### RADIOLOGICAL SURVEY OF BUILDING ROOFS

**JULY 17, 2000** 

### WESTINGHOUSE ELECTRIC CORPORATION BLAIRSVILLE, PA

### RADIOLOGICAL SURVEY OF

### **BUILDING ROOFS**

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### RADIOLOGICAL SURVEY OF

### **BUILDING ROOFS**

### Purpose

The Westinghouse Blairsville Site utilized nuclear materials during the period of the mid to late 1950's to the early part of the 1960's. Work was performed both under licenses with the atomic Energy Commission and for the Bettis Atomic Power Laboratory. Although all work ceased during the 1960's, subsequent radiological surveys and investigations, starting in 1993, established that some residual radioactivity, primarily in underground piping and subsurface soil contamination, existed on the site. During the period of 1993 through the present, additional remediation work and radiological surveys have been conducted to establish that the site can be released for unrestricted use. This series of reports documents the results of the final status radiological surveys subsequent to the various remediation efforts.

### Scope

This report compiles information on the roof surveys performed on buildings 1 and 4 at the Blairsville site. Included in the report is the survey data sheets with the conversion of the results into units comparable with the acceptance criteria, statistical analysis of the survey data in order to determine if the radiological acceptance criteria have been met at the desired degree of confidence, a compiled statistics table, and data trend visualization plots. Report #006 provides the general information relative to the final radiological surveys of buildings under this program. Refer to that report for the following information:

- 1) Site Description
- 2) Radiological Acceptance Criteria
- 3) Survey Classification System
- 4) Classification of Building Area
- 5) Selection of Survey Instruments and Instrument Characterization
- 6) System for Identification of Survey Point Locations
- 7) Statistical Analysis of Survey Results
- 8) Survey Protocol

Much of the general information for the building surveys is applicable to the roof surveys. The following discussion provides specific information related to the roof surveys.

### RADIOLOGICAL SURVEY OF

### **BUILDING ROOFS**

### **Discussion**

Appendix A provides a listing of all of the survey numbers, sections, units, and sub-units that were analyzed. Survey section diagrams of buildings 1 and 4 roofs are included for location referencing also. Appendix B presents the summary table of the compiled statistical analysis of the radiological survey data. Appendices C and D present a graphical depiction of the radiological survey results for Buildings 1 and 4 respectively. These graphs include the survey results for fixed alpha, fixed beta, and the beta scan (maximum and average) only. Other survey measurements included in Appendix B are not presented graphically.

Only the roofs of Buildings 1 and 4 were included in the roof surveys because only Building 1 and section 4-18-1 of Building 4 existed during the period of use of licensed materials. The other buildings were added at later dates and have no recorded use of radioactive material as is further evidenced by the results of surveys conducted within all buildings.

Appendix E presents the graphical results of the radiological survey of the accessible internal surfaces of the roof drains and vents. Because the instrument used was not calibrated to convert the meter output into a measurement consistent with a release criteria (i.e. DPM/100cm2) the data results are qualitative in nature. The only comparison that can be appropriately made is the comparison that can be made against the normal instrument background, which ranged from 20 to 40 CPM. The graphs of Appendix E have the instrument background subtracted.

Appendix F presents all of the radiological survey data converted to the appropriated units, if required, for comparison against the applicable criteria. See Report #006 for the appropriate survey sheets by serial number, to review the "as recorded" survey data.

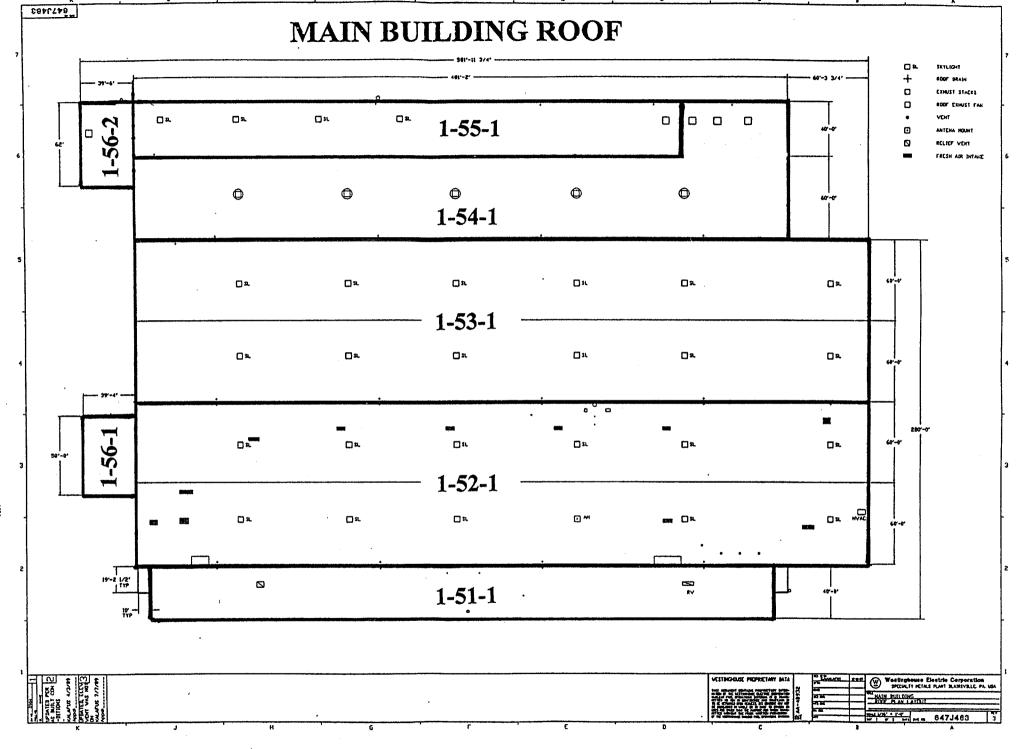
### Conclusions

Based on the radiological surveys of the roofs for Buildings 1 and 4, these roofs meet all applicable criteria for release for unrestricted use.

# APPENDIX A ROOF SURVEY LOG AND ROOF SECTIONING MAP

### Roof Survey Log

Survey Serial	Survey			Sub-	Number of			Total Unit Size	Total Unit Size
Number	Date	Section	Unit	Unit	Survey Points	Туре	Classification	(sq. ft.)	(sq. M.)
01-419	8/13/95	1	51	1	30	ROOFTOP	1	18880	1754.5
01-420	8/17/95	1	52	1	30	ROOFTOP	1	64426	6045
01-421	8/18/95	1	53	1	30	ROOFTOP	1	64426	6045
01-422	8/19/95	1	54	1	30	ROOFTOP	1	30600	2846
01-427	8/29/95	1	55	1	30	ROOF	1	15680	1421
01-428	8/29/95	1	56	2	30	ROOF	1	5040	468.4
01-429	8/30/95	1	56	1	30	ROOF	1	5040	468.4
04-019	8/30/95	4	18	1	30	ROOF	1	12800	189.6
ALL	8//95	All	All	All	42	DRAINS & VENTS	1	N/A	N/A



38%

**DIE SHOP ROOF** 

4-18-1

4-19-1

## APPENDIX B ROOF COMPILED STATISTICAL ANALYSIS

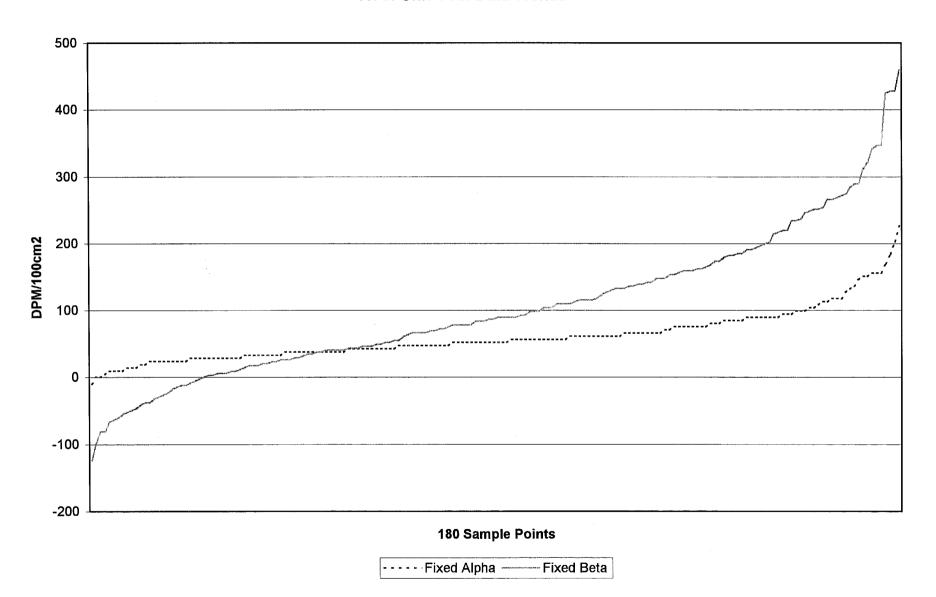
C4 #	Location	Number of Survey Points	Minimum Value	Maximum	Average	Standard	Radiological	11-2-
Sort #	Code	Points	value	Value	Value	Deviation	Acceptance Criteria	Units
		mma (at 1 meter abov	<del></del>					
1	1:51	30	5	8	6.20	0.66	15	(@1m) microR/hr
1	1:52	30	5	9	5.87	0.97	15	(@1m) microR/hr
1	1:53	30	4	6	4.97	0.67	15	(@1m) microR/hr
1	1:54	30	4	6	5.00	0.64	15	(@1m) microR/hr
1	1:55	30	4	7	5.63	0.67	15	(@1m) microR/hr
1	1:56	30	5	8	6.60	0.89	15 15	(@1m) microR/hr
1	4:18	30	5	8	6.33	0.80	15	(@1m) microR/hr
	Gross Beta	/ Gamma (on contact w	vith surface)					
2	1:51	30	0.007	0.064	0.017	0.013	0.20	mR/hr
2	1:52	30	0.010	0.025	0.014	0.005	0.20	mR/hr
2	1:53	30	0.010	0.020	0.014	0.004	0.20	mR/hr
2	1:54	30	0.010	0.025	0.015	0.005	0.20	mR/hr
2	1:55	30	0.007	0.019	0.013	0.003	0.20	mR/hr
2	1:56	30	0.007	0.018	0.013	0.003	0.20	mR/hr
2	4:18	30	0.005	0.016	0.010	0.003	0.20	mR/hr
	Alpha DPM	fixed measurement at	survey naint	}				
3	1:51	30	23.58	99.06	58.81	20.08	5000	DPM/100cm2
3	1:52	30	9.43	89.62	44.18	20.15	5000	DPM/100cm2
3	1:53	30	-9.43	108.49	43.24	22.37	5000	DPM/100cm2
3	1:54	30	23.58	117.92	59.43	22.46	5000	DPM/100cm2
3	1:55	30	33.02	226.42	114.62	49.35	5000	DPM/100cm2
3	1:56	30	0.00	113.21	45.13	32.13	5000	DPM/100cm2
				66.04		21.26	5000	DPM/100cm2
3	4:18	30	-9.43	00.04	34.91	21.20	3000	DEW/100cm2
		fixed measurement at s						
4	1:51	30	-124.28	190.75	23.22	85.46	5000	DPM/100cm2
4	1:52	30	-37.57	320.81	94.89	89.66	5000	DPM/100cm2
4	1:53	30	-26.01	283.24	118.02	78.27	5000	DPM/100cm2
4	1:54	30	-40.46	289.02	83.82	89.43	5000	DPM/100cm2
4	1:55	30	0.00	459.54	234.10	116.95	5000	DPM/100cm2
4	1:56	30	-63.58	219.65	68.88	63.77	5000	DPM/100cm2
4	4:18	30	43,35	277.46	148.07	58.50	5000	DPM/100cm2
Bet	a Scan Max	(maximum of scan ne	ar survey poi	int)				
5	1:51	30	-37.57	1294.80	287.67	259.01	15000	DPM/100cm2
5	1:52	30	106.94	708.09	286.80	114.77	15000	DPM/100cm2
5	1:53	30	135.84	549.13	317.92	106.05	15000	DPM/100cm2
5	1:54	30	144.51	528.90	324.18	100.90	15000	DPM/100cm2
5	1:55	30	309.25	658.96	473.22	111.55	15000	DPM/100cm2
5	1:56	30	101.16	627.17	318.98	143.99	15000	DPM/100cm2
5	4:18	30	208.09	552.02	363.78	90.71	15000	DPM/100cm2
Ro	ta Scan Ave	a. (average of scan nea	r survey noir	nt)				
6	1:51	30	-141.62	205.20	-14.45	83.01	5000	DPM/100cm2
6	1:52	30	-8.67	164.74	68.40	57.47	5000	DPM/100cm2
6	1:53	30	-11.56	219.65	110.79	66.46	5000	DPM/100cm2
6	1:54	30	-40.46	132.95	55.88	42.49	5000	DPM/100cm2
6	1:55	30	-60.69	372.83	180.15	105.26	5000	DPM/100cm2
6	1:56	30	-86.71	297.69	46.53	94.24	5000	DPM/100cm2
6	4:18	30	-14.45	216.76	127.17	67.18	5000	DPM/100cm2
Б	amovehlo A	lpha (alpha smear near	curvey noins	<u> </u>				
7 <b>K</b>	1:51	ipna (aipna sinear near 30	-0.99	3.43	-0.30	1.14	1000	DPM/100cm2
7	1:52	30	-0.99	1.96	-0.20	1.08	1000	DPM/100cm2
7	1:53	30	-0.99	7.85	0.39	1.97	1000	DPM/100cm2
7	1:54	30	-0.99	1.96	-0.45	0.82	1000	DPM/100cm2
,	1.04	30	-0.33	1.50	-U. <del>T</del> U	5.02	1000	J. 11, 10001112

### Roof Compiled Statistics

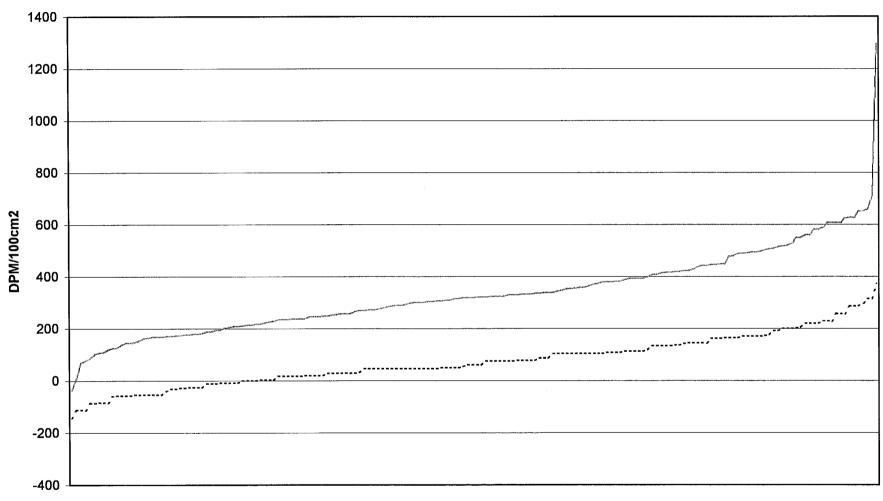
7	1:55	30	-1.61	5.77	0.06	2.00	1000	DPM/100cm2
7	1:56	30	-1.61	2.82	-0.38	1.51	1000	DPM/100cm2
7	4:18	30	-1.61	5.77	0.11	1.55	1000	DPM/100cm2
I	Removable Bet	a (beta smear ne	ar survey point)					
8	1:51	30	-3.13	7.50	0.90	2.99	1000	DPM/100cm2
8	1:52	30	-3.13	7.50	1.65	2.56	1000	DPM/100cm2
8	1:53	30	-3.13	8.83	0.54	2.79	1000	DPM/100cm2
8	1:54	30	-4.46	11.49	-0.08	3.01	1000	DPM/100cm2
8	1:55	30	-4.55	8.82	-0.27	3.01	1000	DPM/100cm2
8	1:56	30	-5.88	6.15	-1.03	2.86	1000	DPM/100cm2
8	4:18	30	-4.55	7.49	0.36	3.15	1000	DPM/100cm2

## APPENDIX C BUILDING 1 DATA TRENDS

**Roof Unit 1-All Data Trends** 



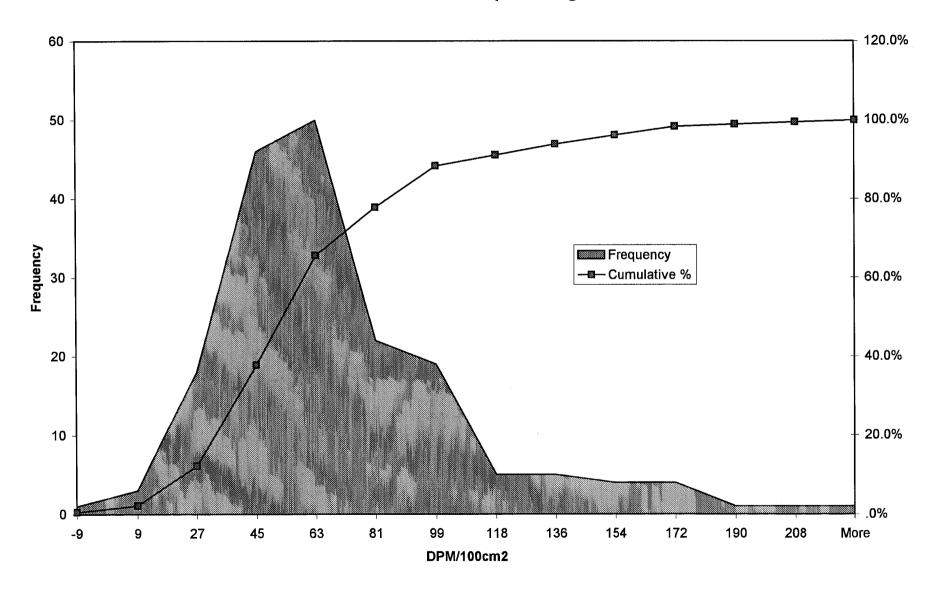
### **Roof Unit 1-All Data Trends**



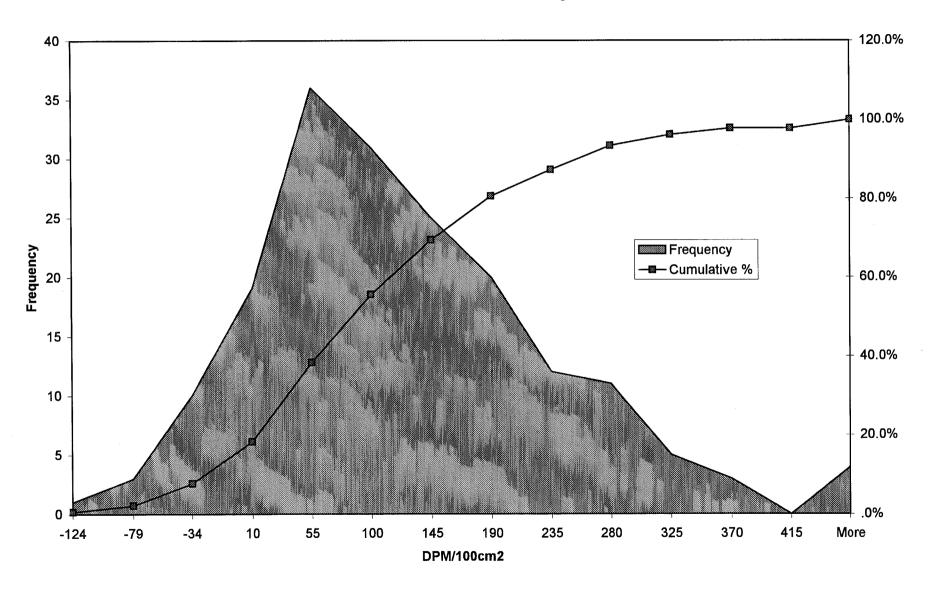
**180 Sample Points** 

Beta Scan Maximum - - - Beta Scan Average

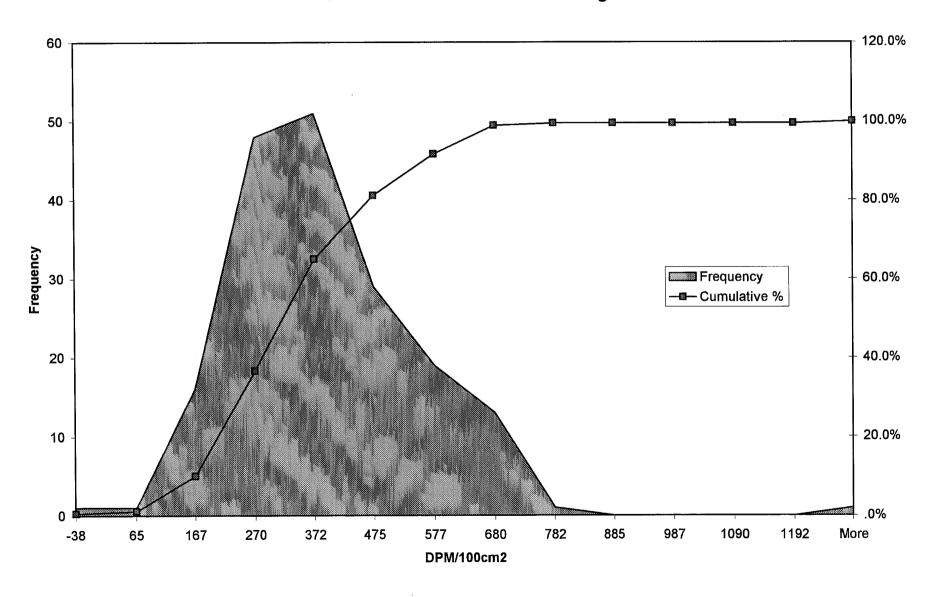
### Roof Unit 1-All Fixed Alpha Histogram



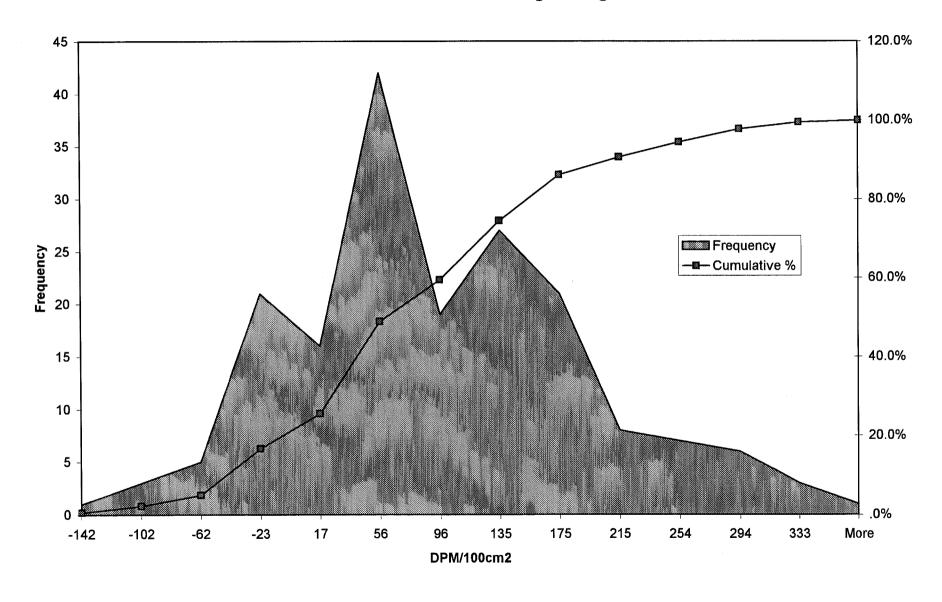
**Roof Unit 1-All Fixed Beta Histogram** 



Roof Unit 1-All Beta Scan Maximum Histogram

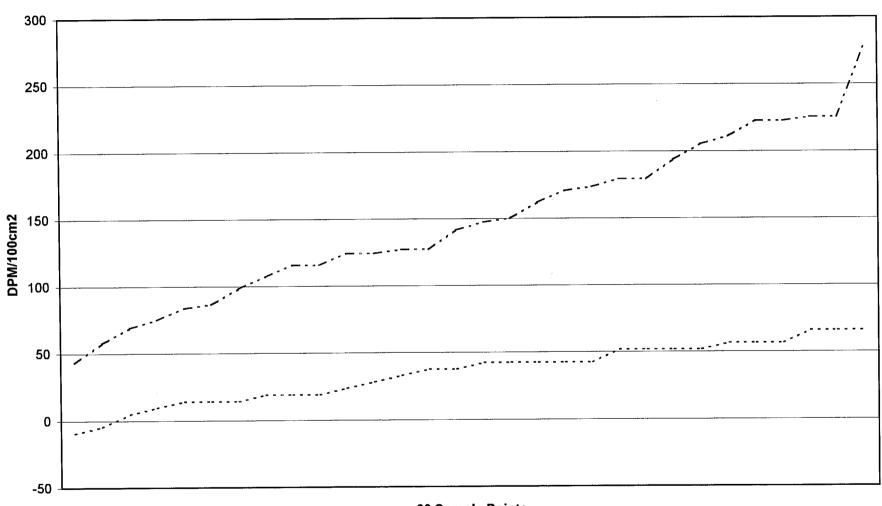


Roof Unit 1-All Beta Scan Average Histogram



## APPENDIX D BUILDING 4 DATA TRENDS

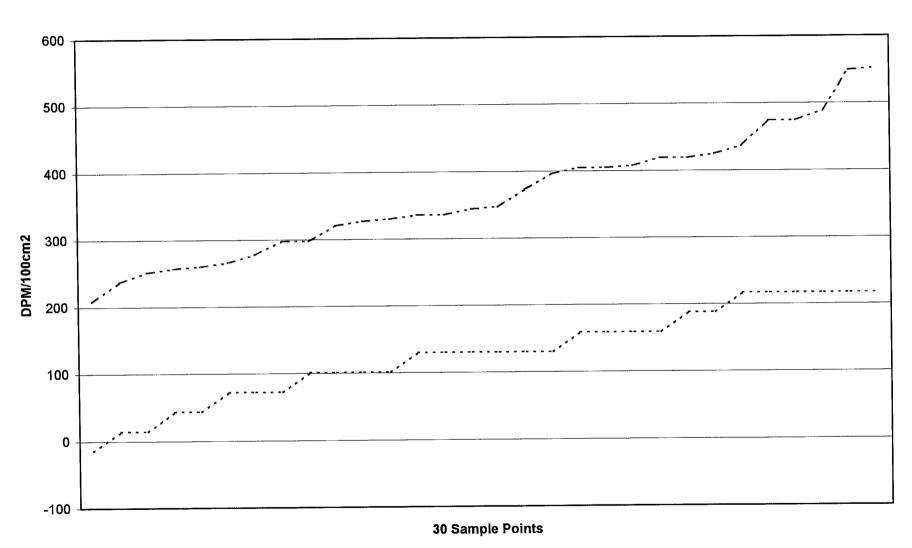
**Roof Unit 4-18 Data Trends** 



30 Sample Points

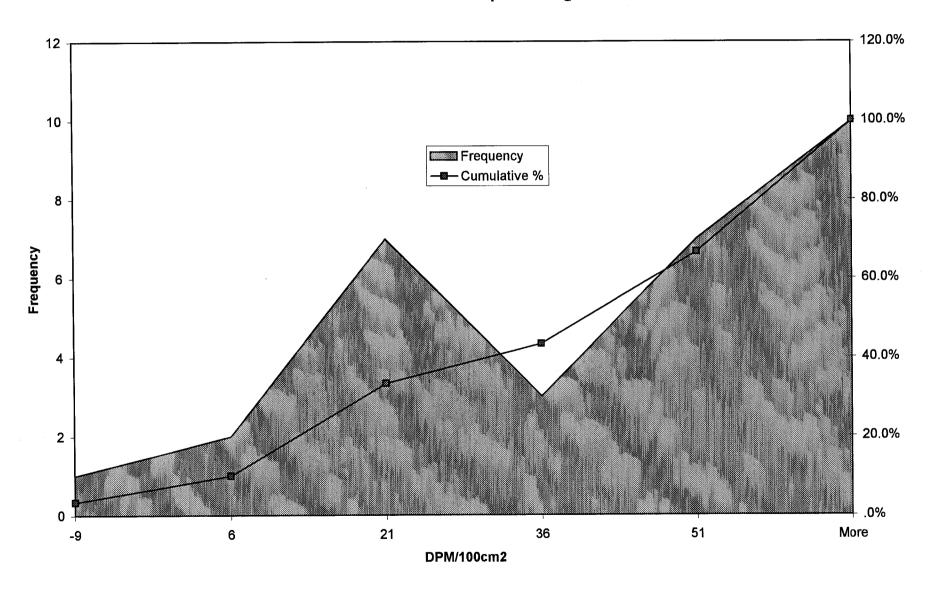
---- Fixed Alpha --- Fixed Beta

**Roof Unit 4-18 Data Trends** 

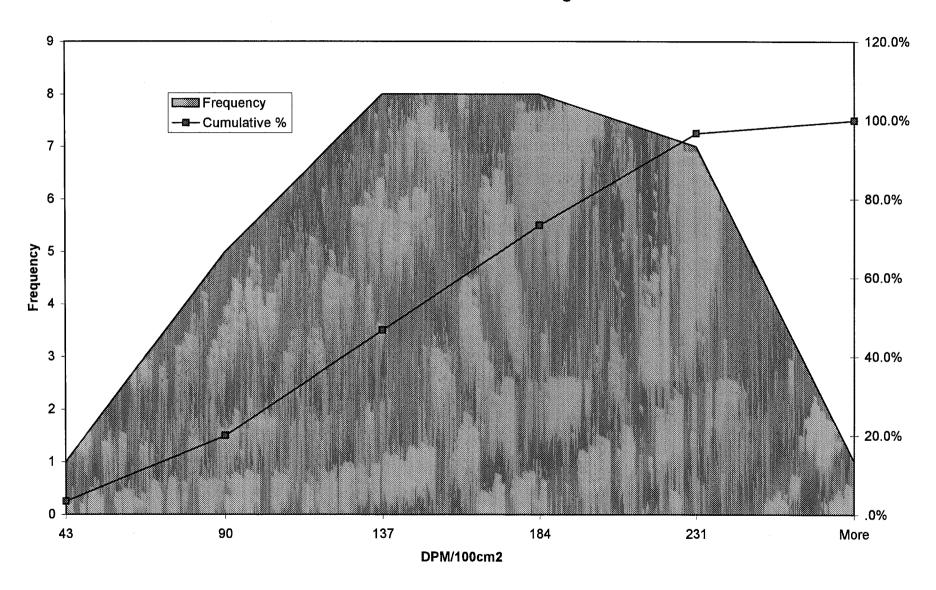


---- Beta Scan Maximum ----- Beta Scan Average

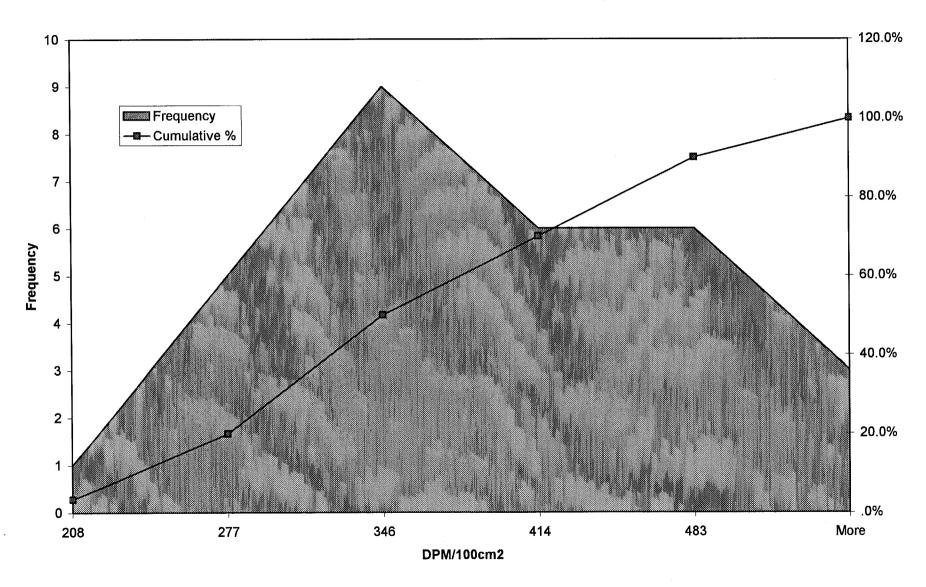
Roof Unit 4-18 Fixed Alpha Histogram



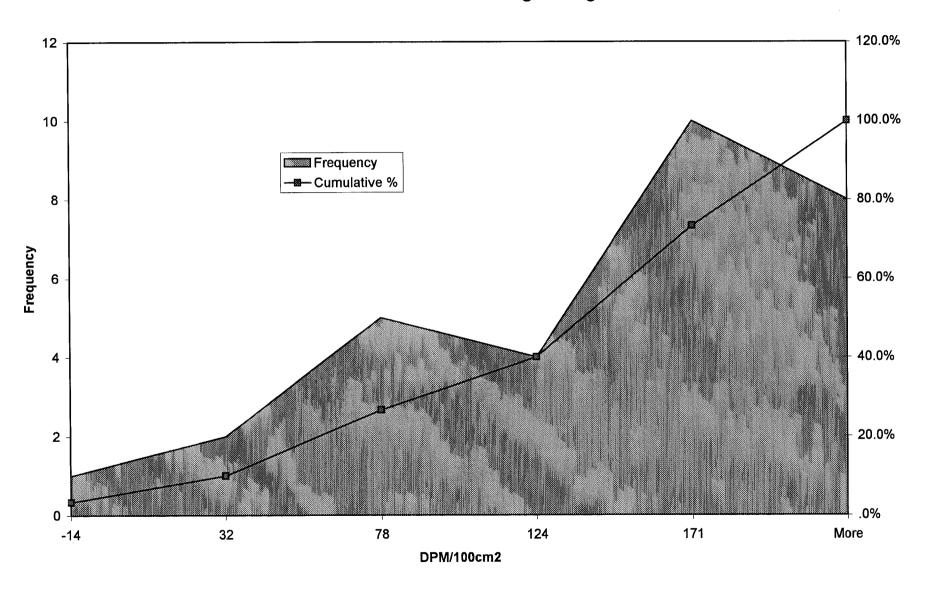
Roof Unit 4-18 Fixed Beta Histogram



Roof Unit 4-18 Beta Scan Maximum Histogram

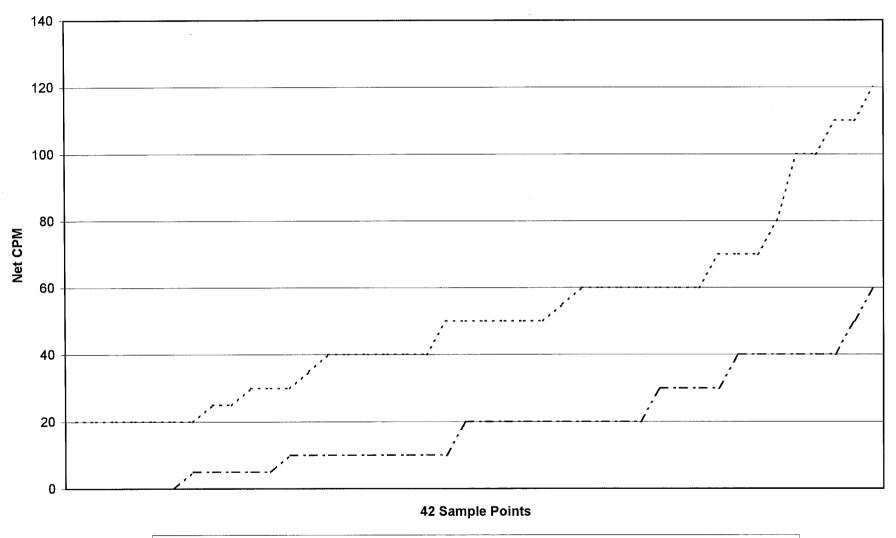


Roof Unit 4-18 Beta Scan Average Histogram



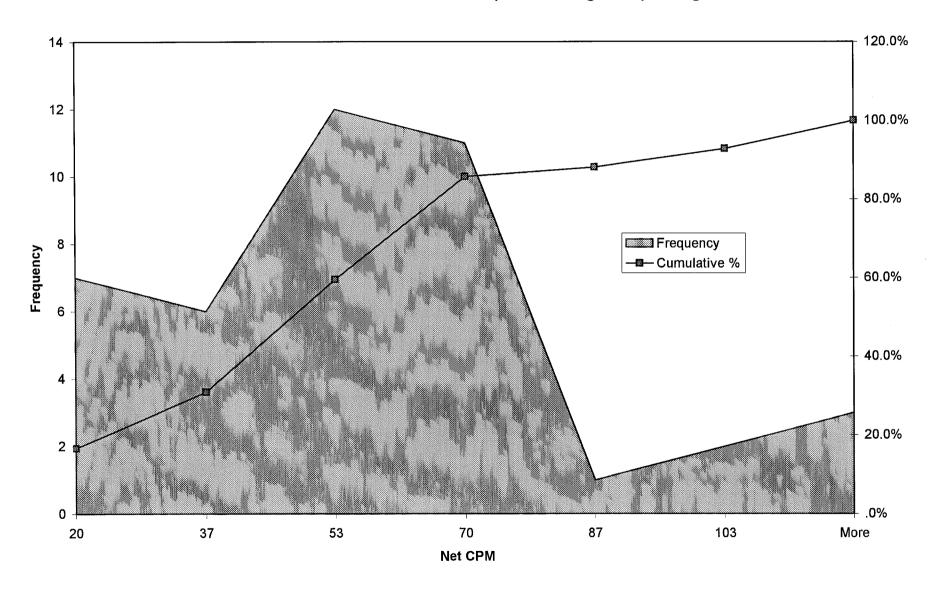
# APPENDIX E ROOF DRAIN AND VENT INTERNALS DATA TRENDS

### **Roof Drain & Vent Internals Data Trends**

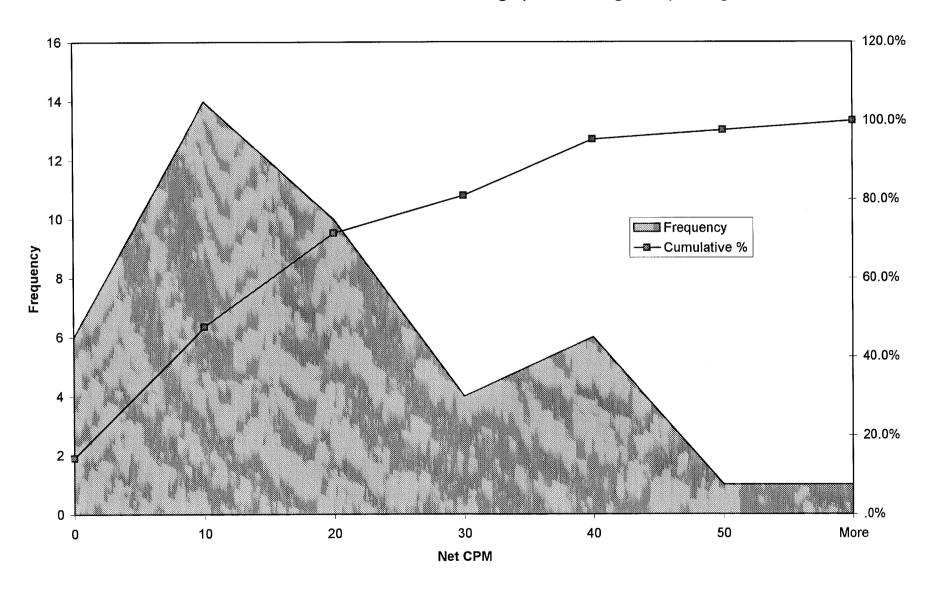


---- Beta Scan CPM Maximum (minus background) ---- Beta Scan CPM Average (minus background)

### Roof Drain & Vent Beta Scan Maximum (minus background) Histogram



### Roof Drain & Vent Internals Beta Scan Average (minus background) Histogram



### APPENDIX F ROOF SURVEYS

														Beta Scan	Beta Scan						
	Survey							Gross	Beta/	Alpha		Beta		DPM per	DPM per	Beta	Removable		Removable		
Survey	Serial	Surface				Gross	Gamma	Beta/	Gamma	DPM per	Alpha	DPM per	Beta	100cm2	100cm2	Scan	Alpha DPM	Removable	Beta DPM	Removable	
Date	Number	Description	Х	Υ	Sub-Unit	Gamma	MDA	Gamma	MDA	100cm2	MDA	100cm2	MDA	Maximum	Average	MDA	per 100cm2	Alpha MDA	per 100cm2	Beta MDA	Comments
8/13/95	01-419	ROOF	6	-5	1-51-1	8	15	0.056	0.02	37.736	63	78.035	286	517.341	176.301	1300	-0.989	7.64	-3.134	12.71	RUBBER
8/13/95	01-419	ROOF	8	-10	1-51-1	7	15	0.013	0.02	94.340	63	104.046	286	124.277	-54.913	1300	1.956	7.64	-3.134	12.71	RUBBÉR
8/13/95	01-419	ROOF	1	-16	1-51-1	7	15	0.012	0.02	51.887	63	98.266	286	560.694	118.497	1300	0.484	7.64	-1.805	12.71	DRAIN AREA
8/13/95	01-419	ROOF	6	-20	1-51-1	6	15	0.011	0.02	75.472	63	54.913	286	124.277	-26.012	1300	-0.989	7.64	-0.475	12.71	RUBBER
8/13/95	01-419	ROOF	4	-25	1-51-1	6	15	0.013	0.02	84.906	63	98.266	286	167.630	-54.913	1300	0.484	7.64	4.844	12.71	RUBBER
8/13/95	01-419	ROOF	10	-30	1-51-1	7	15	0.009	0.02	42.453	63	190.751	286	549.133	60.694	1300	3.429	7.64	6.174	12.71	RUBBER
8/13/95	01-419	ROOF	6	-35	1-51-1	6	15	0.015	0.02	23.585	63	-66.474	286	5.780	-112.717	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/13/95	01-419	ROOF	4	-40	1-51-1	6	15	0.013	0.02	37.736	63	-80.925	286	173.410	-112.717	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/13/95	01-419	ROOF	10	-40	1-51-1	7	15	0.012	0.02	61.321	63	-54.913	286	69.364	-54.913	1300	-0.989	7.64	0.855	12.71	RUBBER
8/13/95	01-419	ROOF	6	-45	1-51-1	6	15	0.007	0.02	51.887	63	-28.902	286	75.145	-141.618	1300	-0.989	7.64	0.855	12.71	RUBBER
8/13/95	01-419	ROOF	6	-50	1-51-1	5	15	0.035	0.02	75.472	63	-80.925	286	106.936	-54.913	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/13/95	01-419	ROOF	1	-52	1-51-1	6	15	0.011	0.02	37.736	63	89.595	286	650.289	60.694	1300	-0.989	7.64	-1.805	12.71	ROOF DRAIN AREA
8/13/95	01-419	ROOF	8	-55	1-51-1	6	15	0.015	0.02	56.604	63	26.012	286	306.358	31.792	1300	1.956	7.64	-1.805	12.71	RUBBER
8/13/95	01-419	ROOF	4.5	-61	1-51-1	6	15	0.013	0.02	42.453	63	89.595	286	176.301	-26.012	1300	-0.989	7.64	4.844	12.71	EXHAUST FAN AREA
8/13/95	01-419	ROOF	1.5	-66.5	1-51-1	6	15	0.010	0.02	37.736	63	8.671	286	-37.572	-83.815	1300	-0.989	7.64	0.855	12.71	SEWER VENT AREA
8/13/95	01-419	ROOF	6	-70	1-51-1	7	15	0.013	0.02	51.887	63	-46.243	286	274.566	-112.717	1300	0.484	7.64	-3.134	12.71	RUBBER
8/13/95	01-419	ROOF	1.5	-73.5	1-51-1	7	15	0.015	0.02	99.057	63	78.035	286	248.555	-83.815	1300	-0.989	7.64	0.855	12.71	SEWER VENT AREA
8/13/95	01-419	ROOF	6	-80	1-51-1	6	15	0.032	0.02	61.321	63	-98.266	286	320.809	-54.913	1300	-0.989	7.64	7.504	12.71	RUBBER
8/13/95	01-419	ROOF	10	-85	1-51-1	6	15	0.007	0.02	28.302	63	-52.023	286	208.092	2.890	1300	-0.989	7.64	0.855	12.71	RUBBER
8/13/95	01-419	ROOF	1	-89	1-51-1	6	15	0.022	0.02	51.887	63	164.740	286	1294.798	205.202	1300	0.484	7.64	3.514	12.71	ROOF DRAIN AREA
8/13/95	01-419	ROOF	6	-95	1-51-1	5	15	0.011	0.02	66.038	63	-23.121	286	86.705	-83.815	1300		7.64	0.855	12.71	RUBBER
8/13/95	01-419	ROOF	8	-100	1-51-1	6	15	0.029	0.02	75.472	63	66.474	286	167.630	-26.012	1300	-0.989	7.64	3.514	12.71	RUBBER
8/13/95	01-419	ROOF	4	-105	1-51-1	6	15	0.012	0.02	84.906	63	124.277	286	580.925	2.890	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/13/95	01-419	ROOF	6	-110	1-51-1	6	15	0.064	0.02	94.340	63	-5.780	286	271.676	-26.012	1300	0.484	7.64	3.514	12.71	RUBBER
8/13/95	01-419	ROOF	4	-115	1-51-1	5	15	0.009	0.02	47.170	63	-124.277	286	118.497	-54.913	1300	-0.989	7.64	6.174	12.71	AIR INTAKE STRUCTURE
8/13/95	01-419	ROOF	6	-120	1-51-1	6	15	0.012	0.02	42.453	63	-2.890	286	300.578	2.890	1300		7.64	2.185	12.71	RUBBER
8/13/95	01-419	ROOF	1	-125	1-51-1	6	15	0.014	0.02	56.604	63	-49.133	286	393.064	60.694	1300	-0.989	7.64	-0.475	12.71	ROOF DRAIN AREA
8/13/95	01-419	ROOF	6	-130	1-51-1	6	15	0.011	0.02	66.038	63	-60.694	286	286.127	2.890	1300	-0.989	7.64	-0.475	12.71	RUBBER
8/13/95	01-419	ROOF	6	-135	1-51-1	6	15	0.008	0.02	70.755	63	52.023	286	193.642	-54.913	1300	-0.989	7.64	0.855	12.71	RUBBER
8/13/95	01-419	ROOF	2	-140	1-51-1	7	15	0.020	0.02	56.604	63	147.399	286	315.029	60.694	1300	0.484	7.64	2.185	12.71	RUBBER

					Beta Scan	Beta Scan		
		Gross	Alpha	Beta	DPM per	DPM per	Removable	Removable
	Gross	BetaGam	DPM per	DPM per	100cm2	100cm2	Alpha DPM	Beta DPM
Stastical Analysis	Gamma	ma	100cm2	100cm2	Maximum	Average	per 100cm2	per 100cm2
Number of Samples	30	30	30	30	30	30	30	30
Minimum	5	0.007	23.58	-124.28	-37.57	-141.62	-0.99	-3.13
Maximum	8	0.064	99.06	190.75	1294.80	205.20	3.43	7.50
Average	6.20	0.017	58,81	23.22	287.67	-14.45	-0.30	0.90
Standard Deviation	0.66	0.013	20.08	85.46	259.01	83,01	1.14	2.99
Limit	15	0.20	5000	5000	15000	5000	1000	1000
Factor for Comparison of Survey								
Data @95% Confidence:	1.699	1.699	1.699	1.699	1.693	1.693	1.693	1.693
Data Test Parameter	6.406	0.022	65.033	49.725	367.727	11.206	0.052	1.824
"Number of Samples" Factor	13.246	13.562	246.090	58.238	56,803	60.411	875.320	333.755
Does Data Satisfy-								
Limit Criteria?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Were an Adequate Number-								
of Samples Taken?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Survey	Out				C	C	Gross Beta/	Beta/	Alpha DPM per	Alaba	Beta DPM per	Beta	Beta Scan DPM per 100cm2	Beta Scan DPM per 100cm2		Removable	Removable	Removable Beta DPM	Removable	
Survey Date	Serial Number	Surface Description	х	Υ	Sub-Unit		Gamma MDA	Gamma	Gamma MDA	100cm2	Alpha MDA	100cm2	MDA	Maximum	Average			Alpha MDA			Comments
8/17/95	01-420	RUBBER ROOF	16	-5	1-52-1	6	15	0.015	0.02	9.434	63	26.012	286	202.312	78.035	1300	-0.989	7.64	2.185	12.71	
8/17/95	01-420	RUBBER ROOF	22	-10	1-52-1	6	15	0.010	0.02	28.302	63	78.035	286	317.919	106,936	1300	-0.989	7.64	4.844	12,71	
8/17/95	01-420	ROOF DRAIN	1	-8	1-52-1	5	15	0.010	0.02	75.472	63	265.896	286	364.162	78.035	1300	-0.989	7.64	3.514	12.71	
8/17/95	01-420	ROOF DRAIN	35.5		1-52-1	9	15	0.015	0.02	33.019	63	213.873	286	297.688	135.838	1300	-0.989	7.64	0.855	12.71	
8/17/95	01-420	RUBBER ROOF	10	-15	1-52-1	7	15	0.010	0.02	9.434	63	-31.792	286	225.434	20.231	1300	0.484	7.64	-0.475	12.71	
8/17/95	01-420	RUBBER ROOF	16	-20	1-52-1	6	15	0.015	0.02	28.302	63	109.827	286	187.861	-8.671	1300	1.956	7.64	7.504	12.71	
8/17/95	01-420	RUBBER ROOF	24	-25	1-52-1	6	15	0.025	0.02	28.302	63	5.780	286	106.936	-8.671	1300	-0.989	7.64	2.185	12.71	
8/17/95	01-420	RUBBER ROOF	16	-30	1-52-1	5	15	0.010	0.02	47.170	63	66.474	286	300.578	78.035	1300	-0.989	7.64	2.185	12.71	
8/17/95	01-420	ROOF DRAIN	1	-37	1-52-1	5	15	0.010	0.02	61.321	63	153.179	286	427.746	164.740	1300	-0.989	7.64	0.855	12.71	
8/17/95	01-420	ROOF DRAIN	35.5	-37	1-52-1	7	15	0.015	0.02	66.038	63	89.595	286	210.983	20.231	1300	1.956	7.64	3.514	12.71	
8/17/95	01-420	ROOF VENTS	35	-23	1-52-1	7	15	0.010	0.02	42.453	63	254.335	286	332.370	106.936	1300	0.484	7.64	0.855	12.71	
8/17/95	01-420	ROOF VENTS	34	-31	1-52-1	7	15	0.015	0.02	37.736	63	-37.572	286	335.260	-8.671	1300	-0.989	7.64	-1.805	12.71	
8/17/95	01-420	ROOF VENTS	34	-35	1-52-1	6	15	0.010	0.02	61.321	63	17.341	286	245.665	-8.671	1300	0.484	7.64	2.185	12.71	
8/17/95	01-420	ROOF VENTS	34	-37	1-52-1	7	15	0.010	0.02	47.170	63	46.243	286	176.301	49.133	1300	-0.989	7.64	2.185	12.71	
8/17/95	01-420	RUBBER ROOF	16	-40	1-52-1	5	15	0.015	0.02	23.585	63	40.462	286	153.179	49.133	1300	0.484	7.64	4.844	12.71	
8/17/95	01-420	RUBBER ROOF	8	-45	1-52-1	5	15	0.020	0.02	51.887	63	34.682	286	245.665	20.231	1300	-0.989	7.64	2.185	12.71	
8/17/95	01-420	RUBBER ROOF	22	-50	1-52-1	5	15	0.010	0.02	47.170	63	5.780	286	343,931	78.035	1300	-0.989	7.64	2.185	12.71	
8/17/95	01-420	RUBBER ROOF	28	-55	1-52-1	6	15	0.020	0.02	66.038	63	104.046	286	236,994	106.936	1300	-0.989	7.64	-0.475	12.71	
8/17/95	01-420	RUBBER ROOF	16	-62	1-52-1	5	15	0.025	0.02	89.623	63	115.607	286	170.520	49.133	1300	-0.989	7.64	-1.805	12.71	
8/17/95	01-420	ROOF DRAIN	1	-73	1-52-1	5	15	0.010	0.02	42.453	63	320.809	286	479.769	164.740	1300	1.956	7.64	0.855	12.71	
8/17/95	01-420	ROOF DRAIN	35.5	-73	1-52-1	6	15	0.015	0.02	9.434	63	83.815	286	338.150	164.740	1300	-0.989	7.64	-3.134	12.71	
8/17/95	01-420	RUBBER ROOF	16	-80	1-52-1	5	15	0.020	0.02	51.887	63	8.671	286	187.861	-8.671	1300	0.484	7.64	4.844	12.71	
8/17/95	01-420	FAN EXHAUST	34	-88	1-52-1	7	15	0.010	0.02	28.302	63	-14.451	286	708.092	164.740	1300	1.956	7.64	2.185	12.71	
8/17/95	01-420	RUBBER ROOF	16	-95	1-52-1	5	15	0.010	0.02	75.472	63	63.584	286	289.017	20.231	1300	0.484	7.64	0.855	12.71	
8/17/95	01-420		16	-105		6	15	0.010	0.02	51.887	63	153.179	286	346.821	78.035	1300	0.484	7.64	6.174	12.71	
8/17/95	01-420	ROOF DRAIN	1	-110		5	15	0.020	0.02	33.019	63	193.642	286	277.457	20.231	1300	-0.989	7.64	3.514	12.71	
8/17/95	01-420	ROOF DRAIN		-110		6	15	0.015	0.02	47.170	63	132.948	286	248.555	106,936	1300	0.484	7.64	-3.134	12.71	
8/17/95	01-420	ROOF DRAIN	35.5	-147		6	15	0.015	0.02	23.585	63	92.486	286	306.358	135.838	1300		7.64	-0.475	12.71	
8/17/95	01-420	ROOF DRAIN	1	-147		5	15	0.015	0.02	56.604	63	156.069	286	323.699	49.133	1300		7.64	0.855	12.71	
8/17/95	01-420	WASTE VENT	27.5	-160	1-52-1	5	15	0.020	0.02	51.887	63	98.266	286	216.763	49,133	1300	-0.989	7.64	-0.475	12.71	
							т	Г	г	<del></del>				Beta Scan	Beta Scan			1	1	1	
								Gross		Alpha		Beta		DPM per	DPM per		Removable		Removable		
						Gross	1	BetaGam	ļ	DPM per		DPM per		100cm2	100cm2		Alpha DPM		Beta DPM		
C44	l Amabasia					Gamma		ma	1	100cm2		100cm2		Maximum	Average		per 100cm2		per 100cm2		
	I Analysis of Sample					30		30		30		30	-	30	30	<del> </del>	30	<b></b>	30	1	
Minimum		8				5		0.010	_	9.43		-37.57		106.94	-8.67	+	-0.99	<del>†</del>	-3.13	┪	
Maximur						9	<del>                                     </del>	0.015	<del> </del>	89.62	-	320.81	<del> </del>	708.09	164.74	1	1.96	<del> </del>	7.50	1	
						5.87	<del>                                     </del>	0.023	<del> </del>	44.18		94.89	<del> </del>	286.80	68.40	1	-0.20	<del> </del>	1.65	1	
Average	d Deviation	1				0.97	+	0.005	-	20.15		89.66	l -	114.77	57.47	1	1.08	<del> </del>	2.56	1	
Limit	L DEVIALION	·				15	†	0.20	<b></b>	5000		5000		15000	5000	<b>T</b>	1000	1	1000	1	
	or Compari	ison of Survey				<del>  "</del>	<del>                                     </del>	0.20		1 0000		1		,,,,,,,,	1	<b>†</b>	† · · · · · · · · · · · · · · · · · · ·	1	1	1	
	@95% Cor	•				1.699		1,699		1,699		1.699		1.679	1.679		1.679	1	1.679	1	
	st Paramet		•			6.169	<del>                                     </del>	0.016		50.431		122,707		321.984	86,018	<b>†</b>	0.126	<del> </del>	2.436	1	
	r of Sample					9.385	<b>†</b>	39.626	i	246.001		54.705	<u> </u>	128.193	85.811	1	930.103	1	390.491	1	
	ata Satisfy					1	<b>†</b>	1	1	1		1	<b>†</b>	1	T	1	1	1	<del>                                     </del>	1	

Yes

Yes

Yes

Yes

Does Data Satisfy-Limit Criteria?

Were an Adequate Number-of Samples Taken?

Yes

														Beta Scan	Beta Scan						
	Survey							Gross	Beta/	Alpha		Beta		DPM per	DPM per	Beta	Removable		Removable		
Survey	Serial	Surface				Gross	Gamma	Beta/	Gamma	DPM per	Alpha	DPM per	Beta	100cm2	100cm2	Scan	Alpha DPM	Removable	Beta DPM	Removable	
Date	Number	Description	Χ	Υ	Sub-Unit	Gamma	MDA	Gamma	MDA	100cm2	MDA	100cm2	MDA	Maximum	Average	MDA	per 100cm2	Alpha MDA	per 100cm2	Beta MDA	Comments
8/18/95	01-421	ROOF	18	-5	1-53-1	6	15	0.015	0.02	61,321	63	196.532	286	317.919	75.145	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/18/95	01-421	DRAIN AREA	36.5	-9	1-53-1	6	15	0.010	0.02	37.736	63	202.312	286	352.601	132.948	1300	0.484	7.64	-1.805	12.71	
8/18/95	01-421	ROOF	18	-10	1-53-1	4	15	0.020	0.02	37.736	63	130.058	286	144.509	17.341	1300	0.484	7.64	-3.134	12.71	RUBBER
8/18/95	01-421	ROOF	10	-15	1-53-1	5	15	0.015	0.02	-9.434	63	46.243	286	182.081	46.243	1300	-0.989	7.64	-3.134	12.71	RUBBER
8/18/95	01-421	ROOF DRAIN	1	-17.5	1-53-1	5	15	0.010	0.02	56.604	63	132.948	286	338.150	46.243	1300	0.484	7.64	-0.475	12.71	
8/18/95	01-421	ROOF	35	-26	1-53-1	5	15	0.015	0.02	28.302	63	-26.012	286	164.740	-11.561	1300	-0.989	7.64	0.855	12.71	RUBBER
8/18/95	01-421	ROOF	18	-30	1-53-1	5	15	0.015	0.02	56.604	63	40.462	286	442.197	161.850	1300	-0.989	7.64	3.514	12.71	RUBBER
8/18/95	01-421	ROOF DRAIN	1	-37	1-53-1	4	15	0.020	0.02	23,585	63	179.191	286	505.780	219.653	1300	-0.989	7.64	2.185	12.71	
8/18/95	01-421	ROOF DRAIN	36.5	-37	1-53-1	4	15	0.010	0.02	61.321	63	147.399	286	338.150	104.046	1300	-0.989	7.64	0.855	12.71	
8/18/95	01-421	ROOF	26	-45	1-53-1	5	15	0.010	0.02	33.019	63	40.462	286	387.283	104.046	1300	-0.989	7.64	0.855	12.71	RUBBER
8/18/95	01-421	ROOF	8	-50	1-53-1	5	15	0.015	0.02	28.302	63	37.572	286	257.225	46.243	1300	-0.989	7.64	-0.475	12.71	RUBBER
8/18/95	01-421	ROOF	18	-60	1-53-1	5	15	0.010	0.02	47.170	63	60.694	286	135.838	46.243	1300	-0.989	7.64	2.185	12.71	RUBBER
8/18/95	01-421	ROOF	26	-65	1-53-1	6	15	0.015	0.02	33.019	63	52.023	286	236.994	104.046	1300	1.956	7.64	3.514	12.71	RUBBER
8/18/95	01-421	ROOF DRAINS	1	-74	1-53-1	5	15	0.020	0.02	47.170	63	274.566	286	407.514	219.653	1300	0.484	7.64	3.514	12.71	
8/18/95	01-421	ROOF DRAINS	36.5	-74	1-53-1	5	15	0.010	0.02	108.491	63	283.237	286	378.613	219.653	1300	0.484	7.64	0.855	12.71	
8/18/95	01-421	ROOF	16	-80	1-53-1	5	15	0.020	0.02	37.736	63	184.971	286	309.249	190.751	1300	0.484	7.64	2.185	12.71	RUBBER
8/18/95	01-421	ROOF	26	-90	1-53-1	4	15	0.015	0.02	18.868	63	78.035	286	236.994	104.046	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/18/95	01-421	ROOF	18	-95	1-53-1	5	15	0.015	0.02	66.038	63	135.838	286	335.260	46.243	1300	-0.989	7.64	0.855	12.71	RUBBER
8/18/95	01-421	ROOF	10	-105	1-53-1	5	15	0.015	0.02	33.019	63	141.618	286	372.832	104.046	1300	1.956	7.64	-1.805	12.71	RUBBER
8/18/95	01-421	ROOF DRAIN	1	-111	1-53-1	5	15	0.010	0.02	51.887	63	158.960	286	323.699	132.948	1300	-0.989	7.64	-3.134	12.71	
8/18/95	01-421	ROOF DRAIN	36.5	-111	1-53-1	6	15	0.020	0.02	37,736	63	234.104	286	445.087	161.850	1300	0.484	7.64	4.844	12.71	
8/18/95	01-421	ROOF	22	-120	1-53-1	5	15	0.010	0.02	33.019	63	28.902	286	216.763	46.243	1300	-0.989	7.64	0.855	12.71	RUBBER
8/18/95	01-421	ROOF	18	-125	1-53-1	4	15	0.020	0.02	80.189	63	31.792	286	303.468	46.243	1300	3.429	7.64	-0.475	12.71	RUBBER
8/18/95	01-421	ROOF	10	-130	1-53-1	4	15	0.010	0.02	37.736	63	86.705	286	393.064	104.046	1300	1.956	7.64	8.833	12.71	RUBBER
8/18/95	01-421	ROOF	6	-135	1-53-1	5	15	0.010	0.02	33.019	63	78.035	286	268.786	132.948	1300	7.846	7.64	2.185	12.71	RUBBER
8/18/95	01-421	ROOF	18	-140	1-53-1	4	15	0.015	0.02	23.585	63	109.827	286	179.191	46.243	1300	-0.989	7.64	-3.134	12.71	RUBBER
8/18/95	01-421	ROOF DRAIN	1	-147	1-53-1	5	15	0.010	0.02	80.189	63	167.630	286	447.977	190.751	1300	0.484	7.64	3.514	12.71	
8/18/95	01-421	ROOF DRAIN	36.5	-147	1-53-1	6	15	0.015	0.02	47.170	63	190.751	286	549.133	219.653	1300	1.956	7.64	-0.475	12.71	
8/18/95	01-421	ROOF	18	-155	1-53-1	6	15	0.020	0.02	47.170	63	72.254	286	234.104	104.046	1300	3.429	7.64	-1.805	12.71	RUBBER
8/18/95	01-421	ROOF	8	-160	1-53-1	5	15	0.015	0.02	18.868	63	43.353	286	332.370	161.850	1300	-0.989	7.64	-1.805	12.71	RUBBER
	-,																				
						T		<u> </u>		T				Beta Scan	Beta Scan					1	
							İ	Gross	1	Alpha	ļ	Beta		DPM per	DPM per		Removable		Removable	ļ	
						Gross		BetaGam		DPM per		DPM per		100cm2	100cm2		Alpha DPM		Beta DPM		
Stastica	l Analysis					Gamma		ma		100cm2	l	100cm2		Maximum	Average		per 100cm2	<u> </u>	per 100cm2	1	
	of Samples	3				30		30		30		30		30	30		30		30	J	
Minimum				-		4		0.010		-9.43		-26.01		135.84	-11.56		-0.99		-3.13	]	
Maximun						6		0.020	1	108,49	<u> </u>	283.24		549.13	219.65		7.85		8.83	1	

					Beta Scan	Beta Scan		
		Gross	Alpha	Beta	DPM per	DPM per	Removable	Removable
	Gross	BetaGam	DPM per	DPM per	100cm2	100cm2	Alpha DPM	Beta DPM
Stastical Analysis	Gamma	ma	100cm2	100cm2	Maximum	Average	per 100cm2	per 100cm2
Number of Samples	30	30	30	30	30	30	30	30
Minimum	4	0.010	-9.43	-26.01	135.84	-11.56	-0.99	-3.13
Maximum	6	0.020	108.49	283.24	549.13	219.65	7.85	8.83
Average	4.97	0.014	43.24	118.02	317.92	110.79	0.39	0.54
Standard Deviation	0.67	0.004	22.37	78.27	106.05	66.46	1.97	2.79
Limit	15	0.20	5000	5000	15000	5000	1000	1000
Factor for Comparison of Survey Data @95% Confidence:	1.699	1,699	1,699	1.699	1.685	1.685	1,685	1.685
Data Test Parameter	5.174	0.016	50.178	142.293	350.544	131.237	0.991	1.402
"Number of Samples" Factor	15.005	47.847	221.592	62.377	138.444	73.561	507.609	358.643
Does Data Satisfy-				"				
Limit Criteria?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Were an Adequate Number-					1			
of Samples Taken?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

														Beta Scan	Beta Scan						
	Survey							Gross	Beta/	Alpha				DPM per	DPM per	Beta	Removable		Removable		
Survey	Serial	Surface				Gross	Gamma	Beta/	Gamma	DPM per	Alpha	Beta DPM	Beta	100cm2	100cm2	Scan	Alpha DPM	Removable	Beta DPM	Removable	
Date	Number	Description	Χ	Υ	Sub-Unit	Gamma	MDA	Gamma	MDA	100cm2	MDA	per 100cm2	MDA	Maximum	Average	MDA	per 100cm2	Alpha MDA	per 100cm2	Beta MDA	Comments
8/19/95	01-422	ROOF	5	-5	1-54-1	6	15	0.010	0.02	99.057	63	69.364	286	528.902	75.145	1300	-0.989	7.64	-0.475	12.71	RUBBER
8/19/95	01-422	ROOF	29	-10	1-54-1	5	15	0.015	0.02	51.887	63	219.653	286	291.908	46.243	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/19/95	01-422	ROOF	12.5	-15	1-54-1	5	15	0.015	0.02	51.887	63	40.462	286	265.896	46.243	1300	-0.989	7.64	-0.475	12.71	RUBBER
8/19/95	01-422	ROOF DRAIN	30	-19	1-54-1	5	15	0.010	0.02	117.925	63	28.902	286	144.509	17.341	1300	0.484	7.64	-1.805	12.71	
8/19/95	01-422	ROOF	20	-25	1-54-1	5	15	0.015	0.02	28.302	63	23.121	286	329.480	-11.561	1300	1.956	7.64	2.185	12.71	RUBBER
8/19/95	01-422	ROOF	25	-30	1-54-1	5	15	0.010	0.02	56.604	63	104.046	286	378.613	104.046	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/19/95	01-422	ROOF	30	-35	1-54-1	5	15	0.020	0.02	33.019	63	-37.572	286	358.382	104.046	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/19/95	01-422	ROOF	18	-40	1-54-1	5	15	0.010	0.02	89.623	63	43.353	286	234.104	104.046	1300	-0.989	7.64	3.514	12.71	RUBBER
8/19/95	01-422	ROOF	12.5	-45	1-54-1	5	15	0.025	0.02	47.170	63	-17.341	286	494.220	75.145	1300	-0.989	7.64	-3.134	12.71	RUBBER
8/19/95	01-422	ROOF	25	-50	1-54-1	5	15	0.010	0.02	66.038	63	11.561	286	393.064	46.243	1300	-0.989	7.64	-1.805	12.71	RUBBER
8/19/95	01-422	ROOF DRAIN	30	-55.5	1-54-1	4	15	0.010	0.02	89.623	63	289.017	286	228.324	104.046	1300	-0.989	7.64	-0.475	12.71	
8/19/95	01-422	ROOF	22	-60	1-54-1	6	15	0.015	0.02	42.453	63	251.445	286	393.064	46.243	1300	0.484	7.64	3.514	12.71	RUBBER
8/19/95	01-422	ROOF	14	-65	1-54-1	5	15	0.010	0.02	51.887	63	115.607	286	283.237	46.243	1300	-0.989	7.64	-0.475	12.71	RUBBER
8/19/95	01-422	ROOF	25	-70	1-54-1	6	15	0.020	0.02	42.453	63	37.572	286	245.665	17.341	1300	-0.989	7.64	0.855	12.71	RUBBER
8/19/95	01-422	ROOF	30	-75	1-54-1	4	15	0.015	0.02	56.604	63	-11.561	286	332.370	-40.462	1300	0.484	7.64	-0.475	12.71	RUBBER
8/19/95	01-422	ROOF	25	-80	1-54-1	4	15	0.020	0.02	84.906	63	109.827	286	236.994	46.243	1300	0.484	7.64	-0.475	12.71	RUBBER
8/19/95	01-422	ROOF	20	-85	1-54-1	5	15	0.020	0.02	61.321	63	127.168	286	369.942	75.145	1300	0.484	7.64	4.844	12.71	RUBBER
8/19/95	01-422	ROOF	24	-90	1-54-1	5	15	0.025	0.02	42.453	63	23.121	286	251.445	17.341	1300	-0.989	7.64	-0.475	12.71	RUBBER
8/19/95	01-422	ROOF DRAIN	30	-92	1-54-1	5	15	0.020	0.02	66.038	63	248.555	286	436.416	75.145	1300	-0.989	7.64	-0.475	12.71	
8/19/95	01-422	ROOF	20	-95	1-54-1	6	15	0.015	0.02	47.170	63	49.133	286	147.399	17.341	1300	0.484	7.64	-3.134	12.71	RUBBER
8/19/95	01-422	ROOF	16	-100	1-54-1	6	15	0.010	0.02	23.585	63	83.815	286	268.786	46.243	1300	0.484	7.64	-4.464	12.71	RUBBER
8/19/95	01-422	ROOF	27	-105	1-54-1	5	15	0.010	0.02	56.604	63	-40.462	286	355.491	17.341	1300	0.484	7.64	-1.805	12.71	RUBBER
8/19/95	01-422	ROOF	30	-110	1-54-1	4	15	0.015	0.02	80.189	63	109.827	286	323.699	104.046	1300	-0.989	7.64	0.855	12.71	RUBBER
8/19/95	01-422	ROOF	25	-115	1-54-1	5	15	0.010	0.02	56.604	63	20.231	286	421.965	46.243	1300	-0.989	7.64	-0.475	12.71	RUBBER
8/19/95	01-422	ROOF	16	-120	1-54-1	6	15	0.020	0.02	70.755	63	89.595	286	161.850	46.243	1300	-0.989	7.64	-0.475	12.71	RUBBER
8/19/95	01-422	ROOF	25	-125	1-54-1	5	15	0.015	0.02	37.736	63	46.243	286	320,809	-11.561	1300	-0.989	7.64	0.855	12.71	RUBBER
8/19/95	01-422	ROOF DRAIN	30	-128	1-54-1	5	15	0.010	0.02	28.302	63	236.994	286	416.185	75.145	1300	-0.989	7.64	-3.134	12.71	
8/19/95	01-422	ROOF	30	-135	1-54-1	4	15	0.015	0.02	84.906	63	17.341	286	476.879	132.948	1300	0.484	7.64	-1.805	12.71	RUBBER
8/19/95	01-422	ROOF	30	-140	1-54-1	4	15	0.015	0.02	51.887	63	158.960	286	413.295	132.948	1300	-0.989	7.64	11.493	12.71	RUBBER
8/19/95	01-422	ROOF	25	-145	1-54-1	5	15	0.020	0.02	66.038	63	66.474	286	222.543	75.145	1300	-0.989	7.64	0.855	12.71	RUBBER
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	The state of the s				Beta Scan	Beta Scan		
		Gross	Alpha		DPM per	DPM per	Removable	Removable
	Gross	BetaGam	DPM per	Beta DPM	100cm2	100cm2	Alpha DPM	Beta DPM
Stastical Analysis	Gamma	ma	100cm2	per 100cm2	Maximum	Average	per 100cm2	per 100cm2
Number of Samples	30	30	30	30	30	30	30	30
Minimum	4	0.010	23.58	-40.46	144.51	-40.46	-0.99	-4.46
Maximum	6	0.025	117.92	289.02	528.90	132.95	1.96	11.49
Average	5.00	0.015	59.43	83.82	324.18	55.88	-0.45	-0.08
Standard Deviation	0.64	0.005	22.46	89.43	100.90	42.49	0.82	3.01
Limit	15	0.20	5000	5000	15000	5000	1000	1000
Factor for Comparison of Survey								
Data @95% Confidence:	1.699	1.699	1.699	1.699	1.693	1.693	1.693	1.693
Data Test Parameter	5.200	0.016	66.399	111.557	355.370	69.009	-0.196	0.853
"Number of Samples" Factor	15.546	39.076	220.020	54.971	145.443	116.371	1221.857	332.575
Does Data Satisfy-				1 1				
Limit Criteria?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Were an Adequate Number-						1		
of Samples Taken?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

														Beta Scan	Beta Scan						
	Survey							Gross	Beta/	Alpha		Beta		DPM per	DPM per		Removable		Removable		
Survey	Serial	Surface				Gross	Gamma	Beta/	Gamma	DPM per	Alpha		Beta	100cm2	100cm2		Alpha DPM				
Date	Number	Description	Х	Υ	Sub-Unit	Gamma	MDA	Gamma	MDA	100cm2	MDA		MDA	Maximum	Average		per 100cm2				Comments
8/29/95	01-427	ROOFTOP	6	-2	1-55-1	5	15	0.014	0.02	33.02	63	115.61	286	508.67	-31.79	1300	2.82	7.64	-0.53	12.71	RUBBER
8/29/95	01-427	ROOF DRAIN	1	-6	1-55-1	6	15	0.009	0.02	42.45	63	161.85	286	329.48	112.72	1300	-1.61	7.64	-3.21	12.71	
8/29/95	01-427	ROOFTOP	8	-10	1-55-1	5	15	0.012	0.02	89.62	63	26.01	286	323.70	112.72	1300	1.34	7.64	-3.21	12.71	RUBBER
8/29/95	01-427	ROOFTOP	4	-15	1-55-1	5	15	0.007	0.02	75.47	63	92.49	286	419.08	-60.69	1300	5.77	7.64	0.80	12.71	RUBBER
8/29/95	01-427	ROOFTOP	2	-20	1-55-1	6	15	0.008	0.02	66.04	63	0.00	286	491.33	-31.79	1300	4.29	7.64	-0.53	12.71	RUBBER
8/29/95	01-427	ROOFTOP	4	-25	1-55-1	6	15	0.009	0.02	94.34	63	138.73	286	381.50	199.42	1300	-0.13	7.64	8.82	12.71	RUBBER
8/29/95	01-427	ROOF DRAIN	1	-30	1-55-1	5	15	0.014	0.02	99.06	63	161.85	286	442.20	257.23	1300	1.34	7.64	-0.53	12.71	
8/29/95	01-427	ROOFTOP	4	-35	1-55-1	6	15	0.012	0.02	155.66	63	182.08	286	421.97	170.52	1300	-1.61	7.64	6.15	12.71	RUBBER
8/29/95	01-427	ROOFTOP	8	-40	1-55-1	6	15	0.016	0.02	136.79	63	216.76	286	315.03	54.91	1300	-1.61	7.64	-0.53	12.71	RUBBER
8/29/95	01-427	ROOFTOP	12	-45	1-55-1	5	15	0.013	0.02	155.66	63	184.97	286	317.92	112.72	1300	-1.61	7.64	-1.87	12.71	RUBBER
8/29/95	01-427	ROOFTOP	6	-50	1-55-1	4	15	0.017	0.02	169.81	63	234.10	286	309.25	141.62	1300	1.34	7.64	-1.87	12.71	RUBBER
8/29/95	01-427	ROOFTOP	4	-55	1-55-1	6	15	0.007	0.02	226.42	63	182.08	286	560.69	199.42	1300	-0.13	7.64	2.14	12.71	RUBBER
	01-427	ROOFTOP	1	-60	1-55-1	6	15	0.007	0.02	150.94	63	115.61	286	589.60	286.13	1300	-1.61	7.64	-4.55	12.71	RUBBER
8/29/95	01-427	ROOF DRAIN	1	-67	1-55-1	7	15	0.016	0.02	117.92	63	346.82	286	606.94	170.52	1300	1.34	7.64	0.80	12.71	
8/29/95	01-427	ROOFTOP	8	-70	1-55-1	7	15	0.016	0.02	56.60	63	173.41	286	488.44	257.23	1300	-1.61	7.64	-0.53	12.71	RUBBER
8/29/95	01-427	ROOFTOP	2	-75	1-55-1	6	15	0.009	0.02	61.32	63	341.04	286	381.50	112.72	1300	-0.13	7.64	-0.53	12.71	RUBBER
	01-427	ROOFTOP	8	-75	1-55-1	6	15	0.014	0.02	84.91	63	289.02	286	606.94	315.03	1300		7.64	-3.21	12.71	RUBBER
8/29/95	5 01-427	ROOFTOP	6	-80	1-55-1	6	15	0.019	0.02	113.21	63	158.96	286	502.89	170.52	1300		7.64	4.81	12.71	RUBBER
8/29/95	5 01-427	ROOFTOP	1	-85	1-55-1	5	15	0.014	0.02	37.74	63	251.45	286	398.84	199.42	1300		7.64	-0.53	12.71	RUBBER
8/29/95	5 01-427	ROOFTOP	12	-85	1-55-1	5	15	0.008	0.02	183.96	63	265.90	286	488.44	170.52	1300	-1.61	7.64	-4.55	12.71	RUBBER
	5 01-427	ROOFTOP	4	-90	1-55-1	5	15	0.015	0.02	89.62	63	427.75	286	494.22	170.52	1300	-1.61	7.64	-4.55	12.71	RUBBER
	5 01-427	ROOFTOP	8	-90	1-55-1	6	15	0.015	0.02	132.08	63	424.86	286	520.23	315.03	1300	-1.61	7.64	-0.53	12.71	RUBBER
8/29/95	5 01-427	ROOFTOP	2	-95	1-55-1	5	15	0.017	0.02	89.62	63	427.75	286	358.38	112.72	1300	-0.13	7.64	0.80	12.71	RUBBER
8/29/95	5 01-427	ROOFTOP	12	-95	1-55-1	5	15	0.011	0.02	155.66	63	271.68	286	416.18	228.32	1300	-1.61	7.64	-0.53	12.71	RUBBER
8/29/95	5 01-427	ROOFTOP	4	-100	1-55-1	6	15	0.008	0.02	150.94	63	245.66	286	580.92	257.23	1300	1.34	7.64	0.80	12.71	RUBBER
8/29/95	5 01-427	ROOF DRAIN	1 1	-102.5		6	15	0.014	0.02	146.23	63	459.54	286	378.61	228.32	1300		7.64	-3.21	12.71	
	5 01-427	ROOFTOP	6	-105	1-55-1	6	15	0.014	0.02	75.47	63	268.79	286	627.17	286.13	1300	-1.61	7.64	2.14	12.71	RUBBER
8/29/95	5 01-427	ROOFTOP	1	-110	1-55-1	6	15	0.015	0.02	117.92	63	312.14	286	658.96	372.83	1300		7.64	-0.53	12.71	RUBBER
8/29/95	5 01-427	ROOFTOP	10	-110	1-55-1	5	15	0.013	0.02	127.36	63	199.42	286	624.28	286.13	1300		7.64	-0.53	12.71	RUBBER
8/29/95	5 01-427	ROOFTOP	4	-115	1-55-1	6	15	0.012	0.02	202.83	63	346.82	286	653.18	228.32	1300	-1.61	7.64	0.80	12.71	RUBBER

					Beta Scan	Beta Scan		
	i	Gross	Alpha	Beta	DPM per	DPM per	Removable	Removable
	Gross	BetaGam	DPM per	DPM per	100cm2	100cm2	Alpha DPM	Beta DPM
Stastical Analysis	Gamma	ma	100cm2	100cm2	Maximum	Average	per 100cm2	per 100cm2
Number of Samples	30	30	30	30	30	30	30	30
Minimum	4	0.007	33.02	0.00	309.25	-60.69	-1.61	-4.55
Maximum	7	0.019	226.42	459.54	658.96	372.83	5.77	8.82
Average	5.63	0.013	114.62	234.10	473.22	180.15	0.06	-0.27
Standard Deviation	0.67	0.003	49.35	116.95	111.55	105.26	2.00	3.01
Limit	15	0.20	5000	5000	15000	5000	1000	1000
Factor for Comparison of Survey								
Data @95% Confidence:	1.699	1.699	1.699	1.699	1.692	1.692	1.692	1.692
Data Test Parameter	5.841	0.014	129.931	270.382	507.677	212.671	0.683	0.662
"Number of Samples" Factor	14.008	54.480	98.994	40.751	130.228	45.790	499.003	332.494
Does Data Satisfy-								
Limit Criteria?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Were an Adequate Number-								
of Samples Taken?	l Yes l	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Survey								Beta/	Alpha		Beta		Beta Scan DPM per	Beta Scan DPM per	Beta	Removable		Removable Beta DPM		
Survey	Serial	Surface				Gross	Gamma	Gross Beta/	Gamma	DPM per	Alpha	DPM per	Beta	100cm2	100cm2	Scan	Alpha DPM	Removable	per	Removable	
Date	Number	Description	Х	Υ	Sub-Unit	Gamma	MDA	Gamma	MDA	100cm2	MDA	100cm2	MDA	Maximum	Average	MDA	per 100cm2	Alpha MDA	100cm2	Beta MDA	Comments
8/30/95	01-429	ROOFTOP	2	-2	1-56-1	6	15	0.011	0.02	9.43	63	-8.67	286	234.10	28.90	1300	-1.61	7.64	-4.55	12.71	RUBBER
8/30/95	01-429	ROOFTOP	4	-2	1-56-1	6	15	0.014	0.02	0.00	63	17.34	286	257.23	0.00	1300	1.34	7.64	-3.21	12.71	RUBBER
8/30/95	01-429	ROOFTOP	6	-2	1-56-1	7	15	0.012	0.02	23.58	63	14.45	286	303.47	0.00	1300	-1.61	7.64	-0.53	12.71	RUBBER
8/30/95	01-429	ROOFTOP	8	-2	1-56-1	6	15	0.009	0.02	28.30	63	89.60	286	289.02	0.00	1300	-1.61	7.64	-4.55	12.71	RUBBER
8/30/95	01-429	ROOFTOP	10	-2	1-56-1	7	15	0.012	0.02	0.00	63	5.78	286	101.16	-57.80	1300	-1.61	7.64	0.80	12.71	RUBBER
8/30/95	01-429	ROOFTOP	12	-4	1-56-1	5	15	0.013	0.02	14.15	63	2.89	286	193.64	-57.80	1300	1.34	7.64	2.14	12.71	RUBBER
8/30/95	01-429	ROOFTOP	18	-4	1-56-1	7	15	0.013	0.02	4.72	63	34.68	286	167.63	28.90	1300	-1.61	7.64	-0.53	12.71	RUBBER
8/30/95	01-429	ROOFTOP	6	-6	1-56-1	5	15	0.018	0.02	23.58	63	-63.58	286	257.23	-28.90	1300	-1.61	7.64	-3.21	12.71	RUBBER
8/30/95	01-429	ROOFTOP	10	-6	1-56-1	5	15	0.017	0.02	37.74	63	-11.56	286	213.87	28.90	1300	1.34	7.64	2.14	12.71	RUBBER
8/30/95	01-429	ROOFTOP	16	-6	1-56-1	6	15	0.012	0.02	61.32	63	66.47	286	208.09	-57.80	1300	1.34	7.64	2.14	12.71	RUBBER
8/30/95	01-429	ROOFTOP	4	-8	1-56-1	6	15	0.009	0.02	14.15	63	86.71	286	173.41	-86.71	1300	-1.61	7.64	-3.21	12.71	RUBBER
8/30/95	01-429	ROOFTOP	8	-8	1 <b>-</b> 56-1	6	15	0.012	0.02	37.74	63	69.36	286	179.19	0.00	1300	-1.61	7.64	0.80	12.71	RUBBER
8/30/95	01-429	ROOFTOP	18	-8	1-56-1	7	15	0.012	0.02	23.58	63	112.72	286	445.09	144.51	1300	-1.61	7.64	0.80	12.71	RUBBER
8/30/95	01-429	ROOFTOP	6	-10	1-56-1	6	15	0.013	0.02	14.15	63	43,35	286	170.52	-86.71	1300	-1.61	7.64	-5.88	12.71	RUBBER
8/30/95	01-429	ROOFTOP	14	-10	1-56-1	6	15	0.012	0.02	28.30	63	72.25	286	320.81	28.90	1300	-0.13	7.64	-1.87	12.71	RUBBER
8/29/95	01-428	ROOFTOP	2	-4	1-56-2	6	15	0.011	0.02	42.45	63	54.91	286	300,58	86,71	1300	-1.61	7.64	-1.87	12.71	RUBBER
8/29/95	01-428	ROOFTOP	2	-8	1-56-2	6	15	0.016	0.02	113.21	63	75.14	286	419.08	28.90	1300	1.34	7.64	2.14	12.71	RUBBER
8/29/95	01-428	ROOFTOP	4	-1	1-56-2	7	15	0.015	0.02	28.30	63	2.89	286	627.17	297.69	1300	-0.13	7.64	-0.53	12.71	RUBBER
8/29/95	01-428	ROOFTOP	4	-6	1-56-2	8	15	0.007	0.02	61.32	63	118.50	286	514.45	202.31	1300	-1.61	7.64	-1.87	12.71	RUBBER
8/29/95	01-428	ROOFTOP	6	-6	1-56-2	7	15	0.013	0.02	47.17	63	49.13	286	407.51	144.51	1300	-1.61	7.64	-1.87	12.71	RUBBER
8/29/95	01-428	ROOFTOP	6	-12	1-56-2	6	15	0.014	0.02	75.47	63	173.41	286	606.94	86.71	1300	-1.61	7.64	-3.21	12.71	RUBBER
8/29/95	01-428	ROOFTOP	10	-8	1-56-2	8	15	0.014	0.02	61.32	63	135.84	286	447.98	144.51	1300	2.82	7.64	2.14	12.71	RUBBER
8/29/95	01-428	ROOF DRAIN	l 12	-0.5	1-56-2	7	15	0.013	0.02	56.60	63	141.62	286	213.87	28.90	1300	-0.13	7.64	-4.55	12.71	
8/29/95	01-428	ROOFTOP	12	-10	1-56-2	8	15	0.008	0.02	42.45	63	83.82	286	606.94	173.41	1300	1.34	7.64	-5.88	12.71	RUBBER
8/29/95	01-428	ROOFTOP	14	-4	1-56-2	7	15	0.018	0.02	56.60	63	138.73	286	352.60	144.51	1300	-1.61	7.64	-0.53	12.71	RUBBER
8/29/95	01-428	ROOFTOP	14	-11	1-56-2	8	15	0.013	0.02	89.62	63	40.46	286	497.11	144.51	1300	1.34	7.64	0.80	12.71	RUBBER
8/29/95	01-428	ROOFTOP	16	-2	1-56-2	7	15	0.01	0.02	61.32	63	132.95	286	329.48	-57.80	1300	-1.61	7.64	-3.21	12.71	RUBBER
8/29/95	01-428	ROOFTOP	16	-8	1-56-2	8	15	0.015	0.02	103.77	63	219.65	286	254.34	28.90	1300		7.64	-1.87	12.71	RUBBER
8/29/95	01-428	ROOFTOP	18	-4	1-56-2	7	15	0.008	0.02	103.77	63	20.23	286	205.20	-28.90	1300	-0.13	7.64	2.14	12.71	RUBBER
8/29/95	01-428	ROOFTOP	18	-10	1-56-2	7	15	0.015	0.02	89.62	63	147.40	286	271.68	86.71	1300	-0.13	7.64	6.15	12.71	RUBBER
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					Beta Scan	Beta Scan		Removable
			Alpha	Beta	DPM per	DPM per	Removable	Beta DPM
	Gross	Gross	DPM per	DPM per	100cm2	100cm2	Alpha DPM	per
Stastical Analysis	Gamma	BetaGamma	100cm2	100cm2	Maximum	Average	per 100cm2	100cm2
Number of Samples	30	30	30	30	30	30	30	30
Minimum	5	0.007	0.00	-63.58	101.16	-86.71	-1.61	-5.88
Maximum	8	0.018	113.21	219.65	627.17	297.69	2.82	6.15
Average	6.60	0.013	45.13	68.88	318.98	46.53	-0.38	-1.03
Standard Deviation	0.89	0.003	32.13	63.77	143.99	94.24	1.51	2.86
Limit	15	0.20	5000	5000	15000	5000	1000	1000
Factor for Comparison of Survey								
Data @95% Confidence:	1.699	1.699	1.699	1.699	1.697	1.697	1.697	1.697
Data Test Parameter	6.877	0.014	55.092	88.662	363.592	75,730	0.088	-0.138
"Number of Samples" Factor	9.391	66.975	154.222	77.333	101.955	52.563	664.620	349.626
Does Data Satisfy-								
Limit Criteria?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Were an Adequate Number-								
of Samples Taken?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Survey Date 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95 8/30/95	Survey Serial Number 04-019 04-019 04-019 04-019 04-019 04-019 04-019 04-019 04-019 04-019 04-019 04-019 04-019 04-019 04-019	ROOFTOP	4 -8 7 -8 10 -8 16 -8 2 -10		Gross Gamma 6 7 7 8 6 7 7 6 6 6 6 6 6 6 7 7 7 7 7 7	Gamma MDA 15 15 15 15 15 15 15 15 15 15 15 15 15	Gross Beta/ Gamma 0.008 0.006 0.01 0.011 0.014 0.008 0.012 0.007 0.014 0.007 0.016 0.011 0.01 0.007 0.011 0.007 0.012 0.008	Beta/ Gamma MDA 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.0	Alpha DPM per 100cm2 9.43 42.45 37.74 -4.72 56.60 51.89 42.45 28.30 33.02 14.15 42.45 18.87 -9.43 56.60 37.74 66.04 14.15 42.45	Alpha MDA 63 63 63 63 63 63 63 63 63 63 63 63 63	Beta DPM per 100cm2 193.64 225.43 173.41 69.36 127.17 170.561 57.80 86.71 124.28 161.85 98.27 225.43 106.94 210.98 115.61 179.19 277.46 75.14 205.20 222.54	Beta MDA 286 286 286 286 286 286 286 286 286 286	DPM per 100cm2 Maximum 549.13 326.59 473.99 208.09 488.44 372.83 335.26 346.82 473.99 335.26 552.02 404.62 251.45 329.48 265.90 419.08 257.23 407.51 277.46 260.12	DPM per 100cm2 Average 216.76 187.86 101.16 72.25 72.25 216.76 43.35 130.06 216.76 130.06 43.35 101.16 72.25 158.96 14.45 130.06	Scan MDA 1300 1300 1300 1300 1300 1300 1300 130	Removable Alpha DPM per 100cm2 5.77 -0.13 -0.13 -0.13 -1.61 1.34 -0.13 -1.61 1.34 -0.13 -1.61 1.34 -0.13 -1.61 1.34 -0.13 -1.61 1.34 -0.13 -1.61 1.34 -0.13 -0.13 1.34 -0.13 1.34 -0.13 1.34 -0.13 -0.	Alpha MDA 7.64 7.64 7.64 7.64 7.64 7.64 7.64 7.64	per 100cm2 6.15 0.80 -1.87 -0.53 -1.87 2.14 4.81 -1.87 6.15 -0.53 0.80 4.81 -3.21 2.14 0.80 7.49 -3.21 2.14 0.80 -1.87	Removable Beta MDA  12.71	Comments RUBBER
					_															
8/30/95	04-019	ROOFTOP	16 -8	4-18-1	6		0.005													
	04-019				7															
8/30/95	04-019	ROOFTOP	8 -10		6	15	0.008	0.02	23.58	63	222.54	286	395.95	216.76	1300	-0.13	7.64	0.80	12.71	RUBBER
8/30/95	04-019	ROOFTOP	12 -10		5	15	0.007	0.02	18.87	63	141.62	286	419.08	158.96	1300	-1.61	7.64 7.64	-0.53	12.71	RUBBER RUBBER
8/30/95	04-019	ROOFTOP ROOFTOP	15 -10 4 -12		5 6	15 15	0.008 0.015	0.02 0.02	4.72 66.04	63 63	124.28 179.19	286 286	343.93 424.86	158.96 130.06	1300 1300	-0.13 -1.61	7.64 7.64	2.14 -1.87	12.71 12.71	RUBBER
8/30/95 8/30/95	04-019 04-019	ROOFTOP	10 -12		7	15	0.013	0.02	51.89	63	127.17	286	297.69	158.96	1300	-1.61	7.64	-3.21	12.71	RUBBER
8/30/95	04-019	ROOFTOP	14 -12		6	15	0.012	0.02	18.87	63	147.40	286	320.81	101.16	1300	-1.61	7.64	-0.53	12.71	RUBBER
8/30/95	04-019	ROOFTOP	2 -14		7	15	0.007	0.02	51.89	63	222.54	286	404.62	130.06	1300	-1.61	7.64	-3.21	12.71	RUBBER
8/30/95	04-019	ROOFTOP	6 -14	4-18-1	7	15	0.014	0.02	66.04	63	150.29	286	436.42	187,86	1300	1.34	7.64	0.80	12.71	RUBBER
8/30/95	04-019	ROOFTOP	12 -14	4-18-1	5	15	0.008	0.02	56.60	63	43.35	286	297.69	14.45	1300	-0.13	7.64	-4.55	12.71	RUBBER
8/30/95	04-019	ROOFTOP	16 -14	4-18-1	7	15	0.01	0.02	14.15	63	83.82	286	236.99	-14.45	1300	-0.13	7.64	-3.21	12.71	RUBBER
					Gross		Gross BetaGam		Alpha DPM per		Beta DPM per		Beta Scan DPM per 100cm2	Beta Scan DPM per 100cm2		Removable Alpha DPM		Removable Beta DPM		

	<u> </u>				Beta Scan	Beta Scan		
		Gross	Alpha	Beta	DPM per	DPM per	Removable	Removable
	Gross	BetaGam	DPM per	DPM per	100cm2	100cm2	Alpha DPM	Beta DPM
Stastical Analysis	Gamma	ma	100cm2	100cm2	Maximum	Average	per 100cm2	per 100cm2
Number of Samples	30	30	30	30	30	30	30	30
Minimum	5	0.005	-9.43	43.35	208.09	-14.45	-1.61	-4.55
Maximum	8	0.016	66.04	277.46	552.02	216.76	5.77	7.49
Average	6.33	0.010	34.91	148.07	363.78	127.17	0.11	0.36
Standard Deviation	0.80	0.003	21.26	58.50	90.71	67.18	1.55	3.15
Limit	15	0.20	5000	5000	15000	5000	1000	1000
Factor for Comparison of Survey								
Data @95% Confidence:	1.699	1.699	1.699	1.699	1.697	1.697	1.697	1.697
Data Test Parameter	6.582	0.011	41.501	166.218	391.881	147.983	0.595	1.332
"Number of Samples" Factor	10.802	63.806	233.524	82.945	161.350	72.531	643.311	317.624
Does Data Satisfy-								
Limit Criteria?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Were an Adequate Number-								
of Samples Taken?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

### Roof Drain & Vent Internals

Survey Date	Survey Serial Number	Surface Description	х	Υ	Beta Instrument Code	Background CPM	Beta Scan CPM Maximum	Beta Scan CPM Average	Removable Alpha DPM/100cm2	Alpha Count Code	Removable Beta DPM/100cm2	Beta Count Code	Comments
8/13/95	01-419	ROOF DRAIN	1	-16	15	40	120	70	-0.99	2	4.84	3	
8/13/95	01-419	ROOF DRAIN	1	-52	15	40	100	50	0.48	2	-0.47	3	
8/13/95	01-419	ROOF DRAIN	1	-89	15	40	90	50	-0.99	2	2.18	3	
8/13/95	01-419	ROOF DRAIN	1	-125	15	40	90	50	-0.99	2	3.51	3	
8/17/95	01-420	ROOF VENTS	35	-23	15	20	50	30	1.96	2	-0.47	3	
8/17/95	01-420	ROOF VENTS	34	-31	15	20	50	25	1.96	2	-0.47	3	
8/17/95	01-420	ROOF VENTS	34	-35	15	20	60	30	0.48	2	15.48	3	
8/17/95	01-420	ROOF VENTS	34	-37	15	20	40	20	0.48	2	0.85	3	
8/17/95	01-420	FAN EXHAUST	34	-88	15	20	40	30	-0.99	2	-3.13	3	
8/17/95	01-420	WASTE VENT	27.5	-160	15	20	40	20	0.48	2	3.51	3	
8/17/95	01-420	WASTE VENT	29.5	-163	15	20	40	20	-0.99	2	-0.47	3	
8/17/95	01-420	ROOF DRAINS	35.5	-147	15	20	60	40	1.96	2	-0.47	3	
8/17/95	01-420	ROOF DRAINS	1	-147	15	20	60	40	-0.99	2	3.51	3	
8/17/95	01-420	ROOF DRAINS	1	-110	15	20	70	50	0.48	2	-0.47	3	
8/17/95	01-420	ROOF DRAINS	35.5	-110	15	20	70	40	-0.99	2	0.85	3	
8/17/95	01-420	ROOF DRAINS	35.5	-73	15	20	80	40	-0.99	2	-3.13	3	
8/17/95	01-420	ROOF DRAINS	1	-73	15	20	120	60	-0.99	2	3.51	3	
8/17/95	01-420	ROOF DRAINS	1	-37	15	20	130	70	-0.99	2	-1.80	3	
8/17/95	01-420	ROOF DRAINS	35.5	-37	15	20	90	50	0.48	2	12.82	3	
8/17/95	01-420	ROOF DRAINS	35.5	-7	15	20	80	50	-0.99	2	-1.80	3	
8/17/95	01-420	ROOF DRAINS	1	-8	15	20	90	60	-0.99	2	-1.80	3	
8/17/95	01-420	WASTE VENT	2	-76	15	20	40	20		2		3	
8/18/95	01-421	ROOF DRAIN	36.5	-9	15	30	60	40	-0.99	2	27.45	3	BETA SCAN ONLY
8/18/95	01-421	ROOF DRAIN	1	-17.5	15	30	80	50	-0.99	2	2.18	3	BETA SCAN ONLY
8/18/95	01-421	ROOF DRAIN	36.5	-37	15	30	130	70	-0.99	2	-1.80	3	BETA SCAN ONLY
8/18/95	01-421	ROOF DRAIN	1	-37	15	30	90	70	-0.99	2	-0.47	3	BETA SCAN ONLY
8/18/95	01-421	ROOF DRAIN	36.5	-74	15	30	90	50	0.48	2	-0.47	3	BETA SCAN ONLY
8/18/95	01-421	ROOF DRAIN	1	-74	15	30	140	90	-0.99	2	0.85		BETA SCAN ONLY
8/18/95	01-421	ROOF DRAIN	36.5	-111	15	30	150	70	-0.99	2	3.51	3	BETA SCAN ONLY
8/18/95	01-421	ROOF DRAIN	1	-111	15	30	90	40	0.48	2	-0.47		BETA SCAN ONLY
8/18/95	01-421	ROOF DRAIN	36.5	-147	15	30	90	50	-0.99	2	2.18	3	BETA SCAN ONLY
8/18/95	01-421	ROOF DRAIN	1	-147	15	30	100	70	-0.99	2	-0.47		BETA SCAN ONLY
8/19/95	01-422	ROOF DRAIN	30	-128	15	35	90	40	1.96	2	3.51		BETA SCAN ONLY
8/19/95	01-422	ROOF DRAIN	30	-92	15	35	60	40	1.96	2	0.85	3	BETA SCAN ONLY
8/19/95	01-422	ROOF DRAIN	30	-55.5	15	35	70	40	0.48	2	-0.47	3	BETA SCAN ONLY
8/19/95	01-422	ROOF DRAIN	30	-19	15	35	60	40	-0.99	2	-0.47		BETA SCAN ONLY
8/29/95	01-427	ROOF DRAIN	1	-102.5	17	40	90	50	-1.61	2	-3.21	3	BETA SCAN ONLY
8/29/95	01-427	ROOF DRAIN	1	-67	17	40	60	40	-1.61	2	-3.21		BETA SCAN ONLY
8/29/95	01-427	ROOF DRAIN	1	-30	17	40	80	60	-1.61	2	-0.53		BETA SCAN ONLY
8/29/95	01-427	ROOF DRAIN	. 1	-6	17	40	60	40	-0.13	2	2.14	3	BETA SCAN ONLY
8/29/95	01-428	ROOF DRAIN	12	-0.5	17	30	70	50	2.82	2	3.48		BETA SCAN ONLY
8/30/95	04-019	ROOF DRAIN	18	-5	17	40	80	60	-0.13	2	3.48	3	BETA SCAN ONLY

	Beta Scan CPM	Beta Scan	Removable Alpha	Removable Beta
Stastical Analysis	Maximum	CPM Average	DPM per 100cm2	DPM per 100cm2
Number of Samples	42	42	41	41
Minimum	40.00	20.00	-1.61	-3.21
Maximum	150.00	90.00	2.82	27.45
Average	79.76	47.02	-0.22	1.82
Standard Deviation	27.89	16.12	1.18	5.53