

**Georgia Institute of Technology  
Research Reactor**

**Final Survey Package 12**

**Process Equipment Room Below 2 Meters**

## TABLE OF CONTENTS

Section 1 - Survey Package 12 Worksheet for the Process Equipment Room Below 2 Meters.....	3
Section 2 - Package 12 Process Area Room Below 2 Meters Drawings .....	8
Section 3 - Package 12 Direct Beta Survey Report for the Suspect Affected Process Room (including download reports) .....	11
Section 4 - Package 12 Exposure Rate Measurements .....	64
Section 5 - Package 12 Removable Beta Contamination for the Suspect Affected Process Room (including lab reports).....	74
Section 6 - Package 12 H-3 Removable Beta Contamination Summary Data Table (including lab reports) .....	140

## **Section 1**

# **Survey Package 12 Worksheet for Process Equipment Room**

Duratek Inc.  
Survey Package Worksheet for Basement Process Equipment Room.  
Georgia Institute of Technology Research Reactor

Package Identification No.: 12	Prepared by: Paul Jones
Location: Basement Process Room Below 2 Meters NOTE: Includes 3 grides located on outside wall of process room (01W01) which extend up to 3 meters in height. See process room grid map	Date prepared: 06/18/2001
Area Classification: Suspect Affected	

#### Area Description

The Reactor Building Process room is located in the basement. The floor of this room is approximately 160 m<sup>2</sup>. For the purposes of final survey, the room was divided into the following 2 parts;

- 1) Process equipment room floor and lower walls
- 2) D2O tank pit floor and walls.

#### Historical Information

This area contained several pieces of contaminated equipment (eg. Primary coolant filtration system, two large heat exchangers, and misc. coolant system lines). Approximately 60% of the floor required decontamination. Only minor decontamination was required on the walls of this room.

#### General Survey Instructions

Floor and Lower walls of the process area room.

- 1) Ensure the area is gridded as shown on the grid map(s).
- 2) Perform a 100% beta scan on the floor and lower walls to identify areas of elevated activity.
- 3) Obtain 1 direct beta measurement for each 1 m<sup>2</sup> grid.
- 4) Obtain 1 smear for removable beta and alpha contamination for each 1 m<sup>2</sup> of area.
- 5) Obtain 1 exposure rate measurement at 1 meter above the floor at each corresponding direct beta measurement location.
- 6) Obtain a minimum of 30 smears for H-3 analysis.

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.

*for 8/10/01*

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 on smooth surfaces.

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

Use GM detector model number 44-40 for surveys on rough concrete, e.g trenches and heavily scabbled surfaces.

Verify that the MDA is less than 600dpm/100cm<sup>2</sup> for direct beta measurements after obtaining initial background.

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 Process Room Floor and Lower Walls										
A0212	01F01	B0003, B0002	See Grid Map(A-Q)	See Grid Map(1 - 14)	(Floor)	wmb 6-28-01	(157) R42 (56) 6-28-01	(157) wmb 7-10-01 (56)	(157) wmb (56) 6-28-01	(15) wmb 6-28-01
A0212	01W01	B0001	<del>A thru C</del> A+B PLUS C 12, 13, 14 R42	1 thru 24 (See grid map)	Wall 1 (outer wall of rx. building)	wmb 6-28-01	(51) R42 6-28-01	N/A	(51) wmb 6-28-01	(5) wmb 6-28-01
A0212	01W02	B0004	A thru B	1 thru 10	Wall 2	<del>W</del> 6-28-01	(20) R42 6-28-01	N/A	(20) wmb 6-28-01	(5) wmb 6-28-01
A0212	01W03	B0001, B0004	A thru B	1 thru 18 <del>B-4 MISSING</del>	Wall 3	<del>W</del> 6-28-01	(30) R42 6-28-01	N/A	(30) wmb 6-28-01	(5) wmb 6-28-01
A0212	01S01	B0001, B0002	A thru B	1 thru 7	Structure 1 (column)	wmb 6-28-01	(12) R42 6-28-01	N/A	(12) wmb 6-28-01	(2) wmb 6-28-01
A0212	01S02	B00001	ZZZZZ	1 thru 5	Structure 2	wmb 6-28-01	(5) R42 6-28-01	N/A	(5) wmb 6-28-01	(1) wmb 6-28-01
A0212	01S03	B0001	ZZZZZ	1 thru 5	Structure 3	wmb 6-28-01	(5) R42 6-28-01	N/A	(5) wmb 6-28-01	(1) wmb 6-28-01

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 Process Room Floor and Lower Walls										
A0212	01S04	B0001	ZZZZZ	1 thru 5	Structure 4	wmb 6-28-01	(5) RA2 6-28-01	N/A	(5) wmb 6-28-01	(1) wmb 6-28-01
A0212	01S05	B0002	ZZZZZ	1 thru 5	Structure 5	wmb 6-28-01	(5) RA2 6-28-01	N/A	(5) wmb 6-28-01	(1) wmb 6-28-01
A0212	01S06	B9999	ZZZZZ	1 thru 5	Structure 6	DB 6-28-01	(5) RA2 6-28-01	N/A	(5) wmb 6-28-01	(1) wmb 6-28-01
A0212	01T01	B0002	ZZZZZ	1 thru 15	Trench to bottom of Fuel Storage Hole	wmb 6-28-01	(15) RA2 6-28-01	N/A	(15) wmb 6-28-01	(4) wmb 6-28-01
A0212	01T02	B0002	ZZZZZ	1 thru 10	Trench at Doorway	BSK 6-28-01	(10) RA2 6-28-01	N/A	(10) wmb 6-28-01	(2) wmb 6-28-01
A0212	01P01	B9999	ZZZZZ	1 thru 2	Penetration 1 (Cooling Water Inlet)	RA2 6-28-01	(2) BSK 6-28-01 DB 7-21-01	N/A	(2) wmb 6-28-01	(1) wmb 6-28-01
A0212	01P02	B9999	ZZZZZ	1 thru 2	Penetration 2 (Cooling Water Outlet)	RA2 6-28-01	(2) BSK 6-28-01	N/A	(2) wmb 6-28-01	(1) wmb 6-28-01
A0212	01P03	<del>B0001</del> B 9999	ZZZZZ	1 thru 2	Penetration 3	DB 7-21-01	(2) DP 7-21-01	N/A	(2) wmb 6-28-01	(1) wmb 6-28-01
A0212	01P04	B9999	ZZZZZ	1 thru 2	Penetration 4 Rx. Vent Duct	RA2 6-28-01	(2) BSK 6-28-01 DB 7-21-01	N/A	(2) wmb 6-28-01	(1) wmb 6-28-01
A0212	02F01	<del>B9999</del> B0002	A thru C	1 thru 5	Floor of D2O Pit	wmb 6-28-01	(15) BSK 6-28-01	(15) wmb 7-10-01	(15) wmb 6-28-01	(4) wmb 6-28-01
A0212	02W01	B0001	A thru C	1 thru 5	Wall 1 of D2O Pit	wmb 6-28-01	(15) BSK 6-28-01	N/A	(15) wmb 6-28-01	(2) wmb 6-28-01
A0212	02W02	B0001	A thru C	1 thru 3	Wall 2 of D2O Pit	wmb 6-28-01	(9) BSK 6-28-01	N/A	(9) wmb 6-28-01	(2) wmb 6-28-01
A0212	02W03	<del>B9999</del> B0001	A thru C	1 thru 5	Wall 3 of D2O Pit	wmb 6-28-01	(15) BSK 6-28-01	N/A	(15) wmb 6-28-01	(2) wmb 6-28-01
A0212	02W04	<del>B0002</del> B0001	A thru C	1 thru 3	Wall 4 of D2O Pit	wmb 6-28-01	(9) BSK 6-28-01	N/A	(9) wmb 6-28-01	(2) wmb 6-28-01

Package Review

Date Package Completed 5/20/02

Package Reviewed by and Date *P. A. Jones* 5/20/02

Survey Comments

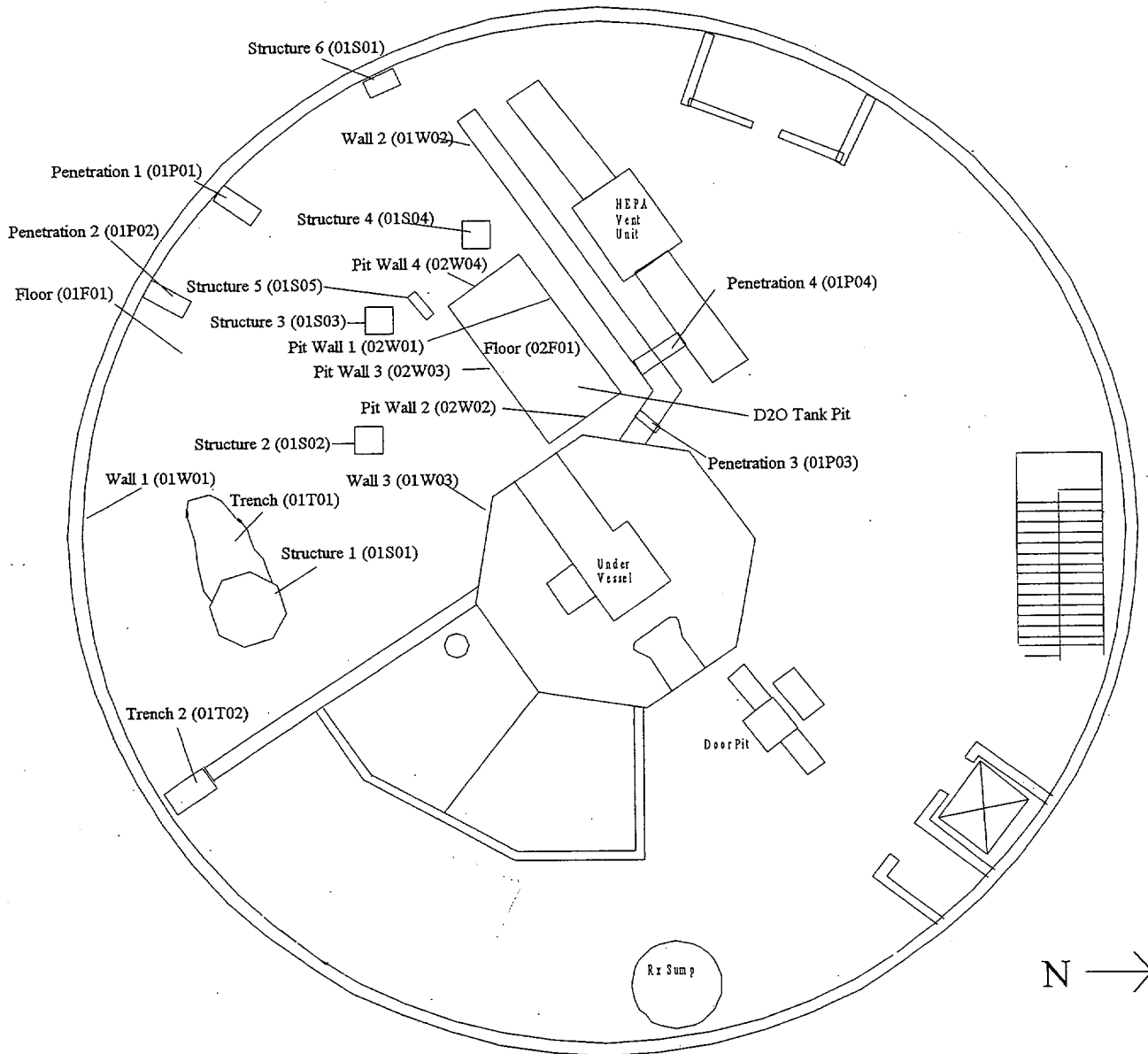
3 Total Direct Beta Readings taken on OI P04. Survey only required 2 total on OI P04. OK ~~P. Jones~~ 12/3/01

**Section 2**

**Package 12  
Process Area Room Below 2 Meters  
Drawings**



# Package 12 Process Equipment Room Below 2 Meters



A0212

D																									
C																									
B																									
A																									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	

01W01

D										
C										
B										
A										
	1	2	3	4	5	6	7	8	9	10

01W02

D																		
C																		
B																		
A																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

01W03

## **Section 3**

### **Package 12 Direct Beta Survey Report for the Suspect Affected Process Room (including download reports)**

Package A0212 Fixed Beta Survey Report (Suspect Affected Process Room)

Dec.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Natural Background (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
01F01	150	5	252	20	B0002	126	01F01	FLDCT	A	00001	0.216	547	768	354	414	570
	150	6	229	20	B0002	126	01F01	FLDCT	A	00002	0.216	547	514	354	160	570
	150	7	254	20	B0002	126	01F01	FLDCT	A	00003	0.216	547	790	354	436	570
	150	8	249	20	B0002	126	01F01	FLDCT	B	00001	0.216	547	735	354	381	570
	150	9	231	20	B0002	126	01F01	FLDCT	B	00002	0.216	547	536	354	182	570
	150	10	286	20	B0002	126	01F01	FLDCT	B	00003	0.216	547	1143	354	789	570
	150	11	267	20	B0002	126	01F01	FLDCT	B	00004	0.216	547	933	354	579	570
	150	12	272	20	B0002	126	01F01	FLDCT	B	00005	0.216	547	988	354	634	570
	150	13	251	20	B0002	126	01F01	FLDCT	B	00006	0.216	547	757	354	403	570
	150	14	342	20	B0003	126	01F01	FLDCT	B	00007	0.216	547	1760	399	1361	575
	150	15	297	20	B0002	126	01F01	FLDCT	C	00003	0.216	547	1264	354	910	570
	150	16	282	20	B0002	126	01F01	FLDCT	C	00004	0.216	547	1099	354	745	570
	150	17	269	20	B0002	126	01F01	FLDCT	C	00005	0.216	547	955	354	601	570
	150	18	264	20	B0002	126	01F01	FLDCT	C	00006	0.216	547	900	354	546	570
	150	19	248	20	B0003	126	01F01	FLDCT	C	00007	0.216	547	724	399	325	575
	150	20	327	20	B0003	126	01F01	FLDCT	C	00008	0.216	547	1595	399	1196	575
	150	21	297	20	B0002	126	01F01	FLDCT	D	00003	0.216	547	1264	354	910	570
	150	22	278	20	B0002	126	01F01	FLDCT	D	00004	0.216	547	1055	354	701	570
	150	23	296	20	B0002	126	01F01	FLDCT	D	00005	0.216	547	1253	354	899	570
	150	24	258	20	B0002	126	01F01	FLDCT	D	00006	0.216	547	834	354	480	570
	150	25	292	20	B0003	126	01F01	FLDCT	D	00007	0.216	547	1209	399	810	575
	150	26	256	20	B0003	126	01F01	FLDCT	D	00008	0.216	547	912	399	413	575
	150	27	308	20	B0003	126	01F01	FLDCT	D	00009	0.216	547	1385	399	986	575
	150	28	300	20	B0003	126	01F01	FLDCT	D	00010	0.216	547	1297	399	898	575
	150	29	273	20	B0002	126	01F01	FLDCT	E	00003	0.216	547	999	354	645	570
	150	30	284	20	B0002	126	01F01	FLDCT	E	00004	0.216	547	1121	354	767	570
	150	31	223	20	B0002	126	01F01	FLDCT	E	00005	0.216	547	448	354	94	570
	150	32	292	20	B0002	126	01F01	FLDCT	E	00006	0.216	547	1209	354	855	570
	150	34	271	20	B0003	126	01F01	FLDCT	E	00009	0.216	547	977	399	578	575
	150	35	298	20	B0003	126	01F01	FLDCT	E	00010	0.216	547	1275	399	876	575
	150	36	303	20	B0003	126	01F01	FLDCT	E	00011	0.216	547	1330	399	931	575
	150	37	265	20	B0002	126	01F01	FLDCT	F	00011	0.216	547	911	354	557	570
	150	38	285	20	B0002	126	01F01	FLDCT	F	00004	0.216	547	1132	354	778	570
	150	39	272	20	B0003	126	01F01	FLDCT	F	00006	0.216	547	988	399	589	575
	150	40	282	20	B0003	126	01F01	FLDCT	F	00007	0.216	547	1099	399	700	575
	150	41	295	20	B0003	126	01F01	FLDCT	F	00008	0.216	547	1242	399	843	575
	150	42	328	20	B0003	126	01F01	FLDCT	F	00009	0.216	547	1606	399	1207	575
	150	43	349	20	B0003	126	01F01	FLDCT	F	00010	0.216	547	1837	399	1438	575
	150	44	261	20	B0003	126	01F01	FLDCT	F	00011	0.216	547	867	399	468	575
	150	45	309	20	B0003	126	01F01	FLDCT	F	00012	0.216	547	1396	399	997	575
	150	46	263	20	B0002	126	01F01	FLDCT	G	00003	0.216	547	889	354	535	570
	150	47	272	20	B0002	126	01F01	FLDCT	G	00004	0.216	547	988	354	634	570
	150	48	284	20	B0003	126	01F01	FLDCT	G	00005	0.216	547	1121	399	722	575
	150	49	270	20	B0003	126	01F01	FLDCT	G	00006	0.216	547	966	399	567	575
	150	50	254	20	B0003	126	01F01	FLDCT	G	00007	0.216	547	790	399	391	575
	150	51	255	20	B0003	126	01F01	FLDCT	G	00008	0.216	547	801	399	402	575
	150	52	233	20	B0003	126	01F01	FLDCT	G	00009	0.216	547	558	399	159	575
	150	53	306	20	B0003	126	01F01	FLDCT	G	00010	0.216	547	1363	399	964	575
	150	54	270	20	B0003	126	01F01	FLDCT	G	00011	0.216	547	966	399	567	575
	150	55	265	20	B0002	126	01F01	FLDCT	G	00012	0.216	547	911	354	557	570
	150	56	304	20	B0002	126	01F01	FLDCT	H	00003	0.216	547	1341	354	987	570
	150	57	250	20	B0002	126	01F01	FLDCT	H	00004	0.216	547	746	354	392	570
	150	58	290	20	B0002	126	01F01	FLDCT	H	00005	0.216	547	1187	354	833	570
	150	59	247	20	B0003	126	01F01	FLDCT	H	00006	0.216	547	713	399	314	575
	150	60	274	20	B0003	126	01F01	FLDCT	H	00007	0.216	547	1010	399	611	575
	150	61	319	20	B0003	126	01F01	FLDCT	H	00008	0.216	547	1506	399	1107	575

Package A0212 Fixed Beta Survey Report (Suspect Affected Process Room)

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Natural Background (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	150	62	258	20	B0002	126	01F01	FLDCT	H	00009	0.216	547	834	354	480	570
	150	63	274	20	B0003	126	01F01	FLDCT	H	00010	0.216	547	1010	399	611	575
	150	64	286	20	B0003	126	01F01	FLDCT	H	00011	0.216	547	1143	399	744	575
	150	65	343	20	B0003	126	01F01	FLDCT	H	00012	0.216	547	1771	399	1372	575
	150	66	310	20	B0002	126	01F01	FLDCT	H	00013	0.216	547	1407	354	1053	570
	150	67	295	20	B0002	126	01F01	FLDCT	I	00003	0.216	547	1242	354	888	570
	150	68	258	20	B0003	126	01F01	FLDCT	I	00004	0.216	547	834	399	435	575
	150	69	290	20	B0003	126	01F01	FLDCT	I	00005	0.216	547	1187	399	788	575
	150	70	268	20	B0003	126	01F01	FLDCT	I	00006	0.216	547	944	399	545	575
	150	71	299	20	B0003	126	01F01	FLDCT	I	00007	0.216	547	1286	399	887	575
	150	72	271	20	B0002	126	01F01	FLDCT	I	00008	0.216	547	977	354	623	570
	150	73	278	20	B0002	126	01F01	FLDCT	I	00009	0.216	547	1055	354	701	570
	150	74	295	20	B0002	126	01F01	FLDCT	I	00010	0.216	547	1242	354	888	570
	150	75	318	20	B0003	126	01F01	FLDCT	I	00011	0.216	547	1495	399	1096	575
	150	76	256	20	B0002	126	01F01	FLDCT	I	00012	0.216	547	812	354	458	570
	150	77	309	20	B0003	126	01F01	FLDCT	I	00013	0.216	547	1396	399	997	575
	150	78	258	20	B0002	126	01F01	FLDCT	J	00003	0.216	547	834	354	480	570
	150	79	293	20	B0002	126	01F01	FLDCT	J	00004	0.216	547	1220	354	866	570
	150	80	274	20	B0002	126	01F01	FLDCT	J	00005	0.216	547	1010	354	656	570
	150	81	234	20	B0002	126	01F01	FLDCT	J	00006	0.216	547	570	354	216	570
	150	82	252	20	B0002	126	01F01	FLDCT	J	00007	0.216	547	768	354	414	570
	150	83	301	20	B0002	126	01F01	FLDCT	J	00008	0.216	547	1308	354	954	570
	150	84	291	20	B0002	126	01F01	FLDCT	J	00008	0.216	547	1198	354	844	570
	150	85	276	20	B0002	126	01F01	FLDCT	J	00009	0.216	547	1032	354	678	570
	150	86	310	20	B0002	126	01F01	FLDCT	J	00010	0.216	547	1407	354	1053	570
	150	87	333	20	B0003	126	01F01	FLDCT	J	00011	0.216	547	1661	399	1262	575
	150	88	290	20	B0003	126	01F01	FLDCT	J	00012	0.216	547	1187	399	788	575
	150	89	288	20	B0002	126	01F01	FLDCT	J	00013	0.216	547	1165	354	811	570
	150	90	311	20	B0002	126	01F01	FLDCT	K	00003	0.216	547	1418	354	1064	570
	150	91	261	20	B0002	126	01F01	FLDCT	K	00004	0.216	547	867	354	513	570
	150	92	265	20	B0002	126	01F01	FLDCT	K	00005	0.216	547	911	354	557	570
	150	93	268	20	B0002	126	01F01	FLDCT	K	00006	0.216	547	944	354	590	570
	150	94	273	20	B0002	126	01F01	FLDCT	K	00007	0.216	547	999	354	645	570
	150	95	265	20	B0002	126	01F01	FLDCT	K	00008	0.216	547	911	354	557	570
	150	96	292	20	B0003	126	01F01	FLDCT	K	00009	0.216	547	1209	399	810	575
	150	97	373	20	B0003	126	01F01	FLDCT	K	00010	0.216	547	2102	399	1703	575
	150	98	263	20	B0002	126	01F01	FLDCT	K	00011	0.216	547	889	354	535	570
	150	99	304	20	B0003	126	01F01	FLDCT	K	00012	0.216	547	1341	399	942	575
	150	100	297	20	B0003	126	01F01	FLDCT	K	00013	0.216	547	1264	399	865	575
	150	101	298	20	B0003	126	01F01	FLDCT	K	00014	0.216	547	1275	399	876	575
	150	102	271	20	B0002	126	01F01	FLDCT	L	00004	0.216	547	977	354	623	570
	150	103	258	20	B0002	126	01F01	FLDCT	L	00005	0.216	547	834	354	480	570
	150	104	280	20	B0002	126	01F01	FLDCT	L	00006	0.216	547	1077	354	723	570
	150	105	237	20	B0002	126	01F01	FLDCT	L	00007	0.216	547	603	354	249	570
	150	106	287	20	B0002	126	01F01	FLDCT	L	00008	0.216	547	1154	354	800	570
	150	107	251	20	B0003	126	01F01	FLDCT	L	00009	0.216	547	757	399	358	575
	150	108	318	20	B0003	126	01F01	FLDCT	L	00010	0.216	547	1495	399	1096	575
	150	109	298	20	B0002	126	01F01	FLDCT	L	00011	0.216	547	1275	354	921	570
	150	110	302	20	B0003	126	01F01	FLDCT	L	00012	0.216	547	1319	399	920	575
	150	111	299	20	B0003	126	01F01	FLDCT	L	00013	0.216	547	1286	399	887	575
	150	112	256	20	B0002	126	01F01	FLDCT	L	00014	0.216	547	812	354	458	570
	150	113	309	20	B0002	126	01F01	FLDCT	M	00004	0.216	547	1396	354	1042	570
	150	114	274	20	B0002	126	01F01	FLDCT	M	00005	0.216	547	1010	354	656	570
	150	115	248	20	B0002	126	01F01	FLDCT	M	00006	0.216	547	724	354	370	570
	150	116	278	20	B0002	126	01F01	FLDCT	M	00007	0.216	547	1055	354	701	570
	150	117	262	20	B0002	126	01F01	FLDCT	M	00008	0.216	547	878	354	524	570

Package A0212 Fixed Beta Survey Report (Suspect Affected Process Room)

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Natural Background (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	150	118	314	20	B0002	126	01F01	FLDCT	M	00009	0.216	547	1451	354	1097	570
	150	119	296	20	B0002	126	01F01	FLDCT	M	00010	0.216	547	1253	354	899	570
	150	120	258	20	B0002	126	01F01	FLDCT	M	00011	0.216	547	834	354	480	570
	150	121	281	20	B0003	126	01F01	FLDCT	M	00012	0.216	547	1088	399	689	575
	150	122	317	20	B0003	126	01F01	FLDCT	M	00013	0.216	547	1484	399	1085	575
	150	123	321	20	B0003	126	01F01	FLDCT	M	00014	0.216	547	1529	399	1130	575
	150	124	263	20	B0002	126	01F01	FLDCT	N	00004	0.216	547	889	354	535	570
	150	125	219	20	B0002	126	01F01	FLDCT	N	00006	0.216	547	404	354	50	570
	150	126	245	20	B0002	126	01F01	FLDCT	N	00007	0.216	547	691	354	327	570
	150	127	262	20	B0002	126	01F01	FLDCT	N	00008	0.216	547	878	354	524	570
	150	128	290	20	B0002	126	01F01	FLDCT	N	00009	0.216	547	1187	354	833	570
	150	129	265	20	B0002	126	01F01	FLDCT	N	00010	0.216	547	911	354	557	570
	150	130	288	20	B0003	126	01F01	FLDCT	N	00011	0.216	547	1165	399	766	575
	150	131	273	20	B0003	126	01F01	FLDCT	N	00012	0.216	547	999	399	600	575
	150	132	283	20	B0003	126	01F01	FLDCT	N	00013	0.216	547	1110	399	711	575
	150	133	292	20	B0003	126	01F01	FLDCT	N	00014	0.216	547	1209	399	810	575
	150	134	301	20	B0002	126	01F01	FLDCT	O	00004	0.216	547	1308	354	954	570
	150	135	255	20	B0002	126	01F01	FLDCT	O	00009	0.216	547	801	354	447	570
	150	136	264	20	B0003	126	01F01	FLDCT	O	00010	0.216	547	900	399	501	575
	150	137	295	20	B0003	126	01F01	FLDCT	O	00011	0.216	547	1242	399	843	575
	150	138	273	20	B0003	126	01F01	FLDCT	O	00012	0.216	547	999	399	600	575
	150	139	255	20	B0003	126	01F01	FLDCT	O	00013	0.216	547	801	399	402	575
	150	140	250	20	B0002	126	01F01	FLDCT	O	00014	0.216	547	746	354	392	570
	150	141	267	20	B0002	126	01F01	FLDCT	P	00004	0.216	547	933	354	579	570
	150	142	229	20	B0002	126	01F01	FLDCT	P	00005	0.216	547	514	354	160	570
	150	143	227	20	B0002	126	01F01	FLDCT	P	00006	0.216	547	492	354	138	570
	150	144	236	20	B0002	126	01F01	FLDCT	P	00007	0.216	547	592	354	238	570
	150	145	256	20	B0002	126	01F01	FLDCT	P	00008	0.216	547	812	354	458	570
	150	146	267	20	B0002	126	01F01	FLDCT	P	00009	0.216	547	933	354	579	570
	150	147	250	20	B0002	126	01F01	FLDCT	P	00010	0.216	547	746	354	392	570
	150	148	323	20	B0003	126	01F01	FLDCT	P	00011	0.216	547	1551	399	1152	575
	150	149	306	20	B0003	126	01F01	FLDCT	P	00012	0.216	547	1363	399	964	575
	150	150	294	20	B0003	126	01F01	FLDCT	P	00013	0.216	547	1231	399	832	575
	150	151	278	20	B0002	126	01F01	FLDCT	P	00014	0.216	547	1055	354	701	570
	150	152	279	20	B0002	126	01F01	FLDCT	Q	00004	0.216	547	1066	354	712	570
	150	153	286	20	B0002	126	01F01	FLDCT	Q	00005	0.216	547	1143	354	789	570
	150	154	262	20	B0002	126	01F01	FLDCT	Q	00006	0.216	547	878	354	524	570
	150	155	255	20	B0002	126	01F01	FLDCT	Q	00007	0.216	547	801	354	447	570
	150	156	266	20	B0002	126	01F01	FLDCT	Q	00008	0.216	547	922	354	568	570
	150	157	270	20	B0002	126	01F01	FLDCT	Q	00009	0.216	547	966	354	612	570
	150	158	279	20	B0002	126	01F01	FLDCT	Q	00010	0.216	547	1066	354	712	570
	150	159	283	20	B0003	126	01F01	FLDCT	Q	00011	0.216	547	1110	399	711	575
	150	160	308	20	B0002	126	01F01	FLDCT	Q	00012	0.216	547	1385	354	1031	570
	150	161	260	20	B0002	126	01F01	FLDCT	Q	00013	0.216	547	856	354	502	570
01P01	202	6	157	60	B9999	126	01P01	FLDCT	ZZZZZ	00001	0.068	133	280	0	280	496
	202	7	162	60	B9999	126	01P01	FLDCT	ZZZZZ	00002	0.068	155	82	0	82	533
01P02	155	54	34	60	B9999	126	01P02	FLDCT	ZZZZZ	00001	0.111	34	0	0	0	163
	155	55	40	60	B9999	126	01P02	FLDCT	ZZZZZ	00002	0.111	33	50	0	50	161
01P03	202	16	121	60	B9999	126	01P03	FLDCT	ZZZZZ	00001	0.068	113	93	0	93	460
	202	17	122	60	B9999	126	01P03	FLDCT	ZZZZZ	00002	0.068	93	338	0	338	420

Package A0212 Fixed Beta Survey Report (Suspect Affected Process Room)

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Natural Background (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
01P04	202	11	149	60	B9999	126	01P04	FLDCT	ZZZZZ	00001	0.068	127	257	0	257	485
	202	12	213	60	B9999	126	01P04	FLDCT	ZZZZZ	00002	0.068	162	595	0	595	544
	202	13	178	60	B9999	126	01P04	FLDCT	ZZZZZ	00003	0.068	163	175	0	175	546
01S01	153	5	174	20	B0001	126	01S01	FLDCT	A	00001	0.22	349	624	346	278	470
	153	6	196	20	B0001	126	01S01	FLDCT	A	00002	0.22	349	862	346	516	470
	153	7	184	20	B0001	126	01S01	FLDCT	A	00003	0.22	349	732	346	386	470
	153	8	196	20	B0001	126	01S01	FLDCT	A	00004	0.22	349	862	346	516	470
	153	9	206	20	B0001	126	01S01	FLDCT	A	00005	0.22	349	970	346	624	470
	153	10	148	20	B0002	126	01S01	FLDCT	A	00006	0.22	349	343	354	-11	471
	153	11	196	20	B0001	126	01S01	FLDCT	B	00001	0.22	349	862	346	516	470
	153	12	170	20	B0001	126	01S01	FLDCT	B	00002	0.22	349	581	346	235	470
	153	13	182	20	B0001	126	01S01	FLDCT	B	00003	0.22	349	711	346	365	470
	153	14	179	20	B0001	126	01S01	FLDCT	B	00004	0.22	349	678	346	332	470
	153	15	167	20	B0001	126	01S01	FLDCT	B	00005	0.22	349	548	346	202	470
	153	16	200	20	B0001	126	01S01	FLDCT	B	00006	0.22	349	905	346	559	470
01S02	153	19	243	20	B0001	126	01S02	FLDCT	ZZZZZ	00001	0.22	560	610	346	264	565
	153	20	233	20	B0001	126	01S02	FLDCT	ZZZZZ	00002	0.22	560	501	346	155	565
	153	21	253	20	B0001	126	01S02	FLDCT	ZZZZZ	00003	0.22	560	718	346	372	565
	153	22	249	20	B0001	126	01S02	FLDCT	ZZZZZ	00004	0.22	560	675	346	329	565
	153	23	259	20	B0001	126	01S02	FLDCT	ZZZZZ	00005	0.22	560	783	346	437	565
01S03	153	24	281	20	B0001	126	01S03	FLDCT	ZZZZZ	00001	0.22	560	1021	346	675	565
	153	25	244	20	B0001	126	01S03	FLDCT	ZZZZZ	00002	0.22	560	620	346	274	565
	153	26	243	20	B0001	126	01S03	FLDCT	ZZZZZ	00003	0.22	560	610	346	264	565
	153	27	267	20	B0001	126	01S03	FLDCT	ZZZZZ	00004	0.22	560	869	346	523	565
	153	28	246	20	B0001	126	01S03	FLDCT	ZZZZZ	00005	0.22	560	642	346	296	565
01S04	153	29	229	20	B0001	126	01S04	FLDCT	ZZZZZ	00001	0.22	560	458	346	112	565
	153	30	253	20	B0001	126	01S04	FLDCT	ZZZZZ	00002	0.22	560	718	346	372	565
	153	31	258	20	B0001	126	01S04	FLDCT	ZZZZZ	00003	0.22	560	772	346	426	565
	153	32	233	20	B0001	126	01S04	FLDCT	ZZZZZ	00004	0.22	560	501	346	155	565
	153	33	266	20	B0001	126	01S04	FLDCT	ZZZZZ	00005	0.22	560	859	346	513	565
01S05	153	34	274	20	B0002	126	01S05	FLDCT	ZZZZZ	00001	0.22	560	945	354	591	565
	153	35	260	20	B0002	126	01S05	FLDCT	ZZZZZ	00002	0.22	560	794	354	440	565
	153	36	246	20	B0002	126	01S05	FLDCT	ZZZZZ	00003	0.22	560	642	354	288	565
	153	37	280	20	B0002	126	01S05	FLDCT	ZZZZZ	00004	0.22	560	1010	354	656	565
	153	38	241	20	B0002	126	01S05	FLDCT	ZZZZZ	00005	0.22	560	588	354	234	565
01S06	153	41	146	20	B9999	126	01S06	FLDCT	ZZZZZ	00001	0.22	466	-101	0	-101	480
	153	42	161	20	B9999	126	01S06	FLDCT	ZZZZZ	00002	0.22	466	61	0	61	480
	153	43	137	20	B9999	126	01S06	FLDCT	ZZZZZ	00003	0.22	466	-198	0	-198	480
	153	44	151	20	B9999	126	01S06	FLDCT	ZZZZZ	00004	0.22	466	-47	0	-47	480
	153	45	172	20	B9999	126	01S06	FLDCT	ZZZZZ	00005	0.22	466	180	0	180	480
01T01	155	33	78	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00001	0.111	32	2674	354	2320	1395
	155	34	84	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00002	0.111	57	1569	354	1215	1751
	155	35	58	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00003	0.111	53	291	354	-63	1699
	155	36	71	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00004	0.111	51	1162	354	808	1673
	155	37	73	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00005	0.111	50	1337	354	983	1660
	155	38	60	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00006	0.111	53	407	354	53	1699
	155	39	23	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00007	0.111	16	407	354	53	1100

File	Desc.	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/opm)	Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Natural Background (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
155		40	23	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00008	0.111	12	639	354	285	1011
155		41	84	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00009	0.111	50	1976	354	1622	1660
155		42	84	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00010	0.111	42	2441	354	2087	1548
155		43	66	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00011	0.111	52	814	354	460	1686
155		44	18	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00012	0.111	19	-58	354	-412	1162
155		45	57	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00013	0.111	26	1802	354	1448	1294
155		46	30	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00014	0.111	29	58	354	-296	1346
155		47	70	60	B0002	15.5	01T01	FLDCT	ZZZZZ	00015	0.111	41	1686	354	1332	1534
01T02		48	274	20	B0002	126	01T02	FLDCT	ZZZZZ	00001	0.22	572	902	354	548	570
153		49	277	20	B0002	126	01T02	FLDCT	ZZZZZ	00002	0.22	572	934	354	580	570
153		50	364	20	B0002	126	01T02	FLDCT	ZZZZZ	00003	0.22	572	794	354	440	570
153		51	300	20	B0002	126	01T02	FLDCT	ZZZZZ	00004	0.22	572	1183	354	829	570
153		52	299	20	B0003	126	01T02	FLDCT	ZZZZZ	00005	0.22	572	1172	399	773	575
153		53	310	20	B0003	126	01T02	FLDCT	ZZZZZ	00006	0.22	572	1291	399	892	575
153		54	214	20	B0003	126	01T02	FLDCT	ZZZZZ	00007	0.22	572	902	399	503	575
153		55	242	20	B0003	126	01T02	FLDCT	ZZZZZ	00008	0.22	572	556	399	157	575
153		56	280	20	B0003	126	01T02	FLDCT	ZZZZZ	00009	0.22	572	967	399	568	575
153		57	261	20	B0003	126	01T02	FLDCT	ZZZZZ	00010	0.22	572	761	399	362	575
01W01		164	286	20	B0001	126	01W01	FLDCT	A	00001	0.216	544	1154	346	808	568
150		165	381	20	B0001	126	01W01	FLDCT	A	00002	0.216	544	1099	346	753	568
150		166	271	20	B0001	126	01W01	FLDCT	A	00003	0.216	544	988	346	642	568
150		167	311	20	B0001	126	01W01	FLDCT	A	00004	0.216	544	1429	346	1083	568
150		168	275	20	B0001	126	01W01	FLDCT	A	00005	0.216	544	1032	346	686	568
150		169	248	20	B0001	126	01W01	FLDCT	A	00006	0.216	544	735	346	389	568
150		170	267	20	B0001	126	01W01	FLDCT	A	00007	0.216	544	944	346	598	568
150		171	293	20	B0001	126	01W01	FLDCT	A	00008	0.216	544	1231	346	885	568
150		172	289	20	B0001	126	01W01	FLDCT	A	00009	0.216	544	966	346	620	568
150		173	284	20	B0001	126	01W01	FLDCT	A	00010	0.216	544	1132	346	786	568
150		174	282	20	B0001	126	01W01	FLDCT	A	00011	0.216	544	889	346	543	568
150		175	263	20	B0001	126	01W01	FLDCT	A	00012	0.216	544	900	346	554	568
150		176	276	20	B0001	126	01W01	FLDCT	A	00013	0.216	544	1044	346	698	568
150		177	299	20	B0001	126	01W01	FLDCT	A	00014	0.216	544	1297	346	951	568
150		178	277	20	B0001	126	01W01	FLDCT	A	00015	0.216	544	1055	346	709	568
150		179	277	20	B0001	126	01W01	FLDCT	A	00016	0.216	544	1055	346	709	568
150		180	292	20	B0001	126	01W01	FLDCT	A	00017	0.216	544	1220	346	874	568
150		181	260	20	B0001	126	01W01	FLDCT	A	00018	0.216	544	867	346	521	568
150		182	296	20	B0001	126	01W01	FLDCT	A	00019	0.216	544	1264	346	918	568
150		183	311	20	B0001	126	01W01	FLDCT	A	00020	0.216	544	1429	346	1083	568
150		184	284	20	B0001	126	01W01	FLDCT	A	00021	0.216	544	1132	346	766	568
150		185	300	20	B0001	126	01W01	FLDCT	A	00022	0.216	544	1308	346	962	568
150		186	273	20	B0001	126	01W01	FLDCT	A	00023	0.216	544	1010	346	664	568
150		187	217	20	B0001	126	01W01	FLDCT	A	00024	0.216	544	393	346	47	568
150		188	253	20	B0001	126	01W01	FLDCT	B	00001	0.216	544	790	346	444	568
150		189	248	20	B0001	126	01W01	FLDCT	B	00002	0.216	544	795	346	389	568
150		190	292	20	B0001	126	01W01	FLDCT	B	00003	0.216	544	1220	346	874	568
150		191	304	20	B0001	126	01W01	FLDCT	B	00004	0.216	544	1352	346	1006	568
150		192	271	20	B0001	126	01W01	FLDCT	B	00005	0.216	544	988	346	642	568
150		193	303	20	B0001	126	01W01	FLDCT	B	00006	0.216	544	1341	346	995	568
150		194	275	20	B0001	126	01W01	FLDCT	B	00007	0.216	544	1032	346	686	568
150		195	268	20	B0001	126	01W01	FLDCT	B	00008	0.216	544	955	346	609	568
150		196	290	20	B0001	126	01W01	FLDCT	B	00009	0.216	544	1198	346	852	568
150		197	269	20	B0001	126	01W01	FLDCT	B	00010	0.216	544	966	346	620	568
150		198	263	20	B0001	126	01W01	FLDCT	B	00011	0.216	544	900	346	554	568
150		199	253	20	B0001	126	01W01	FLDCT	B	00012	0.216	544	790	346	444	568



Package A0212 Fixed Beta Survey Report (Suspect Affected Process Room)

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Natural Background (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	150	200	241	20	B0001	126	01W01	FLDCT	B	00013	0.216	544	658	346	312	568
	150	201	271	20	B0001	126	01W01	FLDCT	B	00014	0.216	544	988	346	642	568
	150	202	260	20	B0001	126	01W01	FLDCT	B	00015	0.216	544	867	346	521	568
	150	203	288	20	B0001	126	01W01	FLDCT	B	00016	0.216	544	1176	346	830	568
	150	204	265	20	B0001	126	01W01	FLDCT	B	00017	0.216	544	922	346	576	568
	150	205	273	20	B0001	126	01W01	FLDCT	B	00018	0.216	544	1010	346	664	568
	150	206	325	20	B0001	126	01W01	FLDCT	B	00019	0.216	544	1584	346	1238	568
	150	207	272	20	B0001	126	01W01	FLDCT	B	00020	0.216	544	999	346	653	568
	150	208	257	20	B0001	126	01W01	FLDCT	B	00021	0.216	544	834	346	488	568
	150	209	291	20	B0001	126	01W01	FLDCT	B	00022	0.216	544	1209	346	863	568
	150	210	255	20	B0001	126	01W01	FLDCT	B	00023	0.216	544	812	346	466	568
	150	211	295	20	B0001	126	01W01	FLDCT	B	00024	0.216	544	1253	346	907	568
	150	212	302	20	B0001	126	01W01	FLDCT	C	00012	0.216	544	1330	346	984	568
	150	213	282	20	B0001	126	01W01	FLDCT	C	00013	0.216	544	1110	346	764	568
	150	214	288	20	B0001	126	01W01	FLDCT	C	00014	0.216	544	1176	346	830	568
01W02	150	217	249	20	B0004	126	01W02	FLDCT	A	00001	0.216	501	904	346	558	549
	150	218	220	20	B0004	126	01W02	FLDCT	A	00002	0.216	501	584	346	238	549
	150	219	209	20	B0004	126	01W02	FLDCT	A	00003	0.216	501	463	346	117	549
	150	220	260	20	B0004	126	01W02	FLDCT	A	00004	0.216	501	1025	346	679	549
	150	221	234	20	B0004	126	01W02	FLDCT	A	00005	0.216	501	739	346	393	549
	150	222	223	20	B0004	126	01W02	FLDCT	A	00006	0.216	501	617	346	271	549
	150	223	246	20	B0004	126	01W02	FLDCT	A	00007	0.216	501	871	346	525	549
	150	224	209	20	B0004	126	01W02	FLDCT	A	00008	0.216	501	463	346	117	549
	150	225	234	20	B0004	126	01W02	FLDCT	A	00009	0.216	501	739	346	393	549
	150	226	242	20	B0004	126	01W02	FLDCT	A	00010	0.216	501	827	346	481	549
	150	227	257	20	B0004	126	01W02	FLDCT	B	00001	0.216	501	992	346	646	549
	150	228	243	20	B0004	126	01W02	FLDCT	B	00002	0.216	501	838	346	492	549
	150	229	228	20	B0004	126	01W02	FLDCT	B	00003	0.216	501	672	346	326	549
	150	230	230	20	B0004	126	01W02	FLDCT	B	00004	0.216	501	694	346	348	549
	150	231	239	20	B0004	126	01W02	FLDCT	B	00005	0.216	501	794	346	448	549
	150	232	227	20	B0004	126	01W02	FLDCT	B	00006	0.216	501	661	346	315	549
	150	233	217	20	B0004	126	01W02	FLDCT	B	00007	0.216	501	551	346	205	549
	150	234	231	20	B0004	126	01W02	FLDCT	B	00008	0.216	501	705	346	359	549
	150	235	213	20	B0004	126	01W02	FLDCT	B	00009	0.216	501	507	346	161	549
	150	236	237	20	B0004	126	01W02	FLDCT	B	00010	0.216	501	772	346	426	549
01W03	150	239	221	20	B0004	126	01W03	FLDCT	A	00001	0.216	511	558	346	212	553
	150	240	239	20	B0004	126	01W03	FLDCT	A	00002	0.216	511	757	346	411	553
	150	241	268	20	B0001	126	01W03	FLDCT	A	00003	0.216	511	1077	346	731	553
	150	242	302	20	B0001	126	01W03	FLDCT	A	00004	0.216	511	1451	346	1105	553
	150	243	256	20	B0001	126	01W03	FLDCT	A	00005	0.216	511	944	346	598	553
	150	244	267	20	B0001	126	01W03	FLDCT	A	00006	0.216	511	1066	346	720	553
	150	245	246	20	B0001	126	01W03	FLDCT	A	00007	0.216	511	834	346	488	553
	150	246	207	20	B0004	126	01W03	FLDCT	A	00008	0.216	511	404	346	58	553
	150	247	255	20	B0004	126	01W03	FLDCT	A	00009	0.216	511	933	346	587	553
	150	248	240	20	B0004	126	01W03	FLDCT	A	00010	0.216	511	768	346	422	553
	150	249	244	20	B0004	126	01W03	FLDCT	A	00011	0.216	511	812	346	466	553
	150	250	220	20	B0004	126	01W03	FLDCT	A	00012	0.216	511	547	346	201	553
	150	251	263	20	B0004	126	01W03	FLDCT	A	00013	0.216	511	1021	346	675	553
	150	252	234	20	B0004	126	01W03	FLDCT	A	00014	0.216	511	702	346	356	553
	150	253	216	20	B0004	126	01W03	FLDCT	A	00015	0.216	511	503	346	157	553
	150	254	252	20	B0004	126	01W03	FLDCT	A	00016	0.216	511	900	346	554	553
	150	255	228	20	B0004	126	01W03	FLDCT	A	00017	0.216	511	636	346	290	553
	150	256	246	20	B0004	126	01W03	FLDCT	A	00018	0.216	511	834	346	488	553
	150	257	216	20	B0004	126	01W03	FLDCT	B	00001	0.216	511	503	346	157	553

Package A0212 Fixed Beta Survey Report (Suspect Affected Process Room)

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Natural Background (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	150	258	244	20	B0004	126	01W03	FLDCT	B	00002	0.216	511	812	346	466	553
	150	259	273	20	B0001	126	01W03	FLDCT	B	00003	0.216	511	1132	346	786	553
	150	260	249	20	B0001	126	01W03	FLDCT	B	00005	0.216	511	867	346	521	553
	150	261	318	20	B0001	126	01W03	FLDCT	B	00006	0.216	511	1628	346	1282	553
	150	262	277	20	B0001	126	01W03	FLDCT	B	00007	0.216	511	1176	346	830	553
	150	263	241	20	B0004	126	01W03	FLDCT	B	00008	0.216	511	779	346	433	553
	150	264	254	20	B0004	126	01W03	FLDCT	B	00009	0.216	511	922	346	576	553
	150	265	238	20	B0004	126	01W03	FLDCT	B	00010	0.216	511	746	346	400	553
	150	266	242	20	B0004	126	01W03	FLDCT	B	00011	0.216	511	790	346	444	553
	150	267	234	20	B0004	126	01W03	FLDCT	B	00012	0.216	511	702	346	356	553
	150	268	243	20	B0004	126	01W03	FLDCT	B	00013	0.216	511	801	346	455	553
	150	269	262	20	B0004	126	01W03	FLDCT	B	00014	0.216	511	1010	346	664	553
	150	270	223	20	B0004	126	01W03	FLDCT	B	00015	0.216	511	581	346	235	553
	150	271	262	20	B0004	126	01W03	FLDCT	B	00016	0.216	511	1010	346	664	553
	150	272	229	20	B0004	126	01W03	FLDCT	B	00017	0.216	511	647	346	301	553
	150	273	257	20	B0004	126	01W03	FLDCT	B	00018	0.216	511	955	346	609	553
02F01	152	1	263	20	B0002	126	02F01	FLDCT	A	00001	0.211	525	993	354	639	573
	152	2	230	20	B0002	126	02F01	FLDCT	A	00002	0.211	525	621	354	267	573
	152	3	235	20	B0002	126	02F01	FLDCT	A	00003	0.211	525	677	354	323	573
	152	4	244	20	B0002	126	02F01	FLDCT	A	00004	0.211	525	779	354	425	573
	152	5	268	20	B0002	126	02F01	FLDCT	A	00005	0.211	525	1049	354	695	573
	152	6	255	20	B0002	126	02F01	FLDCT	B	00001	0.211	525	903	354	549	573
	152	7	261	20	B0002	126	02F01	FLDCT	B	00002	0.211	525	970	354	616	573
	152	8	255	20	B0002	126	02F01	FLDCT	B	00003	0.211	525	903	354	549	573
	152	9	267	20	B0002	126	02F01	FLDCT	B	00004	0.211	525	1038	354	684	573
	152	10	277	20	B0002	126	02F01	FLDCT	B	00005	0.211	525	1151	354	797	573
	152	11	235	20	B0002	126	02F01	FLDCT	C	00001	0.211	525	677	354	323	573
	152	12	250	20	B0002	126	02F01	FLDCT	C	00002	0.211	525	846	354	492	573
	152	13	268	20	B0002	126	02F01	FLDCT	C	00003	0.211	525	1049	354	695	573
	152	14	327	20	B0002	126	02F01	FLDCT	C	00004	0.211	525	1715	354	1361	573
	152	15	252	20	B0002	126	02F01	FLDCT	C	00005	0.211	525	869	354	515	573
02W01	152	16	208	20	B0002	126	02W01	FLDCT	A	00001	0.211	525	372	354	18	573
	152	17	216	20	B0002	126	02W01	FLDCT	A	00002	0.211	525	463	354	109	573
	152	18	232	20	B0002	126	02W01	FLDCT	A	00003	0.211	525	643	354	289	573
	152	19	227	20	B0002	126	02W01	FLDCT	A	00004	0.211	525	587	354	233	573
	152	20	254	20	B0002	126	02W01	FLDCT	A	00005	0.211	525	891	354	537	573
	152	21	211	20	B0002	126	02W01	FLDCT	B	00001	0.211	525	406	354	52	573
	152	22	208	20	B0002	126	02W01	FLDCT	B	00002	0.211	525	372	354	18	573
	152	23	233	20	B0002	126	02W01	FLDCT	B	00003	0.211	525	654	354	300	573
	152	24	257	20	B0002	126	02W01	FLDCT	B	00004	0.211	525	925	354	571	573
	152	25	254	20	B0002	126	02W01	FLDCT	B	00005	0.211	525	891	354	537	573
	152	26	230	20	B0002	126	02W01	FLDCT	C	00001	0.211	525	621	354	267	573
	152	27	197	20	B0002	126	02W01	FLDCT	C	00002	0.211	525	248	354	-106	573
	152	28	222	20	B0002	126	02W01	FLDCT	C	00003	0.211	525	530	354	176	573
	152	29	201	20	B0002	126	02W01	FLDCT	C	00004	0.211	525	293	354	-61	573
	152	30	212	20	B0002	126	02W01	FLDCT	C	00005	0.211	525	418	354	64	573
02W02	152	31	217	20	B0002	126	02W02	FLDCT	A	00001	0.211	525	474	354	120	573
	152	32	214	20	B0002	126	02W02	FLDCT	A	00002	0.211	525	440	354	86	573
	152	33	250	20	B0002	126	02W02	FLDCT	A	00003	0.211	525	846	354	492	573
	152	34	205	20	B0002	126	02W02	FLDCT	B	00001	0.211	525	339	354	-15	573
	152	35	242	20	B0002	126	02W02	FLDCT	B	00002	0.211	525	756	354	402	573
	152	36	234	20	B0002	126	02W02	FLDCT	B	00003	0.211	525	666	354	312	573
	152	37	196	20	B0002	126	02W02	FLDCT	C	00001	0.211	525	237	354	-117	573

Package A0212 Fixed Beta Survey Report (Suspect Affected Process Room)

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Natural Background (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	152	38	212	20	B0002	126	02W02	FLDCT	C	00002	0.211	525	418	354	64	573
	152	39	198	20	B0002	126	02W02	FLDCT	C	00003	0.211	525	260	354	-94	573
02W03	152	40	266	20	B0002	126	02W03	FLDCT	A	00001	0.211	525	1027	354	673	573
	152	41	208	20	B0002	126	02W03	FLDCT	A	00002	0.211	525	372	354	18	573
	152	42	231	20	B0002	126	02W03	FLDCT	A	00003	0.211	525	632	354	278	573
	152	43	200	20	B0002	126	02W03	FLDCT	A	00004	0.211	525	282	354	-72	573
	152	44	225	20	B0002	126	02W03	FLDCT	A	00005	0.211	525	564	354	210	573
	152	45	287	20	B0002	126	02W03	FLDCT	B	00001	0.211	525	1264	354	910	573
	152	46	220	20	B0002	126	02W03	FLDCT	B	00002	0.211	525	508	354	154	573
	152	47	223	20	B0002	126	02W03	FLDCT	B	00003	0.211	525	542	354	188	573
	152	48	205	20	B0002	126	02W03	FLDCT	B	00004	0.211	525	339	354	-15	573
	152	49	227	20	B0002	126	02W03	FLDCT	B	00005	0.211	525	587	354	233	573
	152	50	226	20	B0002	126	02W03	FLDCT	C	00001	0.211	525	575	354	221	573
	152	51	228	20	B0002	126	02W03	FLDCT	C	00002	0.211	525	598	354	244	573
	152	52	227	20	B0002	126	02W03	FLDCT	C	00003	0.211	525	587	354	233	573
	152	53	215	20	B0002	126	02W03	FLDCT	C	00004	0.211	525	451	354	97	573
	152	54	217	20	B0002	126	02W03	FLDCT	C	00005	0.211	525	474	354	120	573
02W04	152	55	257	20	B0002	126	02W04	FLDCT	A	00001	0.211	525	925	354	571	573
	152	56	199	20	B0002	126	02W04	FLDCT	A	00002	0.211	525	271	354	-83	573
	152	57	205	20	B0002	126	02W04	FLDCT	A	00003	0.211	525	339	354	-15	573
	152	58	229	20	B0002	126	02W04	FLDCT	B	00001	0.211	525	609	354	255	573
	152	59	223	20	B0002	126	02W04	FLDCT	B	00002	0.211	525	542	354	188	573
	152	60	232	20	B0002	126	02W04	FLDCT	B	00003	0.211	525	643	354	289	573
	152	61	222	20	B0002	126	02W04	FLDCT	C	00001	0.211	525	530	354	176	573
	152	62	220	20	B0002	126	02W04	FLDCT	C	00002	0.211	525	508	354	154	573
	152	63	218	20	B0002	126	02W04	FLDCT	C	00003	0.211	525	485	354	131	573
														# Measurements	396	
														Average	553	dpm/100cm <sup>2</sup>
														Maximum	2320	dpm/100cm <sup>2</sup>
														STD DEV	351	dpm/100cm <sup>2</sup>
														95% CL on Mean	587	dpm/100cm <sup>2</sup>

The "net activity" (dpm/100 cm<sup>2</sup>) 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 #150

ATTACHMENT 6.14  
SURVEY DOWNLOAD DATA SHEET

Download Print Technician: Name: D. Schumacher Signature: [Signature] Station: 2  
Serial No. Verification: Model 2350:  Detector:  Problems:  (See Comments) File: 150

Survey Technician(s):  
Print Name: Robert Leigh User ID: RAL 7103 Signature: [Signature] Date: 6/26/01  
Print Name: \_\_\_\_\_ User ID: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Survey Unit Description: A0212 PROCESS AREA ROOM - FLOOR (01W01, 01W02, 01W03)  
(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: 922-01 Detector: 923-01

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 $\beta$		43-106B				
<input checked="" type="checkbox"/> Beta $\beta$	<u>095534</u>	43-68B	<u>0.216</u>	<u>5452/431</u>	<u>150</u>	<u>150</u>
<input type="checkbox"/> Alpha $\alpha$		43-68A				
<input type="checkbox"/> Gamma $\gamma$		44-2	N/A			

Local Area Background Measurements						MEAN Value in cpm !
10 MIN	01W01 = 547	01W02 = 501 cpm	01W03 = 511 cpm	Pre	Post	
$\beta$ Beta	<u>5472/8558</u> <u>12011/3144</u>	<u>5297/5586</u> <u>21946/2052</u>	<u>5137/4879</u> <u>31887/1793</u>	<u>4871/15399</u> <u>41768/1984</u>	<u>26-26-01</u>	<u>6</u> <u>564</u> <u>-207</u>
$\alpha$ Alpha	1	2	3	4	5	6

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## GTS DURATEK RADIOLOGICAL ENGINEERING &amp; FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm<sup>2</sup>

File Number: 150	Survey Description: A0212: RX BUILDING PROCESS AREA ROOM FLOOR WALLS 1-3		
Survey Reason: TERMINATION	User ID: RAL7103	Technician name: R.A. Leigh	
Instrument Model: M2350-1	S/N: 126182	Calibration Due: 9/22/01	Group: 2
Detector Model: 43-68B	Detector S/N: 095534	Type: 126 cm <sup>2</sup> Gas Proportional Detector, Beta Window	
Background: 564 cpm	Beta Efficiency: .216	Survey Date: 6/26/01	

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: ROBERT A. LEIGH / *R.A. Leigh* Date: 6-27-01  
 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

*P. Jones*  
Signature

Date: 7/9/01

Survey Date: 6/26/01  
File: 150

Report Date: 6/26/01

Page: 1  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01F01	TAT01	02200	Det Cal Due:	9/23/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDBK	B0002	ZZZZZ	00000	4	600	5472	-62	
FLDBK	B0002	ZZZZZ	00000	162	600	8558	1072	

Group Average: 505

FLDCT	B0002	A	00001	5	20	252	705	
FLDCT	B0002	A	00002	6	20	229	452	
FLDCT	B0002	A	00003	7	20	254	728	
FLDCT	B0002	B	00001	8	20	249	672	
FLDCT	B0002	B	00002	9	20	231	474	
FLDCT	B0002	B	00003	10	20	286	1080	
FLDCT	B0002	B	00004	11	20	267	871	
FLDCT	B0002	B	00005	12	20	272	926	
FLDCT	B0002	B	00006	13	20	251	694	
FLDCT	B0003	B	00007	14	20	342	1698	
FLDCT	B0002	C	00003	15	20	297	1201	
FLDCT	B0002	C	00004	16	20	282	1036	
FLDCT	B0002	C	00005	17	20	269	893	
FLDCT	B0002	C	00006	18	20	264	838	
FLDCT	B0003	C	00007	19	20	248	661	
FLDCT	B0003	C	00008	20	20	327	1532	
FLDCT	B0002	D	00003	21	20	297	1201	
FLDCT	B0002	D	00004	22	20	278	992	
FLDCT	B0002	D	00005	23	20	296	1190	
FLDCT	B0002	D	00006	24	20	258	772	
FLDCT	B0003	D	00007	25	20	292	1146	
FLDCT	B0003	D	00008	26	20	256	750	
FLDCT	B0003	D	00009	27	20	308	1323	
FLDCT	B0003	D	00010	28	20	300	1235	
FLDCT	B0002	E	00003	29	20	273	937	
FLDCT	B0002	E	00004	30	20	284	1058	
FLDCT	B0002	E	00005	31	20	223	386	
<del>FLDCT</del>	<del>B0002</del>	<del>E</del>	<del>00006</del>	<del>32</del>	<del>20</del>	<del>292</del>	<del>1146</del>	
<del>FLDCT</del>	<del>B0003</del>	<del>E</del>	<del>00008</del>	<del>33</del>	<del>20</del>	<del>277</del>	<del>981</del>	
FLDCT	B0003	E	00009	34	20	271	915	
FLDCT	B0003	E	00010	35	20	298	1213	
FLDCT	B0003	E	00011	36	20	303	1268	
FLDCT	B0002	F	00003	37	20	265	849	
FLDCT	B0002	F	00004	38	20	285	1069	
FLDCT	B0003	F	00006	39	20	272	926	
FLDCT	B0003	F	00007	40	20	282	1036	
FLDCT	B0003	F	00008	41	20	295	1179	
FLDCT	B0003	F	00009	42	20	328	1543	
FLDCT	B0003	F	00010	43	20	349	1775	
FLDCT	B0003	F	00011	44	20	261	805	
FLDCT	B0003	F	00012	45	20	309	1334	
FLDCT	B0002	G	00003	46	20	263	827	
FLDCT	B0002	G	00004	47	20	272	926	
FLDCT	B0003	G	00005	48	20	284	1058	
FLDCT	B0003	G	00006	49	20	270	904	
FLDCT	B0003	G	00007	50	20	254	728	
FLDCT	B0003	G	00008	51	20	255	739	
FLDCT	B0003	G	00009	52	20	233	496	
FLDCT	B0003	G	00010	53	20	306	1301	
FLDCT	B0003	G	00011	54	20	270	904	
FLDCT	B0002	G	00012	55	20	265	849	
FLDCT	B0002	H	00003	56	20	304	1279	
FLDCT	B0002	H	00004	57	20	250	683	
FLDCT	B0002	H	00005	58	20	290	1124	
FLDCT	B0003	H	00006	59	20	247	650	
FLDCT	B0003	H	00007	60	20	274	948	
FLDCT	B0003	H	00008	61	20	319	1444	
FLDCT	B0002	H	00009	62	20	258	772	
FLDCT	B0003	H	00010	63	20	274	948	

Deleted sample # 33.  
This reading not required  
due to entire probe was  
not within grid. Reading  
taken conservatively by tech.  
P. Jones 7/24/01  
No reprints

~~Deleted sample #'s  
32 & 33. These readings  
should not have been taken  
due to entire probe was not  
within grid. Readings taken  
conservatively by technician.  
P. Jones 7/24/01  
No reprint~~

Survey Date: 6/26/01  
File: 150

Report Date: 6/26/01

Page: 2  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number
	A0212	01F01	TAT01	02200	0
					Det Cal Due: 9/23/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
FLDCT	B0003	H	00011	64	20	286	1080	
FLDCT	B0003	H	00012	65	20	343	1709	
FLDCT	B0002	H	00013	66	20	310	1345	
FLDCT	B0002	I	00003	67	20	295	1179	
FLDCT	B0003	I	00004	68	20	258	772	
FLDCT	B0003	I	00005	69	20	290	1124	
FLDCT	B0003	I	00006	70	20	268	882	
FLDCT	B0003	I	00007	71	20	299	1224	
FLDCT	B0002	I	00008	72	20	271	915	
FLDCT	B0002	I	00009	73	20	278	992	
FLDCT	B0002	I	00010	74	20	295	1179	
FLDCT	B0003	I	00011	75	20	318	1433	
FLDCT	B0002	I	00012	76	20	256	750	
FLDCT	B0003	I	00013	77	20	309	1334	
FLDCT	B0002	J	00003	78	20	258	772	
FLDCT	B0002	J	00004	79	20	293	1157	
FLDCT	B0002	J	00005	80	20	274	948	
FLDCT	B0002	J	00006	81	20	234	507	
FLDCT	B0002	J	00007	82	20	252	705	
FLDCT	B0002	J	00008	83	20	301	1246	
FLDCT	B0002	J	00009	84	20	291	1135	
FLDCT	B0002	J	00010	85	20	276	970	
FLDCT	B0002	J	00011	86	20	310	1345	
FLDCT	B0003	J	00012	87	20	333	1598	
FLDCT	B0003	J	00013	88	20	290	1124	
FLDCT	B0002	J	00014	89	20	288	1102	
FLDCT	B0002	K	00003	90	20	311	1356	
FLDCT	B0002	K	00004	91	20	261	805	
FLDCT	B0002	K	00005	92	20	265	849	
FLDCT	B0002	K	00006	93	20	268	882	
FLDCT	B0002	K	00007	94	20	273	937	
FLDCT	B0002	K	00008	95	20	265	849	
FLDCT	B0003	K	00009	96	20	292	1146	
FLDCT	B0003	K	00010	97	20	373	2039	
FLDCT	B0002	K	00011	98	20	263	827	
FLDCT	B0003	K	00012	99	20	304	1279	
FLDCT	B0003	K	00013	100	20	297	1201	
FLDCT	B0003	K	00014	101	20	298	1213	
FLDCT	B0002	L	00004	102	20	271	915	
FLDCT	B0002	L	00005	103	20	258	772	
FLDCT	B0002	L	00006	104	20	280	1014	
FLDCT	B0002	L	00007	105	20	237	540	
FLDCT	B0002	L	00008	106	20	287	1091	
FLDCT	B0003	L	00009	107	20	251	694	
FLDCT	B0003	L	00010	108	20	318	1433	
FLDCT	B0002	L	00011	109	20	298	1213	
FLDCT	B0003	L	00012	110	20	302	1257	
FLDCT	B0003	L	00013	111	20	299	1224	
FLDCT	B0002	L	00014	112	20	256	750	
FLDCT	B0002	M	00004	113	20	309	1334	
FLDCT	B0002	M	00005	114	20	274	948	
FLDCT	B0002	M	00006	115	20	248	661	
FLDCT	B0002	M	00007	116	20	278	992	
FLDCT	B0002	M	00008	117	20	262	816	
FLDCT	B0002	M	00009	118	20	314	1389	
FLDCT	B0002	M	00010	119	20	296	1190	
FLDCT	B0002	M	00011	120	20	258	772	
FLDCT	B0003	M	00012	121	20	281	1025	
FLDCT	B0003	M	00013	122	20	317	1422	
FLDCT	B0003	M	00014	123	20	321	1466	
FLDCT	B0002	N	00004	124	20	263	827	
FLDCT	B0002	N	00006	125	20	219	342	
FLDCT	B0002	N	00007	126	20	245	628	
FLDCT	B0002	N	00008	127	20	262	816	

\* Hi flag set at 2400 dpm/100 cm2



Survey Date: 6/26/01  
File: 150

Report Date: 6/26/01

Page: 3  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01F01	TAT01	02200	Det Cal Due:	9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0002	N	00009	128	20	290	1124	
FLDCT	B0002	N	00010	129	20	265	849	
FLDCT	B0003	N	00011	130	20	288	1102	
FLDCT	B0003	N	00012	131	20	273	937	
FLDCT	B0003	N	00013	132	20	283	1047	
FLDCT	B0003	N	00014	133	20	292	1146	
FLDCT	B0002	O	00004	134	20	301	1246	
FLDCT	B0002	O	00009	135	20	255	739	
FLDCT	B0003	O	00010	136	20	264	838	
FLDCT	B0003	O	00011	137	20	295	1179	
FLDCT	B0003	O	00012	138	20	273	937	
FLDCT	B0003	O	00013	139	20	255	739	
FLDCT	B0002	O	00014	140	20	250	683	
FLDCT	B0002	P	00004	141	20	267	871	
FLDCT	B0002	P	00005	142	20	229	452	
FLDCT	B0002	P	00006	143	20	227	430	
FLDCT	B0002	P	00007	144	20	236	529	
FLDCT	B0002	P	00008	145	20	256	750	
FLDCT	B0002	P	00009	146	20	267	871	
FLDCT	B0002	P	00010	147	20	250	683	
FLDCT	B0003	P	00011	148	20	323	1488	
FLDCT	B0003	P	00012	149	20	306	1301	
FLDCT	B0003	P	00013	150	20	294	1168	
FLDCT	B0002	P	00014	151	20	278	992	
FLDCT	B0002	Q	00004	152	20	279	1003	
FLDCT	B0002	Q	00005	153	20	286	1080	
FLDCT	B0002	Q	00006	154	20	262	816	
FLDCT	B0002	Q	00007	155	20	255	739	
FLDCT	B0002	Q	00008	156	20	266	860	
FLDCT	B0002	Q	00009	157	20	270	904	
FLDCT	B0002	Q	00010	158	20	279	1003	
FLDCT	B0003	Q	00011	159	20	283	1047	
FLDCT	B0002	Q	00012	160	20	308	1323	
FLDCT	B0002	Q	00013	161	20	260	794	

Group Average: 1001

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01W01	TAT01	02200	Det Cal Due:	9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0001	ZZZZZ	00000	163	600	5297	-126	
FLDBK	B0001	ZZZZZ	00000	215	600	5586	-20	

Group Average: -73

FLDCT	B0001	A	00001	164	20	286	1080	
FLDCT	B0001	A	00002	165	20	281	1025	
FLDCT	B0001	A	00003	166	20	271	915	
FLDCT	B0001	A	00004	167	20	311	1356	
FLDCT	B0001	A	00005	168	20	275	959	
FLDCT	B0001	A	00006	169	20	248	661	
FLDCT	B0001	A	00007	170	20	267	871	
FLDCT	B0001	A	00008	171	20	293	1157	
FLDCT	B0001	A	00009	172	20	269	893	
FLDCT	B0001	A	00010	173	20	284	1058	
FLDCT	B0001	A	00011	174	20	262	816	
FLDCT	B0001	A	00012	175	20	263	827	
FLDCT	B0001	A	00013	176	20	276	970	

\* Hi flag set at 2400 dpm/100 cm2

Survey Date: 6/26/01  
File: 150

Report Date: 6/26/01

Page: 4  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0212	01W01	TAT01	02200	Det Cal Due: 9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0001	A	00014	177	20	299	1224	
FLDCT	B0001	A	00015	178	20	277	981	
FLDCT	B0001	A	00016	179	20	277	981	
FLDCT	B0001	A	00017	180	20	292	1146	
FLDCT	B0001	A	00018	181	20	260	794	
FLDCT	B0001	A	00019	182	20	296	1190	
FLDCT	B0001	A	00020	183	20	311	1356	
FLDCT	B0001	A	00021	184	20	284	1058	
FLDCT	B0001	A	00022	185	20	300	1235	
FLDCT	B0001	A	00023	186	20	273	937	
FLDCT	B0001	A	00024	187	20	217	320	
FLDCT	B0001	B	00001	188	20	253	716	
FLDCT	B0001	B	00002	189	20	248	661	
FLDCT	B0001	B	00003	190	20	292	1146	
FLDCT	B0001	B	00004	191	20	304	1279	
FLDCT	B0001	B	00005	192	20	271	915	
FLDCT	B0001	B	00006	193	20	303	1268	
FLDCT	B0001	B	00007	194	20	275	959	
FLDCT	B0001	B	00008	195	20	268	882	
FLDCT	B0001	B	00009	196	20	290	1124	
FLDCT	B0001	B	00010	197	20	269	893	
FLDCT	B0001	B	00011	198	20	263	827	
FLDCT	B0001	B	00012	199	20	253	716	
FLDCT	B0001	B	00013	200	20	241	584	
FLDCT	B0001	B	00014	201	20	271	915	
FLDCT	B0001	B	00015	202	20	260	794	
FLDCT	B0001	B	00016	203	20	288	1102	
FLDCT	B0001	B	00017	204	20	265	849	
FLDCT	B0001	B	00018	205	20	273	937	
FLDCT	B0001	B	00019	206	20	325	1510	
FLDCT	B0001	B	00020	207	20	272	926	
FLDCT	B0001	B	00021	208	20	257	761	
FLDCT	B0001	B	00022	209	20	291	1135	
FLDCT	B0001	B	00023	210	20	255	739	
FLDCT	B0001	B	00024	211	20	295	1179	
FLDCT	B0001	C	00012	212	20	302	1257	
FLDCT	B0001	C	00013	213	20	282	1036	
FLDCT	B0001	C	00014	214	20	288	1102	

Group Average: 981

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0212	01W02	TAT01	02200	Det Cal Due: 9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0004	ZZZZZ	00000	216	600	5137	-185	
FLDBK	B0004	ZZZZZ	00000	237	600	4879	-280	

Group Average: -232

FLDCT	B0004	A	00001	217	20	249	672	
FLDCT	B0004	A	00002	218	20	220	353	
FLDCT	B0004	A	00003	219	20	209	231	
FLDCT	B0004	A	00004	220	20	260	794	
FLDCT	B0004	A	00005	221	20	234	507	
FLDCT	B0004	A	00006	222	20	223	386	
FLDCT	B0004	A	00007	223	20	246	639	
FLDCT	B0004	A	00008	224	20	209	231	
FLDCT	B0004	A	00009	225	20	234	507	

\* Hi flag set at 2400 dpm/100 cm2

Survey Date: 6/26/01  
File: 150

Report Date: 6/26/01

Page: 5  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01W02	TAT01	02200	Det Cal Due:	9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0004	A	00010	226	20	242	595	
FLDCT	B0004	B	00001	227	20	257	761	
FLDCT	B0004	B	00002	228	20	243	606	
FLDCT	B0004	B	00003	229	20	228	441	
FLDCT	B0004	B	00004	230	20	230	463	
FLDCT	B0004	B	00005	231	20	239	562	
FLDCT	B0004	B	00006	232	20	227	430	
FLDCT	B0004	B	00007	233	20	217	320	
FLDCT	B0004	B	00008	234	20	231	474	
FLDCT	B0004	B	00009	235	20	213	276	
FLDCT	B0004	B	00010	236	20	237	540	

Group Average: 489

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01W03	TAT01	02200	Det Cal Due:	9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0004	ZZZZZ	00000	238	600	4811	-305	
FLDBK	B0001	ZZZZZ	00000	274	600	5399	-89	

Group Average: -197

FLDCT	B0004	A	00001	239	20	221	364	
FLDCT	B0004	A	00002	240	20	239	562	
FLDCT	B0001	A	00003	241	20	268	882	
FLDCT	B0001	A	00004	242	20	302	1257	
FLDCT	B0001	A	00005	243	20	256	750	
FLDCT	B0001	A	00006	244	20	267	871	
FLDCT	B0001	A	00007	245	20	246	639	
FLDCT	B0004	A	00008	246	20	207	209	
FLDCT	B0004	A	00009	247	20	255	739	
FLDCT	B0004	A	00010	248	20	240	573	
FLDCT	B0004	A	00011	249	20	244	617	
FLDCT	B0004	A	00012	250	20	220	353	
FLDCT	B0004	A	00013	251	20	263	827	
FLDCT	B0004	A	00014	252	20	234	507	
FLDCT	B0004	A	00015	253	20	216	309	
FLDCT	B0004	A	00016	254	20	252	705	
FLDCT	B0004	A	00017	255	20	228	441	
FLDCT	B0004	A	00018	256	20	246	639	
FLDCT	B0004	B	00001	257	20	216	309	
FLDCT	B0004	B	00002	258	20	244	617	
FLDCT	B0001	B	00003	259	20	273	937	
FLDCT	B0001	B	00005	260	20	249	672	
FLDCT	B0001	B	00006	261	20	318	1433	
FLDCT	B0001	B	00007	262	20	277	981	
FLDCT	B0004	B	00008	263	20	241	584	
FLDCT	B0004	B	00009	264	20	254	728	
FLDCT	B0004	B	00010	265	20	238	551	
FLDCT	B0004	B	00011	266	20	242	595	
FLDCT	B0004	B	00012	267	20	234	507	
FLDCT	B0004	B	00013	268	20	243	606	
FLDCT	B0004	B	00014	269	20	262	816	
FLDCT	B0004	B	00015	270	20	223	386	
FLDCT	B0004	B	00016	271	20	262	816	
FLDCT	B0004	B	00017	272	20	229	452	
FLDCT	B0004	B	00018	273	20	257	761	

\* Hi flag set at 2400 dpm/100 cm2

Survey Date: 6/26/01  
File: 150

Report Date: 6/26/01

Page: 6  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01W03	TAT01	02200	Det Cal Due:	9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
Group Average:							657	

Survey Code	L1	L2	L3	L4	Setup Number	0
	ZZZZZ	EZ260	TAT01	02200	Det Cal Due:	9/23/01

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	5917	19669	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	6156	20547	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	5575	18412	*
Group Average:							19542	
PTB00	ZZZZZ	ZZZZZ	00000	276	60	6332	21193	*
PTB00	ZZZZZ	ZZZZZ	00000	277	60	6368	21326	*
PTB00	ZZZZZ	ZZZZZ	00000	278	60	6356	21282	*
Group Average:							21267	

Survey Code	L1	L2	L3	L4	Setup Number	0
	ZZZZZ	ZZZZZ	TAT01	02200	Det Cal Due:	9/23/01

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	4309	-489	
Group Average:							-489	
PTBBK	ZZZZZ	ZZZZZ	00000	275	600	4765	-322	
Group Average:							-322	

Total Number of Measurements on this Report: 279

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 &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

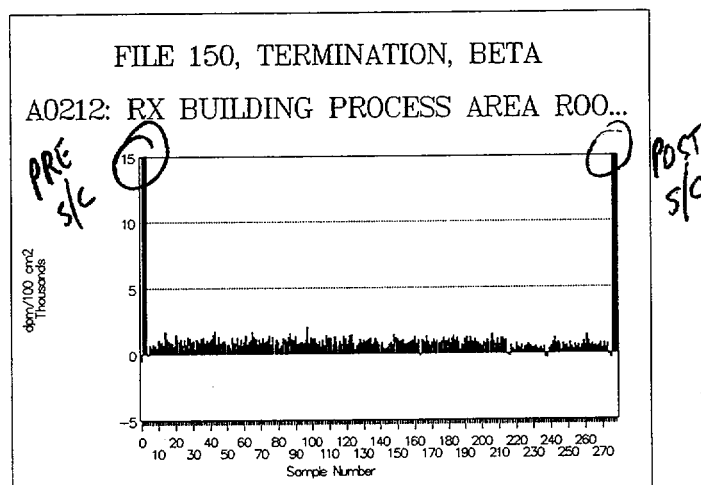
6/26/2001

Graph of File 150

Station: 2

Survey Date: 6/26/2001 Survey Start Time: 08:46:46

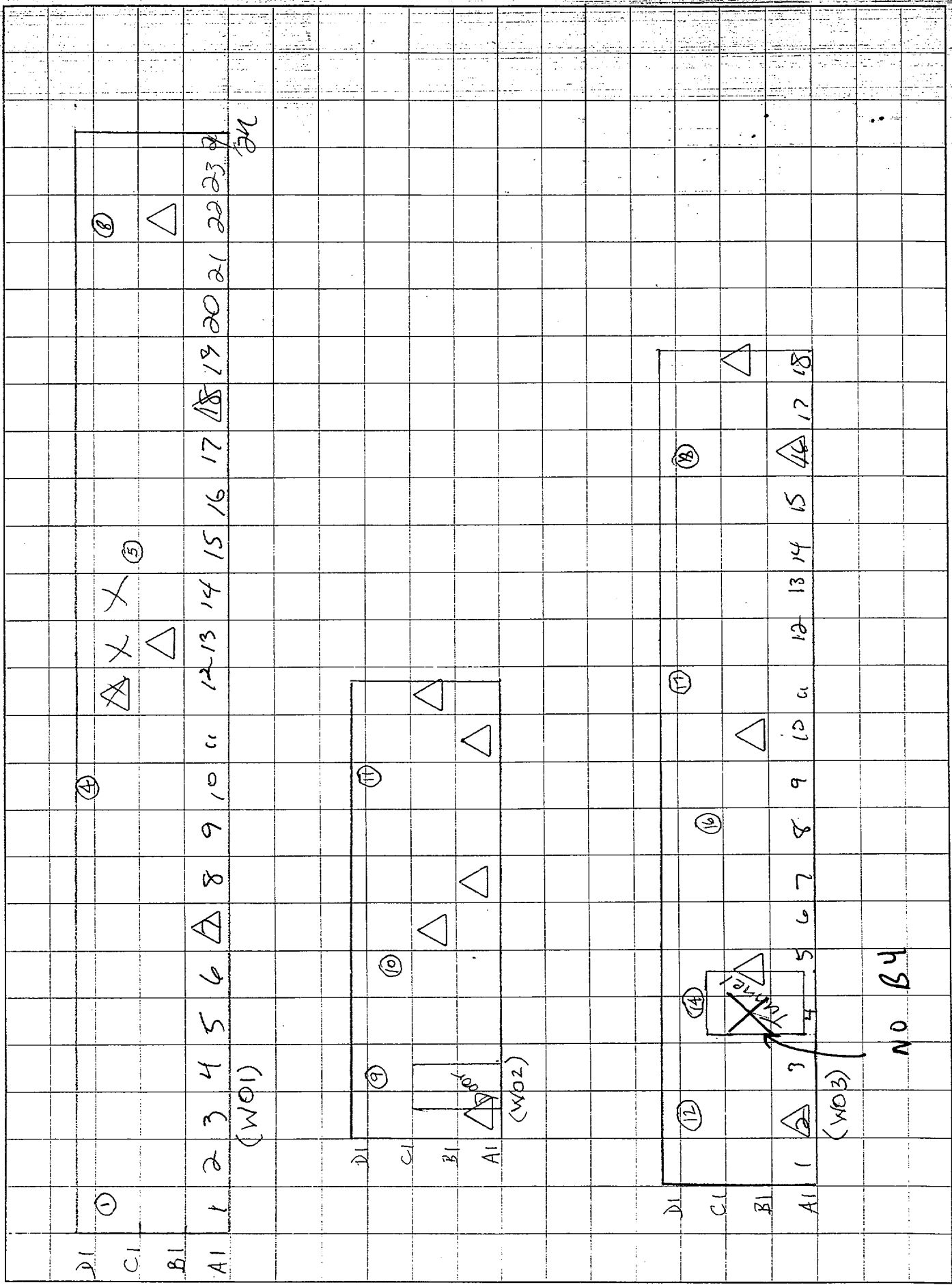
Description: A0212: RX BUILDING PROCESS AREA ROOM FLOOR WALLS 1-3



Flag set for 2400 dpm/100 cm<sup>2</sup>. Review values greater than this value.  
Review this graph for visual outliers.  
Mark outliers, source checks and backgrounds on the graph on this page.

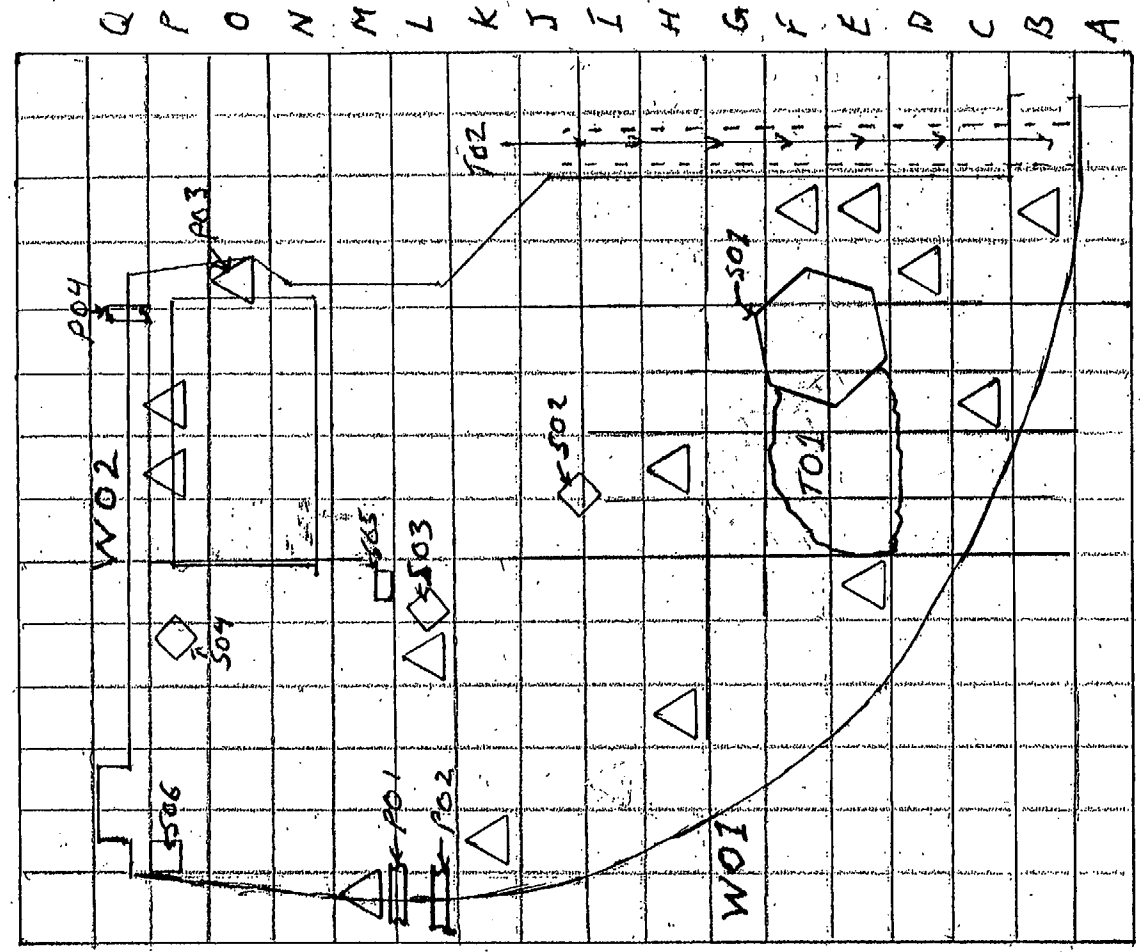
Rx Bldg Basement Area Process Room

(W01)



NO B4

# Rx Bldg BASEMENT PROCESS ROOM



14 13 12 11 10 9 8 7 6 5 4 3 2 1

The "net activity" (dpm/100 cm<sup>2</sup>) 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 #152



ATTACHMENT 6.14  
SURVEY DOWNLOAD DATA SHEET

Download Print  
 Technician: Name: D. Schumaker Signature: [Signature] Station: 2  
 File: 152  
 Serial No. Verification: Model 2350:  Detector:  Problems:  (See Comments)

Survey Technician(s):  
 Print Name: Betty S. Kjos User ID: EX0490 Signature: [Signature] Date: 6-27-01  
 Print Name: \_\_\_\_\_ User ID: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Survey Unit Description: A0212 Process Room D20 Pit  
 (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 $\beta$		43-106B				
<input checked="" type="checkbox"/> Beta $\beta$	<u>091050</u>	43-68B	<u>.211</u>	<u>5311/391</u>	<u>151</u>	<u>152</u>
<input type="checkbox"/> Alpha $\alpha$		43-68A				
<input type="checkbox"/> Gamma $\gamma$		44-2	N/A			

Local Area Background Measurements <u>Pre/Post</u>						MEAN Value in cpm !	
10 Minutes $\beta$ Beta	<u>5118/5376</u>	2	3	4	5	6	<u>525</u>
$\alpha$ Alpha	1	2	3	4	5	6	

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm<sup>2</sup>

File Number: 152	Survey Description: A0212: RX BUILDING PROCESS AREA ROOM D20 PIT		
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 <sup>2</sup> Gas Proportional Detector, Beta Window	
Background: 525 cpm	Beta Efficiency: .211	Survey Date: 6/27/01	

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 #: 151 Post File #: \_\_\_\_\_

Technician Review:

I have reviewed this cover sheet and 3 pages of the report, 0 pages of comments, and 1 graph.

I performed this survey: Betty S. Kjos / Betty S. Kjos Date: 6/27/01  
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: 6/28/01  
Print name Signature

Survey Date: 6/27/01  
File: 152

Report Date: 6/27/01

Page: 1  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0212	02F01	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	00000	0	600	5118	-50	
FLDBK	B0002	ZZZZZ	00000	64	600	5376	47	

Group Average: -1

FLDCT	B0002	A	00001	1	20	263	993	
FLDCT	B0002	A	00002	2	20	230	621	
FLDCT	B0002	A	00003	3	20	235	677	
FLDCT	B0002	A	00004	4	20	244	779	
FLDCT	B0002	A	00005	5	20	268	1049	
FLDCT	B0002	B	00001	6	20	255	903	
FLDCT	B0002	B	00002	7	20	261	970	
FLDCT	B0002	B	00003	8	20	255	903	
FLDCT	B0002	B	00004	9	20	267	1038	
FLDCT	B0002	B	00005	10	20	277	1151	
FLDCT	B0002	C	00001	11	20	235	677	
FLDCT	B0002	C	00002	12	20	250	846	
FLDCT	B0002	C	00003	13	20	268	1049	
FLDCT	B0002	C	00004	14	20	327	1715	
FLDCT	B0002	C	00005	15	20	252	869	

Group Average: 949

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0212	02W01	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	B0002	A	00001	16	20	208	372	
FLDCT	B0002	A	00002	17	20	216	463	
FLDCT	B0002	A	00003	18	20	232	643	
FLDCT	B0002	A	00004	19	20	227	587	
FLDCT	B0002	A	00005	20	20	254	891	
FLDCT	B0002	B	00001	21	20	211	406	
FLDCT	B0002	B	00002	22	20	208	372	
FLDCT	B0002	B	00003	23	20	233	654	
FLDCT	B0002	B	00004	24	20	257	925	
FLDCT	B0002	B	00005	25	20	254	891	
FLDCT	B0002	C	00001	26	20	230	621	
FLDCT	B0002	C	00002	27	20	197	248	
FLDCT	B0002	C	00003	28	20	222	530	
FLDCT	B0002	C	00004	29	20	201	293	
FLDCT	B0002	C	00005	30	20	212	418	

Group Average: 554

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0212	02W02	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	B0002	A	00001	31	20	217	474	
FLDCT	B0002	A	00002	32	20	214	440	
FLDCT	B0002	A	00003	33	20	250	846	
FLDCT	B0002	B	00001	34	20	205	339	
FLDCT	B0002	B	00002	35	20	242	756	

\* Hi flag set at 2400 dpm/100 cm2

Survey Date: 6/27/01  
File: 152

Report Date: 6/27/01

Page: 2  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0212	02W02	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	B0002	B	00003	36	20	234	666	
FLDCT	B0002	C	00001	37	20	196	237	
FLDCT	B0002	C	00002	38	20	212	418	
FLDCT	B0002	C	00003	39	20	198	260	

Group Average: 493

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0212	02W03	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	B0002	A	00001	40	20	266	1027	
FLDCT	B0002	A	00002	41	20	208	372	
FLDCT	B0002	A	00003	42	20	231	632	
FLDCT	B0002	A	00004	43	20	200	282	
FLDCT	B0002	A	00005	44	20	225	564	
FLDCT	B0002	B	00001	45	20	287	1264	
FLDCT	B0002	B	00002	46	20	220	508	
FLDCT	B0002	B	00003	47	20	223	542	
FLDCT	B0002	B	00004	48	20	205	339	
FLDCT	B0002	B	00005	49	20	227	587	
FLDCT	B0002	C	00001	50	20	226	575	
FLDCT	B0002	C	00002	51	20	228	598	
FLDCT	B0002	C	00003	52	20	227	587	
FLDCT	B0002	C	00004	53	20	215	451	
FLDCT	B0002	C	00005	54	20	217	474	

Group Average: 587

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0212	02W04	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	B0002	A	00001	55	20	257	925	
FLDCT	B0002	A	00002	56	20	199	271	
FLDCT	B0002	A	00003	57	20	205	339	
FLDCT	B0002	B	00001	58	20	229	609	
FLDCT	B0002	B	00002	59	20	223	542	
FLDCT	B0002	B	00003	60	20	232	643	
FLDCT	B0002	C	00001	61	20	222	530	
FLDCT	B0002	C	00002	62	20	220	508	
FLDCT	B0002	C	00003	63	20	218	485	

Group Average: 539

Survey Date: 6/27/01  
File: 152

Report Date: 6/27/01

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
PTB00	ZZZZZ	ZZZZZ	00000	66	60	5558	18931	*
PTB00	ZZZZZ	ZZZZZ	00000	67	60	5938	20360	*
PTB00	ZZZZZ	ZZZZZ	00000	68	60	5755	19672	*
Group Average:							19654	

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	65	600	4060	-448	
Group Average:							-448	

Total Number of Measurements on this Report: 69

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

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES  
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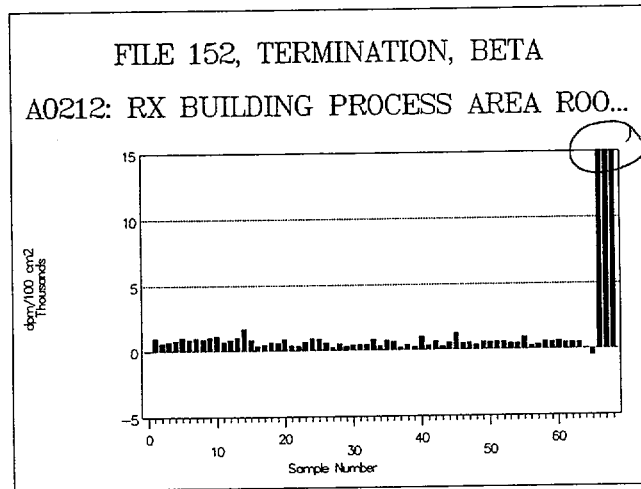
6/27/2001

Graph of File 152

Station: 2

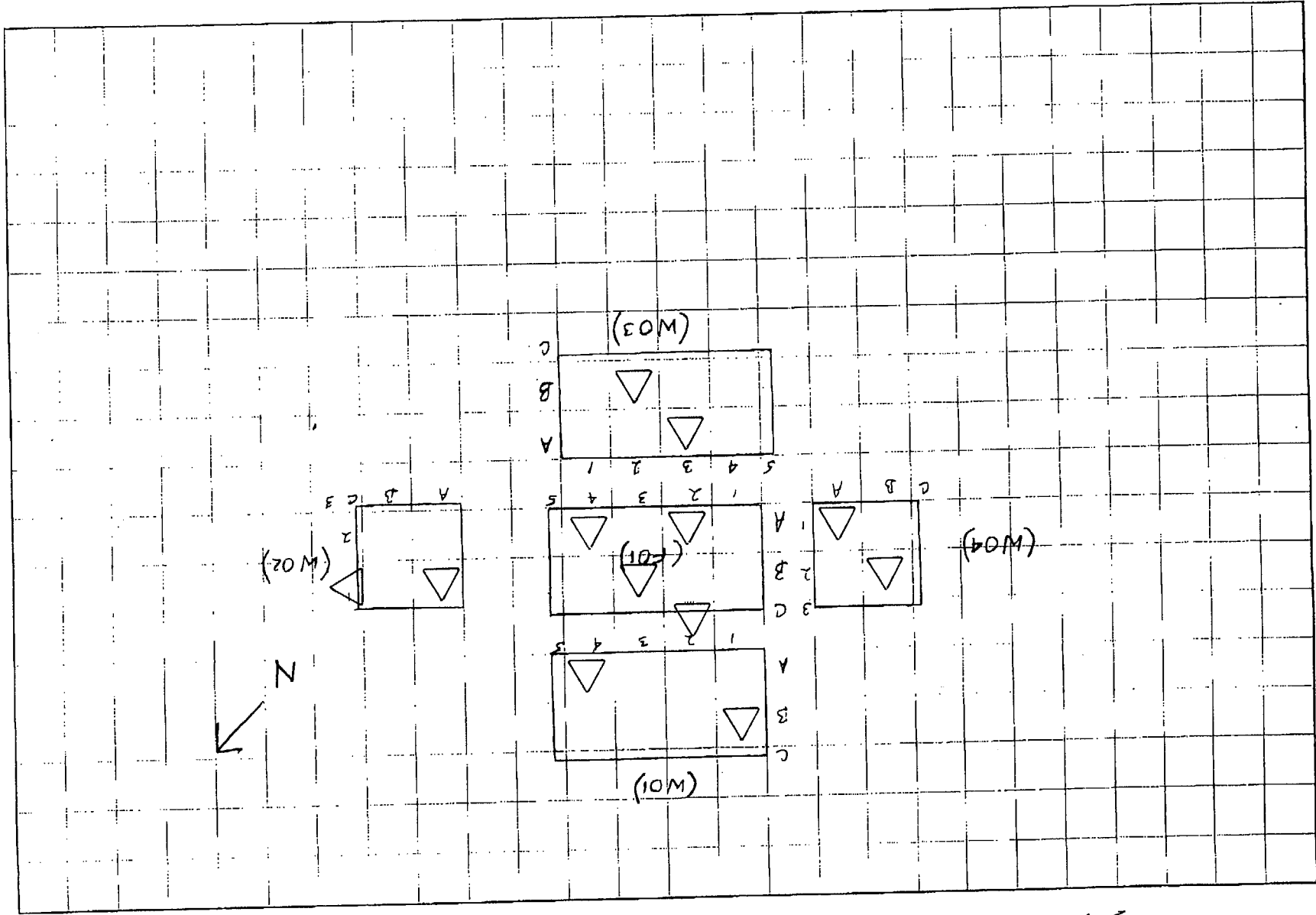
Survey Date: 6/27/2001 Survey Start Time: 09:12:10

Description: A0212: RX BUILDING PROCESS AREA ROOM D20 PIT



Flag set for 2400 dpm/100 cm<sup>2</sup>. Review values greater than this value.  
Review this graph for visual outliers.  
Mark outliers, source checks and backgrounds on the graph on this page.

D20 Tank Pit - R x Basement



The "net activity" (dpm/100 cm<sup>2</sup>) 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 #153



ATTACHMENT 6.14  
SURVEY DOWNLOAD DATA SHEET

Download  Print  
 Technician: Name: Don Schumaker Signature: [Signature] Station: 2  
 File: 153  
 Serial No. Verification: Model 2350:  Detector:  Problems:  (See Comments)

---

Survey Technician(s):  
 Print Name: Robert Leigh User ID: RAL 7103 Signature: [Signature] Date: 6-27-01  
 Print Name: \_\_\_\_\_ User ID: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Survey Unit Description: A0212 PROCESS ROOM, DOORWAY TRENCH, STRUCTURES 1 THRU 6  
 (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: 7/22/01 Detector: 9/23/01

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 $\beta$		43-106B				
<input checked="" type="checkbox"/> Beta $\beta$	<u>095534</u>	43-68B	<u>.220</u>	<u>5744/446</u>	<u>153</u>	<u>153</u>
<input type="checkbox"/> Alpha $\alpha$		43-68A				
<input type="checkbox"/> Gamma $\gamma$		44-2	N/A			

Local Area Background Measurements					MEAN Value in cpm		
10 MINUTES $\beta$ Beta	<u>1 3497/3487</u>	<u>2 5477/5128</u>	<u>3 4687/4639</u>	<u>4 5667/5771</u>	5	6	<u>487</u>
<del>10 MINUTES</del> $\alpha$ Alpha	<u>1 01501 avg = 349 cpm</u>	<u>2 01502-01505 avg = 560 cpm</u>	<u>3 01506 avg = 466 cpm</u>	<u>4 01703 avg = 572 cpm</u>	5	6	

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

GTS DURATEK RADIOLOGICAL ENGINEERING & FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm<sup>2</sup>

File Number: 153		Survey Description: A0212: RX BUILDING PROCESS AREA ROOM		
Survey Reason: TERMINATION		User ID: RAL7103	Technician name: R.A. Leigh	
Instrument Model: M2350-1	S/N: 126182	Calibration Due: 9/22/01	Group: 2	
Detector Model: 43-68B	Detector S/N: 095534	Type: 126 cm <sup>2</sup> Gas Proportional Detector, Beta Window		
Background: 487 cpm	Beta Efficiency: .220			Survey Date: 6/27/01

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 4 pages of the report, 0 pages of comments, and 1 graph.

I performed this survey: ROBERT A. LEIGH / *Robert A Leigh* Date: 6/27/01  
Print name Signature

and,

I performed this survey: \_\_\_\_\_ / \_\_\_\_\_ Date: \_\_\_\_\_  
Print name Signature

Corrections and Reasons:

Comment Resolution:

Survey Reviewed and Approved by: *PJ* Pavi Jones / *Paul Jones* Date: 6/28/01  
Print name Signature

Survey Date: 6/27/01  
File: 153

Report Date: 6/27/01

Page: 1  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
A0212	01S01	TAT01	02200	02200	Det Cal Due: 9/23/01

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	3497	-495	
FLDBK	B0001	ZZZZZ	00000	17	600	3487	-499	

Group Average: -497

FLDCT	B0001	A	00001	5	20	174	126	
FLDCT	B0001	A	00002	6	20	196	364	
FLDCT	B0001	A	00003	7	20	184	234	
FLDCT	B0001	A	00004	8	20	196	364	
FLDCT	B0001	A	00005	9	20	206	473	
FLDCT	B0002	A	00006	10	20	148	-155	
FLDCT	B0001	B	00001	11	20	196	364	
FLDCT	B0001	B	00002	12	20	170	83	
FLDCT	B0001	B	00003	13	20	182	213	
FLDCT	B0001	B	00004	14	20	179	180	
FLDCT	B0001	B	00005	15	20	167	51	
FLDCT	B0001	B	00006	16	20	200	408	

Group Average: 225

Survey Code	L1	L2	L3	L4	Setup Number 0
A0212	01S02	TAT01	02200	02200	Det Cal Due: 9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0001	ZZZZZ	00000	18	600	5477	219	

Group Average: 219

FLDCT	B0001	ZZZZZ	00001	19	20	243	873	
FLDCT	B0001	ZZZZZ	00002	20	20	233	765	
FLDCT	B0001	ZZZZZ	00003	21	20	253	981	
FLDCT	B0001	ZZZZZ	00004	22	20	249	938	
FLDCT	B0001	ZZZZZ	00005	23	20	259	1046	

Group Average: 921

Survey Code	L1	L2	L3	L4	Setup Number 0
A0212	01S03	TAT01	02200	02200	Det Cal Due: 9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0001	ZZZZZ	00001	24	20	281	1284	
FLDCT	B0001	ZZZZZ	00002	25	20	244	884	
FLDCT	B0001	ZZZZZ	00003	26	20	243	873	
FLDCT	B0001	ZZZZZ	00004	27	20	267	1133	
FLDCT	B0001	ZZZZZ	00005	28	20	246	905	

Group Average: 1016

Survey Date: 6/27/01  
File: 153

Report Date: 6/27/01

Page: 2  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01S04	TAT01	02200	Det Cal Due:	9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDCT	B0001	ZZZZZ	00001	29	20	229	722	
FLDCT	B0001	ZZZZZ	00002	30	20	253	981	
FLDCT	B0001	ZZZZZ	00003	31	20	258	1035	
FLDCT	B0001	ZZZZZ	00004	32	20	233	765	
FLDCT	B0001	ZZZZZ	00005	33	20	266	1122	

Group Average: 925

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01S05	TAT01	02200	Det Cal Due:	9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	ZZZZZ	00000	39	600	5728	310	

Group Average: 310

FLDCT	B0002	ZZZZZ	00001	34	20	274	1209	
FLDCT	B0002	ZZZZZ	00002	35	20	260	1057	
FLDCT	B0002	ZZZZZ	00003	36	20	246	905	
FLDCT	B0002	ZZZZZ	00004	37	20	280	1273	
FLDCT	B0002	ZZZZZ	00005	38	20	241	851	

Group Average: 1059

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01S06	TAT01	02200	Det Cal Due:	9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00000	40	600	4687	-66	
FLDBK	B9999	ZZZZZ	00000	46	600	4639	-83	

Group Average: -75

FLDCT	B9999	ZZZZZ	00001	41	20	146	-177	
FLDCT	B9999	ZZZZZ	00002	42	20	161	-14	
FLDCT	B9999	ZZZZZ	00003	43	20	137	-274	
FLDCT	B9999	ZZZZZ	00004	44	20	151	-123	
FLDCT	B9999	ZZZZZ	00005	45	20	172	105	

Group Average: -97

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01T02	TAT01	02200	Det Cal Due:	9/23/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
.DBK	B0002	ZZZZZ	00000	47	600	5667	288	
.LDBK	B0003	ZZZZZ	00000	58	600	5771	325	

Survey Date: 6/27/01  
File: 153

Report Date: 6/27/01

Page: 3  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number	0
	A0212	01T02	TAT01	02200	Det Cal Due:	9/23/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
Group Average:							306	
FLDCT	B0002	ZZZZZ	00001	48	20	274	1209	
FLDCT	B0002	ZZZZZ	00002	49	20	277	1241	
FLDCT	B0002	ZZZZZ	00003	50	20	264	1100	
FLDCT	B0002	ZZZZZ	00004	51	20	300	1490	
FLDCT	B0003	ZZZZZ	00005	52	20	299	1479	
FLDCT	B0003	ZZZZZ	00006	53	20	310	1598	
FLDCT	B0003	ZZZZZ	00007	54	20	274	1209	
FLDCT	B0003	ZZZZZ	00008	55	20	242	862	
FLDCT	B0003	ZZZZZ	00009	56	20	280	1273	
FLDCT	B0003	ZZZZZ	00010	57	20	261	1068	

Group Average: 1253

Survey Code	L1	L2	L3	L4	Setup Number	0
	ZZZZZ	EZ260	TAT01	02200	Det Cal Due:	9/23/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
Group Average:							19814	
PRB00	ZZZZZ	ZZZZZ	00000	1	60	5922	19607	*
RB00	ZZZZZ	ZZZZZ	00000	2	60	6153	20440	*
RB00	ZZZZZ	ZZZZZ	00000	3	60	5863	19394	*

Group Average: 19814

PTB00	ZZZZZ	ZZZZZ	00000	60	60	5995	19870	*
PTB00	ZZZZZ	ZZZZZ	00000	61	60	6309	21003	*
PTB00	ZZZZZ	ZZZZZ	00000	62	60	6265	20844	*

Group Average: 20572

Survey Code	L1	L2	L3	L4	Setup Number	0
	ZZZZZ	ZZZZZ	TAT01	02200	Det Cal Due:	9/23/01

L5 CntTy	L6 BkgSu	L7 Grid	L8 LocNm	Sample Number	Count Time	Gross Counts	Net dpm/100cm2	H i
Group Average:							-227	
PRBBK	ZZZZZ	ZZZZZ	00000	0	600	4241	-227	

Group Average: -227

PTBBK	ZZZZZ	ZZZZZ	00000	59	600	4458	-149	
-------	-------	-------	-------	----	-----	------	------	--

Group Average: -149

Survey Date: 6/27/01  
File: 153

Report Date: 6/27/01

Page: 4  
Station: 2

Comments

Total Number of Measurements on this Report: 63

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 &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

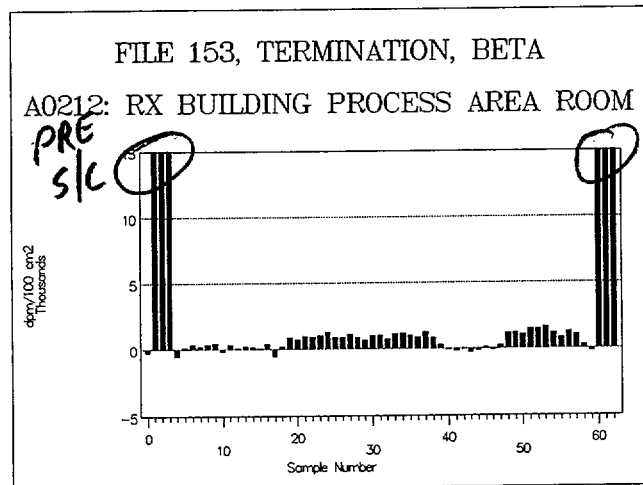
6/27/2001

Graph of File 153

Station: 2

Survey Date: 6/27/2001 Survey Start Time: 07:53:12

Description: A0212: RX BUILDING PROCESS AREA ROOM

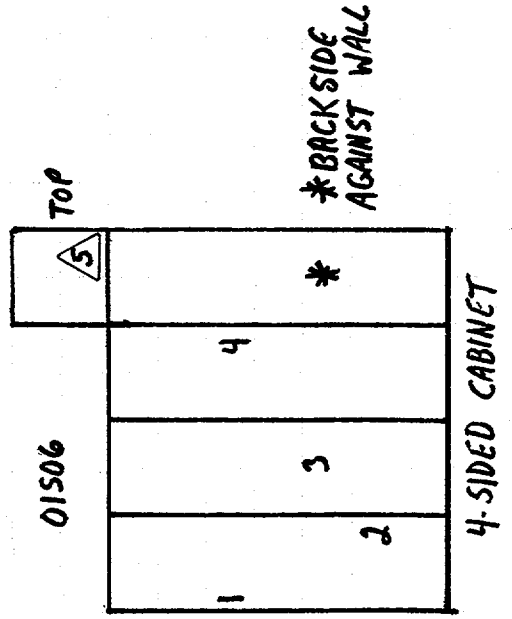
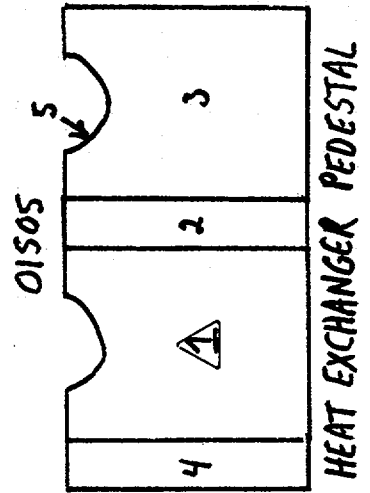
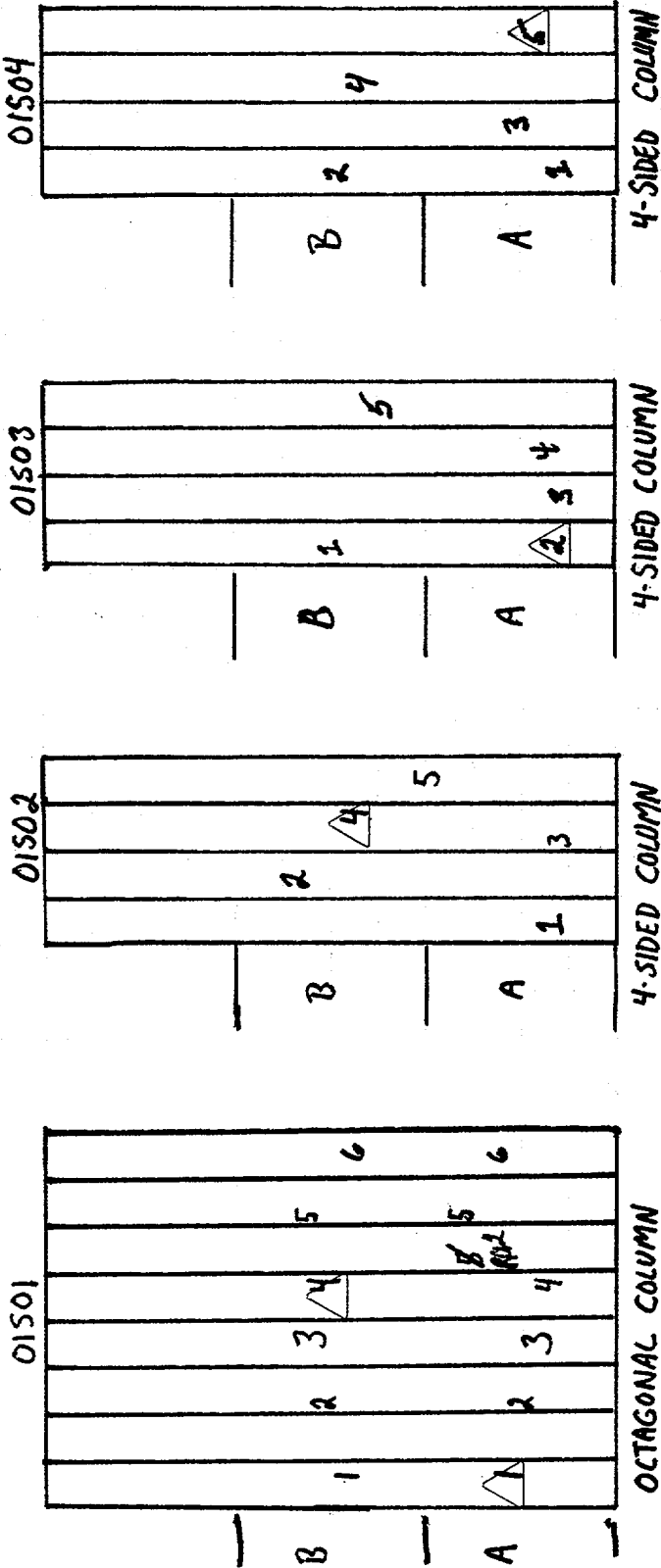


Flag set for 2400 dpm/100 cm<sup>2</sup>. Review values greater than this value.  
Review this graph for visual outliers.  
Mark outliers, source checks and backgrounds on the graph on this page.

A0212 PROCESS ROOM STRUCTURES 1 THRU 6  
 O1S01, O1S02, O1S03, O1S04, O1S05, O1S06

6-27-01  
 R.G. Zyl

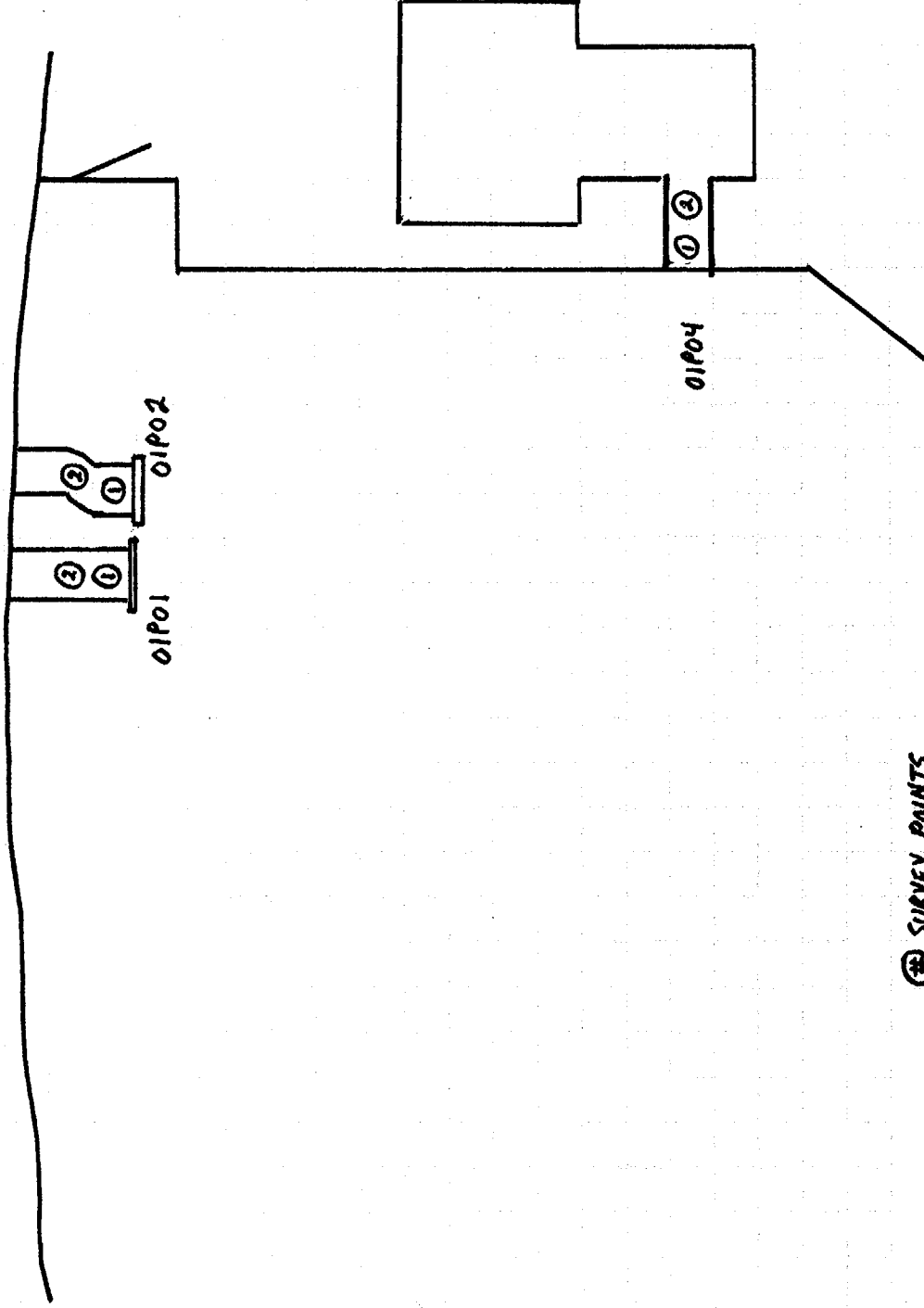
048





PIPE PENETRATIONS IN PROCESS  
ROOM

6-28-01  
RAB/L

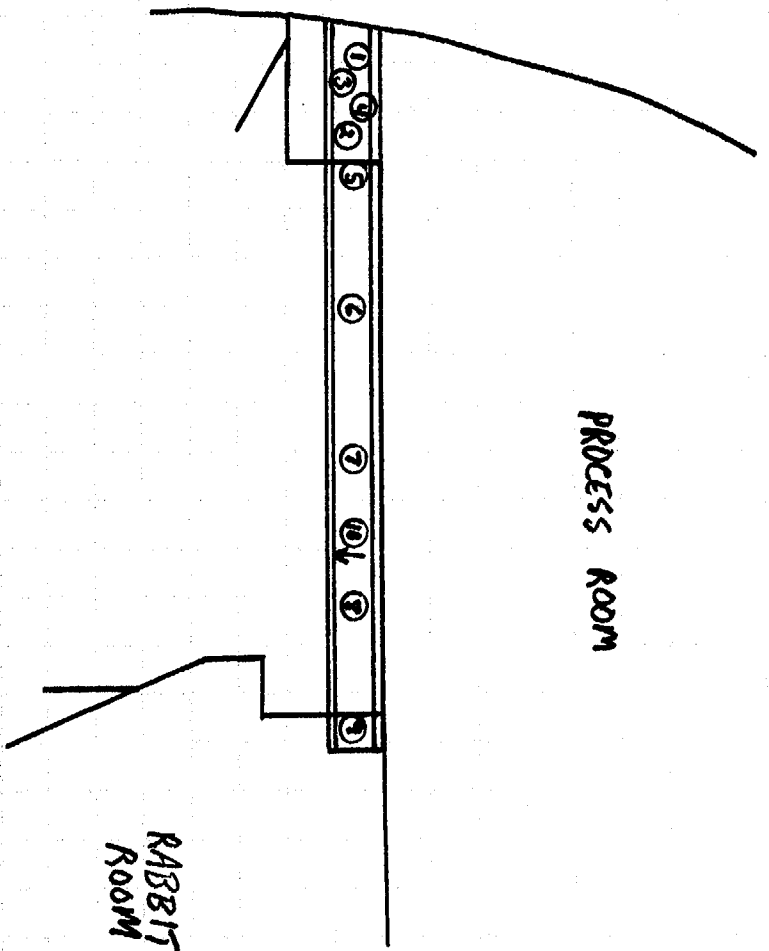


⊕ SURVEY POINTS

TRENCH AT DOORWAY OF PROCESS ROOM

6-28-01  
R.D.S.

TOP VIEW



PROCESS ROOM

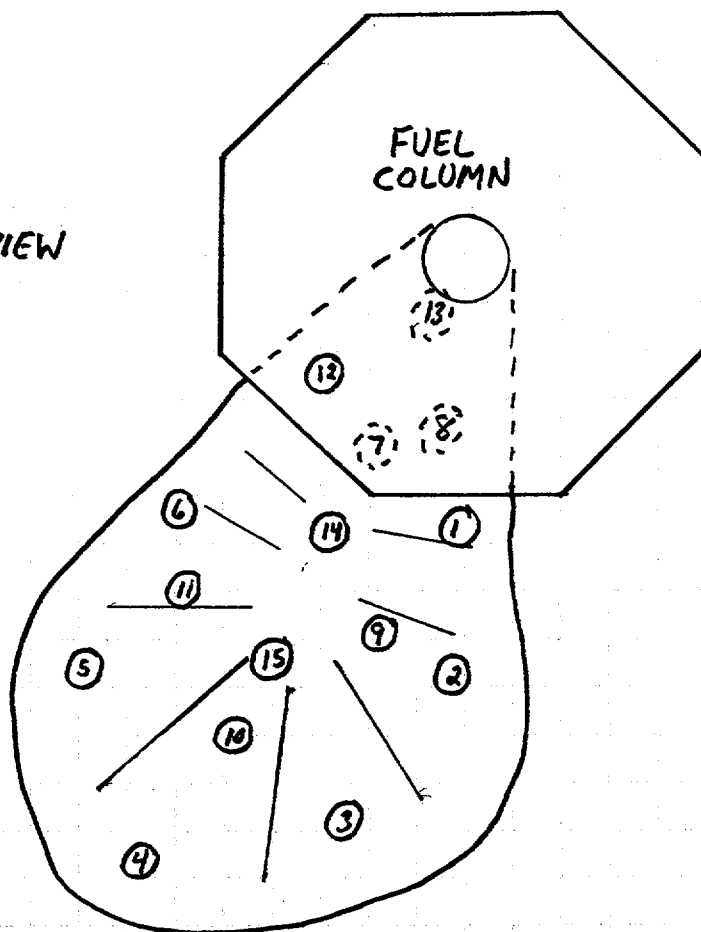
RABBIT ROOM

⊕ SURVEY POINT

TRENCH AT BOTTOM OF  
FUEL COLUMN

6-28-01  
RA Z/K

TOP VIEW



PROCESS ROOM FLOOR

ATTACHMENT 6.14  
SURVEY DOWNLOAD DATA SHEET

Download Print  
 Technician Name: PAUL JONES Signature: [Signature] Station: 2  
 File: 155  
 Serial No. Verification: Model 2350:  Detector:  Problems:  (See Comments)

Survey Technician(s):  
 Print Name: Robert A. Leigh User ID RAL 7103 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Print Name: Billy S. Kjos User ID BSK 0490 Signature: BS Kjos Date: 6-28-01  
 Survey Unit Description: A0212, Process Area Rm. Trench 1 - AP01-02-04<sup>7/16/01</sup> 01P02  
 (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: 123-01 Detector: 9-2201  
 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 $\beta$		43-106B				
<input type="checkbox"/> Beta $\beta$		43-68B				
<input type="checkbox"/> Alpha $\alpha$		43-68A				
<input type="checkbox"/> Gamma $\gamma$		44-2	N/A			
<input checked="" type="checkbox"/> Beta	091089	44-40	.111	2791/36	155	155

Local Area Background Measurements						MEAN Value in cpm	
$\beta$ Beta	1	2	3	4	5	6	0
$\alpha$ 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: 155	Survey Description: A0212: RX BUILDING PROCESS AREA ROOM TRENCH 1, <del>01 P01, P02, P04</del> <sup>A 7/16/01</sup> <sub>OIP02</sub>		
Survey Reason: TERMINATION	User ID: RAL7103	Technician name: R.A. Leigh	
Instrument Model: M2350-1	S/N: 126182	Calibration Due: 12/13/01	Group: 2
Detector Model: 44-40	Detector S/N: 091089	Type: Shielded GM Pancake Detector	
Background: 0 cpm	Beta Efficiency: .111	Survey Date: 6/28/01	

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, 1 pages of comments, and 1 graph.

I performed this survey: Betty S. Kjos / Paul Jones for Betty S. Kjos Date: 7/16/01  
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: 6/28/01  
File: 155

Report Date: 7/16/01

Page: 1  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 3
	A0212	01P02	TST01	02000	Det Cal Due: 12/13/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00001	52	60	34	1976	
FLDBK	B9999	ZZZZZ	00002	53	60	33	1918	

Group Average: 1947

FLDCT	B9999	ZZZZZ	00001	54	60	34	1976	
FLDCT	B9999	ZZZZZ	00002	55	60	40	2325	

Group Average: 2151

Survey Code	L1	L2	L3	L4	Setup Number 3
	A0212	01T01	TST01	02000	Det Cal Due: 12/13/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B0002	ZZZZZ	00001	18	60	32	1860	
FLDBK	B0002	ZZZZZ	00002	19	60	57	3313	*
FLDBK	B0002	ZZZZZ	00003	20	60	53	3080	*
FLDBK	B0002	ZZZZZ	00004	21	60	51	2964	*
FLDBK	B0002	ZZZZZ	00005	22	60	50	2906	*
FLDBK	B0002	ZZZZZ	00006	23	60	53	3080	*
FLDBK	B0002	ZZZZZ	00007	24	60	16	930	
FLDBK	B0002	ZZZZZ	00008	25	60	12	697	
FLDBK	B0002	ZZZZZ	00009	26	60	50	2906	*
FLDBK	B0002	ZZZZZ	00010	27	60	42	2441	*
FLDBK	B0002	ZZZZZ	00011	28	60	52	3022	*
FLDBK	B0002	ZZZZZ	00012	29	60	19	1104	
FLDBK	B0002	ZZZZZ	00013	30	60	26	1511	
FLDBK	B0002	ZZZZZ	00014	31	60	29	1686	
FLDBK	B0002	ZZZZZ	00015	32	60	41	2383	

Group Average: 2259

FLDCT	B0002	ZZZZZ	00001	33	60	78	4534	*
FLDCT	B0002	ZZZZZ	00002	34	60	84	4882	*
FLDCT	B0002	ZZZZZ	00003	35	60	58	3371	*
FLDCT	B0002	ZZZZZ	00004	36	60	71	4127	*
FLDCT	B0002	ZZZZZ	00005	37	60	73	4243	*
FLDCT	B0002	ZZZZZ	00006	38	60	60	3487	*
FLDCT	B0002	ZZZZZ	00007	39	60	23	1337	
FLDCT	B0002	ZZZZZ	00008	40	60	23	1337	
FLDCT	B0002	ZZZZZ	00009	41	60	84	4882	*
FLDCT	B0002	ZZZZZ	00010	42	60	84	4882	*
FLDCT	B0002	ZZZZZ	00011	43	60	66	3836	*
FLDCT	B0002	ZZZZZ	00012	44	60	18	1046	
FLDCT	B0002	ZZZZZ	00013	45	60	57	3313	*
FLDCT	B0002	ZZZZZ	00014	46	60	30	1744	
FLDCT	B0002	ZZZZZ	00015	47	60	70	4069	*

Group Average: 3406

Survey Date: 6/28/01  
File: 155

Report Date: 7/16/01

Page: 2  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 3
	ZZZZZ	EZ260	TAT01	02000	Det Cal Due: 12/13/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
PTB00	ZZZZZ	ZZZZZ	00000	61	60	2838	164952	*
PTB00	ZZZZZ	ZZZZZ	00000	62	60	2744	159489	*
PTB00	ZZZZZ	ZZZZZ	00000	63	60	2801	162802	*

Group Average: 162414

Survey Code	L1	L2	L3	L4	Setup Number 3
	ZZZZZ	FZ260	TAT01	02000	Det Cal Due: 12/13/01

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	2877	167219	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	2833	164661	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	2781	161639	*

Group Average: 164506

Survey Code	L1	L2	L3	L4	Setup Number 3
	ZZZZZ	ZZZZZ	TAT01	02000	Det Cal Due: 12/13/01

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	393	2284	

Group Average: 2284

PTBBK	ZZZZZ	ZZZZZ	00000	60	600	359	2087	
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Group Average: 2087

Total Number of Measurements on this Report: 42

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 &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

7/16/01

Comments Report for File 155

Station: 2

---

Comment Number	Comment
1	Deleted sample numbers from 4 to 17. Because THESE READINGS WERE FOR INFORMATION ONLY. SHOULD HAVE BEEN A C COUNT. READINGS WERE LOGGED BY MISTAKE.
2	Deleted sample numbers from 48 to 51. Because these readings were retaken with SP-175-3M Detector for better geometry. See file 202 for resurvey.
3	Deleted sample numbers from 56 to 59. Because these readings were retaken with SP-175-3M for better geometry. See file 202 for resurvey.

---

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



## GTS DURATEK RADIOLOGICAL ENGINEERING &amp; FIELD SERVICES

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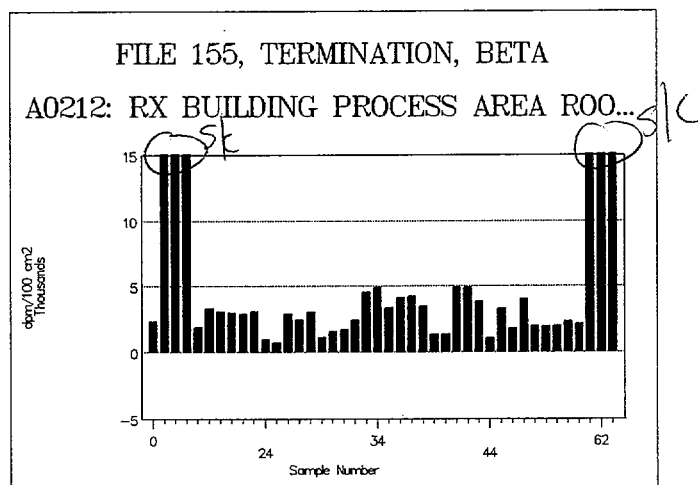
7/16/2001

Graph of File 155

Station: 2

Survey Date: 6/28/2001 Survey Start Time: 09:17:38

Description: A0212: RX BUILDING PROCESS AREA ROOM TRENCH 1,01P01,P02,P04



Flag set for 2400 dpm/100 cm<sup>2</sup>. Review values greater than this value.

Review this graph for visual outliers.

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

ATTACHMENT 6.14  
SURVEY DOWNLOAD DATA SHEET

Download Print  
 Technician: Name: D. Schumaker Signature: [Signature] Station: 2  
 File: 202  
 Serial No. Verification: Model 2350:  Detector:  Problems:  (See Comments)

Survey Technician(s):  
 Print Name: D. Schumaker User ID: DA 4133 Signature: [Signature] Date: 7/29/01  
 Print Name: \_\_\_\_\_ User ID: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Survey Unit Description: A0212; Process Area Rm 01P01, P03, P04  
 (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 : 12670

Instrument and Detector Calibration Due Dates: Survey Meter: 12/19/01 Detector: 8/13/01

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 $\beta$		43-106B				
<input type="checkbox"/> Beta $\beta$		43-68B				
<input type="checkbox"/> Alpha $\alpha$		43-68A				
<input type="checkbox"/> Gamma $\gamma$		44-2	N/A			
<u>Rate</u>	<u>096141</u>	<u>SP-175-3m</u>	<u>2675.068</u>	<u>1883/166</u>	<u>202</u>	<u>202</u>

Local Area Background Measurements						MEAN Value in cpm	
$\beta$ Beta	1	2	3	4	5	6	<u>0</u>
$\alpha$ 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: 202	Survey Description: A0212: PROCESS AREA ROOM 01P01,P03,P04		
Survey Reason: TERMINATION	User ID: DPS4133	Technician name: Don Schumaker	
Instrument Model: 2350-1	S/N: 126170	Calibration Due: 12/19/01	Group: 2
Detector Model: SP-175-3M	Detector S/N: 096141	Type: Pipe Probe	
Background: 0 cpm	Beta Efficiency: .068	Survey Date: 7/20/01	

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, 2 pages of comments, and 1 graph.  
 I performed this survey: Don Schumaker / [Signature] Date: 10/30/01  
 Print name Signature  
 and,  
 I performed this survey: \_\_\_\_\_ / \_\_\_\_\_ Date: \_\_\_\_\_  
 Print name Signature

Corrections and Reasons:  
Efficiency changed from .075 to .068 for this reprint. P. Jones

Comment Resolution:

Survey Reviewed and Approved by: Paul Jones / [Signature] Date: 10/30/01  
 Print name Signature

Survey Date: 7/20/01  
File: 202

Report Date: 8/21/01

Page: 1  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 9
	A0212	01P01	TST01	02100	Det Cal Due: 8/13/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00001	4	60	133	4206	*
FLDBK	B9999	ZZZZZ	00002	5	60	155	4902	*
Group Average:							4554	
FLDCT	B9999	ZZZZZ	00001	6	60	157	4965	*
FLDCT	B9999	ZZZZZ	00002	7	60	162	5123	*
Group Average:							5044	

Survey Code	L1	L2	L3	L4	Setup Number 9
	A0212	01P03	TST01	02100	Det Cal Due: 8/13/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00001	14	60	113	3574	*
FLDBK	B9999	ZZZZZ	00002	15	60	93	2941	*
Group Average:							3257	
FLDCT	B9999	ZZZZZ	00001	16	60	121	3827	*
FLDCT	B9999	ZZZZZ	00002	17	60	122	3858	*
Group Average:							3843	

Survey Code	L1	L2	L3	L4	Setup Number 9
	A0212	01P04	TST01	02100	Det Cal Due: 8/13/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
FLDBK	B9999	ZZZZZ	00001	8	60	127	4016	*
FLDBK	B9999	ZZZZZ	00002	9	60	162	5123	*
FLDBK	B9999	ZZZZZ	00003	10	60	163	5155	*
Group Average:							4765	
FLDCT	B9999	ZZZZZ	00001	11	60	149	4712	*
FLDCT	B9999	ZZZZZ	00002	12	60	213	6736	*
FLDCT	B9999	ZZZZZ	00003	13	60	178	5629	*
Group Average:							5693	

Survey Code	L1	L2	L3	L4	Setup Number 9
	ZZZZZ	EZ260	TAT01	02100	Det Cal Due: 8/13/01

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	1771	56009	*
RB00	ZZZZZ	ZZZZZ	00000	2	60	1987	62840	*
.RB00	ZZZZZ	ZZZZZ	00000	3	60	1892	59836	*

\* Hi flag set at 2400 dpm/100 cm2

Survey Date: 7/20/01  
File: 202

Report Date: 8/21/01

Page: 2  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 9
	ZZZZZ	EZ260	TAT01	02100	Det Cal Due: 8/13/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
Group Average:							59561	
PTB00	ZZZZZ	ZZZZZ	00000	19	60	1885	59614	*
PTB00	ZZZZZ	ZZZZZ	00000	20	60	1899	60057	*
PTB00	ZZZZZ	ZZZZZ	00000	21	60	1973	62397	*
Group Average:							60689	

Survey Code	L1	L2	L3	L4	Setup Number 9
	ZZZZZ	ZZZZZ	TAT01	02100	Det Cal Due: 8/13/01

L5	L6	L7	L8	Sample	Count	Gross	Net	H
CntTy	BkgSu	Grid	LocNm	Number	Time	Counts	dpm/100cm2	i
Group Average:							5253	
PRBBK	ZZZZZ	ZZZZZ	00000	0	600	1661	5253	*
Group Average:							5221	
PTBBK	ZZZZZ	ZZZZZ	00000	18	600	1651	5221	*
Group Average:							5221	

Total Number of Measurements on this Report: 22

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

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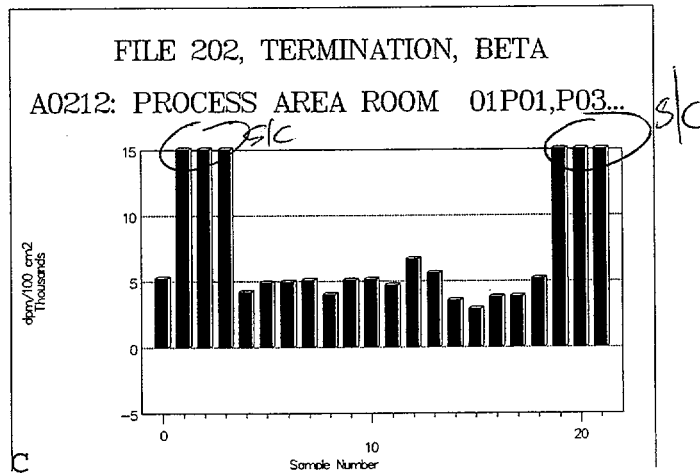
8/21/2001

Graph of File 202

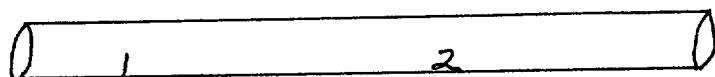
Station: 2

Survey Date: 7/20/2001 Survey Start Time: 14:45:26

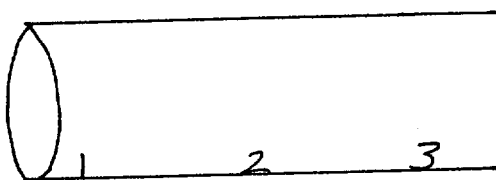
Description: A0212: PROCESS AREA ROOM 01P01,P03,P04



A 0 2 1 2



0 1 P 0 3



0 1 P 0 4

## **Section 4**

# **Package 12 Exposure Rate Measurements**



ATTACHMENT 6.14  
SURVEY DOWNLOAD DATA SHEET

Download Print  
 Technician: Name: D. Schumack Signature: [Signature] Station: 203 7-2-01  
 File: 161/162  
 Serial No. Verification: Model 2350:  Detector:  Problems:  (See Comments)

Survey Technician(s):  
 Print Name: Bill Bishop User ID wmb7302 Signature: [Signature] Date: 7-2-01  
 Print Name: \_\_\_\_\_ User ID \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Survey Unit Description: A0212 Process Area Room and D<sub>2</sub>O Pit  
 (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 $\beta$		43-106B				
<input type="checkbox"/> Beta $\beta$		43-68B				
<input type="checkbox"/> Alpha $\alpha$		43-68A				
<input checked="" type="checkbox"/> Gamma $\gamma$	<u>PR091034</u>	44-2	N/A	N/A	<u>162</u> <del>161</del>	<u>162</u> <del>161</del> <u>7-2-01</u>

Local Area Background Measurements						MEAN Value in cpm	
$\beta$ Beta	1	2	3	4	5	6	
$\alpha$ Alpha	1	2	3	4	5	6	

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## GTS DURATEK RADIOLOGICAL ENGINEERING &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

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

File Number: 162	Survey Description: A0212: RX BUILDING PROCESS AREA ROOM,D20 PIT		
Survey Reason: TERMINATION	User ID: WMB7302	Technician name: Bill Bishop	
Instrument Model: M2350-1	S/N: 126182	Calibration Due: 9/22/01	Group: 2
Detector Model: 44-2	Detector S/N: PR091034	Type:	
Background: 0.0 uR/hr	Gamma Calibration Constant: 1.70095 E10 c/R	PIC ratio: 1.000 (PIC/NaI)	Survey Date: 7/01/01

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, 1 pages of comments, and 1 graph.

I performed this survey: William Bishop / William Bishop Date: 7-5-01  
 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  
Print name

Paul Jones  
Signature

Date: 7/9/01

Survey Date: 7/01/01  
File: 162

Report Date: 7/02/01

Station: 2  
Page: 1

Survey Code	L1 A0212	L2 01F01	L3 TAT01	L4 03100	L5 FLDCT	L6 B0003	Setup Number 2 Det Cal Due:
-------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------------------------

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	787	16.7	*
A	00002	5	10	839	17.8	*
A	00003	6	10	926	19.6	*
B	00001	7	10	703	14.9	*
B	00002	8	10	916	19.4	*
B	00003	9	10	866	18.3	*
B	00004	10	10	838	17.7	*
B	00005	11	10	858	18.2	*
B	00006	12	10	893	18.9	*
C	00003	13	10	895	18.9	*
C	00004	14	10	812	17.2	*
C	00005	15	10	803	17.0	*
C	00006	16	10	860	18.2	*
C	00007	17	10	881	18.6	*
C	00008	18	10	912	19.3	*
D	00003	19	10	774	16.4	*
D	00004	20	10	767	16.2	*
D	00005	21	10	728	15.4	*
D	00006	22	10	749	15.9	*
D	00007	23	10	833	17.6	*
D	00008	24	10	820	17.4	*
D	00009	25	10	928	19.6	*
D	00010	26	10	947	20.0	*
E	00003	27	10	721	15.3	*
E	00004	28	10	614	13.0	*
E	00005	29	10	529	11.2	*
E	00009	30	10	884	18.7	*
E	00010	31	10	947	20.0	*
E	00011	32	10	923	19.5	*
F	00003	33	10	681	14.4	*
F	00004	34	10	628	13.3	*
F	00006	36	10	633	13.4	*
F	00007	37	10	808	17.1	*
F	00008	38	10	896	19.0	*
F	00009	39	10	953	20.2	*
F	00010	40	10	935	19.8	*
F	00011	41	10	952	20.1	*
F	00012	42	10	984	20.8	*
G	00003	43	10	690	14.6	*
G	00004	44	10	722	15.3	*
G	00005	45	10	664	14.1	*
G	00006	46	10	718	15.2	*
G	00007	47	10	866	18.3	*
G	00008	48	10	873	18.5	*
G	00009	49	10	889	18.8	*
G	00010	50	10	989	20.9	*
G	00011	51	10	982	20.8	*
G	00012	52	10	962	20.4	*
H	00003	53	10	767	16.2	*
H	00004	54	10	826	17.5	*
H	00005	55	10	799	16.9	*
H	00006	56	10	766	16.2	*
H	00007	57	10	842	17.8	*
H	00008	58	10	841	17.8	*
H	00009	59	10	901	19.1	*
H	00010	60	10	898	19.0	*
H	00011	61	10	1001	21.2	*
H	00012	62	10	959	20.3	*
H	00013	63	10	950	20.1	*
I	00003	64	10	800	16.9	*
I	00004	65	10	806	17.1	*
I	00005	66	10	777	16.4	*
I	00006	67	10	844	17.9	*
I	00007	68	10	841	17.8	*

Comments

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

Survey Date: 7/01/01  
File: 162

Report Date: 7/02/01

Station: 2  
Page: 2

Survey Code	L1 A0212	L2 01F01	L3 TAT01	L4 03100	L5 FLDCT	L6 B0003	Setup Number 2 Det Cal Due:
-------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------------------------

Comments

L7 Code Grid ID	L8 Code Location Number	Sample Number	Count Time (sec)	Gross Counts	Gross Micro R/hr	H i
I	00008	69	10	940	19.9	*
I	00009	70	10	933	19.7	*
I	00010	71	10	938	19.9	*
I	00011	72	10	919	19.5	*
I	00012	73	10	834	17.7	*
I	00013	74	10	912	19.3	*
J	00003	75	10	796	16.8	*
J	00004	76	10	808	17.1	*
J	00005	77	10	857	18.1	*
J	00006	78	10	835	17.7	*
J	00007	79	10	918	19.4	*
J	00008	80	10	823	17.4	*
J	00009	81	10	958	20.3	*
J	00010	82	10	885	18.7	*
J	00011	83	10	1048	22.2	*
J	00012	84	10	951	20.1	*
J	00013	85	10	961	20.3	*
J	00014	86	10	1001	21.2	*
K	00003	87	10	831	17.6	*
K	00004	88	10	877	18.6	*
K	00005	89	10	864	18.3	*
K	00006	90	10	796	16.8	*
K	00007	91	10	901	19.1	*
K	00008	92	10	933	19.7	*
K	00009	93	10	923	19.5	*
K	00010	94	10	939	19.9	*
K	00011	95	10	940	19.9	*
K	00012	96	10	907	19.2	*
K	00013	97	10	972	20.6	*
K	00014	98	10	1043	22.1	*
L	00004	99	10	807	17.1	*
L	00005	100	10	850	18.0	*
L	00006	101	10	899	19.0	*
L	00007	102	10	930	19.7	*
L	00008	103	10	875	18.5	*
L	00009	104	10	971	20.6	*
L	00010	105	10	927	19.6	*
L	00011	106	10	908	19.2	*
L	00012	107	10	903	19.1	*
L	00013	108	10	948	20.1	*
L	00014	109	10	983	20.8	*
M	00004	110	10	952	20.1	*
M	00005	111	10	897	19.0	*
M	00006	112	10	843	17.8	*
M	00007	113	10	879	18.6	*
M	00008	114	10	945	20.0	*
M	00009	115	10	938	19.9	*
M	00010	116	10	872	18.5	*
M	00011	117	10	867	18.3	*
M	00012	118	10	875	18.5	*
M	00013	119	10	968	20.5	*
M	00014	120	10	975	20.6	*
N	00004	121	10	897	19.0	*
N	00006	122	10	909	19.2	*
N	00007	123	10	872	18.5	*
N	00008	124	10	883	18.7	*
N	00009	125	10	856	18.1	*
N	00010	126	10	928	19.6	*
N	00011	127	10	947	20.0	*
N	00012	128	10	893	18.9	*
N	00013	129	10	944	20.0	*
N	00014	130	10	930	19.7	*
O	00004	131	10	812	17.2	*
O	00009	132	10	862	18.2	*

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

Survey Date: 7/01/01  
File: 162

Report Date: 7/02/01

Station: 2  
Page: 3

Comments

Survey Code	L1 A0212	L2 01F01	L3 TAT01	L4 03100	L5 FLDCT	L6 B0003	Setup Number 2 Det Cal Due:
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L7 Code Grid ID	L8 Code Location Number	Sample Number	Count Time (sec)	Gross Counts	Gross Micro R/hr	H i
O	00010	133	10	895	18.9	*
O	00011	134	10	912	19.3	*
O	00012	135	10	866	18.3	*
O	00013	136	10	915	19.4	*
O	00014	137	10	922	19.5	*
P	00004	138	10	796	16.8	*
P	00005	139	10	808	17.1	*
P	00006	140	10	849	18.0	*
P	00007	141	10	817	17.3	*
P	00008	142	10	868	18.4	*
P	00009	143	10	828	17.5	*
P	00010	144	10	796	16.8	*
P	00011	145	10	898	19.0	*
P	00012	146	10	811	17.2	*
P	00013	147	10	735	15.6	*
P	00014	148	10	787	16.7	*
Q	00004	149	10	775	16.4	*
Q	00005	150	10	837	17.7	*
Q	00006	151	10	856	18.1	*
Q	00007	152	10	825	17.5	*
Q	00008	153	10	805	17.0	*
Q	00009	154	10	797	16.9	*
Q	00010	155	10	791	16.7	*
Q	00011	156	10	847	17.9	*
Q	00012	157	10	785	16.6	*
Q	00013	158	10	813	17.2	*
Q	00007	178	10	929	19.7	*
Q	00006	179	10	615	13.0	*

*BE*

Group Average: 5175 cpm

Average uR/hr: 18.3

Number of measurements: 156

Survey Code	L1 A0212	L2 02F01	L3 TAT01	L4 03100	L5 FLDCT	L6 B0002	Setup Number 2 Det Cal Due:
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L7 Code Grid ID	L8 Code Location Number	Sample Number	Count Time (sec)	Gross Counts	Gross Micro R/hr	H i
A	00001	159	10	976	20.7	*
A	00002	160	10	893	18.9	*
A	00003	161	10	935	19.8	*
A	00004	162	10	924	19.6	*
A	00005	163	10	961	20.3	*
B	00001	164	10	903	19.1	*
B	00002	165	10	934	19.8	*
B	00003	166	10	943	20.0	*
B	00004	167	10	943	20.0	*
B	00005	168	10	942	19.9	*
C	00001	169	10	964	20.4	*
C	00002	170	10	954	20.2	*
C	00003	171	10	960	20.3	*
C	00004	172	10	976	20.7	*
C	00005	173	10	950	20.1	*

Group Average: 5663 cpm

Average uR/hr: 20.0

Number of measurements: 15

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

Survey Date: 7/01/01  
File: 162

Report Date: 7/02/01

Station: 2  
Page: 4

Comments

Survey Code	L1 ZZZZZ	L2 19453	L3 TAT01	L4 03100	L5 PRB00	L6 ZZZZZ	Setup Number 2 Det Cal Due:
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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	553664	1953.0	*
ZZZZZ	00000	2	60	14256	50.3	*
ZZZZZ	00000	3	60	5413	19.1	*

Group Average: 191111 cpm      Average uR/hr: 674.1  
Number of measurements: 3

Survey Code	L1 ZZZZZ	L2 19453	L3 TAT01	L4 03100	L5 PTB00	L6 ZZZZZ	Setup Number 2 Det Cal Due:
-------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------------------------

L7 Code Grid ID	L8 Code Location Number	Sample Number	Count Time (sec)	Gross Counts	Gross Micro R/hr	H i
ZZZZZ	00000	175	60	550759	1942.8	*
ZZZZZ	00000	176	60	14409	50.8	*
ZZZZZ	00000	177	60	5218	18.4	*
ZZZZZ	00000	181	60	537889	1897.4	*
ZZZZZ	00000	182	60	13857	48.9	*
ZZZZZ	00000	183	60	5239	18.5	*

Group Average: 187895 cpm      Average uR/hr: 662.8  
Number of measurements: 6

Survey Code	L1 ZZZZZ	L2 ZZZZZ	L3 TAT01	L4 03100	L5 PRBBK	L6 ZZZZZ	Setup Number 2 Det Cal Due:
-------------	-------------	-------------	-------------	-------------	-------------	-------------	--------------------------------

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	19717	13.9	

Group Average: 3943 cpm      Average uR/hr: 13.9  
Number of measurements: 1

Survey Code	L1 ZZZZZ	L2 ZZZZZ	L3 TAT01	L4 03100	L5 PTBBK	L6 ZZZZZ	Setup Number 2 Det Cal Due:
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L7 Code Grid ID	L8 Code Location Number	Sample Number	Count Time (sec)	Gross Counts	Gross Micro R/hr	H i
ZZZZZ	00000	174	300	19283	13.6	
ZZZZZ	00000	180	300	19765	13.9	

Group Average: 3905 cpm      Average uR/hr: 13.8  
Number of measurements: 2

Survey Date: 7/02/01  
File: 162

Report Date: 7/02/01

Station: 2  
Page: 5

Comments

Total Number of Measurements on this Report: 183

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.R4 11-26-97 JPA

L 80 M 03,133

## GTS DURATEK RADIOLOGICAL ENGINEERING &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

7/02/01

Comments Report for File 162

Station: 2

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Comment  
Number

Comment

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- 1 Changes made to Survfiles because. THIS DOWNLOAD REPLACES FILE # 161. A COUPLE OF DATA POINTS WERE NOT TAKEN ON THAT DOWNLOAD. AS PER P.JONES, THE DATA IN THE METER WAS NOT CLEARED AND WE JUST ADDED TO IT.
  - 2 Deleted sample numbers from 35 to 35. Because DATA POINT TAKEN IN ERROR. LOCATION F-5 DOES NOT EXIST.
- 

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



## GTS DURATEK RADIOLOGICAL ENGINEERING &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

7/02/2001

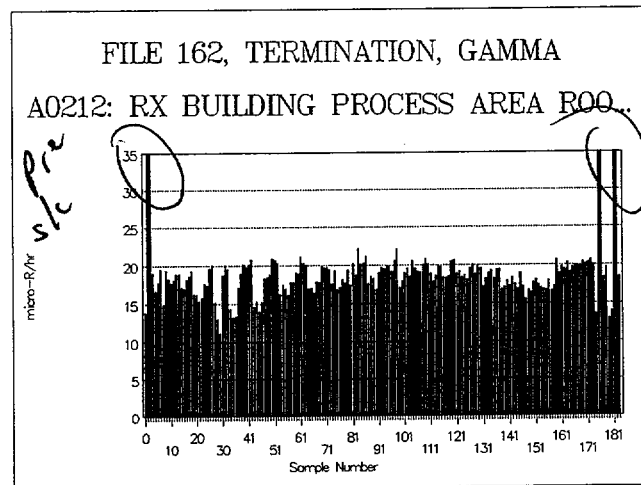
Graph of File 162

Station: 2

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Survey Date: 7/01/2001 Survey Start Time: 19:19:22

Description: A0212: RX BUILDING PROCESS AREA ROOM, D20 PIT



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 12 Removable Beta Contamination for the Suspect Affected Process Room (including lab reports)**

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	8	90	100	01F01	FLDCT	A	00001	0.3425	2	10	17
	2	90	100	01F01	FLDCT	A	00002	0.3425	2	-2	17
	5	90	100	01F01	FLDCT	A	00003	0.3425	2	4	17
	10	90	100	01F01	FLDCT	B	00001	0.3425	2	14	17
	5	90	100	01F01	FLDCT	B	00002	0.3425	2	4	17
	8	90	100	01F01	FLDCT	B	00003	0.3425	2	10	17
	1	90	100	01F01	FLDCT	B	00004	0.3425	2	-4	17
	9	90	100	01F01	FLDCT	B	00005	0.3425	2	12	17
	6	90	100	01F01	FLDCT	B	00006	0.3425	2	6	17
	0	90	100	01F01	FLDCT	B	00007	0.3425	2	-6	17
	2	90	100	01F01	FLDCT	C	00003	0.3425	2	-2	17
	0	90	100	01F01	FLDCT	C	00004	0.3425	2	-6	17
	2	90	100	01F01	FLDCT	C	00005	0.3425	2	-2	17
	1	90	100	01F01	FLDCT	C	00006	0.3425	2	-4	17
	3	90	100	01F01	FLDCT	C	00007	0.3425	2	0	17
	1	90	100	01F01	FLDCT	C	00008	0.3425	2	-4	17
	6	90	100	01F01	FLDCT	D	00003	0.3425	2	6	17
	3	90	100	01F01	FLDCT	D	00004	0.3425	2	0	17
	2	90	100	01F01	FLDCT	D	00005	0.3425	2	-2	17
	6	90	100	01F01	FLDCT	D	00006	0.3425	2	6	17
	1	90	100	01F01	FLDCT	D	00007	0.3425	2	-4	17
	3	90	100	01F01	FLDCT	D	00008	0.3425	2	0	17
	1	90	100	01F01	FLDCT	D	00009	0.3425	2	-4	17
	5	90	100	01F01	FLDCT	D	00010	0.3425	2	4	17
	7	90	100	01F01	FLDCT	E	00003	0.3425	2	8	17
	5	90	100	01F01	FLDCT	E	00004	0.3425	2	4	17
	9	90	100	01F01	FLDCT	E	00005	0.3425	2	12	17
	1	90	100	01F01	FLDCT	E	00006	0.3425	2	-4	17
	3	90	100	01F01	FLDCT	E	00009	0.3425	2	0	17
	0	90	100	01F01	FLDCT	E	00010	0.3425	2	-6	17
	1	90	100	01F01	FLDCT	E	00011	0.3425	2	-4	17
	2	90	100	01F01	FLDCT	F	00003	0.3425	2	-2	17
	5	90	100	01F01	FLDCT	F	00004	0.3425	2	4	17
	6	90	100	01F01	FLDCT	F	00006	0.3425	2	6	17
	4	90	100	01F01	FLDCT	F	00007	0.3425	2	2	17
	0	90	100	01F01	FLDCT	F	00008	0.3425	2	-6	17
	3	90	100	01F01	FLDCT	F	00009	0.3425	2	0	17
	11	90	100	01F01	FLDCT	F	00010	0.3425	2	16	17
	3	90	100	01F01	FLDCT	F	00011	0.3425	2	0	17

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	1	90	100	01F01	FLDCT	F	00012	0.3425	2	-4	17
	2	90	100	01F01	FLDCT	G	00003	0.3425	2	-2	17
	2	90	100	01F01	FLDCT	G	00004	0.3425	2	-2	17
	0	90	100	01F01	FLDCT	G	00005	0.3425	2	-6	17
	3	90	100	01F01	FLDCT	G	00006	0.3425	2	0	17
	2	90	100	01F01	FLDCT	G	00007	0.3425	2	-2	17
	2	90	100	01F01	FLDCT	G	00008	0.3425	2	-2	17
	0	90	100	01F01	FLDCT	G	00009	0.3425	2	-6	17
	0	90	100	01F01	FLDCT	G	00010	0.3425	2	-6	17
	2	90	100	01F01	FLDCT	G	00011	0.3425	2	-2	17
	2	90	100	01F01	FLDCT	G	00012	0.3425	2	-2	17
	7	90	100	01F01	FLDCT	H	00003	0.3425	2	8	17
	3	90	100	01F01	FLDCT	H	00004	0.3425	2	0	17
	13	90	100	01F01	FLDCT	H	00005	0.3425	2	20	17
	0	90	100	01F01	FLDCT	H	00006	0.3425	2	-6	17
	0	90	100	01F01	FLDCT	H	00007	0.3425	2	-6	17
	7	90	100	01F01	FLDCT	H	00008	0.3425	2	8	17
	2	90	100	01F01	FLDCT	H	00009	0.3425	2	-2	17
	3	90	100	01F01	FLDCT	H	00010	0.3425	2	0	17
	2	90	100	01F01	FLDCT	H	00011	0.3425	2	-2	17
	1	90	100	01F01	FLDCT	H	00012	0.3425	2	-4	17
	4	90	100	01F01	FLDCT	H	00013	0.3425	2	2	17
	3	90	100	01F01	FLDCT	I	00003	0.3425	2	0	17
	4	90	100	01F01	FLDCT	I	00004	0.3425	2	2	17
	0	90	100	01F01	FLDCT	I	00005	0.3425	2	-6	17
	2	90	100	01F01	FLDCT	I	00006	0.3425	2	-2	17
	19	90	100	01F01	FLDCT	I	00007	0.3425	2	31	17
	1	90	100	01F01	FLDCT	I	00008	0.3425	2	-4	17
	6	90	100	01F01	FLDCT	I	00009	0.3425	2	6	17
	5	90	100	01F01	FLDCT	I	00010	0.3425	2	4	17
	5	90	100	01F01	FLDCT	I	00011	0.3425	2	4	17
	3	90	100	01F01	FLDCT	I	00012	0.3425	2	0	17
	3	90	100	01F01	FLDCT	I	00013	0.3425	2	0	17
	3	90	100	01F01	FLDCT	J	00003	0.3425	2	0	17
	5	90	100	01F01	FLDCT	J	00004	0.3425	2	4	17
	0	90	100	01F01	FLDCT	J	00005	0.3425	2	-6	17
	2	90	100	01F01	FLDCT	J	00006	0.3425	2	-2	17
	4	90	100	01F01	FLDCT	J	00007	0.3425	2	2	17
	3	90	100	01F01	FLDCT	J	00008	0.3425	2	0	17

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	5	90	100	01F01	FLDCT	J	00009	0.3425	2	4	17
	3	90	100	01F01	FLDCT	J	00010	0.3425	2	0	17
	3	90	100	01F01	FLDCT	J	00011	0.3425	2	0	17
	10	90	100	01F01	FLDCT	J	00012	0.3425	2	14	17
	4	90	100	01F01	FLDCT	J	00013	0.3425	2	2	17
	6	90	100	01F01	FLDCT	J	00014	0.3425	2	6	17
	2	90	100	01F01	FLDCT	K	00003	0.3425	2	-2	17
	0	90	100	01F01	FLDCT	K	00004	0.3425	2	-6	17
	3	90	100	01F01	FLDCT	K	00005	0.3425	2	0	17
	3	90	100	01F01	FLDCT	K	00006	0.3425	2	0	17
	11	90	100	01F01	FLDCT	K	00007	0.3425	2	16	17
	3	90	100	01F01	FLDCT	K	00008	0.3425	2	0	17
	1	90	100	01F01	FLDCT	K	00009	0.3425	2	-4	17
	4	90	100	01F01	FLDCT	K	00010	0.3425	2	2	17
	2	90	100	01F01	FLDCT	K	00011	0.3425	2	-2	17
	5	90	100	01F01	FLDCT	K	00012	0.3425	2	4	17
	0	90	100	01F01	FLDCT	K	00013	0.3425	2	-6	17
	5	90	100	01F01	FLDCT	K	00014	0.3425	2	4	17
	6	90	100	01F01	FLDCT	L	00004	0.3425	2	6	17
	3	90	100	01F01	FLDCT	L	00005	0.3425	2	0	17
	3	90	100	01F01	FLDCT	L	00006	0.3425	2	0	17
	1	90	100	01F01	FLDCT	L	00007	0.3425	2	-4	17
	0	90	100	01F01	FLDCT	L	00008	0.3425	2	-6	17
	2	90	100	01F01	FLDCT	L	00009	0.3425	2	-2	17
	1	90	100	01F01	FLDCT	L	00010	0.3425	2	-4	17
	3	90	100	01F01	FLDCT	L	00011	0.3425	2	0	17
	0	90	100	01F01	FLDCT	L	00012	0.3425	2	-6	17
	3	90	100	01F01	FLDCT	L	00013	0.3425	2	0	17
	6	90	100	01F01	FLDCT	L	00014	0.3425	2	6	17
	0	90	100	01F01	FLDCT	M	00004	0.3425	2	-6	17
	2	90	100	01F01	FLDCT	M	00005	0.3425	2	-2	17
	1	90	100	01F01	FLDCT	M	00006	0.3425	2	-4	17
	0	90	100	01F01	FLDCT	M	00007	0.3425	2	-6	17
	3	90	100	01F01	FLDCT	M	00008	0.3425	2	0	17
	4	90	100	01F01	FLDCT	M	00009	0.3425	2	2	17
	4	90	100	01F01	FLDCT	M	00010	0.3425	2	2	17
	3	90	100	01F01	FLDCT	M	00011	0.3425	2	0	17
	4	90	100	01F01	FLDCT	M	00012	0.3425	2	2	17
	5	90	100	01F01	FLDCT	M	00013	0.3425	2	4	17

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	3	90	100	01F01	FLDCT	M	00014	0.3425	2	0	17
	4	90	100	01F01	FLDCT	N	00004	0.3425	2	2	17
	1	90	100	01F01	FLDCT	N	00006	0.3425	2	-4	17
	4	90	100	01F01	FLDCT	N	00007	0.3425	2	2	17
	2	90	100	01F01	FLDCT	N	00008	0.3425	2	-2	17
	2	90	100	01F01	FLDCT	N	00009	0.3425	2	-2	17
	4	90	100	01F01	FLDCT	N	00010	0.3425	2	2	17
	2	90	100	01F01	FLDCT	N	00011	0.3425	2	-2	17
	3	90	100	01F01	FLDCT	N	00012	0.3425	2	0	17
	1	90	100	01F01	FLDCT	N	00013	0.3425	2	-4	17
	3	90	100	01F01	FLDCT	N	00014	0.3425	2	0	17
	5	90	100	01F01	FLDCT	O	00004	0.3425	2	4	17
	3	90	100	01F01	FLDCT	O	00009	0.3425	2	0	17
	4	90	100	01F01	FLDCT	O	00010	0.3425	2	2	17
	3	90	100	01F01	FLDCT	O	00011	0.3425	2	0	17
	0	90	100	01F01	FLDCT	O	00012	0.3425	2	-6	17
	3	90	100	01F01	FLDCT	O	00013	0.3425	2	0	17
	5	90	100	01F01	FLDCT	O	00014	0.3425	2	4	17
	0	90	100	01F01	FLDCT	P	00004	0.3425	2	-6	17
	7	90	100	01F01	FLDCT	P	00005	0.3425	2	7	17
	6	90	100	01F01	FLDCT	P	00006	0.3425	2	6	17
	2	90	100	01F01	FLDCT	P	00007	0.3425	2	-2	17
	3	90	100	01F01	FLDCT	P	00008	0.3425	2	0	17
	1	90	100	01F01	FLDCT	P	00009	0.3425	2	-4	17
	3	90	100	01F01	FLDCT	P	00010	0.3425	2	0	17
	4	90	100	01F01	FLDCT	P	00011	0.3425	2	2	17
	0	90	100	01F01	FLDCT	P	00012	0.3425	2	-6	17
	4	90	100	01F01	FLDCT	P	00013	0.3425	2	2	17
	0	90	100	01F01	FLDCT	P	00014	0.3425	2	-6	17
	4	90	100	01F01	FLDCT	Q	00004	0.3425	2	2	17
	2	90	100	01F01	FLDCT	Q	00005	0.3425	2	-2	17
	0	90	100	01F01	FLDCT	Q	00006	0.3425	2	-6	17
	3	90	100	01F01	FLDCT	Q	00007	0.3425	2	0	17
	3	90	100	01F01	FLDCT	Q	00008	0.3425	2	0	17
	5	90	100	01F01	FLDCT	Q	00009	0.3425	2	4	17
	1	90	100	01F01	FLDCT	Q	00010	0.3425	2	-4	17
	2	90	100	01F01	FLDCT	Q	00011	0.3425	2	-2	17
	1	90	100	01F01	FLDCT	Q	00012	0.3425	2	-4	17
	7	90	100	01F01	FLDCT	Q	00013	0.3425	2	7	17

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	0	90	100	01P01	FLDCT	ZZZZZ	00001	0.3425	2	-6	17
	0	90	100	01P01	FLDCT	ZZZZZ	00002	0.3425	2	-6	17
	2	90	100	01P02	FLDCT	ZZZZZ	00001	0.3425	2	-2	17
	5	90	100	01P02	FLDCT	ZZZZZ	00002	0.3425	2	4	17
	4	90	100	01P03	FLDCT	ZZZZZ	00001	0.3425	2	2	17
	5	90	100	01P03	FLDCT	ZZZZZ	00002	0.3425	2	4	17
	59	90	100	01P04	FLDCT	ZZZZZ	00001	0.3425	2	109	17
	13	90	100	01P04	FLDCT	ZZZZZ	00002	0.3425	2	19	17
	3	90	100	01S01	FLDCT	A	00001	0.3425	2	0	17
	9	90	100	01S01	FLDCT	A	00002	0.3425	2	11	17
	3	90	100	01S01	FLDCT	A	00003	0.3425	2	0	17
	1	90	100	01S01	FLDCT	A	00004	0.3425	2	-4	17
	2	90	100	01S01	FLDCT	A	00005	0.3425	2	-2	17
	3	90	100	01S01	FLDCT	A	00006	0.3425	2	0	17
	4	90	100	01S01	FLDCT	B	00001	0.3425	2	2	17
	5	90	100	01S01	FLDCT	B	00002	0.3425	2	4	17
	6	90	100	01S01	FLDCT	B	00003	0.3425	2	6	17
	4	90	100	01S01	FLDCT	B	00004	0.3425	2	2	17
	1	90	100	01S01	FLDCT	B	00005	0.3425	2	-4	17
	3	90	100	01S01	FLDCT	B	00006	0.3425	2	0	17
	2	90	100	01S02	FLDCT	ZZZZZ	00001	0.3425	2	-2	17
	2	90	100	01S02	FLDCT	ZZZZZ	00002	0.3425	2	-2	17
	4	90	100	01S02	FLDCT	ZZZZZ	00003	0.3425	2	2	17
	0	90	100	01S02	FLDCT	ZZZZZ	00004	0.3425	2	-6	17
	0	90	100	01S02	FLDCT	ZZZZZ	00005	0.3425	2	-6	17
	4	90	100	01S03	FLDCT	ZZZZZ	00001	0.3425	2	2	17
	2	90	100	01S03	FLDCT	ZZZZZ	00002	0.3425	2	-2	17
	0	90	100	01S03	FLDCT	ZZZZZ	00003	0.3425	2	-6	17
	2	90	100	01S03	FLDCT	ZZZZZ	00004	0.3425	2	-2	17
	0	90	100	01S03	FLDCT	ZZZZZ	00005	0.3425	2	-6	17
	33	90	100	01S04	FLDCT	ZZZZZ	00001	0.3425	2	58	17

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	4	90	100	01S04	FLDCT	ZZZZZ	00002	0.3425	2	2	17
	10	90	100	01S04	FLDCT	ZZZZZ	00003	0.3425	2	13	17
	9	90	100	01S04	FLDCT	ZZZZZ	00004	0.3425	2	11	17
	3	90	100	01S04	FLDCT	ZZZZZ	00005	0.3425	2	0	17
	2	90	100	01S05	FLDCT	ZZZZZ	00001	0.3425	2	-2	17
	11	90	100	01S05	FLDCT	ZZZZZ	00002	0.3425	2	15	17
	18	90	100	01S05	FLDCT	ZZZZZ	00003	0.3425	2	29	17
	3	90	100	01S05	FLDCT	ZZZZZ	00004	0.3425	2	0	17
	2	90	100	01S05	FLDCT	ZZZZZ	00005	0.3425	2	-2	17
	1	90	100	01S06	FLDCT	ZZZZZ	00001	0.3425	2	-4	17
	6	90	100	01S06	FLDCT	ZZZZZ	00002	0.3425	2	6	17
	9	90	100	01S06	FLDCT	ZZZZZ	00003	0.3425	2	11	17
	1	90	100	01S06	FLDCT	ZZZZZ	00004	0.3425	2	-4	17
	2	90	100	01S06	FLDCT	ZZZZZ	00005	0.3425	2	-2	17
	2	90	100	01T01	FLDCT	ZZZZZ	00001	0.3425	2	-2	17
	1	90	100	01T01	FLDCT	ZZZZZ	00002	0.3425	2	-4	17
	1	90	100	01T01	FLDCT	ZZZZZ	00003	0.3425	2	-4	17
	3	90	100	01T01	FLDCT	ZZZZZ	00004	0.3425	2	0	17
	1	90	100	01T01	FLDCT	ZZZZZ	00005	0.3425	2	-4	17
	4	90	100	01T01	FLDCT	ZZZZZ	00006	0.3425	2	2	17
	0	90	100	01T01	FLDCT	ZZZZZ	00007	0.3425	2	-6	17
	0	90	100	01T01	FLDCT	ZZZZZ	00008	0.3425	2	-6	17
	2	90	100	01T01	FLDCT	ZZZZZ	00009	0.3425	2	-2	17
	4	90	100	01T01	FLDCT	ZZZZZ	00010	0.3425	2	2	17
	0	90	100	01T01	FLDCT	ZZZZZ	00011	0.3425	2	-6	17
	0	90	100	01T01	FLDCT	ZZZZZ	00012	0.3425	2	-6	17
	2	90	100	01T01	FLDCT	ZZZZZ	00013	0.3425	2	-2	17
	1	90	100	01T01	FLDCT	ZZZZZ	00014	0.3425	2	-4	17
	2	90	100	01T01	FLDCT	ZZZZZ	00015	0.3425	2	-2	17
	4	90	100	01T02	FLDCT	ZZZZZ	00001	0.3425	2	2	17
	2	90	100	01T02	FLDCT	ZZZZZ	00002	0.3425	2	-2	17
	1	90	100	01T02	FLDCT	ZZZZZ	00003	0.3425	2	-4	17
	1	90	100	01T02	FLDCT	ZZZZZ	00004	0.3425	2	-4	17
	2	90	100	01T02	FLDCT	ZZZZZ	00005	0.3425	2	-2	17
	2	90	100	01T02	FLDCT	ZZZZZ	00006	0.3425	2	-2	17



Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	4	90	100	01T02	FLDCT	ZZZZZ	00007	0.3425	2	2	17
	3	90	100	01T02	FLDCT	ZZZZZ	00008	0.3425	2	0	17
	0	90	100	01T02	FLDCT	ZZZZZ	00009	0.3425	2	-6	17
	0	90	100	01T02	FLDCT	ZZZZZ	00010	0.3425	2	-6	17
	0	90	100	01W01	FLDCT	A	00001	0.3425	2	-6	17
	9	90	100	01W01	FLDCT	A	00002	0.3425	2	11	17
	1	90	100	01W01	FLDCT	A	00003	0.3425	2	-4	17
	3	90	100	01W01	FLDCT	A	00004	0.3425	2	0	17
	3	90	100	01W01	FLDCT	A	00005	0.3425	2	0	17
	3	90	100	01W01	FLDCT	A	00006	0.3425	2	0	17
	5	90	100	01W01	FLDCT	A	00007	0.3425	2	4	17
	7	90	100	01W01	FLDCT	A	00008	0.3425	2	7	17
	2	90	100	01W01	FLDCT	A	00009	0.3425	2	-2	17
	3	90	100	01W01	FLDCT	A	00010	0.3425	2	0	17
	4	90	100	01W01	FLDCT	A	00011	0.3425	2	2	17
	4	90	100	01W01	FLDCT	A	00012	0.3425	2	2	17
	10	90	100	01W01	FLDCT	A	00013	0.3425	2	13	17
	6	90	100	01W01	FLDCT	A	00014	0.3425	2	6	17
	5	90	100	01W01	FLDCT	A	00015	0.3425	2	4	17
	2	90	100	01W01	FLDCT	A	00016	0.3425	2	-2	17
	6	90	100	01W01	FLDCT	A	00017	0.3425	2	6	17
	1	90	100	01W01	FLDCT	A	00018	0.3425	2	-4	17
	3	90	100	01W01	FLDCT	A	00019	0.3425	2	0	17
	2	90	100	01W01	FLDCT	A	00020	0.3425	2	-2	17
	0	90	100	01W01	FLDCT	A	00021	0.3425	2	-6	17
	5	90	100	01W01	FLDCT	A	00022	0.3425	2	4	17
	3	90	100	01W01	FLDCT	A	00023	0.3425	2	0	17
	2	90	100	01W01	FLDCT	A	00024	0.3425	2	-2	17
	6	90	100	01W01	FLDCT	B	00001	0.3425	2	6	17
	0	90	100	01W01	FLDCT	B	00002	0.3425	2	-6	17
	3	90	100	01W01	FLDCT	B	00003	0.3425	2	0	17
	8	90	100	01W01	FLDCT	B	00004	0.3425	2	9	17
	2	90	100	01W01	FLDCT	B	00005	0.3425	2	-2	17
	6	90	100	01W01	FLDCT	B	00006	0.3425	2	6	17
	3	90	100	01W01	FLDCT	B	00007	0.3425	2	0	17
	0	90	100	01W01	FLDCT	B	00008	0.3425	2	-6	17
	3	90	100	01W01	FLDCT	B	00009	0.3425	2	0	17
	1	90	100	01W01	FLDCT	B	00010	0.3425	2	-4	17

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	0	90	100	01W01	FLDCT	B	00011	0.3425	2	-6	17
	3	90	100	01W01	FLDCT	B	00012	0.3425	2	0	17
	3	90	100	01W01	FLDCT	B	00013	0.3425	2	0	17
	4	90	100	01W01	FLDCT	B	00014	0.3425	2	2	17
	5	90	100	01W01	FLDCT	B	00015	0.3425	2	4	17
	5	90	100	01W01	FLDCT	B	00016	0.3425	2	4	17
	5	90	100	01W01	FLDCT	B	00017	0.3425	2	4	17
	1	90	100	01W01	FLDCT	B	00018	0.3425	2	-4	17
	3	90	100	01W01	FLDCT	B	00019	0.3425	2	0	17
	15	90	100	01W01	FLDCT	B	00020	0.3425	2	23	17
	0	90	100	01W01	FLDCT	B	00021	0.3425	2	-6	17
	2	90	100	01W01	FLDCT	B	00022	0.3425	2	-2	17
	0	90	100	01W01	FLDCT	B	00023	0.3425	2	-6	17
	5	90	100	01W01	FLDCT	B	00024	0.3425	2	4	17
	0	90	100	01W01	FLDCT	C	00012	0.3425	2	-6	17
	0	90	100	01W01	FLDCT	C	00013	0.3425	2	-6	17
	5	90	100	01W01	FLDCT	C	00014	0.3425	2	4	17
	1	90	100	01W02	FLDCT	A	00001	0.3425	2	-4	17
	3	90	100	01W02	FLDCT	A	00002	0.3425	2	0	17
	1	90	100	01W02	FLDCT	A	00003	0.3425	2	-4	17
	3	90	100	01W02	FLDCT	A	00004	0.3425	2	0	17
	1	90	100	01W02	FLDCT	A	00005	0.3425	2	-4	17
	5	90	100	01W02	FLDCT	A	00006	0.3425	2	4	17
	7	90	100	01W02	FLDCT	A	00007	0.3425	2	7	17
	0	90	100	01W02	FLDCT	A	00008	0.3425	2	-6	17
	0	90	100	01W02	FLDCT	A	00009	0.3425	2	-6	17
	9	90	100	01W02	FLDCT	A	00010	0.3425	2	11	17
	6	90	100	01W02	FLDCT	B	00001	0.3425	2	6	17
	1	90	100	01W02	FLDCT	B	00002	0.3425	2	-4	17
	1	90	100	01W02	FLDCT	B	00003	0.3425	2	-4	17
	4	90	100	01W02	FLDCT	B	00004	0.3425	2	2	17
	2	90	100	01W02	FLDCT	B	00005	0.3425	2	-2	17
	0	90	100	01W02	FLDCT	B	00006	0.3425	2	-6	17
	1	90	100	01W02	FLDCT	B	00007	0.3425	2	-4	17
	2	90	100	01W02	FLDCT	B	00008	0.3425	2	-2	17
	2	90	100	01W02	FLDCT	B	00009	0.3425	2	-2	17
	0	90	100	01W02	FLDCT	B	00010	0.3425	2	-6	17

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	0	90	100	01W03	FLDCT	A	00001	0.3425	2	-6	17
	4	90	100	01W03	FLDCT	A	00002	0.3425	2	2	17
	14	90	100	01W03	FLDCT	A	00003	0.3425	2	21	17
	3	90	100	01W03	FLDCT	A	00004	0.3425	2	0	17
	10	90	100	01W03	FLDCT	A	00005	0.3425	2	13	17
	5	90	100	01W03	FLDCT	A	00006	0.3425	2	4	17
	2	90	100	01W03	FLDCT	A	00007	0.3425	2	-2	17
	2	90	100	01W03	FLDCT	A	00008	0.3425	2	-2	17
	0	90	100	01W03	FLDCT	A	00009	0.3425	2	-6	17
	1	90	100	01W03	FLDCT	A	00010	0.3425	2	-4	17
	2	90	100	01W03	FLDCT	A	00011	0.3425	2	-2	17
	0	90	100	01W03	FLDCT	A	00012	0.3425	2	-6	17
	1	90	100	01W03	FLDCT	A	00013	0.3425	2	-4	17
	0	90	100	01W03	FLDCT	A	00014	0.3425	2	-6	17
	0	90	100	01W03	FLDCT	A	00015	0.3425	2	-6	17
	4	90	100	01W03	FLDCT	A	00016	0.3425	2	2	17
	5	90	100	01W03	FLDCT	A	00017	0.3425	2	4	17
	14	90	100	01W03	FLDCT	A	00018	0.3425	2	21	17
	3	90	100	01W03	FLDCT	B	00001	0.3425	2	0	17
	14	90	100	01W03	FLDCT	B	00002	0.3425	2	21	17
	1	90	100	01W03	FLDCT	B	00003	0.3425	2	-4	17
	4	90	100	01W03	FLDCT	B	00005	0.3425	2	2	17
	1	90	100	01W03	FLDCT	B	00006	0.3425	2	-4	17
	1	90	100	01W03	FLDCT	B	00007	0.3425	2	-4	17
	6	90	100	01W03	FLDCT	B	00008	0.3425	2	6	17
	3	90	100	01W03	FLDCT	B	00009	0.3425	2	0	17
	4	90	100	01W03	FLDCT	B	00010	0.3425	2	2	17
	4	90	100	01W03	FLDCT	B	00011	0.3425	2	2	17
	1	90	100	01W03	FLDCT	B	00012	0.3425	2	-4	17
	2	90	100	01W03	FLDCT	B	00013	0.3425	2	-2	17
	3	90	100	01W03	FLDCT	B	00014	0.3425	2	0	17
	0	90	100	01W03	FLDCT	B	00015	0.3425	2	-6	17
	1	90	100	01W03	FLDCT	B	00016	0.3425	2	-4	17
	3	90	100	01W03	FLDCT	B	00017	0.3425	2	0	17
	3	90	100	01W03	FLDCT	B	00018	0.3425	2	0	17
	0	90	100	02F01	FLDCT	A	00001	0.3425	2	-6	17
	4	90	100	02F01	FLDCT	A	00002	0.3425	2	2	17
	3	90	100	02F01	FLDCT	A	00003	0.3425	2	0	17

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	0	90	100	02F01	FLDCT	A	00004	0.3425	2	-6	17
	1	90	100	02F01	FLDCT	A	00005	0.3425	2	-4	17
	3	90	100	02F01	FLDCT	B	00001	0.3425	2	0	17
	3	90	100	02F01	FLDCT	B	00002	0.3425	2	0	17
	4	90	100	02F01	FLDCT	B	00003	0.3425	2	2	17
	2	90	100	02F01	FLDCT	B	00004	0.3425	2	-2	17
	4	90	100	02F01	FLDCT	B	00005	0.3425	2	2	17
	4	90	100	02F01	FLDCT	C	00001	0.3425	2	2	17
	4	90	100	02F01	FLDCT	C	00002	0.3425	2	2	17
	3	90	100	02F01	FLDCT	C	00003	0.3425	2	0	17
	3	90	100	02F01	FLDCT	C	00004	0.3425	2	0	17
	22	90	100	02F01	FLDCT	C	00005	0.3425	2	37	17
	5	90	100	02W01	FLDCT	A	00001	0.3425	2	4	17
	0	90	100	02W01	FLDCT	A	00002	0.3425	2	-6	17
	5	90	100	02W01	FLDCT	A	00003	0.3425	2	4	17
	1	90	100	02W01	FLDCT	A	00004	0.3425	2	-4	17
	3	90	100	02W01	FLDCT	A	00005	0.3425	2	0	17
	0	90	100	02W01	FLDCT	B	00001	0.3425	2	-6	17
	2	90	100	02W01	FLDCT	B	00002	0.3425	2	-2	17
	5	90	100	02W01	FLDCT	B	00003	0.3425	2	4	17
	1	90	100	02W01	FLDCT	B	00004	0.3425	2	-4	17
	0	90	100	02W01	FLDCT	B	00005	0.3425	2	-6	17
	1	90	100	02W01	FLDCT	C	00001	0.3425	2	-4	17
	3	90	100	02W01	FLDCT	C	00002	0.3425	2	0	17
	7	90	100	02W01	FLDCT	C	00003	0.3425	2	7	17
	3	90	100	02W01	FLDCT	C	00004	0.3425	2	0	17
	9	90	100	02W01	FLDCT	C	00005	0.3425	2	11	17
	1	90	100	02W02	FLDCT	A	00001	0.3425	2	-4	17
	2	90	100	02W02	FLDCT	A	00002	0.3425	2	-2	17
	5	90	100	02W02	FLDCT	A	00003	0.3425	2	4	17
	2	90	100	02W02	FLDCT	B	00001	0.3425	2	-2	17
	4	90	100	02W02	FLDCT	B	00002	0.3425	2	2	17
	2	90	100	02W02	FLDCT	B	00003	0.3425	2	-2	17
	2	90	100	02W02	FLDCT	C	00001	0.3425	2	-2	17
	0	90	100	02W02	FLDCT	C	00002	0.3425	2	-6	17
	2	90	100	02W02	FLDCT	C	00003	0.3425	2	-2	17

Package 12 Removable Beta Contamination Package A0212 (Suspect Affected Process Room)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	0	90	100	02W03	FLDCT	A	00001	0.3425	2	-6	17
	0	90	100	02W03	FLDCT	A	00002	0.3425	2	-6	17
	2	90	100	02W03	FLDCT	A	00003	0.3425	2	-2	17
	0	90	100	02W03	FLDCT	A	00004	0.3425	2	-6	17
	0	90	100	02W03	FLDCT	A	00005	0.3425	2	-6	17
	3	90	100	02W03	FLDCT	B	00001	0.3425	2	0	17
	13	90	100	02W03	FLDCT	B	00002	0.3425	2	19	17
	4	90	100	02W03	FLDCT	B	00003	0.3425	2	2	17
	0	90	100	02W03	FLDCT	B	00004	0.3425	2	-6	17
	5	90	100	02W03	FLDCT	B	00005	0.3425	2	2	17
	1	90	100	02W03	FLDCT	C	00001	0.3425	2	-4	17
	1	90	100	02W03	FLDCT	C	00002	0.3425	2	-4	17
	0	90	100	02W03	FLDCT	C	00003	0.3425	2	-6	17
	2	90	100	02W03	FLDCT	C	00004	0.3425	2	-2	17
	3	90	100	02W03	FLDCT	C	00005	0.3425	2	0	17
	2	90	100	02W04	FLDCT	A	00001	0.3425	2	-2	17
	2	90	100	02W04	FLDCT	A	00002	0.3425	2	-2	17
	0	90	100	02W04	FLDCT	A	00003	0.3425	2	-6	17
	2	90	100	02W04	FLDCT	B	00001	0.3425	2	-2	17
	0	90	100	02W04	FLDCT	B	00002	0.3425	2	-6	17
	0	90	100	02W04	FLDCT	B	00003	0.3425	2	-6	17
	3	90	100	02W04	FLDCT	C	00001	0.3425	2	0	17
	2	90	100	02W04	FLDCT	C	00002	0.3425	2	-2	17
	0	90	100	02W04	FLDCT	C	00003	0.3425	2	-6	17
									# Measurements	395	
									Average	1	dpm/100cm <sup>2</sup>
									Maximum	109	dpm/100cm <sup>2</sup>
									STD DEV	9	dpm/100cm <sup>2</sup>
									95% CL on Mean	1	dpm/100cm <sup>2</sup>

-----ALPHA-----  
 ) Eff: 34.87% Bkg: 0.00 cpm MDA: 5.17 dpm )  
 ) Eff: 34.25% Bkg: 1.90 cpm MDA: 20.55 dpm )  
 -----BETA-----

ID	RPT	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0.67	1.91	8	3.23	9.44		06-28-2001	09:39:34
002	00	2	0.00	0.00	2	-0.57	-1.65		06-28-2001	09:41:33
003	00	3	0.00	0.00	5	1.43	4.18		06-28-2001	09:43:32

Performed By: [Signature] Date: 4-28-01  
 Reviewed By: [Signature] Date: 7/1/01

ALPHA				BETA				DATE	TIME			
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		10	4.77	13.92		06-28-2001	09:48:30
002	00	2	0	0.00	0.00		5	1.43	4.18		06-28-2001	09:50:29
003	00	3	0	0.00	0.00		8	3.43	10.02		06-28-2001	09:52:28
004	00	4	0	0.00	0.00		1	-1.23	-3.60		06-28-2001	09:54:27
005	00	5	0	0.00	0.00		9	4.10	11.97		06-28-2001	09:56:26
006	00	6	0	0.00	0.00		6	2.10	6.13		06-28-2001	09:58:25
007	00	7	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	10:00:24

Performed By: *Jula* Date: 6-28-01  
Reviewed By: *P. J. G.* Date: 7/11/01

FINAL SURVEY 01F01 C PIN 12

PIC IPC9025 216712

ID	ALPHA				BETA				DATE	TIME	
	NET CPM	MDA	LIMITS	EFF	NET CPM	MDA	LIMITS	EFF			
001	0	0.00	0.00	34.97%	0	0.00	0.00	1.90	20.55	06-28-2001	10:07:10
002	0	0.00	0.00	34.25%	0	0.00	0.00	1.90	20.55	06-28-2001	10:07:09
003	0	0.00	0.00	34.25%	2	0.00	0.00	1.65	1.65	06-28-2001	10:11:08
004	0	0.00	0.00	34.25%	1	0.00	0.00	1.23	3.60	06-28-2001	10:13:07
005	0	0.00	0.00	34.25%	3	0.00	0.00	0.10	0.29	06-28-2001	10:15:06
006	0	0.00	0.00	34.25%	1	0.00	0.00	1.23	3.60	06-28-2001	10:17:05
007	0	0.00	0.00	34.25%	6	0.00	0.00	2.10	6.13	06-28-2001	10:19:04

Performed By: [Signature] Date: 6-28-01

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



ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 1.90 cpm MDA: 20.55 dpm							
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	3	0	0.00	0.00		3	0.10	0.29		06-28-2001	10:23:26
002	00	4	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	10:25:25
003	00	5	0	0.00	0.00		6	2.10	6.13		06-28-2001	10:27:24
004	00	6	0	0.00	0.00		1	-1.23	-3.60		06-28-2001	10:29:23
005	00	7	0	0.00	0.00		3	0.10	0.29		06-28-2001	10:31:22
006	00	8	0	0.00	0.00		1	-1.23	-3.60		06-28-2001	10:33:21
007	00	9	0	0.00	0.00		5	1.43	4.18		06-28-2001	10:35:20
008	00	10	0	0.00	0.00		7	2.77	8.08		06-28-2001	10:37:19

Performed By: *M. Wilson* Date: 6-28-01  
Reviewed By: *P. Adams* Date: 7/6/01

ALPHA

Err: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | Err: 34.25% Bkg: 1.90 cpm MDA: 20.55 dpm

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

SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	00	3	0.00	0.00	1.43	5	1.43	4.18	06-28-2001	10:42:25	
002	00	00	4	0.00	0.00	4.10	9	4.10	11.97	06-28-2001	10:44:24	
003	00	00	5	0.00	0.00	1.43	5	1.43	4.18	06-28-2001	10:46:23	
004	00	00	9	0.00	0.00	0.10	3	0.29	06-28-2001	10:48:22		
005	00	10	0	0.00	0.00	-1.90	0	-5.55	06-28-2001	10:50:21		
006	00	11	0	0.00	0.00	-1.23	1	-3.60	06-28-2001	10:52:20		

Performed By: *Allen* Date: *6-28-01*  
 Reviewed By: *Blay* Date: *7/1/01*

-----ALPHA-----

| Eff: 34.97% Bkg: 0.00 cpm WDA: 5.17 dpm | Eff: 34.25% Bkg: 2.10 cpm WDA: 21.34 dpm |

! SN-RPT-ID --COUNTS--NET CPM--DPM---LIMITS--COUNTS--NET CPM--DPM---LIMITS-- | DATE --TIME -

001 00 6 0 0.00 0.00 1 -1.43 -4.18 07-02-2001 15:11:21

Performed By: [Signature] Date: 7/2/01  
Reviewed By: [Signature] Date: 7/11/01

FINAL SURVEY  
PIC IPC9025 216712

01F01 *06-28-01*  
Z PIN 12  
F

----- ALPHA ----- | ----- BETA -----  
| Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | Eff: 34.25% Bkg: 1.90 cpm MDA: 20.55 dpm |

SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	3	1	0.67	1.91		2	-0.77	-2.24		06-28-2001	11:16:14
002	00	4	0	0.00	0.00		5	1.43	4.18		06-28-2001	11:18:13
<del>003</del>	<del>00</del>	<del>5</del>	<del>0</del>	<del>0.00</del>	<del>0.00</del>		<del>0</del>	<del>-1.90</del>	<del>-5.55</del>		<del>06-28-2001</del>	<del>11:20:13</del>
004	00	6	0	0.00	0.00		6	2.10	6.13		06-28-2001	11:22:11
005	00	7	0	0.00	0.00		4	0.77	2.24		06-28-2001	11:24:10
006	00	8	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	11:26:09
007	00	9	0	0.00	0.00		3	0.10	0.29		06-28-2001	11:28:08
008	00	10	0	0.00	0.00		11	5.43	15.86		06-28-2001	11:30:07
009	00	11	1	0.67	1.91		3	-0.10	-0.29		06-28-2001	11:32:06
010	00	12	0	0.00	0.00		1	-1.23	-3.60		06-28-2001	11:34:05

*Copy  
X-20*

Performed By: *Melen* Date: *6-28-01*  
Reviewed By: *RLO* Date: *7/1/01*

ALPHA				BETA				DATE	TIME			
SN	RPT	ID	LIMITS	SN	RPT	ID	LIMITS					
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm				Eff: 34.25% Bkg: 1.90 cpm NDA: 20.55 dpm								
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	3	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	11:39:24
002	00	4	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	11:41:24
003	00	5	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	11:43:23
004	00	6	0	0.00	0.00		3	0.10	0.29		06-28-2001	11:45:22
005	00	7	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	11:47:21
006	00	8	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	11:49:20
007	00	9	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	11:51:19
008	00	10	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	11:53:18
009	00	11	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	11:55:17
010	00	12	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	11:57:16

Performed By: *M. L. ...* Date: 7/12/01  
Reviewed By: *P. L. ...* Date: 7/12/01

ALPHA							BETA						
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm							Eff: 34.25% Bkg: 1.90 cpm MDA: 20.55 dpm						
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME	
001	00	3	0	0.00	0.00		7	2.77	8.08		06-28-2001	12:37:40	
002	00	4	0	0.00	0.00		3	0.10	0.29		06-28-2001	12:39:39	
003	00	5	0	0.00	0.00		13	6.77	19.76		06-28-2001	12:41:38	
004	00	6	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	12:43:37	
005	00	7	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	12:45:36	
006	00	8	1	0.67	1.91		7	2.57	7.50		06-28-2001	12:47:35	
007	00	9	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	12:49:34	
008	00	10	0	0.00	0.00		3	0.10	0.29		06-28-2001	12:51:33	
009	00	11	1	0.67	1.91		2	-0.77	-2.24		06-28-2001	12:53:32	
010	00	12	0	0.00	0.00		1	-1.23	-3.60		06-28-2001	12:55:31	
011	00	13	0	0.00	0.00		4	0.77	2.24		06-28-2001	12:57:30	

Performed By: *[Signature]* Date: 6-28-01  
Reviewed By: *[Signature]* Date: 7/11/01

ALPHA						BETA					
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm						Eff: 34.25% Bkg: 1.90 cpm MDA: 20.55 dpm					
SN	RPT	ID	COUNTS	NET CPM	DPH	COUNTS	NET CPM	DPH	LIMITS	DATE	TIME
001	00	3	0	0.00	0.00	3	0.10	0.29		06-28-2001	14:21:50
002	00	4	1	0.67	1.91	4	0.57	1.66		06-28-2001	14:23:49
003	00	5	0	0.00	0.00	0	-1.90	-5.55		06-28-2001	14:25:48
004	00	6	0	0.00	0.00	2	-0.57	-1.65		06-28-2001	14:27:47
005	00	7	0	0.00	0.00	19	10.77	31.44		06-28-2001	14:29:45
006	00	8	0	0.00	0.00	1	-1.23	-3.60		06-28-2001	14:31:45
007	00	9	0	0.00	0.00	6	2.10	6.13		06-28-2001	14:33:44
008	00	10	0	0.00	0.00	5	1.43	4.18		06-28-2001	14:35:43
009	00	11	0	0.00	0.00	5	1.43	4.18		06-28-2001	14:37:42
010	00	12	0	0.00	0.00	3	0.10	0.29		06-28-2001	14:39:41
011	00	13	1	0.67	1.91	3	-0.10	-0.29		06-28-2001	14:41:40

Performed By: *[Signature]* Date: 6-28-01  
 Reviewed By: *[Signature]* Date: 7/11/01

-----ALPHA-----  
-----BETA-----

Eff: 34.97% Bkg: 5.17 dpm | Eft: 34.25% Bkg: 1.90 cpm WDA: 20.55 dpm

---RM---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	3	0.00	0.00	0.10	3	0.10	0.29	0.10	06-28-2001	14:46:48
002 00	4	1.57	1.91	1.23	5	3.60	3.60	1.23	06-28-2001	14:48:47
003 00	5	0.00	0.00	-1.90	0	-3.55	-3.55	-1.90	06-28-2001	14:50:46
004 00	6	0.00	0.00	-0.57	2	-1.65	-1.65	-0.57	06-28-2001	14:52:45
005 00	7	0.00	0.00	0.77	4	2.24	2.24	0.77	06-28-2001	14:54:44
006 00	8	0.67	1.91	-0.10	3	-0.29	-0.29	-0.10	06-28-2001	14:56:43
007 00	9	0.00	0.00	1.43	5	4.18	4.18	1.43	06-28-2001	14:58:42
008 00	10	0.00	0.00	0.10	3	0.29	0.29	0.10	06-28-2001	15:00:41
009 00	11	0.00	0.00	0.10	3	0.29	0.29	0.10	06-28-2001	15:02:40
010 00	12	0.00	0.00	4.77	10	13.92	13.92	4.77	06-28-2001	15:04:39
011 00	13	0.00	0.00	0.77	4	2.24	2.24	0.77	06-28-2001	15:06:38
012 00	14	0.00	0.00	2.10	6	6.13	6.13	2.10	06-28-2001	15:08:37

Performed By: *[Signature]* Date: 6-28-21  
 Reviewed By: *[Signature]* Date: 7/1/21



ALPHA				BETA				DATE	TIME			
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	3	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	15:30:04
002	00	4	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	15:32:03
003	00	5	0	0.00	0.00		3	0.10	0.29		06-28-2001	15:34:02
004	00	6	0	0.00	0.00		3	0.10	0.29		06-28-2001	15:36:01
005	00	7	0	0.00	0.00		11	5.43	15.86		06-28-2001	15:38:00
006	00	8	0	0.00	0.00		3	0.10	0.29		06-28-2001	15:39:59
007	00	9	0	0.00	0.00		1	-1.23	-3.60		06-28-2001	15:41:58
008	00	10	0	0.00	0.00		4	0.77	2.24		06-28-2001	15:43:57
009	00	11	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	15:45:56
010	00	12	0	0.00	0.00		5	1.43	4.18		06-28-2001	15:47:55
011	00	13	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	15:49:54
012	00	14	0	0.00	0.00		5	1.43	4.18		06-28-2001	15:51:53

Performed By: [Signature] Date: 6-28-01  
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	4	1	0.67	1.91		6	1.90	5.55		06-28-2001	16:00:51
002	00	5	0	0.00	0.00		3	0.10	0.29		06-28-2001	16:02:50
003	00	6	0	0.00	0.00		3	0.10	0.29		06-28-2001	16:04:49
004	00	7	0	0.00	0.00		1	-1.23	-3.60		06-28-2001	16:06:48
005	00	8	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	16:08:47
006	00	9	0	0.00	0.00		2	-0.57	-1.65		06-28-2001	16:10:46
007	00	10	0	0.00	0.00		1	-1.23	-3.60		06-28-2001	16:12:45
008	00	11	0	0.00	0.00		3	0.10	0.29		06-28-2001	16:14:44
009	00	12	0	0.00	0.00		0	-1.90	-5.55		06-28-2001	16:16:43
010	00	13	0	0.00	0.00		3	0.10	0.29		06-28-2001	16:18:42
011	00	14	0	0.00	0.00		6	2.10	6.13		06-28-2001	16:20:41

Performed By: *[Signature]* Date: 6-28-01  
Reviewed By: *[Signature]* Date: 7/11/01

Performed By: [Signature] Date: 6-29-01  
 Reviewed By: [Signature] Date: 7/11/01

FINAL SURVEY 01F01 M PIN 12  
 PIC IP09025 216712  
 -----ALPHA-----  
 | ETT: 34.97% BKG: 0.00 cpm MDA: 5.17 dpm | ETT: 34.25% BKG: 2.10 cpm MDA: 21.34 dpm |  
 |-----BETA-----|  
 |---COUNTS---|---NET CPM---|---DPM---|---LIMITS---|---LIMITS---|---DATE---|---TIME---|  
 | 4 | 0 | 0.00 | 0.00 | 0 | 0 | 06-29-2001 09:52:17 |  
 |---SN---RPT---ID---|  
 |---COUNTS---|---NET CPM---|---DPM---|---LIMITS---|---LIMITS---|---DATE---|---TIME---|

ALPHA						BETA						
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm						Eff: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm						
SN	RPT	ID	COUNTS	NET CPK	DPM	LIMITS	COUNTS	NET CPK	DPM	LIMITS	DATE	TIME
002	00	5	0	0.00	0.00		2	-0.77	-2.24		06-29-2001	09:59:22
003	00	6	0	0.00	0.00		1	-1.43	-4.18		06-29-2001	10:01:20
004	00	7	0	0.00	0.00		0	-2.10	-6.13		06-29-2001	10:03:19
005	00	8	0	0.00	0.00		3	-0.10	-0.29		06-29-2001	10:05:18
006	00	9	0	0.00	0.00		4	0.57	1.65		06-29-2001	10:07:17
007	00	10	0	0.00	0.00		4	0.57	1.65		06-29-2001	10:09:16
008	00	11	0	0.00	0.00		3	-0.10	-0.29		06-29-2001	10:11:15
009	00	12	1	0.67	1.91		4	0.37	1.07		06-29-2001	10:13:14
010	00	13	0	0.00	0.00		5	1.23	3.60		06-29-2001	10:15:13
011	00	14	0	0.00	0.00		3	-0.10	-0.29		06-29-2001	10:17:12

Performed By: *[Signature]* Date: 6-29-01  
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	4	0	0.00	0.00		4	0.57	1.65		06-29-2001	10:22:38
002	00	6	0	0.00	0.00		1	-1.43	-4.18		06-29-2001	10:24:38
003	00	7	0	0.00	0.00		4	0.57	1.65		06-29-2001	10:26:37
004	00	8	0	0.00	0.00		2	-0.77	-2.24		06-29-2001	10:28:36
005	00	9	0	0.00	0.00		2	-0.77	-2.24		06-29-2001	10:30:35
006	00	10	0	0.00	0.00		4	0.57	1.65		06-29-2001	10:32:34
007	00	11	0	0.00	0.00		2	-0.77	-2.24		06-29-2001	10:34:33
008	00	12	0	0.00	0.00		3	-0.10	-0.29		06-29-2001	10:36:32
009	00	13	1	0.67	1.91		1	-1.63	-4.77		06-29-2001	10:38:31
010	00	14	0	0.00	0.00		3	-0.10	-0.29		06-29-2001	10:40:30

Performed By: *[Signature]* Date: 6-29-01  
Reviewed By: *[Signature]* Date: 7/11/01

ID	COUNTS	NET CPM	ALPHA		BETA		DATE	TIME
			MDA	LIMITS	MDA	LIMITS		
001	4	0.00	5.17 dpm	0.00	2.10 cpm	21.34 dpm	06-29-2001	10:48:59
002	9	0.00	0.00	-0.10	-0.29	3.60	06-29-2001	10:49:59
003	10	0.00	0.00	0.57	1.65	-0.29	06-29-2001	10:47:58
004	11	0.00	0.00	-0.10	-0.29	1.65	06-29-2001	10:48:57
005	12	0.00	0.00	-2.10	-6.13	-0.29	06-29-2001	10:51:56
006	13	0.00	0.00	-0.10	-0.29	3.60	06-29-2001	10:53:55
007	14	0.00	0.00	1.23	3.60	1.23	06-29-2001	10:55:54

Performed By: [Signature] Date: 6-28-01  
 Reviewed By: [Signature] Date: 7/11/01

ALPHA				BETA				DATE	TIME			
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	4	0	0.00	0.00		0	-2.10	-6.13		06-29-2001	11:06:22
002	00	5	0	0.00	0.00		7	2.57	7.49		06-29-2001	11:08:22
003	00	6	0	0.00	0.00		6	1.90	5.55		06-29-2001	11:10:21
004	00	7	0	0.00	0.00		2	-0.77	-2.24		06-29-2001	11:12:20
005	00	8	0	0.00	0.00		3	-0.10	-0.29		06-29-2001	11:14:19
006	00	9	1	0.67	1.91		1	-1.63	-4.77		06-29-2001	11:16:18
007	00	10	0	0.00	0.00		3	-0.10	-0.29		06-29-2001	11:18:17
008	00	11	0	0.00	0.00		4	0.57	1.65		06-29-2001	11:20:16
009	00	12	0	0.00	0.00		0	-2.10	-6.13		06-29-2001	11:22:15
010	00	13	0	0.00	0.00		4	0.57	1.65		06-29-2001	11:24:14
011	00	14	0	0.00	0.00		0	-2.10	-6.13		06-29-2001	11:26:13

Performed By: *[Signature]* Date: 6-29-01  
Reviewed By: *[Signature]* Date: 7/11/01

ID	COUNTS	NET CPM	ALPHA			BETA			DATE	TIME
			EFF: 34.97%	BRG: 0.00 cpm	MDA: 5.17 dpm	EFF: 34.25%	BRG: 2.10 cpm	MDA: 21.34 dpm		
001 00	4	0.00	0.00	0.00	4	0.57	1.65	06-29-2001	11:29:41	
002 00	5	0.00	0.00	0.00	2	-0.77	-2.24	06-29-2001	11:31:40	
003 00	6	0.00	0.00	0.00	0	-2.10	-6.13	06-29-2001	11:33:39	
004 00	7	0.00	0.00	0.00	3	-0.10	-0.29	06-29-2001	11:35:38	
005 00	8	0.00	0.00	0.00	3	-0.10	-0.29	06-29-2001	11:37:37	
006 00	9	0.00	0.00	0.00	5	1.23	3.60	06-29-2001	11:39:36	
007 00	10	0.00	0.00	0.00	1	-1.43	-4.18	06-29-2001	11:41:35	
008 00	11	0.00	0.00	0.00	2	-0.77	-2.24	06-29-2001	11:43:34	
009 00	12	0.00	0.00	0.00	1	-1.43	-4.18	06-29-2001	11:45:33	
010 00	13	0.00	0.00	0.00	7	2.57	7.49	06-29-2001	11:47:32	

Performed By: [Signature] Date: 6-29-01  
 Reviewed By: [Signature] Date: 7/1/01



-----ALPHA-----  
 ERR: 34.97% BKG: 0.00 cpm WDA: 5.17 dpm ERR: 34.25% BKG: 2.10 cpm WDA: 21.34 dpm  
 ---SM---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	0	0.00		0	-2.10	-6.13		06-29-2001	12:47:23
002	00	0	0.00		9	3.90	11.39		06-29-2001	12:49:22
003	00	0	0.00		1	-1.43	-4.18		06-29-2001	12:51:21
004	00	0	0.00		3	-0.10	-0.29		06-29-2001	12:53:20
005	00	0	0.00		3	-0.10	-0.29		06-29-2001	12:55:19
006	00	0	0.00		3	-0.10	-0.29		06-29-2001	12:57:18
007	00	0	0.00		5	1.23	3.60		06-29-2001	12:59:17
008	00	0	0.00		7	2.57	7.49		06-29-2001	13:01:16
009	00	1	0.67		2	-0.97	-2.82		06-29-2001	13:03:15
010	00	0	0.00		3	-0.10	-0.29		06-29-2001	13:05:14
011	00	1	0.67		4	0.37	1.07		06-29-2001	13:07:13
012	00	0	0.00		4	0.57	1.65		06-29-2001	13:09:12
013	00	0	0.00		10	4.57	13.33		06-29-2001	13:11:11
014	00	0	0.00		6	1.90	5.55		06-29-2001	13:13:10
015	00	0	0.00		5	1.23	3.60		06-29-2001	13:15:09
016	00	0	0.00		2	-0.77	-2.24		06-29-2001	13:17:08
017	00	0	0.00		6	1.90	5.55		06-29-2001	13:19:07
018	00	0	0.00		1	-1.43	-4.18		06-29-2001	13:21:06
019	00	0	0.00		3	-0.10	-0.29		06-29-2001	13:23:05
020	00	0	0.00		2	-0.77	-2.24		06-29-2001	13:25:04
021	00	0	0.00		0	-2.10	-6.13		06-29-2001	13:27:03
022	00	0	0.00		5	1.23	3.60		06-29-2001	13:29:02
023	00	0	0.00		3	-0.10	-0.29		06-29-2001	13:31:01
024	00	0	0.00		2	-0.77	-2.24		06-29-2001	13:33:00

Performed By: *[Signature]* Date: 6-29-01  
 Reviewed By: *[Signature]* Date: 7/11/01

Reviewed By: *[Signature]* Date: 7/11/01  
 Performed By: *[Signature]* Date: 6-29-01

ALPHA

Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | Eff: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm

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SN	RPT	ID	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
021	00	21	0.00	0.00	-2.10	0	-2.10	-6.13	0	06-29-2001	14:29:25
022	00	22	0.00	0.00	-0.77	2	-2.24	-6.13	0	06-29-2001	14:31:26
023	00	23	0.00	0.00	-2.10	0	-6.13	-6.13	0	06-29-2001	14:33:27
024	00	24	0.00	0.00	1.23	5	3.60	3.60	0	06-29-2001	14:35:28

BETA

Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | Eff: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm

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SN	RPT	ID	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0.00	0.00	-1.90	6	5.55	5.55	0	06-29-2001	13:44:03
002	00	2	0.00	0.00	-2.10	0	-6.13	-6.13	0	06-29-2001	13:50:02
003	00	3	0.00	0.00	-0.10	3	-0.29	-0.29	0	06-29-2001	13:52:01
004	00	4	0.00	0.00	3.23	8	9.44	9.44	0	06-29-2001	13:54:00
005	00	5	0.00	0.00	-0.77	2	-2.24	-2.24	0	06-29-2001	13:55:59
006	00	6	0.00	0.00	1.90	6	5.55	5.55	0	06-29-2001	13:57:58
007	00	7	0.00	0.00	-0.10	3	-0.29	-0.29	0	06-29-2001	13:59:57
008	00	8	0.00	0.00	-2.10	0	-6.13	-6.13	0	06-29-2001	14:01:56
009	00	9	0.00	0.00	-0.10	3	-0.29	-0.29	0	06-29-2001	14:03:55
010	00	10	0.00	0.00	-1.43	1	-4.18	-4.18	0	06-29-2001	14:05:54
011	00	11	0.00	0.00	-2.10	0	-6.13	-6.13	0	06-29-2001	14:07:53
012	00	12	0.00	0.00	-0.10	3	-0.29	-0.29	0	06-29-2001	14:09:52
013	00	13	0.00	0.00	-0.10	3	-0.29	-0.29	0	06-29-2001	14:11:51
014	00	14	0.00	0.00	0.57	4	1.65	1.65	0	06-29-2001	14:13:50
015	00	15	0.00	0.00	1.23	5	3.60	3.60	0	06-29-2001	14:15:49
016	00	16	0.00	0.00	1.23	5	3.60	3.60	0	06-29-2001	14:17:48
017	00	17	0.00	0.00	1.23	5	3.60	3.60	0	06-29-2001	14:19:47
018	00	18	0.00	0.00	-1.43	1	-4.18	-4.18	0	06-29-2001	14:21:46
019	00	19	0.00	0.00	-0.10	3	-0.29	-0.29	0	06-29-2001	14:23:45
020	00	20	0.00	0.00	7.90	15	23.07	23.07	0	06-29-2001	14:25:44

ID	ALPHA				BETA			
	EFF: 34.97%	BKG: 0.00 cpm	MDA: 5.17 dpm	LIMITS: 0	EFF: 34.25%	BKG: 2.10 cpm	MDA: 21.74 dpm	LIMITS: 0
001 00	12	0	0.00	0.00	0	-2.10	-6.13	06-29-2001 14:44:03
002 00	13	0	0.00	0.00	0	-2.10	-6.13	06-29-2001 14:44:03
003 00	14	0	0.00	0.00	5	1.23	3.60	06-29-2001 14:44:02

Performed By: [Signature] Date: 6-29-01

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

		ALPHA				BETA								
ISN	RPT	ID	NET CPM	DPH	LIMITS	Eff	34.25% Bkg	2.10 cpm NDA	21.34 dpm	NET CPM	DPH	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00	1	-1.43	-4.18	-4.18	06-29-2001	14:53:21			
002	00	2	0	0.00	0.00	3	-0.10	-0.29	-0.29	06-29-2001	14:53:21			
003	00	3	0	0.00	0.00	1	-1.43	-4.18	-4.18	06-29-2001	14:53:20			
004	00	4	0	0.00	0.00	3	-0.10	-0.29	-0.29	06-29-2001	14:57:19			
005	00	5	0	0.00	0.00	1	-1.43	-4.18	-4.18	06-29-2001	14:59:18			
006	00	6	0	0.00	0.00	5	1.23	3.60	3.60	06-29-2001	15:01:17			
007	00	7	0	0.00	0.00	7	2.57	7.49	7.49	06-29-2001	15:03:16			
008	00	8	1	0.67	1.91	0	-2.30	-6.71	-6.71	06-29-2001	15:03:15			
009	00	9	0	0.00	0.00	0	-2.10	-6.13	-6.13	06-29-2001	15:07:14			
010	00	10	0	0.00	0.00	9	3.90	11.39	11.39	06-29-2001	15:09:13			

Performed By:  Date: 6-29-01  
 Reviewed By:  Date: 7/1/01

SR	RPT	ID	ALPHA				BETA			
			EFF	BKG	NET	DPM	EFF	BKG	NET	DPM
001	00	1	34.97%	0.00	0.00	5.17	34.25%	2.10	5.55	
002	00	2	0	0.00	0.00	1.90	-1.43	-4.18	06-29-2001 15:29:18	
003	00	3	0	0.00	0.00	-1.43	-4.18	06-29-2001 15:29:17		
004	00	4	0	0.00	0.00	0.57	1.45	06-29-2001 15:29:16		
005	00	5	0	0.00	0.00	-0.77	-2.24	06-29-2001 15:31:14		
006	00	6	0	0.00	0.00	-2.10	-4.13	06-29-2001 15:33:13		
007	00	7	0	0.00	0.00	-1.43	-4.18	06-29-2001 15:35:12		
008	00	8	0	0.00	0.00	-0.77	-2.24	06-29-2001 15:37:11		
009	00	9	1	0.67	1.91	-0.97	-2.82	06-29-2001 15:39:10		
010	00	10	0	0.00	0.00	-2.10	-6.13	06-29-2001 15:41:09		

Performed By: *[Signature]* Date: 6-29-01  
 Reviewed By: *[Signature]* Date: 7/11/01

ID	ALPHA			BETA			DATE	TIME
	NET CPM	DPH	LIMITS	NET CPM	DPH	LIMITS		
001 00	0	0.00	0.00	0	-2.10	-6.13	06-29-2001	15:45:19
002 00	1	0.67	1.91	4	0.37	1.07	06-29-2001	15:47:18
003 00	0	0.00	0.00	14	7.23	21.12	06-29-2001	15:49:17
004 00	0	0.00	0.00	3	-0.10	-0.29	06-29-2001	15:51:16
005 00	0	0.00	0.00	10	4.57	13.33	06-29-2001	15:53:15
006 00	0	0.00	0.00	5	1.23	3.60	06-29-2001	15:55:14
007 00	1	0.67	1.91	2	-0.97	-2.82	06-29-2001	15:57:13
008 00	0	0.00	0.00	2	-0.77	-2.24	06-29-2001	15:59:12
009 00	0	0.00	0.00	0	-2.10	-6.13	06-29-2001	16:01:11
010 00	1	0.67	1.91	1	-1.63	-4.77	06-29-2001	16:03:10
011 00	0	0.00	0.00	2	-0.77	-2.24	06-29-2001	16:05:09
012 00	0	0.00	0.00	0	-2.10	-6.13	06-29-2001	16:07:08
013 00	0	0.00	0.00	1	-1.43	-4.18	06-29-2001	16:09:07
014 00	1	0.67	1.91	0	-2.30	-6.71	06-29-2001	16:11:06
015 00	0	0.00	0.00	0	-2.10	-6.13	06-29-2001	16:13:05
016 00	0	0.00	0.00	4	0.57	1.65	06-29-2001	16:15:04
017 00	0	0.00	0.00	5	1.23	3.60	06-29-2001	16:17:03
018 00	0	0.00	0.00	14	7.23	21.12	06-29-2001	16:19:02

Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm Eff: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm

Performed By: [Signature] Date: 6-29-01  
 Reviewed By: [Signature] Date: 7/1/01

-----ALPHA-----  
 Effic: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | Effic: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm  
 -----BETA-----

ID	NET CPM	NET CPM	LIMITS	COUNTS	NET CPM	NET CPM	DATE	TIME
001	0.00	0.00	-0.10	3	-0.10	-0.29	07-02-2001	07:05:16
002	0.00	0.00	7.23	14	21.12	21.12	07-02-2001	07:07:15
003	0.00	0.00	-1.43	1	-4.18	-4.18	07-02-2001	07:09:15
004	0.00	0.00	0.57	4	1.65	1.65	07-02-2001	07:11:14
005	0.57	1.91	-1.63	1	-4.77	-4.77	07-02-2001	07:13:13
006	0.00	0.00	-1.43	1	-4.18	-4.18	07-02-2001	07:15:12
007	0.00	0.00	1.90	6	5.55	5.55	07-02-2001	07:17:11
008	0.00	0.00	-0.10	3	-0.29	-0.29	07-02-2001	07:19:10
009	0.00	0.00	0.57	4	1.65	1.65	07-02-2001	07:21:09
010	0.00	0.00	0.57	4	1.65	1.65	07-02-2001	07:23:08
011	0.00	0.00	-1.43	1	-4.18	-4.18	07-02-2001	07:25:07
012	0.00	0.00	-0.77	2	-2.24	-2.24	07-02-2001	07:27:06
013	0.00	0.00	-0.10	3	-0.29	-0.29	07-02-2001	07:29:05
014	0.00	0.00	-2.10	0	-6.13	-6.13	07-02-2001	07:31:04
015	0.00	0.00	-1.43	1	-4.18	-4.18	07-02-2001	07:33:03
016	0.00	0.00	-0.10	3	-0.29	-0.29	07-02-2001	07:35:02
017	0.00	0.00	-0.10	3	-0.29	-0.29	07-02-2001	07:37:01

Performed By: [Signature] Date: 7-2-01  
 Reviewed By: [Signature] Date: 7/11/01

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 2.10 cpm MDA: 21.34 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	-0.10	-0.29		07-02-2001	07:50:35
002	00	2	1	0.67	1.91		9	3.70	10.61		07-02-2001	07:52:34
003	00	3	0	0.00	0.00		3	-0.10	-0.29		07-02-2001	07:54:33
004	00	4	0	0.00	0.00		1	-1.43	-4.18		07-02-2001	07:56:32
005	00	5	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	07:58:32
006	00	6	0	0.00	0.00		3	-0.10	-0.29		07-02-2001	08:00:31

Performed By: *[Signature]* Date: 2-2-01  
Reviewed By: *[Signature]* Date: 7/11/01



-----ALPHA-----  
 | Eft: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | Eft: 34.23% Bkg: 2.10 cpm MDA: 21.34 dpm |  
 |-----BETA-----|

ID	DATE	NET CPM	NET CPM	NET CPM	NET CPM	NET CPM	NET CPM	NET CPM	NET CPM
001	07-02-2001 08:10:14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
002	07-02-2001 08:12:13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
003	07-02-2001 08:14:12	1	1.91	1.70	4.97	1.65	1.65	1.65	1.65
004	07-02-2001 08:16:11	4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
005	07-02-2001 08:18:10	5	0.00	-1.43	-4.18	0.00	0.00	0.00	0.00
006	07-02-2001 08:20:09	6	0.00	-0.10	-0.29	0.00	0.00	0.00	0.00

Performed By: [Signature] Date: 7/21  
 Reviewed By: [Signature] Date: 7/11/01

-----ALPHA-----  
| E11: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm | E11: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm |  
|-----BETA-----  
|-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	0	0.00	-	2	-0.77	-2.24	-	07-02-2001	08:31:44
002	00	0	0.00	-	2	-0.77	-2.24	-	07-02-2001	08:33:43
003	00	0	0.00	-	4	0.57	1.65	-	07-02-2001	08:35:43
004	00	0	0.00	-	0	-2.10	-6.13	-	07-02-2001	08:37:43
005	00	0	0.00	-	0	-2.10	-6.13	-	07-02-2001	08:39:42

Performed By: *[Signature]* Date: 7-2-01  
Reviewed By: *[Signature]* Date: 7/11/01

ALPHA				BETA				DATE	TIME			
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		4	0.57	1.65		07-02-2001	08:43:08
002	00	2	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	08:45:08
003	00	3	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	08:47:08
004	00	4	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	08:49:08
005	00	5	1	0.67	1.91		0	-2.30	-6.71		07-02-2001	08:51:08

Performed By: *[Signature]* Date: 7-2-01  
Reviewed By: *[Signature]* Date: 7/1/01

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm							
BN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	1	1	0.67	1.91		33	19.70	57.52		07-02-2001	08:55:51
002	00	2	1	0.67	1.91		4	0.37	1.07		07-02-2001	08:57:51
003	00	3	2	1.33	3.81		10	4.17	12.17		07-02-2001	08:59:51
004	00	4	0	0.00	0.00		9	3.90	11.39		07-02-2001	09:01:51
005	00	5	0	0.00	0.00		3	-0.10	-0.29		07-02-2001	09:03:51

Performed By: *[Signature]* Date: 7-2-01  
Reviewed By: *[Signature]* Date: 7/11/01

-----ALPHA-----

Eff: 34.97% Bkg: 0.00 cpm NDA: 3.17 dpm | Eff: 34.25% Bkg: 2.10 cpm NDA: 21.34 dpm

---SN---RPT---ID---COUNTS---NET CFM---DPM---LIMITS---COUNTS---NET CFM---DPM---LIMITS---DATE---TIME-

001	00	1	1	0.67	1.91	2	-0.97	-2.82	07-02-2001	09:11:37
002	00	2	0	0.00	0.00	11	5.23	15.28	07-02-2001	09:13:36
003	00	3	0	0.00	0.00	18	9.90	28.91	07-02-2001	09:15:35
004	00	4	0	0.00	0.00	3	-0.10	-0.29	07-02-2001	09:17:34
005	00	5	0	0.00	0.00	2	-0.77	-2.24	07-02-2001	09:19:34

Performed By: Mike Date: 7-2-01  
 Reviewed By: Proog Date: 7/1/01

ALPHA				BETA				DATE	TIME		
SN	RPT	ID	LIMITS	Eff: 34.97%	Bkg: 0.00 cpm	MDA: 5.17 dpm	Eff: 34.25%	Bkg: 2.10 cpm	MDA: 21.34 dpm		
				COUNTS	NET CPM	DPM	COUNTS	NET CPM	DPM		
001	00	1		0	0.00	0.00	1	-1.43	-4.18	07-02-2001	09:23:41
002	00	2		1	0.67	1.91	4	1.70	4.97	07-02-2001	09:25:41
003	00	3		1	0.67	1.91	9	3.70	10.81	07-02-2001	09:27:41
004	00	4		0	0.00	0.00	1	-1.43	-4.18	07-02-2001	09:29:41
005	00	5		0	0.00	0.00	2	-0.77	-2.24	07-02-2001	09:31:40

Performed By: *[Signature]* Date: 7-2-01  
Reviewed By: *[Signature]* Date: 7/11/01

----- ALPHA -----				----- BETA -----								
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm				Eff: 34.25% Bkg: 2.10 cpm MDA: 21.34 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	-0.77	-2.24		07-02-2001	09:35:36
002	00	2	0	0.00	0.00		1	-1.43	-4.18		07-02-2001	09:37:35
003	00	3	0	0.00	0.00		1	-1.43	-4.18		07-02-2001	09:39:34
004	00	4	0	0.00	0.00		3	-0.10	-0.29		07-02-2001	09:41:33
005	00	5	0	0.00	0.00		1	-1.43	-4.18		07-02-2001	09:43:32
006	00	6	0	0.00	0.00		4	0.57	1.65		07-02-2001	09:45:31
007	00	7	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	09:47:30
008	00	8	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	09:49:29
009	00	9	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	09:51:28
010	00	10	0	0.00	0.00		4	0.57	1.65		07-02-2001	09:53:27
011	00	11	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	09:55:26
012	00	12	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	09:57:25
013	00	13	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	09:59:24
014	00	14	0	0.00	0.00		1	-1.43	-4.18		07-02-2001	10:01:23
015	00	15	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	10:03:22

Performed By: *[Signature]* Date: 7-2-01  
 Reviewed By: *[Signature]* Date: 7/6/01

FINAL SURVEY  
PIC IP39025 216712

01102 [1] PM 12

ID	ALPHA				BETA				DATE	TIME
	EFF: 34.97%	BKG: 0.00 cpm	MDA: 5.17 dpm	LIMITS	EFF: 34.25%	BKG: 2.10 cpm	MDA: 21.34 dpm	LIMITS		
1	0	0.00	0.00	0.00	4	0.57	1.65	07-02-2001	10:04:38	
2	0	0.00	0.00	0.00	2	-0.77	-2.24	07-02-2001	10:08:37	
3	0	0.00	0.00	0.00	1	-1.43	-4.18	07-02-2001	10:10:13	
4	1	0.57	1.91	1.91	2	-0.77	-2.24	07-02-2001	10:12:13	
5	0	0.00	0.00	0.00	2	-0.97	-2.82	07-02-2001	10:14:11	
6	1	0.57	1.91	1.91	4	0.57	1.65	07-02-2001	10:18:11	
7	0	0.00	0.00	0.00	3	-0.10	-0.29	07-02-2001	10:20:11	
8	0	0.00	0.00	0.00	0	-2.10	-6.13	07-02-2001	10:22:11	
9	0	0.00	0.00	0.00	0	-2.30	-6.71	07-02-2001	10:24:11	
10	1	0.57	1.91	1.91	0					

Performed By: [Signature] Date: 7/2/01  
 Reviewed By: [Signature] Date: 7/2/01



Reviewed By: [Signature] Date: 7/11/01  
 Performed By: [Signature] Date: 7-2-01

ALPHA BETA  
 -----  
 ERR: 34.87% BRG: 0.00 cpm MDA: 5.17 dpm ERR: 34.23% BRG: 2.10 cpm MDA: 21.34 dpm  
 |-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|  
 |SN|RPT|ID|COUNTS|NET CPM|DPM|LIMITS|COUNTS|NET CPM|DPM|LIMITS|DATE|TIME|  
 001 00 1 0 0.00 0.00 -2.10 -6.13 07-02-2001 10:28:06  
 002 00 2 0 0.00 0.00 -2.10 -6.13 07-02-2001 10:30:06

Reviewed By:        Date: 7/17/01  
 Performed By:        Date: 7-2-01

01P02 [Z] PIN 12  
 FINAL SURVEY  
 PIC IPC9025 216712

-----ALPHA-----  
 Eff: 34.87% Bkg: 0.00 cpm MDA: 5.17 dpm  
 Err: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm  
 -----BETA-----

ID	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001 00	0.00	0.00		Z	-0.77	-2.24		07-02-2001	10:35:34
002 00	0.00	0.00		S	1.23	3.60		07-02-2001	10:37:33

FIG 1FC9925 21A712

ISN	RRT	ID	ALPHA				BETA				DATE	TIME
			Eff	Bkg	MDA	LIMITS	Eff	Bkg	MDA	LIMITS		
001	00	1	0	0.00	0.00	0	0.57	1.65	07-02-2001	10:40:55		
002	00	2	0	0.00	0.00	5	1.23	3.60	07-02-2001	10:42:55		

Performed By: *Miller* Date: 2-2-01  
 Reviewed By: *McGee* Date: 7/14/01

Performed By: [Signature] Date: 7-2-01  
 Reviewed By: [Signature] Date: 7/14/01

ALPHA -----  
Effic: 34.97% Bkg: 0.00 cpm MDAs: 5.17 dpm	Effic: 34.25% Bkg: 2.10 cpm MDAs: 21.34 dpm											
SN-	RPT-	ID --	COUNTS -	NET CPM -	DPM ---	LIMITS -	COUNTS -	NET CPM -	DPM ---	LIMITS -	DATE -	TIME -
 001 00 1 0 0.00 0.00 59 37.23 108.71 07-02-2001 10:46:01  
 002 00 2 0 0.00 0.00 13 6.57 19.17 07-02-2001 10:48:01

Reviewed By: [Signature] Date: 7/14/01  
 Performed By: [Signature] Date: 7-2-01

ID	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS
001	0.00	0	-2.10	0	-6.13	07-02-2001 10:51:45	
002	0.00	0	0.57	4	1.55	07-02-2001 10:53:44	
003	0.00	0	-0.10	3	-0.29	07-02-2001 10:55:43	
004	0.00	0	-2.10	0	-6.13	07-02-2001 10:57:42	
005	0.00	0	-1.43	1	-4.18	07-02-2001 10:59:41	

ALPHA -----  
 Effic: 34.97% Bkg: 0.00 cpm MDA: 3.17 dpm Effic: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm  
 BETA -----  
 ID -- COUNTS -- NET CPM -- DPM -- LIMITS -- COUNTS -- NET CPM -- DPM -- LIMITS -- DATE -- TIME --

ID	RPT	ID	ALPHA				BETA				DATE	TIME
			EFF	Bkg	MDA	NET CPM	EFF	Bkg	MDA	NET CPM		
001	00	1	0	0.00	0.00	5.17 dpm	0	-0.10	-0.29	07-02-2001	11:09:35	
002	00	2	0	0.00	0.00	5.17 dpm	3	-0.10	-0.29	07-02-2001	11:07:34	
003	00	3	0	0.00	0.00	5.17 dpm	4	0.57	1.65	07-02-2001	11:09:33	
004	00	4	0	0.00	0.00	5.17 dpm	2	-0.77	-2.24	07-02-2001	11:11:32	
005	00	5	1	0.57	1.91	5.17 dpm	4	0.37	1.07	07-02-2001	11:13:32	

Performed By: [Signature] Date: 7-2-01

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

Reviewed By:        Date: 7/11/01  
 Performed By:        Date: 7-2-01

ID	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	0.00	0.00	0.00	4	0.57	1.65		07-02-2001	11:21:56
002	0.00	0.00	0.00	4	0.57	1.65		07-02-2001	11:23:55
003	0.00	0.00	0.00	3	-0.10	-0.29		07-02-2001	11:25:55
004	0.00	0.00	0.00	3	-0.10	-0.29		07-02-2001	11:27:54
005	0.00	0.00	0.00	22	12.57	36.68		07-02-2001	11:29:53

ALPHA  
 -----  
 Effic: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm  
 Effic: 34.25% Bkg: 2.10 cpm MDA: 21.34 dpm  
 -----  
 BETA

ID	ALPHA					BETA					
	Err: 34.97%	Bkg: 0.00 cpm	MDA: 5.17 dpm	Err: 34.25%	Bkg: 2.10 cpm	MDA: 21.34 dpm	Counts	Net CPM	DPM	Limits	Date
001 00	1	0	0.00	0.00	1.23	3.60	5	1.23	3.60	07-02-2001	11:38:13
002 00	2	2	1.33	3.61	-2.50	-7.29	0	-2.50	-7.29	07-02-2001	11:40:12
003 00	3	0	0.00	0.00	1.23	3.60	5	1.23	3.60	07-02-2001	11:42:11
004 00	4	0	0.00	0.00	-1.43	-4.18	1	-1.43	-4.18	07-02-2001	11:44:10
005 00	5	0	0.00	0.00	-0.10	-0.29	3	-0.10	-0.29	07-02-2001	11:45:09

Performed By: *[Signature]* Date: 7-2-01  
 Reviewed By: *[Signature]* Date: 7/11/01



ALPHA						BETA						
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm						Eff: 34.25% Bkg: 2.10 cpm NDA: 21.34 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	-2.10	-6.13		07-02-2001	12:16:47
002	00	2	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	12:18:46
003	00	3	0	0.00	0.00		5	1.23	3.60		07-02-2001	12:20:45
004	00	4	0	0.00	0.00		1	-1.43	-4.18		07-02-2001	12:22:44
005	00	5	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	12:24:43

Performed By: *[Signature]* Date: 7-2-01  
Reviewed By: *[Signature]* Date: 7/1/01

ALPHA										BETA											
SN	RPT	ID	EFF	34.97%	Bkg	0.00	CPM	MDA	5.17	dpm	EFF	34.25%	Bkg	2.10	CPM	MDA	21.34	dpm	DATE	TIME	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
001	00	1	0	0.00		0.00		0.00		0.00	1	-1.43		-4.18		07-02-2001	13:52:17				
002	00	2	1	0.67		1.91		-0.30		-0.87	3	7.49		7.49		07-02-2001	13:54:16				
003	00	3	0	0.00		0.00		-0.10		-0.29	7	3.90		11.39		07-02-2001	13:58:14				
004	00	4	0	0.00		0.00					3					07-02-2001	13:40:13				
005	00	5	0	0.00		0.00					9					07-02-2001	13:40:13				

Performed By: *[Signature]* Date: 7-2-01  
Reviewed By: *[Signature]* Date: 7/11/01

ALPHA				BETA				DATE	TIME			
SN	RPT	ID	COUNTS	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPK	LIMITS	DATE	TIME
001	00	1	0	0.00	0.00		1	-1.43	-4.18		07-02-2001	13:46:07
002	00	2	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	13:48:06
003	00	3	0	0.00	0.00		5	1.23	3.60		07-02-2001	13:50:05

Performed By: *[Signature]* Date: 7/2/01  
Reviewed By: *[Signature]* Date: 7/11/01

ID	ALPHA				BETA				DATE	TIME
	EFF	COUNTS	NET	CPM	EFF	COUNTS	NET	CPM		
1-5M-1-RPT-1	1	0	0.00	5.17	2	0	0.00	2.10	07-02-2001	13:55:20
001 00	1	0	0.00	0.00	2	0	0.00	0.00	07-02-2001	13:55:19
002 00	2	0	0.00	0.00	4	0	0.00	0.00	07-02-2001	13:55:19
003 00	3	1	0.57	1.91	2	1	0.97	2.82	07-02-2001	13:57:18

Performed By: *[Signature]* Date: 7/2/01  
 Reviewed By: *[Signature]* Date: 7/11/01

PIC IP69025 212712

I-SM-I-RPT-I--	ID--	COUNTS--	ALPHA				BETA				DATE -I- TIME -
			EFF: 34.97%	BLG: 0.00 cpm	MDA: 5.17 dpm	LIMITS--	EFF: 34.25%	BLG: 2.10 cpm	MDA: 21.34 dpm	LIMITS--	
001	00	1	0	0.00	0.00	0	-0.77	-2.24	07-02-2001	14:01:20	
002	00	2	0	0.00	0.00	0	-2.10	-4.13	07-02-2001	14:03:19	
003	00	3	0	0.00	0.00	2	-0.77	-2.24	07-02-2001	14:05:18	

Performed By: *[Signature]* Date: 7/2/01

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

ALPHA				BETA								
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm				Eff: 34.25% Bkg: 2.10 cpm NDA: 21.34 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	-2.10	-6.13		07-02-2001	14:10:21
002	00	2	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	14:12:20
003	00	3	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	14:14:19
004	00	4	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	14:16:18
005	00	5	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	14:18:17

Performed By: *M. Miller* Date: 7/2/01  
Reviewed By: *P. [Signature]* Date: 7/1/01

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm					Eff: 34.25% Bkg: 2.10 cpm NDA: 21.34 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	-0.10	-0.29		07-02-2001	14:22:01
002	00	2	0	0.00	0.00		13	6.57	19.17		07-02-2001	14:24:01
003	00	3	0	0.00	0.00		4	0.57	1.65		07-02-2001	14:26:00
004	00	4	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	14:27:59
005	00	5	2	1.33	3.81		5	0.84	2.44		07-02-2001	14:29:58

Performed By: *[Signature]* Date: 7/2/01  
Reviewed By: *[Signature]* Date: 7/11/01

ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm NDA: 5.17 dpm					Eff: 34.25% Bkg: 2.10 cpm NDA: 21.34 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	-1.43	-4.18		07-02-2001	14:33:03
002	00	2	0	0.00	0.00		1	-1.43	-4.18		07-02-2001	14:35:02
003	00	3	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	14:37:01
004	00	4	1	0.67	1.91		2	-0.97	-2.82		07-02-2001	14:39:00
005	00	5	0	0.00	0.00		3	-0.10	-0.29		07-02-2001	14:40:59

Performed By: *M. L. ...* Date: 7/2/01  
Reviewed By: *P. ...* Date: 7/16/01



ALPHA					BETA							
Eff: 34.97% Bkg: 0.00 cpm MDA: 5.17 dpm					Eff: 34.25% Bkg: 2.10 cpm MDA: 21.34 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	-0.77	-2.24		07-02-2001	14:45:00
002	00	2	1	0.67	1.91		2	-0.97	-2.82		07-02-2001	14:47:00
003	00	3	0	0.00	0.00		0	-2.10	-5.13		07-02-2001	14:48:59

Performed By: *M. L. ...* Date: 7/2/01  
Reviewed By: *...* Date: 7/10/01

ALPHA				BETA								
-SN- -RPT- -		ID	- COUNTS -	- NET CPM -	- DPM -	- LIMITS -	- COUNTS -	- NET CPM -	- DPM -	- LIMITS -	- DATE -	- TIME -
001	00	1	1	0.67	1.91		2	-0.97	-2.82		07-02-2001	14:53:07
002	00	2	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	14:55:07
003	00	3	0	0.00	0.00		0	-2.10	-6.13		07-02-2001	14:57:06

Performed By: *[Signature]* Date: 7/2/01  
Reviewed By: *[Signature]* Date: 7/11/01

ALPHA					BETA							
Eff:	Bkg:	MDA:			Eff:	Bkg:	MDA:					
34.97%	0.00 cpm	5.17 dpm			34.25%	2.10 cpm	21.34 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	-0.10	-0.29		07-02-2001	15:01:50

FINAL SURVEY 02W04 C PIN 12  
PIC IPC9025 216712

ALPHA					BETA							
Eff:	Bkg:	MDA:			Eff:	Bkg:	MDA:					
34.97%	0.00 cpm	5.17 dpm			34.25%	2.10 cpm	21.34 dpm					
-SN-	-RPT-	-- ID --	- COUNTS -	- NET CPM -	--- DPM ---	- LIMITS -	- COUNTS -	- NET CPM -	--- DPM ---	- LIMITS -	- DATE -	- TIME -
002	00	2	0	0.00	0.00		2	-0.77	-2.24		07-02-2001	15:05:46
003	00	3	1	0.67	1.91		0	-2.30	-6.71		07-02-2001	15:07:45

Performed By: *[Signature]* Date: 7/2/01  
Reviewed By: *[Signature]* Date: 7/10/01

## **Section 6**

### **Package 12 H-3 Removable Beta Contamination Summary Data Table (including lab reports)**

H-3 Removable Beta Contamination Summary Data Table PKG 12.xls

Carrier No.	CPM	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Row	Location	Beta Efficiency	Beta Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
1	38	60	100	01F01	B	00003	0.161	0.00	236	236	17
2	42	60	100	01F01	C	00006	0.203	0.00	207	207	13
3	42	60	100	01F01	D	00004	0.203	0.00	207	207	13
4	43	60	100	01F01	E	00003	0.208	0.00	207	207	13
5	39	60	100	01F01	E	00009	0.136	0.00	287	287	20
6	41	60	100	01F01	F	00003	0.208	0.00	197	197	13
7	41	60	100	01F01	G	00007	0.272	0.00	151	151	10
8	23	60	100	01F01	H	00011	0.244	0.00	94	94	11
9	32	60	100	01F01	I	00004	0.175	0.00	183	183	15
10	56	60	100	01F01	I	00005	0.320	0.00	175	175	8
11	21	60	100	01F01	K	00013	0.156	0.00	135	135	17
12	32	60	100	01F01	L	00010	0.224	0.00	143	143	12
13	29	60	100	01F01	M	00014	0.179	0.00	162	162	15
14	37	60	100	01F01	O	00004	0.167	0.00	221	221	16
15	36	60	100	01F01	P	00006	0.167	0.00	215	215	16
16	30	60	100	01W01	A	00007	0.407	0.00	74	74	7
17	35	60	100	01W01	A	00018	0.256	0.00	137	137	11
18	32	60	100	01W01	B	00013	0.308	0.00	104	104	9
19	27	60	100	01W01	B	00022	0.341	0.00	79	79	8
20	28	60	100	01W01	C	00012	0.353	0.00	79	79	8
21	38	60	100	01W02	A	00001	0.267	0.00	142	142	10
22	37	60	100	01W02	A	00006	0.308	0.00	120	120	9
23	32	60	100	01W02	A	00009	0.353	0.00	91	91	8
24	36	60	100	01W02	B	00005	0.359	0.00	100	100	8
25	33	60	100	01W02	B	00010	0.343	0.00	96	96	8
26	30	60	100	01W03	A	00002	0.341	0.00	88	88	8
27	42	60	100	01W03	A	00016	0.280	0.00	150	150	10
28	30	60	100	01W03	B	00005	0.338	0.00	89	89	8
29	25	60	100	01W03	B	00010	0.283	0.00	88	88	10
30	26	60	100	01W03	B	00018	0.244	0.00	107	107	11
31	28	60	100	01S01	A	00001	0.280	0.00	100	100	10
32	28	60	100	01S01	B	00004	0.278	0.00	101	101	10
33	34	60	100	01S02	ZZZZ	00004	0.332	0.00	103	103	8
34	30	60	100	01S03	ZZZZ	00002	0.381	0.00	79	79	7
35	39	60	100	01S04	ZZZZ	00005	0.371	0.00	105	105	7
36	32	60	100	01S05	ZZZZ	00001	0.305	0.00	105	105	9
37	29	60	100	01S06	ZZZZ	00005	0.241	0.00	120	120	11

H-3 Removable Beta Contamination Summary Data Table PKG 12.xls

Carrier No.	CPM	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Row	Location	Beta Efficiency	Beta Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
1	43	60	100	01T01	ZZZZZ	00003	0.332	0.00	130	130	8
2	41	60	100	01T01	ZZZZZ	00005	0.239	0.00	172	172	11
3	33	60	100	01T01	ZZZZZ	00010	0.259	0.00	127	127	10
4	36	60	100	01T01	ZZZZZ	00014	0.251	0.00	143	143	11
5	41	60	100	01T02	ZZZZZ	00001	0.280	0.00	146	146	10
6	18	60	100	01T02	ZZZZZ	00005	0.047	0.00	380	380	57
1	12	60	100	01P01	ZZZZZ	00001	0.063	0.00	190	190	43
1	31	60	100	01P02	ZZZZZ	00001	0.059	0.00	530	530	46
2	20	60	100	01P03	ZZZZZ	00001	0.026	0.00	756	756	102
3	53	60	100	01P04	ZZZZZ	00001	0.115	0.00	463	463	24
4	33	60	100	02F01	A	00002	0.262	0.00	126	126	10
5	28	60	100	02F01	A	00004	0.272	0.00	103	103	10
6	30	60	100	02F01	B	00003	0.283	0.00	106	106	10
7	34	60	100	02F01	C	00002	0.203	0.00	167	167	13
8	34	60	100	02W01	A	00004	0.341	0.00	100	100	8
9	36	60	100	02W01	B	00001	0.341	0.00	106	106	8
10	29	60	100	02W02	A	00001	0.371	0.00	78	78	7
11	31	60	100	02W02	C	00001	0.224	0.00	138	138	12
12	19	60	100	02W03	A	00003	0.397	0.00	48	48	7
13	25	60	100	02W03	B	00002	0.338	0.00	74	74	8
14	25	60	100	02W04	A	00001	0.335	0.00	75	75	8
15	27	60	100	02W04	B	00002	0.323	0.00	84	84	8
									# Measurements	59	
									Average	158	
									Maximum	756	
									STD DEV	117	
									95% CL on Mean	193	

USER: 1 ID: SMEARS PRESET TIME: 1.00 THU 28 JUN 2001 11:00  
 SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR: N RS232: N  
 1 ADC: N DCF: N RCM: 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	B- 1	1	38.00	32.44	1.00	1.31	189.0	
		2	65.00	24.81				
		3	83.00	21.95				
								%EFF: 16.13 ISO1 DPM : 235.5962
2	B- 2	1	42.00	30.86	1.00	2.80	169.0	
		2	65.00	24.81				
		3	81.00	22.22				
								%EFF: 20.31 ISO1 DPM : 206.7513
3	B- 3	1	42.00	30.86	1.00	4.28	169.0	
		2	62.00	25.40				
		3	90.00	22.36				
								%EFF: 20.31 ISO1 DPM : 206.7513
4	B- 4	1	43.00	30.50	1.00	5.77	167.0	
		2	70.00	23.90				
		3	97.00	20.31				
								%EFF: 20.77 ISO1 DPM : 207.0594
5	B- 5	1	39.00	32.03	1.00	7.24	203.0	
		2	61.00	25.61				
		3	76.00	22.94				
								%EFF: 13.57 ISO1 DPM : 287.4514
6	B- 6	1	41.00	31.23	1.00	8.73	167.0	
		2	80.00	22.36				
		3	112.00	18.90				
								%EFF: 20.77 ISO1 DPM : 197.4287
7	B- 7	1	41.00	31.23	1.00	10.21	141.0	
		2	65.00	24.81				
		3	93.00	20.74				
								%EFF: 27.21 ISO1 DPM : 150.6670
8	B- 8	1	23.00	41.70	1.00	11.69	152.0	
		2	57.00	26.49				
		3	82.00	22.09				
								%EFF: 24.36 ISO1 DPM : 94.41791
9	B- 9	1	32.00	35.36	1.00	13.53	182.0	
		2	59.00	26.04				
		3	86.00	21.57				
								%EFF: 17.52 ISO1 DPM : 182.6151

Performed By: Mila Date: 6-28-01  
 Reviewed By: PLA Date: 6/28/01

SAM	POS	CH	CPM	2SIBX	TIME	EL TIME	AVG H#	ERR
	8-10	1	56.00	26.73	1.00	15.02	124.0	
		2	92.00	20.85				
		3	129.00	17.61				
								%EFF:31.97 ISD1 DPM :175.1630
11	8-11	1	21.00	43.64	1.00	16.50	192.0	
		2	54.00	27.22				
		3	70.00	23.90				
								%EFF:15.55 ISD1 DPM :135.0051
12	8-12	1	32.00	35.36	1.00	17.98	160.0	
		2	50.00	28.28				
		3	75.00	23.09				
								%EFF:22.40 ISD1 DPM :142.8541
13	7- 1	1	29.00	37.14	1.00	19.52	180.0	
		2	59.00	26.04				
		3	82.00	22.09				
								%EFF:17.94 ISD1 DPM :161.6902
14	7- 2	1	37.00	32.88	1.00	21.00	186.0	
		2	71.00	23.74				
		3	89.00	21.20				
								%EFF:16.72 ISD1 DPM :221.3265
15	7- 3	1	36.00	33.33	1.00	22.48	186.0	
		2	67.00	24.43				
		3	92.00	20.85				
								%EFF:16.72 ISD1 DPM :215.3447
16	7- 4	1	30.00	36.51	1.00	23.97	96.0	
		2	60.00	25.82				
		3	76.00	22.94				
								%EFF:40.66 ISD1 DPM :73.78745
17	7- 5	1	35.00	33.81	1.00	25.44	147.0	
		2	64.00	25.00				
		3	93.00	20.74				
								%EFF:25.63 ISD1 DPM :136.5383
18	7- 6	1	32.00	35.36	1.00	26.92	128.0	
		2	62.00	25.40				
		3	87.00	21.44				
								%EFF:30.81 ISD1 DPM :103.8503
19	7- 7	1	27.00	38.49	1.00	28.41	117.0	
		2	57.00	26.49				
		3	86.00	21.57				
								%EFF:34.05 ISD1 DPM :79.30267
20	7- 8	1	28.00	37.80	1.00	29.88	113.0	
		2	52.00	27.74				
		3	76.00	22.94				
								%EFF:35.26 ISD1 DPM :79.40295
21	7- 9	1	38.00	32.44	1.00	31.36	143.0	
		2	64.00	25.00				
		3	88.00	21.32				
								%EFF:26.68 ISD1 DPM :142.4274
22	7-10	1	37.00	32.88	1.00	32.84	128.0	
		2	54.00	27.22				
		3	88.00	21.32				
								%EFF:30.81 ISD1 DPM :120.0769

Performed By: *M. L. ...* Date: 6/28/01  
Reviewed By: *Pat O'...* Date: 6/28/01



SAM	POS	CH	DPM	2615%	TIME	EL TIME	AVG H#	ERR
	7-11	1	32.00	35.36	1.00	34.33	113.0	
		2	68.00	24.25				
		3	100.00	20.00				
						%EFF:35.26	ISD1 DPM	:90.74622
24	7-12	1	36.00	33.33	1.00	35.82	111.0	
		2	71.00	23.74				
		3	103.00	19.71				
						%EFF:35.88	ISD1 DPM	:100.3372
25	2- 1	1	33.00	34.82	1.00	37.37	116.0	
		2	58.00	26.26				
		3	96.00	20.41				
						%EFF:34.35	ISD1 DPM	:96.07222
26	2- 2	1	30.00	36.51	1.00	38.87	117.0	
		2	58.00	26.26				
		3	80.00	22.36				
						%EFF:34.05	ISD1 DPM	:88.11407
27	2- 3	1	42.00	30.86	1.00	40.35	138.0	
		2	78.00	22.65				
		3	100.00	20.00				
						%EFF:28.02	ISD1 DPM	:149.8840
28	2- 4	1	30.00	36.51	1.00	41.83	118.0	
		2	62.00	25.40				
		3	90.00	21.08				
						%EFF:33.75	ISD1 DPM	:88.89851
29	2- 5	1	25.00	40.00	1.00	43.31	137.0	
		2	43.00	30.50				
		3	80.00	22.36				
						%EFF:28.29	ISD1 DPM	:88.35648
30	2- 6	1	26.00	39.22	1.00	44.80	152.0	
		2	62.00	25.40				
		3	89.00	21.20				
						%EFF:24.36	ISD1 DPM	:106.7333
31	2- 7	1	28.00	37.80	1.00	46.28	138.0	
		2	70.00	23.90				
		3	104.00	19.61				
						%EFF:28.02	ISD1 DPM	:99.92266
32	2- 8	1	28.00	37.80	1.00	47.77	139.0	
		2	58.00	26.26				
		3	87.00	21.44				
						%EFF:27.75	ISD1 DPM	:100.8986
33	2- 9	1	34.00	34.30	1.00	49.25	120.0	
		2	63.00	25.20				
		3	85.00	21.69				
						%EFF:33.15	ISD1 DPM	:102.5676
34	2-10	1	30.00	36.51	1.00	50.73	104.0	
		2	52.00	27.74				
		3	79.00	22.50				
						%EFF:38.07	ISD1 DPM	:78.79239
35	2-11	1	39.00	32.03	1.00	52.20	107.0	
		2	70.00	23.90				
		3	96.00	20.41				
						%EFF:37.13	ISD1 DPM	:105.0479

Performed By: Miller Date: 6-28-01

Reviewed By: Pal Yos Date: 6/28/01

SAM	FOS	CH	DPM	2516%	TIME	EL TIME	AVG H#	ERR
	2-12	1	32.00	35.36	1.00	53.69	129.0	
		2	26.00	24.62				
		3	23.00	21.32				
								%EFF:30.53 ISD1 DPM #104.8213
37	3- 1	1	29.00	37.14	1.00	55.22	153.0	
		2	33.00	26.97				
		3	75.00	23.09				
								%EFF:24.11 ISD1 DPM #120.2839

Performed By: *J. Miller* Date: 6-28-01  
Reviewed By: *Paul G.* Date: 6/28/01

Reviewed By: *[Signature]* Date: *6/28/01*  
 Performed By: *[Signature]* Date: *6-28-01*

USER: 1 ID: 05698 PREAMP TIME: 1.00 THU 28 JUN 2001 13:15  
 POWER REPEAT: 1 CYCLE REPEAT: 1 SCRN: R5232IN  
 1 ADDIN GCFIN ROMIN 2 PHASE MONITORIN  
 CHANNEL 1-LIT: 0 ULS: 400 ZSIEMW: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0  
 CHANNEL 2-LIT: 0 ULS: 670 ZSIEMW: 2.00 BKG SUB: 0.00 BKG 2SIG: 0.00 LSR: 0  
 CHANNEL 3-LIT: 0 ULS: 1000 ZSIEMW: 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: 05698 UNKNOWN REPLICATES: 1  
 UNKNOWN NORM FACTOR: 1.00000 UNKNOWN UNITS: DPM  
 AGENCH MODEL: CALCULATE COEFF: N HALF LIFE (DAYS): N  
 AGENCH COEFF A: 4.328559 B: -0.0051270 C: -0.0000122 D: -0.000000212  
 STANDARD ID:  
 OPERCH LIMITS LOW: 20.00 HIGH: 390.0  
 BQM POS CH DPM 2SIG% TIME EL TIME AVG H# ERR

CH	POS	DPM	2SIG%	TIME	EL TIME	AVG H#	ERR
1	3-2	1	43.00	30.50	1.00	1.31 120.0	
		2	64.00	25.00			
		3	92.00	20.50			
2	3-3	1	41.00	31.23	1.00	2.79 154.0	
		2	60.00	25.82			
		3	91.00	20.97			
3	3-4	1	33.00	34.82	1.00	4.27 146.0	
		2	56.00	26.73			
		3	86.00	21.57			
4	3-5	1	36.00	33.33	1.00	5.76 149.0	
		2	70.00	23.90			
		3	95.00	20.52			
5	3-6	1	41.00	31.23	1.00	7.23 138.0	
		2	67.00	24.43			
		3	84.00	21.57			
6	3-7	1	19.00	47.14	1.00	8.83 275.0	
		2	39.00	32.03			
		3	51.00	28.01			
			%EFF: 4.736	ISOT DPM		# 380.0969	
			%EFF: 28.02	ISOT DPM		# 146.3153	
			%EFF: 25.12	ISOT DPM		# 143.3129	
			%EFF: 25.89	ISOT DPM		# 127.4464	
			%EFF: 23.86	ISOT DPM		# 171.8302	
			%EFF: 33.15	ISOT DPM		# 129.7179	

USER: 1 ID: BMEARS                    PRESET TIME: 1.00                    THU 28 JUN 2001 13:44  
 SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR: N                    RS232: N  
 1 ADD: N QCF: N RCM: 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: BMEARS                    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: 4.325557                    B: -0.0051270                    C: -0.0000122                    D: -0.0000000212  
 STANDARD ID:  
 QUENCH LIMITS LOW: 90.00                    HIGH: 390.0

BAH	PDS	CH	DPM	2SIG%	TIME	EL TIME	AVG H#	ERR
1	3-	B	1	12.00	57.74	1.00	1.30	257.0
			2	40.00	31.62			
			3	46.00	29.49			

%EFF: 6.330 ISO1 DPM : 189.5804

Performed By: *[Signature]*                    Date: 6-28-01  
 Reviewed By: *[Signature]*                    Date: 6/28/01

USER: 1 ID: SMEARS                    PRESET TIME: 1.00                    THU 28 JUN 2001 14:36  
 SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR: N                    RS232: N  
 1 ACC: N GCF: N RCM: 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 DPK, 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

BAM	POS	CH	CPM	2SIG%	TIME	EL TIME	AVG H#	ERR
1	3-9	1	31.00	35.92	1.00	1.30	262.0	
		2	61.00	25.61				
		3	71.00	23.74				
								%EFF: 5.851 ISO1 DPM : 529.8558
2	3-10	1	20.00	44.72	1.00	2.88	308.0	
		2	44.00	30.15				
		3	50.00	28.28				
								%EFF: 2.645 ISO1 DPM : 756.1430
3	3-11	1	53.00	27.47	1.00	4.37	216.0	
		2	94.00	20.63				
		3	121.00	18.18				
								%EFF: 11.45 ISO1 DPM : 462.7512
4	3-12	1	33.00	34.82	1.00	5.85	145.0	
		2	57.00	26.49				
		3	84.00	21.82				
								%EFF: 26.15 ISO1 DPM : 126.1750
5	8-1	1	28.00	37.80	1.00	7.39	141.0	
		2	58.00	26.26				
		3	82.00	22.09				
								%EFF: 27.21 ISO1 DPM : 102.8945
6	8-2	1	30.00	36.51	1.00	8.88	137.0	
		2	60.00	25.82				
		3	89.00	21.20				
								%EFF: 28.29 ISO1 DPM : 106.0278
7	8-3	1	34.00	34.30	1.00	10.35	169.0	
		2	73.00	23.41				
		3	93.00	20.74				
								%EFF: 20.31 ISO1 DPM : 167.3701
8	8-4	1	34.00	34.30	1.00	11.83	117.0	
		2	69.00	24.08				
		3	94.00	20.63				
								%EFF: 34.05 ISO1 DPM : 99.86262
9	8-5	1	36.00	33.33	1.00	13.32	117.0	
		2	63.00	25.20				
		3	84.00	21.82				
								%EFF: 34.05 ISO1 DPM : 105.7369

Performed By: *[Signature]* Date: 6-28-01  
 Reviewed By: *[Signature]* Date: 6/28/01

SAM	POS	CH	DPM	2SIG%	TIME	EL TIME	AVG H#	ERR
	5- 6	1	29.00	37.14	1.00	14.80	107.0	
		2	54.00	27.22				
		3	33.00	21.95				
			%EFF:37.13 ISO1 DPM :78.11255					
11	5- 7	1	31.00	35.92	1.00	16.29	160.0	
		2	65.00	24.81				
		3	91.00	20.97				
			%EFF:22.40 ISO1 DPM :138.3899					
12	5- 8	1	19.00	45.88	1.00	17.78	99.0	
		2	50.00	28.28				
		3	56.00	21.57				
			%EFF:39.68 ISO1 DPM :47.88330					
13	5- 9	1	25.00	40.00	1.00	19.26	118.0	
		2	47.00	29.17				
		3	53.00	21.95				
			%EFF:33.75 ISO1 DPM :74.08208					
14	5-10	1	25.00	40.00	1.00	20.73	119.0	
		2	44.00	30.15				
		3	63.00	24.25				
			%EFF:33.45 ISO1 DPM :74.74555					
15	5-11	1	27.00	38.49	1.00	22.21	123.0	
		2	58.00	26.26				
		3	56.00	21.57				
			%EFF:32.26 ISO1 DPM :83.68802					

Performed By: *[Signature]* Date: 6-28-01  
Reviewed By: *[Signature]* Date: 6/28/01

**Georgia Institute of Technology  
Research Reactor**

**Final Survey Package 13**

**Process Equipment Room Above 2 Meters**

TABLE OF CONTENTS

Section 1 - Survey Package 13 Worksheet for the Process Room Above 2 Meters ..... 3

Section 2 - Package 13 Direct Beta Survey Report (including download reports) ..... 8

Section 3 - Package 13 Removable Beta Contamination for the Process Area Room  
Above 2 Meters Non-Suspect Affected (including lab reports)..... 26

Section 4 - Package 13 H-3 Removable Beta Contamination Summary Data Table  
(including lab reports) ..... 29



## **Section 1**

# **Survey Package 13 Worksheet for the Process Room Above 2 Meters**

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

Package Identification No.: 13	Prepared by: Paul Jones
Location: Process Room Walls Above 2 Meters and Ceiling	Date prepared: 06/27/2001
Area Classification: Non-Suspect Affected	

#### Area Description

The survey area consists of the process equipment room wall areas extending from 2 meters above the floor up to and including the ceiling in this room. This package also includes the equipment access hatches that are located in the ceiling of this room.

This package excludes the 3 grids located on wall 1 (outside wall) that extend up to 3 meters in height.

#### 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/100cm<sup>2</sup> 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 2 <sup>nd</sup> Floor Lower Walls and Floor - 7/7/01 Process Room Wall above 2 meters and ceiling.										
A0213	01OH1	B0002, B0004, B0001	ZZZZZ	1 thru 30	Overhead areas above 2 meters.	(5) 6-29-01	(30) 6-29-01	N/A	(30) R02 6-29-01 R02 R02	(30) R02 6-29-01
A										
N										

Survey performance (Initial and date as survey is complete)

Location Code					General Description	Beta Scan	Direct Beta	1 meter Gamma	Smear Gross $\alpha/\beta$	LS Smear
L1	L2	L6	L7	L8						

Georgia Tech Research Reactor 2<sup>nd</sup> Floor Lower Walls and Floor


N/A

N/A

Package Review

Date Package Completed

5/21/02

Package Reviewed by and Date

RJA Jones 5/21/02

Survey Comments


## **Section 2**

### **Package 13 Direct Beta Survey Report (including download reports)**

Package 13\_A0213 FBSR (Process Room Above 2 Meters Non-Suspect Affected)

Desc.	File	Sample Number	Gross Counts	Count Time (sec)	Material Type	Detector Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Natural Background (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	224	5	705	60	B0001	126	010H1	FLDCT	ZZZZZ	00001	0.214	458	346	570	311
	224	6	721	60	B0001	126	010H1	FLDCT	ZZZZZ	00002	0.214	500	346	474	322
	224	7	687	60	B0001	126	010H1	FLDCT	ZZZZZ	00003	0.214	555	346	144	336
	224	8	721	60	B0001	126	010H1	FLDCT	ZZZZZ	00004	0.214	543	346	314	333
	224	9	673	60	B0001	126	010H1	FLDCT	ZZZZZ	00005	0.214	481	346	366	317
	224	10	743	60	B0001	126	010H1	FLDCT	ZZZZZ	00006	0.214	492	346	585	320
	224	11	749	60	B0001	126	010H1	FLDCT	ZZZZZ	00007	0.214	517	346	514	326
	224	12	714	60	B0001	126	010H1	FLDCT	ZZZZZ	00008	0.214	502	346	440	322
	224	13	595	60	B0001	126	010H1	FLDCT	ZZZZZ	00009	0.214	411	346	336	297
	224	14	659	60	B0001	126	010H1	FLDCT	ZZZZZ	00010	0.214	453	346	418	309
	224	17	608	60	B0004	126	010H1	FLDCT	ZZZZZ	00011	0.214	479	346	132	316
	224	18	640	60	B0004	126	010H1	FLDCT	ZZZZZ	00012	0.214	478	346	255	316
	224	19	625	60	B0004	126	010H1	FLDCT	ZZZZZ	00013	0.214	405	346	470	296
	235	47	1114	120	B0004	126	010H1	FLDCT	ZZZZZ	00014	0.21	380	346	323	214
	224	21	621	60	B0004	126	010H1	FLDCT	ZZZZZ	00015	0.214	462	346	244	312
	224	22	642	60	B0004	126	010H1	FLDCT	ZZZZZ	00016	0.214	456	346	344	310
	224	23	671	60	B0004	126	010H1	FLDCT	ZZZZZ	00017	0.214	467	346	411	313
	224	24	673	60	B0004	126	010H1	FLDCT	ZZZZZ	00018	0.214	472	346	399	314
	224	25	676	60	B0004	126	010H1	FLDCT	ZZZZZ	00019	0.214	471	346	414	314
	224	26	589	60	B0004	126	010H1	FLDCT	ZZZZZ	00020	0.214	432	346	236	303
	224	39	733	60	B0002	126	010H1	FLDCT	ZZZZZ	00021	0.214	569	354	254	340
	224	40	713	60	B0002	126	010H1	FLDCT	ZZZZZ	00022	0.214	511	354	395	325
	224	41	759	60	B0002	126	010H1	FLDCT	ZZZZZ	00023	0.214	561	354	380	338
	224	42	624	60	B0002	126	010H1	FLDCT	ZZZZZ	00024	0.214	522	354	24	328
	224	43	719	60	B0002	126	010H1	FLDCT	ZZZZZ	00025	0.214	532	354	340	331
	224	44	699	60	B0002	126	010H1	FLDCT	ZZZZZ	00026	0.214	559	354	165	337
	224	45	763	60	B0002	126	010H1	FLDCT	ZZZZZ	00027	0.214	533	354	499	331
	224	46	674	60	B0002	126	010H1	FLDCT	ZZZZZ	00028	0.214	489	354	332	319
	224	47	820	60	B0002	126	010H1	FLDCT	ZZZZZ	00029	0.214	566	354	588	339
	224	48	704	60	B0002	126	010H1	FLDCT	ZZZZZ	00030	0.214	502	354	395	323
													# Measurements	30	
													Average	359	dpm/100cm <sup>2</sup>
													Maximum	588	dpm/100cm <sup>2</sup>
													STD DEV	134	dpm/100cm <sup>2</sup>
													95% CL on Mean	407	dpm/100cm <sup>2</sup>

ATTACHMENT 6.14  
SURVEY DOWNLOAD DATA SHEET

Download Print  
Technician Name: PAUL JONES Signature: [Signature] Station: 2  
Serial No. Verification: Model 2350:  Detector:  Problems:  (See Comments) File: 224

Survey Technician(s):  
Print Name: BSKjos User ID: BSK0490 Signature: [Signature] Date: 11-21-01

Print Name: \_\_\_\_\_ User ID: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Survey Unit Description: A1213, Process 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: 12-21-01

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 $\beta$		43-106B				
<input checked="" type="checkbox"/> Beta $\beta$	<u>095080</u>	43-68B	<u>.214</u>	<u>5394/429</u>	<u>224</u>	<u>224</u>
<input type="checkbox"/> Alpha $\alpha$		43-68A				
<input type="checkbox"/> Gamma $\gamma$		44-2	N/A			

Local Area Background Measurements						MEAN Value in cpm !	
$\beta$ Beta	1	2	3	4	5	6	<u>368</u>
$\alpha$ Alpha	1	2	3	4	5	6	

COMMENTS: Delete sample # 445; 68-140. See downloads 223, 225-228, 229 for these results.



## GTS DURATEK RADIOLOGICAL ENGINEERING &amp; FIELD SERVICES

GEORGIA INSTITUTE OF TECHNOLOGY

Direct Beta Survey Report, dpm/100 cm2

File Number: 224	Survey Description: A0213 Process Rm. Above 2 Meters		
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: 43-68	Detector S/N: 095080	Type:	
Background: 368 cpm	Beta Efficiency: .214	Survey Date: 11/15/01	

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: Betty S. Kjos / BS Kjos Date: 11-28-01  
 Print name Signature

and,

I performed this survey: \_\_\_\_\_ / \_\_\_\_\_ Date: \_\_\_\_\_  
 Print name Signature

## Corrections and Reasons:

## Comment Resolution:

Survey Reviewed and Approved by: PAUL JONES / fil qjo Date: 11/28/01  
 Print name Signature

Survey Date: 11/15/01  
File: 224

Report Date: 11/28/01

Page: 1  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 4
	A0213	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	C	00004	44	60	569	745	
FLDBK	B0002	C	00007	46	60	511	530	
FLDBK	B0002	E	00008	48	60	561	716	
FLDBK	B0002	F	00007	50	60	522	571	
FLDBK	B0002	I	00011	52	60	533	612	
FLDBK	B0002	M	00010	54	60	566	734	
FLDBK	B0002	O	00011	56	60	502	497	
FLDBK	B0002	M	00006	58	60	489	449	
FLDBK	B0002	J	00005	60	60	559	708	
FLDBK	B0002	G	00004	62	60	532	608	

Group Average: 617

FLDCT	B0002	C	00004	45	60	733	1354	
FLDCT	B0002	C	00007	47	60	713	1279	
FLDCT	B0002	E	00008	49	60	759	1450	
FLDCT	B0002	F	00007	51	60	624	949	
FLDCT	B0002	I	00011	53	60	763	1465	
FLDCT	B0002	M	00010	55	60	820	1676	
FLDCT	B0002	O	00011	57	60	704	1246	
FLDCT	B0002	M	00006	59	60	674	1135	
FLDCT	B0002	J	00005	61	60	699	1228	
FLDCT	B0002	G	00004	63	60	719	1302	

Group Average: 1308

Survey Code	L1	L2	L3	L4	Setup Number 4
	A0213	01W01	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	B0001	C	00001	6	60	458	334	
FLDBK	B0001	C	00004	8	60	500	490	
FLDBK	B0001	D	00007	10	60	555	694	
FLDBK	B0001	C	00009	12	60	543	649	
FLDBK	B0001	D	00013	14	60	481	419	
FLDBK	B0001	C	00016	16	60	492	460	
FLDBK	B0001	C	00019	18	60	517	553	
FLDBK	B0001	C	00022	20	60	502	497	

Group Average: 512

FLDCT	B0001	C	00001	7	60	705	1250	
FLDCT	B0001	C	00004	9	60	721	1309	
FLDCT	B0001	D	00007	11	60	687	1183	
FLDCT	B0001	C	00009	13	60	721	1309	
FLDCT	B0001	D	00013	15	60	673	1131	
FLDCT	B0001	C	00016	17	60	743	1391	
FLDCT	B0001	C	00019	19	60	749	1413	
FLDCT	B0001	C	00022	21	60	714	1283	

Group Average: 1284

Survey Date: 11/15/01  
File: 224

Report Date: 11/28/01

Page: 2  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 4
A0213	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	B0004	C	00001	22	60	432	237	
FLDBK	B0004	D	00003	24	60	471	382	
FLDBK	B0004	C	00005	26	60	472	386	
FLDBK	B0004	C	00007	28	60	467	367	
FLDBK	B0004	D	00009	30	60	456	326	

Group Average: 340

FLDCT	B0004	C	00001	23	60	589	820	
FLDCT	B0004	D	00003	25	60	676	1142	
FLDCT	B0004	C	00005	27	60	673	1131	
FLDCT	B0004	C	00007	29	60	671	1124	
FLDCT	B0004	D	00009	31	60	642	1016	

Group Average: 1047

Survey Code	L1	L2	L3	L4	Setup Number 4
A0213	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	B0004	C	00001	32	60	462	349	
DBK	B0004	D	00006	34	60	453	315	
BK	B0004	D	00011	36	60	411	159	
FLDBK	B0004	C	00012	38	60	405	137	
FLDBK	B0004	D	00014	40	60	478	408	
FLDBK	B0004	C	00016	42	60	479	412	

Group Average: 297

FLDCT	B0004	C	00001	33	60	621	938	
FLDCT	B0004	D	00006	35	60	659	1079	
FLDCT	B0004	D	00011	37	60	595	842	
FLDCT	B0004	C	00012	39	60	625	953	
FLDCT	B0004	D	00014	41	60	640	1009	
FLDCT	B0004	C	00016	43	60	608	890	

Group Average: 952

Survey Code	L1	L2	L3	L4	Setup Number 4
ZZZZZ	EZ260	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
PRB00	ZZZZZ	ZZZZZ	00000	1	60	5716	19834	*
PRB00	ZZZZZ	ZZZZZ	00000	2	60	6006	20909	*
PRB00	ZZZZZ	ZZZZZ	00000	3	60	5748	19953	*

Group Average: 20232

PRBBK	ZZZZZ	ZZZZZ	00000	0	600	4293	227	
-------	-------	-------	-------	---	-----	------	-----	--

Group Average: 227

PTB00	ZZZZZ	ZZZZZ	00000	65	60	5729	19882	*
PTB00	ZZZZZ	ZZZZZ	00000	66	60	6032	21006	*

\* Hi flag set at 2400 dpm/100 cm2

Survey Date: 11/15/01  
File: 224

Report Date: 11/28/01

Page: 3  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 4
	ZZZZ	EZ260	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
PTB00	ZZZZ	ZZZZ	00000	67	60	5800	20145	*
Group Average:							20344	
PTBBK	ZZZZ	ZZZZ	00000	64	600	4554	324	
Group Average:							324	

Total Number of Measurements on this Report: 66

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

## GTS DURATEK RADIOLOGICAL ENGINEERING &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

11/28/01

Comments Report for File 224

Station: 2

---

Comment  
Number

Comment

---

- 1 Deleted sample numbers from 4 to 5 and sample numbers 68-140. See files 223 and 225 thru 229 for these sample numbers.
  - 2 Changed L5(Count Type) from FLDBK to FLDCT for odd numbered Samples from 7 to 53. Because code not changed in field.
- 

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

## GTS DURATEK RADIOLOGICAL ENGINEERING &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

11/28/2001

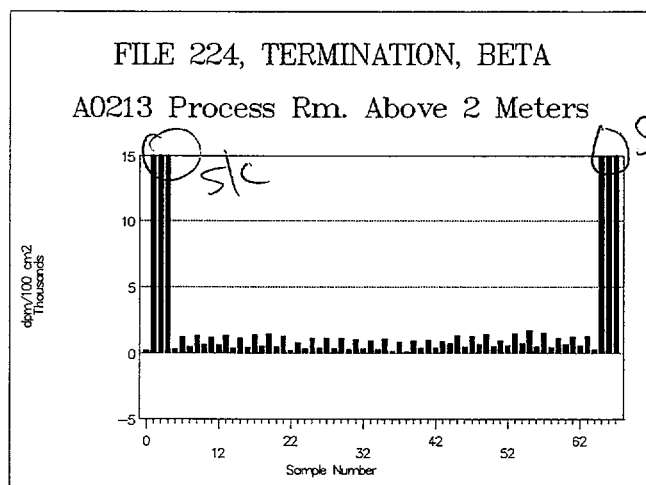
Graph of File 224

Station: 2

---

Survey Date: 11/15/2001 Survey Start Time: 15:25:22

Description: A0213 Process Rm. Above 2 Meters



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.

D							3										5					
C		1			2					4							6			7		8
B																						
A																						

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

1

D				19																		
C			20						18						17							
B																						
A																						

1 2 3 4 5 6 7 8 9 10

01W02

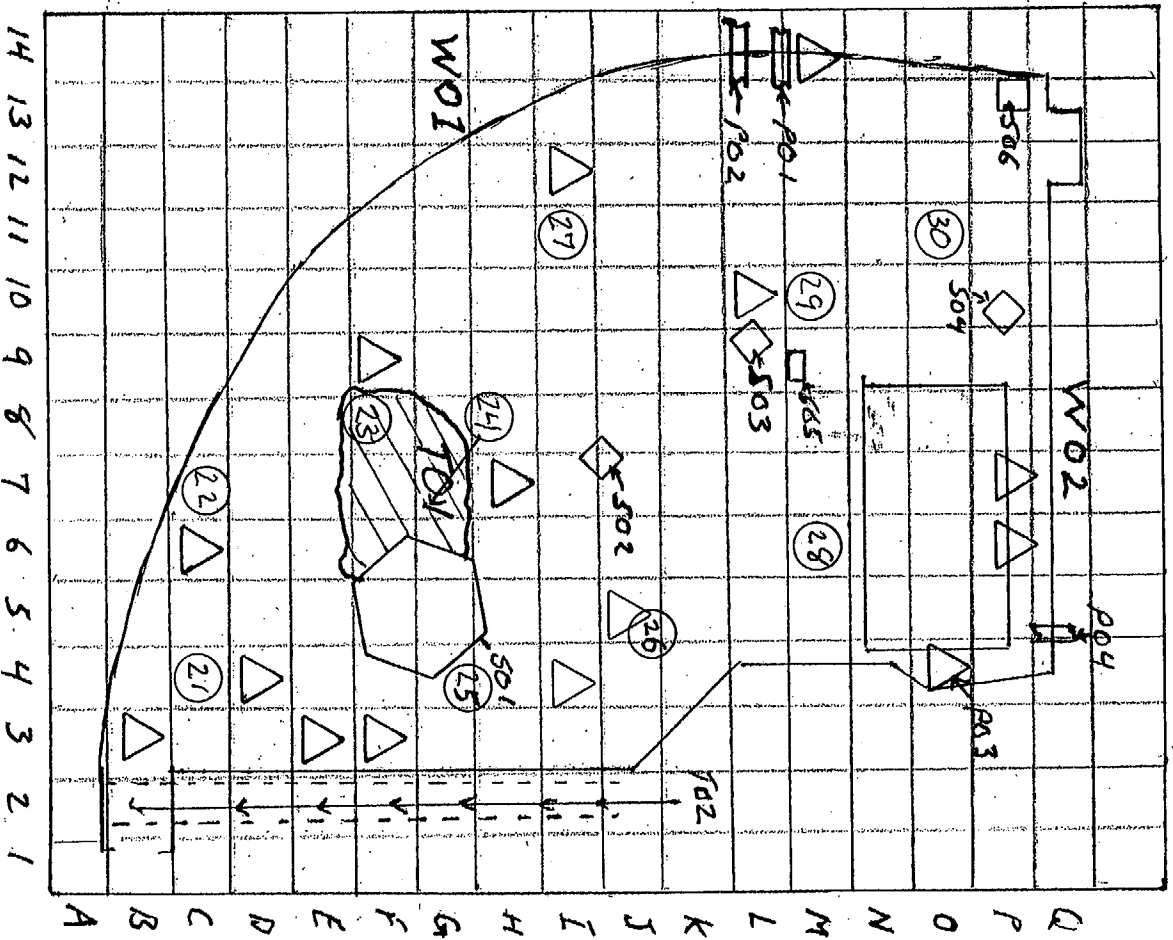
D						10			9			12										
C			15								13				11							
B																						
A																						

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

01W03

10f2

# Rx Bldg BASEMENT PROCESS ROOM



NOTE: (21) thru (30)  
TAKEN ON CEILING



The "net activity" (dpm/100 cm<sup>2</sup>) 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 # 235

ATTACHMENT 6.14  
SURVEY DOWNLOAD DATA SHEET

Download Print  
Technician: Name: P. Jones Signature: Pal Jones Station: 2  
File: 235  
Serial No. Verification: Model 2350:  Detector:  Problems:  (See Comments)

Survey Technician(s):  
Print Name: D. Schwicker User ID: DPS 4133 Signature: Pal Jones for D. Schwicker Date: 12/7/01

Print Name: \_\_\_\_\_ User ID: \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Survey Unit Description: A0213 Overhead of Access Area Room Loc #14  
(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 $\beta$		43-106B				
<input checked="" type="checkbox"/> Beta $\beta$	<u>091050</u>	43-68B	<u>.210</u>	<u>N/A</u>	<u>237</u>	<u>237</u>
<input type="checkbox"/> Alpha $\alpha$		43-68A				
<input type="checkbox"/> Gamma $\gamma$		44-2	<u>N/A</u>			

Local Area Background Measurements						MEAN Value in cpm !	
$\beta$ Beta	1 <u>3802</u>	2	3	4	5	6	<u>380.2</u>
$\alpha$ 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: 235		Survey Description: A0213: Overhead Outside Process Area Room Location		
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: 12/06/01		

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 #: 231 Post File #: 237

Technician Review:

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

I performed this survey: D. Schumaker / [Signature] Date: 12/14/01  
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: 12/14/01  
Print name Signature

Survey Date: 12/06/01  
File: 235

Report Date: 12/13/01

Page: 1  
Station: 2

Comments

Survey Code	L1	L2	L3	L4	Setup Number 0
	A0213	010H1	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	00014	46	600	3802	1437	
Group Average:							1437	
FLDCT	B0004	ZZZZZ	00014	47	120	1114	2105	
Group Average:							2105	

Total Number of Measurements on this Report: 2

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 &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

12/13/01

Comments Report for File 235

Station: 2

---

Comment Number	Comment
1	Deleted sample numbers from 0 to 45. Because these samples are on other downloads. See files 236-237.

---

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

## GTS DURATEK RADIOLOGICAL ENGINEERING &amp; FIELD SERVICES

## GEORGIA INSTITUTE OF TECHNOLOGY

12/13/2001

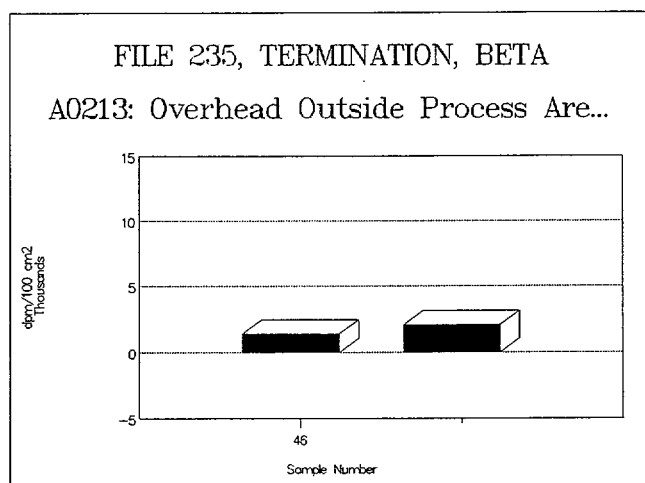
Graph of File 235

Station: 2

---

Survey Date: 12/06/2001 Survey Start Time: 09:01:32

Description: A0213: Overhead Outside Process Area Room Location



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.

A0213  
010H1

D																								
C	1																							
B		2																						
A																								

01W01

~~1 N/A~~

D																								
C	20																							
B																								
A																								

01W02

~~1 N/A~~

D																								
C	15																							
B																								
A																								

01W03

Location of sample #14. Download file #235

~~1 of 2~~ 19 3/102

## **Section 3**

### **Package 13 Removable Beta Contamination for the Process Area Room Above 2 Meters Non-Suspect Affected (including lab reports)**



Removable Beta Contamination Package A0213 (Process Area Room Above 2 Meters Non-Suspect Affected)

Desc.	Gross Counts	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Count Type	Row	Location	Efficiency (dpm/cpm)	Background (cpm)	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
	1	90	100	010H1	FLDCT	ZZZZZ	00001	0.3425	2	-4	17
	4	90	100	010H1	FLDCT	ZZZZZ	00002	0.3425	2	2	17
	1	90	100	010H1	FLDCT	ZZZZZ	00003	0.3425	2	-4	17
	2	90	100	010H1	FLDCT	ZZZZZ	00004	0.3425	2	-2	17
	6	90	100	010H1	FLDCT	ZZZZZ	00005	0.3425	2	6	17
	1	90	100	010H1	FLDCT	ZZZZZ	00006	0.3425	2	-4	17
	3	90	100	010H1	FLDCT	ZZZZZ	00007	0.3425	2	0	17
	0	90	100	010H1	FLDCT	ZZZZZ	00008	0.3425	2	-6	17
	1	90	100	010H1	FLDCT	ZZZZZ	00009	0.3425	2	-4	17
	3	90	100	010H1	FLDCT	ZZZZZ	00010	0.3425	2	0	17
	4	90	100	010H1	FLDCT	ZZZZZ	00011	0.3425	2	2	17
	3	90	100	010H1	FLDCT	ZZZZZ	00012	0.3425	2	0	17
	2	90	100	010H1	FLDCT	ZZZZZ	00013	0.3425	2	-3	17
	0	90	100	010H1	FLDCT	ZZZZZ	00014	0.3425	2	-6	17
	0	90	100	010H1	FLDCT	ZZZZZ	00015	0.3425	2	-6	17
	2	90	100	010H1	FLDCT	ZZZZZ	00016	0.3425	2	-2	17
	0	90	100	010H1	FLDCT	ZZZZZ	00017	0.3425	2	-6	17
	4	90	100	010H1	FLDCT	ZZZZZ	00018	0.3425	2	2	17
	1	90	100	010H1	FLDCT	ZZZZZ	00019	0.3425	2	-4	17
	1	90	100	010H1	FLDCT	ZZZZZ	00020	0.3425	2	-4	17
	5	90	100	010H1	FLDCT	ZZZZZ	00021	0.3425	2	4	17
	4	90	100	010H1	FLDCT	ZZZZZ	00022	0.3425	2	2	17
	3	90	100	010H1	FLDCT	ZZZZZ	00023	0.3425	2	0	17
	1	90	100	010H1	FLDCT	ZZZZZ	00024	0.3425	2	-4	17
	4	90	100	010H1	FLDCT	ZZZZZ	00025	0.3425	2	2	17
	1	90	100	010H1	FLDCT	ZZZZZ	00026	0.3425	2	-4	17
	5	90	100	010H1	FLDCT	ZZZZZ	00027	0.3425	2	4	17
	1	90	100	010H1	FLDCT	ZZZZZ	00028	0.3425	2	-4	17
	0	90	100	010H1	FLDCT	ZZZZZ	00029	0.3425	2	-6	17
	3	90	100	010H1	FLDCT	ZZZZZ	00030	0.3425	2	0	17
									# Measurements	30	
									Average	-2	dpm/100cm <sup>2</sup>
									Maximum	6	dpm/100cm <sup>2</sup>
									STD DEV	3	dpm/100cm <sup>2</sup>
									95% CL on Mean	0	dpm/100cm <sup>2</sup>

SN	RPT	ID	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
001	00	00	0	0	0	0	0	0	0	07-03-2001	12:55:23
002	00	00	0	0	0	0	0	0	0	07-03-2001	12:57:23

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	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
003	00	00	0	0	0	0	0	0	0	07-03-2001	13:00:15
004	00	00	0	0	0	0	0	0	0	07-03-2001	13:02:14
005	00	00	0	0	0	0	0	0	0	07-03-2001	13:04:13
006	00	00	1	1	1	1.91	1.91	1.91	1.91	07-03-2001	13:06:12
007	00	00	0	0	0	0	0	0	0	07-03-2001	13:08:11
008	00	00	0	0	0	0	0	0	0	07-03-2001	13:10:10
009	00	00	0	0	0	0	0	0	0	07-03-2001	13:12:09
010	00	00	0	0	0	0	0	0	0	07-03-2001	13:14:08
011	00	00	0	0	0	0	0	0	0	07-03-2001	13:16:07
012	00	00	0	0	0	0	0	0	0	07-03-2001	13:18:06
013	00	00	1	1	1	1.91	1.91	1.91	1.91	07-03-2001	13:20:05
014	00	00	0	0	0	0	0	0	0	07-03-2001	13:22:04
015	00	00	0	0	0	0	0	0	0	07-03-2001	13:24:03
016	00	00	0	0	0	0	0	0	0	07-03-2001	13:26:02
017	00	00	0	0	0	0	0	0	0	07-03-2001	13:28:01
018	00	00	0	0	0	0	0	0	0	07-03-2001	13:30:00
019	00	00	0	0	0	0	0	0	0	07-03-2001	13:31:59
020	00	00	0	0	0	0	0	0	0	07-03-2001	13:33:58
021	00	00	0	0	0	0	0	0	0	07-03-2001	13:35:57
022	00	00	0	0	0	0	0	0	0	07-03-2001	13:37:56
023	00	00	0	0	0	0	0	0	0	07-03-2001	13:39:55
024	00	00	0	0	0	0	0	0	0	07-03-2001	13:41:54
025	00	00	0	0	0	0	0	0	0	07-03-2001	13:43:53
026	00	00	0	0	0	0	0	0	0	07-03-2001	13:45:52
027	00	00	0	0	0	0	0	0	0	07-03-2001	13:47:51
028	00	00	0	0	0	0	0	0	0	07-03-2001	13:49:50
029	00	00	0	0	0	0	0	0	0	07-03-2001	13:51:49
030	00	00	0	0	0	0	0	0	0	07-03-2001	13:53:48

SN	RPT	ID	NET CPM	DPM	LIMITS	COUNTS	NET CPM	DPM	LIMITS	DATE	TIME
031	00	00	0	0	0	0	0	0	0	07-03-2001	13:55:47
032	00	00	0	0	0	0	0	0	0	07-03-2001	13:57:46
033	00	00	0	0	0	0	0	0	0	07-03-2001	13:59:45
034	00	00	0	0	0	0	0	0	0	07-03-2001	14:01:44
035	00	00	0	0	0	0	0	0	0	07-03-2001	14:03:43
036	00	00	0	0	0	0	0	0	0	07-03-2001	14:05:42
037	00	00	0	0	0	0	0	0	0	07-03-2001	14:07:41
038	00	00	0	0	0	0	0	0	0	07-03-2001	14:09:40
039	00	00	0	0	0	0	0	0	0	07-03-2001	14:11:39
040	00	00	0	0	0	0	0	0	0	07-03-2001	14:13:38
041	00	00	0	0	0	0	0	0	0	07-03-2001	14:15:37
042	00	00	0	0	0	0	0	0	0	07-03-2001	14:17:36
043	00	00	0	0	0	0	0	0	0	07-03-2001	14:19:35
044	00	00	0	0	0	0	0	0	0	07-03-2001	14:21:34
045	00	00	0	0	0	0	0	0	0	07-03-2001	14:23:33
046	00	00	0	0	0	0	0	0	0	07-03-2001	14:25:32
047	00	00	0	0	0	0	0	0	0	07-03-2001	14:27:31
048	00	00	0	0	0	0	0	0	0	07-03-2001	14:29:30
049	00	00	0	0	0	0	0	0	0	07-03-2001	14:31:29
050	00	00	0	0	0	0	0	0	0	07-03-2001	14:33:28

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

Performed By: *[Signature]* Date: 7/3/01  
 Reviewed By: *[Signature]* Date: 7/9/01

## **Section 4**

### **Package 13 H-3 Removable Beta Contamination Summary Data Table (including lab reports)**

H-3 Removable Beta Contamination Summary Data Table PKG 13.xls

Carrier No.	CPM	Count Time (sec)	Sample Area (cm <sup>2</sup> )	Surface	Row	Location	Beta Efficiency	Beta Background (cpm)	Activity (dpm/100cm <sup>2</sup> )	Net Activity (dpm/100cm <sup>2</sup> )	MDA (dpm/100cm <sup>2</sup> )
1	41	60	100	01OH1	ZZZZZ	00001	0.254	0.00	162	162	11
2	40	60	100	01OH1	ZZZZZ	00002	0.272	0.00	147	147	10
3	38	60	100	01OH1	ZZZZZ	00003	0.270	0.00	141	141	10
4	32	60	100	01OH1	ZZZZZ	00004	0.374	0.00	85	85	7
5	51	60	100	01OH1	ZZZZZ	00005	0.259	0.00	197	197	10
6	45	60	100	01OH1	ZZZZZ	00006	0.291	0.00	155	155	9
7	36	60	100	01OH1	ZZZZZ	00007	0.338	0.00	107	107	8
8	41	60	100	01OH1	ZZZZZ	00008	0.297	0.00	138	138	9
9	40	60	100	01OH1	ZZZZZ	00009	0.362	0.00	111	111	7
10	37	60	100	01OH1	ZZZZZ	00010	0.308	0.00	120	120	9
11	45	60	100	01OH1	ZZZZZ	00011	0.353	0.00	128	128	8
12	57	60	100	01OH1	ZZZZZ	00012	0.371	0.00	154	154	7
13	47	60	100	01OH1	ZZZZZ	00013	0.302	0.00	155	155	9
14	55	60	100	01OH1	ZZZZZ	00014	0.362	0.00	152	152	7
15	31	60	100	01OH1	ZZZZZ	00015	0.338	0.00	92	92	8
16	78	60	100	01OH1	ZZZZZ	00016	0.317	0.00	246	246	9
17	149	60	100	01OH1	ZZZZZ	00171	0.326	0.00	458	458	8
18	47	60	100	01OH1	ZZZZZ	00018	0.323	0.00	146	146	8
19	32	60	100	01OH1	ZZZZZ	00019	0.387	0.00	83	83	7
20	35	60	100	01OH1	ZZZZZ	00020	0.297	0.00	118	118	9
21	36	60	100	01OH1	ZZZZZ	00021	0.320	0.00	113	113	8
22	29	60	100	01OH1	ZZZZZ	00022	0.332	0.00	87	87	8
23	41	60	100	01OH1	ZZZZZ	00023	0.302	0.00	136	136	9
24	46	60	100	01OH1	ZZZZZ	00024	0.374	0.00	123	123	7
25	37	60	100	01OH1	ZZZZZ	00025	0.314	0.00	118	118	9
26	41	60	100	01OH1	ZZZZZ	00026	0.297	0.00	138	138	9
27	46	60	100	01OH1	ZZZZZ	00027	0.378	0.00	122	122	7
28	35	60	100	01OH1	ZZZZZ	00028	0.314	0.00	112	112	9
29	26	60	100	01OH1	ZZZZZ	00029	0.305	0.00	85	85	9
30	47	60	100	01OH1	ZZZZZ	00030	0.300	0.00	157	157	9
									# Measurements	30	
									Average	143	
									Maximum	458	
									STD DEV	68	
									95% CL on Mean	171	

USER: 1 ID: SMEARS PRESET TIME: 1.00 FRI 29 JUN 2001 14:55

SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR: N RS232: N

H#: 1 ADC: N DCF: N RCM: 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	B- 1	1	41.00	31.23	1.00	1.32	148.0	
		2	64.00	25.00				
		3	85.00	21.69				
								%EFF: 25.38 ISO1 DPM : 161.5686
2	B- 2	1	40.00	31.62	1.00	2.81	141.0	
		2	73.00	23.41				
		3	93.00	20.74				
								%EFF: 27.21 ISO1 DPM : 146.9922
3	B- 3	1	38.00	32.44	1.00	4.30	142.0	
		2	65.00	24.81				
		3	101.00	19.90				
								%EFF: 26.95 ISO1 DPM : 141.0244
4	B- 4	1	32.00	35.36	1.00	5.79	106.0	
		2	67.00	24.43				
		3	90.00	21.08				
								%EFF: 37.44 ISO1 DPM : 85.46782
5	B- 5	1	51.00	28.01	1.00	7.28	146.0	
		2	83.00	21.95				
		3	107.00	19.33				
								%EFF: 25.89 ISO1 DPM : 196.9626
6	B- 6	1	45.00	29.81	1.00	8.78	134.0	
		2	71.00	23.74				
		3	110.00	19.07				
								%EFF: 29.12 ISO1 DPM : 154.5266
7	B- 7	1	36.00	33.33	1.00	10.28	118.0	
		2	50.00	28.28				
		3	75.00	23.09				
								%EFF: 33.75 ISO1 DPM : 106.6782
8	B- 8	1	41.00	31.23	1.00	11.76	132.0	
		2	90.00	21.08				
		3	123.00	18.03				
								%EFF: 29.68 ISO1 DPM : 138.1417
9	B- 9	1	40.00	31.62	1.00	13.25	110.0	
		2	67.00	24.43				
		3	95.00	20.52				
								%EFF: 36.19 ISO1 DPM : 110.5312

Performed By: *[Signature]* Date: 6-29-01  
Reviewed By: *[Signature]* Date: 7/9/01

SM#	POS	CH	CPM	2SIGX	TIME	EL TIME	AVG H#	ERR
10	B-10	1	37.00	32.88	1.00	14.73	128.0	
		2	71.00	23.74				
		3	106.00	19.43				
								%EFF:30.81 ISO1 DPM :120.0769
11	B-11	1	45.00	29.81	1.00	16.23	113.0	
		2	77.00	22.79				
		3	106.00	19.43				
								%EFF:35.26 ISO1 DPM :127.6119
12	B-12	1	57.00	26.49	1.00	17.73	107.0	
		2	87.00	21.44				
		3	117.00	18.49				
								%EFF:37.13 ISO1 DPM :153.5316
13	B- 1	1	47.00	29.17	1.00	19.27	130.0	
		2	79.00	22.50				
		3	107.00	19.33				
								%EFF:30.24 ISO1 DPM :155.4042
14	B- 2	1	55.00	26.97	1.00	20.77	110.0	
		2	85.00	21.69				
		3	112.00	18.41				
								%EFF:36.19 ISO1 DPM :151.9804
15	B- 3	1	31.00	35.92	1.00	22.25	118.0	
		2	57.00	26.49				
		3	90.00	21.08				
								%EFF:33.75 ISO1 DPM :91.86179
16	B- 4	1	78.00	22.65	1.00	23.74	125.0	
		2	105.00	19.52				
		3	138.00	17.03				
								%EFF:31.68 ISO1 DPM :246.2194
17	B- 5	1	149.00	16.38	1.00	25.23	122.0	
		2	174.00	15.16				
		3	196.00	14.29				
								%EFF:32.56 ISO1 DPM :457.6618
18	B- 6	1	47.00	29.17	1.00	26.72	123.0	
		2	69.00	24.08				
		3	94.00	20.63				
								%EFF:32.26 ISO1 DPM :145.6791
19	B- 7	1	32.00	35.36	1.00	28.20	102.0	
		2	65.00	24.81				
		3	89.00	21.20				
								%EFF:38.71 ISO1 DPM :82.65939
20	B- 8	1	35.00	33.81	1.00	29.69	132.0	
		2	72.00	23.57				
		3	105.00	19.52				
								%EFF:29.68 ISO1 DPM :117.9259
21	B- 9	1	36.00	33.33	1.00	31.17	124.0	
		2	57.00	26.49				
		3	84.00	21.82				
								%EFF:31.97 ISO1 DPM :112.6048
22	B-10	1	29.00	37.14	1.00	32.66	120.0	
		2	53.00	27.47				
		3	86.00	21.57				
								%EFF:33.15 ISO1 DPM :87.48415

Performed By: *[Signature]*Date: 6-29-01Reviewed By: *[Signature]*Date: 7/9/01

SAM	POS	CH	CFM	2SIBX	TIME	EL TIME	AVG H#	ERR
23	B-11	1	41.00	31.23	1.00	34.14	130.0	
		2	73.00	23.41				
		3	99.00	20.20				
								%EFF:30.24 ISO1 DPM :135.5654
24	B-12	1	44.00	29.49	1.00	35.63	106.0	
		2	75.00	23.09				
		3	99.00	20.10				
								%EFF:37.44 ISO1 DPM :122.8600
25	3- 1	1	37.00	32.88	1.00	37.17	126.0	
		2	71.00	23.74				
		3	105.00	19.52				
								%EFF:31.39 ISO1 DPM :117.8748
26	3- 2	1	41.00	31.23	1.00	38.67	132.0	
		2	71.00	23.74				
		3	100.00	20.00				
								%EFF:29.68 ISO1 DPM :138.1417
27	3- 3	1	46.00	29.49	1.00	40.15	105.0	
		2	78.00	22.65				
		3	116.00	18.57				
								%EFF:37.76 ISO1 DPM :121.8313
28	3- 4	1	35.00	33.81	1.00	41.63	126.0	
		2	64.00	25.00				
		3	82.00	22.09				
								%EFF:31.39 ISO1 DPM :111.5032
29	3- 5	1	26.00	39.22	1.00	43.12	129.0	
		2	66.00	24.62				
		3	89.00	21.20				
								%EFF:30.53 ISO1 DPM :85.16734
30	3- 6	1	47.00	29.17	1.00	44.60	131.0	
		2	78.00	22.65				
		3	107.00	19.33				
								%EFF:29.96 ISO1 DPM :156.8706

Performed By: *[Signature]* Date: 6-29-01

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