EZ260	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PRB00	ZZZZZ	ZZZZZ	00000	1	60	5423	19075	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	5793	20500	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	5484	19310	*
Group Average:							19628	
PTB00	ZZZZZ	ZZZZZ	00000	45	60	5716	20203	*
PTB00	ZZZZZ	ZZZZZ	00000	46	60	5886	20858	*
PTB00	ZZZZZ	ZZZZZ	00000	47	60	5487	19321	*
Group Average:							20128	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/06/01
File: 169

Report Date: 7/06/01

Page: 3
Station: 2

Comments

Survey Code	L1 ZZZZZ	L2 ZZZZZ	L3 TAT01	L4 02200	Setup Number 0 Det Cal Due: 12/06/01
-------------	-------------	-------------	-------------	-------------	---

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
PRBBK	ZZZZZ	ZZZZZ	00000	0	600	3767	-367	
Group Average:							-367	
PTBBK	ZZZZZ	ZZZZZ	00000	44	600	4086	-244	
Group Average:							-244	

Total Number of Measurements on this Report: 48

NOTE: This report is grouped by:
 Package (L1) (Package number)
 Setup number (Detector parameters)
 Det Type (L4) (GM pancake-flat surface, Beta 3.5-12" pipe, gamma at 1 m, etc.)
 Reason (L3-345) (Char survey, source check, final survey, etc.)
 Surface Cat (L2) (Wall, floor, drain, penetration, etc.)
 Count Type (L5) (Field count, bkg, pre-, post-, etc.)
 Bkgd Sub (L6) (Material code, i.e., wood, iron, concr, etc.)

GTS:0143 :C:\PDOX35\M2350\TLOGREVU.R2 12-01-97 JPA

L 80 M 03,133

* Hi flag set at 2400 dpm/100 cm2

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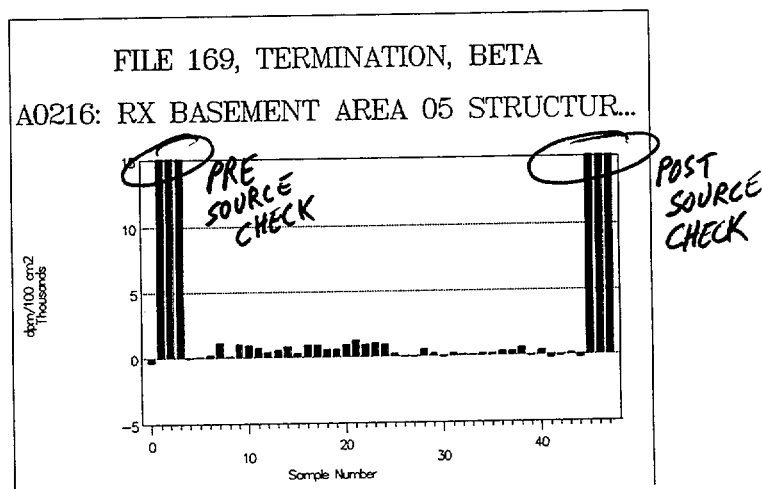
7/06/2001

Graph of File 169

Station: 2

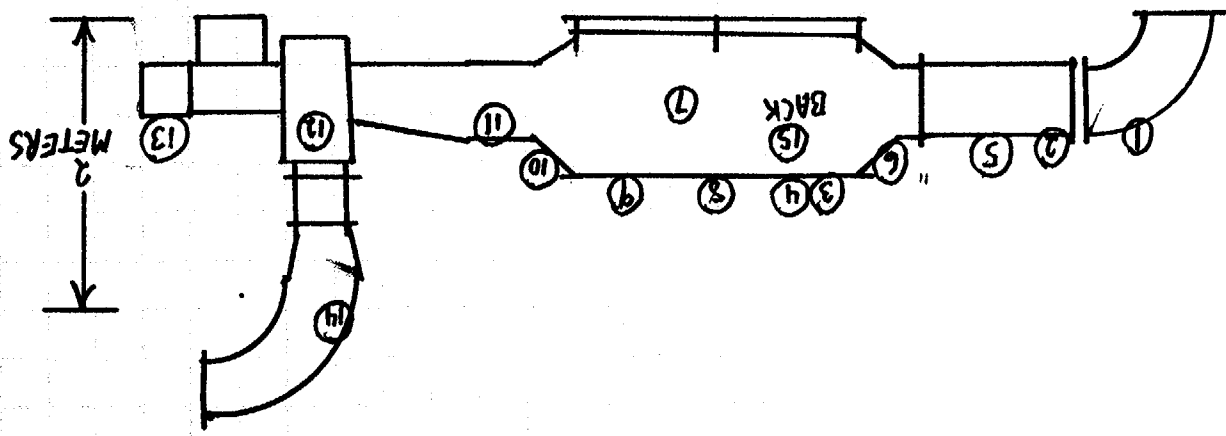
Survey Date: 7/06/2001 Survey Start Time: 12:43:36

Description: A0216: RX BASEMENT AREA 05 STRUCTURES 1-5



BASEMENT VENTILATION UNIT
05505

7-6-81
R.A.Z.



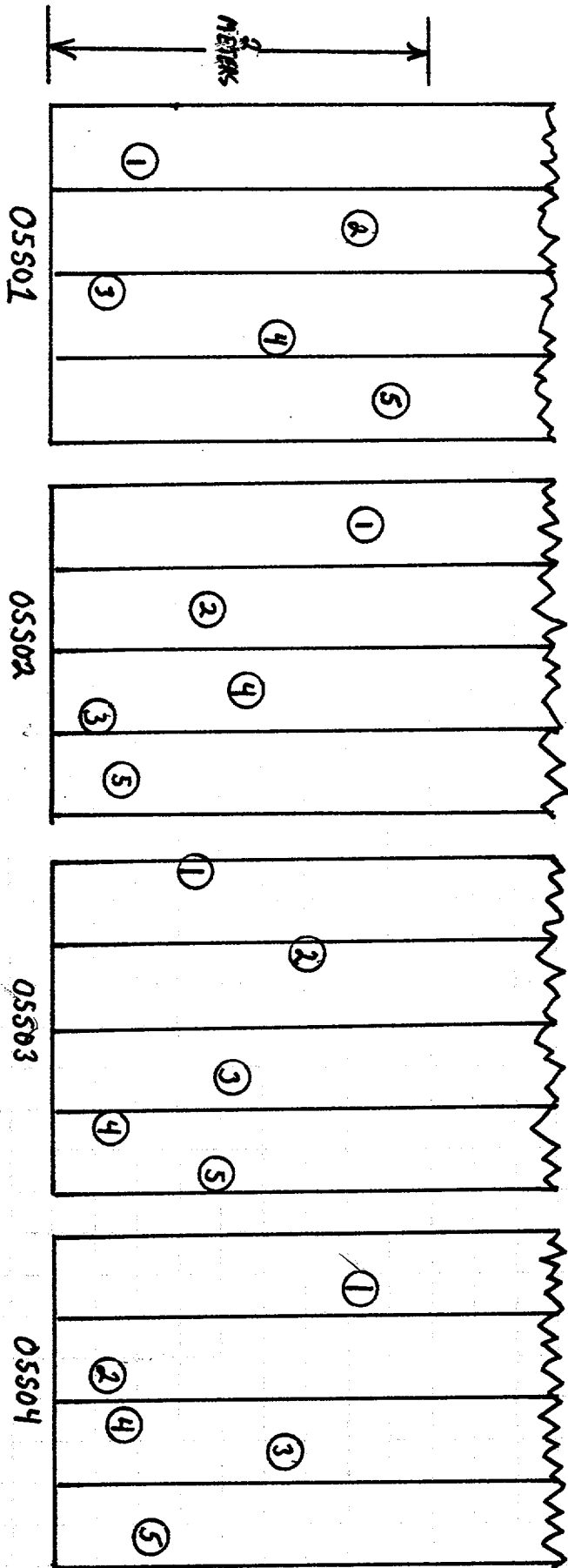
Ⓝ DENOTES SURVEY POINTS

TRITIUM SMEARS TAKEN AT LOCATIONS 6 + 10.

BASEMENT COLUMNS

7-6-01
RA 23.1

⊕ DENOTES SURVEY POINTS
TRITIUM SMEARS TAKEN AT LOCATIONS 2 + 4.



The "net activity" (dpm/100 cm²) presented on the following download report is raw data. It has not been corrected, if required, for the natural radioactivity that may be present in materials of construction. In addition the background used to correct for ambient exposure rates, instrument noise, etc. may need to be adjusted if more than one surface type was included in the download.

See the enclosed spreadsheets for the corrected results.

File #170

ATTACHMENT 6.14
SURVEY DOWNLOAD DATA SHEET

Download Print
Technician: Name: D. Schwane Signature: [Signature] Station: 2
Serial No. Verification: Model 2350: Detector: Problems: (See Comments) File: 170

Survey Technician(s):
Print Name: Billy S. Kjos User ID: BSK0490 Signature: [Signature] Date: 7-9-01
Print Name: _____ User ID: _____ Signature: _____ Date: _____

Survey Unit Description: A0216, Floor of Stairwell Gen. Area & MCC Panel
(Example: Survey Package + description i.e. D16, Building 43, Area 09, Room 100, Floor - Grid Locations A1 through A7)

Instrument Model and Serial No.: Model 2350 Model 2350-1 : 129429

Instrument and Detector Calibration Due Dates: Survey Meter: 12-6-01 Detector: 12-6-01

Type Of Survey: Term Survey Characterization Information Only
 Other (explain):

Type of Measurement	Detector Serial Number	Detector Model Number	Detector Efficiency	Source Mean BKG Value	Pre & Post Use Info	
					Pre File No.	Post File No.
<input type="checkbox"/> Beta β		43-106B				
<input checked="" type="checkbox"/> Beta β	<u>091050</u>	43-68B	<u>.212</u>	<u>5354/401</u>	<u>170</u>	<u>170</u>
<input type="checkbox"/> Alpha α		43-68A				
<input type="checkbox"/> Gamma γ		44-2	N/A			

Local Area Background Measurements MEAN Value in cpm !

04 EQ1 avg = 352 cpm 05 FO1 (80003) avg = 552 cpm 05 FO1 (80003) avg = 591 cpm

10 Minutes	1	2	3	4	5	6	7
β Beta	<u>13434/3605</u>	<u>25551/5447</u>	<u>35935/5888</u>	4	5	6	<u>4918 box 350790</u>
α Alpha	1	2	3	4	5	6	

COMMENTS: _____

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm²

File Number: 170	Survey Description: A0216: RX BASEMENT AREA 05 FLOOR.AREA 04 MC PANEL		
Survey Reason: TERMINATION	User ID: BSK0490	Technician name: B.S. Kjos	
Instrument Model: 2350-1	S/N: 129429	Calibration Due: 12/06/01	Group: 2
Detector Model: 43-68B	Detector S/N: 091050	Type: 126 cm ² Gas Proportional Detector, Beta Window	
Background: 498 cpm	Beta Efficiency: .212	Survey Date: 7/09/01	

Pre and Post source checks are included on this download: Yes No
 If No is answered, then list the Download Files which include the Pre and Post source checks.
 Pre File #: _____ Post File #: _____

Technician Review:

I have reviewed this cover sheet and 5 pages of the report, 0 pages of comments, and 1 graph.

I performed this survey: Betty S. Kjos / B.S. Kjos Date: 7-10-01
Print name Signature

and,

I performed this survey: _____ / _____ Date: _____
Print name Signature

Corrections and Reasons:

Comment Resolution:

Survey Reviewed and Approved by: PAUL JONES / [Signature] Date: 7/18/01
Print name Signature

Survey Date: 7/09/01
File: 170

Report Date: 7/09/01

Page: 1
Station: 2

Comments

Survey Code	L1 A0216	L2 04EQ1	L3 TAT01	L4 02200	Setup Number 0 Det Cal Due: 12/06/01
-------------	-------------	-------------	-------------	-------------	---

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDBK	B9999	ZZZZZ	00000	4	600	3434	-579	
FLDBK	B9999	ZZZZZ	00000	20	600	3605	-515	

Group Average: -547

FLDCT	B9999	ZZZZZ	00001	5	20	144	-247	
FLDCT	B9999	ZZZZZ	00002	6	20	115	-573	
FLDCT	B9999	ZZZZZ	00003	7	20	105	-685	
FLDCT	B9999	ZZZZZ	00004	8	20	123	-483	
FLDCT	B9999	ZZZZZ	00005	9	20	124	-472	
FLDCT	B9999	ZZZZZ	00006	10	20	131	-393	
FLDCT	B9999	ZZZZZ	00007	11	20	126	-449	
FLDCT	B9999	ZZZZZ	00008	12	20	124	-472	
FLDCT	B9999	ZZZZZ	00009	13	20	149	-191	
FLDCT	B9999	ZZZZZ	00010	14	20	134	-359	
FLDCT	B9999	ZZZZZ	00011	15	20	113	-595	
FLDCT	B9999	ZZZZZ	00012	16	20	139	-303	
FLDCT	B9999	ZZZZZ	00013	17	20	131	-393	
FLDCT	B9999	ZZZZZ	00014	18	20	158	-90	
FLDCT	B9999	ZZZZZ	00015	19	20	143	-258	

Group Average: -398

Survey Code	L1 A0216	L2 05F01	L3 TAT01	L4 02200	Setup Number 0 Det Cal Due: 12/06/01
-------------	-------------	-------------	-------------	-------------	---

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDBK	B0003	ZZZZZ	00000	21	600	5557	216	
FLDBK	B0002	ZZZZZ	00000	22	600	5935	358	
FLDBK	B0003	ZZZZZ	00000	204	600	5447	175	
FLDBK	B0002	ZZZZZ	00000	205	600	5888	340	

Group Average: 272

FLDCT	B0003	C	00001	23	20	251	955	
FLDCT	B0003	C	00002	24	20	235	775	
FLDCT	B0003	C	00003	25	20	213	528	
FLDCT	B0003	C	00004	26	20	278	1258	
FLDCT	B0003	C	00005	27	20	246	898	
FLDCT	B0003	C	00006	28	20	292	1415	
FLDCT	B0003	C	00007	29	20	269	1157	
FLDCT	B0003	C	00008	30	20	275	1224	
FLDCT	B0003	C	00009	31	20	261	1067	
FLDCT	B0003	C	00010	32	20	244	876	
FLDCT	B0003	C	00011	33	20	224	651	
FLDCT	B0003	C	00012	34	20	224	651	
FLDCT	B0003	C	00013	35	20	244	876	
FLDCT	B0003	C	00014	36	20	253	977	
FLDCT	B0003	C	00015	37	20	265	1112	
FLDCT	B0002	C	00016	38	20	231	730	
FLDCT	B0003	C	00017	39	20	182	180	
FLDCT	B0003	C	00018	40	20	242	854	
FLDCT	B0003	C	00019	41	20	206	449	
FLDCT	B0003	C	00020	42	20	214	539	
FLDCT	B0003	C	00021	43	20	220	606	
FLDCT	B0003	C	00022	44	20	249	932	
FLDCT	B0003	A	00016	45	20	249	932	
FLDCT	B0003	A	00017	46	20	272	1190	
FLDCT	B0003	A	00018	47	20	259	1044	

Survey Date: 7/09/01
File: 170

Report Date: 7/09/01

Page: 2
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0216	05F01	TAT01	02200	Det Cal Due: 12/06/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDCT	B0003	A	00019	48	20	263	1089	
FLDCT	B0003	A	00020	49	20	251	955	
FLDCT	B0003	A	00021	50	20	202	404	
FLDCT	B0003	A	00022	51	20	252	966	
FLDCT	B0003	B	00011	52	20	319	1718	
FLDCT	B0003	B	00012	53	20	271	1179	
FLDCT	B0003	B	00015	54	20	248	921	
FLDCT	B0003	B	00016	55	20	214	539	
FLDCT	B0003	B	00017	56	20	215	550	
FLDCT	B0003	B	00018	57	20	254	988	
FLDCT	B0003	B	00019	58	20	233	752	
FLDCT	B0003	B	00020	59	20	253	977	
FLDCT	B0003	B	00021	60	20	229	708	
FLDCT	B0003	B	00022	61	20	243	865	
FLDCT	B0003	D	00001	62	20	306	1572	
FLDCT	B0003	D	00002	63	20	230	719	
FLDCT	B0003	D	00003	64	20	275	1224	
FLDCT	B0003	D	00004	65	20	245	887	
FLDCT	B0003	D	00005	66	20	276	1235	
FLDCT	B0003	D	00006	67	20	266	1123	
FLDCT	B0003	D	00007	68	20	299	1494	
FLDCT	B0003	D	00008	69	20	253	977	
FLDCT	B0003	D	00009	70	20	257	1022	
FLDCT	B0003	D	00010	71	20	271	1179	
FLDCT	B0003	D	00011	72	20	217	573	
FLDCT	B0003	D	00012	73	20	244	876	
FLDCT	B0003	D	00013	74	20	258	1033	
FLDCT	B0003	D	00014	75	20	278	1258	
FLDCT	B0003	D	00015	76	20	243	865	
FLDCT	B0003	D	00016	77	20	225	663	
FLDCT	B0003	D	00017	78	20	235	775	
FLDCT	B0003	D	00018	79	20	200	382	
FLDCT	B0003	D	00019	80	20	217	573	
FLDCT	B0003	D	00020	81	20	216	562	
FLDCT	B0003	D	00021	82	20	228	696	
FLDCT	B0003	D	00022	83	20	221	618	
FLDCT	B0003	E	00001	84	20	284	1325	
FLDCT	B0003	E	00002	85	20	208	472	
FLDCT	B0003	E	00003	86	20	251	955	
FLDCT	B0003	E	00004	87	20	257	1022	
FLDCT	B0003	E	00005	88	20	272	1190	
FLDCT	B0003	E	00006	89	20	250	943	
FLDCT	B0003	E	00007	90	20	274	1213	
FLDCT	B0003	E	00008	91	20	255	1000	
FLDCT	B0003	E	00009	92	20	273	1202	
FLDCT	B0003	E	00010	93	20	231	730	
FLDCT	B0003	E	00011	94	20	264	1101	
FLDCT	B0003	E	00012	95	20	243	865	
FLDCT	B0003	E	00013	96	20	229	708	
FLDCT	B0003	E	00014	97	20	250	943	
FLDCT	B0003	E	00015	98	20	259	1044	
FLDCT	B0003	E	00016	99	20	240	831	
FLDCT	B0003	E	00017	100	20	227	685	
FLDCT	B0003	E	00018	101	20	278	1258	
FLDCT	B0003	E	00019	102	20	213	528	
FLDCT	B0003	E	00020	103	20	212	517	
FLDCT	B0003	E	00021	104	20	211	505	
FLDCT	B0003	E	00022	105	20	207	460	
FLDCT	B0003	F	00002	106	20	237	797	
FLDCT	B0003	F	00003	107	20	291	1404	
FLDCT	B0003	F	00004	108	20	274	1213	
FLDCT	B0002	F	00005	109	20	320	1730	
FLDCT	B0003	F	00006	110	20	276	1235	
FLDCT	B0003	F	00007	111	20	279	1269	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/09/01
File: 170

Report Date: 7/09/01

Page: 3
Station: 2

Comments

Survey Code	L1 A0216	L2 05F01	L3 TAT01	L4 02200	Setup Number 0 Det Cal Due: 12/06/01
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L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDCT	B0003	F	00008	112	20	259	1044	
FLDCT	B0003	F	00009	113	20	256	1011	
FLDCT	B0003	F	00010	114	20	255	1000	
FLDCT	B0003	F	00011	115	20	225	663	
FLDCT	B0003	F	00012	116	20	238	809	
FLDCT	B0003	F	00013	117	20	224	651	
FLDCT	B0003	F	00014	118	20	267	1134	
FLDCT	B0003	F	00015	119	20	244	876	
FLDCT	B0003	F	00016	120	20	259	1044	
FLDCT	B0003	F	00017	121	20	209	483	
FLDCT	B0003	F	00018	122	20	234	764	
FLDCT	B0003	F	00019	123	20	217	573	
FLDCT	B0003	F	00020	124	20	234	764	
FLDCT	B0003	F	00021	125	20	226	674	
FLDCT	B0003	F	00022	126	20	218	584	
FLDCT	B0003	F	00023	127	20	205	438	
FLDCT	B0003	G	00003	128	20	299	1494	
FLDCT	B0003	G	00005	129	20	283	1314	
FLDCT	B0003	G	00006	130	20	266	1123	
FLDCT	B0003	G	00007	131	20	234	764	
FLDCT	B0003	G	00008	132	20	248	921	
FLDCT	B0003	G	00009	133	20	275	1224	
FLDCT	B0003	G	00010	134	20	238	809	
FLDCT	B0003	G	00011	135	20	236	786	
FLDCT	B0003	G	00012	136	20	217	573	
FLDCT	B0003	G	00013	137	20	242	854	
FLDCT	B0003	G	00014	138	20	230	719	
FLDCT	B0003	G	00015	139	20	235	775	
FLDCT	B0003	G	00016	140	20	204	427	
FLDCT	B0003	G	00017	141	20	230	719	
FLDCT	B0003	G	00018	142	20	241	842	
FLDCT	B0003	G	00019	143	20	243	865	
FLDCT	B0003	G	00020	144	20	249	932	
FLDCT	B0003	G	00021	145	20	230	719	
FLDCT	B0003	G	00022	146	20	257	1022	
FLDCT	B0003	H	00007	147	20	271	1179	
FLDCT	B0003	H	00008	148	20	313	1651	
FLDCT	B0003	H	00009	149	20	294	1438	
FLDCT	B0003	H	00010	150	20	286	1348	
FLDCT	B0003	H	00011	151	20	282	1303	
FLDCT	B0003	H	00012	152	20	266	1123	
FLDCT	B0003	H	00013	153	20	250	943	
FLDCT	B0003	H	00014	154	20	239	820	
FLDCT	B0003	H	00015	155	20	233	752	
FLDCT	B0003	H	00016	156	20	234	764	
FLDCT	B0003	H	00017	157	20	234	764	
FLDCT	B0003	H	00018	158	20	264	1101	
FLDCT	B0003	H	00019	159	20	223	640	
FLDCT	B0003	H	00020	160	20	233	752	
FLDCT	B0003	H	00021	161	20	238	809	
FLDCT	B0003	H	00022	162	20	262	1078	
FLDCT	B0003	I	00008	163	20	336	1909	
FLDCT	B0003	I	00009	164	20	298	1482	
FLDCT	B0003	I	00010	165	20	254	988	
FLDCT	B0003	I	00011	166	20	252	966	
FLDCT	B0003	I	00012	167	20	247	910	
FLDCT	B0003	I	00013	168	20	237	797	
FLDCT	B0003	I	00014	169	20	235	775	
FLDCT	B0003	I	00015	170	20	217	573	
FLDCT	B0003	I	00016	171	20	236	786	
FLDCT	B0003	I	00017	172	20	252	966	
FLDCT	B0003	I	00018	173	20	253	977	
FLDCT	B0003	I	00019	174	20	262	1078	
FLDCT	B0003	I	00020	175	20	298	1482	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/09/01
File: 170

Report Date: 7/09/01

Page: 4
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number
A0216	05F01	TAT01	02200	0	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0003	J	00007	176	20	298	1482	
FLDCT	B0003	J	00008	177	20	258	1033	
FLDCT	B0003	J	00009	178	20	283	1314	
FLDCT	B0003	J	00010	179	20	267	1134	
FLDCT	B0003	J	00011	180	20	266	1123	
FLDCT	B0003	J	00012	181	20	269	1157	
FLDCT	B0003	J	00013	182	20	237	797	
FLDCT	B0003	J	00014	183	20	269	1157	
FLDCT	B0003	J	00015	184	20	251	955	
FLDCT	B0003	J	00016	185	20	255	1000	
FLDCT	B0003	J	00017	186	20	245	887	
FLDCT	B0003	J	00018	187	20	257	1022	
FLDCT	B0003	J	00019	188	20	258	1033	
FLDCT	B0003	K	00007	189	20	271	1179	
FLDCT	B0003	K	00008	190	20	294	1438	
FLDCT	B0003	K	00009	191	20	283	1314	
FLDCT	B0003	K	00010	192	20	258	1033	
FLDCT	B0003	K	00011	193	20	250	943	
FLDCT	B0003	K	00012	194	20	272	1190	
FLDCT	B0003	K	00013	195	20	277	1247	
FLDCT	B0003	K	00014	196	20	263	1089	
FLDCT	B0003	K	00015	197	20	279	1269	
FLDCT	B0003	K	00016	198	20	245	887	
FLDCT	B0003	K	00017	199	20	256	1011	
FLDCT	B0003	L	00011	200	20	232	741	
FLDCT	B0003	L	00012	201	20	261	1067	
FLDCT	B0003	L	00013	202	20	253	977	
FLDCT	B0003	L	00014	203	20	265	1112	

Group Average: 951

Survey Code	L1	L2	L3	L4	Setup Number
ZZZZZ	EZZ60	TAT01	02200	0	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PRB00	ZZZZZ	ZZZZZ	00000	1	60	5606	19122	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	5838	19991	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	5821	19927	*

Group Average: 19680

PTB00	ZZZZZ	ZZZZZ	00000	207	60	5576	19010	*
PTB00	ZZZZZ	ZZZZZ	00000	208	60	5946	20395	*
PTB00	ZZZZZ	ZZZZZ	00000	209	60	5684	19414	*

Group Average: 19607

Survey Code	L1	L2	L3	L4	Setup Number
ZZZZZ	ZZZZZ	TAT01	02200	0	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PRBBK	ZZZZZ	ZZZZZ	00000	0	600	4011	-363	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/09/01
File: 170

Report Date: 7/09/01

Page: 5
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	ZZZZZ	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H	
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i	
							Group Average:	-363	
PTBBK	ZZZZZ	ZZZZZ	00000	206	600	4200	-292		
							Group Average:	-292	

Total Number of Measurements on this Report: 210

NOTE: This report is grouped by:
 Package (L1) (Package number)
 Setup number (Detector parameters)
 Det Type (L4) (GM pancake-flat surface, Beta 3.5-12" pipe, gamma at 1 m, etc.)
 Reason (L3-345) (Char survey, source check, final survey, etc.)
 Surface Cat (L2) (Wall, floor, drain, penetration, etc.)
 Count Type (L5) (Field count, bkg, pre-, post-, etc.)
 Bkgd Sub (L6) (Material code, i.e., wood, iron, concr, etc.)

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

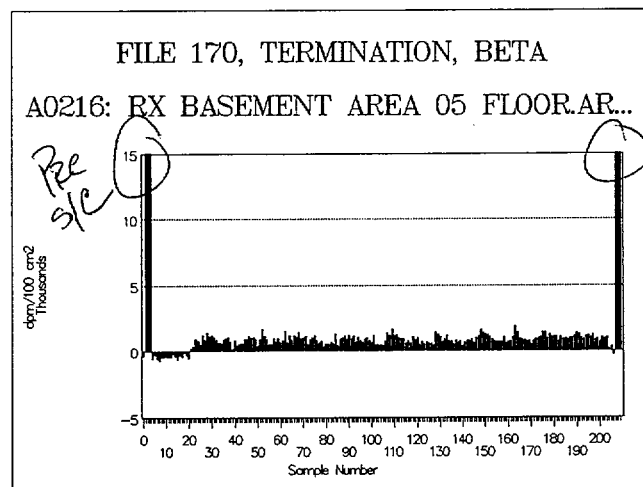
7/09/2001

Graph of File 170

Station: 2

Survey Date: 7/09/2001 Survey Start Time: 07:09:44

Description: A0216: RX BASEMENT AREA 05 FLOOR.AREA 04 MC PANEL

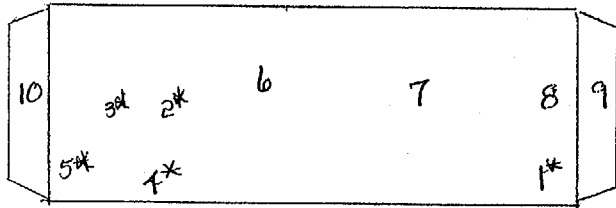


Flag set for 2400 dpm/100 cm2. Review values greater than this value.

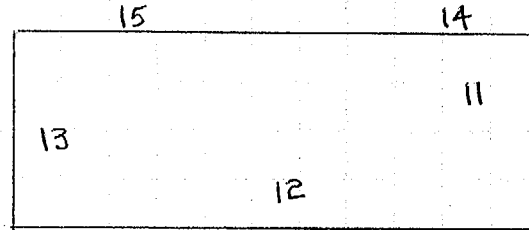
Review this graph for visual outliers.

Mark outliers, source checks and backgrounds on the graph on this page.

A0216
04EQ1
MC PANEL



FRONT PANEL



BACK PANEL

* READINGS TAKEN INSIDE PANEL

FINAL SURVEY 05F01 A PIN 16
 PIC IPC9025 216712

ALPHA				BETA								
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm				Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm								
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	16	0	0.00	0.00		6	2.30	6.72		07-09-2001	12:50:23
002	00	17	0	0.00	0.00		0	-1.70	-4.96		07-09-2001	12:52:22
003	00	18	0	0.00	0.00		8	3.63	10.61		07-09-2001	12:54:21
004	00	19	0	0.00	0.00		6	2.30	6.72		07-09-2001	12:56:20
005	00	20	1	0.67	1.91		7	2.77	8.08		07-09-2001	12:58:19
006	00	21	1	0.67	1.91		4	0.77	2.24		07-09-2001	13:00:18
007	00	22	0	0.00	0.00		0	-1.70	-4.96		07-09-2001	13:02:17

Performed By: Mila Date: 7/9/01

Reviewed By: P. P. P. Date: 7/18/01

FINAL SURVEY
PIC IPC9025 216712

05F01 B PIN 16

238

ALPHA						BETA						
Eff: 34.97% Bkg: 0.00 cpm NDA: 8.17 dpm						Eff: 34.25% Bkg: 1.70 cpm NDA: 19.73 dpm						
-SN-	-RPT-	ID	COUNTS	NET CPM	DPH	LIMITS	COUNTS	NET CPM	DPH	LIMITS	DATE	TIME
001	00	11	0	0.00	0.00		17	9.63	28.13		07-09-2001	13:13:23
002	00	12	0	0.00	0.00		7	2.97	8.66		07-09-2001	13:15:22
003	00	15	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	13:17:21
004	00	16	1	0.67	1.91		10	4.77	13.92		07-09-2001	13:19:20
005	00	17	1	0.67	1.91		19	10.77	31.44		07-09-2001	13:21:19
006	00	18	0	0.00	0.00		8	3.63	10.61		07-09-2001	13:23:18
007	00	19	1	0.67	1.91		7	2.77	8.08		07-09-2001	13:25:17
008	00	20	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	13:27:16
009	00	21	1	0.67	1.91		8	3.43	10.03		07-09-2001	13:29:15

Performed By: *Miller* Date: 7/10/01
Reviewed By: *PLA* Date: 7/10/01

KSK
238

239

-----ALPHA-----
 Eff: 34.97% BKG: 0.00 cpm MDA: 5.17 dpm
 Eff: 34.25% BKG: 1.70 cpm MDA: 19.73 dpm
 -----BETA-----

SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		8	3.63	10.61		07-09-2001	13:33:17
002	00	2	0	0.00	0.00		6	2.30	6.72		07-09-2001	13:35:16
003	00	3	0	0.00	0.00		6	2.30	6.72		07-09-2001	13:37:15
004	00	4	1	0.67	1.91		17	9.43	27.55		07-09-2001	13:39:14
005	00	5	1	0.67	1.91		11	5.43	15.87		07-09-2001	13:41:13
006	00	6	0	0.00	0.00		8	3.63	10.61		07-09-2001	13:43:12
007	00	7	0	0.00	0.00		37	22.97	67.06		07-09-2001	13:45:12
008	00	8	0	0.00	0.00		8	3.63	10.61		07-09-2001	13:47:11
009	00	9	0	0.00	0.00		5	1.63	4.77		07-09-2001	13:49:10
010	00	10	2	1.33	3.81		2	-0.76	-2.23		07-09-2001	13:51:09
011	00	11	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	13:53:08
012	00	12	0	0.00	0.00		8	3.63	10.61		07-09-2001	13:55:07
013	00	13	0	0.00	0.00		5	1.63	4.77		07-09-2001	13:57:06
014	00	14	1	0.67	1.91		7	2.77	8.08		07-09-2001	13:59:05
015	00	15	0	0.00	0.00		6	2.30	6.72		07-09-2001	14:01:04
016	00	16	2	1.33	3.81		9	3.90	11.39		07-09-2001	14:03:03
017	00	17	0	0.00	0.00		5	1.63	4.77		07-09-2001	14:05:02
018	00	18	0	0.00	0.00		8	3.63	10.61		07-09-2001	14:07:01
019	00	19	0	0.00	0.00		7	2.97	8.66		07-09-2001	14:09:00
020	00	20	0	0.00	0.00		6	2.30	6.72		07-09-2001	14:10:59
021	00	21	0	0.00	0.00		1	-1.03	-3.02		07-09-2001	14:12:58
022	00	22	0	0.00	0.00		3	0.30	0.88		07-09-2001	14:14:57

Performed By: *[Signature]* Date: 7/10/01
 Reviewed By: *[Signature]* Date: 7/18/01

FINAL SURVEY
PIC IPC9025 216712

05F01 D PIN 16

~~239~~ KSK
240

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		3	0.30	0.88		07-09-2001	14:27:37
002	00	2	0	0.00	0.00		6	2.30	6.72		07-09-2001	14:29:36
003	00	3	1	0.67	1.91		3	0.10	0.29		07-09-2001	14:31:35
004	00	4	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	14:33:34
005	00	5	0	0.00	0.00		9	4.30	12.55		07-09-2001	14:35:33
006	00	6	0	0.00	0.00		10	4.97	14.50		07-09-2001	14:37:32
007	00	7	0	0.00	0.00		6	2.30	6.72		07-09-2001	14:39:31
008	00	8	2	1.33	3.81		19	10.57	30.86		07-09-2001	14:41:30
009	00	9	0	0.00	0.00		15	8.30	24.23		07-09-2001	14:43:29
010	00	10	0	0.00	0.00		5	1.63	4.77		07-09-2001	14:45:28
011	00	11	0	0.00	0.00		5	1.63	4.77		07-09-2001	14:47:27
012	00	12	1	0.67	1.91		3	0.10	0.29		07-09-2001	14:49:26
013	00	13	0	0.00	0.00		9	4.30	12.55		07-09-2001	14:51:25
014	00	14	0	0.00	0.00		4	0.97	2.82		07-09-2001	14:53:24
015	00	15	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	14:55:23
016	00	16	0	0.00	0.00		5	1.63	4.77		07-09-2001	14:57:22
017	00	17	1	0.67	1.91		7	2.77	8.08		07-09-2001	14:59:21
018	00	18	0	0.00	0.00		7	2.97	8.66		07-09-2001	15:01:20
019	00	19	0	0.00	0.00		3	0.30	0.88		07-09-2001	15:03:19
020	00	20	1	0.67	1.91		4	0.77	2.24		07-09-2001	15:05:18
021	00	21	0	0.00	0.00		7	2.97	8.66		07-09-2001	15:07:17
022	00	22	1	0.67	1.91		3	0.10	0.29		07-09-2001	15:09:16

Performed By: JML Date: 7/10/01
Reviewed By: PLA Date: 7/18/01

240
241

SMEARS ALPHA/BETA Count Mins: 1				Alpha					Beta						
IPC-0025 #721052 Instr No 1 Pass Count Started				NET: 24.671 LD: 11.01 dpm					NET: 20.04 LD: 14.63 dpm						
Carrier No.	Sample ID	Date	Time	cpm	Bkg cpm	dpm	± err (95%)	MDA	Message	cpm	Bkg cpm	dpm	± err (95%)	MDA	Message
1	A0216 05F01 Grid B22	11/27/01	10:25:23	0.00	0.000	0.00	0.00	11.01	Less Than MDA	1.00	0.250	2.50	6.53	14.63	Less Than MDA

cal. due ~~7-5-02~~ 11-21-02
A 11/29/01

REVIEWED BY Pat Jones DATE 11/29/01
~~11/29/00~~

Reviewed By: Nancy Switzer Date: 11/27/01

FINAL SURVEY
PIC IPC9025 21A712

05F01 E PIN 16

241 KSK

242

ALPHA						BETA						
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm						Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm						
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		5	1.63	4.77		07-09-2001	15:16:27
002	00	2	0	0.00	0.00		5	1.63	4.77		07-09-2001	15:18:26
003	00	3	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	15:20:25
004	00	4	0	0.00	0.00		4	0.97	2.82		07-09-2001	15:22:24
005	00	5	0	0.00	0.00		8	3.63	10.61		07-09-2001	15:24:23
006	00	6	2	1.33	3.81		9	3.90	11.39		07-09-2001	15:26:22
007	00	7	0	0.00	0.00		5	1.63	4.77		07-09-2001	15:28:21
008	00	8	0	0.00	0.00		4	0.97	2.82		07-09-2001	15:30:20
009	00	9	0	0.00	0.00		8	3.63	10.61		07-09-2001	15:32:19
010	00	10	0	0.00	0.00		4	0.97	2.82		07-09-2001	15:34:18
011	00	11	0	0.00	0.00		32	19.63	57.32		07-09-2001	15:36:17
012	00	12	1	0.67	1.91		3	0.10	0.29		07-09-2001	15:38:16
013	00	13	0	0.00	0.00		4	0.97	2.82		07-09-2001	15:40:15
014	00	14	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	15:42:14
015	00	15	0	0.00	0.00		7	2.97	8.66		07-09-2001	15:44:13
016	00	16	1	0.67	1.91		5	1.43	4.19		07-09-2001	15:46:12
017	00	17	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	15:48:11
018	00	18	2	1.33	3.81		8	3.24	9.45		07-09-2001	15:50:10
019	00	19	0	0.00	0.00		12	6.30	18.39		07-09-2001	15:52:09
020	00	20	0	0.00	0.00		4	0.97	2.82		07-09-2001	15:54:08
021	00	21	0	0.00	0.00		2	-0.37	-1.07		07-09-2001	15:56:07
022	00	22	0	0.00	0.00		4	0.97	2.82		07-09-2001	15:58:06

Performed By: M. M. M. Date: 7/10/01
Reviewed By: P. P. P. Date: 7/18/01

FINAL SURVEY
PIC IPC9025 216712

05F01 F PIN 16

243

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	2	0	0.00	0.00		16	8.67	25.30		07-10-2001	06:40:11
002	00	3	0	0.00	0.00		7	2.67	7.79		07-10-2001	06:42:11
003	00	4	0	0.00	0.00		9	4.00	11.68		07-10-2001	06:44:11
004	00	5	0	0.00	0.00		7	2.67	7.79		07-10-2001	06:46:11
005	00	6	0	0.00	0.00		3	0.00	0.00		07-10-2001	06:48:11
006	00	7	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	06:50:11
007	00	8	0	0.00	0.00		4	0.67	1.95		07-10-2001	06:52:10
008	00	9	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	06:54:09
009	00	10	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	06:56:08
010	00	11	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	06:58:07
011	00	12	0	0.00	0.00		6	2.00	5.84		07-10-2001	07:00:06
012	00	13	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	07:02:05
013	00	14	1	0.67	1.91		3	-0.20	-0.58		07-10-2001	07:04:04
014	00	15	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	07:06:03
015	00	16	0	0.00	0.00		3	0.00	0.00		07-10-2001	07:08:02
016	00	17	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	07:10:01
017	00	18	1	0.67	1.91		4	0.67	1.95		07-10-2001	07:12:00
018	00	19	0	0.00	0.00		5	1.33	3.89		07-10-2001	07:13:59
019	00	20	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	07:15:58
020	00	21	0	0.00	0.00		3	0.00	0.00		07-10-2001	07:17:57
021	00	22	0	0.00	0.00		6	2.00	5.84		07-10-2001	07:19:56
022	00	23	1	0.67	1.91		17	9.13	26.67		07-10-2001	07:21:55

Performed By: *Miller* Date: 7/10/01
Reviewed By: *Blas* Date: 7/8/01

FINAL SURVEY
PIC IPC9025 216712

05F01 B PIN 16

212 KSK

244

ALPHA						BETA						
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm						Eff: 34.25% Bkg: 2.00 cpm NDA: 20.95 dpm						
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	3	0	0.00	0.00		9	4.00	11.68		07-10-2001	07:28:54
002	00	5	0	0.00	0.00		13	6.67	19.46		07-10-2001	07:30:53
003	00	6	0	0.00	0.00		4	0.67	1.95		07-10-2001	07:32:53
004	00	7	0	0.00	0.00		4	0.67	1.95		07-10-2001	07:34:52
005	00	8	1	0.67	1.91		0	-2.20	-6.42		07-10-2001	07:36:51
006	00	9	0	0.00	0.00		12	6.00	17.52		07-10-2001	07:38:50
007	00	10	0	0.00	0.00		11	5.33	15.57		07-10-2001	07:40:50
008	00	11	0	0.00	0.00		10	4.67	13.63		07-10-2001	07:42:49
009	00	12	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	07:44:48
010	00	13	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	07:46:47
011	00	14	0	0.00	0.00		7	2.67	7.79		07-10-2001	07:48:46
012	00	15	0	0.00	0.00		5	1.33	3.89		07-10-2001	07:50:45
013	00	16	0	0.00	0.00		11	5.33	15.57		07-10-2001	07:52:44
014	00	17	0	0.00	0.00		7	2.67	7.79		07-10-2001	07:54:43
015	00	18	1	0.67	1.91		6	1.80	5.26		07-10-2001	07:56:42
016	00	19	0	0.00	0.00		3	0.00	0.00		07-10-2001	07:58:41
017	00	20	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	08:00:40
018	00	21	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	08:02:39
019	00	22	0	0.00	0.00		5	1.33	3.89		07-10-2001	08:04:38

Performed By: Miller Date: 7/16/01
Reviewed By: Deas Date: 7/18/01

ID	NET CPM	CPM	NET CPM	CPM	NET CPM	CPM	NET CPM	CPM	NET CPM	CPM	NET CPM	CPM
001	0.57	1.91	0.47	1.37	0.57	1.91	0.47	1.37	0.57	1.91	0.47	1.37
002	0.57	1.91	5.13	14.99	0.57	1.91	5.13	14.99	0.57	1.91	5.13	14.99
003	0.00	0.00	-0.67	-1.95	0.00	0.00	-0.67	-1.95	0.00	0.00	-0.67	-1.95
004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
005	0.00	0.00	0.67	1.95	0.67	1.95	0.67	1.95	0.67	1.95	0.67	1.95
006	0.67	1.91	-1.53	-4.47	0.67	1.91	-1.53	-4.47	0.67	1.91	-1.53	-4.47
007	0.00	0.00	-0.67	-1.95	0.00	0.00	-0.67	-1.95	0.00	0.00	-0.67	-1.95
008	0.67	1.91	1.13	3.31	0.67	1.91	1.13	3.31	0.67	1.91	1.13	3.31
009	0.00	0.00	0.67	1.95	0.00	0.00	0.67	1.95	0.00	0.00	0.67	1.95
010	0.67	1.91	1.13	3.31	0.67	1.91	1.13	3.31	0.67	1.91	1.13	3.31
011	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
012	0.00	0.00	4.00	11.68	0.00	0.00	4.00	11.68	0.00	0.00	4.00	11.68
013	0.67	1.91	3.13	9.15	0.67	1.91	3.13	9.15	0.67	1.91	3.13	9.15
014	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
015	0.00	0.00	0.67	1.95	0.00	0.00	0.67	1.95	0.00	0.00	0.67	1.95
016	0.00	0.00	0.67	1.95	0.00	0.00	0.67	1.95	0.00	0.00	0.67	1.95
017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
019	0.67	1.91	1.13	3.31	0.67	1.91	1.13	3.31	0.67	1.91	1.13	3.31
020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
021	0.00	0.00	0.67	1.95	0.00	0.00	0.67	1.95	0.00	0.00	0.67	1.95
022	0.00	0.00	5.33	15.57	0.00	0.00	5.33	15.57	0.00	0.00	5.33	15.57

Performed By: [Signature] Date: 7/10/01
 Reviewed By: [Signature] Date: 7/18/01

FINAL SURVEY
PIC IPC9025 216712

05F01 I PIN 16

246

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm					Eff: 34.25% Bkg: 2.00 cpm NDA: 20.95 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	8	0	0.00	0.00		5	1.33	3.89		07-10-2001	08:49:08
002	00	9	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	08:51:07
003	00	10	0	0.00	0.00		5	1.33	3.89		07-10-2001	08:53:06
004	00	11	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	08:55:05
005	00	12	1	0.67	1.91		4	0.67	1.95		07-10-2001	08:57:04
006	00	13	0	0.00	0.00		9	4.00	11.68		07-10-2001	08:59:03
007	00	14	0	0.00	0.00		4	0.67	1.95		07-10-2001	09:01:02
008	00	15	0	0.00	0.00		4	0.67	1.95		07-10-2001	09:03:01
009	00	16	0	0.00	0.00		27	16.00	46.72		07-10-2001	09:05:00
010	00	17	1	0.67	1.91		14	7.13	20.83		07-10-2001	09:06:59
011	00	18	0	0.00	0.00		8	3.33	9.73		07-10-2001	09:08:58
012	00	19	0	0.00	0.00		4	0.67	1.95		07-10-2001	09:10:57
013	00	20	0	0.00	0.00		6	2.00	5.84		07-10-2001	09:12:56

Performed By: *[Signature]* Date: 7/10/01
Reviewed By: *[Signature]* Date: 7/18/01

FINAL SURVEY
PIC IPC9025 216712

05F01 J PIN 16

247

ALPHA										BETA									
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm										Eff: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm									
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME							
001	00	7	1	0.67	1.91		22	12.47	36.40		07-10-2001	09:21:10							
002	00	8	0	0.00	0.00		7	2.67	7.79		07-10-2001	09:23:10							
003	00	9	0	0.00	0.00		4	0.67	1.95		07-10-2001	09:25:09							
004	00	10	1	0.67	1.91		1	-1.53	-4.47		07-10-2001	09:27:08							
005	00	11	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	09:29:07							
006	00	12	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	09:31:06							
007	00	13	1	0.67	1.91		4	0.47	1.37		07-10-2001	09:33:05							
008	00	14	1	0.67	1.91		3	-0.20	-0.58		07-10-2001	09:35:04							
009	00	15	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	09:37:03							
010	00	16	0	0.00	0.00		7	2.67	7.79		07-10-2001	09:39:02							
011	00	17	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	09:41:01							
012	00	18	0	0.00	0.00		8	3.33	9.73		07-10-2001	09:43:00							
013	00	19	1	0.67	1.91		3	-0.20	-0.58		07-10-2001	09:44:59							

Performed By: M. Lee Date: 7/10/01
Reviewed By: R. Wang Date: 7/18/01

05F01 K PIN 16

FINAL SURVEY

PIC IPC9025 216712

		ALPHA				BETA				
ISN	RPRT	ID	NET CPM	LIMITS	NET CPM	LIMITS	DPH	MDA	DATE	TIME
001	00	7	0	0.00	0.00	0.67	1.95	20.95 dpm	07-10-2001	10:09:12
002	00	8	0	0.00	0.00	6.67	19.46		07-10-2001	10:11:11
003	00	9	1	0.67	1.91	11.13	32.51		07-10-2001	10:13:10
004	00	10	0	0.00	0.00	0.67	1.95		07-10-2001	10:15:09
005	00	11	0	0.00	0.00	1.33	3.89		07-10-2001	10:17:08
006	00	12	0	0.00	0.00	0.00	0.00		07-10-2001	10:19:07
007	00	13	1	0.67	1.71	3.80	11.10		07-10-2001	10:21:06
008	00	14	0	0.00	0.00	1.33	3.89		07-10-2001	10:23:05
009	00	15	0	0.00	0.00	2.67	7.79		07-10-2001	10:25:04
010	00	16	1	0.67	1.91	1.80	5.26		07-10-2001	10:27:03
011	00	17	0	0.00	0.00	0.00	0.00		07-10-2001	10:29:02

Performed By: [Signature] Date: 7/16/01

Reviewed By: [Signature] Date: 7/16/01

FINAL SURVEY 05F01 L PIN 16

PIC IPC9025 216712

I-SM-RPT-ID	ALPHA				BETA				DATE	TIME
	Eff	34.97%	34.25%	34.25%	Eff	2.00	2.00	2.00		
	Counts	Net CPW	DPW	MDA	Counts	Net CPW	DPW	MDA		
001 00	11	1	0.67	1.91	2	-0.87	-2.33	20.95	07-10-2001	10:32:01
002 00	12	0	0.00	0.00	3	0.00	0.00	0.00	07-10-2001	10:34:00
003 00	13	0	0.00	0.00	2	-0.67	-1.95	1.95	07-10-2001	10:35:59
004 00	14	1	0.67	1.91	6	1.80	5.26	5.26	07-10-2001	10:37:58

Performed By: *[Signature]* Date: 7/19/01
 Reviewed By: *[Signature]* Date: 7/18/01

FINAL SURVEY
PIC IPC9025 216712

05W01 A PIN 16

251

ALPHA				BETA							
SN	RPT	ID		Eff: 34.97%	Bkg: 0.00 cpm	MDA: 5.17 dpm	Eff: 34.25%	Bkg: 2.00 cpm	MDA: 20.95 dpm	DATE	TIME
			COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	
026	00	26	0	0.00	0.00		5	1.33	3.89	07-10-2001	11:57:45
027	00	27	0	0.00	0.00		7	2.67	7.79	07-10-2001	11:59:44
028	00	28	0	0.00	0.00		3	0.00	0.00	07-10-2001	12:01:43
029	00	29	0	0.00	0.00		8	3.33	9.73	07-10-2001	12:03:42
030	00	30	1	0.67	1.91		1	-1.53	-4.47	07-10-2001	12:05:41
031	00	31	0	0.00	0.00		4	0.67	1.95	07-10-2001	12:07:40
032	00	32	0	0.00	0.00		4	0.67	1.95	07-10-2001	12:09:39
033	00	33	0	0.00	0.00		8	3.33	9.73	07-10-2001	12:11:38
034	00	34	0	0.00	0.00		7	2.67	7.79	07-10-2001	12:13:37
035	00	35	0	0.00	0.00		6	2.00	5.84	07-10-2001	12:15:36
036	00	36	0	0.00	0.00		3	0.00	0.00	07-10-2001	12:17:35
037	00	37	0	0.00	0.00		5	1.33	3.89	07-10-2001	12:19:34
038	00	38	0	0.00	0.00		4	0.67	1.95	07-10-2001	12:21:33
039	00	39	1	0.67	1.91		9	3.80	11.10	07-10-2001	12:23:32
040	00	40	1	0.67	1.91		4	0.67	1.95	07-10-2001	12:25:31
041	00	41	0	0.00	0.00		4	0.67	1.95	07-10-2001	12:27:30

Performed By: Date: 7/10/01
Reviewed By: Date: 7/10/01

FINAL SURVEY
 PIC IPC9025 216712

05W01 B PIN 1A

232

Performed By: [Signature] Date: 7/10/01
 Revised By: [Signature] Date: 7/10/01

----- ALPHA -----												
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm					Eff: 34.25% Bkg: 2.00 cpm NDA: 20.95 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		6	2.00	5.84		07-10-2001	12:39:08
002	00	2	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	12:41:07
003	00	3	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	12:43:06
004	00	4	0	0.00	0.00		3	0.00	0.00		07-10-2001	12:45:05
005	00	5	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	12:47:04
006	00	6	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	12:49:03
007	00	7	0	0.00	0.00		3	0.00	0.00		07-10-2001	12:51:02
008	00	8	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	12:53:01
009	00	9	0	0.00	0.00		3	0.00	0.00		07-10-2001	12:55:00
010	00	10	1	0.67	1.91		1	-1.53	-4.47		07-10-2001	12:56:59
011	00	11	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	12:58:58
012	00	12	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	13:00:57
013	00	13	1	0.67	1.91		0	-2.20	-6.42		07-10-2001	13:02:56
014	00	14	1	0.67	1.91		2	-0.87	-2.53		07-10-2001	13:04:55
015	00	15	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	13:06:54
016	00	16	0	0.00	0.00		4	0.67	1.95		07-10-2001	13:08:53
017	00	17	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	13:10:52
018	00	18	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	13:12:51
019	00	19	0	0.00	0.00		3	0.00	0.00		07-10-2001	13:14:50
020	00	20	1	0.67	1.91		5	1.13	3.31		07-10-2001	13:16:49
021	00	21	0	0.00	0.00		3	0.00	0.00		07-10-2001	13:18:48
022	00	22	0	0.00	0.00		12	6.00	17.52		07-10-2001	13:20:47

FINAL SURVEY 05W01 P PIN 16
 PIC IPC9025 216712

ALPHA						BETA				DATE	TIME	
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS		
023	00	23	0	0.00	0.00		8	3.33	9.73		07-10-2001	13:59:06
024	00	24	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	14:01:06
025	00	25	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	14:03:05
026	00	26	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	14:05:04
027	00	27	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	14:07:03
028	00	28	0	0.00	0.00		6	2.00	5.84		07-10-2001	14:09:02
029	00	29	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	14:11:01
030	00	30	0	0.00	0.00		5	1.33	3.89		07-10-2001	14:13:00
031	00	31	0	0.00	0.00		5	1.33	3.89		07-10-2001	14:14:59
032	00	32	1	0.67	1.91		0	-2.20	-6.42		07-10-2001	14:16:58
033	00	33	0	0.00	0.00		8	3.33	9.73		07-10-2001	14:18:57
034	00	34	0	0.00	0.00		3	0.00	0.00		07-10-2001	14:20:56
035	00	35	0	0.00	0.00		9	4.00	11.68		07-10-2001	14:22:55
036	00	36	0	0.00	0.00		6	2.00	5.84		07-10-2001	14:24:54
037	00	37	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	14:26:53
038	00	38	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	14:28:52
039	00	39	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	14:30:51
040	00	40	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	14:32:50
041	00	41	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	14:34:49

Performed By: Mike Date: 7/11/01
 Reviewed By: P. [Signature] Date: 7/15/01

Reviewed By: [Signature] Date: 7/18/01
 Performed By: [Signature] Date: 7/11/01

ID	SN	RPT	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001			1	0.67	1.91		2	-0.87	-2.53		07-10-2001	14:40:11
002			2	0.00	0.00		5	1.33	3.89		07-10-2001	14:42:10
003			3	0.67	1.91		1	-1.53	-4.47		07-10-2001	14:44:09
004			4	0.00	0.00		1	-1.33	-3.89		07-10-2001	14:46:08
005			5	0.00	0.00		7	2.67	7.79		07-10-2001	14:48:07
006			6	0.00	0.00		1	-1.33	-3.89		07-10-2001	14:50:06
007			7	0.00	0.00		1	-1.33	-3.89		07-10-2001	14:52:05
008			8	0.67	1.91		1	-1.33	-4.47		07-10-2001	14:54:04
009			9	0.00	0.00		4	0.47	1.37		07-10-2001	14:56:03
010			10	0.67	1.91		1	-1.33	-3.89		07-10-2001	14:58:02
011			11	0.00	0.00		0	0.00	0.00		07-10-2001	15:00:01
012			12	0.00	0.00		4	0.67	1.95		07-10-2001	15:02:00
013			13	0.00	0.00		4	0.67	1.95		07-10-2001	15:03:59
014			14	0.00	0.00		7	2.67	7.79		07-10-2001	15:05:58
015			15	0.00	0.00		2	-0.67	-1.95		07-10-2001	15:07:57
016			16	0.00	0.00		0	-2.00	-5.84		07-10-2001	15:09:56
017			17	0.00	0.00		0	-2.00	-5.84		07-10-2001	15:11:54
018			18	0.00	0.00		1	-1.33	-3.89		07-10-2001	15:13:54
019			19	0.00	0.00		1	-1.33	-3.89		07-10-2001	15:15:53
020			20	0.00	0.00		1	-1.33	-3.89		07-10-2001	15:17:52
021			21	0.67	1.91		2	-0.87	-2.53		07-10-2001	15:19:51
022			22	0.00	0.00		0	-2.00	-5.84		07-10-2001	15:21:50

254

FINAL SURVEY 05M02 A PIN 15

PIC 1P39025 216712

-----ALPHA-----
 Effic: 34.87% Bkg: 0.00 cpm MDA: 5.17 dpm
 Effic: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm
 -----BETA-----

FINAL SURVEY
PIC IPC9025 216712

05W02 B PIN 16

----- ALPHA -----										----- BETA -----									
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm										Eff: 34.25% Bkg: 2.00 cpm MDA: 20.95 dpm									
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME							
001	00	1	0	0.00	0.00		3	0.00	0.00		07-10-2001	15:37:02							
002	00	2	0	0.00	0.00		4	0.67	1.95		07-10-2001	15:39:01							
003	00	3	0	0.00	0.00		3	0.00	0.00		07-10-2001	15:41:00							
004	00	4	0	0.00	0.00		5	1.33	3.89		07-10-2001	15:42:59							
005	00	5	0	0.00	0.00		6	2.00	5.84		07-10-2001	15:44:58							
006	00	6	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	15:46:57							
007	00	7	0	0.00	0.00		3	0.00	0.00		07-10-2001	15:48:56							
008	00	8	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	15:50:55							
009	00	9	0	0.00	0.00		5	1.33	3.89		07-10-2001	15:52:54							
010	00	10	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	15:54:53							
011	00	11	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	15:56:52							
012	00	12	0	0.00	0.00		3	0.00	0.00		07-10-2001	15:58:51							
013	00	13	1	0.67	1.91		0	-2.20	-6.42		07-10-2001	16:00:50							
014	00	14	0	0.00	0.00		5	1.33	3.89		07-10-2001	16:02:49							
015	00	15	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	16:04:48							
016	00	16	0	0.00	0.00		5	1.33	3.89		07-10-2001	16:06:46							
017	00	17	0	0.00	0.00		2	-0.67	-1.95		07-10-2001	16:08:46							
018	00	18	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	16:10:45							
019	00	19	0	0.00	0.00		5	1.33	3.89		07-10-2001	16:12:44							
020	00	20	0	0.00	0.00		1	-1.33	-3.89		07-10-2001	16:14:43							
021	00	21	0	0.00	0.00		0	-2.00	-5.84		07-10-2001	16:16:42							
022	00	22	0	0.00	0.00		5	1.33	3.89		07-10-2001	16:18:41							

Performed By: *[Signature]* Date: 7/1/01
 Reviewed By: *[Signature]* Date: 7/18/01

FINAL SURVEY
PID: P09025 216712

05801 (Z) PIN 16

		ALPHA				BETA			
1-SU-1-RPT-1	ID	EFF: 34.97%	Bkg: 0.00 cpm	MDA: 5.17 dpm	EFF: 34.25%	Bkg: 1.70 cpm	MDA: 19.73 dpm	DATE	TIME
		COUNTS	NET CPM	DPH	LIMITS	COUNTS	NET CPM	DPH	LIMITS
001	00	1	0.00	0.00		2	-0.37	-1.07	07-11-2001 07:21:58
002	00	2	0.00	0.00		2	-0.37	-1.07	07-11-2001 07:21:57
003	00	3	0.57	1.91		3	0.10	0.29	07-11-2001 07:30:56
004	00	4	0.00	0.00		1	-1.03	-3.02	07-11-2001 07:32:55
005	00	5	0.57	1.91		3	0.10	0.29	07-11-2001 07:34:54

Performed By: *[Signature]* Date: 7/11/01
 Reviewed By: *[Signature]* Date: 7/8/01

FINAL SURVEY 05502 [Z] PIN 16

PIC IPC025 216712

		ALPHA				BETA				
Eff: 34.97%	Big: 0.00 cpm	NDA: 5.17 dpm	Eff: 34.25%	Big: 1.70 cpm	NDA: 19.73 dpm					
--- COUNTS ---	--- NET CPM ---	--- LIMITS ---	--- COUNTS ---	--- NET CPM ---	--- LIMITS ---	DATE	TIME			
001 00	1	0	0.00	0.00	0.00	07-11-2001	07:38:22	4	0.97	2.52
002 00	2	0	0.00	0.00	0.00	07-11-2001	07:40:21	4	0.97	2.52
003 00	3	0	0.00	0.00	0.00	07-11-2001	07:42:20	0	-1.70	-4.96
004 00	4	0	0.00	0.00	0.00	07-11-2001	07:44:19	5	1.53	4.77
005 00	5	1	0.67	1.91	0.00	07-11-2001	07:45:18	1	-1.23	-3.60

Performed By: *[Signature]* Date: 7/11/01
 Reviewed By: *[Signature]* Date: 7/18/01

Performed By: [Signature] Date: 7/11/07
 Reviewed By: [Signature] Date: 7/11/07

ID	DATE	TIME	NET CPM	NET DPM	LIMITS	COUNTS	LIMITS	NET CPM	NET DPM	LIMITS	COUNTS	DATE	TIME
001	07-11-2001	07:53:34	1.53	3.81	1.43	1	-1.43	1.53	3.81	1.43	1	07-11-2001	07:53:34
002	07-11-2001	07:55:33	0.00	0.00	1.03	1	-3.02	0.00	0.00	1.03	1	07-11-2001	07:55:33
003	07-11-2001	07:57:32	0.00	0.00	1.63	3	4.77	0.00	0.00	1.63	3	07-11-2001	07:57:32
004	07-11-2001	07:59:31	0.00	0.00	0.37	2	-1.07	0.00	0.00	0.37	2	07-11-2001	07:59:31
005	07-11-2001	08:01:30	0.67	1.91	1.43	5	4.19	0.67	1.91	1.43	5	07-11-2001	08:01:30

ALPHA -----
 Effic: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm Effic: 34.25% Bkg: 1.70 cpm MDA: 19.75 dpm
 BETA -----

FINAL SURVEY 05805 [Z] PIN 16
 PIC IPC9025 21671Z

----- ALPHA -----						----- BETA -----						
Eff: 34.97% Bkg: 0.00 cpm MDA: 3.17 dpm						Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm						
-SN-	-RPT-	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	08:28:22
002	00	2	0	0.00	0.00		3	0.30	0.88		07-11-2001	08:30:21
003	00	3	0	0.00	0.00		6	2.30	6.72		07-11-2001	08:32:20
004	00	4	0	0.00	0.00		4	0.97	2.82		07-11-2001	08:34:19
005	00	5	0	0.00	0.00		9	4.30	12.55		07-11-2001	08:36:18
006	00	6	1	0.67	1.91		6	2.10	6.13		07-11-2001	08:38:17
007	00	7	0	0.00	0.00		4	0.97	2.82		07-11-2001	08:40:16
008	00	8	1	0.67	1.91		2	-0.57	-1.65		07-11-2001	08:42:15
009	00	9	1	0.67	1.91		8	3.43	10.03		07-11-2001	08:44:14
010	00	10	1	0.67	1.91		3	0.10	0.29		07-11-2001	08:46:13
011	00	11	0	0.00	0.00		6	2.30	6.72		07-11-2001	08:48:12
012	00	12	0	0.00	0.00		4	0.97	2.82		07-11-2001	08:50:11
013	00	13	0	0.00	0.00		11	5.63	16.45		07-11-2001	08:52:10
014	00	14	0	0.00	0.00		5	1.63	4.77		07-11-2001	08:54:09
015	00	15	0	0.00	0.00		5	1.63	4.77		07-11-2001	08:56:08

Performed By: *[Signature]* Date: 7-11-01
 Reviewed By: *[Signature]* Date: 7/18/01

**Georgia Institute of Technology
Research Reactor**

Final Survey Package 17

**Areas Outside Process Equipment Room
Above 2 Meters**

TABLE OF CONTENTS

Section 1 - Survey Package 17 Worksheet for the Outside Process Room Above 2 Meters.....	3
Section 2 - Package 17 Drawings.....	9
Section 3 - Package 17 Direct Beta Survey Report for the Basement Areas Outside Process Room Above 2 Meters Non-Suspect Affected (including download reports)	16
Section 4 - Package 17 Removable Beta Contamination for the Outside Process Area Room Above 2 Meters Non-Suspect Affected (including lab reports)	26
Section 5 - Package 17 H-3 Removable Beta Contamination Summary Data Table (including lab reports)	32

Section 1

Survey Package 17 Worksheet for Outside Process Room Above 2 Meters

Duratek Inc.
Survey Package Worksheet for Outside Process Room Above 2 Meters
Georgia Institute of Technology Research Reactor

Package Identification No.: 17	Prepared by: Paul Jones
Location: Outside Process Room Floor Above 2 Meters	Date prepared: 07/02/2001
Area Classification: Non-Suspect Affected	

Area Description

This area consists of several areas outside the process area room and includes the wall surfaces 2 meters above the floor up to and including the ceiling. For the purposes of final survey, the area is divided into the following 4 parts;

- 1) Rabbit Room,
- 2) Experiment Room,
- 3) MC Panel Area,
- 4) Basement Stairwell Area.

Historical Information

No decontamination was required in these areas.

General Survey Instructions

Overhead (Non-Suspect Affected):

- 1) Perform a minimum of 10% scan of accessible surfaces. The surface scanned should be biased towards surfaces with a higher potential of being contaminated, (i.e. tops of lamps and other tops of horizontal surfaces).
- 2) Obtain 1 direct beta measurement in the overhead for each 20 square meters of surface (See Special Instructions for the minimum number of readings required). Denote location of all readings on map.
- 3) Obtain 1 smear for gross alpha/beta analysis at each measurement location.
- 4) Obtain required smears for H-3 analysis (See Special Instructions for the minimum number of smears required). Denote location of all smears on map.

Use only the Package ID, L2, L7 and L8 codes when labeling smears for counting.

Use all location codes provided below when taking fixed beta readings.

Special Instructions

Source check meters to Tc-99 for beta measurements.

Use gas flow proportional detector model numbers 43-68 and 43-106 for surveys.

Perform a minimum of two 10-minute backgrounds on each surface to be surveyed.

Verify that the MDA is less than 600 dpm/100cm² for direct beta measurements after obtaining initial background.

The direct beta measurements and smears should be taken equidistant throughout the survey area.

During scanning the detector is to be kept as close to the surface as possible and moved across the surface at a slow speed (scan speed shall not exceed on probe width per sec). The scan should be performed using the audible output and using headphones whenever necessary.

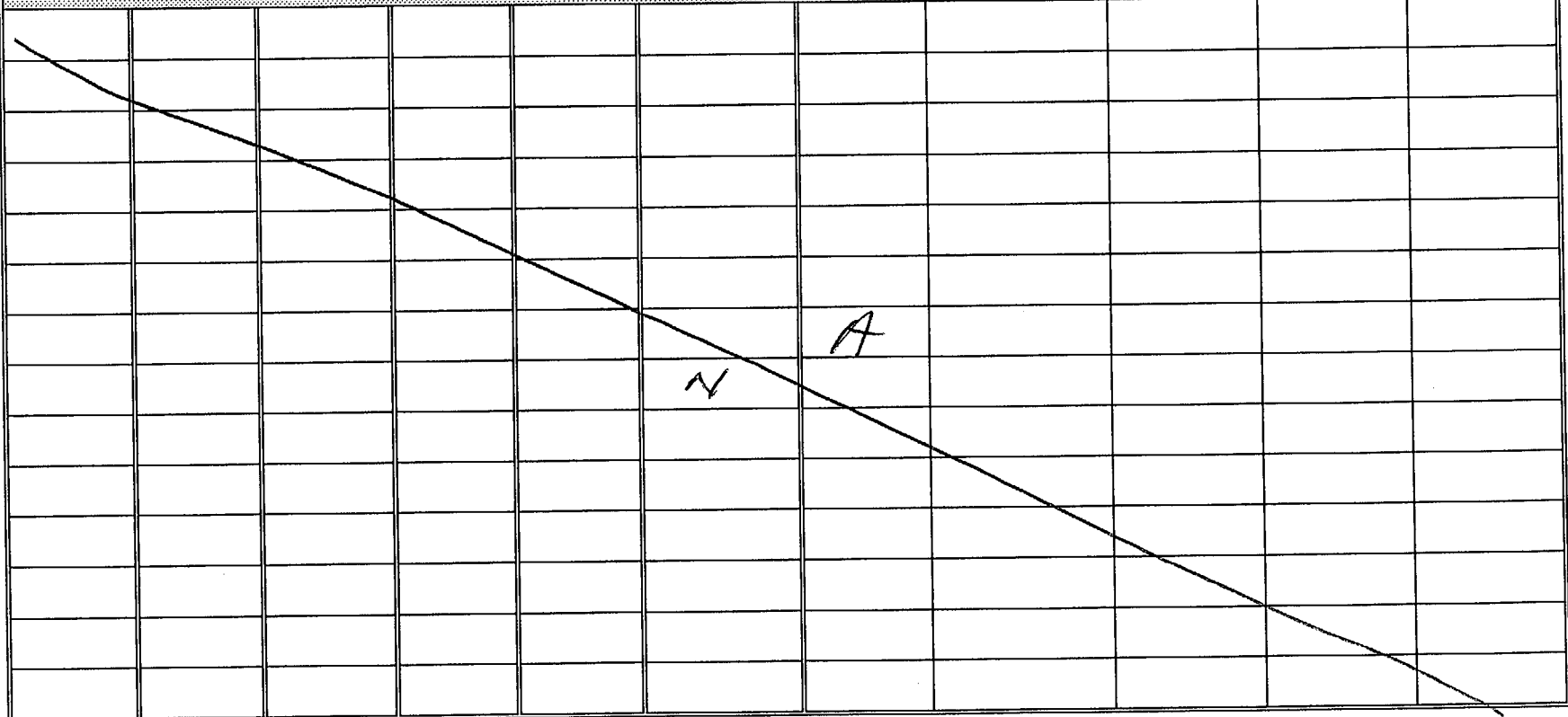
Survey performance (Initial and date as each survey is complete)

Location Code					General Description	Beta Scan	Direct Beta	1 meter Gamma	Smear Gross α/β	LS Smear
L1	L2	L6	L7	L8						
Georgia Tech Research Reactor Areas Outside the Process Area Room Above 2 Meters										
A0217	01OH1	B0002, B9999	ZZZZZ	1 thru 5	Rabbit Room Overhead above 2 meters.	BSK 7-10-01	(5) BSK 7-10-01	N/A	(5) BSK 7-10-01	(5) BSK 7-10-01
A0217	02OH1	B0002, B9999	ZZZZZ	1 thru 5	Experiment Room Overhead above 2 meters.	BSK 7-10-01	(5) BSK 7-10-01	N/A	(5) BSK 7-10-01	(5) BSK 7-10-01
A0217	03OH1	B0002, B9999	ZZZZZ	1 thru 10	MC Panel Area Overhead above 2 meters.	BSK 7-10-01	(10) BSK 7-10-01	N/A	(10) BSK 7-10-01	(10) BSK 7-10-01
A0217	04OH1	B0002, B9999	ZZZZZ	1 thru 15	Stairwell General Area Overhead above 2 meters.	BSK 7-10-01	(15) BSK 7-10-01	N/A	(15) BSK 7-10-01	(15) BSK 7-10-01

Survey performance (Initial and date as survey is complete)

Location Code					General Description	Beta Scan	Direct Beta	1 meter Gamma	Smear Gross α/β	LS Smear
L1	L2	L6	L7	L8						

Georgia Tech Research Reactor Areas Outside the Process Area Room Above 2 Meters

										
--	--	--	--	--	--	--	--	--	--	--

Package Review

Date Package Completed

5/23/02

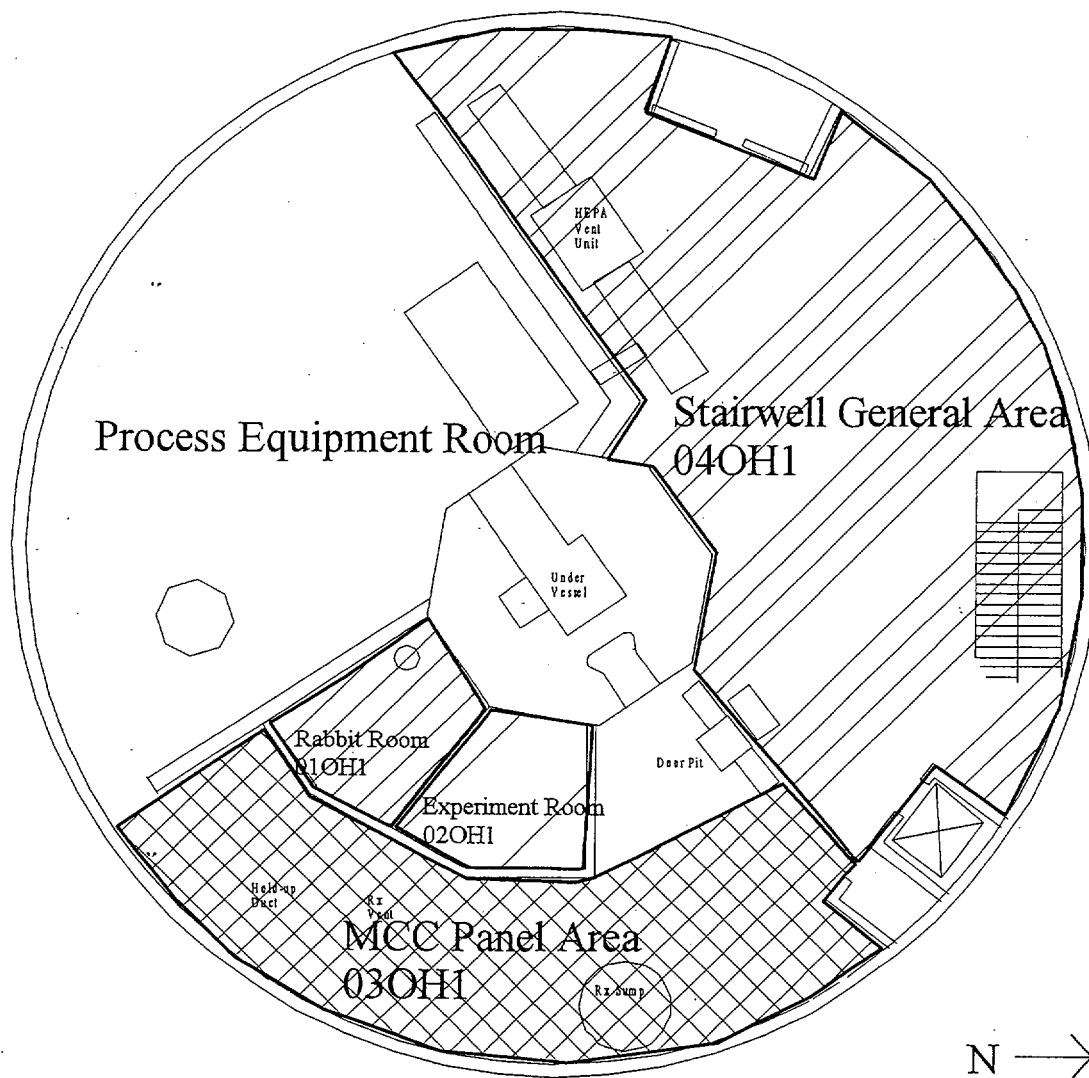
Package Reviewed by and Date

P. J. Jones 5/23/02

Survey Comments

① The direct beta readings were repeated using a local area background at each measurement location. See file 237 for these results. P. J. Jones

Areas Outside Process Equipment Room Above 2 Meters

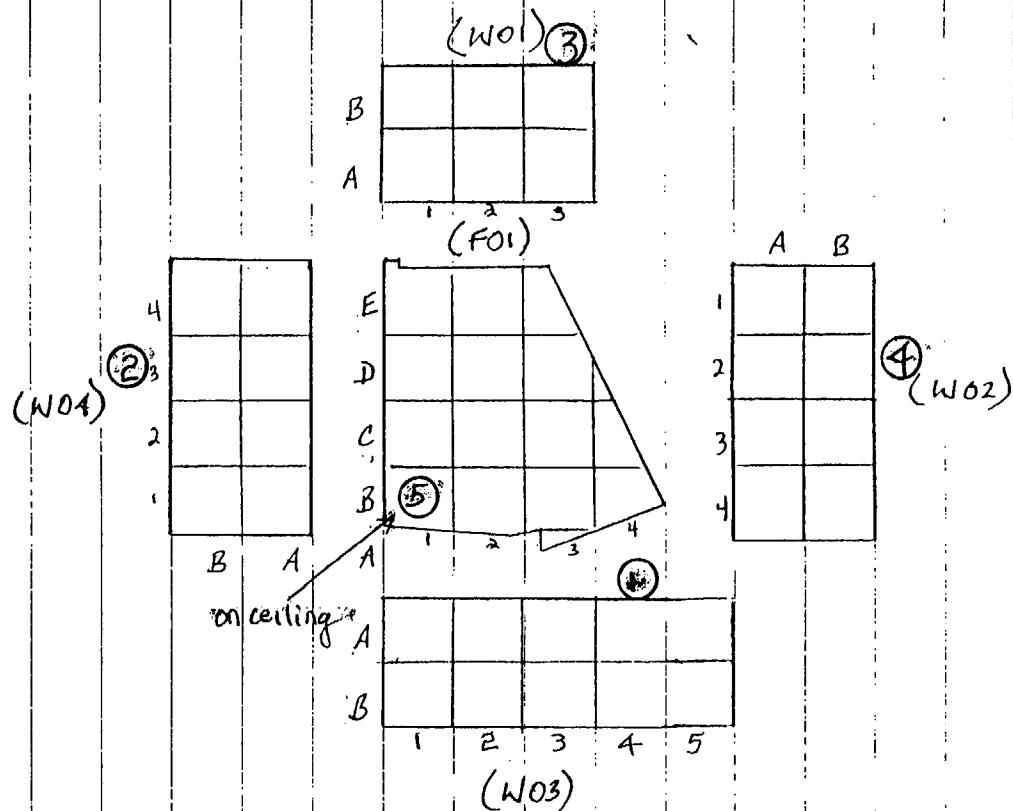


Section 2

**Package 17
Drawings**

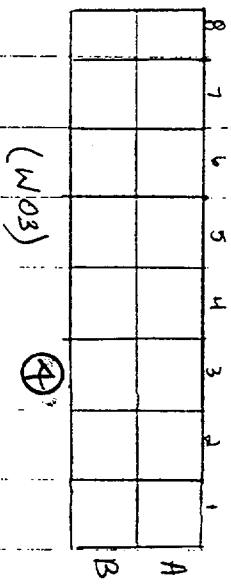
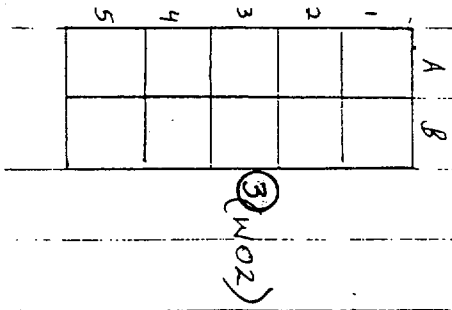
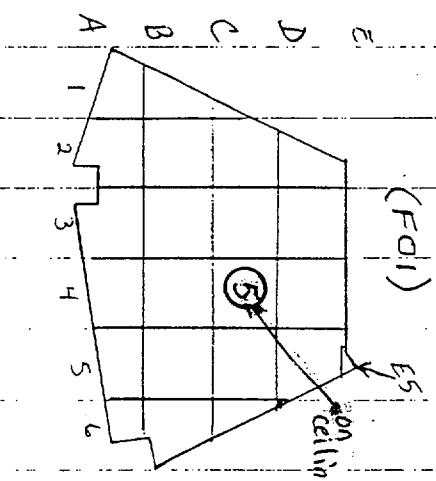
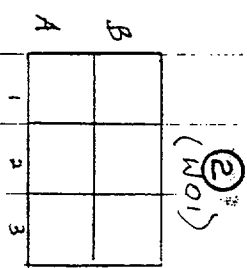
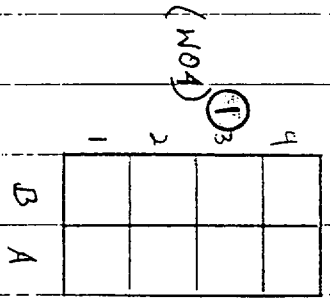
Area 02 Rabbit Room

AOE 17
 010H-1
 17 2 meters



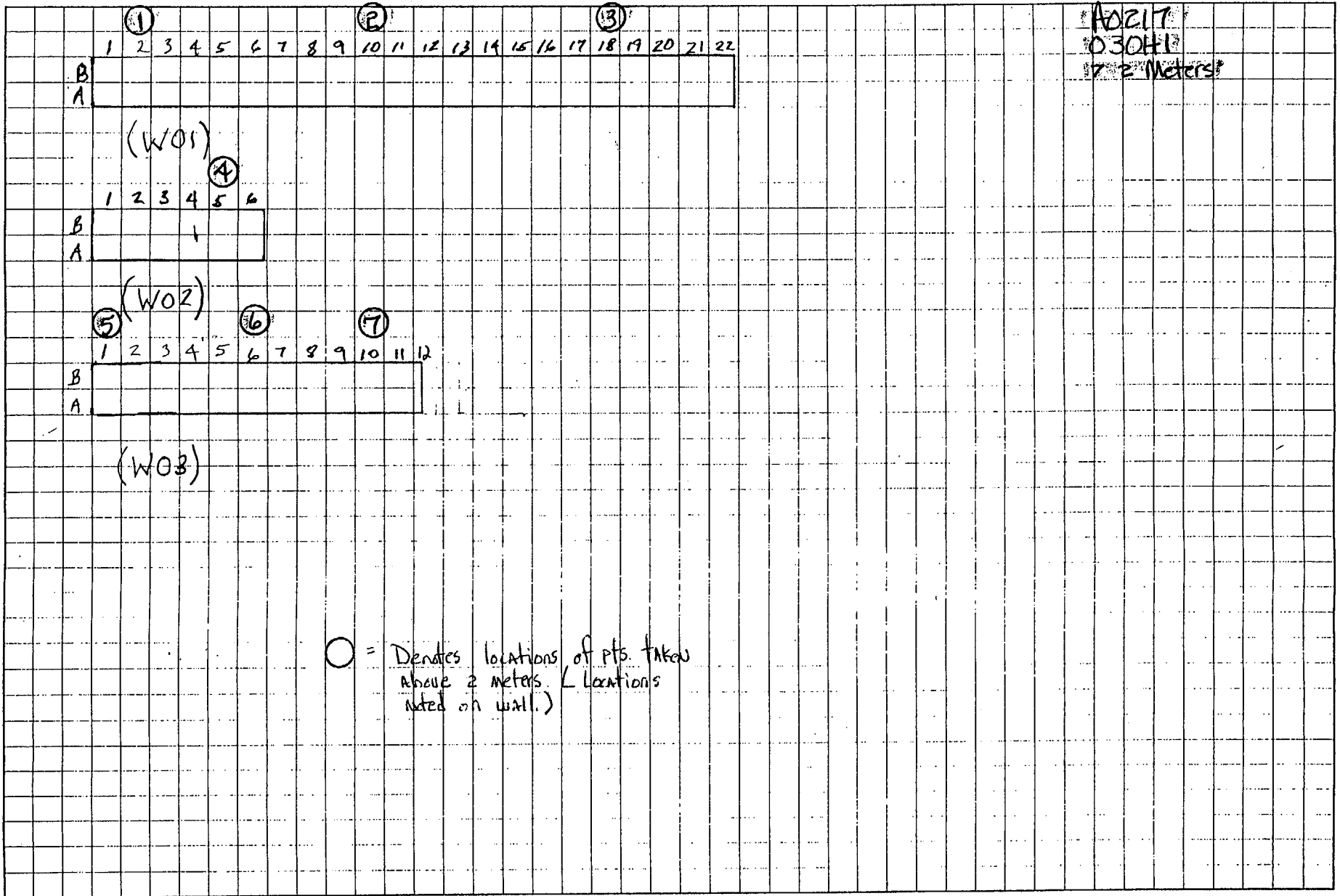
Area 03 Experimental Room

AD217
020411
→ 2 METERS

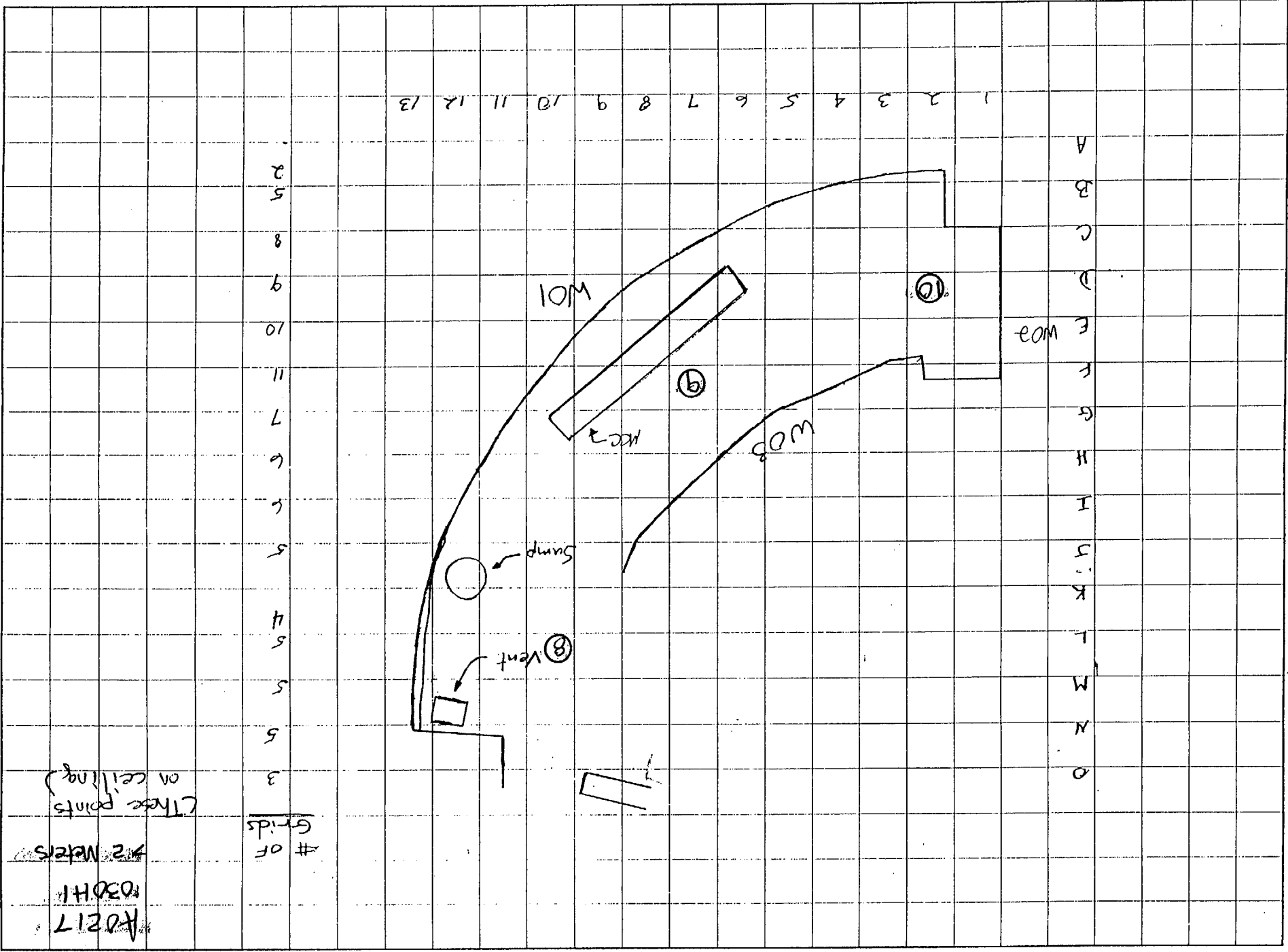


○ = Denotes locations of pts. taken.
 Above 2 meters. (Locations listed on wall.)

(Walls) Area 04 Rx Basement



Area 04 Rx Bldg. Basement (Floor)



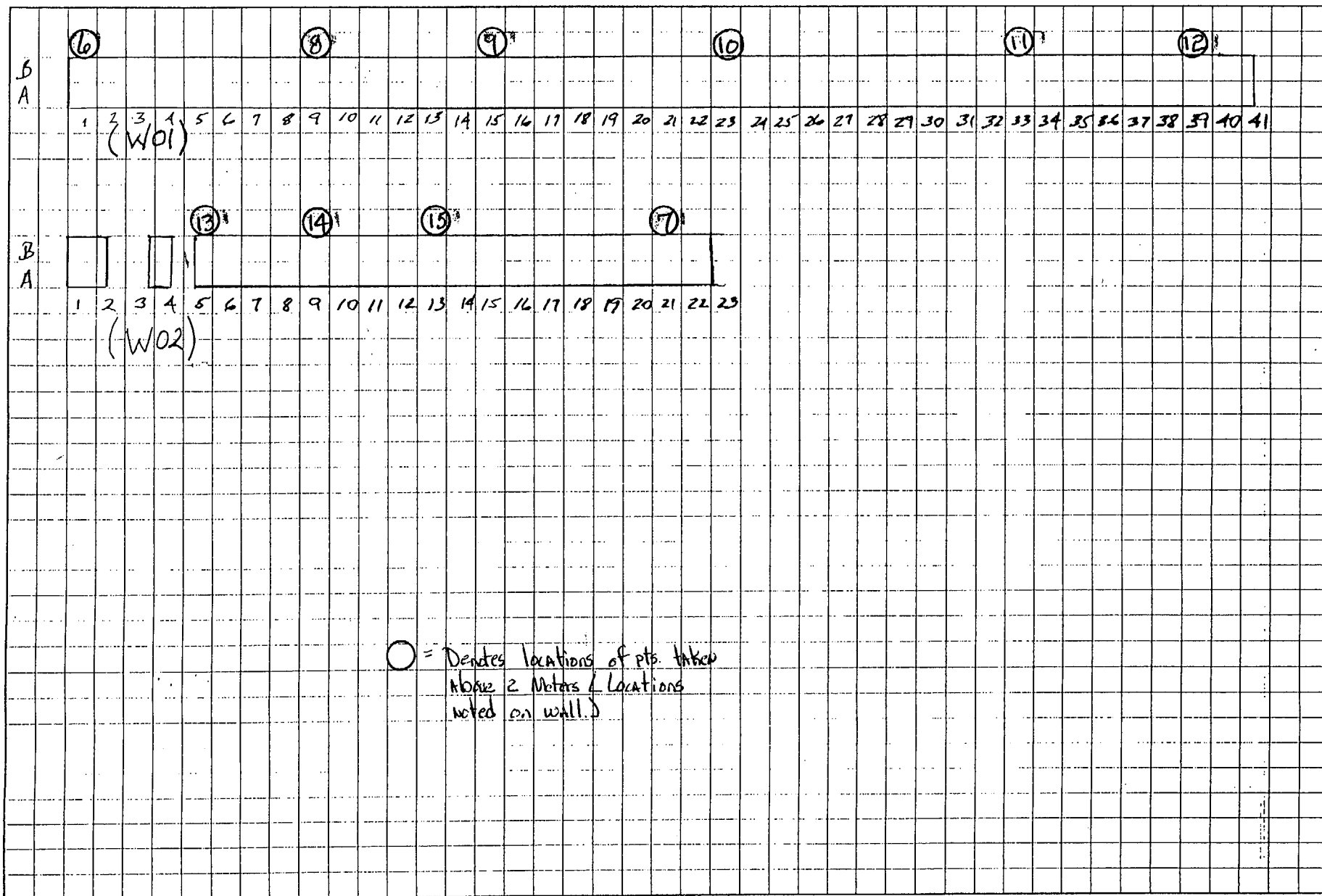
K0217
030H1

of
Fire Meters

These points
are meters
on ceiling

Area 05 Rx Basement

AD217
040H1
2 Meters



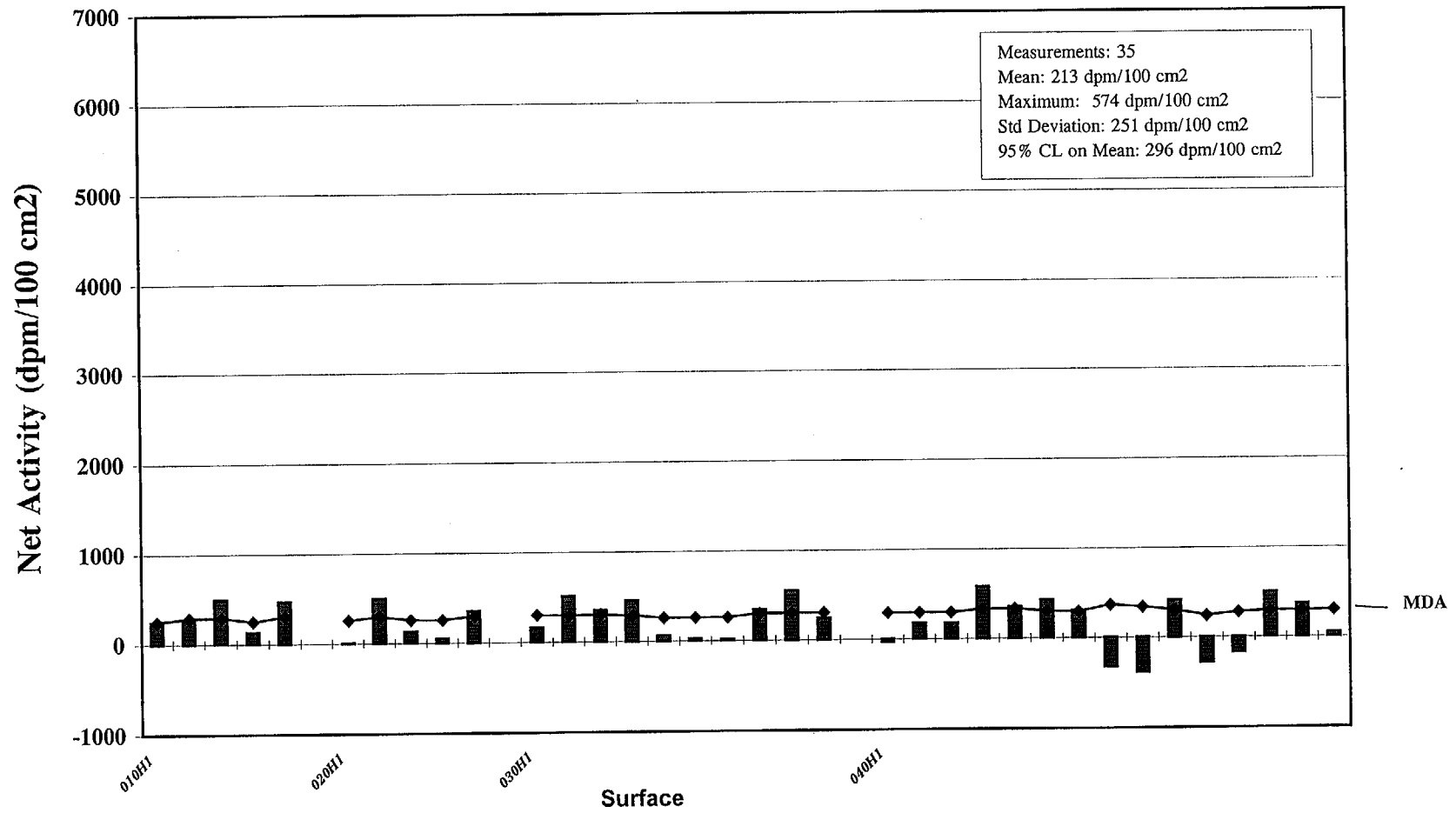
Section 3

Package 17

**Direct Beta Survey Report for the
Basement Areas Outside Process Room
Above 2 Meters Non-Suspect Affected
(including download reports)**

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm ²)	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm ²)	Natural Background (dpm/100cm ²)	Net Activity (dpm/100cm ²)	MDA (dpm/100cm ²)
010H1	237	6	891	120	B9999	126	010H1	FLDCT	ZZZZZ	00001	0.21	381	246	0	246	248
	237	7	1173	120	B0004	126	010H1	FLDCT	ZZZZZ	00002	0.21	424	614	346	268	287
	237	8	1311	120	B0001	126	010H1	FLDCT	ZZZZZ	00003	0.21	433	841	346	495	290
	237	9	820	120	B9999	126	010H1	FLDCT	ZZZZZ	00004	0.21	376	128	0	128	246
	237	10	1392	120	B0002	126	010H1	FLDCT	ZZZZZ	00005	0.21	479	820	354	466	303
020H1	237	21	811	120	B9999	126	020H1	FLDCT	ZZZZZ	00001	0.21	404	8	0	8	255
	237	22	1336	120	B0001	126	020H1	FLDCT	ZZZZZ	00002	0.21	445	845	346	499	293
	237	23	886	120	B9999	126	020H1	FLDCT	ZZZZZ	00003	0.21	410	127	0	127	257
	237	24	828	120	B9999	126	020H1	FLDCT	ZZZZZ	00004	0.21	402	47	0	47	254
	237	25	1269	120	B0002	126	020H1	FLDCT	ZZZZZ	00005	0.21	448	705	354	351	295
030H1	237	36	1206	120	B0001	126	030H1	FLDCT	ZZZZZ	00001	0.21	470	505	346	159	300
	237	37	1348	120	B0001	126	030H1	FLDCT	ZZZZZ	00002	0.21	449	852	346	506	294
	237	38	1309	120	B0001	126	030H1	FLDCT	ZZZZZ	00003	0.21	471	695	346	349	300
	237	39	1280	120	B0004	126	030H1	FLDCT	ZZZZZ	00004	0.21	428	803	346	457	288
	237	40	872	120	B9999	126	030H1	FLDCT	ZZZZZ	00005	0.21	421	59	0	59	260
	237	41	847	120	B9999	126	030H1	FLDCT	ZZZZZ	00006	0.21	418	21	0	21	259
	237	42	847	120	B9999	126	030H1	FLDCT	ZZZZZ	00007	0.21	420	15	0	15	260
	237	43	1303	120	B0002	126	030H1	FLDCT	ZZZZZ	00008	0.21	468	695	354	341	300
	237	44	1407	120	B0002	126	030H1	FLDCT	ZZZZZ	00009	0.21	465	903	354	549	299
	237	45	1284	120	B0002	126	030H1	FLDCT	ZZZZZ	00010	0.21	485	593	354	239	304
040H1	237	63	1064	120	B0002	126	040H1	FLDCT	ZZZZZ	00001	0.21	446	327	354	-27	294
	237	64	1169	120	B0002	126	040H1	FLDCT	ZZZZZ	00002	0.21	446	525	354	171	294
	237	65	1171	120	B0002	126	040H1	FLDCT	ZZZZZ	00003	0.21	446	529	354	175	294
	237	66	1656	120	B0002	126	040H1	FLDCT	ZZZZZ	00004	0.21	583	928	354	574	328
	237	68	1552	120	B0002	126	040H1	FLDCT	ZZZZZ	00005	0.21	590	703	354	349	330
	237	69	1351	120	B0001	126	040H1	FLDCT	ZZZZZ	00006	0.21	472	769	346	423	300
	237	70	1243	120	B0004	126	040H1	FLDCT	ZZZZZ	00007	0.21	450	648	346	302	294
	237	72	1504	120	B0004	126	040H1	FLDCT	ZZZZZ	00008	0.21	746	23	346	-323	365
	237	73	1262	120	B0001	126	040H1	FLDCT	ZZZZZ	00009	0.21	641	-36	346	-382	342
	237	74	1377	120	B0001	126	040H1	FLDCT	ZZZZZ	00010	0.21	488	760	346	414	304
	237	75	568	120	B0001	126	040H1	FLDCT	ZZZZZ	00011	0.21	267	66	346	-280	240
	237	76	883	120	B0001	126	040H1	FLDCT	ZZZZZ	00012	0.21	395	176	346	-170	279
	237	77	1339	120	B0001	126	040H1	FLDCT	ZZZZZ	00013	0.21	446	845	346	499	293
	237	78	1272	120	B0001	126	040H1	FLDCT	ZZZZZ	00014	0.21	447	714	346	368	294
	237	79	1145	120	B0004	126	040H1	FLDCT	ZZZZZ	00015	0.21	469	393	346	47	299
														# Measurements	35	
														Average	213	dpm/100cm ²
														Maximum	574	dpm/100cm ²
														STD DEV	251	dpm/100cm ²
														95% CL on Mean	296	dpm/100cm ²

Areas Outside Process Equipment Room Above 2 Meters Direct Beta Activity



ATTACHMENT 6.14
SURVEY DOWNLOAD DATA SHEET

019

Download Print
 Technician: Name: D. Schumaker Signature: [Signature] Station: 2
 File: 237
 Serial No. Verification: Model 2350: Detector: Problems: (See Comments)

Survey Technician(s):
 Print Name: D. Schumaker User ID: DS V133 Signature: [Signature] Date: 12/8/01
 Print Name: _____ User ID: _____ Signature: _____ Date: _____

Survey Unit Description: AD217: 0/s Process Area Rm ABOVE 2 METERS
 (Example: Survey Package + description i.e. D16, Building 43, Area 09, Room 100, Floor - Grid Locations A1 through A7)

Instrument Model and Serial No.: Model 2350 Model 2350-1 : 129429

Instrument and Detector Calibration Due Dates: Survey Meter: 12/6/01 Detector: 12/6/01

Type Of Survey: Term Survey Characterization Information Only
 Other (explain):

Type of measurement	Detector Serial Number	Detector Model Number	Detector Efficiency	Source Mean BKG Value	Pre & Post Use Info	
					Pre File No.	Post File No.
<input type="checkbox"/> Beta β		43-106B				
<input checked="" type="checkbox"/> Beta β	<u>091050</u>	43-68B	<u>.210</u>	<u>N/A</u>	<u>231</u>	<u>237</u>
<input type="checkbox"/> Alpha α		43-68A				
<input type="checkbox"/> Gamma γ		44-2	N/A			

Local Area Background Measurements						MEAN Value in cpm	
β Beta	1	2	3	4	5	6	Δ
α Alpha	1	2	3	4	5	6	

COMMENTS: _____

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm2

File Number: 237		Survey Description: A0217: O/S Process Area Room above 2 Meters		
Survey Reason: TERMINATION		User ID: DPS4133	Technician name: Don Schumaker	
Instrument Model: 2350-1	S/N: 129429	Calibration Due: 12/06/01	Group: 2	
Detector Model: 43-68B	Detector S/N: 091050	Type: 126 cm2 Gas Proportional Detector, Beta Window		
Background: 0 cpm	Beta Efficiency: .210	Survey Date: 12/07/01		

Pre and Post source checks are included on this download: Yes ___ No
 If No is answered, then list the Download Files which include the Pre and Post source checks.
 Pre File #: 231 Post File #: 237

Technician Review:

I have reviewed this cover sheet and 4 pages of the report, 0 pages of comments, and 1 graph.

I performed this survey: D. Schumaker / [Signature] Date: 12/11/01
Print name Signature

and,
 I performed this survey: _____ / _____ Date: _____
Print name Signature

Corrections and Reasons:

Comment Resolution:

Survey Reviewed and Approved by: Paul A. Jones / [Signature] Date: 12/11/01
Print name Signature

Survey Date: 12/06/01
File: 237

Report Date: 12/07/01

Page: 1
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
A0217	010H1	TAT01	02200		Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00001	6	120	761	1438	*
FLDBK	B0004	ZZZZZ	00002	7	120	848	1602	*
FLDBK	B0001	ZZZZZ	00003	8	120	866	1636	*
FLDBK	B9999	ZZZZZ	00004	9	120	752	1421	*
FLDBK	B0002	ZZZZZ	00005	10	120	958	1810	*

Group Average: 1582

FLDCT	B9999	ZZZZZ	00001	11	120	891	1684	*
FLDCT	B0004	ZZZZZ	00002	12	120	1173	2217	*
FLDCT	B0001	ZZZZZ	00003	13	120	1311	2477	*
FLDCT	B0001	ZZZZZ	00004	14	120	820	1550	*
FLDCT	B0001	ZZZZZ	00005	15	120	1392	2630	*

Group Average: 2111

Survey Code	L1	L2	L3	L4	Setup Number 0
A0217	020H1	TAT01	02200		Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00001	16	120	807	1525	*
FLDBK	B0001	ZZZZZ	00002	17	120	889	1680	*
FLDBK	B9999	ZZZZZ	00003	18	120	819	1548	*
FLDBK	B9999	ZZZZZ	00004	19	120	803	1517	*
FLDBK	B0002	ZZZZZ	00005	20	120	896	1693	*

Group Average: 1593

FLDCT	B9999	ZZZZZ	00001	21	120	811	1533	*
FLDCT	B0001	ZZZZZ	00002	22	120	1336	2525	*
FLDCT	B9999	ZZZZZ	00003	23	120	886	1674	*
FLDCT	B9999	ZZZZZ	00004	24	120	828	1565	*
FLDCT	B0002	ZZZZZ	00005	25	120	1269	2398	*

Group Average: 1939

Survey Code	L1	L2	L3	L4	Setup Number 0
A0217	030H1	TAT01	02200		Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0001	ZZZZZ	00001	26	120	939	1774	*
FLDBK	B0001	ZZZZZ	00002	27	120	897	1695	*
FLDBK	B0001	ZZZZZ	00003	28	120	941	1778	*
FLDBK	B0004	ZZZZZ	00004	29	120	855	1616	*
FLDBK	B9999	ZZZZZ	00005	30	120	841	1589	*
FLDBK	B9999	ZZZZZ	00006	31	120	836	1580	*
FLDBK	B9999	ZZZZZ	00007	32	120	839	1585	*
FLDBK	B0002	ZZZZZ	00008	33	120	935	1767	*
FLDBK	B0002	ZZZZZ	00009	34	120	929	1755	*
FLDBK	B0002	ZZZZZ	00010	35	120	970	1833	*

Group Average: 1697

FLDCT	B0001	ZZZZZ	00001	36	120	1206	2279	*
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* Hi flag set at 600 dpm/100 cm2

Survey Date: 12/06/01
File: 237

Report Date: 12/07/01

Page: 2
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0217	030H1	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0001	ZZZZZ	00002	37	120	1348	2547	*
FLDCT	B0001	ZZZZZ	00003	38	120	1309	2474	*
FLDCT	B0004	ZZZZZ	00004	39	120	1280	2419	*
FLDCT	B0004	ZZZZZ	00005	40	120	872	1648	*
FLDCT	B9999	ZZZZZ	00006	41	120	847	1601	*
FLDCT	B9999	ZZZZZ	00007	42	120	847	1601	*
FLDCT	B0002	ZZZZZ	00008	43	120	1303	2462	*
FLDCT	B0002	ZZZZZ	00009	44	120	1407	2659	*
FLDCT	B0002	ZZZZZ	00010	45	120	1284	2426	*

Group Average: 2211

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0217	040H1	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	ZZZZZ	00003	50	120	891	1684	*
FLDBK	B0002	ZZZZZ	00004	51	120	1165	2201	*
FLDBK	B0002	ZZZZZ	00005	52	120	1180	2230	*
FLDBK	B0001	ZZZZZ	00006	53	120	944	1784	*
FLDBK	B0004	ZZZZZ	00007	54	120	900	1701	*
FLDBK	B0004	ZZZZZ	00008	55	120	1492	2819	*
FLDBK	B0001	ZZZZZ	00009	56	120	1281	2421	*
FLDBK	B0001	ZZZZZ	00010	57	120	975	1842	*
FLDBK	B0001	ZZZZZ	00011	58	120	533	1007	*
FLDBK	B0001	ZZZZZ	00012	59	120	790	1493	*
FLDBK	B0001	ZZZZZ	00013	60	120	892	1686	*
FLDBK	B0001	ZZZZZ	00014	61	120	894	1689	*
FLDBK	B0001	ZZZZZ	00015	62	120	937	1771	*

Group Average: 1871

FLDCT	B0002	ZZZZZ	00001	63	120	1064	2011	*
FLDCT	B0002	ZZZZZ	00002	64	120	1169	2209	*
FLDCT	B0002	ZZZZZ	00003	65	120	1171	2213	*
FLDCT	B0002	ZZZZZ	00004	66	120	1656	3129	*
FLDCT	B0002	ZZZZZ	00005	68	120	1552	2933	*
FLDCT	B0001	ZZZZZ	00006	69	120	1351	2553	*
FLDCT	B0004	ZZZZZ	00007	70	120	1243	2349	*
FLDCT	B0004	ZZZZZ	00008	72	120	1504	2842	*
FLDCT	B0001	ZZZZZ	00009	73	120	1262	2385	*
FLDCT	B0001	ZZZZZ	00010	74	120	1377	2602	*
FLDCT	B0001	ZZZZZ	00011	75	120	568	1073	*
FLDCT	B0001	ZZZZZ	00012	76	120	883	1669	*
FLDCT	B0001	ZZZZZ	00013	77	120	1339	2530	*
FLDCT	B0001	ZZZZZ	00014	78	120	1272	2404	*
FLDCT	B0004	ZZZZZ	00015	79	120	1145	2164	*

Group Average: 2338

Survey Date: 12/07/01
File: 237

Report Date: 12/07/01

Page: 3
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	EZ260	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PRB00	ZZZZZ	ZZZZZ	00000	81	60	5749	21727	*
PRB00	ZZZZZ	ZZZZZ	00000	82	60	5916	22358	*
PRB00	ZZZZZ	ZZZZZ	00000	83	60	5775	21825	*

Group Average: 21970

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	ZZZZZ	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PTBBK	ZZZZZ	ZZZZZ	00000	80	600	4209	1591	*

Group Average: 1591

Total Number of Measurements on this Report: 72

NOTE: This report is grouped by:

Package (L1) (Package number)

Setup number (Detector parameters)

Det Type (L4) (GM pancake-flat surface, Beta 3.5-12" pipe, gamma at 1 m, etc.)

Reason (L3-345) (Char survey, source check, final survey, etc.)

Surface Cat (L2) (Wall, floor, drain, penetration, etc.)

Count Type (L5) (Field count, bkg, pre-, post-, etc.)

Bkgd Sub (L6) (Material code, i.e., wood, iron, concr, etc.)

GTS:0143 :C:\PDOX35\M2350\TLOGREVU.R2 12-01-97 JPA

L 80 M 03,133

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

12/07/01

Comments Report for File 237

Station: 2

Comment Number	Comment
1	Deleted sample numbers from 0 to 5 and 46-49 because these data points can be found on files 235-236.
2	Deleted sample numbers from 67 to 67. Because detector was not in contact with surface during entire reading. See sample 68 for resurvey.
3	Deleted sample numbers from 71 to 71. Because detector was not in contact with overhead surface during entire reading. See sample number 72 for recount.

GTS:0143 :C:\PDOX35\M2350\COMMENTS:R1

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

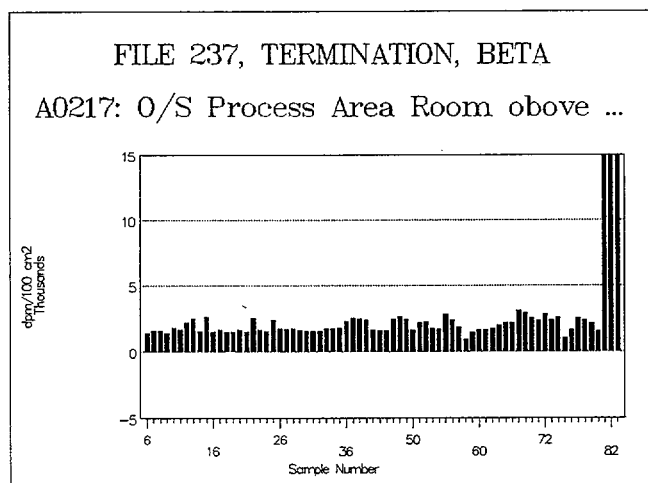
12/07/2001

Graph of File 237

Station: 2

Survey Date: 12/06/2001 Survey Start Time: 16:12:22

Description: A0217: O/S Process Area Room above 2 Meters



Flag set for 600 dpm/100 cm2. Review values greater than this value.

Review this graph for visual outliers.

Mark outliers, source checks and backgrounds on the graph on this page.

Section 4

Package 17

**Removable Beta Contamination for the
Outside Process Area Room Above 2 Meters
Non-Suspect Affected (including lab
reports)**

Removable Beta Contamination Package A0217 (Outside Process Area Room Above 2 Meters Non-Suspect Affected)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm ²)	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm ²)	MDA (dpm/100cm ²)
	1	90	100	010H1	FLDCT	ZZZZZ	00001	0.3425	2	-3	16
	2	90	100	010H1	FLDCT	ZZZZZ	00002	0.3425	2	-1	16
	3	90	100	010H1	FLDCT	ZZZZZ	00003	0.3425	2	1	16
	3	90	100	010H1	FLDCT	ZZZZZ	00004	0.3425	2	1	16
	0	90	100	010H1	FLDCT	ZZZZZ	00005	0.3425	2	-5	16
	0	90	100	020H1	FLDCT	ZZZZZ	00001	0.3425	2	-6	16
	0	90	100	020H1	FLDCT	ZZZZZ	00002	0.3425	2	-5	16
	3	90	100	020H1	FLDCT	ZZZZZ	00003	0.3425	2	1	16
	3	90	100	020H1	FLDCT	ZZZZZ	00004	0.3425	2	1	16
	1	90	100	020H1	FLDCT	ZZZZZ	00005	0.3425	2	-3	16
	3	90	100	030H1	FLDCT	ZZZZZ	00001	0.3425	2	1	16
	3	90	100	030H1	FLDCT	ZZZZZ	00002	0.3425	2	1	16
	0	90	100	030H1	FLDCT	ZZZZZ	00003	0.3425	2	-5	16
	0	90	100	030H1	FLDCT	ZZZZZ	00004	0.3425	2	-6	16
	1	90	100	030H1	FLDCT	ZZZZZ	00005	0.3425	2	-3	16
	2	90	100	030H1	FLDCT	ZZZZZ	00006	0.3425	2	-1	16
	3	90	100	030H1	FLDCT	ZZZZZ	00007	0.3425	2	1	16
	1	90	100	030H1	FLDCT	ZZZZZ	00008	0.3425	2	-3	16
	2	90	100	030H1	FLDCT	ZZZZZ	00009	0.3425	2	-1	16
	4	90	100	030H1	FLDCT	ZZZZZ	00010	0.3425	2	3	16
	0	90	100	040H1	FLDCT	ZZZZZ	00001	0.3425	2	-5	16
	1	90	100	040H1	FLDCT	ZZZZZ	00002	0.3425	2	-3	16
	0	90	100	040H1	FLDCT	ZZZZZ	00003	0.3425	2	-5	16
	1	90	100	040H1	FLDCT	ZZZZZ	00004	0.3425	2	-3	16
	3	90	100	040H1	FLDCT	ZZZZZ	00005	0.3425	2	1	16
	3	90	100	040H1	FLDCT	ZZZZZ	00006	0.3425	2	1	16
	1	90	100	040H1	FLDCT	ZZZZZ	00007	0.3425	2	-3	16
	1	90	100	040H1	FLDCT	ZZZZZ	00008	0.3425	2	-3	16
	6	90	100	040H1	FLDCT	ZZZZZ	00009	0.3425	2	7	16
	0	90	100	040H1	FLDCT	ZZZZZ	00010	0.3425	2	-5	16
	0	90	100	040H1	FLDCT	ZZZZZ	00011	0.3425	2	-5	16
	0	90	100	040H1	FLDCT	ZZZZZ	00012	0.3425	2	-5	16
	2	90	100	040H1	FLDCT	ZZZZZ	00013	0.3425	2	-1	16
	0	90	100	040H1	FLDCT	ZZZZZ	00014	0.3425	2	-5	16
	0	90	100	040H1	FLDCT	ZZZZZ	00015	0.3425	2	-5	16
									# Measurements	35	
									Average	-2	dpm/100cm ²
									Maximum	7	dpm/100cm ²
									STD DEV	3	dpm/100cm ²
									95% CL on Mean	-1	dpm/100cm ²

Performed By: [Signature] Date: 7/11/01
 Reviewed By: [Signature] Date: 7/11/01

ID	SN	RPT	NET CFM	DPM	LIMITS	COUNTS	NET CFM	DPM	LIMITS	DATE	TIME
001	00	00	0.00	0	0	0	0.00	-1.03	-3.02	07-11-2001	09:26:51
002	00	00	0.00	0	0	0	0.00	-0.37	-1.07	07-11-2001	09:28:50
003	00	00	0.00	0	0	0	0.00	0.30	0.88	07-11-2001	09:30:49
004	00	00	0.00	0	0	0	0.00	0.30	0.88	07-11-2001	09:32:48
005	00	00	0.00	0	0	0	0.00	-1.70	-4.96	07-11-2001	09:34:47

FINAL SURVEY
 PIC IPC9025 216712
 ALPHA
 Eft: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | Eft: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm |
 BETA

020H1 [Z] P1M 17

FINAL SURVEY
PIC IP09025 215712

SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	1	0.67	1.91	0	-1.90	-5.54	07-11-2001	09:39:27		
002	00	2	0	0.00	0.00	0	-1.70	-4.96	07-11-2001	09:41:26		
003	00	3	0	0.00	0.00	3	0.30	0.88	07-11-2001	09:43:25		
004	00	4	0	0.00	0.00	3	0.30	0.88	07-11-2001	09:45:24		
005	00	5	0	0.00	0.00	1	-1.03	-3.02	07-11-2001	09:47:23		

-----ALPHA-----
 ETT: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm / ETT: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm
 BETA

Performed By: [Signature] Date: 7/11/01
 Reviewed By: [Signature] Date: 7/14/01

FINAL SURVEY
PIC IPC9025 Z16712

030H1 [Z] PIN 17

----- ALPHA -----				----- BETA -----								
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm				Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm								
-SN-	-RPT-	-- ID --	- COUNTS -	- NET CPM -	- DPM -	- LIMITS -	- COUNTS -	- NET CPM -	- DPM -	- LIMITS -	- DATE -	- TIME -
001	00	1	0	0.00	0.00		3	0.30	0.88		07-11-2001	09:50:35
002	00	2	0	0.00	0.00		3	0.30	0.88		07-11-2001	09:52:34
003	00	3	0	0.00	0.00		0	-1.70	-4.96		07-11-2001	09:54:33
004	00	4	1	0.67	1.91		0	-1.90	-5.54		07-11-2001	09:56:32
005	00	5	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	09:58:31
006	00	6	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	10:00:30
007	00	7	0	0.00	0.00		3	0.30	0.88		07-11-2001	10:02:29
008	00	8	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	10:04:28
009	00	9	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	10:06:27
010	00	10	0	0.00	0.00		4	0.97	2.82		07-11-2001	10:08:26

Performed By: *[Signature]* Date: 7/14/01
 Reviewed By: *[Signature]* Date: 7/16/01

-----ALPHA-----
| E4t: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | E4t: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm |
|-----BETA-----

ID	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	0.00	0		0	-1.70	-4.96		07-11-2001	10:15:06
002	0.00	0		1	-1.03	-3.02		07-11-2001	10:17:07
003	0.00	0		0	-1.70	-4.96		07-11-2001	10:19:06
004	0.00	0		4	-1.03	-3.02		07-11-2001	10:21:06
005	0.00	0		5	0.30	0.55		07-11-2001	10:23:04
006	0.00	0		6	0.30	0.55		07-11-2001	10:25:03
007	0.00	0		7	-1.03	-3.02		07-11-2001	10:27:02
008	0.00	0		8	-1.03	-3.02		07-11-2001	10:29:01
009	0.00	0		9	2.30	4.72		07-11-2001	10:31:00
010	0.00	0		10	-1.70	-4.96		07-11-2001	10:32:59
011	0.00	0		11	-1.70	-4.96		07-11-2001	10:34:58
012	0.00	0		12	-1.70	-4.96		07-11-2001	10:36:57
013	0.00	0		13	-0.37	-1.07		07-11-2001	10:38:56
014	0.00	0		14	-1.70	-4.96		07-11-2001	10:40:55
015	0.00	0		15	-1.70	-4.96		07-11-2001	10:42:54

Performed By: [Signature] Date: 7/11/01
 Reviewed By: [Signature] Date: 7/11/01

Section 5

Package 17
H-3 Removable Beta Contamination
Summary Data Table (including lab reports)

H-3 Removable Beta Contamination Summary Data Table PKG 17.xls

Carrier No.	CPM	Count Time (sec)	Sample Area (cm ²)	Surface	Row	Location	Beta Efficiency	Beta Background (cpm)	Activity (dpm/100cm ²)	Net Activity (dpm/100cm ²)	MDA (dpm/100cm ²)
1	50	60	100	01OH1	ZZZZ	00001	0.347	0.00	144	144	8
2	45	60	100	01OH1	ZZZZ	00002	0.374	0.00	120	120	7
3	47	60	100	01OH1	ZZZZ	00003	0.332	0.00	142	142	8
4	40	60	100	01OH1	ZZZZ	00004	0.356	0.00	112	112	8
5	38	60	100	01OH1	ZZZZ	00005	0.371	0.00	102	102	7
6	40	60	100	02OH1	ZZZZ	00001	0.338	0.00	119	119	8
7	43	60	100	02OH1	ZZZZ	00002	0.356	0.00	121	121	8
8	34	60	100	02OH1	ZZZZ	00003	0.347	0.00	98	98	8
9	45	60	100	02OH1	ZZZZ	00004	0.384	0.00	117	117	7
10	39	60	100	02OH1	ZZZZ	00005	0.323	0.00	121	121	8
11	37	60	100	03OH1	ZZZZ	00001	0.359	0.00	103	103	8
12	35	60	100	03OH1	ZZZZ	00002	0.291	0.00	120	120	9
13	39	60	100	03OH1	ZZZZ	00003	0.344	0.00	114	114	8
14	33	60	100	03OH1	ZZZZ	00004	0.308	0.00	107	107	9
15	31	60	100	03OH1	ZZZZ	00005	0.356	0.00	87	87	8
16	33	60	100	03OH1	ZZZZ	00006	0.329	0.00	100	100	8
17	23	60	100	03OH1	ZZZZ	00007	0.335	0.00	69	69	8
18	39	60	100	03OH1	ZZZZ	00008	0.359	0.00	109	109	8
19	38	60	100	03OH1	ZZZZ	00009	0.359	0.00	106	106	8
20	43	60	100	03OH1	ZZZZ	00010	0.338	0.00	127	127	8
21	37	60	100	04OH1	ZZZZ	00001	0.353	0.00	105	105	8
22	39	60	100	04OH1	ZZZZ	00002	0.320	0.00	122	122	8
23	30	60	100	04OH1	ZZZZ	00003	0.262	0.00	115	115	10
24	30	60	100	04OH1	ZZZZ	00004	0.212	0.00	141	141	13
25	30	60	100	04OH1	ZZZZ	00005	0.343	0.00	88	88	8
26	30	60	100	04OH1	ZZZZ	00006	0.335	0.00	90	90	8
27	30	60	100	04OH1	ZZZZ	00007	0.297	0.00	101	101	9
28	37	60	100	04OH1	ZZZZ	00008	0.341	0.00	109	109	8
29	39	60	100	04OH1	ZZZZ	00009	0.311	0.00	125	125	9
30	42	60	100	04OH1	ZZZZ	00010	0.275	0.00	153	153	10
31	31	60	100	04OH1	ZZZZ	00011	0.341	0.00	91	91	8
32	34	60	100	04OH1	ZZZZ	00012	0.365	0.00	93	93	7
33	26	60	100	04OH1	ZZZZ	00013	0.374	0.00	69	69	7
34	29	60	100	04OH1	ZZZZ	00014	0.344	0.00	84	84	8
35	43	60	100	04OH1	ZZZZ	00015	0.374	0.00	115	115	7
									# Measurements	35	

H-3 Removable Beta Contamination Summary Data Table PKG 17.xls

Carrier No.	CPM	Count Time (sec)	Sample Area (cm ²)	Surface	Row	Location	Beta Efficiency	Beta Background (cpm)	Activity (dpm/100cm ²)	Net Activity (dpm/100cm ²)	MDA (dpm/100cm ²)
									Average	110	
									Maximum	153	
									STD DEV	19	
									95% CL on Mean	117	

USER: 1 ID:SMEARS PRESET TIME: 1.00 TUE 10 JUL 2001 14:39
 SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR:N RS232:N
 H#: 1 AQC:N QCF:N RDM:N 2 PHASE MONITOR:N
 CHANNEL 1-LL: 0 UL: 400 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
 CHANNEL 2-LL: 0 UL: 670 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0
 CHANNEL 3-LL: 0 UL:1000 2SIGMA: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0

SINGLE LABEL DPM, SET UP ON SUN 24 JUN 2001 16:19
 UNKNOWN ID:SMEARS UNKNOWN REPLICATES: 1
 UNKNOWN NORM FACTOR:0 1.00000 UNKNOWN UNITS:DPM
 QUENCH MODE:H CALCULATE COEFF:N HALF LIFE(DAYS):N
 QUENCH COEFF A: 4.328559 B:-0.0051270 C:-0.0000122 D:-0.0000000212
 STANDARD ID:
 QUENCH LIMITS LOW:90.00 HIGH:390.0

SAM	POS	CH	CPM	2SIG%	TIME	EL TIME	AVG H#	ERR
1	8-	1	50.00	28.28	1.00	1.30	115.0	
		2	77.00	22.79				
		3	98.00	20.20				
								%EFF:34.65 ISD1 DPM :144.2902
2	8-	1	45.00	29.81	1.00	2.78	106.0	
		2	73.00	23.41				
		3	101.00	19.90				
								%EFF:37.44 ISD1 DPM :120.1891
8-	3	1	47.00	29.17	1.00	4.27	120.0	
		2	68.00	24.25				
		3	88.00	21.32				
								%EFF:33.15 ISD1 DPM :141.7847
4	8-	1	40.00	31.62	1.00	5.75	112.0	
		2	68.00	24.25				
		3	107.00	19.33				
								%EFF:35.57 ISD1 DPM :112.4533
5	8-	1	38.00	32.44	1.00	7.23	107.0	
		2	62.00	25.40				
		3	99.00	20.10				
								%EFF:37.13 ISD1 DPM :102.3544
6	8-	1	40.00	31.62	1.00	8.72	118.0	
		2	69.00	24.08				
		3	101.00	19.90				
								%EFF:33.75 ISD1 DPM :118.5313
7	8-	1	43.00	30.50	1.00	10.20	112.0	
		2	90.00	21.08				
		3	111.00	18.98				
								%EFF:35.57 ISD1 DPM :120.8873
8	8-	1	34.00	34.30	1.00	11.68	115.0	
		2	55.00	26.97				
		3	79.00	22.50				
								%EFF:34.65 ISD1 DPM :98.11733
9	8-	1	45.00	29.81	1.00	13.17	103.0	
		2	73.00	23.41				
		3	104.00	19.61				
								%EFF:38.39 ISD1 DPM :117.2077

Performed By: *[Signature]* Date: 7/10/01
 Reviewed By: *[Signature]* Date: 7/14/01

ERR

SAM	POS	CH	CPM	2SIGX	TIME	EL TIME	AVG H#
10	8-10	1	39.00	32.03	1.00	14.65	123.0
		2	58.00	26.26			
		3	92.00	20.85			
11	8-11	1	37.00	32.88	%EFF:32.26	IS01	DPM :120.8827
		2	70.00	23.90	1.00	16.13	111.0
		3	102.00	19.80			
12	8-12	1	35.00	33.81	%EFF:35.88	IS01	DPM :103.1243
		2	70.00	23.90	1.00	17.62	134.0
		3	102.00	19.80			
13	3- 1	1	39.00	32.03	%EFF:29.12	IS01	DPM :120.1874
		2	61.00	25.61	1.00	19.16	116.0
		3	91.00	20.97			
14	3- 2	1	33.00	34.82	%EFF:34.35	IS01	DPM :113.5399
		2	57.00	26.49	1.00	20.64	128.0
		3	87.00	21.44			
15	3- 3	1	31.00	35.92	%EFF:30.81	IS01	DPM :107.0956
		2	56.00	26.73	1.00	22.12	112.0
		3	89.00	21.20			
	3- 4	1	33.00	34.82	%EFF:35.57	IS01	DPM :87.15128
		2	61.00	25.61	1.00	23.61	121.0
		3	98.00	20.20			
17	3- 5	1	23.00	41.70	%EFF:32.85	IS01	DPM :100.4499
		2	46.00	29.49	1.00	25.09	119.0
		3	79.00	22.50			
18	3- 6	1	39.00	32.03	%EFF:33.45	IS01	DPM :68.76591
		2	61.00	25.61	1.00	26.57	111.0
		3	94.00	20.63			
19	3- 7	1	38.00	32.44	%EFF:35.88	IS01	DPM :108.6986
		2	73.00	23.41	1.00	28.06	111.0
		3	100.00	20.00			
20	3- 8	1	43.00	30.50	%EFF:35.88	IS01	DPM :105.9114
		2	77.00	22.79	1.00	29.54	118.0
		3	96.00	20.41			
21	3- 9	1	37.00	32.88	%EFF:33.75	IS01	DPM :127.4212
		2	71.00	23.74	1.00	31.02	113.0
		3	101.00	19.90			
22	3-10	1	39.00	32.03	%EFF:35.26	IS01	DPM :104.9253
		2	65.00	24.81	1.00	32.51	124.0
		3	93.00	20.52			
					%EFF:31.97	IS01	DPM :121.9885

Performed By: *[Signature]* Date: 7/10/01
Reviewed By: *[Signature]* Date: 7/10/01

SRM	POS	CH	CPM	2518X	TIME	EL. TIME	AVG HH	ERR
23	3-11	1	30.00	36.51	1.00	33.99	145.0	
		2	59.00	26.04				
		3	91.00	20.97				
24	3-12	1	30.00	36.51	1.00	35.47	165.0	: 114.7045
		2	58.00	26.26				
		3	75.00	23.09				
25	8- 1	1	30.00	36.51	1.00	21.23	1501 DPM	: 141.3362
		2	55.00	24.97		37.02	116.0	
		3	85.00	21.69				
26	8- 2	1	30.00	36.51	1.00	34.35	1501 DPM	: 87.33839
		2	60.00	25.82		38.50	119.0	
		3	87.00	21.20				
27	8- 3	1	30.00	36.51	1.00	33.45	1501 DPM	: 89.69466
		2	48.00	29.87		39.97	132.0	
		3	75.00	22.94				
28	8- 4	1	37.00	32.88	1.00	29.68	1501 DPM	: 101.0793
		2	54.00	27.22		41.45	117.0	
		3	84.00	21.57				
	8- 5	1	39.00	32.03	1.00	34.05	1501 DPM	: 108.6740
		2	68.00	24.25		42.94	127.0	
		3	105.00	19.52				
30	8- 6	1	42.00	30.86	1.00	31.10	1501 DPM	: 125.3989
		2	71.00	23.74		44.42	140.0	
		3	94.00	20.63				
31	8- 7	1	31.00	35.92	1.00	27.48	1501 DPM	: 152.8343
		2	55.00	26.97		45.91	117.0	
		3	89.00	21.20				
32	8- 8	1	34.00	34.30	1.00	34.05	1501 DPM	: 91.05121
		2	51.00	28.01		47.39	109.0	
		3	95.00	20.52				
33	8- 9	1	26.00	39.22	1.00	36.50	1501 DPM	: 93.15105
		2	49.00	29.57		48.87	106.0	
		3	84.00	21.82				
34	8-10	1	29.00	37.14	1.00	37.44	1501 DPM	: 69.44260
		2	48.00	28.87		50.36	116.0	
		3	78.00	22.65				
35	8-11	1	43.00	30.50	1.00	34.35	1501 DPM	: 84.42710
		2	71.00	23.74		51.83	106.0	
		3	101.00	19.90				
						37.44	1501 DPM	: 114.8474

Performed By: [Signature] Date: 7/10/01
 Reviewed By: [Signature] Date: 7/16/01

**Georgia Institute of Technology
Research Reactor**

Final Survey Package 18

Reactor Vessel Tunnel

TABLE OF CONTENTS

Section 1 - Survey Package 18 Worksheet for the Vessel Tunnel.....	3
Section 2 - Package 18 Drawings.....	8
Section 3 - Package 18 Direct Beta Survey Report for the Suspect Affected Vessel Tunnel (including download reports).....	11
Section 4 - Package 18 Exposure Rate Measurements	34
Section 5 - Package 18 Removable Beta Contamination for the Vessel Tunnel (Including lab reports)	39
Section 6 - Package 18 H-3 Removable Beta Contamination Summary Data Table (including lab reports).....	56

Section 1

Survey Package 18 Worksheet for Vessel Tunnel

Duratek Inc.
Survey Package Worksheet for Vessel Tunnel
Georgia Institute of Technology Research Reactor

Package Identification No.: 18	Prepared by: Paul Jones
Location: Vessel Tunnel	Date prepared: 07/2/2001
Area Classification: Suspect Affected	

Area Description

The survey area consists of the reactor vessel tunnel and alcove area. The vessel tunnel is accessed through the process room in the basement of the reactor building. The vessel tunnel is only 1.3 meters wide at the opening and opens up to an area of approx. 1.7 meters wide. This package includes the floor, walls and ceiling of this area. The floor of the vessel tunnel is approximately 6 square meters.

This vessel tunnel area does not have a wall 4 (this wall is completely open to the process room).

Historical Information

This area was decontaminated during the spring of 2001. The decontamination consisted of concrete removal of portions of the floor and all of the walls. No decontamination was required on the ceiling of this area.

General Survey Instructions

Floor, walls, and ceiling of the vessel tunnel.

- 1) Ensure the area is gridded as shown on the grid map(s).
- 2) Perform a 100% beta scan on the floor, walls and ceiling to identify areas of elevated activity.
- 3) Obtain 1 direct beta measurement for each 1 m².
- 4) Obtain 1 smear for removable beta and alpha contamination for each 1 m² of area.
- 5) Obtain 1 exposure rate measurement at one meter above the floor at the corresponding direct beta measurement location.
- 6) Obtain required smears for H-3 analysis (See special Instructions for the minimum number of smears required). Denote location of all smears on map.

Use only the Package ID, L2, L7 and L8 codes when labeling smears for counting.

Use all location codes provided below when taking fixed beta readings.

Special Instructions

Source check meters to Tc-99 for beta measurements.

Use gas flow proportional detector model numbers 43-68 and 43-106 for surveys.

Use GM detector model number 44-40 for surveys on heavily scabbled concrete surfaces.

The direct beta, smears, and the exposure rate measurements should be taken in the center of each grid.

Verify that the MDA is less than 600dpm/100cm² for direct beta measurements after obtaining initial background.

Obtain background readings at each grid location.

During scanning the detector is to be kept as close to the surface as possible and moved across the surface at a slow speed (scan speed shall not exceed one probe width per sec). The scan should be performed using the audible output and using headphones whenever necessary.

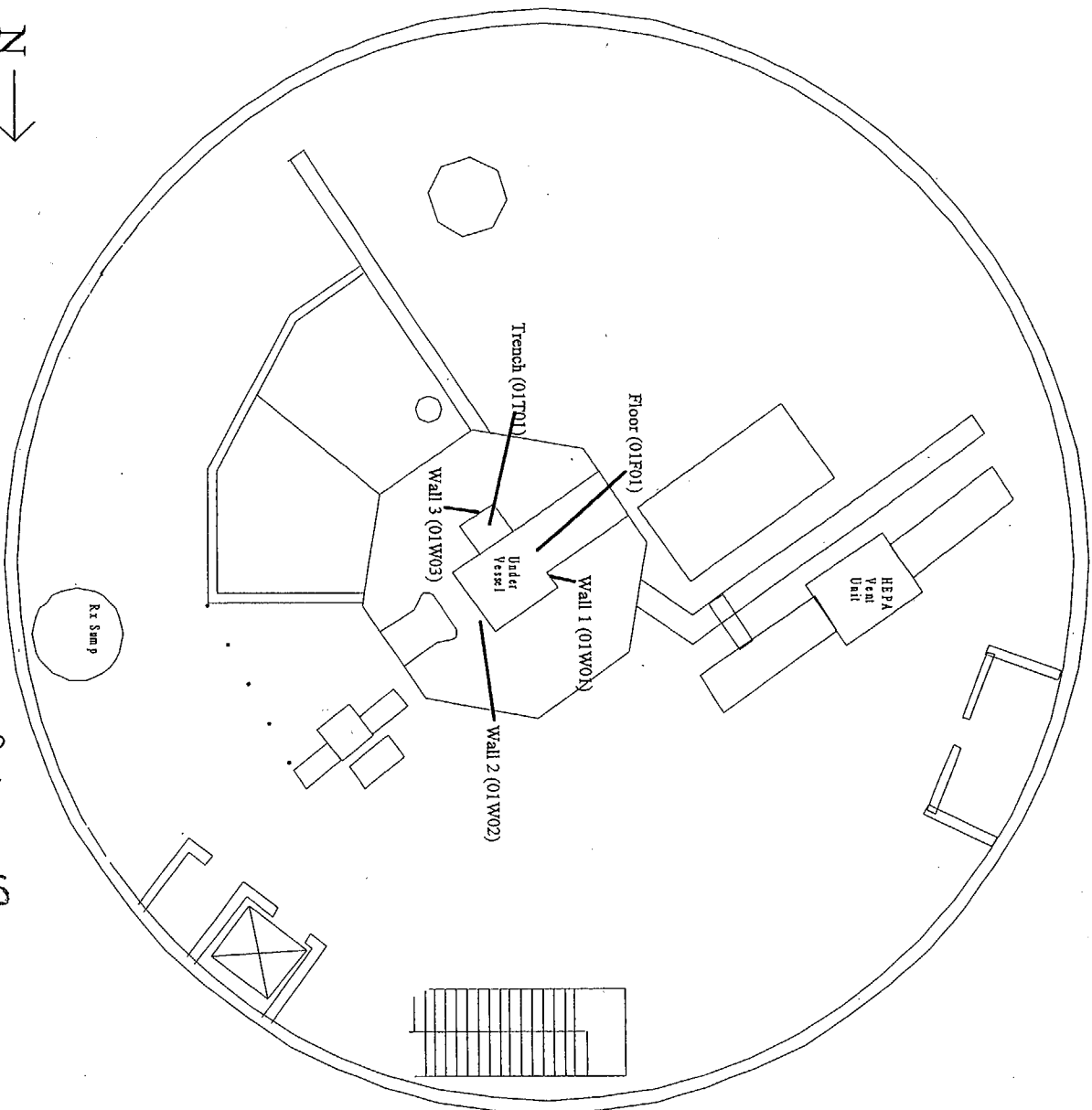
Survey performance (Initial and date as each survey is complete)

Location Code					General Description	Beta Scan	Direct Beta	1 meter Gamma	Smear Gross α/β	LS Smear
L1	L2	L6	L7	L8						
Georgia Tech Research Reactor Ground Floor General Area VESSEL TUNNEL										
A0218	01F01	B0002	A - B	1 thru 5	Floor	DB 7-10-01	(10) RB2 7-10-01	(10) DB 7-16-01	(10) WMB 7-10-01	(10) WMB 7-10-01
A0218	01W01	B0002	A thru C	1 thru 5	Wall 1	DB 7-10-01	(12) RB2 7-10-01	N/A	(12) WMB 7-10-01	(4) WMB 7-10-01
A0218	01W02	B0002	A thru C	1 thru 2	Wall 2	DB 7-10-01	(6) RB2 7-10-01	N/A	(6) WMB 7-10-01	(4) WMB 7-10-01
A0218	01W03	B0002	A thru C	1 thru 6	Wall 3	DB 7-10-01	(15) RB2 7-10-01	N/A	(15) WMB 7-10-01	(4) WMB 7-10-01
A0218	01C01	B0002	A thru B	1 thru 3	Ceiling	DB 7-10-01	(6) RB2 7-10-01	N/A	(6) WMB 7-10-01	(4) WMB 7-10-01

Section 2

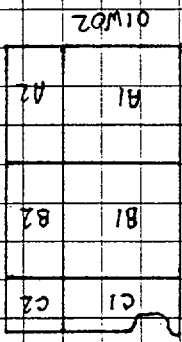
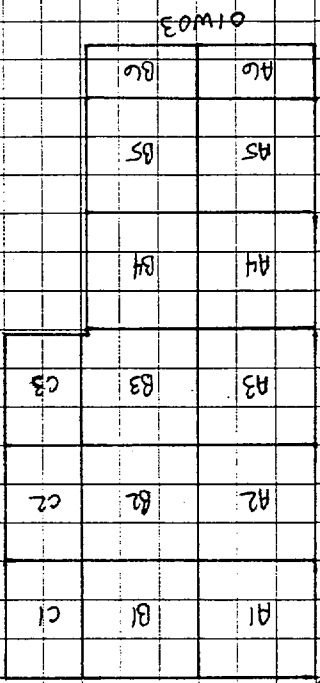
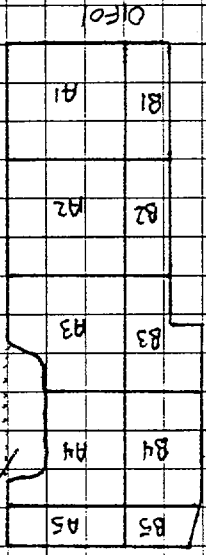
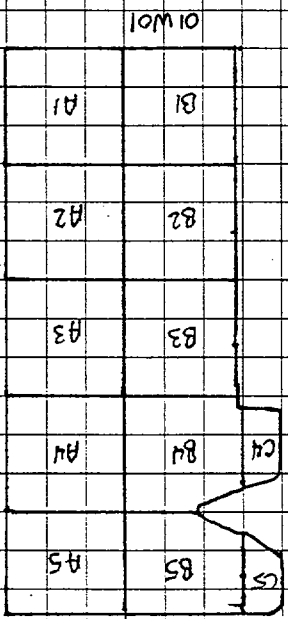
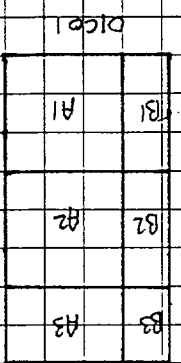
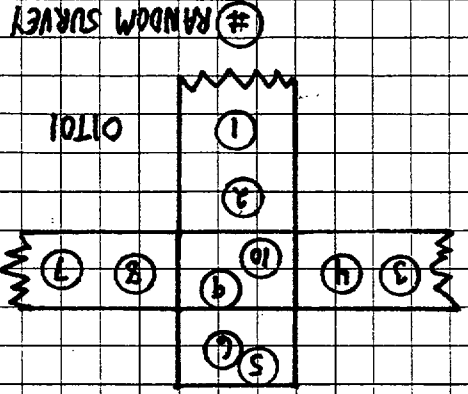
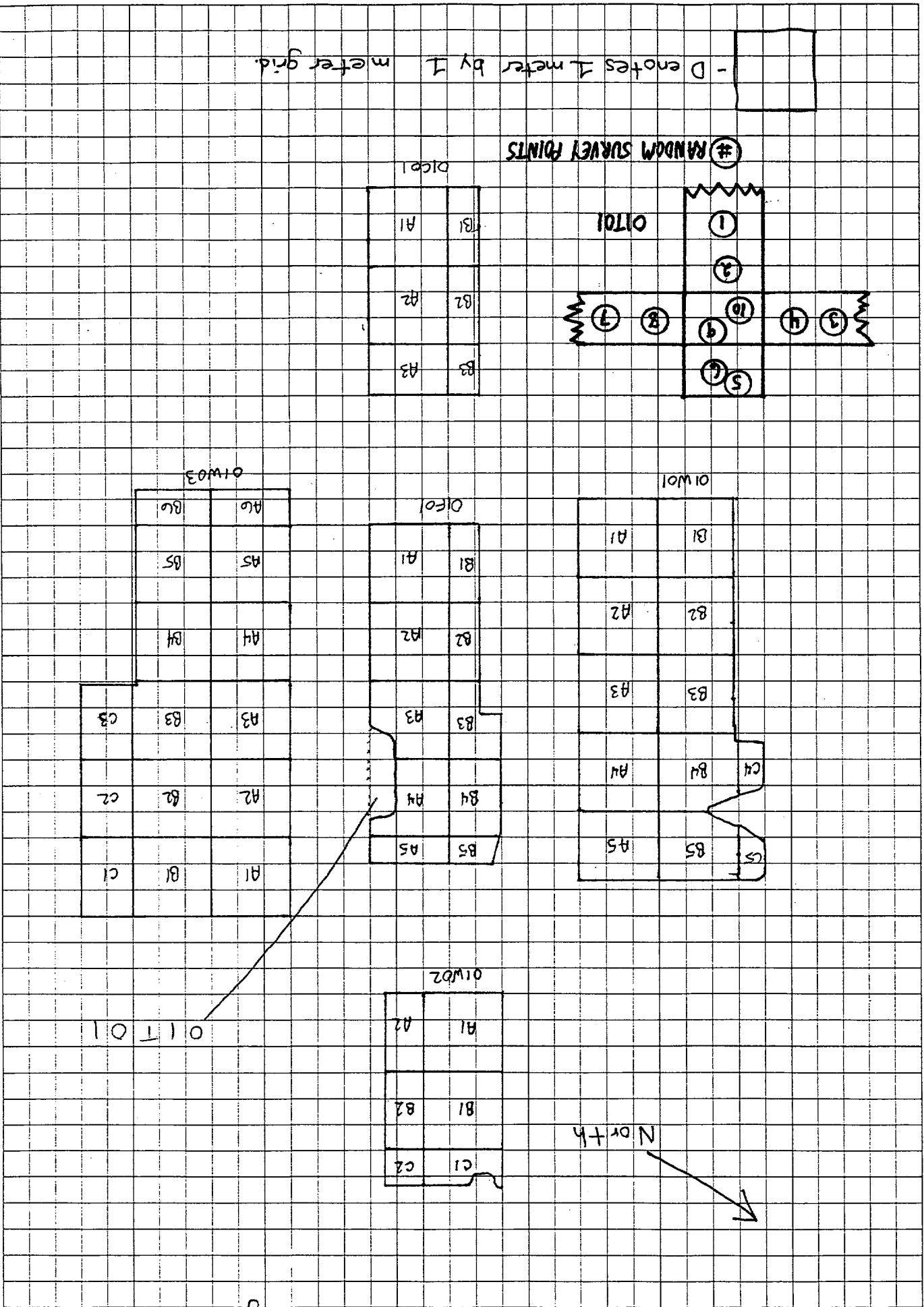
**Package 18
Drawings**

Vessel Tunnel

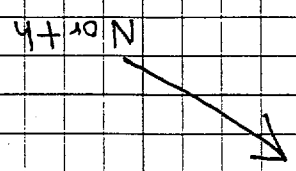


N →

Package 18
~~Vessel Tunnel~~ at 5/3/02



01T01



- D denotes 1 meter by 1 meter grid.

Section 3

Package 18
Direct Beta Survey Report for the Vessel
Tunnel (including download reports)

Direct
 Package A0218, ~~Fixed~~ Beta Survey Report (Suspect Affected Vessel Tunnel)
19 sheets

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm ²)	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm ²)	Natural Background (dpm/100cm ²)	Net Activity (dpm/100cm ²)	MDA (dpm/100cm ²)
Trench 1	174	14	820	60	B0002	126	01T01	FLDCT	ZZZZZ	00001	0.206	659	620	354	266	375
	174	15	1015	60	B0002	126	01T01	FLDCT	ZZZZZ	00002	0.206	711	1171	354	817	387
	174	16	953	60	B0002	126	01T01	FLDCT	ZZZZZ	00003	0.206	677	1063	354	709	379
	174	17	1124	60	B0002	126	01T01	FLDCT	ZZZZZ	00004	0.206	786	1302	354	948	404
	174	18	1078	60	B0002	126	01T01	FLDCT	ZZZZZ	00005	0.206	793	1098	354	744	406
	174	19	998	60	B0002	126	01T01	FLDCT	ZZZZZ	00006	0.206	745	975	354	621	395
	174	20	1226	60	B0002	126	01T01	FLDCT	ZZZZZ	00007	0.206	911	1214	354	860	431
	174	21	1313	60	B0002	126	01T01	FLDCT	ZZZZZ	00008	0.206	977	1294	354	940	445
	174	22	1044	60	B0002	126	01T01	FLDCT	ZZZZZ	00009	0.206	807	913	354	559	409
	174	23	1277	60	B0002	126	01T01	FLDCT	ZZZZZ	00010	0.206	1016	1006	354	652	453
Ceiling	172	91	1070	60	B0002	126	01C01	FLDCT	A	00001	0.213	566	1878	354	1524	341
	172	92	942	60	B0002	126	01C01	FLDCT	A	00002	0.213	730	790	354	436	379
	172	93	1158	60	B0002	126	01C01	FLDCT	A	00003	0.213	876	1051	354	697	411
	172	94	853	60	B0002	126	01C01	FLDCT	B	00001	0.213	580	1017	354	663	344
	172	95	1064	60	B0002	126	01C01	FLDCT	B	00002	0.213	717	1293	354	939	376
	172	96	1011	60	B0002	126	01C01	FLDCT	B	00003	0.213	766	913	354	559	387
Floor	172	53	844	60	B0002	126	01F01	FLDCT	A	00001	0.213	636	775	354	421	358
	172	54	927	60	B0002	126	01F01	FLDCT	A	00002	0.213	693	872	354	518	371
	172	55	1014	60	B0002	126	01F01	FLDCT	A	00003	0.213	737	1032	354	678	381
	172	56	1003	60	B0002	126	01F01	FLDCT	A	00004	0.213	738	987	354	633	381
	172	57	1423	60	B0002	126	01F01	FLDCT	A	00005	0.213	811	2280	354	1926	397
	172	58	886	60	B0002	126	01F01	FLDCT	B	00001	0.213	674	790	354	436	367
	172	59	935	60	B0002	126	01F01	FLDCT	B	00002	0.213	730	764	354	410	379
	172	60	1168	60	B0002	126	01F01	FLDCT	B	00003	0.213	803	1360	354	1006	395
	172	61	1296	60	B0002	126	01F01	FLDCT	B	00004	0.213	921	1397	354	1043	420
	172	62	1127	60	B0002	126	01F01	FLDCT	B	00005	0.213	849	1036	354	682	405
Wall 1	175	16	828	60	B0002	126	01W01	FLDCT	A	00001	0.217	547	1028	354	674	330
	175	17	826	60	B0002	126	01W01	FLDCT	A	00002	0.217	562	966	354	612	334
	175	18	976	60	B0002	126	01W01	FLDCT	A	00003	0.217	644	1214	354	860	353
	175	19	1108	60	B0002	126	01W01	FLDCT	A	00004	0.217	762	1265	354	911	380
	175	20	1070	60	B0002	126	01W01	FLDCT	A	00005	0.217	744	1192	354	838	376
	175	21	815	60	B0002	126	01W01	FLDCT	B	00001	0.217	566	911	354	557	335
	175	22	1028	60	B0002	126	01W01	FLDCT	B	00002	0.217	711	1159	354	805	369
	175	23	1210	60	B0002	126	01W01	FLDCT	B	00003	0.217	812	1456	354	1102	390
	175	24	1244	60	B0002	126	01W01	FLDCT	B	00004	0.217	854	1426	354	1072	399
	175	25	1228	60	B0002	126	01W01	FLDCT	B	00005	0.217	857	1357	354	1003	400
	175	26	723	60	B0002	126	01W01	FLDCT	C	00004	0.217	459	966	354	612	307
	175	27	701	60	B0002	126	01W01	FLDCT	C	00005	0.217	529	629	354	275	326
Wall 2	172	70	1105	60	B0002	126	01W02	FLDCT	A	00001	0.213	780	1211	354	857	390
	172	71	1184	60	B0002	126	01W02	FLDCT	A	00002	0.213	722	1721	354	1367	378
	172	72	1143	60	B0002	126	01W02	FLDCT	B	00001	0.213	745	1483	354	1129	383
	172	73	1378	60	B0002	126	01W02	FLDCT	B	00002	0.213	779	2232	354	1878	390
	172	74	679	60	B0002	126	01W02	FLDCT	C	00001	0.213	512	622	354	268	327
	172	75	849	60	B0002	126	01W02	FLDCT	C	00002	0.213	545	1133	354	779	335
Wall 3	172	76	1115	60	B0002	126	01W03	FLDCT	A	00001	0.213	787	1222	354	868	392
	172	77	959	60	B0002	126	01W03	FLDCT	A	00002	0.213	659	1118	354	764	363
	172	78	949	60	B0002	126	01W03	FLDCT	A	00003	0.213	629	1192	354	838	356

Direct
 Package A0218 ~~Fixed~~ Beta Survey Report (Suspect Affected Vessel Tunnel)
19.5/20/02

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm ²)	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm ³)	Natural Background (dpm/100cm ³)	Net Activity (dpm/100cm ²)	MDA (dpm/100cm ²)
	172	79	931	60	B0002	126	01W03	FLDCT	A	00004	0.213	631	1118	354	764	357
	172	80	878	60	B0002	126	01W03	FLDCT	A	00005	0.213	579	1114	354	760	344
	172	81	799	60	B0002	126	01W03	FLDCT	A	00006	0.213	532	995	354	641	332
	172	82	1254	60	B0002	126	01W03	FLDCT	B	00001	0.213	857	1479	354	1125	407
	172	83	1039	60	B0002	126	01W03	FLDCT	B	00002	0.213	713	1215	354	861	376
	172	84	1007	60	B0002	126	01W03	FLDCT	B	00003	0.213	783	835	354	481	391
	172	85	981	60	B0002	126	01W03	FLDCT	B	00004	0.213	699	1051	354	697	372
	172	86	837	60	B0002	126	01W03	FLDCT	B	00005	0.213	614	831	354	477	352
	172	87	806	60	B0002	126	01W03	FLDCT	B	00006	0.213	553	943	354	589	337
	172	88	771	60	B0002	126	01W03	FLDCT	C	00001	0.213	546	838	354	484	336
	172	89	818	60	B0002	126	01W03	FLDCT	C	00002	0.213	520	1110	354	756	329
	172	90	824	60	B0002	126	01W03	FLDCT	C	00003	0.213	587	883	354	529	346
													# Measurements		59	
													Average		778	dpm/100cm ²
													Maximum		1926	dpm/100cm ²
													STD DEV		325	dpm/100cm ²
													95% CL on Mean		861	dpm/100cm ²

The "net activity" (dpm/100 cm²) presented on the following download report is raw data. It has not been corrected, if required, for the natural radioactivity that may be present in materials of construction. In addition the background used to correct for ambient exposure rates, instrument noise, etc. may need to be adjusted if more than one surface type was included in the download.

See the enclosed spreadsheets for the corrected results.

File #175

015

ATTACHMENT 6.14
SURVEY DOWNLOAD DATA SHEET

Download Print
Technician Name: D. Schumaker Signature: [Signature] Station: 2
Serial No. Verification: Model 2350: Detector: Problems: (See Comments) File: 175

Survey Technician(s):
Print Name: R. A. LEIGH User ID: RAL 7103 Signature: R.A. Leigh Date: 7-10-01
Print Name: _____ User ID: _____ Signature: _____ Date: _____

Survey Unit Description: A0218, 01W01 VESSEL TUNNEL WALL 01
(Example: Survey Package + description i.e. D16, Building 43, Area 09, Room 100, Floor - Grid Locations A1 through A7)

Instrument Model and Serial No.: Model 2350 Model 2350-1 : 129433

Instrument and Detector Calibration Due Dates: Survey Meter: 10/24/01 Detector: 12/21/01
095080 R02

Type Of Survey: Term Survey Characterization Information Only
 Other (explain):

Type of Measurement	Detector Serial Number	Detector Model Number	Detector Efficiency	Source Mean BKG Value	Pre & Post Use Info	
					Pre File No.	Post File No.
<input type="checkbox"/> Beta β		43-106B				
<input checked="" type="checkbox"/> Beta β	<u>095080</u>	43-68B	<u>.217</u>	<u>5479 / 408</u>	<u>175</u>	<u>175</u>
<input type="checkbox"/> Alpha α		43-68A				
<input type="checkbox"/> Gamma γ		44-2	N/A			

Local Area Background Measurements						MEAN Value in cpm	
	1	2	3	4	5	6	
β Beta							
α Alpha							

COMMENTS: _____

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm²

File Number: 175	Survey Description: A0218: RX VESSEL TUNNEL WALL 01		
Survey Reason: TERMINATION	User ID: RAL7103	Technician name: R.A. Leigh	
Instrument Model: 2350-1	S/N: 129433	Calibration Due: 10/24/01	Group: 2
Detector Model: 43-68	Detector S/N: 095080	Type: 126 cm ² Gas Proportional Detector	
Background: 0 cpm	Beta Efficiency: .217	Survey Date: 7/10/01	

Pre and Post source checks are included on this download: Yes No
 If No is answered, then list the Download Files which include the Pre and Post source checks.
 Pre File #: _____ Post File #: _____

Technician Review:

I have reviewed this cover sheet and 2 pages of the report, 0 pages of comments, and 1 graph.

I performed this survey: R.A. LEIGH / R.A. Leigh Date: 7-10-01
 Print name Signature

and,

I performed this survey: _____ / _____ Date: _____
 Print name Signature

Corrections and Reasons:

Comment Resolution:

Survey Reviewed and Approved by: PAUL JONES / R.A. Leigh Date: 7/16/01
 Print name Signature

Survey Date: 7/10/01
File: 175

Report Date: 7/10/01

Page: 1
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0218	01W01	TAT01	02200	Det Cal Due: 12/21/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDBK	B0002	A	00001	4	60	547	2001	
FLDBK	B0002	A	00002	5	60	562	2055	
FLDBK	B0002	A	00003	6	60	644	2355	
FLDBK	B0002	A	00004	7	60	762	2787	*
FLDBK	B0002	A	00005	8	60	744	2721	*
FLDBK	B0002	B	00001	9	60	566	2070	
FLDBK	B0002	B	00002	10	60	711	2600	*
FLDBK	B0002	B	00003	11	60	812	2970	*
FLDBK	B0002	B	00004	12	60	854	3123	*
FLDBK	B0002	B	00005	13	60	857	3134	*
FLDBK	B0002	C	00004	14	60	459	1679	
FLDBK	B0002	C	00005	15	60	529	1935	

Group Average: 2453

FLDCT	B0002	A	00001	16	60	828	3028	*
FLDCT	B0002	A	00002	17	60	826	3021	*
FLDCT	B0002	A	00003	18	60	976	3570	*
FLDCT	B0002	A	00004	19	60	1108	4052	*
FLDCT	B0002	A	00005	20	60	1070	3913	*
FLDCT	B0002	B	00001	21	60	815	2981	*
FLDCT	B0002	B	00002	22	60	1028	3760	*
FLDCT	B0002	B	00003	23	60	1210	4425	*
FLDCT	B0002	B	00004	24	60	1244	4550	*
FLDCT	B0002	B	00005	25	60	1228	4491	*
FLDCT	B0002	C	00004	26	60	723	2644	*
FLDCT	B0002	C	00005	27	60	701	2564	*

Group Average: 3583

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	EZ260	TAT01	02200	Det Cal Due: 12/21/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
PRB00	ZZZZZ	ZZZZZ	00000	1	60	5808	21242	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	6063	22175	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	5791	21180	*

Group Average: 21532

PTB00	ZZZZZ	ZZZZZ	00000	29	60	5994	21922	*
PTB00	ZZZZZ	ZZZZZ	00001	30	60	6277	22957	*
PTB00	ZZZZZ	ZZZZZ	00000	31	60	6032	22061	*

Group Average: 22314

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	ZZZZZ	TAT01	02200	Det Cal Due: 12/21/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
PRBBK	ZZZZZ	ZZZZZ	00000	0	600	4081	1493	

Group Average: 1493

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/10/01
File: 175

Report Date: 7/10/01

Page: 2
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	ZZZZZ	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PTBBK	ZZZZZ	ZZZZZ	00000	28	600	4457	1630	-

Group Average: 1630

Total Number of Measurements on this Report: 32

NOTE: This report is grouped by:

Package (L1) (Package number)

Setup number (Detector parameters)

Det Type (L4) (GM pancake-flat surface, Beta 3.5-12" pipe, gamma at 1 m, etc.)

Reason (L3-345) (Char survey, source check, final survey, etc.)

Surface Cat (L2) (Wall, floor, drain, penetration, etc.)

Count Type (L5) (Field count, bkg, pre-, post-, etc.)

Bkgd Sub (L6) (Material code, i.e., wood, iron, concr, etc.)

GTS:0143 :C:\PDOX35\M2350\TLOGREVU.R2 12-01-97 JPA

L 80 M 03,133

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

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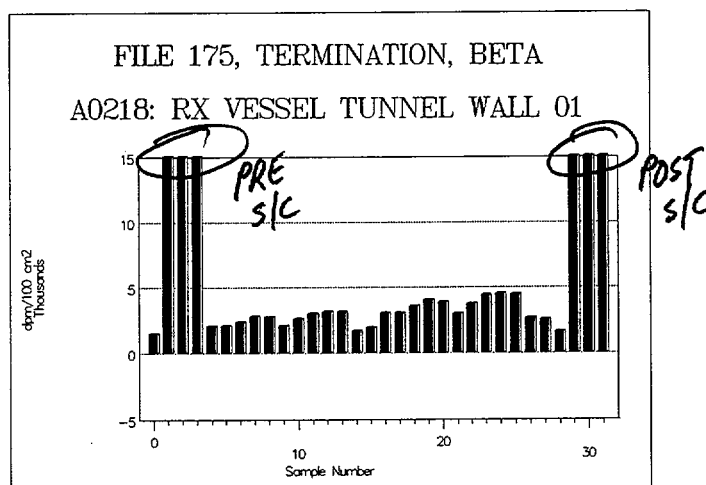
7/10/2001

Graph of File 175

Station: 2

Survey Date: 7/10/2001 Survey Start Time: 13:12:10

Description: A0218: RX VESSEL TUNNEL WALL 01



Flag set for 2400 dpm/100 cm². Review values greater than this value.

Review this graph for visual outliers.

Mark outliers, source checks and backgrounds on the graph on this page.

The "net activity" (dpm/100 cm²) presented on the following download report is raw data. It has not been corrected, if required, for the natural radioactivity that may be present in materials of construction. In addition the background used to correct for ambient exposure rates, instrument noise, etc. may need to be adjusted if more than one surface type was included in the download.

See the enclosed spreadsheets for the corrected results.

File #174

ATTACHMENT 6.14
SURVEY DOWNLOAD DATA SHEET

Download Print
 Technician: Name: D. Schumaker Signature: [Signature] Station: 2
 Serial No. Verification: Model 2350: Detector: Problems: (See Comments) File: 124

Survey Technician(s):
 Print Name: R.A. Leyh User ID: RAL7103 Signature: R.A. Leyh Date: 7-10-01
 Print Name: _____ User ID: _____ Signature: _____ Date: _____

Survey Unit Description: A0218: Rx Vessel tunnel trench
 (Example: Survey Package + description i.e. D16, Building 43, Area 09, Room 100, Floor - Grid Locations A1 through A7)

Instrument Model and Serial No.: Model 2350 Model 2350-1 129429

Instrument and Detector Calibration Due Dates: Survey Meter: 12-6-01 Detector: 12-6-01

Type Of Survey: Term Survey Characterization Information Only
 Other (explain): _____

Type of Measurement	Detector Serial Number	Detector Model Number	Detector Efficiency	Source Mean BKG Value	Pre & Post Use Info	
					Pre File No.	Post File No.
<input type="checkbox"/> Beta β		43-106B				
<input checked="" type="checkbox"/> Beta β	<u>091050</u>	43-68B	<u>.206</u>	<u>5198/416</u>	<u>124</u>	<u>124</u>
<input type="checkbox"/> Alpha α		43-68A				
<input type="checkbox"/> Gamma γ		44-2	N/A			

Local Area Background Measurements						MEAN Value in cpm	
β Beta	1	2	3	4	5	6	
α Alpha	1	2	3	4	5	6	

COMMENTS: _____

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm²

File Number: 174		Survey Description: A0218: RX VESSEL TUNNEL		
Survey Reason: TERMINATION		User ID: BSK0490	Technician name: B.S. Kjos	
Instrument Model: 2350-1	S/N: 129429	Calibration Due: 12/06/01	Group: 2	
Detector Model: 43-68B	Detector S/N: 091050	Type: 126 cm ² Gas Proportional Detector, Beta Window		
Background: 0 cpm	Beta Efficiency: .206			Survey Date: 7/10/01

Pre and Post source checks are included on this download: Yes No
 If No is answered, then list the Download Files which include the Pre and Post source checks.
 Pre File #: _____ Post File #: _____

Technician Review:

I have reviewed this cover sheet and 2 pages of the report, 0 pages of comments, and 1 graph.

I performed this survey: R.A. LEIGH / *R.A. Leigh* Date: 7-10-01
Print name Signature

and,

I performed this survey: _____ / _____ Date: _____
Print name Signature

Corrections and Reasons:

Comment Resolution:

Survey Reviewed and Approved by: PAUL JONES / *Paul Jones* Date: 7/16/01
Print name Signature

Survey Date: 7/10/01
File: 174

Report Date: 7/10/01

Page: 1
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0218	01T01	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	ZZZZZ	00001	4	60	659	2539	*
FLDBK	B0002	ZZZZZ	00002	5	60	711	2739	*
FLDBK	B0002	ZZZZZ	00003	6	60	677	2608	*
FLDBK	B0002	ZZZZZ	00004	7	60	786	3028	*
FLDBK	B0002	ZZZZZ	00005	8	60	793	3055	*
FLDBK	B0002	ZZZZZ	00006	9	60	745	2870	*
FLDBK	B0002	ZZZZZ	00007	10	60	911	3510	*
FLDBK	B0002	ZZZZZ	00008	11	60	977	3764	*
FLDBK	B0002	ZZZZZ	00009	12	60	807	3109	*
FLDBK	B0002	ZZZZZ	00010	13	60	1016	3914	*

Group Average: 3114

FLDCT	B0002	ZZZZZ	00001	14	60	820	3159	*
FLDCT	B0002	ZZZZZ	00002	15	60	1015	3910	*
FLDCT	B0002	ZZZZZ	00003	16	60	953	3672	*
FLDCT	B0002	ZZZZZ	00004	17	60	1124	4330	*
FLDCT	B0002	ZZZZZ	00005	18	60	1078	4153	*
FLDCT	B0002	ZZZZZ	00006	19	60	998	3845	*
FLDCT	B0002	ZZZZZ	00007	20	60	1226	4723	*
FLDCT	B0002	ZZZZZ	00008	21	60	1313	5059	*
FLDCT	B0002	ZZZZZ	00009	22	60	1044	4022	*
FLDCT	B0002	ZZZZZ	00010	23	60	1277	4920	*

Group Average: 4179

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	EZZ60	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PRB00	ZZZZZ	ZZZZZ	00000	1	60	5467	21063	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	5673	21856	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	5701	21964	*

Group Average: 21628

PTB00	ZZZZZ	ZZZZZ	00000	25	60	5685	21902	*
PTB00	ZZZZZ	ZZZZZ	00000	26	60	5867	22604	*
PTB00	ZZZZZ	ZZZZZ	00000	27	60	5764	22207	*

Group Average: 22238

Survey Code	L1	L2	L3	L4	Setup Number 0
	ZZZZZ	ZZZZZ	TAT01	02200	Det Cal Due: 12/06/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PRBBK	ZZZZZ	ZZZZZ	00000	0	600	4160	1603	

Group Average: 1603

?TBK	ZZZZZ	ZZZZZ	00000	24	600	4224	1627	
------	-------	-------	-------	----	-----	------	------	--

Group Average: 1627

Survey Date: 7/10/01
File: 174

Report Date: 7/10/01

Page: 2
Station: 2

Comments

Total Number of Measurements on this Report: 28

NOTE: This report is grouped by:

Package (L1) (Package number)

Setup number (Detector parameters)

Det Type (L4) (GM pancake-flat surface, Beta 3.5-12" pipe, gamma at 1 m, etc.)

Reason (L3-345) (Char survey, source check, final survey, etc.)

Surface Cat (L2) (Wall, floor, drain, penetration, etc.)

Count Type (L5) (Field count, bkg, pre-, post-, etc.)

Bkgd Sub (L6) (Material code, i.e., wood, iron, concr, etc.)

GTS:0143 :C:\PDOX35\M2350\TLOGREVU.R2 12-01-97 JPA

L 80 M 03,133

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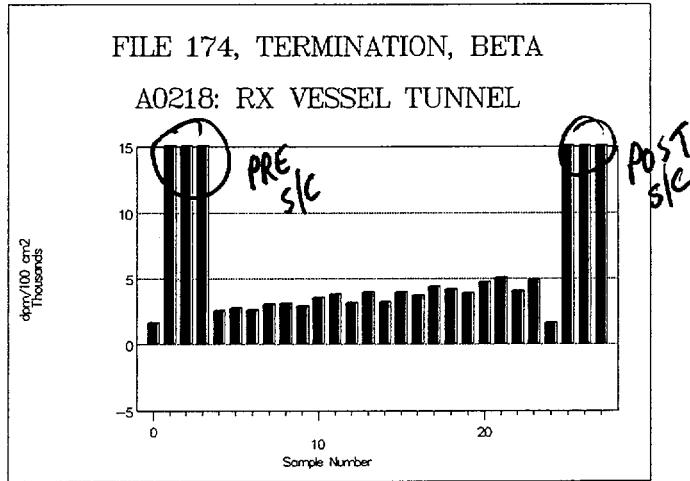
7/10/2001

Graph of File 174

Station: 2

Survey Date: 7/10/2001 Survey Start Time: 10:50:48

Description: A0218: RX VESSEL TUNNEL



Flag set for 2400 dpm/100 cm². Review values greater than this value.
Review this graph for visual outliers.

Mark outliers, source checks and backgrounds on the graph on this page.

The "net activity" (dpm/100 cm²) presented on the following download report is raw data. It has not been corrected, if required, for the natural radioactivity that may be present in materials of construction. In addition the background used to correct for ambient exposure rates, instrument noise, etc. may need to be adjusted if more than one surface type was included in the download.

See the enclosed spreadsheets for the corrected results.

File #172

ATTACHMENT 6.14
SURVEY DOWNLOAD DATA SHEET

Download Print
 Technician: Name: D. Schumaker Signature: [Signature] Station: 2
 File: 172
 Serial No. Verification: Model 2350: Detector: Problems: (See Comments)

Survey Technician(s):
 Print Name: R.A. LEIGH User ID: RAL 7103 Signature: [Signature] Date: 7-9-01

Print Name: _____ User ID: _____ Signature: _____ Date: _____

Survey Unit Description: A0218 VESSEL TUNNEL
 (Example: Survey Package + description i.e. D16, Building 43, Area 09, Room 100, Floor - Grid Locations A1 through A7)

Instrument Model and Serial No.: Model 2350 Model 2350-1 : 129433

Instrument and Detector Calibration Due Dates: Survey Meter: 10-24-01 Detector: 12-21-01

Type Of Survey: Term Survey Characterization Information Only
 Other (explain):

Type of Measurement	Detector Serial Number	Detector Model Number	Detector Efficiency	Source Mean BKG Value	Pre & Post Use Info	
					Pre File No.	Post File No.
<input type="checkbox"/> Beta β		43-106B				
<input checked="" type="checkbox"/> Beta β	<u>095080</u>	43-68B	<u>.213</u>	<u>5358/425</u>		
<input type="checkbox"/> Alpha α		43-68A				
<input type="checkbox"/> Gamma γ		44-2	N/A			

Local Area Background Measurements MEAN Value in cpm |

	1	2	3	4	5	6	
β Beta							
α Alpha							

COMMENTS: _____

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Direct Beta Survey Report, dpm/100 cm²

File Number: 172	Survey Description: A0218: RX VESSEL TUNNEL		
Survey Reason: TERMINATION	User ID: RAL7103	Technician name: R.A. Leigh	
Instrument Model: 2350-1	S/N: 129433	Calibration Due: 10/24/01	Group: 2
Detector Model: 43-68	Detector S/N: 095080	Type: 126 cm ² Gas Proportional Detector	
Background: 0 cpm	Beta Efficiency: .213	Survey Date: 7/09/01	

Pre and Post source checks are included on this download: Yes No
 If No is answered, then list the Download Files which include the Pre and Post source checks.
 Pre File #: _____ Post File #: _____

Technician Review:

I have reviewed this cover sheet and 3 pages of the report, 1 pages of comments, and 1 graph.

I performed this survey: R.A. LEIGH / *RAL* Date: 7-10-01
 Print name Signature

and,
 I performed this survey: _____ / _____ Date: _____
 Print name Signature

Corrections and Reasons:

Comment Resolution:

Survey Reviewed
and Approved by:

PAUL JONES
Print name

Paul Jones
Signature

Date: 7/16/01

Survey Date: 7/09/01
File: 172

Report Date: 7/10/01

Page: 1
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0218	01C01	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	A	00001	47	60	566	2109	
FLDBK	B0002	A	00002	48	60	730	2720	*
FLDBK	B0002	A	00003	49	60	876	3264	*
FLDBK	B0002	B	00001	50	60	580	2161	
FLDBK	B0002	B	00002	51	60	717	2672	*
FLDBK	B0002	B	00003	52	60	766	2854	*

Group Average: 2630

FLDCT	B0002	A	00001	91	60	1070	3987	*
FLDCT	B0002	A	00002	92	60	942	3510	*
FLDCT	B0002	A	00003	93	60	1158	4315	*
FLDCT	B0002	B	00001	94	60	853	3178	*
FLDCT	B0002	B	00002	95	60	1064	3965	*
FLDCT	B0002	B	00003	96	60	1011	3767	*

Group Average: 3787

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0218	01F01	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	A	00001	4	60	636	2370	
FLDBK	B0002	A	00002	5	60	693	2582	*
FLDBK	B0002	A	00003	6	60	737	2746	*
FLDBK	B0002	A	00004	7	60	738	2750	*
FLDBK	B0002	A	00005	8	60	811	3022	*
FLDBK	B0002	B	00001	9	60	674	2511	*
FLDBK	B0002	B	00002	10	60	730	2720	*
FLDBK	B0002	B	00003	11	60	803	2992	*
FLDBK	B0002	B	00004	12	60	921	3432	*
FLDBK	B0002	B	00005	13	60	849	3163	*

Group Average: 2829

FLDCT	B0002	A	00001	53	60	844	3145	*
FLDCT	B0002	A	00002	54	60	927	3454	*
FLDCT	B0002	A	00003	55	60	1014	3778	*
FLDCT	B0002	A	00004	56	60	1003	3737	*
FLDCT	B0002	A	00005	57	60	1423	5302	*
FLDCT	B0002	B	00001	58	60	886	3301	*
FLDCT	B0002	B	00002	59	60	935	3484	*
FLDCT	B0002	B	00003	60	60	1168	4352	*
FLDCT	B0002	B	00004	61	60	1296	4829	*
FLDCT	B0002	B	00005	62	60	1127	4199	*

Group Average: 3958

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0218	01W02	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	A	00001	24	60	780	2906	*
FLDBK	B0002	A	00002	25	60	722	2690	*

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/09/01
File: 172

Report Date: 7/10/01

Page: 2
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0218	01W02	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	B	00001	26	60	745	2776	*
FLDBK	B0002	B	00002	27	60	779	2903	*
FLDBK	B0002	C	00001	28	60	512	1908	*
FLDBK	B0002	C	00002	29	60	545	2031	*
Group Average:							2536	
FLDCT	B0002	A	00001	70	60	1105	4117	*
FLDCT	B0002	A	00002	71	60	1184	4412	*
FLDCT	B0002	B	00001	72	60	1143	4259	*
FLDCT	B0002	B	00002	73	60	1378	5135	*
FLDCT	B0002	C	00001	74	60	679	2530	*
FLDCT	B0002	C	00002	75	60	849	3163	*
Group Average:							3936	

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0218	01W03	TAT01	02200	Det Cal Due: 12/21/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	A	00001	32	60	787	2932	*
FLDBK	B0002	A	00002	33	60	659	2455	*
FLDBK	B0002	A	00003	34	60	629	2344	*
FLDBK	B0002	A	00004	35	60	631	2351	*
FLDBK	B0002	A	00005	36	60	579	2157	*
FLDBK	B0002	A	00006	37	60	532	1982	*
FLDBK	B0002	B	00001	38	60	857	3193	*
FLDBK	B0002	B	00002	39	60	713	2657	*
FLDBK	B0002	B	00003	40	60	783	2918	*
FLDBK	B0002	B	00004	41	60	699	2605	*
FLDBK	B0002	B	00005	42	60	614	2288	*
FLDBK	B0002	B	00006	43	60	553	2061	*
FLDBK	B0002	C	00001	44	60	546	2034	*
FLDBK	B0002	C	00002	45	60	520	1938	*
FLDBK	B0002	C	00003	46	60	587	2187	*
Group Average:							2407	
FLDCT	B0002	A	00001	76	60	1115	4155	*
FLDCT	B0002	A	00002	77	60	959	3573	*
FLDCT	B0002	A	00003	78	60	949	3536	*
FLDCT	B0002	A	00004	79	60	931	3469	*
FLDCT	B0002	A	00005	80	60	878	3271	*
FLDCT	B0002	A	00006	81	60	799	2977	*
FLDCT	B0002	B	00001	82	60	1254	4672	*
FLDCT	B0002	B	00002	83	60	1039	3871	*
FLDCT	B0002	B	00003	84	60	1007	3752	*
FLDCT	B0002	B	00004	85	60	981	3655	*
FLDCT	B0002	B	00005	86	60	837	3119	*
FLDCT	B0002	B	00006	87	60	806	3003	*
FLDCT	B0002	C	00001	88	60	771	2873	*
FLDCT	B0002	C	00002	89	60	818	3048	*
FLDCT	B0002	C	00003	90	60	824	3070	*
Group Average:							3470	

* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/09/01
File: 172

Report Date: 7/10/01

Page: 3
Station: 2

Comments

Survey Code	L1 ZZZZZ	L2 EZ260	L3 TAT01	L4 02200	Setup Number 0 Det Cal Due: 12/21/01
-------------	-------------	-------------	-------------	-------------	---

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
PRB00	ZZZZZ	ZZZZZ	00000	1	60	5667	21116	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	5789	21570	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	5893	21958	*
Group Average:							21548	
PTB00	ZZZZZ	ZZZZZ	00000	98	60	5909	22017	*
PTB00	ZZZZZ	ZZZZZ	00000	99	60	6083	22666	*
PTB00	ZZZZZ	ZZZZZ	00000	100	60	6069	22613	*
Group Average:							22432	

Survey Code	L1 ZZZZZ	L2 ZZZZZ	L3 TAT01	L4 02200	Setup Number 0 Det Cal Due: 12/21/01
-------------	-------------	-------------	-------------	-------------	---

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
PRBBK	ZZZZZ	ZZZZZ	00000	0	600	4253	1585	
Group Average:							1585	
PTBBK	ZZZZZ	ZZZZZ	00000	97	600	4377	1631	
Group Average:							1631	

Total Number of Measurements on this Report: 82

NOTE: This report is grouped by:
 Package (L1) (Package number)
 Setup number (Detector parameters)
 Det Type (L4) (GM pancake-flat surface, Beta 3.5-12" pipe, gamma at 1 m, etc.)
 Reason (L3-345) (Char survey, source check, final survey, etc.)
 Surface Cat (L2) (Wall, floor, drain, penetration, etc.)
 Count Type (L5) (Field count, bkg, pre-, post-, etc.)
 Bkgd Sub (L6) (Material code, i.e., wood, iron, concr, etc.)

* Hi flag set at 2400 dpm/100 cm2

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7/10/01

Comments Report for File 172

Station: 2

Comment Number	Comment
-------------------	---------

- | | |
|---|--|
| 1 | Deleted sample numbers from 63 to 69. Because THESE FIELD BACKGROUND READINGS DO NOT HAVE MATCHING FIELD COUNTS. SEE FILE #175 FOR RESURVEY. |
| 2 | Deleted sample numbers from 14 to 23. SAME AS COMMENT 1 |
| 3 | Deleted sample numbers from 30 to 31. SAME AS COMMENT 1 |
-

GTS:0143 :C:\PDOX35\M2350\COMMENTS:R1

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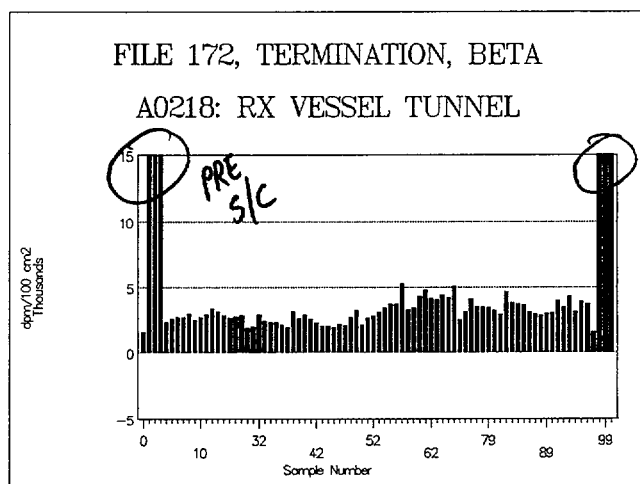
7/10/2001

Graph of File 172

Station: 2

Survey Date: 7/09/2001 Survey Start Time: 14:10:58

Description: A0218: RX VESSEL TUNNEL



Flag set for 2400 dpm/100 cm2. Review values greater than this value.

Review this graph for visual outliers.

Mark outliers, source checks and backgrounds on the graph on this page.

Section 4

**Package 18
Exposure Rate Measurements**

ATTACHMENT 6.14
SURVEY DOWNLOAD DATA SHEET

Download Print
 Technician: Name: D. Schumaker Signature: [Signature] Station: 2
 File: 187
 Serial No. Verification: Model 2350: Detector: Problems: (See Comments)

Survey Technician(s):
 Print Name: D. Schumaker User ID DPS 4133 Signature: [Signature] Date: 7-16-01
 Print Name: _____ User ID _____ Signature: _____ Date: _____

Survey Unit Description: A0218: Rx Vessel Tunnel Gamma Readings
 (Example: Survey Package + description i.e. D16, Building 43, Area 09, Room 100, Floor - Grid Locations A1 through A7)

Instrument Model and Serial No.: Model 2350 Model 2350-1 : 126182

Instrument and Detector Calibration Due Dates: Survey Meter: 9-22-01 Detector: 12-6-01

Type Of Survey: Term Survey Characterization Information Only
 Other (explain): _____

Type of Measurement	Detector Serial Number	Detector Model Number	Detector Efficiency	Source Mean BKG Value	Pre & Post Use Info	
					Pre File No.	Post File No.
<input type="checkbox"/> Beta β		43-106B				
<input type="checkbox"/> Beta β		43-68B				
<input type="checkbox"/> Alpha α		43-68A				
<input checked="" type="checkbox"/> Gamma γ	<u>091034</u>	44-2	N/A		<u>187</u>	<u>189</u>

Local Area Background Measurements MEAN Value in cpm !

	1	2	3	4	5	6
β Beta						
α Alpha						

COMMENTS: _____

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

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Gamma Radiation Survey Report, Micro-R/hour - Integrated Measurement

File Number: 187	Survey Description: A0218: RX VESSEL TUNNEL GAMMA READINGS		
Survey Reason: TERMINATION	User ID: DPS4133	Technician name: Don Schumaker	
Instrument Model: M2350-1	S/N: 126182	Calibration Due: 9/22/01	Group: 2
Detector Model: 44-2	Detector S/N: 091034	Type: High Energy Gamma Scintillator, 1x1 NaI	
Background: 0.0 uR/hr	Gamma Calibration Constant: 1.70095 E10 c/R	PIC ratio: 1.000 (PIC/NaI)	Survey Date: 7/16/01

Pre and Post source checks are included on this download: Yes No
 If No is answered, then list the Download Files which include the Pre and Post source checks.
 Pre File #: 187 Post File #: 189

Technician Review:

I have reviewed this cover sheet and 1 pages of the report, 0 pages of comments, and 1 graph.

I performed this survey: Don Schumaker / [Signature] Date: 7/16/01
Print name Signature

and,

I performed this survey: _____ / _____ Date: _____
Print name Signature

Corrections and reason (required):

Comment Resolution:

Survey Reviewed and Approved by: Paul Jones / [Signature] Date: 11/12/01
Print name Signature

Survey Date: 7/16/01
File: 187

Report Date: 7/16/01

Station: 2
Page: 1

Survey Code	L1	L2	L3	L4	L5	L6	Setup Number 2 Det Cal Due: 12/06/01
	A0218	01F01	TAT01	03100	FLDCT	B0002	

L7 Code Grid ID	L8 Code Location Number	Sample Number	Count Time (sec)	Gross Counts	Gross Micro R/hr	H i
A	00001	4	10	1055	22.3	*
A	00002	5	10	1250	26.5	*
A	00003	6	10	1221	25.8	*
A	00004	7	10	1431	30.3	*
A	00005	8	10	1662	35.2	*
B	00001	9	10	1052	22.3	*
B	00002	10	10	1197	25.3	*
B	00003	11	10	1419	30.0	*
B	00004	12	10	1508	31.9	*
B	00005	13	10	1598	33.8	*

Group Average: 8036 cpm Average uR/hr: 28.3
Number of measurements: 10

Survey Code	L1	L2	L3	L4	L5	L6	Setup Number 2 Det Cal Due: 12/06/01
	ZZZZZ	19453	TAT01	03100	PRB00	ZZZZZ	

L7 Code Grid ID	L8 Code Location Number	Sample Number	Count Time (sec)	Gross Counts	Gross Micro R/hr	H i
ZZZZZ	00000	1	60	551300	1944.7	*
ZZZZZ	00000	2	60	13962	49.3	*
ZZZZZ	00000	3	60	5227	18.4	*

Group Average: 190163 cpm Average uR/hr: 670.8
Number of measurements: 3

Survey Code	L1	L2	L3	L4	L5	L6	Setup Number 2 Det Cal Due: 12/06/01
	ZZZZZ	ZZZZZ	TAT01	03100	PRBBK	ZZZZZ	

L7 Code Grid ID	L8 Code Location Number	Sample Number	Count Time (sec)	Gross Counts	Gross Micro R/hr	H i
ZZZZZ	00000	0	300	20020	14.1	

Group Average: 4004 cpm Average uR/hr: 14.1
Number of measurements: 1

Total Number of Measurements on this Report: 14

Comments

NOTE: This report is grouped by:
 Package (L1) (Package number)
 Setup number (Detector parameters)
 Det Type (L4) (GM pancake-flat surface, Beta 3.5-12" pipe, gamma at 1 m, etc.)
 Reason (L3-345) (Char survey, source check, final survey, etc.)
 Surface Cat (L2) (Wall, floor, drain, penetration, etc.)
 Count Type (L5) (Field count, bkg, pre-, post-, etc.)
 Bkgd Sub (L6) (Material code, i.e., wood, iron, concr, etc.)

* Hi flag set at 15.0 micro-R/hr.

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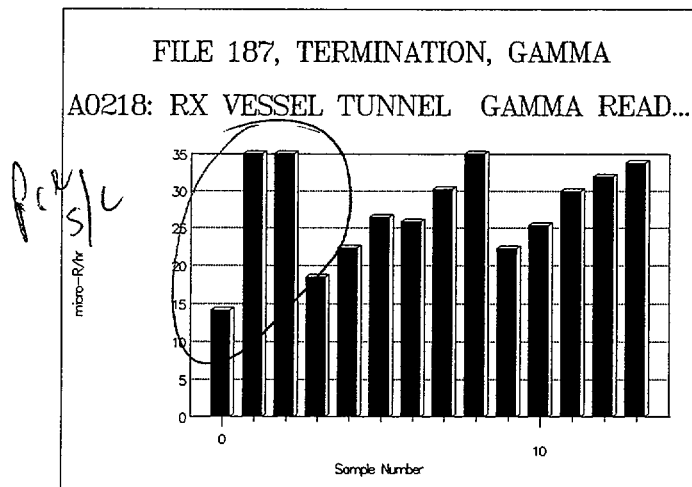
7/16/2001

Graph of File 187

Station: 2

Survey Date: 7/16/2001 Survey Start Time: 07:22:10

Description: A0218: RX VESSEL TUNNEL GAMMA READINGS



Flag set for 15 micro-R/hr. Review values greater than this value.

Review this graph for visual outliers.

Mark outliers, source checks and backgrounds on the graph on this page.

Section 5

**Package 18
Removable Beta Contamination for the
Vessel Tunnel (including lab reports)**

Removable Beta Contamination Package A0218 (Vessel Tunnel)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm ²)	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm ²)	MDA (dpm/100cm ²)
Trench 1	2	90	100	01T01	FLDCT	ZZZZZ	00001	0.3425	2	-1	16
	1	90	100	01T01	FLDCT	ZZZZZ	00002	0.3425	2	-4	16
	2	90	100	01T01	FLDCT	ZZZZZ	00003	0.3425	2	-1	16
	2	90	100	01T01	FLDCT	ZZZZZ	00004	0.3425	2	-1	16
	1	90	100	01T01	FLDCT	ZZZZZ	00005	0.3425	2	-3	16
	2	90	100	01T01	FLDCT	ZZZZZ	00006	0.3425	2	-1	16
	4	90	100	01T01	FLDCT	ZZZZZ	00007	0.3425	2	3	16
	3	90	100	01T01	FLDCT	ZZZZZ	00008	0.3425	2	1	16
	1	90	100	01T01	FLDCT	ZZZZZ	00009	0.3425	2	-3	16
	0	90	100	01T01	FLDCT	ZZZZZ	00010	0.3425	2	-5	16
Ceiling	13	90	100	01C01	FLDCT	A	00001	0.3425	2	20	16
	4	90	100	01C01	FLDCT	A	00002	0.3425	2	3	16
	3	90	100	01C01	FLDCT	A	00003	0.3425	2	1	16
	4	90	100	01C01	FLDCT	B	00001	0.3425	2	3	16
	4	90	100	01C01	FLDCT	B	00002	0.3425	2	3	16
	1	90	100	01C01	FLDCT	B	00003	0.3425	2	-3	16
Floor	1	90	100	01F01	FLDCT	A	00001	0.3425	2	-3	16
	1	90	100	01F01	FLDCT	A	00002	0.3425	2	-3	16
	5	90	100	01F01	FLDCT	A	00003	0.3425	2	5	16
	3	90	100	01F01	FLDCT	A	00004	0.3425	2	1	16
	2	90	100	01F01	FLDCT	A	00005	0.3425	2	-1	16
	3	90	100	01F01	FLDCT	B	00001	0.3425	2	1	16
	1	90	100	01F01	FLDCT	B	00002	0.3425	2	-3	16
	0	90	100	01F01	FLDCT	B	00003	0.3425	2	-5	16
	0	90	100	01F01	FLDCT	B	00004	0.3425	2	-5	16
	2	90	100	01F01	FLDCT	B	00005	0.3425	2	-2	16
Wall 1	4	90	100	01W01	FLDCT	A	00001	0.3425	2	3	16
	3	90	100	01W01	FLDCT	A	00002	0.3425	2	0	16
	1	90	100	01W01	FLDCT	A	00003	0.3425	2	-3	16
	0	90	100	01W01	FLDCT	A	00004	0.3425	2	-5	16
	1	90	100	01W01	FLDCT	A	00005	0.3425	2	-3	16
	5	90	100	01W01	FLDCT	B	00001	0.3425	2	5	16
	0	90	100	01W01	FLDCT	B	00002	0.3425	2	-5	16

Removable Beta Contamination Package A0218 (Vessel Tunnel)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm ²)	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm ²)	MDA (dpm/100cm ²)
	4	90	100	01W01	FLDCT	B	00003	0.3425	2	3	16
	2	90	100	01W01	FLDCT	B	00004	0.3425	2	-1	16
	2	90	100	01W01	FLDCT	B	00005	0.3425	2	-1	16
	2	90	100	01W01	FLDCT	C	00004	0.3425	2	-1	16
	5	90	100	01W01	FLDCT	C	00005	0.3425	2	5	16
Wall 2	3	90	100	01W02	FLDCT	A	00001	0.3425	2	1	16
	1	90	100	01W02	FLDCT	A	00002	0.3425	2	-3	16
	2	90	100	01W02	FLDCT	B	00001	0.3425	2	-1	16
	0	90	100	01W02	FLDCT	B	00002	0.3425	2	-5	16
	1	90	100	01W02	FLDCT	C	00001	0.3425	2	-3	16
	2	90	100	01W02	FLDCT	C	00002	0.3425	2	-1	16
Wall 3	6	90	100	01W03	FLDCT	A	00001	0.3425	2	7	16
	0	90	100	01W03	FLDCT	A	00002	0.3425	2	-5	16
	5	90	100	01W03	FLDCT	A	00003	0.3425	2	5	16
	2	90	100	01W03	FLDCT	A	00004	0.3425	2	-1	16
	4	90	100	01W03	FLDCT	A	00005	0.3425	2	3	16
	1	90	100	01W03	FLDCT	A	00006	0.3425	2	-3	16
	0	90	100	01W03	FLDCT	B	00001	0.3425	2	-5	16
	0	90	100	01W03	FLDCT	B	00002	0.3425	2	-5	16
	0	90	100	01W03	FLDCT	B	00003	0.3425	2	-5	16
	2	90	100	01W03	FLDCT	B	00004	0.3425	2	-1	16
	5	90	100	01W03	FLDCT	B	00005	0.3425	2	5	16
	1	90	100	01W03	FLDCT	B	00006	0.3425	2	-3	16
	0	90	100	01W03	FLDCT	C	00001	0.3425	2	-5	16
	2	90	100	01W03	FLDCT	C	00002	0.3425	2	-1	16
	1	90	100	01W03	FLDCT	C	00003	0.3425	2	-3	16
									# Measurements	59	
									Average	-1	dpm/100cm2
									Maximum	20	dpm/100cm2
									STD DEV	4	dpm/100cm2
									95% CL on Mean	0	dpm/100cm2

FINAL SURVEY 01F01 A PIN 16
PIC IPC9025 216712

ALPHA						BETA						
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm												
-SN-	-RPT-	-- ID --	- COUNTS -	- NET CPM -	--- DPM ---	- LIMITS -	- COUNTS -	- NET CPM -	--- DPM ---	- LIMITS -	- DATE -	- TIME -
001	00	1	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	10:55:27
002	00	2	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	10:57:26
003	00	3	0	0.00	0.00		5	1.63	4.77		07-11-2001	10:59:25
004	00	4	0	0.00	0.00		3	0.30	0.88		07-11-2001	11:01:24
005	00	5	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	11:03:23

Performed By: *J. Miller* Date: 7/11/01
Reviewed By: *P. [Signature]* Date: 7/16/01

FINAL SURVEY
PIC IP09025 216712

01W01 A PIN 18

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm					Eff: 34.25% Bkg: 1.70 cpm NDA: 19.73 dpm							
-SN-	RPT-	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		4	0.97	2.82		07-11-2001	11:23:37
002	00	2	1	0.67	1.91		3	0.10	0.29		07-11-2001	11:25:36
003	00	3	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	11:27:35
004	00	4	0	0.00	0.00		0	-1.70	-4.96		07-11-2001	11:29:34
005	00	5	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	11:31:33

Performed By: *[Signature]* Date: 7/11/01
Reviewed By: *[Signature]* Date: 7/16/01

FINAL SURVEY 01W01 B PIN 18
PIC IPC9025 216712

ALPHA						BETA						
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm												
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		5	1.63	4.77		07-11-2001	12:06:01
002	00	2	0	0.00	0.00		0	-1.70	-4.96		07-11-2001	12:08:00
003	00	3	0	0.00	0.00		4	0.97	2.82		07-11-2001	12:09:59
004	00	4	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	12:11:58
005	00	5	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	12:13:57

Performed By: *[Signature]* Date: 7/11/01
Reviewed By: *[Signature]* Date: 7/16/01

FINAL SURVEY 01W01 C PIN 1B
PIC IPC9A05 216712

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPH	LIMITS	COUNTS	NET CPM	DPH	LIMITS	DATE	TIME
001	00		4	0	0.00	0.00	2	-0.37	-1.07		07-11-2001	12:17:17
002	00		5	0	0.00	0.00	5	1.63	4.77		07-11-2001	12:19:16

Performed By: *[Signature]* Date: 7/11/01
Reviewed By: *[Signature]* Date: 7/16/01

FINAL SURVEY 01W02 A PIN 18
PIC IPC9025 216712

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		3	0.30	0.88		07-11-2001	12:22:13
002	00	2	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	12:24:12

Performed By: *Mike* Date: 7/14/01
Reviewed By: *PLG* Date: 7/16/01

FINAL SURVEY 01W02 B FIN 18
 PIC IPC9025 216712

ALPHA				BETA								
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm				Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm								
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	12:27:13
002	00	2	0	0.00	0.00		0	-1.70	-4.96		07-11-2001	12:29:12

Performed By: *MLC* Date: 7/11/01

Reviewed By: *Slaps* Date: 7/16/01

FINAL SURVEY 01W02 C PIN 18
 PIC IPC9025 216712

----- ALPHA -----						----- BETA -----						
; Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm ; Eff: 34.25% Bkg: 1.70 cpm NDA: 19.73 dpm ;												
;-SM-;	-RPT-;	--- ID --;	- COUNTS -;	- NET CPM -;	---- DPM ----;	- LIMITS -;	- COUNTS -;	- NET CPM -;	---- DPM ----;	- LIMITS -;	- DATE -;	- TIME -;
001	00	1	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	12:32:06
002	00	2	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	12:34:06

Performed By: *[Signature]* Date: 7/14/01
 Reviewed By: *[Signature]* Date: 7/16/01

FINAL SURVEY
PIC IFCV025 216712

01M03 A PIN 15

		ALPHA				BETA			
IS-	RPT-	ID	Eff: 34.97%	Bkg: 0.00 cpm	MDA: 5.17 dpm	Eff: 34.25%	Bkg: 1.70 cpm	MDA: 19.73 dpm	
			NET CPW	---	DPW	---	NET CPW	---	DPW
			---	COUNTS	---	LIMITS	---	COUNTS	---
001	00	1	0	0.00	0.00	2.30	6.72	07-11-2001	12:57:57
002	00	2	0	0.00	0.00	-1.70	-4.96	07-11-2001	12:59:57
003	00	3	0	0.00	0.00	1.63	4.77	07-11-2001	12:41:36
004	00	4	0	0.00	0.00	-0.37	-1.07	07-11-2001	12:43:55
005	00	5	0	0.00	0.00	0.97	2.82	07-11-2001	12:45:34
006	00	6	0	0.00	0.00	-1.03	-3.02	07-11-2001	12:47:33

Performed By: *[Signature]* Date: 7/14/01

Reviewed By: *[Signature]* Date: 7/16/01

FINAL SURVEY
PIC IPC9025 216712

01W03 B PIN 16

051

		ALPHA				BETA						
		Eff: 34.97%	Bkg: 0.00 cpm	MDA: 5.17 dpm		Eff: 34.25%	Bkg: 1.70 cpm	NDA: 19.73 dpm				
-SN-	-RPT-	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	1	0.67	1.91		0	-1.90	-5.54		07-11-2001	12:54:24
002	00	2	0	0.00	0.00		0	-1.70	-4.96		07-11-2001	12:56:24
003	00	3	1	0.67	1.91		0	-1.90	-5.54		07-11-2001	12:58:23
004	00	4	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	13:00:22
005	00	5	0	0.00	0.00		5	1.63	4.77		07-11-2001	13:02:21
006	00	6	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	13:04:20

Performed By: *[Signature]* Date: 7/11/01
Reviewed By: *[Signature]* Date: 7/16/01

FINAL SURVEY
PIC IPC9025 216712

01W03 C PIN 1B

052

		ALPHA				BETA						
		Eff: 34.97%	Bkg: 0.00 cpm	MDA: 5.17 dpm		Eff: 34.25%	Bkg: 1.70 cpm	MDA: 19.73 dpm				
-SN-	-RPT-	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		0	-1.70	-4.96		07-11-2001	13:07:41
002	00	2	0	0.00	0.00		2	-0.37	-1.07		07-11-2001	13:09:40
003	00	3	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	13:11:39

Performed By: *[Signature]* Date: 7-11-01
Reviewed By: *[Signature]* Date: 7/6/01

SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00	0.00	13	6.97	20.34	07-11-2001	13:19:01	
002	00	2	0	0.00	0.00	0.00	4	0.97	2.82	07-11-2001	13:21:00	
003	00	3	0	0.00	0.00	0.00	3	0.30	0.88	07-11-2001	13:22:59	

-----ALPHA-----
 | ETR: 34.97% BKG: 0.00 cpm MDR: 5.17 dpm | ETR: 34.25% BKG: 1.70 cpm MDR: 19.73 dpm |
 |-----BETA-----|

Performed By: *[Signature]* Date: 7-11-01
 Reviewed By: *[Signature]* Date: 7/6/01

FINAL SURVEY
PIC IPC9025 216712

01C01 B PIN 18

054

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 1.70 cpm MDA: 19.73 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		4	0.97	2.82		07-11-2001	13:27:06
002	00	2	0	0.00	0.00		4	0.97	2.82		07-11-2001	13:29:05
003	00	3	0	0.00	0.00		1	-1.03	-3.02		07-11-2001	13:31:04

Performed By: *J. Miller* Date: 7-11-01
Reviewed By: *P. [Signature]* Date: 7/16/01

Section 6

Package 18
H-3 Removable Beta Contamination
Summary Data Table (including lab reports)

USER: 1 ID: SMEARS PRESET TIME: 1.00 WED 11 JUL 2001 10:11
 SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR: N RS232: N
 R#: 1 AQC: N QCF: N RCM: N 2 PHASE MONITOR: N
 CHANNEL 1-LL: 0 UL: 400 ZSIGMA: 2.00 BKG SUB: 0.00 BKG ZSIG: 0.00 LSR: 0
 CHANNEL 2-LL: 0 UL: 670 ZSIGMA: 2.00 BKG SUB: 0.00 BKG ZSIG: 0.00 LSR: 0
 CHANNEL 3-LL: 0 UL: 1000 ZSIGMA: 2.00 BKG SUB: 0.00 BKG ZSIG: 0.00 LSR: 0

SINGLE LABEL DPM, SET UP ON SUN 24 JUN 2001 16:19
 UNKNOWN ID: SMEARS UNKNOWN REPLICATES: 1
 UNKNOWN NDRM FACTOR: 0 1.00000 UNKNOWN UNITS: DPM
 QUENCH MODE: H CALCULATE COEFF: N HALF LIFE (DAYS): N
 QUENCH COEFF A: 4.328559 B: -0.0051270 C: -0.0000122 D: -0.0000000212
 STANDARD ID:
 QUENCH LIMITS LOW: 90.00 HIGH: 390.0

SAM	POS	CH	CPM	ZSIG%	TIME	EL TIME	AVG H#	ERR
1	B- 1	1	32.00	35.36	1.00	1.30	166.0	
		2	67.00	24.43				
		3	89.00	21.20				
								%EFF: 21.00 ISO1 DPM : 152.4115
2	B- 2	1	53.00	27.47	1.00	2.78	210.0	
		2	76.00	20.41				
		3	115.00	18.65				
								%EFF: 12.40 ISO1 DPM : 427.4890
3	B- 3	1	39.00	32.03	1.00	4.27	170.0	
		2	74.00	23.25				
		3	97.00	20.31				
								%EFF: 20.09 ISO1 DPM : 194.1253
4	B- 4	1	34.00	34.30	1.00	5.75	163.0	
		2	69.00	24.08				
		3	96.00	20.41				
								%EFF: 21.69 ISO1 DPM : 156.7453
5	B- 5	1	43.00	30.50	1.00	7.23	159.0	
		2	87.00	21.44				
		3	113.00	18.81				
								%EFF: 22.64 ISO1 DPM : 189.9286
6	B- 6	1	24.00	40.82	1.00	8.73	179.0	
		2	51.00	28.01				
		3	72.00	23.57				
								%EFF: 18.14 ISO1 DPM : 132.2760
7	B- 7	1	37.00	32.88	1.00	10.21	232.0	
		2	64.00	25.00				
		3	75.00	23.09				
								%EFF: 9.186 ISO1 DPM : 402.7757
8	B- 8	1	46.00	29.49	1.00	11.69	178.0	
		2	85.00	21.69				
		3	99.00	20.10				
								%EFF: 18.35 ISO1 DPM : 250.6283
9	B- 9	1	38.00	32.44	1.00	13.18	142.0	
		2	63.00	25.20				
		3	93.00	20.74				
								%EFF: 26.95 ISO1 DPM : 141.0244

Performed By: *[Signature]* Date: 7/17/01
 Reviewed By: *[Signature]* Date: 7/16/01

SAM	POS	CH	DPM	2SIG%	TIME	EL TIME	AVG H#	ERR
10	B-10	1	34.00	34.30	1.00	14.66	136.0	
		2	43.00	25.20				
		3	75.00	20.52				
								%EFF:28.57 ISO1 DPM :119.0113
11	B-11	1	32.00	35.36	1.00	16.13	119.0	
		2	52.00	27.74				
		3	74.00	23.25				
								%EFF:33.45 ISO1 DPM :95.67431
12	B-12	1	35.00	33.81	1.00	17.62	128.0	
		2	57.00	26.49				
		3	98.00	20.20				
								%EFF:30.81 ISO1 DPM :113.5862
13	3- 1	1	23.00	41.70	1.00	19.16	123.0	
		2	44.00	30.15				
		3	67.00	24.43				
								%EFF:32.26 ISO1 DPM :71.28979
14	3- 2	1	28.00	37.80	1.00	20.64	131.0	
		2	53.00	27.47				
		3	86.00	21.57				
								%EFF:29.96 ISO1 DPM :93.45485
15	3- 3	1	37.00	32.88	1.00	22.12	125.0	
		2	60.00	25.82				
		3	87.00	21.44				
								%EFF:31.68 ISO1 DPM :116.7964
	3- 4	1	38.00	32.44	1.00	23.60	126.0	
		2	63.00	25.20				
		3	89.00	21.20				
								%EFF:31.39 ISO1 DPM :121.0606
17	3- 5	1	21.00	43.64	1.00	25.09	131.0	
		2	59.00	26.04				
		3	96.00	20.41				
								%EFF:29.96 ISO1 DPM :70.09113
18	3- 6	1	30.00	36.51	1.00	26.57	128.0	
		2	52.00	27.74				
		3	88.00	21.32				
								%EFF:30.81 ISO1 DPM :97.35961
19	3- 7	1	23.00	41.70	1.00	28.06	139.0	
		2	57.00	26.49				
		3	79.00	22.50				
								%EFF:27.75 ISO1 DPM :82.88101
20	3- 8	1	36.00	33.33	1.00	29.53	137.0	
		2	66.00	24.62				
		3	100.00	20.00				
								%EFF:28.29 ISO1 DPM :127.2333
21	3- 9	1	34.00	34.30	1.00	31.02	123.0	
		2	62.00	25.40				
		3	82.00	22.09				
								%EFF:32.26 ISO1 DPM :105.3849
22	3-10	1	21.00	43.64	1.00	32.51	139.0	
		2	49.00	29.57				
		3	80.00	22.36				
								%EFF:27.75 ISO1 DPM :75.67397

Performed By: *[Signature]* Date: 7/1/01
 Reviewed By: *[Signature]* Date: 7/1/01

SAM	POS	CH	CPM	2515%	TIME	EL TIME	AVG HH
23	3-11	1	30.00	36.51	1.00	33.99	146.0
		2	74.00	23.25			
		3	99.00	10.10			
24	3-12	1	27.00	38.49	1.00	25.89	1501 DPM
		2	58.00	26.25		35.47	136.0
		3	51.00	22.22			
25	8- 1	1	27.00	38.49	1.00	28.57	1501 DPM
		2	65.00	24.81		37.02	133.0
		3	99.00	20.10			
26	8- 2	1	35.00	33.81	1.00	29.40	1501 DPM
		2	71.00	23.74		38.50	122.0
		3	99.00	20.10			
27	8- 3	1	120.00	18.26	1.00	32.56	1501 DPM
		2	154.00	16.12		40.00	110.0
		3	176.00	15.08			
28	8- 4	1	285.00	11.83	1.00	36.19	1501 DPM
		2	314.00	11.29		41.51	115.0
		3	348.00	10.72			
29	8- 5	1	77.00	22.79	1.00	34.65	1501 DPM
		2	110.00	19.07		42.99	114.0
		3	134.00	17.28			
30	8- 6	1	55.00	26.73	1.00	34.96	1501 DPM
		2	94.00	20.63		44.47	117.0
		3	122.00	19.11			
					%EFF: 34.05	1501 DPM	: 164.4796

Performed By: *[Signature]* Date: 7/11/01

Reviewed By: *[Signature]* Date: 7/16/01