04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D1000

SYSTEMS

PACKAGE DESCRIPTION

Auxiliary Boiler System

SURVEY AREA DESCRIPTION

Auxiliary Boiler System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Auxiliary Boiler System supplied steam to the auxiliary steam system when the reactor was shut down and the normal supply from the main steam system was unavailable.

In June of 1989 it was determined that the auxiliary condensate system contained low levels of radioactivity. It is suspected that the radioactivity entered the system via small siphon heater leaks and entries to the secondary side of the Steam Generators during refueling for inspections and sludge lancing.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 32 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 32 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 32 survey locations as for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 3 survey measurement locations indicated on the results listing report.

Collected exposure rate measurements at 13 survey locations indicated on the results listing report.

Collected 4 material samples (e.g., sludge, sediment, rust, etc.) from the sumps, drains for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

o There were 9 direct measurements for total beta activity above MDA (Maximum MDA was 2,606 dpm/100cm^2). The maximum measurement result was 2,724 dpm/100cm^2.

o There was 6 measurements for removable beta activity above MDA (17 dpm/100cm^2) and 1 result greater than 100 dpm/100cm^2. The maximum measurement result was 115 dpm/100cm^2.

o There were no measurements for removable alpha activity above MDA (6 dpm/100cm²).

o There were 2 measurements for removable tritium activity above MDA (8 dpm/100cm²) and no result greater than 100 dpm/100cm². The maximum measurement result was 55 dpm/100cm².

o The average and maximum exposure rate measurement results were 7.1 µR/hr and 20.1 µR/hr respectively.

o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

The following locations had minimum detectable activity values ranging from 2224 dpm/100cm² to 2658 dpm/100cm² due to high background.
- o Auxiliary Boiler B-1A Soot Blower (02M01, survey measurement location # 1 and 2)
- o Discharge Check Valve ACD-7 (02V02, survey measurement location # 1 and 2)

REFERENCES (Documents, Interviews)

SUMMARY OF SURVEY UNIT(S)

03/27/98

OUTPUT BATCH SN = 197

PACKAGE D1000 SYSTEMS

Auxiliary Boiler System

UNIT(S)	SURFACE(S)
01 - Auxiliary Boiler	T01 (Upper Steam Drum for Aux. Boiler B-1A, (Auxiliary Boiler Room)) T02 (Lower Steam Drum for Aux. Boiler B-1A, (Auxiliary Boiler Room)) T03 (Burner Box for Aux. Boiler B-1A, (Auxiliary Boiler Room)) T04 (Upper Steam Drum for Aux. Boiler B-1B, (Auxiliary Boiler Room)) T05 (Lower Steam Drum for Aux. Boiler B-1B, (Auxiliary Boiler Room)) T06 (Burner Box for Aux. Boiler B-1B, (Auxiliary Boiler Room))
02 - Auxiliary Boiler Supporting Components	M01 (Aux Boiler B-1A Soot Blower, (Auxiliary Boiler Room)) M02 (Aux Boiler B-1B Soot Blower, (Auxiliary Boiler Room)) M03 (Exhaust Duct from Boiler B-1A, (Auxiliary Boiler Room)) M04 (Exhaust Duct from Boiler B-1B, (Auxiliary Boiler Room)) P01 (Spool piece for the Aux Boiler Feedwater Pump, P-36A, (Auxiliary Boiler Room)) P02 (Spool Piece for the Aux. Boiler Feedwater Pump, P-36B, (Auxiliary Boiler Room)) S01 (Strainer FL-59A, (Auxiliary Boiler Room)) T01 (Blow Down Tank TK-29, (Auxiliary Boiler Room)) T02 (Aux. Boiler Condensate Receiver Tank TK-30, (Auxiliary Boiler Room)) V01 (Valve ACD-73 for the Condensate Makeup Pump, P-35, (Auxiliary Boiler Room)) V02 (Discharge Check Valve ACD-7, (Auxiliary Boiler Room)) V03 (Valve ACD-8, pump P-36B discharge check valve (Auxiliary Boiler Room))

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0
G0031	METAL - BARE (GAMMA)	0.0

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Direct Measurements For Total Beta Activity

Survey Package D1000 SYSTEMS

Auxiliary Boiler System

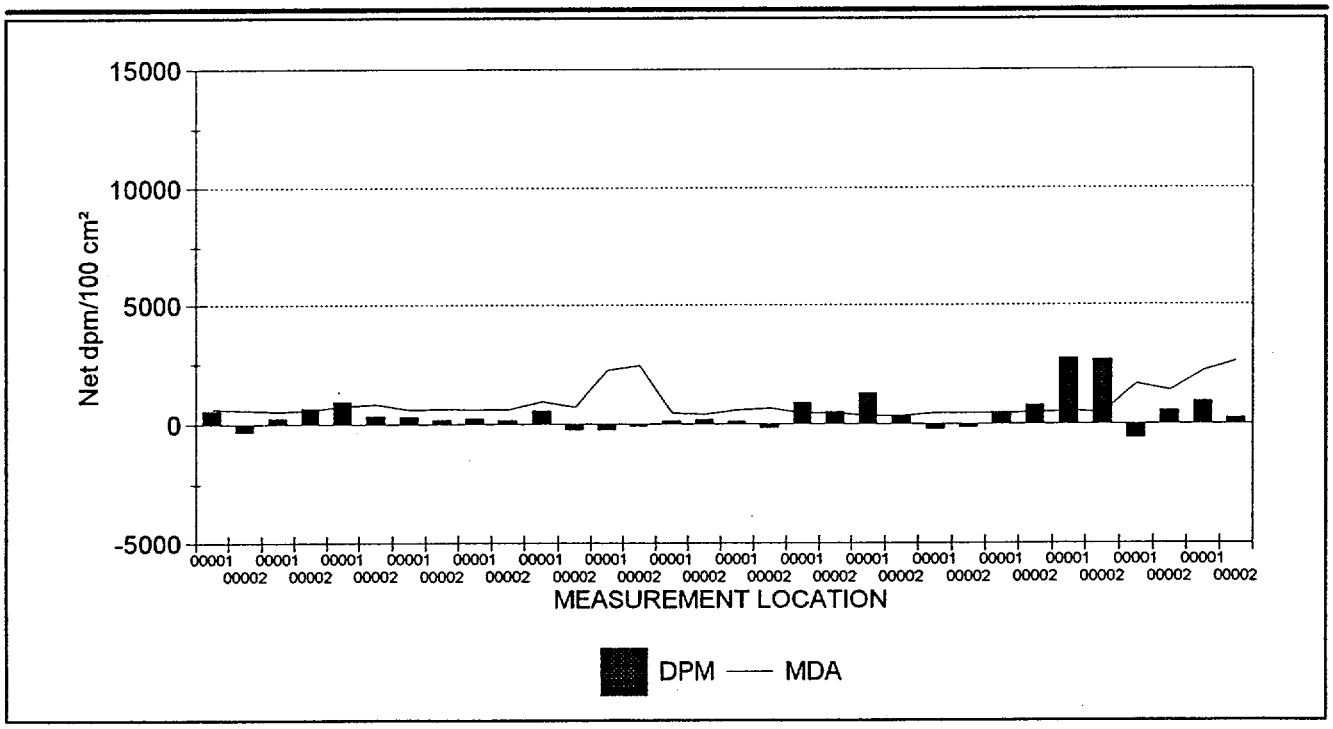
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	446.0
Maximum	2,723.9
Minimum	-574.7
Standard Deviation	730.5
MDA	2,605.8

Samples Reported	32
Samples Prescribed	32

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	NO
Results above 2000 net dpm/100 cm²	2
Number of results above MDA	9



32 RESULTS ARE GRAPHED

03/27/98

Direct Measurements For Total Beta Activity

Survey Package : D1000 SYSTEMS

Auxiliary Boiler System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
40 (2)	01	T01	B0031	C01	20	00001	642.0	584.8
40 (2)	01	T01	B0031	C01	20	00002	609.9	-306.3
40 (2)	01	T02	B0031	C01	20	00001	547.9	236.7
40 (2)	01	T02	B0031	C01	20	00002	609.9	682.3
42 (2)	01	T03	B0031	C01	15	00001	779.0	955.6
42 (2)	01	T03	B0031	C01	15	00002	853.6	328.5
29 (2)	01	T04	B0031	C01	20	00001	623.3	301.3
29 (2)	01	T04	B0031	C01	20	00002	648.1	183.4
29 (2)	01	T05	B0031	C01	20	00001	623.3	235.8
29 (2)	01	T05	B0031	C01	20	00002	617.0	144.1
27 (2)	01	T06	B0031	C01	15	00001	966.8	572.2
27 (2)	01	T06	B0031	C01	15	00002	732.9	-222.5
41 (2)	02	M01	B0031	C01	60	00001	2,251.4	-243.3
41 (2)	02	M01	B0031	C01	60	00002	2,419.6	-81.1
42 (2)	02	M03	B0031	C01	15	00001	468.7	119.5
42 (2)	02	M03	B0031	C01	15	00002	427.3	179.2
27 (2)	02	M04	B0031	C01	15	00001	591.6	111.3
27 (2)	02	M04	B0031	C01	15	00002	666.3	-159.0
48 (2)	02	P01	B0031	C01	300	00001	460.1	905.4
48 (2)	02	P01	B0031	C01	300	00002	469.3	532.8
30 (2)	02	P02	B0031	C01	300	00001	342.8	1,302.6
30 (2)	02	P02	B0031	C01	300	00002	345.8	303.0
48 (2)	02	S01	B0031	C01	300	00001	461.3	-196.3
48 (2)	02	S01	B0031	C01	300	00002	464.4	-136.2
100 (2)	02	T01	B0031	C01	15	00001	460.7	487.4
100 (2)	02	T01	B0031	C01	15	00002	496.1	817.2
100 (2)	02	T02	B0031	C01	15	00001	559.8	***2,723.9***
100 (2)	02	T02	B0031	C01	15	00002	533.5	***2,695.2***
102 (2)	02	V01	B0031	C01	60	00001	1,679.0	-574.7
102 (2)	02	V01	B0031	C01	60	00002	1,404.7	574.7
41 (2)	02	V02	B0031	C01	60	00001	2,180.1	973.0
41 (2)	02	V02	B0031	C01	60	00002	2,605.8	243.3

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
32 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Direct Measurements For Total Beta Activity

Survey Package: D1000 SYSTEMS

Auxiliary Boiler System

SURVEY DATE	FILE #	M2350 INST S/N	M2350 CAL DUE	DETECTOR MODEL	DETECTOR S/N	DETECTOR CAL DUE	PRE EFF	TECHNICIAN
11/17/97	27 (2)	126197	3/22/98	43-68	075064	3/30/98	.20	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
11/17/97	29 (2)	126198	3/22/98	43-106	128914	3/30/98	.18	DRL7343
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
11/17/97	30 (2)	129407	5/4/98	SP-175-3M	PR02349	5/4/98	.11	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
11/25/97	40 (2)	126197	3/22/98	43-68	075064	3/30/98	.17	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/20/90	41 (2)	129430	5/6/98	44-40	092401	4/29/98	.08	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
11/25/97	42 (2)	126198	3/22/98	43-106	PR128914	3/30/98	.21	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
11/26/97	48 (2)	129414	3/22/98	SP-175-3M	024349	5/4/98	.11	MAP5535
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/8/97	100 (2)	129414	3/22/98	43-106	133882	3/27/98	.22	LCF0451
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/8/97	102 (2)	126198	3/22/98	44-40	091089	3/23/98	.12	DRL7343
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Beta Activity

Survey Package D1000 SYSTEMS

Auxiliary Boiler System

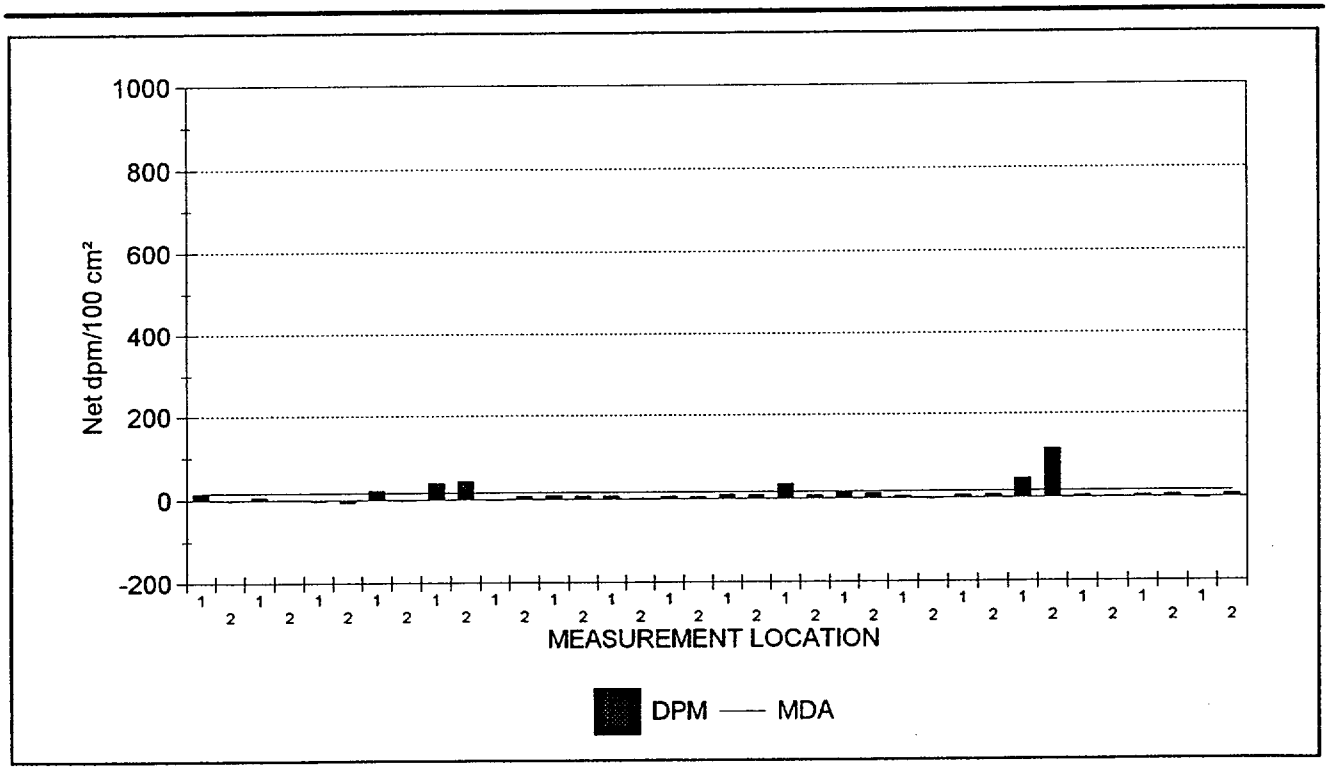
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	12.3
Maximum	114.8
Minimum	-6.3
Standard Deviation	21.8
MDA	17.0

Samples Reported	36
Samples Prescribed	39

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	1
Number of results above MDA	6



36 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Alpha Activity

Survey Package D1000 SYSTEMS

Auxiliary Boiler System

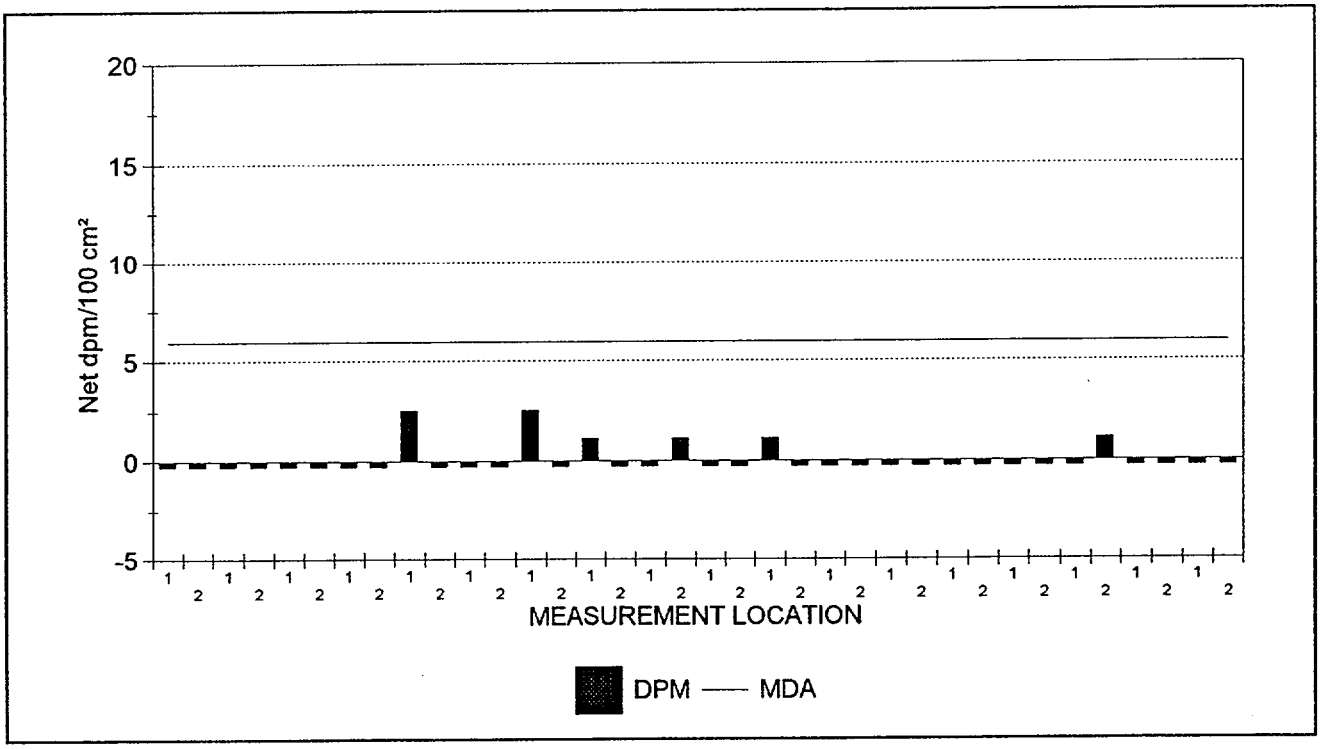
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	0.0
Maximum	2.5
Minimum	-0.3
Standard Deviation	0.8
MDA	6.0

Samples Reported	36
Samples Prescribed	39

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



36 RESULTS ARE GRAPHED

03/27/98 Removable Contamination

Survey Package : D1000 SYSTEMS

Auxiliary Boiler System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D040.XLS	02	V03	C01	2	-0.3	7.2
SME1D040.XLS	02	V03	C01	1	-0.3	-2.9
SME1D040.XLS	02	V02	C01	2	-0.3	5.5
SME1D040.XLS	02	V02	C01	1	-0.3	3.8
SME1D040.XLS	02	V01	C01	2	1.1	2.1
SME1D040.XLS	02	V01	C01	1	-0.3	3.8
SME1D040.XLS	02	T02	C01	2	-0.3	***114.8***
SME1D040.XLS	02	T02	C01	1	-0.3	45.9
SME1D040.XLS	02	T01	C01	2	-0.3	7.2
SME1D040.XLS	02	T01	C01	1	-0.3	5.5
SME1D040.XLS	02	S01	C01	2	-0.3	-1.2
SME1D040.XLS	02	S01	C01	1	-0.3	3.8
SME1D040.XLS	02	P02	C01	2	-0.3	12.2
SME1D040.XLS	02	P02	C01	1	-0.3	13.9
SME1D040.XLS	02	P01	C01	2	-0.3	7.2
SME1D040.XLS	02	P01	C01	1	1.1	35.8
SME1D040.XLS	02	M04	C01	2	-0.3	8.9
SME1D040.XLS	02	M04	C01	1	-0.3	10.5
SME1D040.XLS	02	M03	C01	2	1.1	3.8
SME1D040.XLS	02	M03	C01	1	-0.3	5.5
SME1D040.XLS	02	M02	C01	2	-0.3	2.1
SME1D040.XLS	02	M02	C01	1	1.1	7.2
SME1D040.XLS	02	M01	C01	2	-0.3	7.2
SME1D040.XLS	02	M01	C01	1	2.5	8.9
SME1D040.XLS	01	T06	C01	2	-0.3	7.2
SME1D040.XLS	01	T06	C01	1	-0.3	-1.2
SME1D040.XLS	01	T05	C01	2	-0.3	44.2
SME1D040.XLS	01	T05	C01	1	2.5	40.8
SME1D040.XLS	01	T04	C01	2	-0.3	-1.2
SME1D040.XLS	01	T04	C01	1	-0.3	22.3
SME1D040.XLS	01	T03	C01	2	-0.3	-6.3
SME1D040.XLS	01	T03	C01	1	-0.3	-2.9
SME1D040.XLS	01	T02	C01	2	-0.3	0.4
SME1D040.XLS	01	T02	C01	1	-0.3	5.5
SME1D040.XLS	01	T01	C01	2	-0.3	-1.2
SME1D040.XLS	01	T01	C01	1	-0.3	15.6

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
36 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/27/98 Removable Contamination

Survey Package : D1000 SYSTEMS

Auxiliary Boiler System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/17/98	SME1D040.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1000 SYSTEMS

Auxiliary Boiler System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
H022	Whatman smear	01	T01	C01	00001	8.0	**55.0**
H023	Whatman smear	01	T02	C01	00001	8.0	**42.4**
H024	Whatman smear	01	T03	C01	00001	8.0	-0.6

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1000 SYSTEMS

Auxiliary Boiler System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Exposure Rate Measurements

Survey Package D1000 SYSTEMS

Auxiliary Boiler System

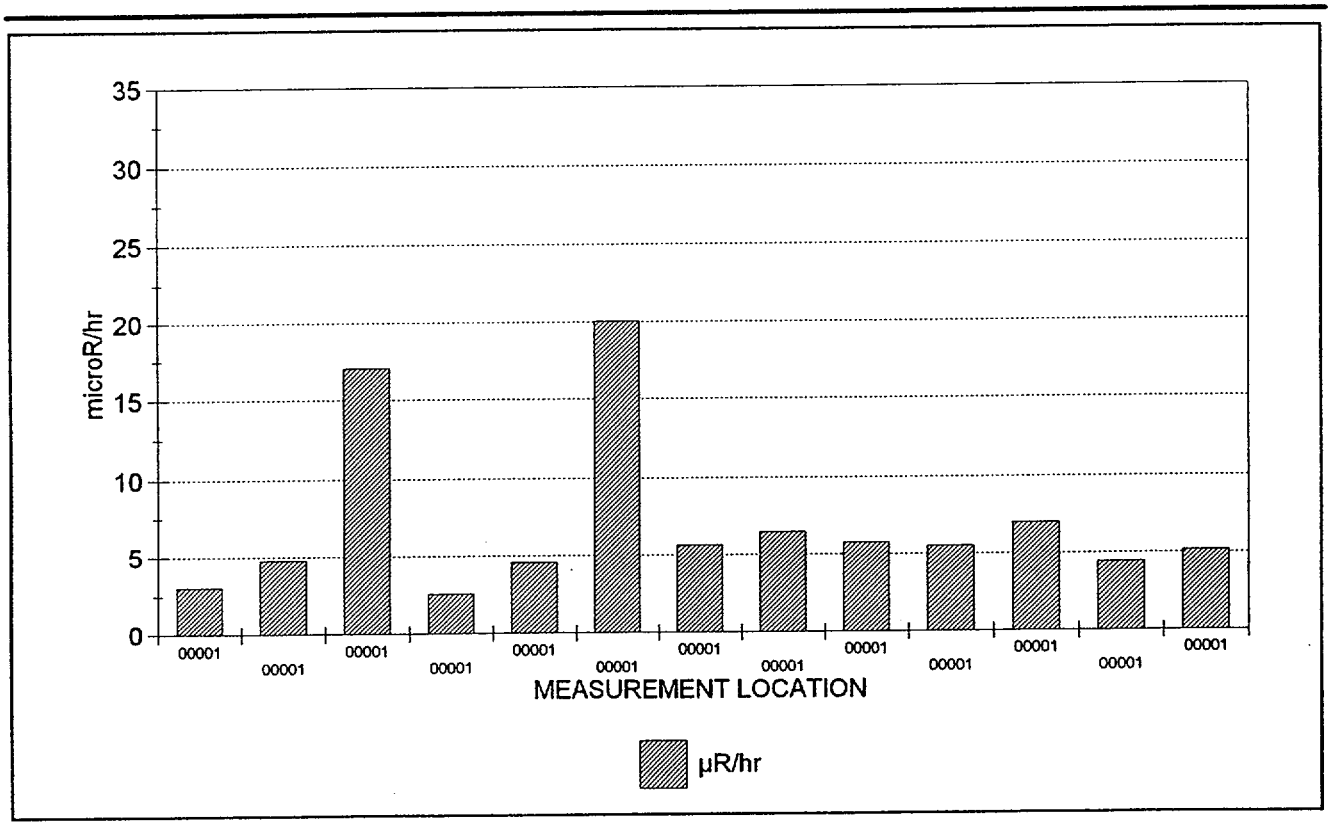
STATISTICAL SUMMARY

	µR/hr
Mean	7.1
Maximum	20.1
Minimum	2.6
Standard Deviation	5.3

Samples Reported	13
Samples Prescribed	12

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES



13 RESULTS ARE GRAPHED

03/27/98 Exposure Rate Measurements

Survey Package : D1000 SYSTEMS

Auxiliary Boiler System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	RESULT
43 (2)	01	T01	G0031	C01	60.00	00001	3.1
43 (2)	01	T02	G0031	C01	60.00	00001	4.8
43 (2)	01	T03	G0031	C01	60.00	00001	***17.0***
28 (2)	01	T04	G0031	C01	60.00	00001	2.6
28 (2)	01	T05	G0031	C01	60.00	00001	4.6
28 (2)	01	T06	G0031	C01	60.00	00001	***20.1***
43 (2)	02	M03	G0031	C01	60.00	00001	5.6
47 (2)	02	S01	G0031	C01	60.00	00001	6.5
47 (2)	02	T01	G0031	C01	60.00	00001	5.8
101 (2)	02	T01	G0031	C01	60.00	00001	5.5
101 (2)	02	T02	G0031	C01	60.00	00001	7.0
101 (2)	02	V01	G0031	C01	60.00	00001	4.4
47 (2)	02	V02	G0031	C01	60.00	00001	5.2

NOTES: Exposure rates reported in net µR/hr. Count times are reported in seconds.
Underlined results did not meet the minimum required count time.
Bold values exceed 15 µR/hr.
13 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Exposure Rate Measurements

Survey Package : D1000 SYSTEMS

Auxiliary Boiler System

SURVEY DATE	FILE #	M2350 INST S/N	M2350 CAL DUE	DETECTOR MODEL	DETECTOR S/N	DETECTOR CAL DUE	TECHNICIAN
11/17/97	28 (2)	117573	4/14/98	44-2	091017	5/12/98	JFM0682
				CALIBRATION DATES VERIFIED AS ACCEPTABLE			
11/25/97	43 (2)	129414	3/22/98	44-2	126916	4/19/98	MAP5535
				CALIBRATION DATES VERIFIED AS ACCEPTABLE			
11/26/97	47 (2)	117573	4/14/98	44-2	091017	5/12/98	JFM0682
				CALIBRATION DATES VERIFIED AS ACCEPTABLE			
12/8/97	101 (2)	126182	3/22/98	44-2	128338	4/19/98	KFS5185
				CALIBRATION DATES VERIFIED AS ACCEPTABLE			

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/28/98 OUTPUT BATCH SN = 211

Survey Package D1000 SYSTEMS

Auxiliary Boiler System

UNIT : 01 SURFACE : T03 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Tank
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD01	FAL00005	17.4	1800	Co-57	< 3.8	3.8	0.0
				Co-60	< 4.6	4.6	0.0
				Cs-134	< 4.3	4.3	0.0
				Cs-137	< 5.2	5.2	0.0
				K-40	< 45.0	45.0	0.0
				Mn-54	< 5.1	5.1	0.0

UNIT : 02 SURFACE : M01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Misc component
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD02	FAL00004	11.3	1800	Co-57	< 5.2	5.3	0.0
				Co-60	< 6.4	6.4	0.0
				Cs-134	< 5.6	5.6	0.0
				Cs-137	< 6.3	6.3	0.0
				K-40	< 55.4	55.4	0.0
				Mn-54	< 5.8	5.8	0.0

Survey Package D1000 SYSTEMS

Auxiliary Boiler System

UNIT : 02 SURFACE : M03 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Misc component
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD03	FAL00006	5.8	1800	Co-57	< 10.4	10.4	0.0
				Co-60	< 12.8	12.8	0.0
				Cs-134	< 12.0	12.0	0.0
				Cs-137	< 10.9	10.9	0.0
				K-40	< 159.0	159.0	0.0
				Mn-54	< 13.7	13.7	0.0

UNIT : 02 SURFACE : M04 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Misc component
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD04	FAL00005	31.5	1800	Co-57	< 1.7	1.8	0.0
				Co-60	< 1.7	1.7	0.0
				Cs-134	< 2.3	2.3	0.0
				Cs-137	< 1.9	1.9	0.0
				K-40	< 30.9	30.9	0.0
				Mn-54	< 2.6	2.6	0.0

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D1100

SYSTEMS

PACKAGE DESCRIPTION

Steam Generator System

SURVEY AREA DESCRIPTION

Steam Generation System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Steam Generation System produced steam for the generation of electricity by transferring heat from the Reactor Coolant System to secondary feedwater. Proper steam generator chemistry was maintained by removal of contaminants via the Steam Generator Blowdown System. The system also removed decay heat during normal reactor shutdown. The wet lay-up recirculation system allowed the contents of the steam generators to be recirculated or nitrogen agitated during shutdown periods when they were full of water, and provided a means for hydrazine addition.

In June of 1989 it was determined that the auxiliary condensate system contained low levels of radioactivity. It is suspected that the radioactivity entered the system via small siphon heater leaks and entries to the secondary side of the Steam Generators during refueling for inspections and sludge lancing.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 24 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 24 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at 30 survey locations including those for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 2 survey measurement locations indicated on the results listing report.

Collected exposure rate measurements at 2 survey locations indicated on the results listing report.

Collected 1 material samples (e.g., sludge, sediment, rust, etc.) from the sumps, drains for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

- There were 6 direct measurements for total beta activity above MDA (Maximum MDA was 1346 dpm/100cm²)

and 1 result greater than 2000 dpm/100cm². The maximum measurement result was 2,664 dpm/100cm².

o There were 4 measurements for removable beta activity above MDA (17 dpm/100cm²) and no result greater than 100 dpm/100cm². The maximum measurement result was 48 dpm/100cm².

o There were no measurements for removable alpha activity above MDA (6 dpm/100cm²).

o There was 1 measurement for removable tritium activity above MDA (8 dpm/100cm²). The maximum measurement result was 9.6 dpm/100cm².

o The average and maximum exposure rate measurement results were 35 µR/hr and 67 µR/hr respectively.

o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

REFERENCES (Documents, Interviews)

Maine Yankee Drawing 1150 - FM - 77 B
Operator System Training Manual, Chapter 21

SUMMARY OF SURVEY UNIT(S)

03/29/98 OUTPUT BATCH SN = 235

PACKAGE D1100 SYSTEMS

Steam Generator System

UNIT(S)	SURFACE(S)
01 - 21' Turbine Building Components	M01 (S/G blow down demineralizer I-6 (southwest)) S01 (Prefilter FL-84 (southwest)) S02 (Postfilter FL-85 (southwest))
02 - 36' Primary Auxiliary Building Components	H01 (S/G blow down cooler E-100 (beside TK-18)) P01 (2" discharge spoolpiece for pump P-136 (beside TK-18)) P02 (3" line at valve BD-197) T01 (S/G blow down tank TK-18)
03 - 21' Containment Components	S01 (S/G E-1-1 wet lay up recirculation filter) S02 (S/G E-1-2 wet lay up recirculation filter) S03 (S/G E-1-3 wet lay up recirculation filter)

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0
G0031	METAL - BARE (GAMMA)	0.0

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package D1100 SYSTEMS

Steam Generator System

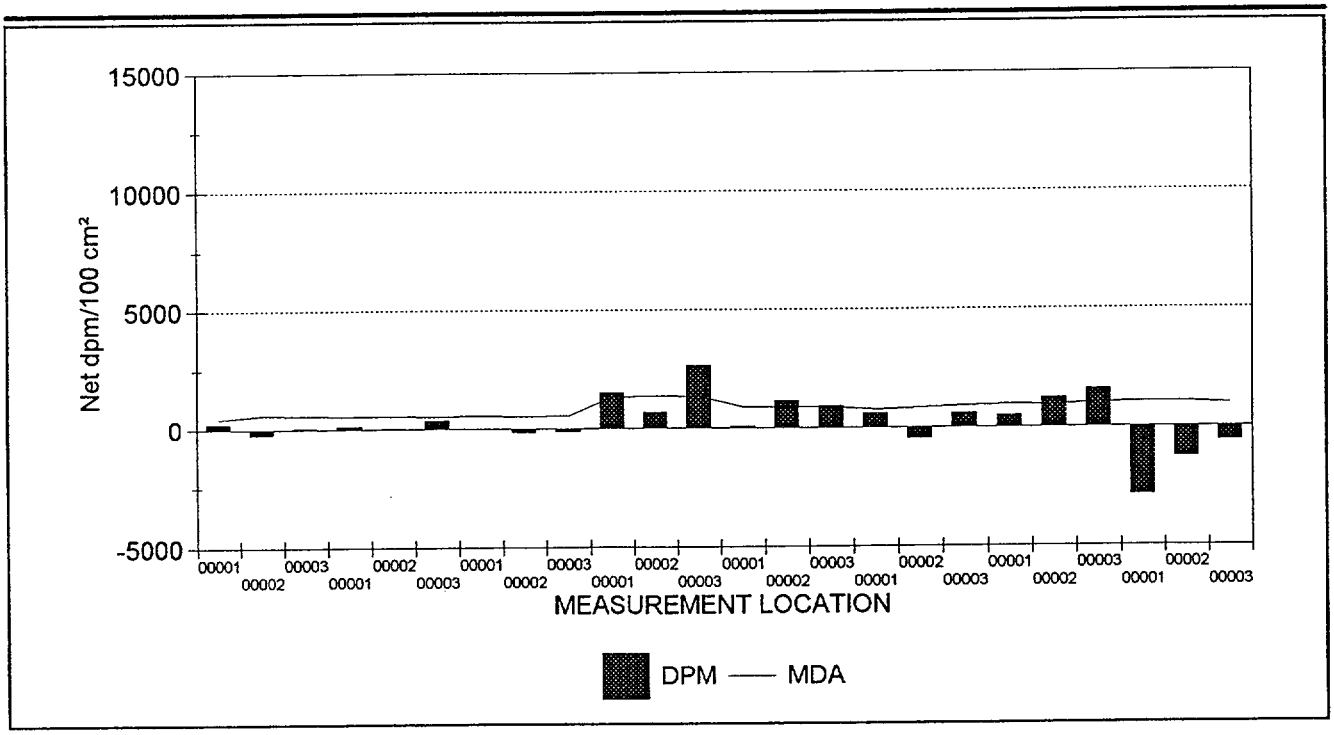
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	270.8
Maximum	2,664.1
Minimum	-2,903.2
Standard Deviation	1,067.4
MDA	1,346.7

Samples Reported	24
Samples Prescribed	24

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	YES
Results above 2000 net dpm/100 cm²	1
Number of results above MDA	6



24 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D1100 SYSTEMS

Steam Generator System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
143 (2)	01	M01	B0031	C01	20	00001	447.5	237.4
143 (2)	01	M01	B0031	C01	20	00002	601.6	-224.2
143 (2)	01	M01	B0031	C01	20	00003	560.1	52.8
148 (2)	01	S01	B0031	C01	300	00001	544.1	141.9
148 (2)	01	S01	B0031	C01	300	00002	552.8	14.7
148 (2)	01	S01	B0031	C01	300	00003	533.2	376.7
148 (2)	01	S02	B0031	C01	300	00001	556.2	-4.9
148 (2)	01	S02	B0031	C01	300	00002	532.7	-151.6
148 (2)	01	S02	B0031	C01	300	00003	549.9	-137.0
160 (2)	02	P01	B0031	C01	300	00001	1,336.5	1,505.3
160 (2)	02	P01	B0031	C01	300	00002	1,346.7	677.0
160 (2)	02	P01	B0031	C01	300	00003	1,336.3	***2,664.0***
153 (2)	02	P02	B0031	C01	1800	00001	886.1	66.6
153 (2)	02	P02	B0031	C01	1800	00002	885.7	1,158.8
153 (2)	02	P02	B0031	C01	1800	00003	887.4	907.2
137 (2)	02	T01	B0031	C01	30	00001	760.3	611.8
137 (2)	02	T01	B0031	C01	30	00002	841.5	-474.2
137 (2)	02	T01	B0031	C01	30	00003	908.9	588.9
165 (2)	03	S01	B0031	C01	300	00001	960.5	491.4
165 (2)	03	S01	B0031	C01	300	00002	936.7	1,219.9
165 (2)	03	S01	B0031	C01	300	00003	1,019.9	1,577.7
165 (2)	03	S03	B0031	C01	600	00001	1,051.6	-2,903.2
165 (2)	03	S03	B0031	C01	600	00002	1,036.1	-1,312.6
165 (2)	03	S03	B0031	C01	600	00003	972.3	-586.2

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
24 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

04/01/98 Direct Measurements For Total Beta Activity

Survey Package : D1100 SYSTEMS

Steam Generator System

SURVEY		M2350		DETECTOR			POST	
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	EFF	TECHNICIAN
12/15/97	137 (2)	129414	3/22/98	43-106	PR133882	3/27/98	.21	KFS5185
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/15/97	143 (2)	129414	3/22/98	43-106	PR133882	3/27/98	.18	KFS5185
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/15/97	148 (2)	117573	4/14/98	SP-175-3M	PR024349	5/4/98	.09	KFS5185
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/16/97	153 (2)	129430	5/6/98	43-98	123604	5/5/98	.02	JWD4920
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/16/97	160 (2)	129430	5/6/98	43-98	123604	5/5/98	.05	JWD4920
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/17/97	165 (2)	117573	4/14/98	SP-175-3M	PR024349	5/4/98	.10	KFS5185
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Removable Contamination - Gross Beta Activity

Survey Package D1100 SYSTEMS

Steam Generator System

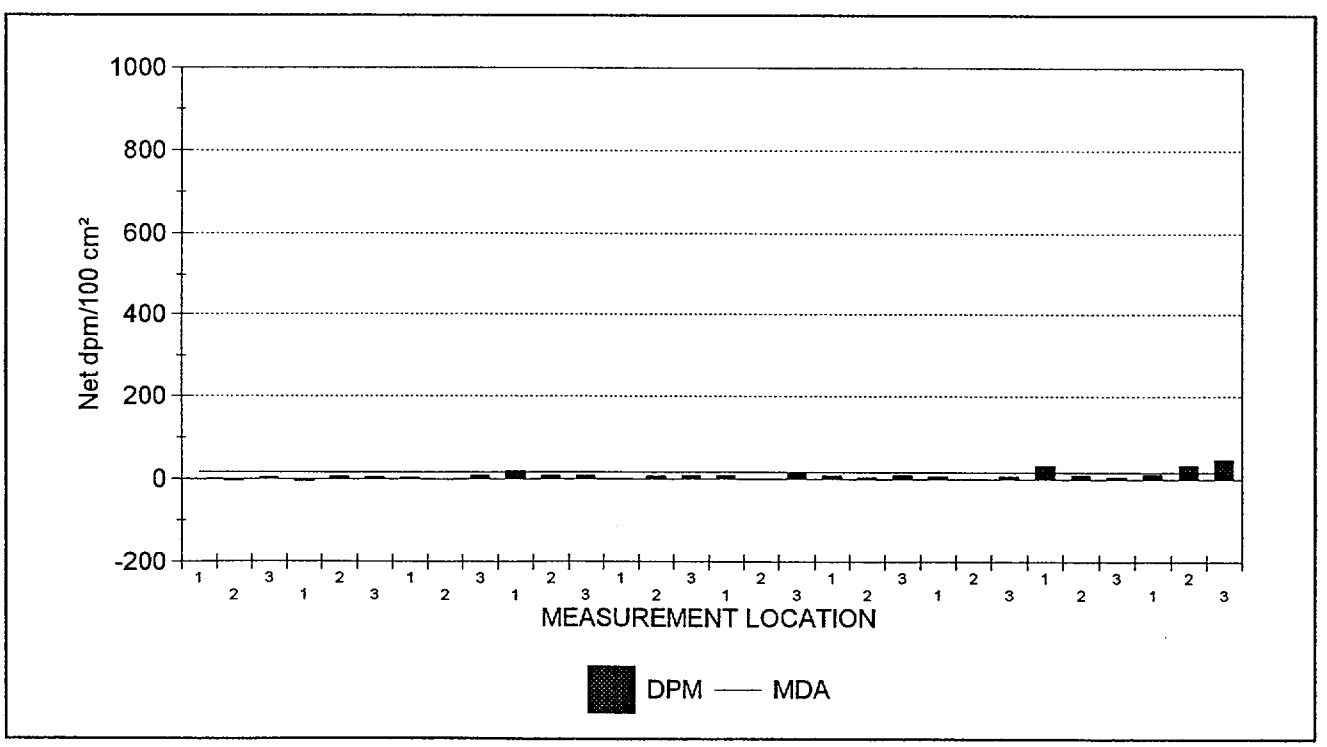
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	9.2
Maximum	47.5
Minimum	-4.6
Standard Deviation	11.1
MDA	17.0

Samples Reported	30
Samples Prescribed	32

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	4



30 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Removable Contamination - Gross Alpha Activity

Survey Package D1100 SYSTEMS

Steam Generator System

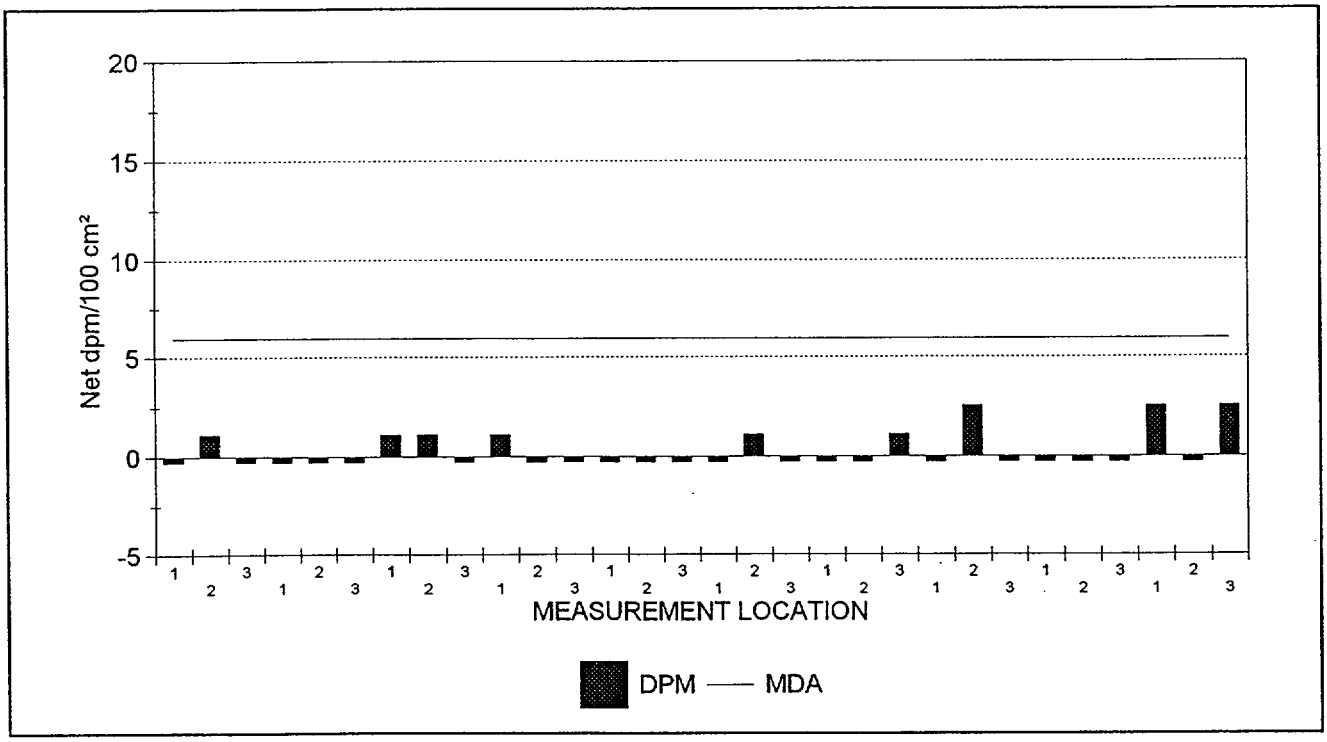
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	0.3
Maximum	2.5
Minimum	-0.3
Standard Deviation	1.0
MDA	6.0

Samples Reported	30
Samples Prescribed	32

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



30 RESULTS ARE GRAPHED

03/29/98 Removable Contamination

Survey Package : D1100 SYSTEMS

Steam Generator System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D041.XLS	03	S03	C01	3	2.5	47.6
SME1D041.XLS	03	S03	C01	2	-0.3	32.4
SME1D041.XLS	03	S03	C01	1	2.5	12.2
SME1D041.XLS	03	S02	C01	3	-0.3	5.5
SME1D041.XLS	03	S02	C01	2	-0.3	10.5
SME1D041.XLS	03	S02	C01	1	-0.3	32.4
SME1D041.XLS	03	S01	C01	3	-0.3	7.2
SME1D041.XLS	03	S01	C01	2	2.5	2.1
SME1D041.XLS	03	S01	C01	1	-0.3	7.2
SME1D041.XLS	02	T01	C01	3	1.1	10.5
SME1D041.XLS	02	T01	C01	2	-0.3	3.8
SME1D041.XLS	02	T01	C01	1	-0.3	8.9
SME1D041.XLS	02	P02	C01	3	-0.3	13.9
SME1D041.XLS	02	P02	C01	2	1.1	0.4
SME1D041.XLS	02	P02	C01	1	-0.3	8.9
SME1D041.XLS	02	P01	C01	3	-0.3	8.9
SME1D041.XLS	02	P01	C01	2	-0.3	7.2
SME1D041.XLS	02	P01	C01	1	-0.3	2.1
SME1D041.XLS	02	H01	C01	3	-0.3	8.9
SME1D041.XLS	02	H01	C01	2	-0.3	8.9
SME1D041.XLS	02	H01	C01	1	1.1	19.0
SME1D041.XLS	01	S02	C01	3	-0.3	8.9
SME1D041.XLS	01	S02	C01	2	1.1	-1.2
SME1D041.XLS	01	S02	C01	1	1.1	3.8
SME1D041.XLS	01	S01	C01	3	-0.3	5.5
SME1D041.XLS	01	S01	C01	2	-0.3	7.2
SME1D041.XLS	01	S01	C01	1	-0.3	-4.6
SME1D041.XLS	01	M01	C01	3	-0.3	3.8
SME1D041.XLS	01	M01	C01	2	1.1	-4.6
SME1D041.XLS	01	M01	C01	1	-0.3	-1.2

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
30 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/29/98 Removable Contamination

Survey Package : D1100 SYSTEMS

Steam Generator System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/17/98	SME1D041.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

03/29/98 Removable Contamination - Tritium Activity

Survey Package : D1100 SYSTEMS

Steam Generator System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
H025	Whatman smear	02	T01	C01	00001	8.0	-0.5
H026	Whatman smear	01	M01	C01	00001	8.0	9.6

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/29/98 Removable Contamination - Tritium Activity

Survey Package : D1100 SYSTEMS

Steam Generator System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Exposure Rate Measurements

Survey Package D1100 SYSTEMS

Steam Generator System

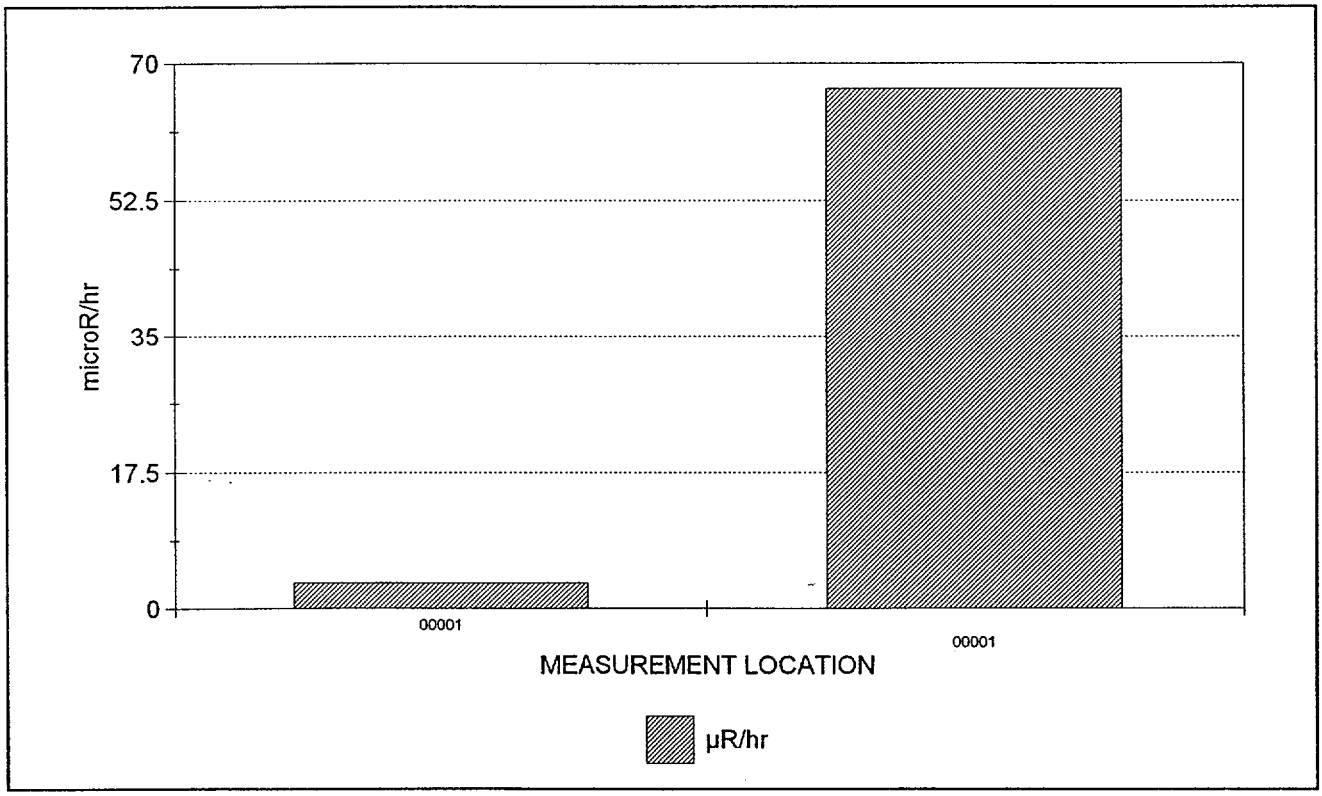
STATISTICAL SUMMARY

	µR/hr
Mean	35.0
Maximum	66.8
Minimum	3.3
Standard Deviation	44.9

Samples Reported	2
Samples Prescribed	2

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES



2 RESULTS ARE GRAPHED

03/29/98 Exposure Rate Measurements

Survey Package : D1100 SYSTEMS

Steam Generator System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	RESULT
142 (2)	01	M01	G0031	C01	60.00	00001	3.3
142 (2)	02	T01	G0031	C01	60.00	00001	***66.8***

NOTES: Exposure rates reported in net µR/hr. Count times are reported in seconds.
Underlined results did not meet the minimum required count time.
Bold values exceed 15 µR/hr.
2 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/29/98 Exposure Rate Measurements

Survey Package : D1100 SYSTEMS

Steam Generator System

SURVEY		M2350		DETECTOR			
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	TECHNICIAN
12/15/97	142 (2)	129430	5/6/98	44-2	PR118258	5/12/98	DRL7343

CALIBRATION DATES VERIFIED AS ACCEPTABLE

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/29/98

OUTPUT BATCH SN = 235

Survey Package D1100 SYSTEMS

Steam Generator System

UNIT : 01 SURFACE : S01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Strainer / Filters
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD06	FAL00006	0.3	1800	Co-57	< 174.0	174.0	0.0
				Co-60	< 216.0	216.0	0.0
				Cs-134	< 259.0	259.0	0.0
				Cs-137	< 236.0	236.0	0.0
				K-40	< 2130.0	2,130.0	0.0
				Mn-54	< 266.0	266.0	0.0

Version 3.0.7 - 3/24/98

PAJ

DBACORR Documentation
:aProgDBACORR:R_GSPEC.RSL

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D1200

SYSTEMS

PACKAGE DESCRIPTION

Main and Reheat Steam System

SURVEY AREA DESCRIPTION

Main and Reheat Steam System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Main and Reheat Steam System transported steam to the high pressure turbine, removed moisture from the high pressure turbine exhaust, and reheated the exhaust prior to its use in the low pressure turbines.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 76 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 76 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 76 survey locations as for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 3 survey measurement locations indicated on the results listing report.

Collected no exposure rate measurements.

Collected 3 material samples (e.g., sludge, sediment, rust, etc.) from the sumps, drains for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

o There were 5 direct measurements for total beta activity above MDA (Maximum MDA was 1,002 dpm/100cm²) and 1 result greater than 2000 dpm/100cm². The maximum measurement result was 4,599 dpm/100cm² at location 04P03 (30" pipe at valve MS-M-30) survey measurement location number 1.

o There was 1 measurement for removable beta activity above MDA (36 dpm/100cm²) and no result greater than 100 dpm/100cm². The maximum measurement result was 59.6 dpm/100cm².

o There were no measurements for removable alpha activity above MDA (8.2 dpm/100cm²).

- o There were no measurements for removable tritium activity above MDA (8 dpm/100cm²).
- o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

REFERENCES (Documents, Interviews)
Maine Yankee Drawing 1150 - FM - 70 A
Operator System Training Manual, Chapter 22

SUMMARY OF SURVEY UNIT(S)

03/27/98 OUTPUT BATCH SN = 198

PACKAGE D1200 SYSTEMS

Main and Reheat Steam System

UNIT(S)	SURFACE(S)
01 - Main Steam Valve House, Level 3	V01 (Valve MS-S-13) V02 (Valve MS-S-14) V03 (Valve MS-S-16) V04 (Valve MS-S-23) V05 (Valve MS-S-22) V06 (Valve MS-S-27) V07 (Valve MS-S-32) V08 (Valve MS-S-34)
02 - Turbine Building 61'	M01 (MSR E-18A) M02 (MSR E-18B) M03 (MSR E-18C) M04 (MSR E-18D) P01 (PI-2310B Piping)
03 - Main Steam Valve House, Level 21'	P01 (1.5" line at valve HPD-8)
04 - Main Steam Valve House Level 4	P01 (30" pipe at valve MS-M-20) P02 (30" pipe at valve MS-M-10) P03 (30" pipe at valve MS-M-30) P04 (6" line at valve MS-79) P05 (4" pipe at valve MS-M-255)

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Direct Measurements For Total Beta Activity

Survey Package D1200 SYSTEMS

Main and Reheat Steam System

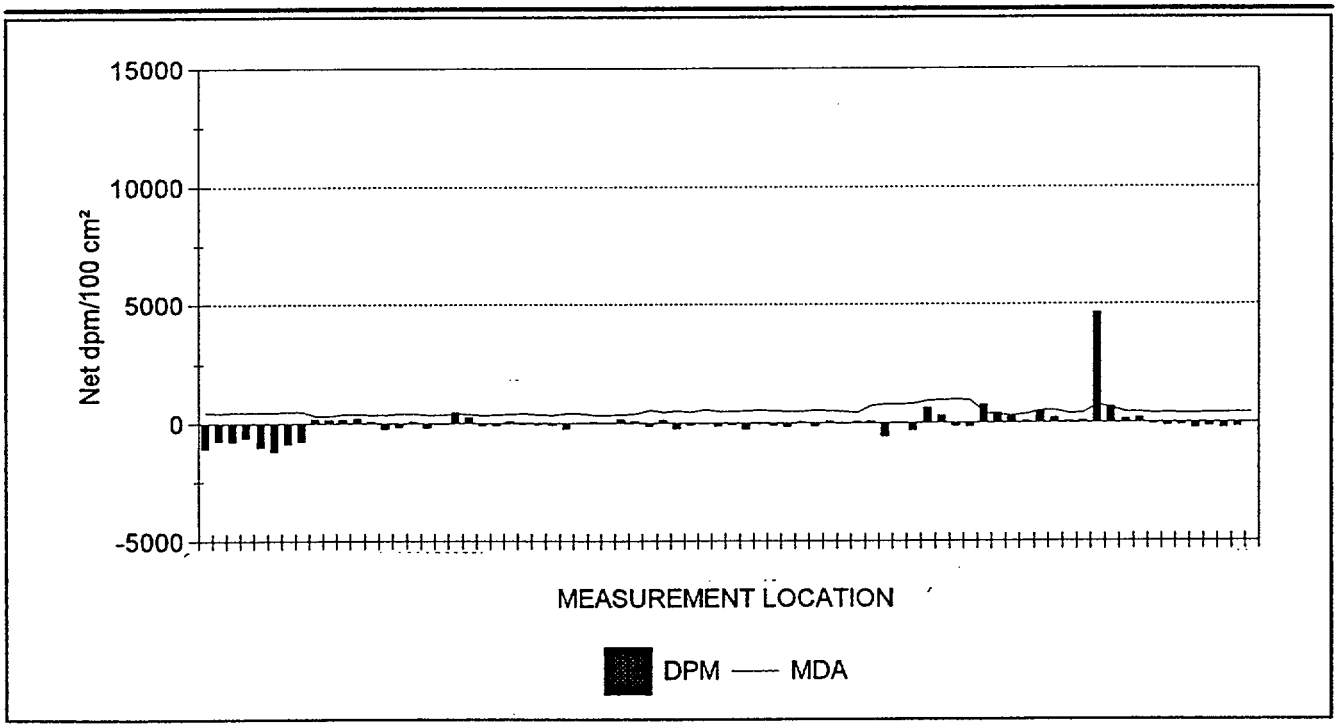
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-9.2
Maximum	4,598.7
Minimum	-1,236.3
Standard Deviation	649.0
MDA	1,002.2

Samples Reported	76
Samples Prescribed	76

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	YES
Results above 2000 net dpm/100 cm²	1
Number of results above MDA	5



76 RESULTS ARE GRAPHED

03/27/98

Direct Measurements For Total Beta Activity

Survey Package : D1200 SYSTEMS

Main and Reheat Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
60 (2)	01	V01	B0031	C01	300	00001	465.0	-1,098.5
60 (2)	01	V01	B0031	C01	300	00002	442.4	-751.8
60 (2)	01	V01	B0031	C01	300	00003	475.7	-772.7
60 (2)	01	V01	B0031	C01	300	00004	480.1	-626.5
60 (2)	01	V02	B0031	C01	300	00001	471.6	-1,044.2
60 (2)	01	V02	B0031	C01	300	00002	471.6	-1,236.3
60 (2)	01	V02	B0031	C01	300	00003	497.1	-872.9
60 (2)	01	V02	B0031	C01	300	00004	488.5	-793.6
78 (2)	01	V03	B0031	C01	300	00001	322.5	194.1
78 (2)	01	V03	B0031	C01	300	00002	323.2	155.3
78 (2)	01	V03	B0031	C01	300	00003	386.5	159.6
78 (2)	01	V03	B0031	C01	300	00004	382.2	198.4
60 (2)	01	V04	B0031	C01	300	00001	367.0	83.5
60 (2)	01	V04	B0031	C01	300	00002	365.4	-225.5
60 (2)	01	V04	B0031	C01	300	00003	429.0	-162.9
60 (2)	01	V04	B0031	C01	300	00004	404.8	83.5
60 (2)	01	V05	B0031	C01	300	00001	355.1	-171.2
60 (2)	01	V05	B0031	C01	300	00002	352.9	-29.2
60 (2)	01	V05	B0031	C01	300	00003	413.4	467.8
60 (2)	01	V05	B0031	C01	300	00004	401.9	254.8
60 (2)	01	V06	B0031	C01	300	00001	348.5	-91.9
60 (2)	01	V06	B0031	C01	300	00002	352.9	-91.9
60 (2)	01	V06	B0031	C01	300	00003	387.1	71.0
60 (2)	01	V06	B0031	C01	300	00004	405.3	-33.4
78 (2)	01	V07	B0031	C01	300	00001	375.6	-64.7
78 (2)	01	V07	B0031	C01	300	00002	350.4	-81.9
78 (2)	01	V07	B0031	C01	300	00003	410.5	-224.3
78 (2)	01	V07	B0031	C01	300	00004	404.9	4.3
78 (2)	01	V08	B0031	C01	300	00001	332.7	47.4
78 (2)	01	V08	B0031	C01	300	00002	342.0	17.3
78 (2)	01	V08	B0031	C01	300	00003	367.8	168.2
78 (2)	01	V08	B0031	C01	300	00004	378.9	90.6
32 (2)	02	M01	B0031	C01	15	00001	539.3	-141.6
32 (2)	02	M01	B0031	C01	15	00002	463.3	125.9
409 (2)	02	M01	B0031	C01	15	00003	520.8	-229.5
409 (2)	02	M01	B0031	C01	15	00004	462.2	-65.6
32 (2)	02	M02	B0031	C01	15	00001	565.6	-31.5
32 (2)	02	M02	B0031	C01	15	00002	482.0	-125.9
409 (2)	02	M02	B0031	C01	15	00003	489.2	-82.0
409 (2)	02	M02	B0031	C01	15	00004	532.9	-262.3

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

03/27/98 Direct Measurements For Total Beta Activity

Survey Package : D1200 SYSTEMS

Main and Reheat Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
32 (2)	02	M03	B0031	C01	15	00001	555.2	-15.7
32 (2)	02	M03	B0031	C01	15	00002	528.4	-94.4
409 (2)	02	M03	B0031	C01	15	00003	489.2	-147.6
409 (2)	02	M03	B0031	C01	15	00004	489.2	49.2
32 (2)	02	M04	B0031	C01	15	00001	539.3	-125.9
32 (2)	02	M04	B0031	C01	15	00002	511.5	78.7
409 (2)	02	M04	B0031	C01	15	00003	489.2	-16.4
409 (2)	02	M04	B0031	C01	15	00004	455.2	49.2
88 (2)	02	P01	B0031	C01	180	00001	718.1	90.3
88 (2)	02	P01	B0031	C01	180	00002	780.3	-564.4
88 (2)	02	P01	B0031	C01	180	00003	784.3	-7.5
88 (2)	02	P01	B0031	C01	180	00004	798.6	-301.0
99 (2)	03	P01	B0031	C01	180	00001	931.3	634.5
99 (2)	03	P01	B0031	C01	180	00002	956.3	303.5
99 (2)	03	P01	B0031	C01	180	00003	1,002.2	-137.9
99 (2)	03	P01	B0031	C01	180	00004	967.5	-165.5
81 (2)	04	P01	B0031	C01	15	00001	407.9	749.3
81 (2)	04	P01	B0031	C01	15	00002	374.7	411.4
81 (2)	04	P01	B0031	C01	15	00003	321.7	264.5
81 (2)	04	P01	B0031	C01	15	00004	374.7	44.1
81 (2)	04	P02	B0031	C01	15	00001	523.2	499.5
81 (2)	04	P02	B0031	C01	15	00002	513.4	205.7
81 (2)	04	P02	B0031	C01	15	00003	381.6	58.8
81 (2)	04	P02	B0031	C01	15	00004	414.2	73.5
81 (2)	04	P03	B0031	C01	15	00001	763.3	***4,598.7***
81 (2)	04	P03	B0031	C01	15	00002	619.9	675.8
81 (2)	04	P03	B0031	C01	15	00003	438.4	146.9
81 (2)	04	P03	B0031	C01	15	00004	432.5	205.7
34 (2)	04	P04	B0031	C01	300	00001	394.9	-48.0
34 (2)	04	P04	B0031	C01	300	00002	403.8	-124.1
34 (2)	04	P04	B0031	C01	300	00003	400.3	-96.1
34 (2)	04	P04	B0031	C01	300	00004	395.4	-224.2
34 (2)	04	P05	B0031	C01	300	00001	416.4	-156.2
34 (2)	04	P05	B0031	C01	300	00002	421.1	-244.2
34 (2)	04	P05	B0031	C01	300	00003	410.0	-176.2
34 (2)	04	P05	B0031	C01	300	00004	411.3	0.0

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
76 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Direct Measurements For Total Beta Activity

Survey Package : D1200 SYSTEMS

Main and Reheat Steam System

SURVEY DATE	FILE #	M2350 INST S/N	M2350 CAL DUE	DETECTOR MODEL	DETECTOR S/N	DETECTOR CAL DUE	PRE EFF	TECHNICIAN
11/18/97	32 (2)	126198	3/22/98	43-106	128914	3/30/98	.20	MAP5535
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
11/18/97	34 (2)	126195	5/7/98	SP-175-3M	PR02349	5/4/98	.11	JFM0682
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/2/97	60 (2)	117573	4/14/98	SP-175-3M	PR024349	5/4/98	.10	JFM0682
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/3/97	78 (2)	117573	4/14/98	SP-175-3M	PR024349	5/4/98	.10	JFM0682
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/3/97	81 (2)	129430	5/6/98	43-106	PR133886	5/7/98	.22	JFM0682
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/4/97	88 (2)	129429	5/5/98	43-98	PR123601	5/5/98	.04	MAP5535
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/4/97	99 (2)	129407	5/4/98	43-94	PR124110	5/5/98	.02	JFM0682
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
1/15/98	409 (2)	126197	3/22/98	43-68	PR075064	3/30/98	.19	JWD4920
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Beta Activity

Survey Package D1200 SYSTEMS

Main and Reheat Steam System

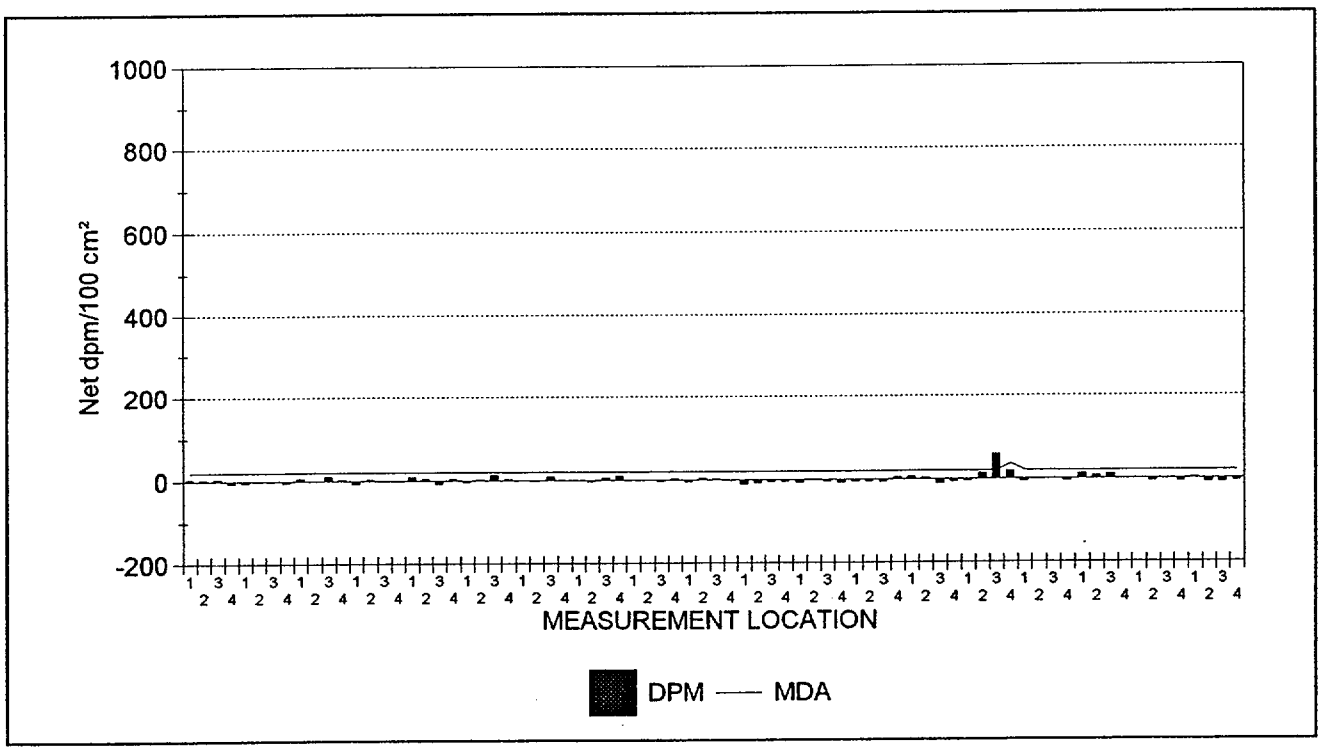
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	0.8
Maximum	59.6
Minimum	-11.1
Standard Deviation	9.3
MDA	36.1

Samples Reported	76
Samples Prescribed	79

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	1



76 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Alpha Activity

Survey Package D1200 SYSTEMS

Main and Reheat Steam System

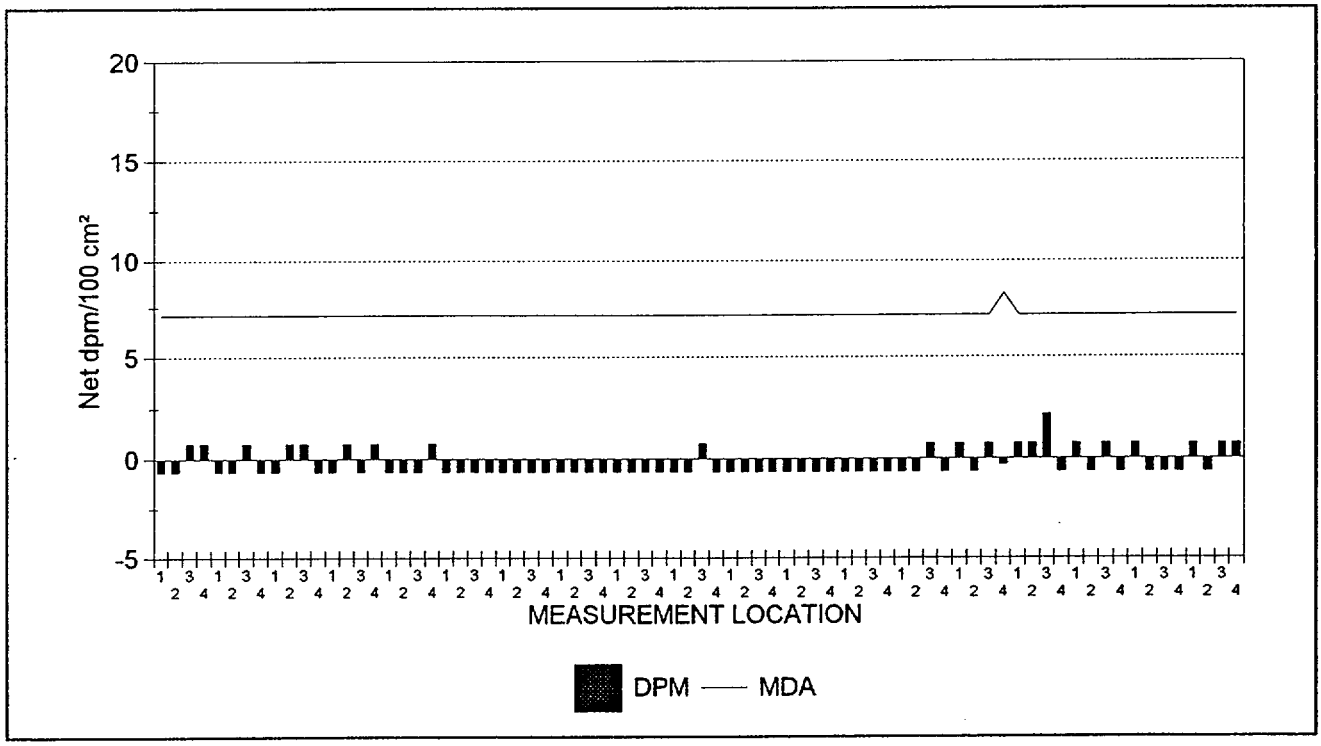
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.3
Maximum	2.2
Minimum	-0.7
Standard Deviation	0.7
MDA	8.2

Samples Reported	76
Samples Prescribed	79

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



76 RESULTS ARE GRAPHED

03/27/98 Removable Contamination

Survey Package: D1200 SYSTEMS

Main and Reheat Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D042.XLS	04	P05	C01	4	0.8	-6.1
SME1D042.XLS	04	P05	C01	3	0.8	-9.4
SME1D042.XLS	04	P05	C01	2	-0.7	-9.4
SME1D042.XLS	04	P05	C01	1	0.8	2.4
SME1D042.XLS	04	P04	C01	4	-0.7	-7.7
SME1D042.XLS	04	P04	C01	3	-0.7	-1.0
SME1D042.XLS	04	P04	C01	2	-0.7	-6.1
SME1D042.XLS	04	P04	C01	1	0.8	0.7
SME1D042.XLS	04	P03	C01	4	-0.7	0.7
SME1D042.XLS	04	P03	C01	3	0.8	10.8
SME1D042.XLS	04	P03	C01	2	-0.7	7.4
SME1D042.XLS	04	P03	C01	1	0.8	12.4
SME1D042.XLS	04	P02	C01	4	-0.7	-4.4
SME1D042.XLS	04	P02	C01	3	2.2	0.7
SME1D042.XLS	04	P02	C01	2	0.8	-1.0
SME1D042.XLS	04	P02	C01	1	0.8	-6.1
SME1E075.XLS	04	P01	C01	4	-0.3	18.5
SME1D042.XLS	04	P01	C01	3	0.8	59.6
SME1D042.XLS	04	P01	C01	2	-0.7	14.1
SME1D042.XLS	04	P01	C01	1	0.8	-4.4
SME1D042.XLS	03	P01	C01	4	-0.7	-6.1
SME1D042.XLS	03	P01	C01	3	0.8	-11.1
SME1D042.XLS	03	P01	C01	2	-0.7	2.4
SME1D042.XLS	03	P01	C01	1	-0.7	5.7
SME1D042.XLS	02	P01	C01	4	-0.7	4.0
SME1D042.XLS	02	P01	C01	3	-0.7	-6.1
SME1D042.XLS	02	P01	C01	2	-0.7	-4.4
SME1D042.XLS	02	P01	C01	1	-0.7	-4.4
SME1D042.XLS	02	M04	C01	4	-0.7	-7.7
SME1D042.XLS	02	M04	C01	3	-0.7	-4.4
SME1D042.XLS	02	M04	C01	2	-0.7	0.7
SME1D042.XLS	02	M04	C01	1	-0.7	-7.7
SME1D042.XLS	02	M03	C01	4	-0.7	-4.4
SME1D042.XLS	02	M03	C01	3	-0.7	-4.4
SME1D042.XLS	02	M03	C01	2	-0.7	-7.7
SME1D042.XLS	02	M03	C01	1	-0.7	-11.1
SME1D042.XLS	02	M02	C01	4	-0.7	-1.0
SME1D042.XLS	02	M02	C01	3	0.8	2.4
SME1D042.XLS	02	M02	C01	2	-0.7	4.0
SME1D042.XLS	02	M02	C01	1	-0.7	-4.4

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).

03/27/98 Removable Contamination

Survey Package : D1200 SYSTEMS

Main and Reheat Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D042.XLS	02	M01	C01	4	-0.7	2.4
SME1D042.XLS	02	M01	C01	3	-0.7	-2.7
SME1D042.XLS	02	M01	C01	2	-0.7	0.7
SME1D042.XLS	02	M01	C01	1	-0.7	0.7
SME1D042.XLS	01	V08	C01	4	-0.7	10.8
SME1D042.XLS	01	V08	C01	3	-0.7	5.7
SME1D042.XLS	01	V08	C01	2	-0.7	-2.7
SME1D042.XLS	01	V08	C01	1	-0.7	0.7
SME1D042.XLS	01	V07	C01	4	-0.7	0.7
SME1D042.XLS	01	V07	C01	3	-0.7	9.1
SME1D042.XLS	01	V07	C01	2	-0.7	-1.0
SME1D042.XLS	01	V07	C01	1	-0.7	0.7
SME1D042.XLS	01	V06	C01	4	-0.7	2.4
SME1D042.XLS	01	V06	C01	3	-0.7	14.1
SME1D042.XLS	01	V06	C01	2	-0.7	2.4
SME1D042.XLS	01	V06	C01	1	-0.7	-4.4
SME1D042.XLS	01	V05	C01	4	0.8	4.0
SME1D042.XLS	01	V05	C01	3	-0.7	-7.7
SME1D042.XLS	01	V05	C01	2	-0.7	4.0
SME1D042.XLS	01	V05	C01	1	-0.7	9.1
SME1D042.XLS	01	V04	C01	4	0.8	-1.0
SME1D042.XLS	01	V04	C01	3	-0.7	-1.0
SME1D042.XLS	01	V04	C01	2	0.8	2.4
SME1D042.XLS	01	V04	C01	1	-0.7	-7.7
SME1D042.XLS	01	V03	C01	4	-0.7	2.4
SME1D042.XLS	01	V03	C01	3	0.8	10.8
SME1D042.XLS	01	V03	C01	2	0.8	0.7
SME1D042.XLS	01	V03	C01	1	-0.7	5.7
SME1D042.XLS	01	V02	C01	4	-0.7	-4.4
SME1D042.XLS	01	V02	C01	3	0.8	-1.0
SME1D042.XLS	01	V02	C01	2	-0.7	-1.0
SME1D042.XLS	01	V02	C01	1	-0.7	-4.4
SME1D042.XLS	01	V01	C01	4	0.8	-6.1
SME1D042.XLS	01	V01	C01	3	0.8	4.0
SME1D042.XLS	01	V01	C01	2	-0.7	2.4
SME1D042.XLS	01	V01	C01	1	-0.7	4.0

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
76 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/27/98

Removable Contamination

Survey Package : D1200 SYSTEMS

Main and Reheat Steam System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/18/98	SME1D042.XLS	1	14131	8/7/98	SMM
					CALIBRATION DATE VERIFIED AS ACCEPTABLE

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1200 SYSTEMS

Main and Reheat Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
H027	Whatman smear	02	M02	C01	00001	8.0	-1.9
H028	Whatman smear	03	P01	C01	00001	8.0	-3.8
H029	Whatman smear	02	M01	C01	00001	8.0	-6.5

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/27/98

Removable Contamination - Tritium Activity

Survey Package : D1200 SYSTEMS

Main and Reheat Steam System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
					CALIBRATION DATE VERIFIED AS ACCEPTABLE

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/28/98 OUTPUT BATCH SN = 213

Survey Package D1200 SYSTEMS

Main and Reheat Steam System

UNIT : 01 SURFACE : V01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Valve
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD33	PET00021	0.2	1800	Co-57	< 213.0	213.0	0.0
				Co-60	< 512.0	512.0	0.0
				Cs-134	< 266.0	266.0	0.0
				Cs-137	< 233.0	233.0	0.0
				K-40	< 3290.0	3,290.0	0.0
				Mn-54	< 312.0	312.0	0.0

UNIT : 01 SURFACE : V06 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Valve
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD32	PET00020	0.1	1800	Co-57	< 461.0	461.0	0.0
				Co-60	< 547.0	547.0	0.0
				Cs-134	< 568.0	568.0	0.0
				Cs-137	< 517.0	517.0	0.0
				K-40	< 6850.0	6,850.0	0.0
				Mn-54	< 624.0	624.0	0.0

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/28/98 OUTPUT BATCH SN = 213

Survey Package D1200 SYSTEMS

Main and Reheat Steam System

UNIT : 01 SURFACE : V07 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Valve
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD31	PET00019	0.2	1800	Co-57	< 208.0	208.0	0.0
				Co-60	< 307.0	307.0	0.0
				Cs-134	< 315.0	315.0	0.0
				Cs-137	< 309.0	309.0	0.0
				K-40	< 3430.0	3,430.0	0.0
				Mn-54	< 290.0	290.0	0.0

Version 3.0.7 - 3/24/98
PAJ

DBACORR Documentation
:aProgDBACORR:R_GSPEC.RSL

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D1300

SYSTEMS

PACKAGE DESCRIPTION

Auxiliary Steam System

SURVEY AREA DESCRIPTION

Auxiliary Steam System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Auxiliary Steam Systems supplied steam for fluid heating, space heating, air removal in the main condenser and Feed Pump Turbine P-2C, and gland sealing steam for the main turbine and Feed Pump Turbine P-2C.

In June of 1989 it was determined that the auxiliary condensate system contained low levels of radioactivity. It is suspected that the radioactivity entered the system via small siphon heater leaks and entries to the secondary side of the Steam Generators during refueling for inspections and sludge lancing.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 70 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 70 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 70 survey locations as for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 3 survey measurement locations indicated on the results listing report.

Collected exposure rate measurements at 5 survey locations indicated on the results listing report.

Collected no material samples.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

- There were 19 direct measurements for total beta activity above MDA (Maximum MDA was 2,381dpm/100cm²) and 11 results greater than 2000 dpm/100cm². The maximum measurement result was 11,787 dpm/100cm².

- There was no measurements for removable beta activity above MDA (36 dpm/100cm²).

o There were no measurements for removable alpha activity above MDA (8 dpm/100cm²).

o There were 1 measurement for removable tritium activity above MDA (8 dpm/100cm²). The maximum measurement result was 15.5 dpm/100cm².

o The average and maximum exposure rate measurement results were 163 µR/hr and 435 µR/hr respectively.

REFERENCES (Documents, Interviews)

Maine Yankee Drawing 1150 - FM - 72 A
Maine Yankee Drawing 1150 - FB - 35
Operator System Training Manual, Chapter 23

SUMMARY OF SURVEY UNIT(S)

03/29/98 OUTPUT BATCH SN = 236

PACKAGE D1300 SYSTEMS

Auxiliary Steam System

UNIT(S)	SURFACE(S)
01 - Yard Components	P01 (1.5" pipe at valve AST-74, (next to RWST, inside metal shed)) P02 (1.5" pipe at valve AS-T-70, (DWST valve cubicle)) V01 (Valve AS-T-109, (next to PWST heater E-37))
02 - Valve House 21' Components	P01 (3/4" pipe at valve AS-788, (east wall)) V01 (Valve AS-478)
03 - Valve House Level 3 Components	V01 (Valve AS-63 (valve house, 3rd floor))
05 - PAB 11' Components	P01 (Pipe at valve AS-596 (west wall behind TK-3))
06 - PAB 21' Components	P01 (1" line at drain trap ACD-113 (east wall)) V01 (Valve AS-80) V02 (Valve AS-286 (south hall overhead)) V03 (Valve AS-P-591 (south of ops desk))
07 - PAB 36' Components	P01 (1" line at valve AS-634 (beside offgas filter A)) P02 (2" line at valve AS-735 (beside offgas filter A)) V01 (Valve AS-581 (southeast corner))
08 - Duratek Room 21' Components	P01 (1" line at valve AS-748) T01 (Tank TK-143)
09 - Turbine Building 21' Components	P01 (2" line at valve AS-P-833 (next to auxiliary boiler room door))
10 - Turbine Building 61' Components	V01 (Valve AS-677 (southwest next to fan FN-3A))
11 - Service Building 39' Components	P01 (4" line at valve AS-P-3 (below FW-F-207))

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0
G0031	METAL - BARE (GAMMA)	0.0

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Direct Measurements For Total Beta Activity

Survey Package D1300 SYSTEMS

Auxiliary Steam System

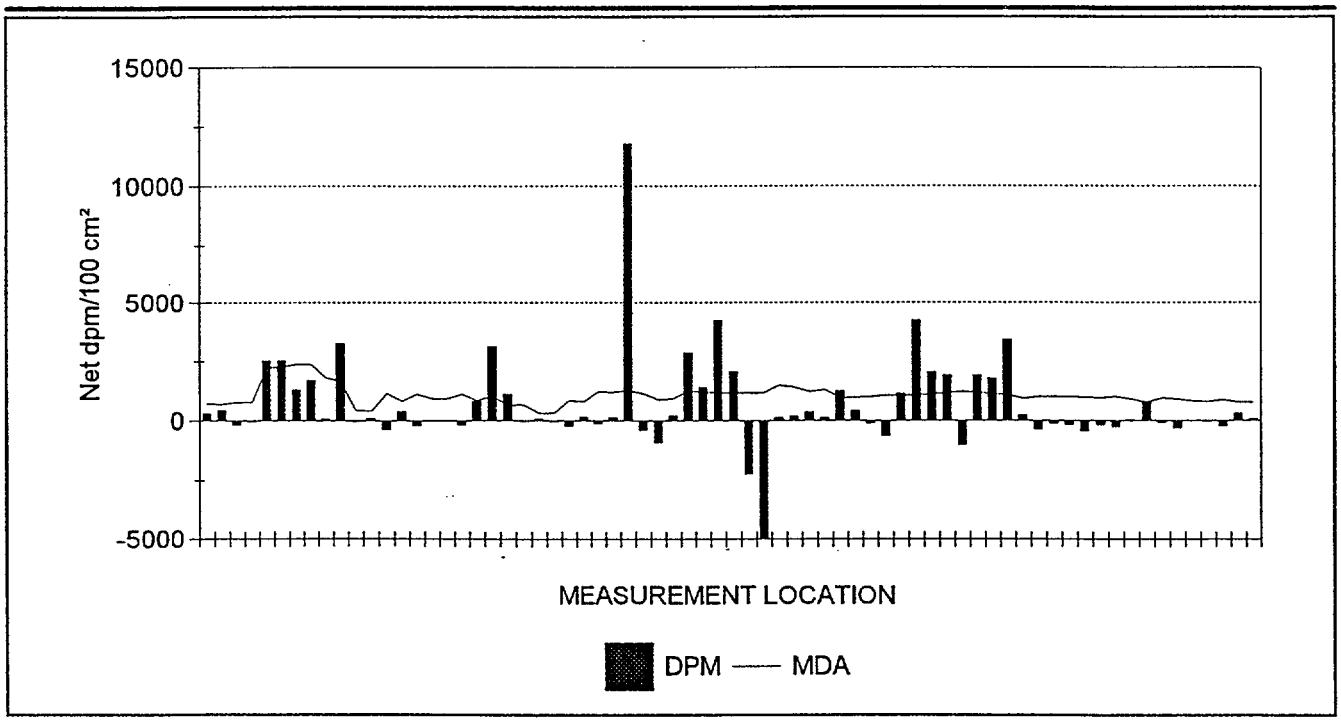
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	667.3
Maximum	11,786.6
Minimum	-5,390.3
Standard Deviation	1,963.4
MDA	2,381.7

Samples Reported	70
Samples Prescribed	70

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	NO
Results above 2000 net dpm/100 cm²	11
Number of results above MDA	19



70 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Direct Measurements For Total Beta Activity

Survey Package: D1300 SYSTEMS

Auxiliary Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
54 (2)	01	P01	B0031	C01	180	00001	732.5	308.4
54 (2)	01	P01	B0031	C01	180	00002	712.6	438.9
54 (2)	01	P01	B0031	C01	180	00003	770.6	-177.9
54 (2)	01	P01	B0031	C01	180	00004	770.6	-47.5
54 (2)	01	P02	B0031	C01	180	00001	2,203.8	***2,514.9***
54 (2)	01	P02	B0031	C01	180	00002	2,256.4	***2,514.9***
54 (2)	01	P02	B0031	C01	180	00003	2,364.7	1,304.9
54 (2)	01	P02	B0031	C01	180	00004	2,381.7	1,684.5
65 (2)	01	V01	B0031	C01	120	00001	1,800.7	89.6
65 (2)	01	V01	B0031	C01	120	00002	1,672.3	***3,257.1***
63 (2)	02	P01	B0031	C01	180	00001	436.3	-18.5
63 (2)	02	P01	B0031	C01	180	00002	429.4	117.1
65 (2)	02	V01	B0031	C01	120	00001	1,139.8	-358.6
65 (2)	02	V01	B0031	C01	120	00002	829.7	388.5
65 (2)	02	V01	B0031	C01	120	00003	1,130.6	-209.2
65 (2)	02	V01	B0031	C01	120	00004	938.0	29.9
65 (2)	03	V01	B0031	C01	120	00001	926.7	0.0
65 (2)	03	V01	B0031	C01	120	00002	1,112.1	-179.3
65 (2)	03	V01	B0031	C01	120	00003	867.5	836.7
65 (2)	03	V01	B0031	C01	120	00004	1,034.1	***3,137.5***
94 (2)	05	P01	B0031	C01	900	00001	657.6	1,129.0
94 (2)	05	P01	B0031	C01	900	00002	674.1	-15.9
94 (2)	06	P01	B0031	C01	180	00001	318.4	79.7
94 (2)	06	P01	B0031	C01	180	00002	320.7	-39.9
93 (2)	06	V01	B0031	C01	180	00001	854.6	-245.9
93 (2)	06	V01	B0031	C01	180	00002	798.5	151.3
92 (2)	06	V01	B0031	C01	180	00003	1,232.0	-141.8
92 (2)	06	V01	B0031	C01	180	00004	1,205.3	121.5
97 (2)	06	V02	B0031	C01	1800	00001	1,278.7	***11,786.6***
97 (2)	06	V02	B0031	C01	120	00002	1,155.5	-388.8
93 (2)	06	V03	B0031	C01	1800	00001	895.8	-909.8
93 (2)	06	V03	B0031	C01	1800	00002	927.2	215.6
86 (2)	07	P01	B0031	C01	1500	00001	1,245.0	***2,855.1***
86 (2)	07	P01	B0031	C01	1500	00002	1,235.2	1,407.7
82 (2)	07	P02	B0031	C01	2400	00001	1,168.7	***4,254.4***
82 (2)	07	P02	B0031	C01	2400	00002	1,173.6	***2,058.4***
82 (2)	07	P02	B0031	C01	2400	00003	1,173.4	-2,243.0
82 (2)	07	P02	B0031	C01	2400	00004	1,168.8	-5,390.3
104 (2)	07	V01	B0031	C01	120	00001	1,472.7	133.5
104 (2)	07	V01	B0031	C01	120	00002	1,405.1	186.9

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².

03/29/98 Direct Measurements For Total Beta Activity

Survey Package : D1300 SYSTEMS

Auxiliary Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
104 (2)	07	V01	B0031	C01	120	00003	1,222.0	373.8
104 (2)	07	V01	B0031	C01	120	00004	1,305.4	133.5
86 (2)	08	P01	B0031	C01	600	00001	954.3	1,250.3
86 (2)	08	P01	B0031	C01	600	00002	980.3	422.7
86 (2)	08	P01	B0031	C01	600	00003	1,014.5	-94.2
86 (2)	08	P01	B0031	C01	600	00004	1,060.8	-621.3
85 (2)	08	T01	B0031	C01	120	00001	1,063.2	1,139.9
85 (2)	08	T01	B0031	C01	120	00002	1,078.4	***4,244.7***
85 (2)	08	T01	B0031	C01	120	00003	1,131.4	***2,026.0***
85 (2)	08	T01	B0031	C01	120	00004	1,164.1	1,896.7
85 (2)	08	T01	B0031	C01	120	00005	1,224.1	-1,013.0
85 (2)	08	T01	B0031	C01	120	00006	1,184.0	1,892.0
85 (2)	08	T01	B0031	C01	120	00007	1,150.1	1,769.8
85 (2)	08	T01	B0031	C01	120	00008	1,091.0	***3,417.3***
91 (2)	09	P01	B0031	C01	120	00001	925.0	225.8
91 (2)	09	P01	B0031	C01	120	00002	1,020.2	-361.2
91 (2)	09	P01	B0031	C01	120	00003	1,016.0	-124.2
91 (2)	09	P01	B0031	C01	120	00004	1,014.6	-180.6
104 (2)	10	V01	B0031	C01	120	00001	980.2	-453.8
104 (2)	10	V01	B0031	C01	120	00002	956.4	-186.9
104 (2)	10	V01	B0031	C01	120	00003	1,018.5	-267.0
104 (2)	10	V01	B0031	C01	120	00004	915.3	26.7
104 (2)	10	V01	B0031	C01	120	00005	777.6	800.9
104 (2)	10	V01	B0031	C01	120	00006	964.4	-80.1
104 (2)	11	P01	B0031	C01	180	00001	920.3	-302.6
104 (2)	11	P01	B0031	C01	180	00002	831.2	0.0
104 (2)	11	P01	B0031	C01	180	00003	811.1	-35.6
104 (2)	11	P01	B0031	C01	180	00004	888.5	-231.4
104 (2)	11	P01	B0031	C01	180	00005	774.6	320.4
104 (2)	11	P01	B0031	C01	180	00006	790.5	89.0

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
70 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/29/98 Direct Measurements For Total Beta Activity

Survey Package : D1300 SYSTEMS

Auxiliary Steam System

SURVEY DATE	FILE #	M2350		DETECTOR			PRE EFF	TECHNICIAN
		INST S/N	CAL DUE	MODEL	S/N	CAL DUE		
12/1/97	54 (2)	129429	5/5/98	43-94	PR119461	5/5/98	.03	AOK2982
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/2/97	63 (2)	129429	5/5/98	43-94	PR119461	5/5/98	.06	AOK2982
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/2/97	65 (2)	126182	3/22/98	44-40	095101	3/23/98	.11	DRL7343
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/3/97	82 (2)	129429	5/5/98	43-98	123601	5/5/98	.04	AOK2982
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/3/97	85 (2)	126197	3/22/98	43-68	075064	3/30/98	.17	DRL7343
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/3/97	86 (2)	129407	5/4/98	43-94	PR124110	5/5/98	.04	DRL7343
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	

DETECTOR LISTING CONTINUED ON NEXT PAGE

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/29/98 Direct Measurements For Total Beta Activity

Survey Package: D1300 SYSTEMS

Auxiliary Steam System

SURVEY		M2350		DETECTOR			PRE	
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	EFF	TECHNICIAN
12/4/97	91 (2)	129429	5/5/98	43-98	PR123601	5/5/98	.04	MAP5535

CALIBRATION DATES VERIFIED AS ACCEPTABLE

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Removable Contamination - Gross Beta Activity

Survey Package D1300 SYSTEMS

Auxiliary Steam System

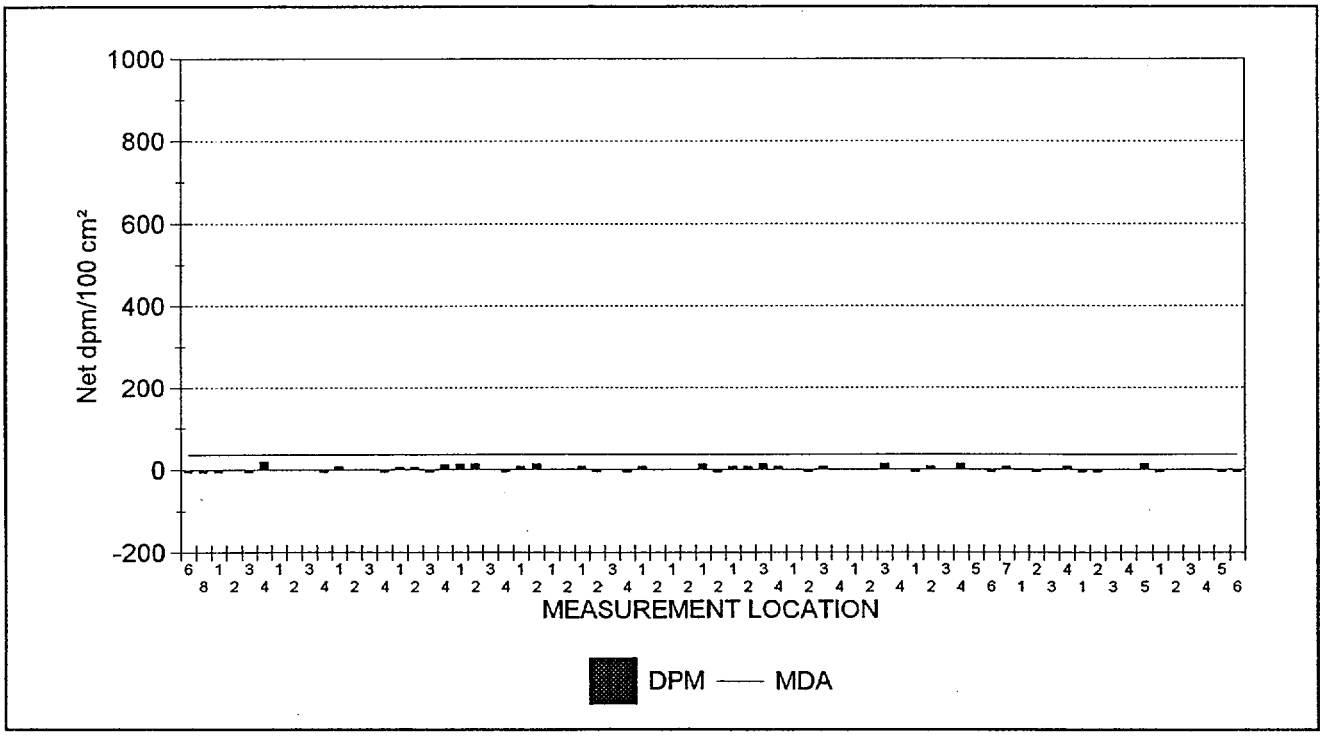
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	1.9
Maximum	19.4
Minimum	-5.8
Standard Deviation	6.5
MDA	36.2

Samples Reported	70
Samples Prescribed	73

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	0



70 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Removable Contamination - Gross Alpha Activity

Survey Package D1300 SYSTEMS

Auxiliary Steam System

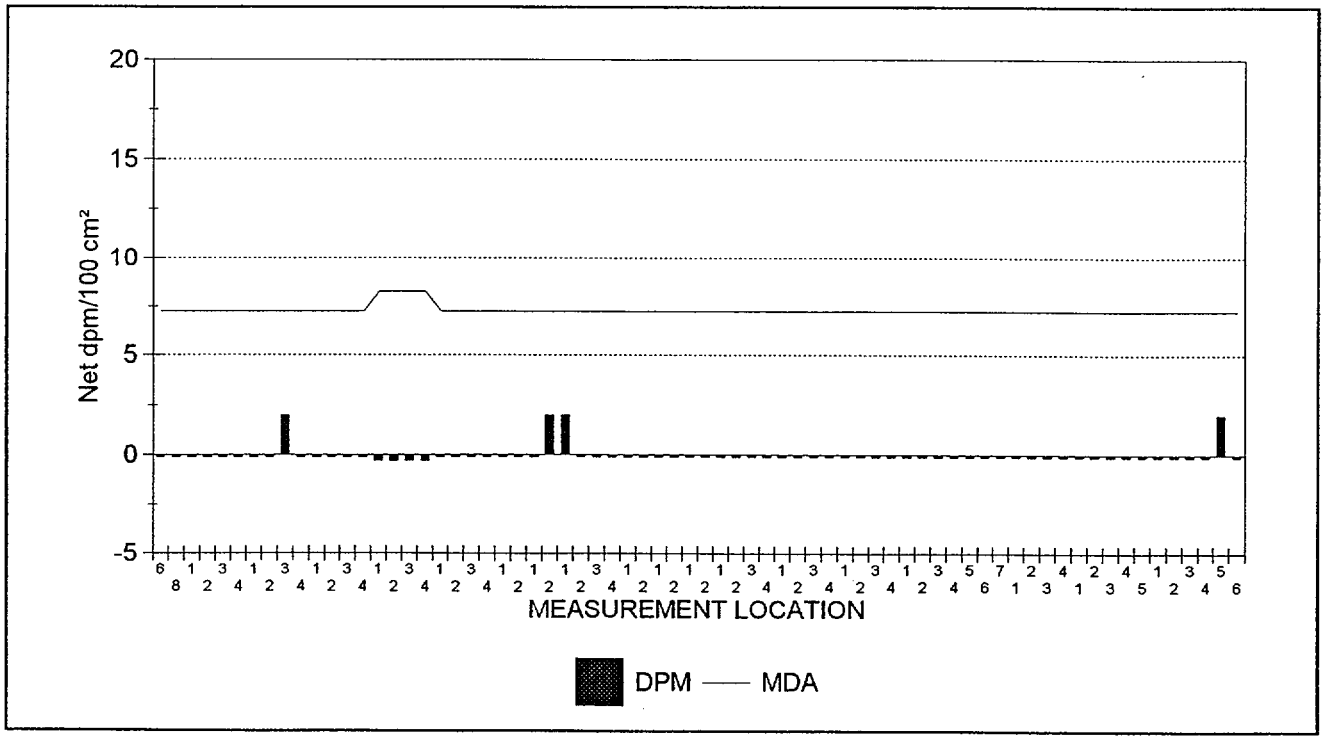
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	0.0
Maximum	2.0
Minimum	-0.3
Standard Deviation	0.5
MDA	8.2

Samples Reported	70
Samples Prescribed	73

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



70 RESULTS ARE GRAPHED

03/29/98 Removable Contamination

Survey Package : D1300 SYSTEMS

Auxiliary Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1E049.XLS	11	P01	C01	6	-0.1	-5.5
SME1E049.XLS	11	P01	C01	5	2.0	-5.5
SME1E049.XLS	11	P01	C01	4	-0.1	0.7
SME1E049.XLS	11	P01	C01	3	-0.1	0.7
SME1E049.XLS	11	P01	C01	2	-0.1	0.7
SME1E049.XLS	11	P01	C01	1	-0.1	-5.5
SME1E049.XLS	10	V01	C01	5	-0.1	13.2
SME1E049.XLS	10	V01	C01	4	-0.1	0.7
SME1E049.XLS	10	V01	C01	3	-0.1	0.7
SME1E049.XLS	10	V01	C01	2	-0.1	-5.5
SME1E049.XLS	10	V01	C01	1	-0.1	-5.5
SME1E049.XLS	09	P01	C01	4	-0.1	6.9
SME1E049.XLS	09	P01	C01	3	-0.1	0.7
SME1E049.XLS	09	P01	C01	2	-0.1	-5.5
SME1E049.XLS	09	P01	C01	1	-0.1	0.7
SME1E049.XLS	08	T01	C01	7	-0.1	6.9
SME1E049.XLS	08	T01	C01	6	-0.1	-5.5
SME1E049.XLS	08	T01	C01	5	-0.1	0.7
SME1E049.XLS	08	T01	C01	4	-0.1	13.2
SME1E049.XLS	08	T01	C01	3	-0.1	0.7
SME1E049.XLS	08	T01	C01	2	-0.1	6.9
SME1E049.XLS	08	T01	C01	1	-0.1	-5.5
SME1E049.XLS	08	P01	C01	4	-0.1	0.7
SME1E049.XLS	08	P01	C01	3	-0.1	13.2
SME1E049.XLS	08	P01	C01	2	-0.1	0.7
SME1E049.XLS	08	P01	C01	1	-0.1	0.7
SME1E049.XLS	07	V01	C01	4	-0.1	0.7
SME1E049.XLS	07	V01	C01	3	-0.1	6.9
SME1E049.XLS	07	V01	C01	2	-0.1	-5.5
SME1E049.XLS	07	V01	C01	1	-0.1	0.7
SME1E049.XLS	07	P02	C01	4	-0.1	6.9
SME1E049.XLS	07	P02	C01	3	-0.1	13.2
SME1E049.XLS	07	P02	C01	2	-0.1	6.9
SME1E049.XLS	07	P02	C01	1	-0.1	6.9
SME1E049.XLS	07	P01	C01	2	-0.1	-5.5
SME1E049.XLS	07	P01	C01	1	-0.1	13.2
SME1E049.XLS	06	V03	C01	2	-0.1	0.7
SME1E049.XLS	06	V03	C01	1	-0.1	0.7
SME1E049.XLS	06	V02	C01	2	-0.1	0.7
SME1E049.XLS	06	V02	C01	1	-0.1	6.9

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).

03/29/98 Removable Contamination

Survey Package: D1300 SYSTEMS

Auxiliary Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1E049.XLS	06	V01	C01	4	-0.1	-5.5
SME1E049.XLS	06	V01	C01	3	-0.1	0.7
SME1E049.XLS	06	V01	C01	2	-0.1	-5.5
SME1E049.XLS	06	V01	C01	1	2.0	6.9
SME1E049.XLS	06	P01	C01	2	2.0	0.7
SME1E049.XLS	06	P01	C01	1	-0.1	0.7
SME1E049.XLS	05	P01	C01	2	-0.1	13.2
SME1E049.XLS	05	P01	C01	1	-0.1	6.9
SME1E049.XLS	03	V01	C01	4	-0.1	-5.5
SME1E049.XLS	03	V01	C01	3	-0.1	0.7
SME1E049.XLS	03	V01	C01	2	-0.1	13.2
SME1E049.XLS	03	V01	C01	1	-0.1	13.2
SME1E073.XLS	02	V01	C01	4	-0.3	12.4
SME1E073.XLS	02	V01	C01	3	-0.3	-5.8
SME1E073.XLS	02	V01	C01	2	-0.3	6.4
SME1E073.XLS	02	V01	C01	1	-0.3	6.4
SME1E049.XLS	01	V01	C01	4	-0.1	-5.5
SME1E049.XLS	01	V01	C01	3	-0.1	0.7
SME1E049.XLS	01	V01	C01	2	-0.1	0.7
SME1E049.XLS	01	V01	C01	1	-0.1	6.9
SME1E049.XLS	01	P02	C01	4	-0.1	-5.5
SME1E049.XLS	01	P02	C01	3	2.0	0.7
SME1E049.XLS	01	P02	C01	2	-0.1	0.7
SME1E049.XLS	01	P02	C01	1	-0.1	0.7
SME1E049.XLS	01	P01	C01	4	-0.1	19.4
SME1E049.XLS	01	P01	C01	3	-0.1	-5.5
SME1E049.XLS	01	P01	C01	2	-0.1	0.7
SME1E049.XLS	01	P01	C01	1	-0.1	-5.5
SME1E049.XLS	01	FL1	C01	8	-0.1	-5.5
SME1E049.XLS	01	FL1	C01	6	-0.1	-5.5

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
70 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/29/98

Removable Contamination

Survey Package : D1300 SYSTEMS

Auxiliary Steam System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
3/5/98	SME1E049.XLS	1	15632	8/5/98	JWD
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	
3/9/98	SME1E073.XLS	1	15632	8/5/98	JWD
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

03/29/98 Removable Contamination - Tritium Activity

Survey Package : D1300 SYSTEMS

Auxiliary Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
H030	Whatman smear	06	V01	C01	00001	8.0	1.2
H031	Whatman smear	10	V01	C01	00001	8.0	-7.0
H032	Whatman smear	08	T01	C01	00001	8.0	15.5

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 75 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/29/98

Removable Contamination - Tritium Activity

Survey Package : D1300 SYSTEMS

Auxiliary Steam System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
					CALIBRATION DATE VERIFIED AS ACCEPTABLE

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Exposure Rate Measurements

Survey Package D1300 SYSTEMS

Auxiliary Steam System

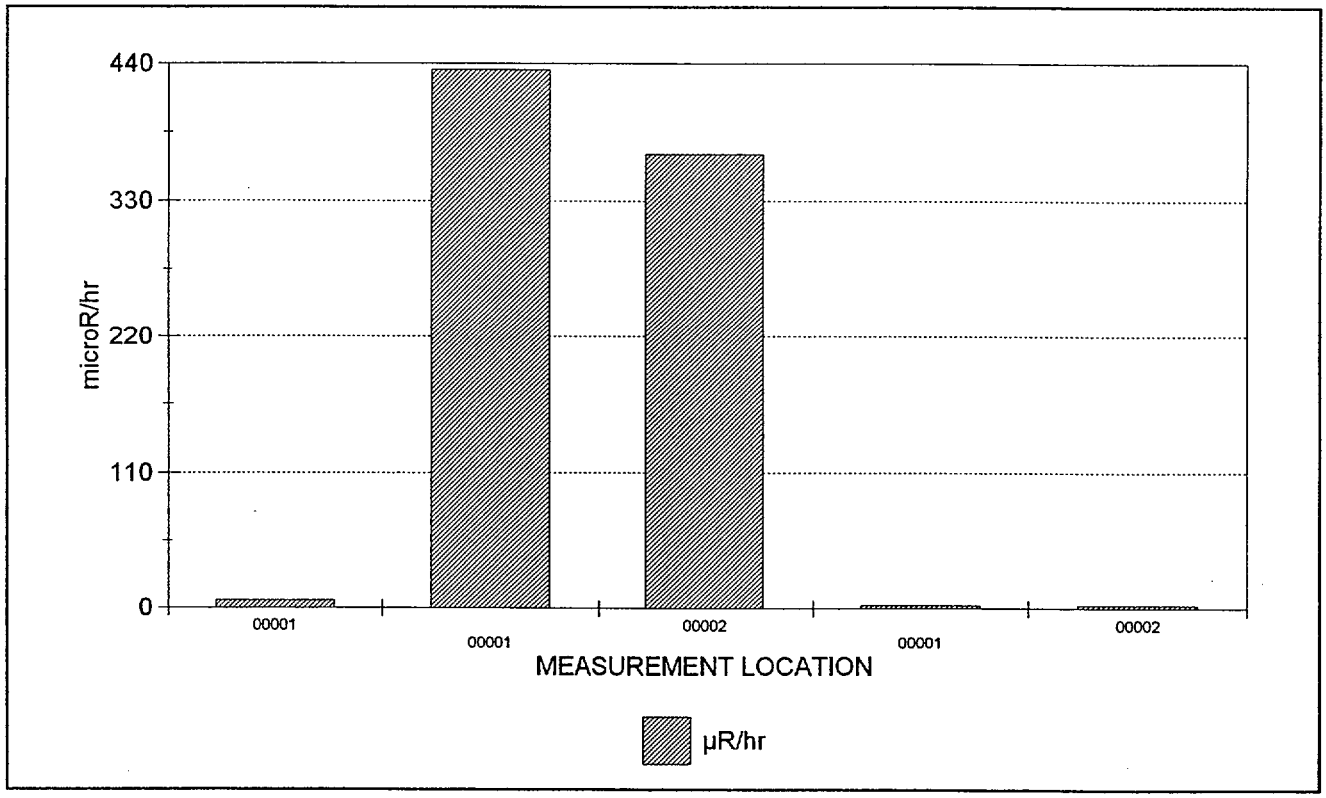
STATISTICAL SUMMARY

	µR/hr
Mean	162.8
Maximum	435.1
Minimum	2.5
Standard Deviation	218.9

Samples Reported	5
Samples Prescribed	5

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES



5 RESULTS ARE GRAPHED

03/29/98

Exposure Rate Measurements

Survey Package : D1300 SYSTEMS

Auxiliary Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	RESULT
68 (2)	03	V01	G0031	C01	60.00	00001	6.6
84 (2)	08	T01	G0031	C01	60.00	00001	***435.1***
84 (2)	08	T01	G0031	C01	60.00	00002	***367.0***
103 (2)	10	V01	G0031	C01	60.00	00001	2.7
103 (2)	10	V01	G0031	C01	60.00	00002	2.5

NOTES: Exposure rates reported in net µR/hr. Count times are reported in seconds.
Underlined results did not meet the minimum required count time.
Bold values exceed 15 µR/hr.
5 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Exposure Rate Measurements

Survey Package: D1300 SYSTEMS

Auxiliary Steam System

SURVEY		M2350		DETECTOR			
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	TECHNICIAN
12/2/97	68 (2)	095349	4/15/98	44-2	PR126918	5/12/98	
						CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/3/97	84 (2)	095349	4/15/98	44-2	PR126918	5/12/98	DRL7343
						CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/8/97	103 (2)	095349	4/15/98	44-2	PR126918	5/12/98	DRL7343
						CALIBRATION DATES VERIFIED AS ACCEPTABLE	

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D1400

SYSTEMS

PACKAGE DESCRIPTION

Main Turbine and Turbine Control System

SURVEY AREA DESCRIPTION

Main Turbine & Turbine Control System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Main Turbine and Turbine Control System converted thermal energy of steam from the Main Steam System into mechanical energy for turning the main generator. The main turbine is an ASEA Brown Boveri (ABB), tandem compound condensing unit, consisting of one high pressure turbine and two low pressure turbines.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 60 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 60 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 60 survey locations as for direct measurements for total beta activity within the scanned area.

Collected smear samples to analyze for removable tritium activity at 3 survey measurement locations indicated on the results listing report.

Collected exposure rate measurements at survey 17 locations indicated on the results listing report.

Collected 4 material samples (e.g., sludge, sediment, rust, etc.) from the sumps, drains for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

- o There were no direct measurements for total beta activity above MDA (Maximum MDA was 839 dpm/100cm^2).
- o There was 1 measurement for removable beta activity above MDA (19 dpm/100cm^2) and no result greater than 100 dpm/100cm^2. The maximum measurement result was 20.9 dpm/100cm^2.
- o There were no measurements for removable alpha activity above MDA (7 dpm/100cm^2).
- o There was 1 measurement for removable tritium activity above MDA (8 dpm/100cm^2) and no result greater

than 100 dpm/100cm². The maximum measurement result was 84 dpm/100cm².

- o The average and maximum exposure rate measurement results were 0.8 µR/hr and 1.6 µR/hr respectively.
- o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

REFERENCES (Documents, Interviews)

Maine Yankee Drawing 1150 - FM - 70 A
Operator System Training Manual, Chapter 24

SUMMARY OF SURVEY UNIT(S)

03/27/98

OUTPUT BATCH SN = 200

PACKAGE D1400 SYSTEMS

Main Turbine and Turbine Control System

UNIT(S)	SURFACE(S)
01 - Turbine Building 61 ft Elevation - High Pressure Turbine Area	M01 (High Pressure Turbine) M02 (High Pressure Turbine) V01 (Stop valve MS-190) V02 (Stop Valve MS-191) V03 (Stop Valve MS-192) V04 (Stop Valve MS-193)
02 - Turbine Building 61 ft Elevation - Low Pressure Turbine Area	M01 (Low Pressure Turbine LP-1) M02 (Low Pressure Turbine LP-1) M03 (Low Pressure Turbine LP-2) M04 (Low Pressure Turbine LP-2)

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
G0031	METAL - BARE (GAMMA)	0.0

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Direct Measurements For Total Beta Activity

Survey Package D1400 SYSTEMS

Main Turbine and Turbine Control System

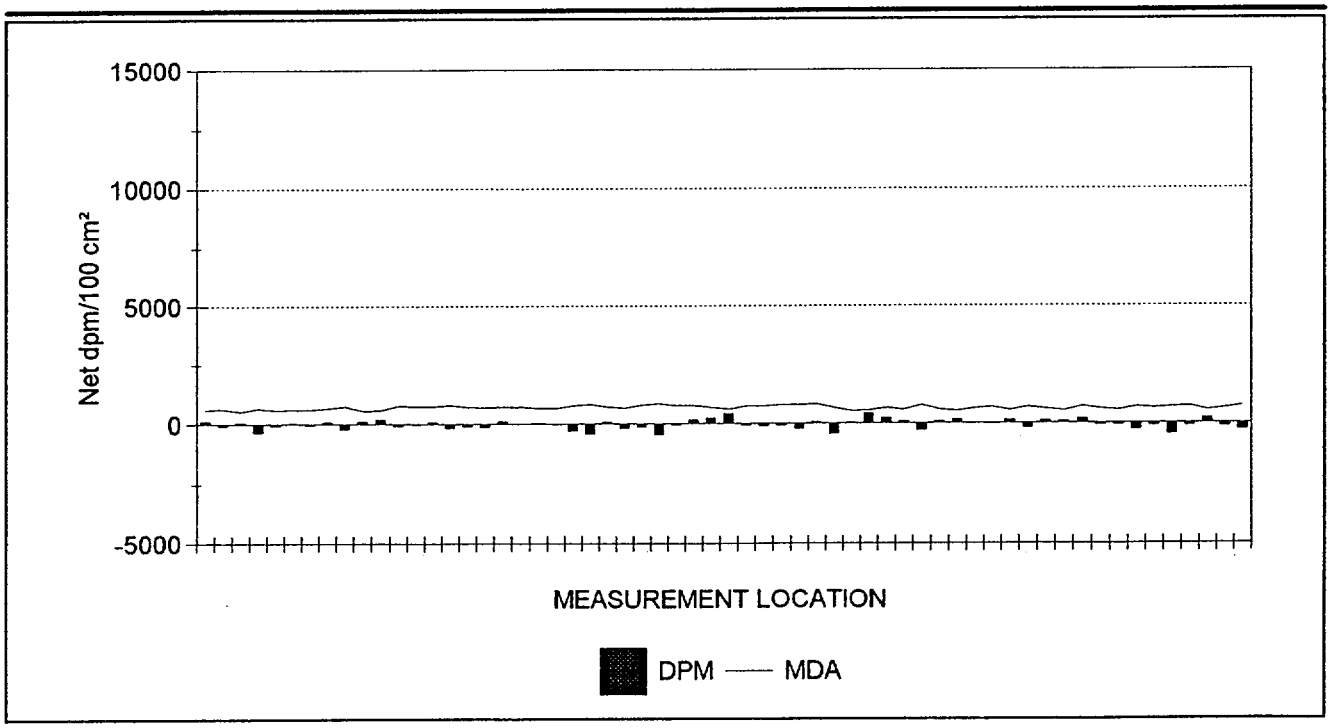
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-38.3
Maximum	416.5
Minimum	-454.0
Standard Deviation	189.7
MDA	839.1

Samples Reported	60
Samples Prescribed	60

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	YES
Results above 2000 net dpm/100 cm²	0
Number of results above MDA	0



60 RESULTS ARE GRAPHED

03/27/98

Direct Measurements For Total Beta Activity

Survey Package : D1400 SYSTEMS

Main Turbine and Turbine Control System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
9 (2)	01	M01	G0031	C01	10	00001	589.6	136.2
9 (2)	01	M01	G0031	C01	10	00002	620.4	-90.8
9 (2)	01	M01	G0031	C01	10	00003	521.9	45.4
9 (2)	01	M01	G0031	C01	10	00004	658.9	-340.5
9 (2)	01	M01	G0031	C01	10	00005	578.9	-68.1
9 (2)	01	M01	G0031	C01	10	00006	600.0	22.7
9 (2)	01	M02	G0031	C01	10	00001	610.3	-45.4
9 (2)	01	M02	G0031	C01	10	00002	649.5	90.8
9 (2)	01	M02	G0031	C01	10	00003	721.1	-204.3
9 (2)	01	M02	G0031	C01	10	00004	545.5	113.5
9 (2)	01	M02	G0031	C01	10	00005	568.0	181.6
9 (2)	01	M02	G0031	C01	10	00006	754.0	-68.1
4 (2)	01	V01	G0031	C01	10	00001	735.1	-23.1
4 (2)	01	V01	G0031	C01	10	00002	726.4	69.4
4 (2)	01	V01	G0031	C01	10	00003	785.0	-162.0
4 (2)	01	V01	G0031	C01	10	00004	708.7	-115.7
4 (2)	01	V01	G0031	C01	10	00005	671.8	-138.8
4 (2)	01	V01	G0031	C01	10	00006	690.5	92.6
4 (2)	01	V02	G0031	C01	10	00001	699.7	0.0
4 (2)	01	V02	G0031	C01	10	00002	652.4	23.1
4 (2)	01	V02	G0031	C01	10	00003	652.4	-23.1
4 (2)	01	V02	G0031	C01	10	00004	743.7	-277.7
4 (2)	01	V02	G0031	C01	10	00005	816.4	-416.5
4 (2)	01	V02	G0031	C01	10	00006	708.7	69.4
4 (2)	01	V03	G0031	C01	10	00001	642.5	-185.1
4 (2)	01	V03	G0031	C01	10	00002	785.0	-138.8
4 (2)	01	V03	G0031	C01	10	00003	839.1	-439.7
4 (2)	01	V03	G0031	C01	10	00004	760.5	-46.3
4 (2)	01	V03	G0031	C01	10	00005	760.5	162.0
4 (2)	01	V03	G0031	C01	10	00006	671.8	231.4
4 (2)	01	V04	G0031	C01	10	00001	611.7	416.5
4 (2)	01	V04	G0031	C01	10	00002	717.6	-69.4
4 (2)	01	V04	G0031	C01	10	00003	735.1	-115.7
4 (2)	01	V04	G0031	C01	10	00004	792.9	-69.4
4 (2)	01	V04	G0031	C01	10	00005	785.0	-208.3
4 (2)	01	V04	G0031	C01	10	00006	800.8	46.3
9 (2)	02	M01	G0031	C01	10	00001	658.9	-408.6
9 (2)	02	M01	G0031	C01	10	00002	509.6	22.7
9 (2)	02	M01	G0031	C01	10	00003	556.9	408.6
9 (2)	02	M01	G0031	C01	10	00004	640.0	227.0

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².

03/27/98

Direct Measurements For Total Beta Activity

Survey Package: D1400 SYSTEMS

Main Turbine and Turbine Control System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
9 (2)	02	M01	G0031	C01	10	00005	568.0	90.8
9 (2)	02	M01	G0031	C01	10	00006	745.9	-295.1
9 (2)	02	M02	G0031	C01	10	00001	568.0	68.1
9 (2)	02	M02	G0031	C01	10	00002	521.9	158.9
9 (2)	02	M02	G0031	C01	10	00003	630.2	0.0
9 (2)	02	M02	G0031	C01	10	00004	686.3	-22.7
9 (2)	02	M02	G0031	C01	10	00005	556.9	136.2
9 (2)	02	M02	G0031	C01	10	00006	677.3	-181.6
9 (2)	02	M03	G0031	C01	10	00001	610.3	113.5
9 (2)	02	M03	G0031	C01	10	00002	509.6	68.1
9 (2)	02	M03	G0031	C01	10	00003	695.2	181.6
9 (2)	02	M03	G0031	C01	10	00004	610.3	-90.8
9 (2)	02	M03	G0031	C01	10	00005	545.5	-90.8
9 (2)	02	M03	G0031	C01	10	00006	686.3	-272.4
9 (2)	02	M04	G0031	C01	10	00001	630.2	-113.5
9 (2)	02	M04	G0031	C01	10	00002	686.3	-454.0
9 (2)	02	M04	G0031	C01	10	00003	703.9	-113.5
9 (2)	02	M04	G0031	C01	10	00004	545.5	204.3
9 (2)	02	M04	G0031	C01	10	00005	620.4	-136.2
9 (2)	02	M04	G0031	C01	10	00006	737.8	-249.7

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
60 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Direct Measurements For Total Beta Activity

Survey Package : D1400 SYSTEMS

Main Turbine and Turbine Control System

SURVEY		M2350		DETECTOR			PRE	
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	EFF	TECHNICIAN
11/7/97	4 (2)	126198	3/22/98	43-106	128914	3/30/98	.21	MAP5535
								CALIBRATION DATES VERIFIED AS ACCEPTABLE
11/9/97	9 (2)	126197	3/22/98	43-68	075064	3/30/98	.21	JFM0682
								CALIBRATION DATES VERIFIED AS ACCEPTABLE

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Beta Activity

Survey Package D1400 SYSTEMS

Main Turbine and Turbine Control System

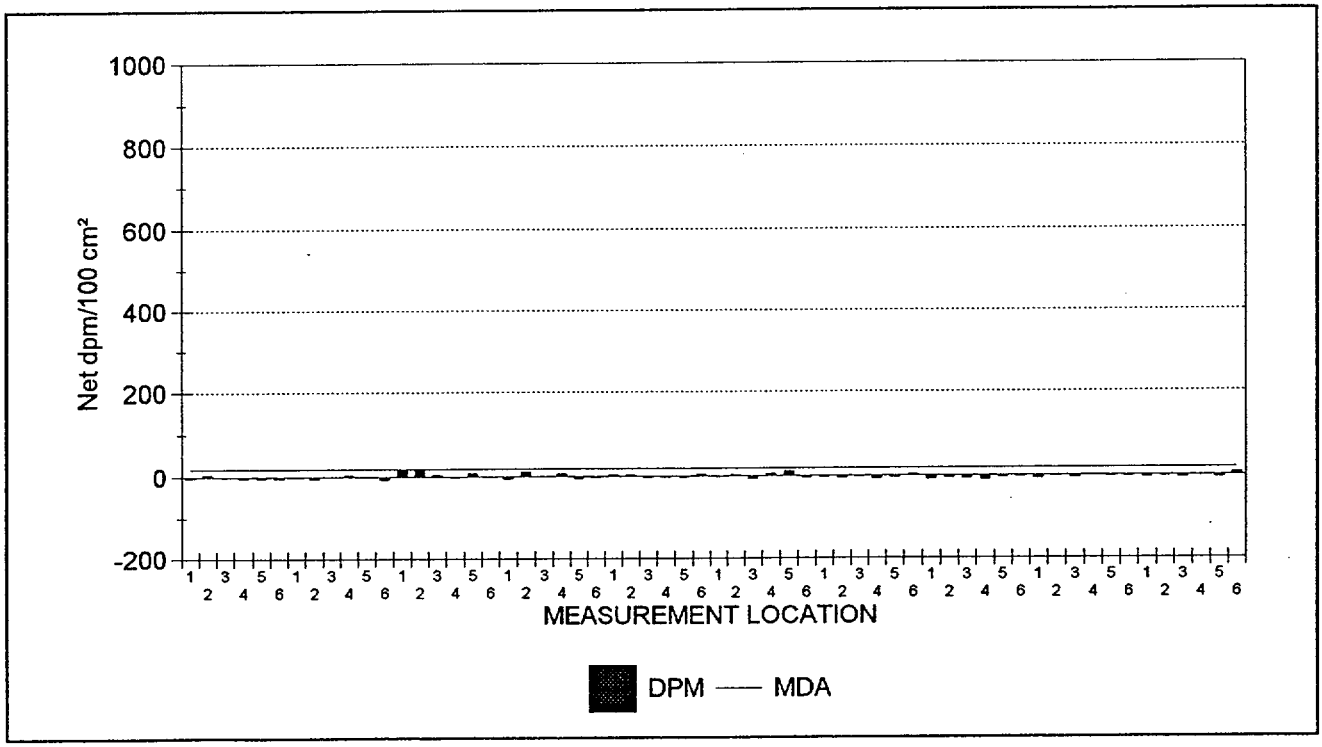
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.9
Maximum	20.9
Minimum	-11.1
Standard Deviation	6.3
MDA	19.2

Samples Reported	60
Samples Prescribed	63

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	1



60 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Alpha Activity

Survey Package D1400 SYSTEMS

Main Turbine and Turbine Control System

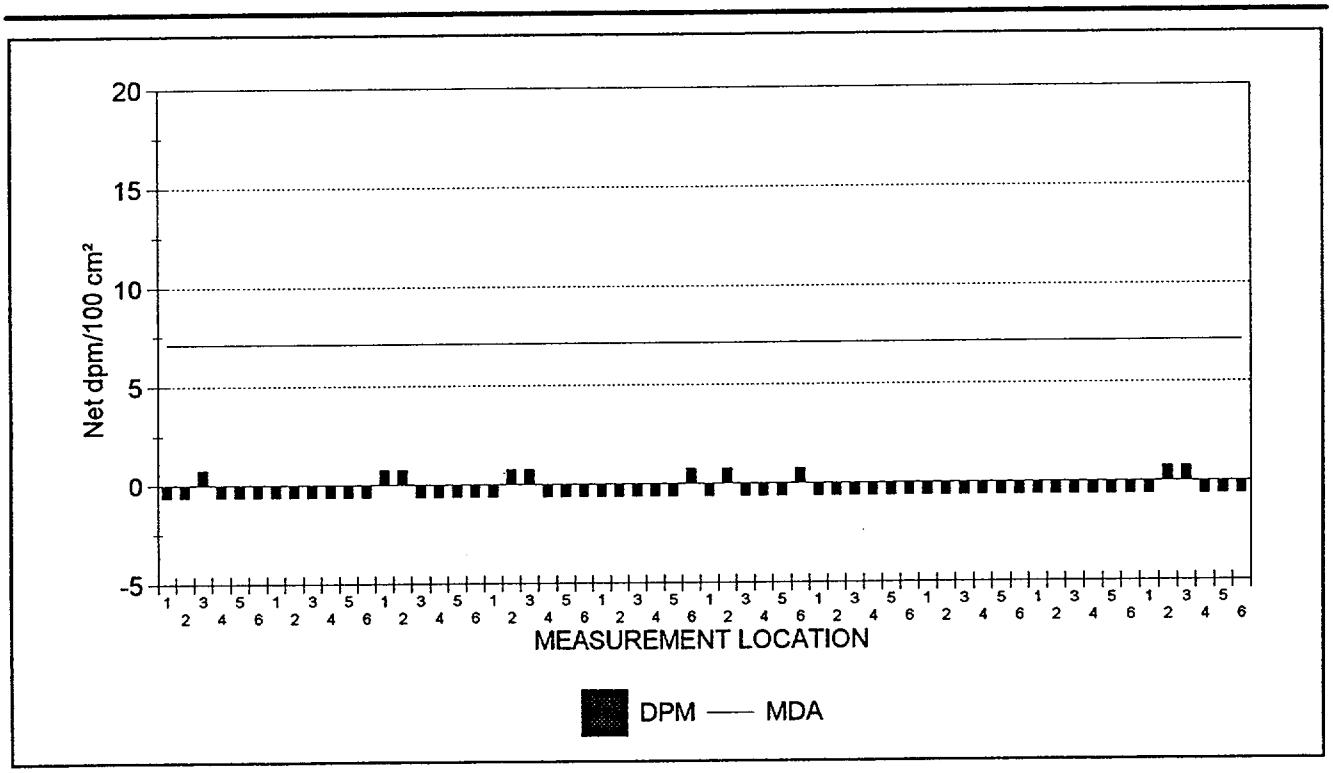
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.4
Maximum	0.8
Minimum	-0.7
Standard Deviation	0.5
MDA	7.1

Samples Reported	60
Samples Prescribed	63

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



60 RESULTS ARE GRAPHED

Survey Package : D1400 SYSTEMS

Main Turbine and Turbine Control System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D043.XLS	02	M04	C01	6	-0.7	7.4
SME1D043.XLS	02	M04	C01	5	-0.7	-6.1
SME1D043.XLS	02	M04	C01	4	-0.7	-1.0
SME1D043.XLS	02	M04	C01	3	0.8	-6.1
SME1D043.XLS	02	M04	C01	2	0.8	-2.7
SME1D043.XLS	02	M04	C01	1	-0.7	-6.1
SME1D043.XLS	02	M03	C01	6	-0.7	-2.7
SME1D043.XLS	02	M03	C01	5	-0.7	-2.7
SME1D043.XLS	02	M03	C01	4	-0.7	0.7
SME1D043.XLS	02	M03	C01	3	-0.7	-6.1
SME1D043.XLS	02	M03	C01	2	-0.7	-1.0
SME1D043.XLS	02	M03	C01	1	-0.7	-7.7
SME1D043.XLS	02	M02	C01	6	-0.7	-2.7
SME1D043.XLS	02	M02	C01	5	-0.7	-4.4
SME1D043.XLS	02	M02	C01	4	-0.7	-11.1
SME1D043.XLS	02	M02	C01	3	-0.7	-7.7
SME1D043.XLS	02	M02	C01	2	-0.7	-6.1
SME1D043.XLS	02	M02	C01	1	-0.7	-9.4
SME1D043.XLS	02	M01	C01	6	-0.7	2.4
SME1D043.XLS	02	M01	C01	5	-0.7	-4.4
SME1D043.XLS	02	M01	C01	4	-0.7	-7.7
SME1D043.XLS	02	M01	C01	3	-0.7	-2.7
SME1D043.XLS	02	M01	C01	2	-0.7	-6.1
SME1D043.XLS	02	M01	C01	1	-0.7	-2.7
SME1D043.XLS	01	V04	C01	6	0.8	-4.4
SME1D043.XLS	01	V04	C01	5	-0.7	12.4
SME1D043.XLS	01	V04	C01	4	-0.7	5.7
SME1D043.XLS	01	V04	C01	3	-0.7	-7.7
SME1D043.XLS	01	V04	C01	2	0.8	2.4
SME1D043.XLS	01	V04	C01	1	-0.7	-1.0
SME1D043.XLS	01	V03	C01	6	0.8	4.0
SME1D043.XLS	01	V03	C01	5	-0.7	-2.7
SME1D043.XLS	01	V03	C01	4	-0.7	-2.7
SME1D043.XLS	01	V03	C01	3	-0.7	-2.7
SME1D043.XLS	01	V03	C01	2	-0.7	2.4
SME1D043.XLS	01	V03	C01	1	-0.7	4.0
SME1D043.XLS	01	V02	C01	6	-0.7	-2.7
SME1D043.XLS	01	V02	C01	5	-0.7	-6.1
SME1D043.XLS	01	V02	C01	4	-0.7	7.4
SME1D043.XLS	01	V02	C01	3	0.8	0.7

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).

03/27/98 Removable Contamination

Survey Package : D1400 SYSTEMS

Main Turbine and Turbine Control System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D043.XLS	01	V02	C01	2	0.8	12.4
SME1D043.XLS	01	V02	C01	1	-0.7	-6.1
SME1D043.XLS	01	V01	C01	6	-0.7	-1.0
SME1D043.XLS	01	V01	C01	5	-0.7	9.1
SME1D043.XLS	01	V01	C01	4	-0.7	-1.0
SME1D043.XLS	01	V01	C01	3	-0.7	4.0
SME1D043.XLS	01	V01	C01	2	0.8	20.9
SME1D043.XLS	01	V01	C01	1	0.8	15.8
SME1D043.XLS	01	M02	C01	6	-0.7	-7.7
SME1D043.XLS	01	M02	C01	5	-0.7	-1.0
SME1D043.XLS	01	M02	C01	4	-0.7	4.0
SME1D043.XLS	01	M02	C01	3	-0.7	0.7
SME1D043.XLS	01	M02	C01	2	-0.7	-6.1
SME1D043.XLS	01	M02	C01	1	-0.7	-1.0
SME1D043.XLS	01	M01	C01	6	-0.7	-4.4
SME1D043.XLS	01	M01	C01	5	-0.7	-4.4
SME1D043.XLS	01	M01	C01	4	-0.7	-4.4
SME1D043.XLS	01	M01	C01	3	0.8	-1.0
SME1D043.XLS	01	M01	C01	2	-0.7	5.7
SME1D043.XLS	01	M01	C01	1	-0.7	-2.7

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
60 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/27/98 Removable Contamination

Survey Package : D1400 SYSTEMS

Main Turbine and Turbine Control System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/18/98	SME1D043.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1400 SYSTEMS

Main Turbine and Turbine Control System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
H033	Whatman smear	01	V01	C01	00001	8.0	3.5
H034	Whatman smear	01	M01	C01	00001	8.0	-6.7
H035	Whatman smear	02	M01	C01	00001	8.0	**84.0**

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/27/98

Removable Contamination - Tritium Activity

Survey Package : D1400 SYSTEMS

Main Turbine and Turbine Control System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
					CALIBRATION DATE VERIFIED AS ACCEPTABLE

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Exposure Rate Measurements

Survey Package D1400 SYSTEMS

Main Turbine and Turbine Control System

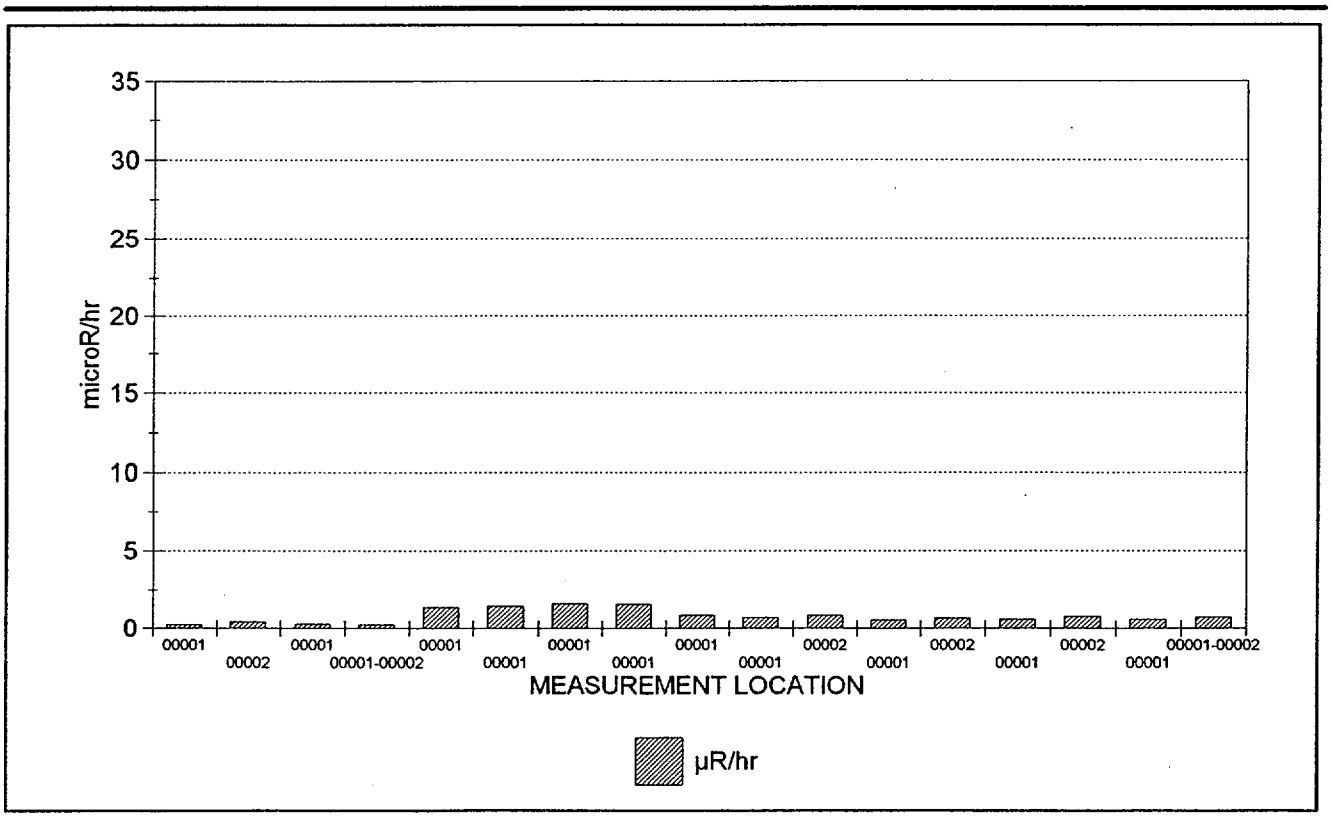
STATISTICAL SUMMARY

	µR/hr
Mean	0.8
Maximum	1.6
Minimum	0.2
Standard Deviation	0.4

Samples Reported	17
Samples Prescribed	11

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES



17 RESULTS ARE GRAPHED

03/27/98

Exposure Rate Measurements

Survey Package : D1400 SYSTEMS

Main Turbine and Turbine Control System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	RESULT
0 (2)	01	M01	G0031	C01	60.00	00001	0.3
20 (2)	01	M01	G0031	C01	60.00	00002	0.4
0 (2)	01	M02	G0031	C01	60.00	00001	0.3
20 (2)	01	M02	G0031	C01	60.00	00001-00002	0.2
136 (2)	01	V01	G0031	C01	60.00	00001	1.4
136 (2)	01	V02	G0031	C01	60.00	00001	1.4
136 (2)	01	V03	G0031	C01	60.00	00001	1.6
136 (2)	01	V04	G0031	C01	60.00	00001	1.6
0 (2)	02	M01	G0031	C01	60.00	00001	0.7
136 (2)	02	M01	G0031	C01	60.00	00001	0.9
136 (2)	02	M01	G0031	C01	60.00	00002	0.9
0 (2)	02	M02	G0031	C01	60.00	00001	0.6
20 (2)	02	M02	G0031	C01	60.00	00002	0.7
0 (2)	02	M03	G0031	C01	60.00	00001	0.6
20 (2)	02	M03	G0031	C01	60.00	00002	0.8
0 (2)	02	M04	G0031	C01	60.00	00001	0.6
20 (2)	02	M04	G0031	C01	60.00	00001-00002	0.7

NOTES: Exposure rates reported in net µR/hr. Count times are reported in seconds.
Underlined results did not meet the minimum required count time.
Bold values exceed 15 µR/hr.
17 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98

Exposure Rate Measurements

Survey Package: D1400 SYSTEMS

Main Turbine and Turbine Control System

SURVEY		M2350		DETECTOR			
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	TECHNICIAN
11/7/97	0 (2)	129414	3/22/98	44-2	126916	4/19/98	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE	
11/14/97	20 (2)	129414	3/22/98	44-2	126916	4/19/98	DRL7343
						CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/13/97	136 (2)	095349	4/15/98	44-2	PR126918	5/12/98	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/28/98 OUTPUT BATCH SN = 214

Survey Package D1400 SYSTEMS

Main Turbine and Turbine Control System

UNIT : 01 SURFACE : V01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Valve
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD34	FAL00020	14.3	1800	Co-57	< 4.3	4.3	0.0
				Co-60	< 4.2	4.2	0.0
				Cs-134	< 5.4	5.4	0.0
				Cs-137	< 5.1	5.1	0.0
				K-40	< 56.3	56.3	0.0
				Mn-54	< 5.8	5.8	0.0

UNIT : 01 SURFACE : V02 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Valve
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD35	FAL00021	15.6	1800	Co-57	< 4.4	4.4	0.0
				Co-60	< 3.8	3.8	0.0
				Cs-134	< 3.7	3.7	0.0
				Cs-137	< 3.5	3.5	0.0
				K-40	< 59.0	59.0	0.0
				Mn-54	< 4.8	4.8	0.0

Survey Package D1400 SYSTEMS

Main Turbine and Turbine Control System

UNIT : 01 SURFACE : V03 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Valve
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD36	FAL00022	18.1	1800	Co-57	< 3.5	3.6	0.0
				Co-60	< 3.8	3.8	0.0
				Cs-134	< 4.2	4.2	0.0
				Cs-137	< 2.9	2.9	0.0
				K-40	< 38.9	38.9	0.0
				Mn-54	< 4.6	4.6	0.0

UNIT : 01 SURFACE : V04 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Valve
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD79	FAL00046	33.5	1800	Co-57	< 1.4	1.4	0.0
				Co-60	< 2.1	2.1	0.0
				Cs-134	< 1.8	1.8	0.0
				Cs-137	< 2.1	2.1	0.0
				K-40	< 22.1	22.1	0.0
				Mn-54	< 2.2	2.2	0.0

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D1500

SYSTEMS

PACKAGE DESCRIPTION

Steam Dump and Turbne Bypass System

SURVEY AREA DESCRIPTION

Steam Dump & Turbine Bypass System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Steam Dump & Turbine Bypass System provided a means for controlled venting of steam from the steam generators.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 24 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 24 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 24 survey locations as for direct measurements for total beta activity.

Collected 1 smear sample to analyze for removable tritium activity at the survey measurement location indicated on the results listing report.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

- o There were no direct measurements for total beta activity above MDA (Maximum MDA was 677 dpm/100cm²).
- o There were no measurement for removable beta activity above MDA (19.2 dpm/100cm²).
- o There were no measurements for removable alpha activity above MDA (7 dpm/100cm²).
- o There were no measurements for removable tritium activity above MDA (8 dpm/100cm²).

REFERENCES (Documents, Interviews)

Maine Yankee Drawing 1150 - FM - 9 A

Operator System Training Manual, Chapter 25

SUMMARY OF SURVEY UNIT(S)

03/27/98

OUTPUT BATCH SN = 294

PACKAGE D1500 SYSTEMS

Steam Dump and Turbne Bypass System

UNIT(S)	SURFACE(S)
01 - 39' Turbine Building	P01 (6" steam line at valve MS-P-143) P02 (6" steam line at valve MS-P-142) P03 (8" steam line at valve MS-T-145) P04 (8" steam line at valve MS-T-146) P05 (8" steam line at valve MS-T-149) P06 (8" steam line at valve MS-T-150) P07 (8" steam line at valve MS-T-153) P08 (8" steam line at valve MS-T-144) P09 (8" steam line at valve MS-T-147) P10 (8" steam line at valve MS-T-148) P11 (8" steam line at valve MS-T-151) P12 (8" steam line at valve MS-T-152)

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0

Maine Yankee Atomic Power Plant Site Characterization

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Direct Measurements For Total Beta Activity

Survey Package D1500 SYSTEMS

Steam Dump and Turbne Bypass System

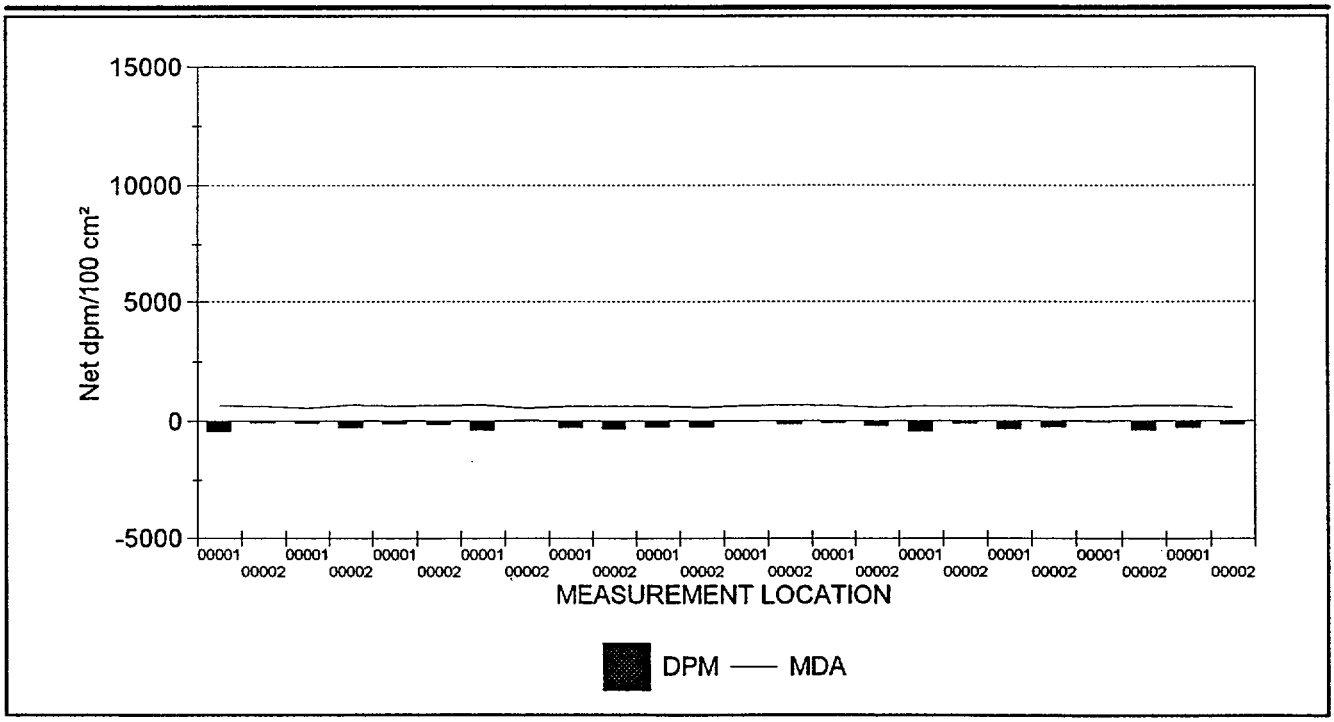
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-216.5
Maximum	64.1
Minimum	-448.2
Standard Deviation	139.9
MDA	676.7

Samples Reported	24
Samples Prescribed	24

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	YES
Results above 2000 net dpm/100 cm²	0
Number of results above MDA	0



24 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Direct Measurements For Total Beta Activity

Survey Package: D1500 SYSTEMS

Steam Dump and Turbne Bypass System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
105 (2)	01	P01	B0031	C01	300	00001	651.4	-448.2
105 (2)	01	P01	B0031	C01	300	00002	634.6	-74.7
105 (2)	01	P02	B0031	C01	300	00001	556.4	-99.6
105 (2)	01	P02	B0031	C01	300	00002	676.7	-280.1
105 (2)	01	P03	B0031	C01	300	00001	616.0	-118.3
105 (2)	01	P03	B0031	C01	300	00002	641.4	-168.1
106 (2)	01	P04	B0031	C01	300	00001	667.5	-403.5
106 (2)	01	P04	B0031	C01	300	00002	553.7	64.0
105 (2)	01	P05	B0031	C01	300	00001	633.3	-280.1
105 (2)	01	P05	B0031	C01	300	00002	635.3	-342.4
105 (2)	01	P06	B0031	C01	300	00001	620.9	-267.7
105 (2)	01	P06	B0031	C01	300	00002	569.4	-267.7
105 (2)	01	P07	B0031	C01	300	00001	647.4	-31.1
105 (2)	01	P07	B0031	C01	300	00002	665.8	-124.5
106 (2)	01	P08	B0031	C01	300	00001	638.2	-70.5
106 (2)	01	P08	B0031	C01	300	00002	572.5	-217.8
105 (2)	01	P09	B0031	C01	300	00001	622.3	-441.9
105 (2)	01	P09	B0031	C01	300	00002	633.3	-105.8
105 (2)	01	P10	B0031	C01	300	00001	658.0	-329.9
105 (2)	01	P10	B0031	C01	300	00002	571.7	-261.4
105 (2)	01	P11	B0031	C01	300	00001	608.3	-62.2
105 (2)	01	P11	B0031	C01	300	00002	639.4	-398.4
105 (2)	01	P12	B0031	C01	300	00001	640.7	-298.8
105 (2)	01	P12	B0031	C01	300	00002	581.4	-168.1

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
24 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Direct Measurements For Total Beta Activity

Survey Package: D1500 SYSTEMS

Steam Dump and Turbne Bypass System

SURVEY		M2350		DETECTOR			PRE	
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	EFF	TECHNICIAN
12/8/97	105 (2)	129430	5/6/98	SP-175-3M	PR096141	6/2/98	.07	MAP5535
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/9/97	106 (2)	129430	5/6/98	SP-175-3M	PR096141	6/2/98	.07	MAP5535
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Beta Activity

Survey Package D1500 SYSTEMS

Steam Dump and Turbne Bypass System

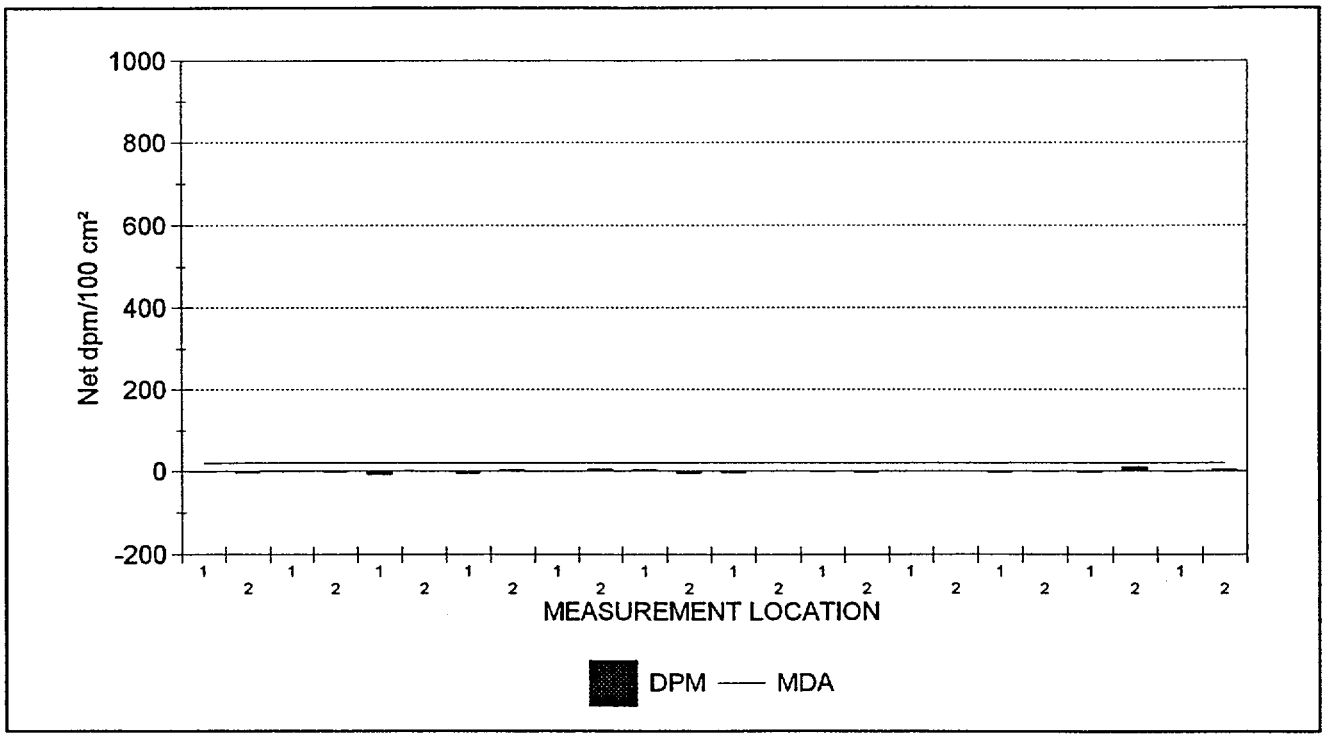
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.8
Maximum	10.8
Minimum	-9.4
Standard Deviation	4.1
MDA	19.2

Samples Reported	24
Samples Prescribed	24

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	0



24 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Alpha Activity

Survey Package D1500 SYSTEMS

Steam Dump and Turbne Bypass System

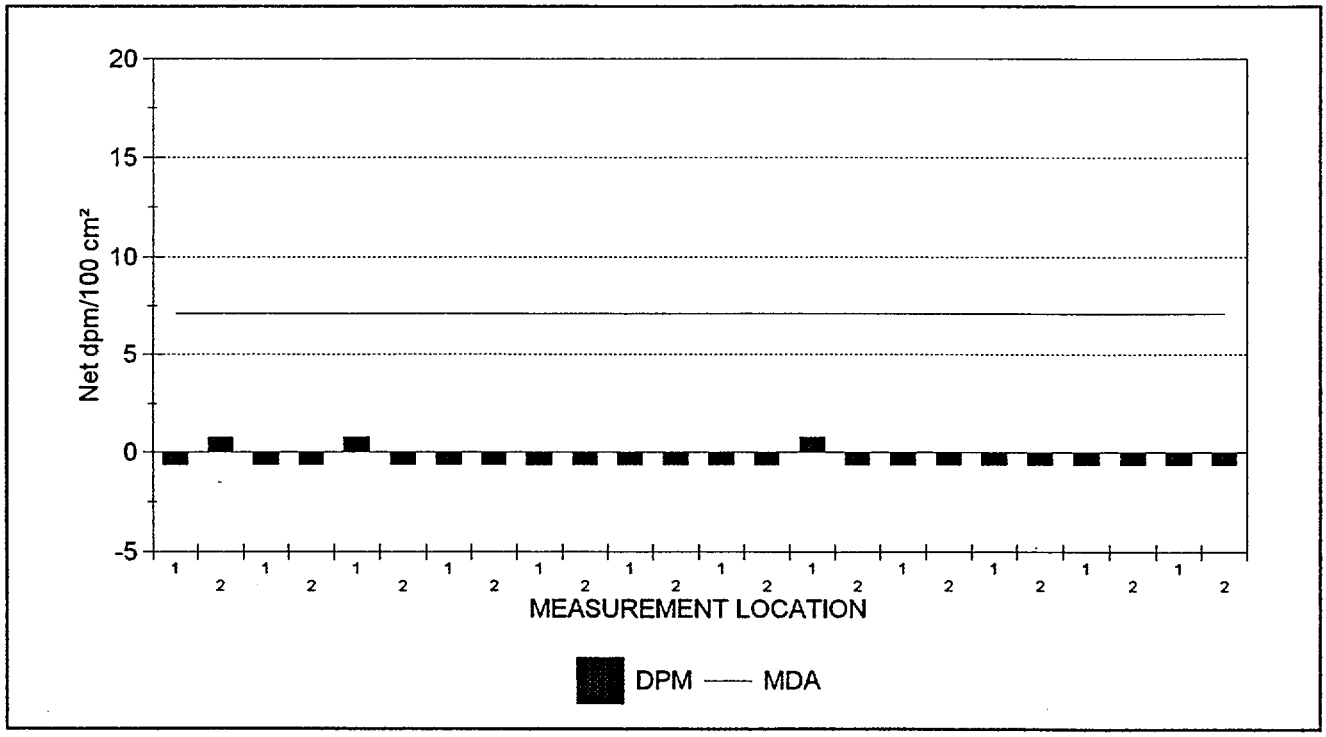
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.5
Maximum	0.8
Minimum	-0.7
Standard Deviation	0.5
MDA	7.1

Samples Reported	24
Samples Prescribed	24

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



24 RESULTS ARE GRAPHED

03/27/98 Removable Contamination

Survey Package : D1500 SYSTEMS

Steam Dump and Turbne Bypass System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D044.XLS	01	P12	C01	2	-0.7	4.0
SME1D044.XLS	01	P12	C01	1	-0.7	-1.0
SME1D044.XLS	01	P11	C01	2	-0.7	10.8
SME1D044.XLS	01	P11	C01	1	-0.7	-2.7
SME1D044.XLS	01	P10	C01	2	-0.7	-1.0
SME1D044.XLS	01	P10	C01	1	-0.7	-2.7
SME1D044.XLS	01	P09	C01	2	-0.7	0.7
SME1D044.XLS	01	P09	C01	1	-0.7	0.7
SME1D044.XLS	01	P08	C01	2	-0.7	-2.7
SME1D044.XLS	01	P08	C01	1	0.8	-1.0
SME1D044.XLS	01	P07	C01	2	-0.7	0.7
SME1D044.XLS	01	P07	C01	1	-0.7	-4.4
SME1D044.XLS	01	P06	C01	2	-0.7	-6.1
SME1D044.XLS	01	P06	C01	1	-0.7	2.4
SME1D044.XLS	01	P05	C01	2	-0.7	4.0
SME1D044.XLS	01	P05	C01	1	-0.7	0.7
SME1D044.XLS	01	P04	C01	2	-0.7	2.4
SME1D044.XLS	01	P04	C01	1	-0.7	-6.1
SME1D044.XLS	01	P03	C01	2	-0.7	0.7
SME1D044.XLS	01	P03	C01	1	0.8	-9.4
SME1D044.XLS	01	P02	C01	2	-0.7	-2.7
SME1D044.XLS	01	P02	C01	1	-0.7	-1.0
SME1D044.XLS	01	P01	C01	2	0.8	-4.4
SME1D044.XLS	01	P01	C01	1	-0.7	-1.0

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
24 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/27/98

Removable Contamination

Survey Package : D1500 SYSTEMS

Steam Dump and Turbne Bypass System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/18/98	SME1D044.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1500 SYSTEMS

Steam Dump and Turbne Bypass System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
H036	Whatman smear	01	P01	C01	00001	8.0	0.2

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/27/98

Removable Contamination - Tritium Activity

Survey Package: D1500 SYSTEMS

Steam Dump and Turbne Bypass System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D1600

SYSTEMS

PACKAGE DESCRIPTION

Main Feedwater System

SURVEY AREA DESCRIPTION

Main Feedwater System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The main feedwater system supplied preheated feedwater to the steam generators.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 72 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 72 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 72 survey locations as for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 3 survey measurement locations indicated on the results listing report.

Collected exposure rate measurements at 4 survey locations indicated on the results listing report.

Collected 1 material sample (e.g., sludge, sediment, rust, etc.) from the piping for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

o There was 1 direct measurement for total beta activity above MDA (Maximum MDA was 640 dpm/100cm²) and no results greater than 2000 dpm/100cm².

o There was 1 measurement for removable beta activity above MDA (19 dpm/100cm²) and no result greater than 100 dpm/100cm². The maximum measurement result was 24.2 dpm/100cm².

o There were no measurements for removable alpha activity above MDA (7 dpm/100cm²).

o There were no measurements for removable tritium activity above MDA (8 dpm/100cm²).

o The average and maximum exposure rate measurement results were 2 µR/hr and 5.4 µR/hr respectively.

o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

REFERENCES (Documents, Interviews)
Maine Yankee Drawing 1150 - FM - 73 A, B
Operator System Training Manual, Chapter 27

SUMMARY OF SURVEY UNIT(S)

03/27/98

OUTPUT BATCH SN = 201

PACKAGE D1600 SYSTEMS

Main Feedwater System

UNIT(S)	SURFACE(S)
01 - 21' Turbine Building	H01 (First point heater E-11A (near southwest stairs)) H02 (First point heater E-11B (near southwest stairs)) P01 (6" recirc line at valve FW-F-7 (behind tool cage)) P02 (6" recirc line at valve FW-F-8 (behind tool cage)) P03 (10" pipe at valve FW-A-342, (south end)) P04 (27" line at valve FW-M-336 (next to pump P-2A)) T01 (Seal water receiver tank TK-35 (north of southwest stairs))
02 - 36' Turbine Building	P01 (18" line downstream of FW-36 (southwest corner)) P02 (18" line downstream of FW-37 (southwest corner)) P03 (18" line at check valve FW-17 (south end under grating)) P04 (18" line at check valve FW-18 (south end under grating)) P05 (1" line at valve FW-334 (southeast corner above handrail on stairs))
03 - 21' Service Building	P01 (14" line at valve FW-M-304 (beside gaitronics)) P02 (14" line at valve FW-M-204 (beside gaitronics))

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0
G0031	METAL - BARE (GAMMA)	0.0

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Direct Measurements For Total Beta Activity

Survey Package D1600 SYSTEMS

Main Feedwater System

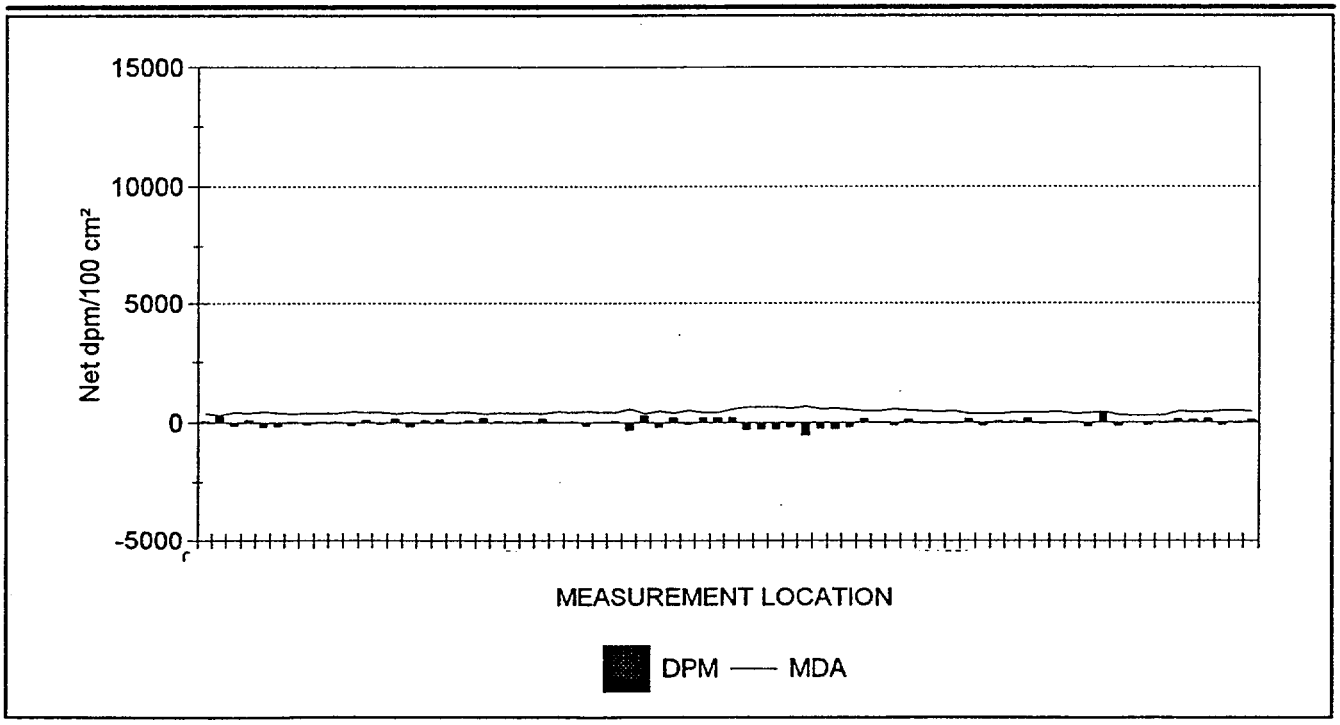
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.3
Maximum	453.9
Minimum	-526.1
Standard Deviation	160.8
MDA	640.0

Samples Reported	72
Samples Prescribed	72

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	YES
Results above 2000 net dpm/100 cm²	0
Number of results above MDA	1



72 RESULTS ARE GRAPHED

03/27/98 Direct Measurements For Total Beta Activity

Survey Package : D1600 SYSTEMS

Main Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
117 (2)	01	H01	B0031	C01	20	00001	371.1	53.5
117 (2)	01	H01	B0031	C01	20	00002	314.3	253.9
117 (2)	01	H01	B0031	C01	20	00003	419.6	-120.3
117 (2)	01	H01	B0031	C01	20	00004	398.8	93.6
117 (2)	01	H01	B0031	C01	20	00005	444.0	-187.1
117 (2)	01	H01	B0031	C01	20	00006	382.5	-160.4
117 (2)	01	H01	B0031	C01	20	00007	359.3	26.7
117 (2)	01	H01	B0031	C01	20	00008	393.5	-66.8
118 (2)	01	H02	B0031	C01	20	00001	403.6	13.3
118 (2)	01	H02	B0031	C01	20	00002	393.0	26.7
118 (2)	01	H02	B0031	C01	20	00003	438.7	-93.4
118 (2)	01	H02	B0031	C01	20	00004	424.0	93.4
118 (2)	01	H02	B0031	C01	20	00005	424.0	-40.0
118 (2)	01	H02	B0031	C01	20	00006	358.9	160.2
118 (2)	01	H02	B0031	C01	20	00007	424.0	-146.8
118 (2)	01	H02	B0031	C01	20	00008	393.0	106.8
122 (2)	01	P01	B0031	C01	300	00001	399.4	140.8
122 (2)	01	P01	B0031	C01	300	00002	409.3	-24.8
122 (2)	01	P01	B0031	C01	300	00003	413.9	74.5
122 (2)	01	P01	B0031	C01	300	00004	361.7	173.9
122 (2)	01	P02	B0031	C01	300	00001	399.4	53.8
122 (2)	01	P02	B0031	C01	300	00002	395.0	16.6
122 (2)	01	P02	B0031	C01	300	00003	397.9	62.1
122 (2)	01	P02	B0031	C01	300	00004	365.9	149.0
118 (2)	01	P03	B0031	C01	20	00001	433.9	26.7
118 (2)	01	P03	B0031	C01	20	00002	419.0	26.7
118 (2)	01	P03	B0031	C01	20	00003	443.4	-120.1
118 (2)	01	P03	B0031	C01	20	00004	408.8	13.3
118 (2)	01	P03	B0031	C01	20	00005	419.0	53.4
118 (2)	01	P03	B0031	C01	20	00006	559.5	-307.0
118 (2)	01	P04	B0031	C01	20	00001	364.8	280.3
118 (2)	01	P04	B0031	C01	20	00002	462.0	-173.5
118 (2)	01	P04	B0031	C01	20	00003	382.0	200.2
118 (2)	01	P04	B0031	C01	20	00004	484.0	-40.0
118 (2)	01	P04	B0031	C01	20	00005	424.0	213.6
118 (2)	01	P04	B0031	C01	20	00006	414.0	200.2
119 (2)	01	T01	B0031	C01	15	00001	540.8	201.2
119 (2)	01	T01	B0031	C01	15	00002	635.7	-294.0
119 (2)	01	T01	B0031	C01	15	00003	617.9	-247.6
119 (2)	01	T01	B0031	C01	15	00004	631.3	-247.6

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².

03/27/98

Direct Measurements For Total Beta Activity

Survey Package : D1600 SYSTEMS

Main Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
119 (2)	01	T01	B0031	C01	15	00005	585.5	-185.7
119 (2)	01	T01	B0031	C01	15	00006	640.0	-526.1
119 (2)	01	T01	B0031	C01	15	00007	545.9	-232.1
119 (2)	01	T01	B0031	C01	15	00008	566.1	-247.6
117 (2)	02	P01	B0031	C01	20	00001	525.9	-187.1
117 (2)	02	P01	B0031	C01	20	00002	480.3	147.0
117 (2)	02	P01	B0031	C01	20	00003	467.1	0.0
117 (2)	02	P02	B0031	C01	20	00001	545.2	-106.9
117 (2)	02	P02	B0031	C01	20	00002	505.7	133.7
117 (2)	02	P02	B0031	C01	20	00003	480.3	-26.7
118 (2)	02	P03	B0031	C01	20	00001	448.2	-13.3
118 (2)	02	P03	B0031	C01	20	00002	466.5	-26.7
118 (2)	02	P03	B0031	C01	20	00003	370.6	160.2
118 (2)	02	P03	B0031	C01	20	00004	358.9	-106.8
118 (2)	02	P03	B0031	C01	20	00005	352.9	53.4
118 (2)	02	P03	B0031	C01	20	00006	408.8	53.4
118 (2)	02	P04	B0031	C01	20	00001	424.0	186.9
118 (2)	02	P04	B0031	C01	20	00002	429.0	-13.3
118 (2)	02	P04	B0031	C01	20	00003	448.2	0.0
118 (2)	02	P04	B0031	C01	20	00004	376.4	26.7
118 (2)	02	P04	B0031	C01	20	00005	387.5	-146.8
118 (2)	02	P04	B0031	C01	20	00006	433.9	453.9
126 (2)	02	P05	B0031	C01	180	00001	319.5	-119.0
126 (2)	02	P05	B0031	C01	180	00002	295.7	-5.7
126 (2)	02	P05	B0031	C01	180	00003	294.5	-96.4
126 (2)	02	P05	B0031	C01	180	00004	295.7	-17.0
117 (2)	03	P01	B0031	C01	20	00001	444.0	120.3
117 (2)	03	P01	B0031	C01	20	00002	424.6	106.9
117 (2)	03	P01	B0031	C01	20	00003	409.3	160.4
117 (2)	03	P01	B0031	C01	20	00004	480.3	-93.6
117 (2)	03	P02	B0031	C01	20	00001	462.5	-26.7
117 (2)	03	P02	B0031	C01	20	00002	444.0	106.9

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
72 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Direct Measurements For Total Beta Activity

Survey Package : D1600 SYSTEMS

Main Feedwater System

SURVEY DATE	FILE #	M2350 INST S/N	M2350 CAL DUE	DETECTOR MODEL	DETECTOR S/N	DETECTOR CAL DUE	PRE EFF	TECHNICIAN
12/10/97	117 (2)	117014	4/16/98	43-106	PR126903	4/18/98	.18	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/11/97	118 (2)	117014	4/16/98	43-106	PR126903	4/18/98	.18	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/11/97	119 (2)	129414	3/22/98	43-106	PR133882	3/27/98	.21	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/11/97	122 (2)	117573	4/14/98	SP-175-3M	PR024349	5/4/98	.10	KFS5185
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/12/97	126 (2)	129407	5/4/98	43-94	PR119461	5/5/98	.06	KFS5185
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Beta Activity

Survey Package D1600 SYSTEMS

Main Feedwater System

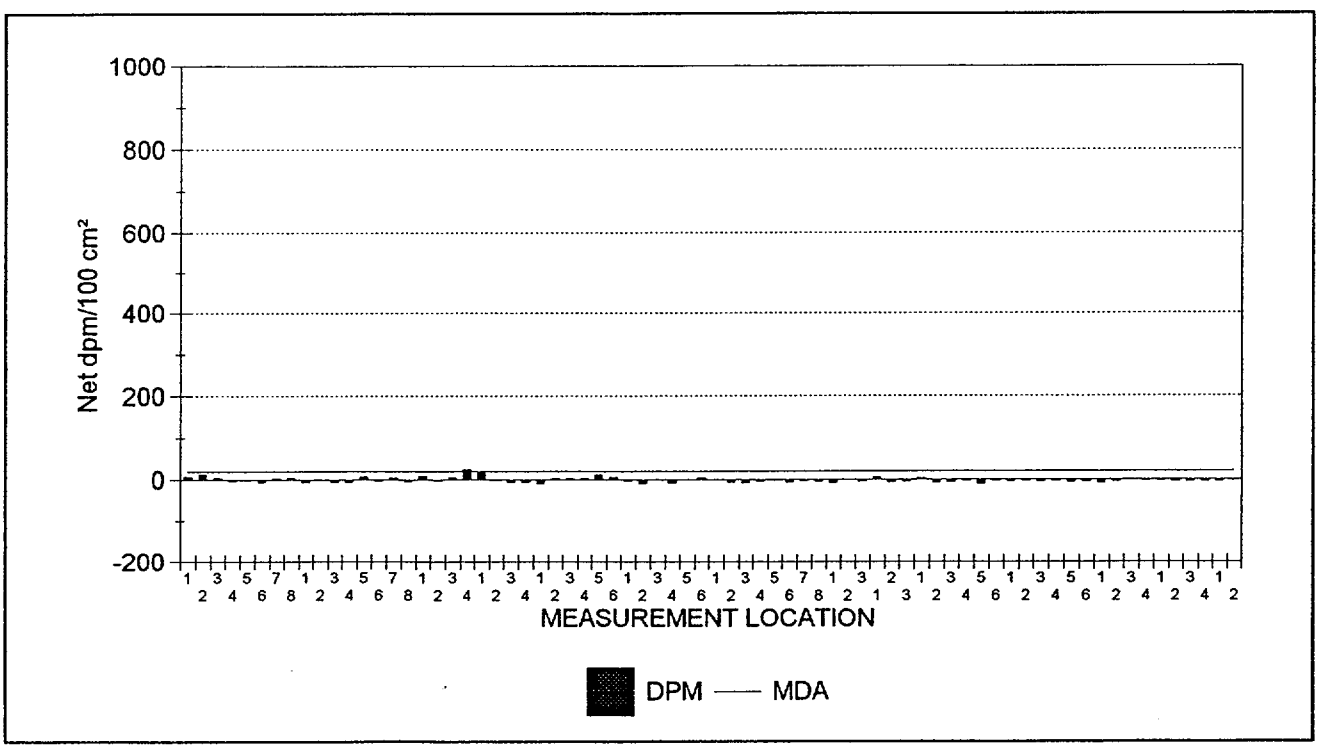
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-1.2
Maximum	24.2
Minimum	-11.1
Standard Deviation	6.3
MDA	19.2

Samples Reported	72
Samples Prescribed	75

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	1



72 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Alpha Activity

Survey Package D1600 SYSTEMS

Main Feedwater System

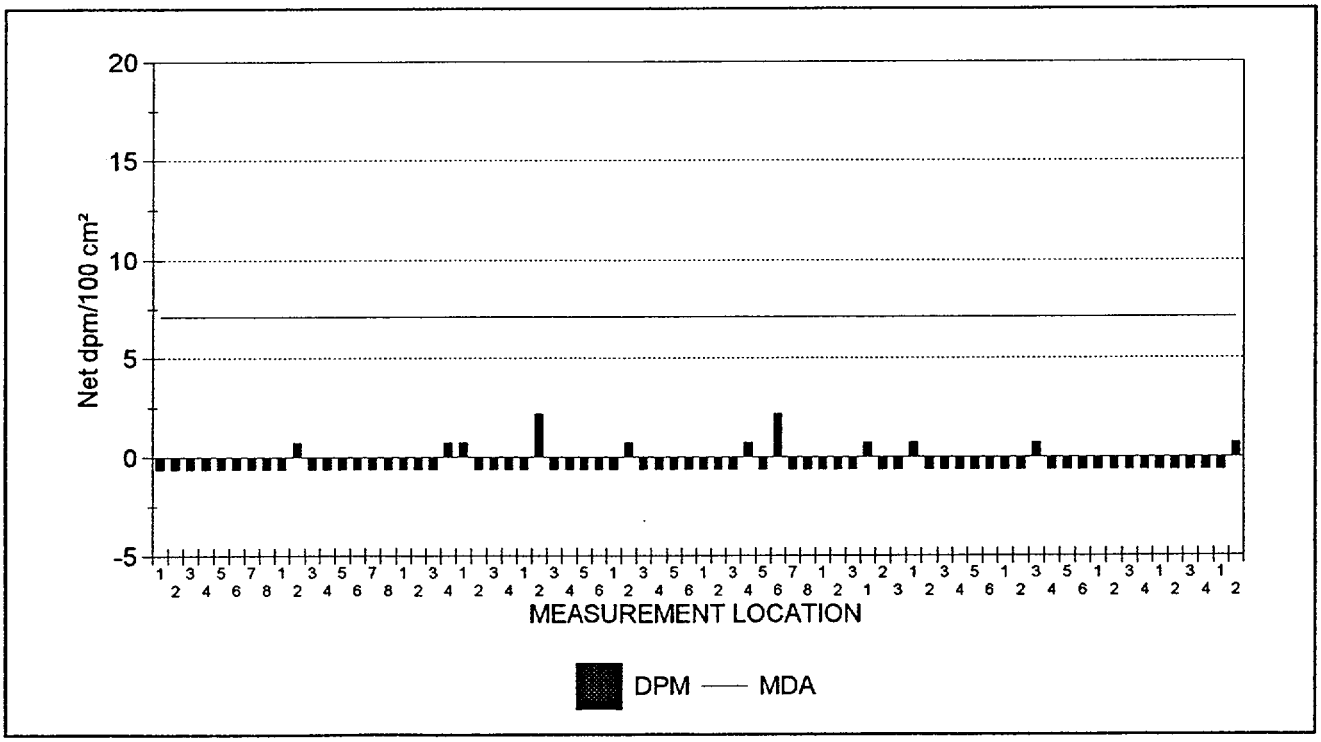
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.4
Maximum	2.2
Minimum	-0.7
Standard Deviation	0.6
MDA	7.1

Samples Reported	72
Samples Prescribed	75

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



72 RESULTS ARE GRAPHED

03/27/98 Removable Contamination

Survey Package : D1600 SYSTEMS

Main Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D045.XLS	03	P02	C01	2	0.8	-1.0
SME1D045.XLS	03	P02	C01	1	-0.7	-4.4
SME1D045.XLS	03	P01	C01	4	-0.7	-4.4
SME1D045.XLS	03	P01	C01	3	-0.7	-4.4
SME1D045.XLS	03	P01	C01	2	-0.7	-4.4
SME1D045.XLS	03	P01	C01	1	-0.7	-2.7
SME1D045.XLS	02	P05	C01	4	-0.7	-2.7
SME1D045.XLS	02	P05	C01	3	-0.7	-1.0
SME1D045.XLS	02	P05	C01	2	-0.7	-4.4
SME1D045.XLS	02	P05	C01	1	-0.7	-7.7
SME1D045.XLS	02	P04	C01	6	-0.7	-4.4
SME1D045.XLS	02	P04	C01	5	-0.7	-6.1
SME1D045.XLS	02	P04	C01	4	-0.7	-2.7
SME1D045.XLS	02	P04	C01	3	0.8	-4.4
SME1D045.XLS	02	P04	C01	2	-0.7	-2.7
SME1D045.XLS	02	P04	C01	1	-0.7	-4.4
SME1D045.XLS	02	P03	C01	6	-0.7	-2.7
SME1D045.XLS	02	P03	C01	5	-0.7	-11.1
SME1D045.XLS	02	P03	C01	4	-0.7	-2.7
SME1D045.XLS	02	P03	C01	3	-0.7	-6.1
SME1D045.XLS	02	P03	C01	2	-0.7	-7.7
SME1D045.XLS	02	P03	C01	1	0.8	2.4
SME1D045.XLS	02	P02	C01	3	-0.7	-4.4
SME1D045.XLS	02	P02	C01	2	-0.7	-6.1
SME1D045.XLS	02	P02	C01	1	0.8	5.7
SME1D045.XLS	02	P01	C01	3	-0.7	-4.4
SME1D045.XLS	02	P01	C01	2	-0.7	0.7
SME1D045.XLS	02	P01	C01	1	-0.7	-7.7
SME1D045.XLS	01	T01	C01	8	-0.7	-4.4
SME1D045.XLS	01	T01	C01	7	-0.7	-2.7
SME1D045.XLS	01	T01	C01	6	2.2	-6.1
SME1D045.XLS	01	T01	C01	5	-0.7	-1.0
SME1D045.XLS	01	T01	C01	4	0.8	-4.4
SME1D045.XLS	01	T01	C01	3	-0.7	-7.7
SME1D045.XLS	01	T01	C01	2	-0.7	-6.1
SME1D045.XLS	01	T01	C01	1	-0.7	0.7
SME1D045.XLS	01	P04	C01	6	-0.7	4.0
SME1D045.XLS	01	P04	C01	5	-0.7	0.7
SME1D045.XLS	01	P04	C01	4	-0.7	-7.7
SME1D045.XLS	01	P04	C01	3	-0.7	0.7

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).

03/27/98 Removable Contamination

Survey Package : D1600 SYSTEMS

Main Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D045.XLS	01	P04	C01	2	0.8	-9.4
SME1D045.XLS	01	P04	C01	1	-0.7	-2.7
SME1D045.XLS	01	P03	C01	6	-0.7	5.7
SME1D045.XLS	01	P03	C01	5	-0.7	12.4
SME1D045.XLS	01	P03	C01	4	-0.7	2.4
SME1D045.XLS	01	P03	C01	3	-0.7	2.4
SME1D045.XLS	01	P03	C01	2	2.2	2.4
SME1D045.XLS	01	P03	C01	1	-0.7	-9.4
SME1D045.XLS	01	P02	C01	4	-0.7	-6.1
SME1D045.XLS	01	P02	C01	3	-0.7	-6.1
SME1D045.XLS	01	P02	C01	2	-0.7	-1.0
SME1D045.XLS	01	P02	C01	1	0.8	15.8
SME1D045.XLS	01	P01	C01	4	0.8	24.2
SME1D045.XLS	01	P01	C01	3	-0.7	5.7
SME1D045.XLS	01	P01	C01	2	-0.7	-2.7
SME1D045.XLS	01	P01	C01	1	-0.7	9.1
SME1D045.XLS	01	H02	C01	8	-0.7	-4.4
SME1D045.XLS	01	H02	C01	7	-0.7	4.0
SME1D045.XLS	01	H02	C01	6	-0.7	-2.7
SME1D045.XLS	01	H02	C01	5	-0.7	7.4
SME1D045.XLS	01	H02	C01	4	-0.7	-6.1
SME1D045.XLS	01	H02	C01	3	-0.7	-6.1
SME1D045.XLS	01	H02	C01	2	0.8	-1.0
SME1D045.XLS	01	H02	C01	1	-0.7	-6.1
SME1D045.XLS	01	H01	C01	8	-0.7	4.0
SME1D045.XLS	01	H01	C01	7	-0.7	2.4
SME1D045.XLS	01	H01	C01	6	-0.7	-6.1
SME1D045.XLS	01	H01	C01	5	-0.7	-1.0
SME1D045.XLS	01	H01	C01	4	-0.7	-2.7
SME1D045.XLS	01	H01	C01	3	-0.7	4.0
SME1D045.XLS	01	H01	C01	2	-0.7	14.1
SME1D045.XLS	01	H01	C01	1	-0.7	7.4

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
72 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/27/98 Removable Contamination

Survey Package : D1600 SYSTEMS

Main Feedwater System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/18/98	SME1D045.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1600 SYSTEMS

Main Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
H037	Whatman smear	01	H02	C01	00001	8.0	-3.3
H038	Whatman smear	01	P01	C01	00001	8.0	7.2
H039	Whatman smear	01	H01	C01	00001	8.0	2.1

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1600 SYSTEMS

Main Feedwater System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Exposure Rate Measurements

Survey Package D1600 SYSTEMS

Main Feedwater System

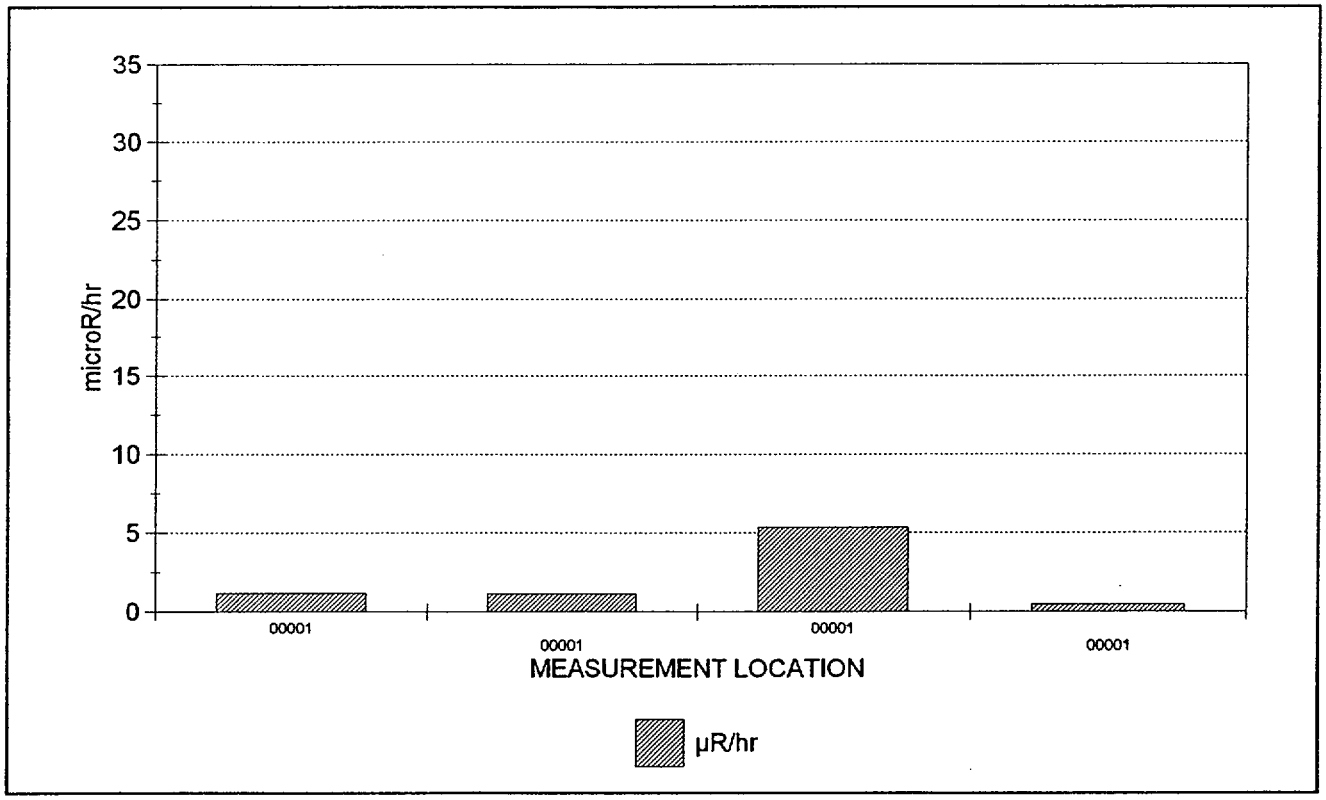
STATISTICAL SUMMARY

	µR/hr
Mean	2.0
Maximum	5.4
Minimum	0.5
Standard Deviation	2.2

Samples Reported	4
Samples Prescribed	4

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES



4 RESULTS ARE GRAPHED

03/27/98 Exposure Rate Measurements

Survey Package : D1600 SYSTEMS

Main Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	RESULT
121 (2)	01	H01	G0031	C01	60.00	00001	1.2
121 (2)	01	H02	G0031	C01	60.00	00001	1.1
121 (2)	01	T01	G0031	C01	60.00	00001	5.4
121 (2)	02	P04	G0031	C01	60.00	00001	0.5

NOTES: Exposure rates reported in net µR/hr. Count times are reported in seconds.
Underlined results did not meet the minimum required count time.
Bold values exceed 15 µR/hr.
4 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Exposure Rate Measurements

Survey Package: D1600 SYSTEMS

Main Feedwater System

SURVEY DATE	FILE #	M2350 INST S/N	M2350 CAL DUE	DETECTOR MODEL	DETECTOR S/N	DETECTOR CAL DUE	TECHNICIAN
12/11/97	121 (2)	95348	3/20/98	44-2	PR091091	4/19/98	KFS5185

CALIBRATION DATES VERIFIED AS ACCEPTABLE

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/28/98 OUTPUT BATCH SN = 215

Survey Package D1600 SYSTEMS

Main Feedwater System

UNIT : 01 SURFACE : P01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Plant Piping (interior)
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD59	PET00030	1.0	1800	Co-57	< 46.3	46.3	0.0
				Co-60	< 54.2	54.2	0.0
				Cs-134	< 64.4	64.4	0.0
				Cs-137	< 59.0	59.0	0.0
				K-40	< 711.0	711.0	0.0
				Mn-54	< 57.0	57.0	0.0

CHARACTERIZATION SUMMARY

04/01/98

SURVEY PACKAGE NUMBER :D1700

SYSTEMS

PACKAGE DESCRIPTION

Emergency / Auxiliary Feedwater System

SURVEY AREA DESCRIPTION

Emergency/Auxiliary Feedwater System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Emergency/Auxiliary Feedwater System was designed to supply water to the Steam Generators to remove reactor decay heat under accident conditions when the main feedwater system was not available, and maintained steam generator water level during plant start up and shutdown operations.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 55 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 55 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 55 survey locations as for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 4 survey measurement locations indicated on the results listing report.

Collected no exposure rate measurements.

Collected 4 material samples (e.g., sludge, sediment, rust, etc.) from the piping for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

o There was 1 direct measurement for total beta activity above MDA (Maximum MDA was 2414 dpm/100cm^2). The maximum measurement result was 851 dpm/100cm^2.

o There was 1 measurement for removable beta activity above MDA (18 dpm/100cm^2) and no result greater than 100 dpm/100cm^2. The maximum measurement result was 21 dpm/100cm^2.

o There were no measurements for removable alpha activity above MDA (7 dpm/100cm^2).

o There was 1 measurement for removable tritium activity above MDA (38.4 dpm/100cm^2). The maximum

measurement result was 138.2 dpm/100cm².

o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

Positive findings and special conditions (if any) are listed below.

The 1.5" and 3" lines at valve AFW-372 (02P03, survey measurement location # 1, 2, and 3) had minimum detectable activity values ranging from 2376 dpm/100cm² to 2414 dpm/100cm² due to high background dose rates in the area when the survey was performed. The component was closed up and the system was operating before the data could be evaluated.

REFERENCES (Documents, Interviews)

Maine Yankee Drawing 1150 - FM - 73 A, B
Operator System Training Manual, Chapter 28

Maine Yankee Atomic Power Plant Site Characterization

SUMMARY OF SURVEY UNIT(S)

03/27/98

OUTPUT BATCH SN = 295

PACKAGE D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

UNIT(S)	SURFACE(S)
01 - Emergency Feed Pump Room Components	P01 (8" line at pump P-25C) P02 (8" line at pump P-25B) P03 (8" line at valve EFW-3) P04 (1" line at valve EFW-11) P05 (3" line at valve EFW-A-301) P06 (3" and 6" lines at valve EFW-100) P07 (1" line at valve EFW-311) P08 (6" line at valve EFW-316) P09 (4" line at valve EFW-317 and EFW-23) P10 (3" line at valve EFW-203) P11 (6" line downstream of EFW-17) U01 (Emergency feed pump P-25A) V02 (Valve EFW-17)
02 - Demineralized Water Storage Tank Room Components	P01 (1" line at valve AFW-26) P02 (1" line at valve AFW-359 (above pump P-25)) P03 (3" line at valve AFW-372) P04 (1.5" line at valve EFW-37)
03 - 39' Turbine Building Components	P01 (4" line at valve AFW-33 (west side)) P02 (2" line at valve AFW-30 (west side)) P03 (4" line at valve AFW-28 (west side))

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

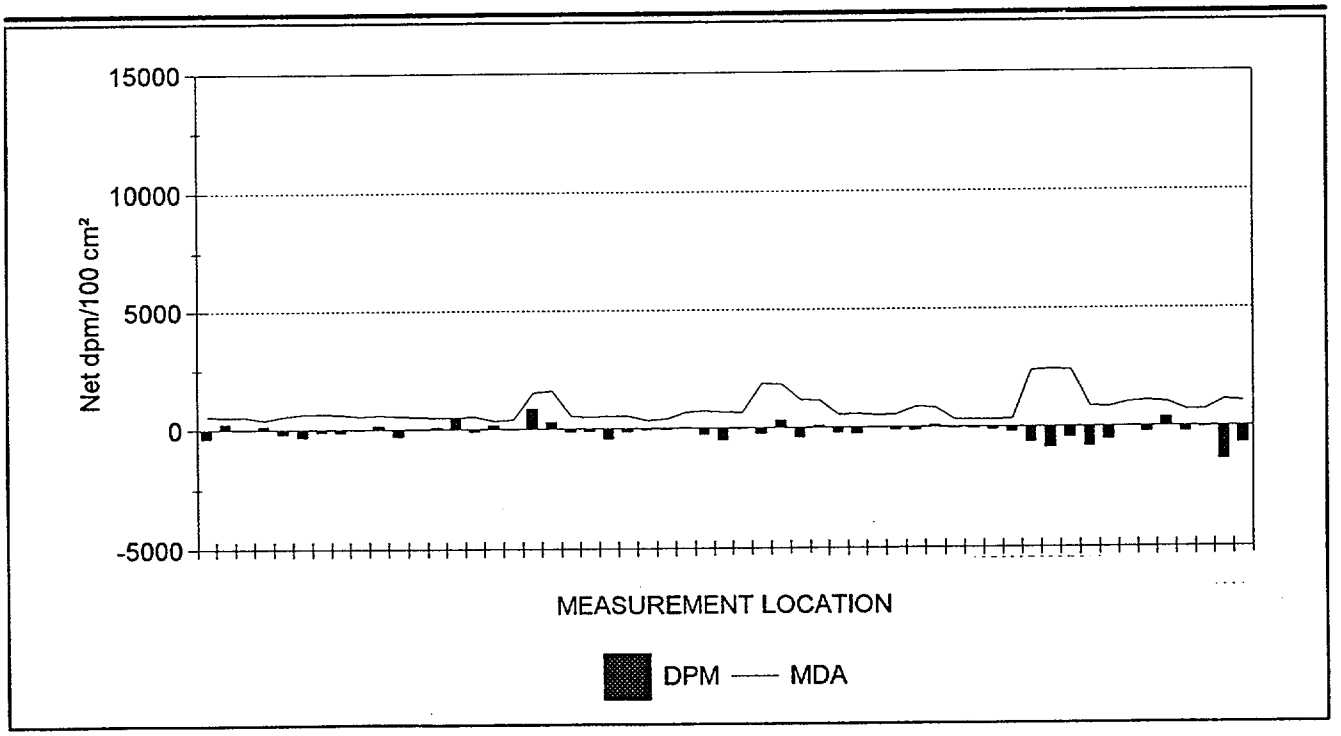
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-136.5
Maximum	851.3
Minimum	-1,389.8
Standard Deviation	347.6
MDA	2,413.5

Samples Reported	55
Samples Prescribed	55

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	NO
Results above 2000 net dpm/100 cm²	0
Number of results above MDA	1



55 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
146 (2)	01	P01	B0031	C01	300	00001	538.5	-369.8
146 (2)	01	P01	B0031	C01	300	00002	527.9	226.8
146 (2)	01	P01	B0031	C01	300	00003	511.8	4.9
146 (2)	01	P01	B0031	C01	300	00004	400.0	138.1
146 (2)	01	P01	B0031	C01	300	00005	539.5	-172.6
170 (2)	01	P02	B0031	C01	300	00001	654.8	-306.9
170 (2)	01	P02	B0031	C01	300	00002	656.2	-100.2
170 (2)	01	P02	B0031	C01	300	00003	618.5	-119.0
170 (2)	01	P02	B0031	C01	300	00004	539.1	-37.6
170 (2)	01	P02	B0031	C01	300	00005	588.8	169.1
146 (2)	01	P03	B0031	C01	300	00001	537.5	-295.8
146 (2)	01	P03	B0031	C01	300	00002	518.0	4.9
146 (2)	01	P03	B0031	C01	300	00003	507.5	83.8
146 (2)	01	P03	B0031	C01	300	00004	488.0	502.9
146 (2)	01	P03	B0031	C01	300	00005	520.1	-98.6
270 (2)	01	P04	B0031	C01	180	00001	341.2	161.7
270 (2)	01	P04	B0031	C01	180	00002	383.3	-21.1
254 (2)	01	P05	B0031	C01	120	00001	1,511.0	851.3
254 (2)	01	P05	B0031	C01	120	00002	1,599.8	295.3
146 (2)	01	P06	B0031	C01	300	00001	518.0	-123.3
146 (2)	01	P06	B0031	C01	300	00002	486.8	-93.7
146 (2)	01	P06	B0031	C01	300	00003	524.8	-409.2
146 (2)	01	P06	B0031	C01	300	00004	517.5	-138.1
270 (2)	01	P07	B0031	C01	180	00001	342.8	-42.2
270 (2)	01	P07	B0031	C01	180	00002	378.8	-42.2
170 (2)	01	P08	B0031	C01	300	00001	685.4	18.8
170 (2)	01	P08	B0031	C01	300	00002	724.9	-269.3
170 (2)	01	P09	B0031	C01	300	00001	683.5	-501.1
170 (2)	01	P09	B0031	C01	300	00002	646.1	-18.8
254 (2)	01	P10	B0031	C01	120	00001	1,850.9	-225.8
254 (2)	01	P10	B0031	C01	120	00002	1,812.5	312.7
179 (2)	01	P11	B0031	C01	120	00001	1,179.6	-386.4
179 (2)	01	P11	B0031	C01	120	00002	1,141.6	82.8
181 (2)	01	U01	B0031	C01	20	00001	555.2	-219.5
181 (2)	01	U01	B0031	C01	20	00002	565.5	-271.1
181 (2)	01	U01	B0031	C01	20	00003	515.5	0.0
181 (2)	01	U01	B0031	C01	20	00004	555.2	-103.3
179 (2)	01	V02	B0031	C01	120	00001	866.5	-138.0
179 (2)	01	V02	B0031	C01	120	00002	845.4	82.8
270 (2)	02	P01	B0031	C01	180	00001	306.0	-56.2

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
270 (2)	02	P01	B0031	C01	180	00002	302.3	-42.2
270 (2)	02	P02	B0031	C01	180	00001	322.4	-105.4
270 (2)	02	P02	B0031	C01	180	00002	336.1	-217.9
155 (2)	02	P03	B0031	C01	120	00001	2,376.4	-618.5
155 (2)	02	P03	B0031	C01	120	00002	2,413.5	-860.5
155 (2)	02	P03	B0031	C01	120	00003	2,386.6	-430.2
264 (2)	02	P04	B0031	C01	180	00001	858.8	-813.4
264 (2)	02	P04	B0031	C01	180	00002	838.5	-510.1
169 (2)	03	P01	B0031	C01	300	00001	1,005.6	-10.2
169 (2)	03	P01	B0031	C01	300	00002	1,057.4	-235.0
169 (2)	03	P01	B0031	C01	300	00003	1,011.3	357.7
261 (2)	03	P02	B0031	C01	120	00001	706.2	-236.4
261 (2)	03	P02	B0031	C01	120	00002	690.5	-64.5
169 (2)	03	P03	B0031	C01	300	00001	1,091.9	-1,389.8
169 (2)	03	P03	B0031	C01	300	00002	1,037.4	-705.1

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
55 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

04/01/98 Direct Measurements For Total Beta Activity

Survey Package : D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

SURVEY DATE	FILE #	M2350		DETECTOR			PRE EFF	TECHNICIAN
		INST S/N	CAL DUE	MODEL	S/N	CAL DUE		
12/15/97	146 (2)	129407	5/4/98	SP-175-3M	PR024349	5/4/98	.09	JWD4920
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/16/97	155 (2)	129429	5/5/98	43-98	PR123601	5/5/98	.02	KFS5185
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/17/97	169 (2)	126182	3/22/98	SP-113-3M	621311	5/4/98	.10	JWD4920
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/17/97	170 (2)	129430	5/6/98	SP-175-3M	PR096141	6/2/98	.07	JWD4920
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/18/97	179 (2)	095348	3/20/98	44-40	PR119456	3/22/98	.12	JWD4920
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/18/97	181 (2)	126197	3/22/98	43-68	PR075064	3/30/98	.18	JWD4920
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/1/98	254 (2)	129414	3/22/98	43-98	PR117961	6/10/98	.03	DRL7343
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/1/98	261 (2)	129430	5/6/98	43-94	124115	6/9/98	.02	MAP5535
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/2/98	264 (2)	129430	5/6/98	43-94	124115	6/9/98	.02	LKW7727
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/2/98	270 (2)	129430	5/6/98	43-94	124115	6/9/98	.05	DRL7343
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Beta Activity

Survey Package D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

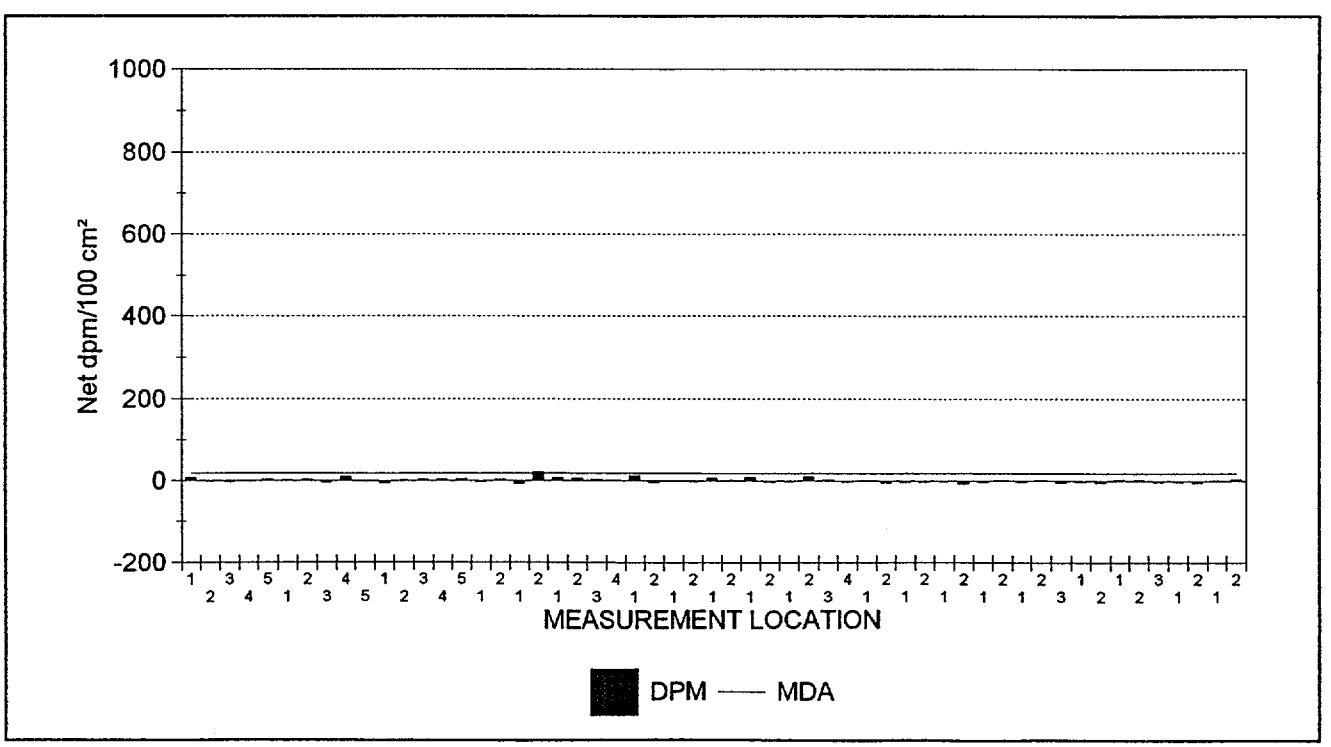
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	0.9
Maximum	21.0
Minimum	-7.6
Standard Deviation	5.3
MDA	18.0

Samples Reported	55
Samples Prescribed	58

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	1



55 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Alpha Activity

Survey Package D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

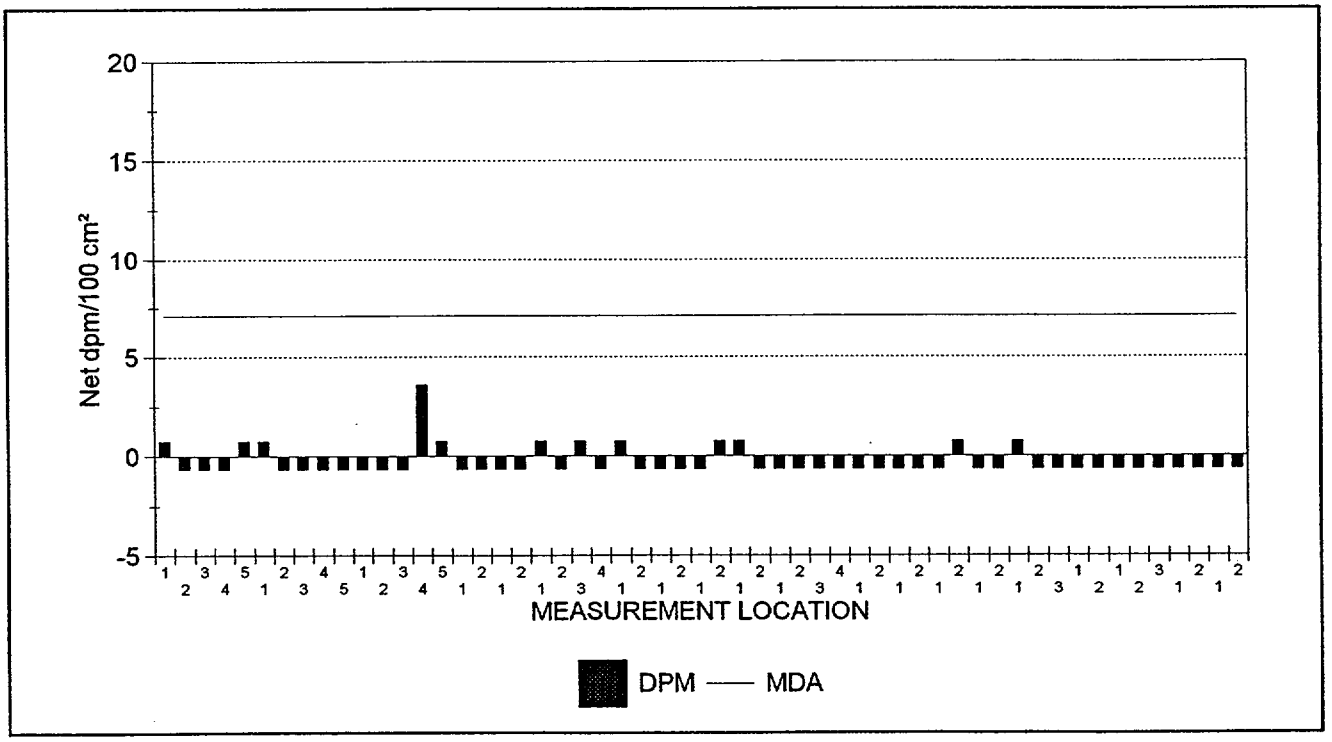
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.3
Maximum	3.6
Minimum	-0.7
Standard Deviation	0.8
MDA	7.1

Samples Reported	55
Samples Prescribed	58

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



55 RESULTS ARE GRAPHED

03/27/98 Removable Contamination

Survey Package : D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D048.XLS	03	P03	C01	2	-0.7	4.1
SME1D048.XLS	03	P03	C01	1	-0.7	0.8
SME1D048.XLS	03	P02	C01	2	-0.7	-4.3
SME1D048.XLS	03	P02	C01	1	-0.7	-2.6
SME1D048.XLS	03	P01	C01	3	-0.7	-2.6
SME1D048.XLS	03	P01	C01	2	-0.7	2.5
SME1D048.XLS	03	P01	C01	1	-0.7	2.5
SME1D048.XLS	02	P04	C01	2	-0.7	-4.3
SME1D048.XLS	02	P04	C01	1	-0.7	-2.6
SME1D048.XLS	02	P03	C01	3	-0.7	-4.3
SME1D048.XLS	02	P03	C01	2	-0.7	0.8
SME1D048.XLS	02	P03	C01	1	0.8	-2.6
SME1D048.XLS	02	P02	C01	2	-0.7	0.8
SME1D048.XLS	02	P02	C01	1	-0.7	-2.6
SME1D048.XLS	02	P01	C01	2	0.8	-7.6
SME1D048.XLS	02	P01	C01	1	-0.7	-0.9
SME1D048.XLS	01	V03	C01	2	-0.7	-2.6
SME1D048.XLS	01	V03	C01	1	-0.7	-2.6
SME1D048.XLS	01	V02	C01	2	-0.7	-4.3
SME1D048.XLS	01	V02	C01	1	-0.7	0.8
SME1D048.XLS	01	U01	C01	4	-0.7	-2.6
SME1D048.XLS	01	U01	C01	3	-0.7	2.5
SME1D048.XLS	01	U01	C01	2	-0.7	10.9
SME1D048.XLS	01	U01	C01	1	-0.7	-0.9
SME1D048.XLS	01	P10	C01	2	-0.7	-2.6
SME1D048.XLS	01	P10	C01	1	0.8	9.2
SME1D048.XLS	01	P09	C01	2	0.8	0.8
SME1D048.XLS	01	P09	C01	1	-0.7	7.5
SME1D048.XLS	01	P08	C01	2	-0.7	-0.9
SME1D048.XLS	01	P08	C01	1	-0.7	0.7
SME1D048.XLS	01	P07	C01	2	-0.7	-4.3
SME1D048.XLS	01	P07	C01	1	0.8	12.6
SME1D048.XLS	01	P06	C01	4	-0.7	0.8
SME1D048.XLS	01	P06	C01	3	0.8	2.5
SME1D048.XLS	01	P06	C01	2	-0.7	5.8
SME1D048.XLS	01	P06	C01	1	0.8	7.5
SME1D048.XLS	01	P05	C01	2	-0.7	21.0
SME1D048.XLS	01	P05	C01	1	-0.7	-7.6
SME1D048.XLS	01	P04	C01	2	-0.7	2.5
SME1D048.XLS	01	P04	C01	1	-0.7	-2.6

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).

03/27/98 Removable Contamination

Survey Package : D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D048.XLS	01	P03	C01	5	0.8	4.1
SME1D048.XLS	01	P03	C01	4	3.6	2.5
SME1D048.XLS	01	P03	C01	3	-0.7	2.5
SME1D048.XLS	01	P03	C01	2	-0.7	0.8
SME1D048.XLS	01	P03	C01	1	-0.7	-5.9
SME1D048.XLS	01	P02	C01	5	-0.7	-0.9
SME1D048.XLS	01	P02	C01	4	-0.7	10.9
SME1D048.XLS	01	P02	C01	3	-0.7	-4.3
SME1D048.XLS	01	P02	C01	2	-0.7	2.5
SME1D048.XLS	01	P02	C01	1	0.8	0.8
SME1D048.XLS	01	P01	C01	5	0.8	2.5
SME1D048.XLS	01	P01	C01	4	-0.7	-0.9
SME1D048.XLS	01	P01	C01	3	-0.7	-2.6
SME1D048.XLS	01	P01	C01	2	-0.7	-0.9
SME1D048.XLS	01	P01	C01	1	0.8	7.5

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
55 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/27/98 Removable Contamination

Survey Package : D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/19/98	SME1D048.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
D7	Hoppes patch	01	P01	C01	00001	38.4	9.0
H040	Whatman smear	01	P01	C01	00001	8.0	***138.2***
H041	Whatman smear	01	P03	C01	00001	8.0	13.0
H042	Whatman smear	01	P02	C01	00001	8.0	-4.5

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/27/98

Removable Contamination - Tritium Activity

Survey Package: D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/28/98

OUTPUT BATCH SN = 216

Survey Package D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

UNIT : 01 SURFACE : P01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Plant Piping (interior)
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD57	FAL00039	2.5	1800	Co-57	< 24.4	24.4	0.0
				Co-60	< 27.6	27.6	0.0
				Cs-134	< 29.3	29.3	0.0
				Cs-137	< 29.0	29.0	0.0
				K-40	< 368.0	368.0	0.0
				Mn-54	< 26.5	26.5	0.0

UNIT : 01 SURFACE : P02 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Plant Piping (interior)
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD60	FAL00040	4.1	1800	Co-57	< 13.9	13.9	0.0
				Co-60	< 14.2	14.2	0.0
				Cs-134	< 17.2	17.2	0.0
				Cs-137	< 19.6	19.6	0.0
				K-40	< 196.0	196.0	0.0
				Mn-54	< 14.1	14.1	0.0

Survey Package D1700 SYSTEMS

Emergency / Auxiliary Feedwater System

UNIT : 01 SURFACE : P03 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Plant Piping (interior)
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD58	PET00028	1.5	1800	Co-57	< 27.1	27.1	0.0
				Co-60	< 33.5	33.5	0.0
				Cs-134	< 37.6	37.6	0.0
				Cs-137	< 36.4	36.4	0.0
				K-40	< 420.0	420.0	0.0
				Mn-54	< 40.2	40.2	0.0

SAMPLE TYPE OR SURFACE SAMPLED: Plant Piping (interior)
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD58D	PET00029	1.5	1800	Co-57	< 30.3	30.3	0.0
				Co-60	< 32.6	32.6	0.0
				Cs-134	< 38.2	38.2	0.0
				Cs-137	< 37.4	37.4	0.0
				K-40	< 522.0	522.0	0.0
				Mn-54	< 34.8	34.8	0.0

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D1800

SYSTEMS

PACKAGE DESCRIPTION

Heater Drain and Extraction Steam System

SURVEY AREA DESCRIPTION

Heater Drain & Extraction Steam System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Heater Drain & Extraction Steam System supplies steam to the feedwater extraction heaters, collects condensed steam from the extraction heaters and moisture separator-reheaters, and returns the collected water to the condenser and Main Feedwater System.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 88 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 88 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at 89 survey locations including those for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 3 survey measurement locations indicated on the results listing report.

Collected exposure rate measurements at 3 survey locations indicated on the results listing report.

Collected 8 material samples (e.g., sludge, sediment, rust, etc.) from the piping, drains for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

- There were 2 direct measurements for total beta activity above MDA (Maximum MDA was 1182 dpm/100cm²) and no results greater than 2000 dpm/100cm². The maximum measurement result was 1,864 dpm/100cm².
- There were no measurements for removable beta activity above MDA (19.2 dpm/100cm²).
- There were no measurements for removable alpha activity above MDA (7.1 dpm/100cm²).
- There was 1 measurement for removable tritium activity above MDA (8 dpm/100cm²). The maximum

measurement result was 14.2 dpm/100cm².

- o The average and maximum exposure rate measurement results were 0.9 µR/hr and 1.3 µR/hr respectively.
- o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

REFERENCES (Documents, Interviews)
Maine Yankee Drawing 1150 - FM - 75 A, 76 A
Operator System Training Manual, Chapter 29

SUMMARY OF SURVEY UNIT(S)

03/27/98 OUTPUT BATCH SN = 202

PACKAGE D1800 SYSTEMS

Heater Drain and Extraction Steam System

UNIT(S)	SURFACE(S)
01 - Turbine Building 21' Elevation	M03 (Extraction Heater E-13A) M04 (Extraction Heater E-14A) M05 (Extraction Heater E-15A) M06 (Extraction Heater E-13B) M07 (Extraction Heater E-14B) M08 (Extraction Heater E-15B) M09 (Heater Drain Cooler E-17A) M10 (Heater Drain Cooler E-17B) S01 (Strainer STR-3-P62A) S02 (Strainer STR-3-P62B) T01 (Heater Drain Receiver Tank, TK-19) V01 (Check valve HD-116) V02 (Check valve HD-117)
02 - Turbine Building 39' Elevation	M01 (Extraction Heater E-16A) M02 (Extraction Heater E-16B) T01 (Heater Drain Receiver Tank TK-20A) T02 (Heater Drain Receiver Tank TK-20B)
03 - Turbine Building 61' Elevation	M01 (Extraction Heater E-12A) M02 (Extraction Heater E-12B)

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0
G0031	METAL - BARE (GAMMA)	0.0

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package D1800 SYSTEMS

Heater Drain and Extraction Steam System

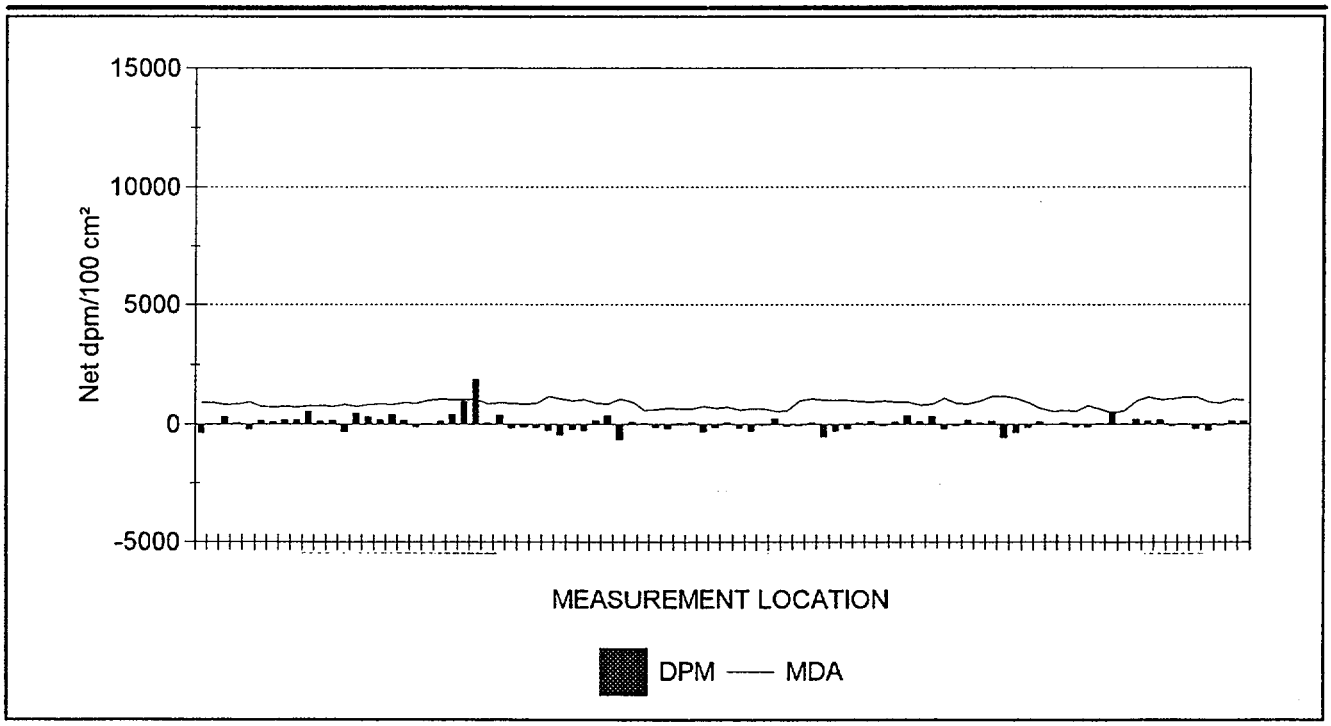
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	42.4
Maximum	1,864.3
Minimum	-661.1
Standard Deviation	323.3
MDA	1,182.3

Samples Reported	88
Samples Prescribed	88

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	YES
Results above 2000 net dpm/100 cm²	0
Number of results above MDA	2



88 RESULTS ARE GRAPHED

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
79 (2)	01	M03	B0031	C01	120	00001	905.2	-358.1
79 (2)	01	M03	B0031	C01	120	00002	905.2	0.0
79 (2)	01	M03	B0031	C01	120	00003	821.9	303.0
79 (2)	01	M03	B0031	C01	120	00004	864.7	55.1
79 (2)	01	M03	B0031	C01	120	00005	924.8	-220.4
79 (2)	01	M04	B0031	C01	120	00001	752.8	165.3
79 (2)	01	M04	B0031	C01	120	00002	740.6	110.2
79 (2)	01	M04	B0031	C01	120	00003	764.8	192.8
79 (2)	01	M04	B0031	C01	120	00004	728.1	192.8
79 (2)	01	M04	B0031	C01	120	00005	776.6	550.9
79 (2)	01	M05	B0031	C01	120	00001	788.2	137.7
79 (2)	01	M05	B0031	C01	120	00002	764.8	165.3
79 (2)	01	M05	B0031	C01	120	00003	843.6	-303.0
79 (2)	01	M05	B0031	C01	120	00004	752.8	468.3
79 (2)	01	M05	B0031	C01	120	00005	843.6	303.0
79 (2)	01	M06	B0031	C01	120	00001	854.2	192.8
79 (2)	01	M06	B0031	C01	120	00002	821.9	413.2
79 (2)	01	M06	B0031	C01	120	00003	905.2	165.3
79 (2)	01	M06	B0031	C01	120	00004	875.0	-110.2
75 (2)	01	M07	B0031	C01	120	00001	1,011.6	27.4
75 (2)	01	M07	B0031	C01	120	00002	1,062.4	137.1
75 (2)	01	M07	B0031	C01	120	00003	1,028.9	411.2
75 (2)	01	M07	B0031	C01	120	00004	1,037.3	959.5
75 (2)	01	M07	B0031	C01	120	00005	1,037.3	1,864.3
75 (2)	01	M08	B0031	C01	120	00001	850.2	54.8
75 (2)	01	M08	B0031	C01	120	00002	910.7	383.8
75 (2)	01	M08	B0031	C01	120	00003	891.1	-164.5
75 (2)	01	M08	B0031	C01	120	00004	870.9	-109.7
75 (2)	01	M08	B0031	C01	120	00005	881.0	-137.1
79 (2)	01	M09	B0031	C01	120	00001	1,162.1	-247.9
79 (2)	01	M09	B0031	C01	120	00002	1,067.4	-440.7
79 (2)	01	M09	B0031	C01	120	00003	998.8	-220.4
79 (2)	01	M09	B0031	C01	120	00004	1,050.7	-247.9
79 (2)	01	M10	B0031	C01	120	00001	895.3	165.3
79 (2)	01	M10	B0031	C01	120	00002	854.2	358.1
79 (2)	01	M10	B0031	C01	120	00003	1,067.4	-661.1
79 (2)	01	M10	B0031	C01	120	00004	934.4	82.6
19 (2)	01	S01	G0031	C01	10	00001	564.5	22.1
19 (2)	01	S01	G0031	C01	10	00002	633.3	-132.8
19 (2)	01	S01	G0031	C01	10	00003	686.4	-177.1

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
19 (2)	01	S01	G0031	C01	10	00004	642.5	22.1
19 (2)	01	S02	G0031	C01	10	00001	651.5	88.5
19 (2)	01	S02	G0031	C01	10	00002	765.9	-309.8
19 (2)	01	S02	G0031	C01	10	00003	669.2	-132.8
19 (2)	01	S02	G0031	C01	10	00004	719.3	88.5
19 (2)	01	T01	G0031	C01	10	00001	604.9	-154.9
19 (2)	01	T01	G0031	C01	10	00002	660.4	-287.7
19 (2)	01	T01	G0031	C01	10	00003	642.5	-22.1
19 (2)	01	T01	G0031	C01	10	00004	543.0	243.5
19 (2)	01	T01	G0031	C01	10	00005	574.9	-88.5
79 (2)	01	V01	B0031	C01	120	00001	989.9	-55.1
79 (2)	01	V01	B0031	C01	120	00002	1,067.4	55.1
79 (2)	01	V01	B0031	C01	120	00003	1,025.1	-523.3
79 (2)	01	V01	B0031	C01	120	00004	1,007.7	-275.4
79 (2)	01	V01	B0031	C01	120	00005	1,025.1	-192.8
79 (2)	01	V02	B0031	C01	120	00001	971.8	55.1
79 (2)	01	V02	B0031	C01	120	00002	934.4	137.7
79 (2)	01	V02	B0031	C01	120	00003	998.8	-55.1
79 (2)	01	V02	B0031	C01	120	00004	934.4	110.2
79 (2)	01	V02	B0031	C01	120	00005	934.4	358.1
98 (2)	02	M01	B0031	C01	120	00001	806.6	91.5
98 (2)	02	M01	B0031	C01	120	00002	847.2	335.6
98 (2)	02	M01	B0031	C01	120	00003	1,096.5	-183.1
98 (2)	02	M01	B0031	C01	120	00004	898.2	-61.0

REMAINING RESULTS PRINTED ON NEXT PAGE

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
98 (2)	02	M01	B0031	C01	120	00005	860.3	183.1
98 (2)	02	M02	B0031	C01	120	00001	991.7	61.0
98 (2)	02	M02	B0031	C01	120	00002	1,182.3	122.0
98 (2)	02	M02	B0031	C01	120	00003	1,163.9	-549.2
98 (2)	02	M02	B0031	C01	120	00004	1,086.5	-335.6
98 (2)	02	M02	B0031	C01	120	00005	910.5	-122.0
2 (2)	02	T01	G0031	C01	10	00001	672.2	115.8
2 (2)	02	T01	G0031	C01	10	00002	544.6	0.0
2 (2)	02	T01	G0031	C01	10	00003	579.4	46.3
2 (2)	02	T01	G0031	C01	10	00004	556.5	-92.6
2 (2)	02	T02	G0031	C01	10	00001	785.5	-115.8
2 (2)	02	T02	G0031	C01	10	00002	612.1	23.2
2 (2)	02	T02	G0031	C01	10	00003	480.0	532.6
2 (2)	02	T02	G0031	C01	10	00004	579.4	23.2
98 (2)	03	M01	B0031	C01	120	00001	980.6	213.6
98 (2)	03	M01	B0031	C01	120	00002	1,145.1	122.0
98 (2)	03	M01	B0031	C01	120	00003	1,035.0	183.1
98 (2)	03	M01	B0031	C01	120	00004	1,076.4	-61.0
98 (2)	03	M01	B0031	C01	120	00005	1,154.5	30.5
98 (2)	03	M02	B0031	C01	120	00001	1,154.5	-183.1
98 (2)	03	M02	B0031	C01	180	00002	932.8	-264.4
98 (2)	03	M02	B0031	C01	180	00003	896.3	-40.7
98 (2)	03	M02	B0031	C01	120	00004	1,035.0	122.0
98 (2)	03	M02	B0031	C01	120	00005	1,013.6	122.0

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
88 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

04/01/98 Direct Measurements For Total Beta Activity

Survey Package: D1800 SYSTEMS

Heater Drain and Extraction Steam System

SURVEY		M2350		DETECTOR			PRE	
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	EFF	TECHNICIAN
11/11/97	2 (2)	095348	3/20/98	43-106	126906	3/30/98	.21	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
11/10/97	19 (2)	95348	3/20/98	43-106	126906	3/30/98	.22	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/3/97	75 (2)	095348	3/20/98	44-40	PR119456	3/22/98	.12	KFS5185
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/3/97	79 (2)	126198	3/22/98	44-40	091089	3/23/98	.12	LCF0451
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
12/5/97	98 (2)	126197	3/22/98	44-40	117008	3/24/98	.11	DRL7343
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Beta Activity

Survey Package D1800 SYSTEMS

Heater Drain and Extraction Steam System

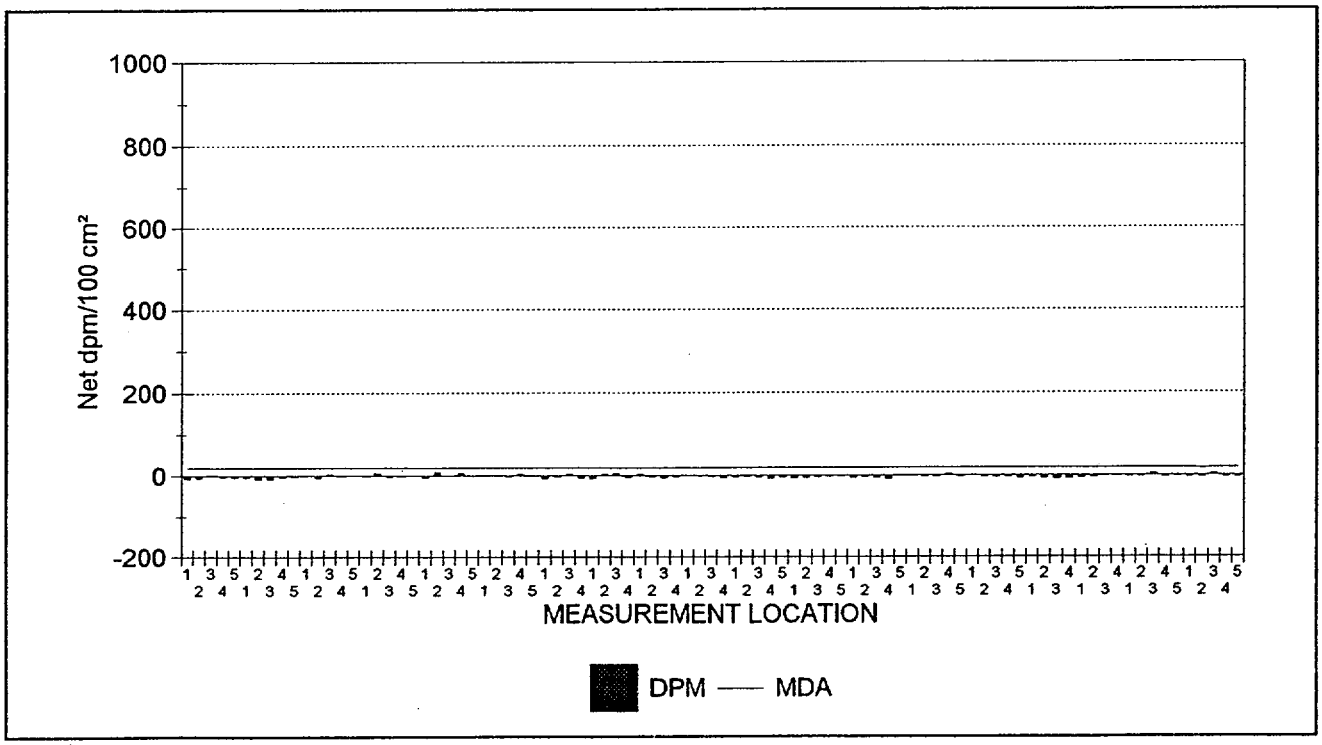
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-2.7
Maximum	9.1
Minimum	-9.4
Standard Deviation	3.8
MDA	19.2

Samples Reported	89
Samples Prescribed	81

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	0



89 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Alpha Activity

Survey Package D1800 SYSTEMS

Heater Drain and Extraction Steam System

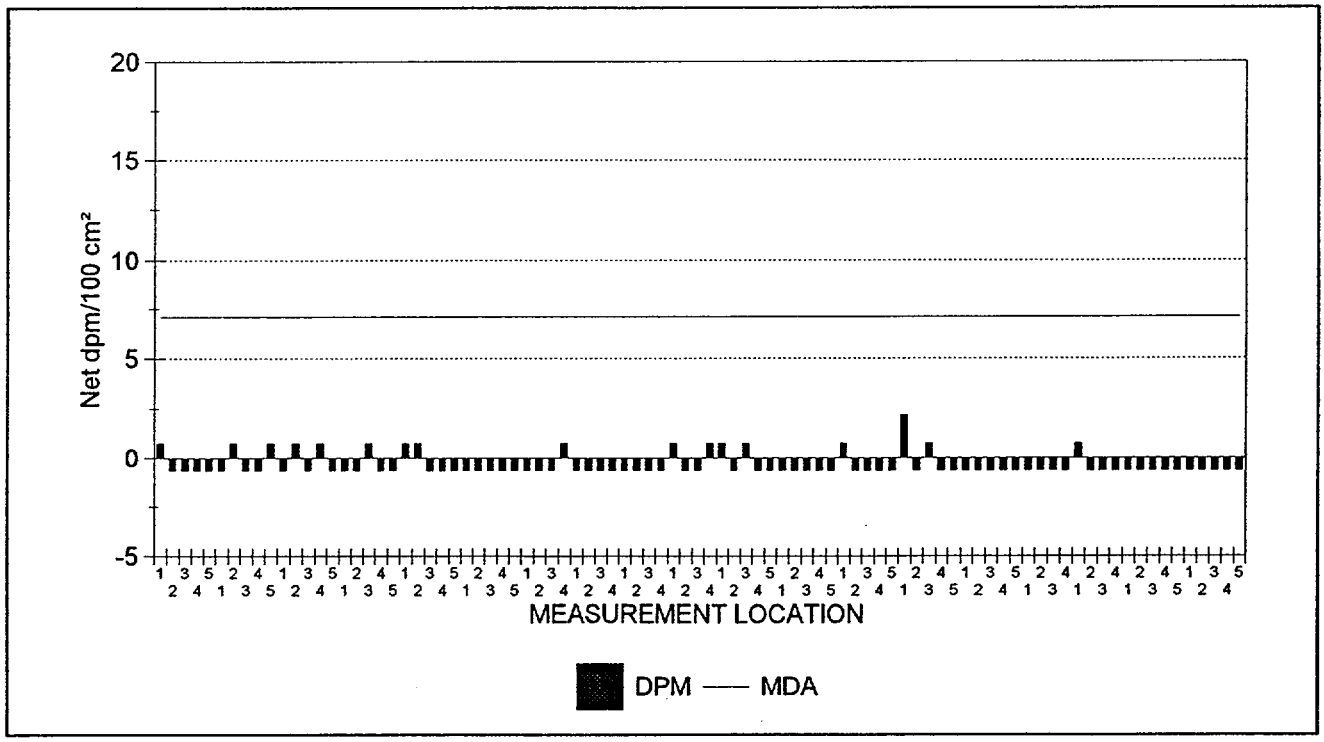
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.4
Maximum	2.2
Minimum	-0.7
Standard Deviation	0.6
MDA	7.1

Samples Reported	89
Samples Prescribed	81

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



89 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98 Removable Contamination

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D046.XLS	03	M02	C01	5	-0.7	-4.4
SME1D046.XLS	03	M02	C01	4	-0.7	-4.4
SME1D046.XLS	03	M02	C01	3	-0.7	4.0
SME1D047.XLS	03	M02	C01	2	-0.7	-4.3
SME1D046.XLS	03	M02	C01	1	-0.7	-4.4
SME1D046.XLS	03	M01	C01	5	-0.7	-2.7
SME1D046.XLS	03	M01	C01	4	-0.7	-4.4
SME1D046.XLS	03	M01	C01	3	-0.7	4.0
SME1D046.XLS	03	M01	C01	2	-0.7	-2.7
SME1D046.XLS	03	M01	C01	1	-0.7	-2.7
SME1D046.XLS	02	T02	C01	4	-0.7	-1.0
SME1D046.XLS	02	T02	C01	3	-0.7	0.7
SME1D046.XLS	02	T02	C01	2	-0.7	-4.4
SME1D046.XLS	02	T02	C01	1	0.8	-6.1
SME1D046.XLS	02	T01	C01	4	-0.7	-7.7
SME1D046.XLS	02	T01	C01	3	-0.7	-9.4
SME1D046.XLS	02	T01	C01	2	-0.7	-7.7
SME1D046.XLS	02	T01	C01	1	-0.7	-4.4
SME1D046.XLS	02	M02	C01	5	-0.7	-7.7
SME1D046.XLS	02	M02	C01	4	-0.7	-4.4
SME1D046.XLS	02	M02	C01	3	-0.7	-4.4
SME1D046.XLS	02	M02	C01	2	-0.7	-2.7
SME1D046.XLS	02	M02	C01	1	-0.7	0.7
SME1D046.XLS	02	M01	C01	5	-0.7	-2.7
SME1D046.XLS	02	M01	C01	4	-0.7	2.4
SME1D046.XLS	02	M01	C01	3	0.8	-2.7
SME1D046.XLS	02	M01	C01	2	-0.7	-2.7
SME1D046.XLS	02	M01	C01	1	2.2	-1.0
SME1D046.XLS	01	V02	C01	5	-0.7	-1.0
SME1D046.XLS	01	V02	C01	4	-0.7	-9.4
SME1D046.XLS	01	V02	C01	3	-0.7	-6.1
SME1D046.XLS	01	V02	C01	2	-0.7	-4.4
SME1D046.XLS	01	V02	C01	1	0.8	-6.1
SME1D046.XLS	01	V01	C01	5	-0.7	-1.0
SME1D046.XLS	01	V01	C01	4	-0.7	-2.7
SME1D046.XLS	01	V01	C01	3	-0.7	-4.4
SME1D046.XLS	01	V01	C01	2	-0.7	-6.1
SME1D046.XLS	01	V01	C01	1	-0.7	-7.7
SME1D046.XLS	01	T01	C01	5	-0.7	-4.4
SME1D046.XLS	01	T01	C01	4	-0.7	-7.7

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).

Survey Package: D1800 SYSTEMS

Heater Drain and Extraction Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D046.XLS	01	T01	C01	3	0.8	-4.4
SME1D046.XLS	01	T01	C01	2	-0.7	-2.7
SME1D046.XLS	01	T01	C01	1	0.8	-4.4
SME1D046.XLS	01	S02	C01	4	0.8	-6.1
SME1D046.XLS	01	S02	C01	3	-0.7	-2.7
SME1D046.XLS	01	S02	C01	2	-0.7	-1.0
SME1D046.XLS	01	S02	C01	1	0.8	0.7
SME1D046.XLS	01	S01	C01	4	-0.7	-2.7
SME1D046.XLS	01	S01	C01	3	-0.7	-6.1
SME1D046.XLS	01	S01	C01	2	-0.7	-2.7
SME1D046.XLS	01	S01	C01	1	-0.7	2.4
SME1D046.XLS	01	M10	C01	4	-0.7	-4.4
SME1D046.XLS	01	M10	C01	3	-0.7	5.7
SME1D046.XLS	01	M10	C01	2	-0.7	2.4
SME1D046.XLS	01	M10	C01	1	-0.7	-7.7
SME1D046.XLS	01	M09	C01	4	0.8	-6.1
SME1D046.XLS	01	M09	C01	3	-0.7	2.4
SME1D046.XLS	01	M09	C01	2	-0.7	-2.7
SME1D046.XLS	01	M09	C01	1	-0.7	-7.7
SME1D046.XLS	01	M08	C01	5	-0.7	-1.0
SME1D046.XLS	01	M08	C01	4	-0.7	2.4
SME1D046.XLS	01	M08	C01	3	-0.7	-2.7
SME1D046.XLS	01	M08	C01	2	-0.7	0.7
SME1D046.XLS	01	M08	C01	1	-0.7	-1.0

REMAINING RESULTS PRINTED ON NEXT PAGE

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).

03/27/98 Removable Contamination

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D046.XLS	01	M07	C01	5	-0.7	-1.0
SME1D046.XLS	01	M07	C01	4	-0.7	5.7
SME1D046.XLS	01	M07	C01	3	-0.7	0.7
SME1D046.XLS	01	M07	C01	2	0.8	9.1
SME1D046.XLS	01	M07	C01	1	0.8	-4.4
SME1D046.XLS	01	M06	C01	5	-0.7	0.7
SME1D046.XLS	01	M06	C01	4	-0.7	-1.0
SME1D046.XLS	01	M06	C01	3	0.8	-2.7
SME1D046.XLS	01	M06	C01	2	-0.7	5.7
SME1D046.XLS	01	M06	C01	1	-0.7	-1.0
SME1D046.XLS	01	M05	C01	5	-0.7	0.7
SME1D046.XLS	01	M05	C01	4	0.8	-1.0
SME1D046.XLS	01	M05	C01	3	-0.7	2.4
SME1D046.XLS	01	M05	C01	2	0.8	-6.1
SME1D046.XLS	01	M05	C01	1	-0.7	0.7
SME1D046.XLS	01	M04	C01	5	0.8	-2.7
SME1D046.XLS	01	M04	C01	4	-0.7	-4.4
SME1D046.XLS	01	M04	C01	3	-0.7	-9.4
SME1D046.XLS	01	M04	C01	2	0.8	-9.4
SME1D046.XLS	01	M04	C01	1	-0.7	-4.4
SME1D046.XLS	01	M03	C01	5	-0.7	-4.4
SME1D046.XLS	01	M03	C01	4	-0.7	-2.7
SME1D046.XLS	01	M03	C01	3	-0.7	0.7
SME1D046.XLS	01	M03	C01	2	-0.7	-6.1
SME1D046.XLS	01	M03	C01	1	0.8	-7.7

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
89 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/27/98 Removable Contamination

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/19/98	SME1D046.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	
2/19/98	SME1D047.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
H043	Whatman smear	01	T01	C01	00001	8.0	14.2
H044	Whatman smear	01	S01	C01	00001	8.0	10.0
H045	Whatman smear	01	V01	C01	00001	8.0	-1.1

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Exposure Rate Measurements

Survey Package D1800 SYSTEMS

Heater Drain and Extraction Steam System

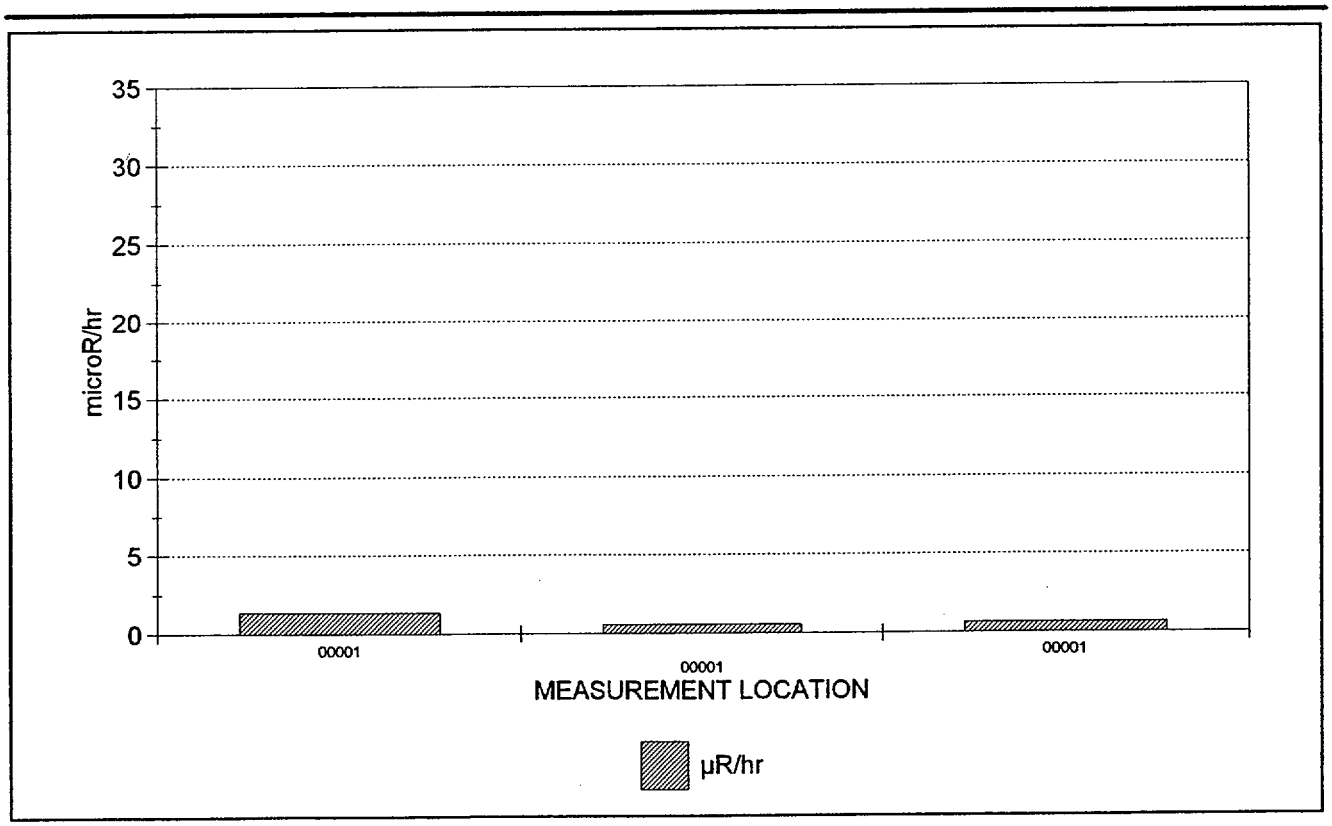
STATISTICAL SUMMARY

	µR/hr
Mean	0.9
Maximum	1.3
Minimum	0.6
Standard Deviation	0.4

Samples Reported	3
Samples Prescribed	3

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES



3 RESULTS ARE GRAPHED

03/27/98 Exposure Rate Measurements

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	RESULT
15 (2)	01	T01	G0031	C01	60.00	00001	1.3
15 (2)	02	T01	G0031	C01	60.00	00001	0.6
15 (2)	02	T02	G0031	C01	60.00	00001	0.6

NOTES: Exposure rates reported in net µR/hr. Count times are reported in seconds.
Underlined results did not meet the minimum required count time.
Bold values exceed 15 µR/hr.
3 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Exposure Rate Measurements

Survey Package : D1800 SYSTEMS

Heater Drain and Extraction Steam System

SURVEY		M2350		DETECTOR			
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	TECHNICIAN
11/14/97	15 (2)	117573	4/14/98	44-2	091017	5/12/98	DRL7343

CALIBRATION DATES VERIFIED AS ACCEPTABLE

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/28/98 OUTPUT BATCH SN = 217

Survey Package D1800 SYSTEMS

Heater Drain and Extraction Steam System

UNIT : 01 SURFACE : M09 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Misc component
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD69	FAL00042	40.7	1800	Co-57	< 1.6	1.6	0.0
				Co-60	< 1.9	1.9	0.0
				Cs-134	< 1.6	1.6	0.0
				Cs-137	< 1.7	1.7	0.0
				K-40	< 19.8	19.8	0.0
				Mn-54	< 1.9	2.0	0.0

UNIT : 01 SURFACE : M10 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Misc component
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD70	FAL00025	49.8	1800	Co-57	< 1.3	1.3	0.0
				Co-60	< 1.3	1.4	0.0
				Cs-134	< 1.9	1.9	0.0
				Cs-137	< 1.5	1.5	0.0
				K-40	< 13.3	13.3	0.0
				Mn-54	< 1.7	1.7	0.0

Survey Package D1800 SYSTEMS

Heater Drain and Extraction Steam System

UNIT : 01 SURFACE : S01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Strainer / Filters
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD68	PET00014	0.3	1800	Co-57	< 150.0	150.0	0.0
				Co-60	< 194.0	194.0	0.0
				Cs-134	< 193.0	193.0	0.0
				Cs-137	< 155.0	155.0	0.0
				K-40	< 2210.0	2,210.0	0.0
				Mn-54	< 230.0	230.0	0.0

UNIT : 01 SURFACE : T01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Tank
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD65	FAL00024	12.8	1800	Co-57	< 5.1	5.1	0.0
				Co-60	< 5.7	5.7	0.0
				Cs-134	< 5.9	5.9	0.0
				Cs-137	< 6.1	6.1	0.0
				K-40	< 72.0	72.0	0.0
				Mn-54	< 5.9	5.9	0.0

UNIT : 01 SURFACE : V01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Valve
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD67	PET00015	0.1	1800	Co-57	< 418.0	418.0	0.0
				Co-60	< 521.0	521.0	0.0
				Cs-134	< 626.0	626.0	0.0
				Cs-137	< 602.0	602.0	0.0
				K-40	< 8870.0	8,870.0	0.0
				Mn-54	< 559.0	559.0	0.0

Survey Package D1800 SYSTEMS

Heater Drain and Extraction Steam System

UNIT : 02 SURFACE : M01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Misc component
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD71	FAL00026	33.2	1800	Co-57	< 1.7	1.7	0.0
				Co-60	< 2.4	2.4	0.0
				Cs-134	< 2.4	2.4	0.0
				Cs-137	< 2.1	2.1	0.0
				K-40	< 20.0	20.0	0.0
				Mn-54	< 2.0	2.0	0.0

UNIT : 02 SURFACE : M02 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Misc component
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD72	FAL00041	38.9	1800	Co-57	< 1.6	1.6	0.0
				Co-60	< 1.8	1.8	0.0
				Cs-134	< 1.9	2.0	0.0
				Cs-137	< 1.9	2.0	0.0
				K-40	< 22.2	22.2	0.0
				Mn-54	< 1.7	1.7	0.0

UNIT : 02 SURFACE : T01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Tank
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD66	PET00031	0.2	1800	Co-57	< 221.0	221.0	0.0
				Co-60	< 306.0	306.0	0.0
				Cs-134	< 331.0	331.0	0.0
				Cs-137	< 266.0	266.0	0.0
				K-40	< 3680.0	3,680.0	0.0
				Mn-54	< 336.0	336.0	0.0

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D1900

SYSTEMS

PACKAGE DESCRIPTION

Component Cooling Water

SURVEY AREA DESCRIPTION

Component Cooling Water System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Component Cooling Water System functions included: serve as a buffer between primary and secondary systems and the service water system, supply cooling water to primary and secondary system components during normal operation, and remove reactor decay heat while shutdown and following a loss of coolant accident.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 41 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 41 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at 43 survey locations including those for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 4 survey measurement locations indicated on the results listing report.

Collected exposure rate measurements at 9 survey locations indicated on the results listing report.

Collected 1 material samples (e.g., sludge, sediment, rust, etc.) from the tank for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

o There were 10 direct measurements for total beta activity above MDA (Maximum MDA was 4385 dpm/100cm^2) and 7 results greater than 2000 dpm/100cm^2. The maximum measurement result was 21,644 dpm/100cm^2.

o There was 1 measurement for removable beta activity above MDA (36 dpm/100cm^2) and noresult greater than 100 dpm/100cm^2. The maximum measurement result was 38 dpm/100cm^2.

o There were no measurements for removable alpha activity above MDA (7.2 dpm/100cm^2).

o There was 1 measurement for removable tritium activity above MDA (38.4 dpm/100cm^2) and 1 result greater than 100 dpm/100cm^2. The maximum measurement result was 116.7 dpm/100cm^2..

o The average and maximum exposure rate measurement results were 10.1 µR/hr and 12.85 µR/hr respectively.

o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

The following locations had minimum detectable activity values ranging from 2090 dpm/100 cm2 to 4385 dpm/100 cm2 due to high background dose rates.

- o 6" line PCC-237-151R3, Reactor coolant pump return header (06P01, survey measurement location # 1)
- o 3" line PCC-36-151R3, CEDM cooler return header (06P02, survey measurement location # 1 and 2)
- o 3" line PCC-384-151R3, CEDM air cooler return header (06P02, survey measurement location # 1 and 2)

REFERENCES (Documents, Interviews)

Maine Yankee Drawing 1150 - FM - 94 A, B, C
Operator System Training Manual, Chapter 18

SUMMARY OF SURVEY UNIT(S)

03/29/98

OUTPUT BATCH SN = 323

PACKAGE D1900 SYSTEMS

Component Cooling Water

UNIT(S)	SURFACE(S)
01 - 21' Turbine Building Components	H01 (Component cooling water heat exchanger E-4A (under HX north end)) H02 (Component cooling water heat exchanger E-5B (under HX north end)) P01 (12" suction line to pump P-9A (north end)) P03 (12" suction line to pump P-10A (north end)) P04 (12" suction line to pump P-10B (north end)) P05 (4" line, outlet of E-82 B for DG-1B (south)) S01 (Component cooling water filter FL-67 (north side)) S02 (Component cooling water filter FL-69 (north side)) S03 (Secondary component cooling filter FL-68 (northwest))
02 - 39' Turbine Building Components	H01 (Turbine lube oil cooler E-7B (southeast, near FEMCO)) H02 (Turbine lube oil cooler E-7A (southeast, near FEMCO))
03 - 61' Turbine Building Components	T02 (Secondary component cooling surge tank TK-59 (west wall))
05 - 36' Primary Auxiliary Building Components	H02 (Blow down tank cooler E-100 (north walkway))
06 - -2' Containment Building Components	P01 (6" line PCC-237-151R3, Reactor coolant pump return header (at valve PCC-A-252)) P02 (3" line PCC-36-151R3, CEDM cooler return (at valve PCC-263)) P03 (3" line PCC-384-151R3, CEDM air cooler return (at valve PCC-265))

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0
G0031	METAL - BARE (GAMMA)	0.0

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package D1900 SYSTEMS

Component Cooling Water

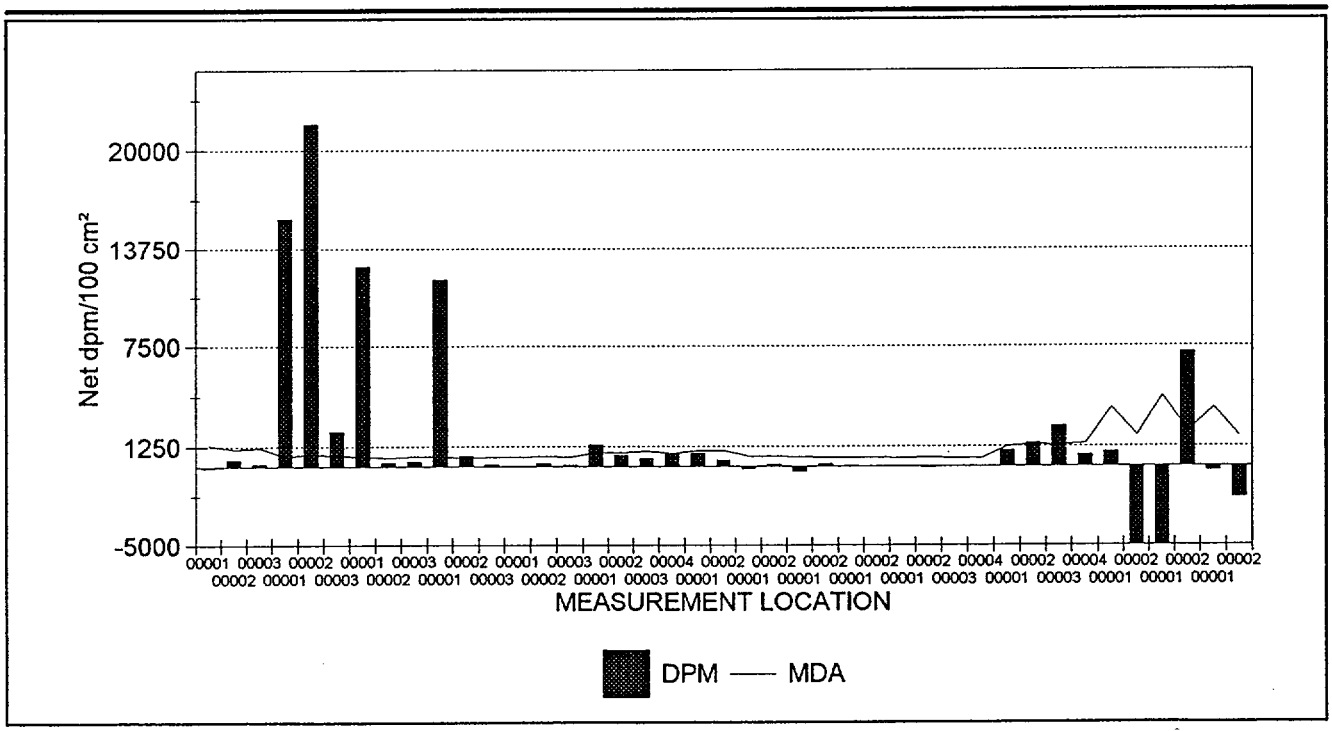
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	1,168.0
Maximum	21,644.3
Minimum	-25,536.7
Standard Deviation	6,616.3
MDA	4,385.3

Samples Reported	41
Samples Prescribed	41

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	NO
Results above 2000 net dpm/100 cm²	7
Number of results above MDA	10



41 RESULTS ARE GRAPHED

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D1900 SYSTEMS

Component Cooling Water

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
445 (2)	01	H02	B0031	C01	120	00001	1,310.9	-95.7
445 (2)	01	H02	B0031	C01	120	00002	1,104.4	414.9
445 (2)	01	H02	B0031	C01	120	00003	1,167.4	159.6
470 (2)	01	P01	B0031	C01	20	00001	630.6	***15,685.7***
470 (2)	01	P01	B0031	C01	20	00002	783.1	***21,644.3***
470 (2)	01	P01	B0031	C01	20	00003	650.6	***2,176.7***
444 (2)	01	P03	B0031	C01	20	00001	609.7	***12,576.7***
444 (2)	01	P03	B0031	C01	20	00002	550.8	231.1
444 (2)	01	P03	B0031	C01	20	00003	620.1	312.7
460 (2)	01	P04	B0031	C01	20	00001	644.1	***11,740.4***
460 (2)	01	P04	B0031	C01	20	00002	515.3	670.1
460 (2)	01	P04	B0031	C01	20	00003	590.6	107.2
455 (2)	01	P05	B0031	C01	300	00001	601.0	-18.7
455 (2)	01	P05	B0031	C01	300	00002	606.7	186.9
455 (2)	01	P05	B0031	C01	300	00003	592.3	93.5
481 (2)	01	S01	B0031	C01	180	00001	870.9	1,371.9
481 (2)	01	S01	B0031	C01	180	00002	876.1	715.8
481 (2)	01	S01	B0031	C01	180	00003	955.6	517.0
481 (2)	01	S01	B0031	C01	180	00004	838.9	795.3
468 (2)	01	S02	B0031	C01	180	00001	962.2	824.6
468 (2)	01	S02	B0031	C01	180	00002	989.3	392.7
446 (2)	01	S03	B0031	C01	300	00001	639.6	-159.9
446 (2)	01	S03	B0031	C01	300	00002	614.1	116.8
470 (2)	02	H01	B0031	C01	20	00001	603.0	-299.3
470 (2)	02	H01	B0031	C01	20	00002	535.3	149.6
460 (2)	02	H02	B0031	C01	20	00001	561.8	26.8
460 (2)	02	H02	B0031	C01	20	00002	531.3	-13.4
459 (2)	03	T02	B0031	C01	15	00001	507.2	15.8
459 (2)	03	T02	B0031	C01	15	00002	546.2	-63.1
459 (2)	03	T02	B0031	C01	15	00003	518.6	0.0
459 (2)	03	T02	B0031	C01	15	00004	524.3	0.0
489 (2)	05	H02	B0031	C01	300	00001	1,239.8	970.9
489 (2)	05	H02	B0031	C01	300	00002	1,383.1	1,456.3
489 (2)	05	H02	B0031	C01	300	00003	1,334.3	***2,517.5***
489 (2)	05	H02	B0031	C01	300	00004	1,432.2	699.9
500 (2)	06	P01	B0031	C01	600	00001	3,623.2	908.2
500 (2)	06	P01	B0031	C01	2400	00002	1,896.0	-25,536.7
501 (2)	06	P02	B0031	C01	600	00001	4,385.3	-8,322.9
501 (2)	06	P02	B0031	C01	2400	00002	2,144.8	***7,114.2***
500 (2)	06	P03	B0031	C01	600	00001	3,649.5	-254.5

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D1900 SYSTEMS

Component Cooling Water

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
500 (2)	06	P03	B0031	C01	2400	00002	1,846.1	-1,939.2

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
41 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

04/01/98 Direct Measurements For Total Beta Activity

Survey Package : D1900 SYSTEMS

Component Cooling Water

SURVEY DATE	FILE #	M2350 INST S/N	M2350 CAL DUE	DETECTOR MODEL	DETECTOR S/N	DETECTOR CAL DUE	PRE EFF	TECHNICIAN
1/20/98	444 (2)	126197	3/22/98	43-68	PR075064	3/30/98	.18	LCF0451
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/20/98	445 (2)	126185	3/20/98	44-40	PR121903	3/22/98	.10	JWD4920
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/20/98	446 (2)	095349	4/15/98	SP-175-3M	096135	4/28/98	.07	JFM0682
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/21/98	455 (2)	095349	4/15/98	SP-175-3M	096135	4/28/98	.07	AOK2982
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/21/98	459 (2)	129414	3/22/98	43-106	PR133882	3/27/98	.20	DRL7313
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/21/98	460 (2)	126197	3/22/98	43-68	PR075064	3/30/98	.18	LCF0451
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		

DETECTOR LISTING CONTINUED ON NEXT PAGE

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

04/01/98 Direct Measurements For Total Beta Activity

Survey Package : D1900 SYSTEMS

Component Cooling Water

SURVEY		M2350		DETECTOR			PRE	
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	EFF	TECHNICIAN
1/22/98	468 (2)	126182	3/22/98	44-40	PR095101	3/23/98	.11	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
1/22/98	470 (2)	126197	3/22/98	43-68	PR075064	3/30/98	.18	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
1/26/98	481 (2)	126182	3/22/98	44-40	PR095101	3/23/98	.11	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
1/27/98	489 (2)	126185	3/20/98	44-40	PR121903	3/22/98	.11	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
1/28/98	500 (2)	126185	3/20/98	44-40	PR121903	3/22/98	.11	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
1/28/98	501 (2)	095348	3/20/98	44-40	PR119456	3/22/98	.12	LKW7727
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Removable Contamination - Gross Beta Activity

Survey Package D1900 SYSTEMS

Component Cooling Water

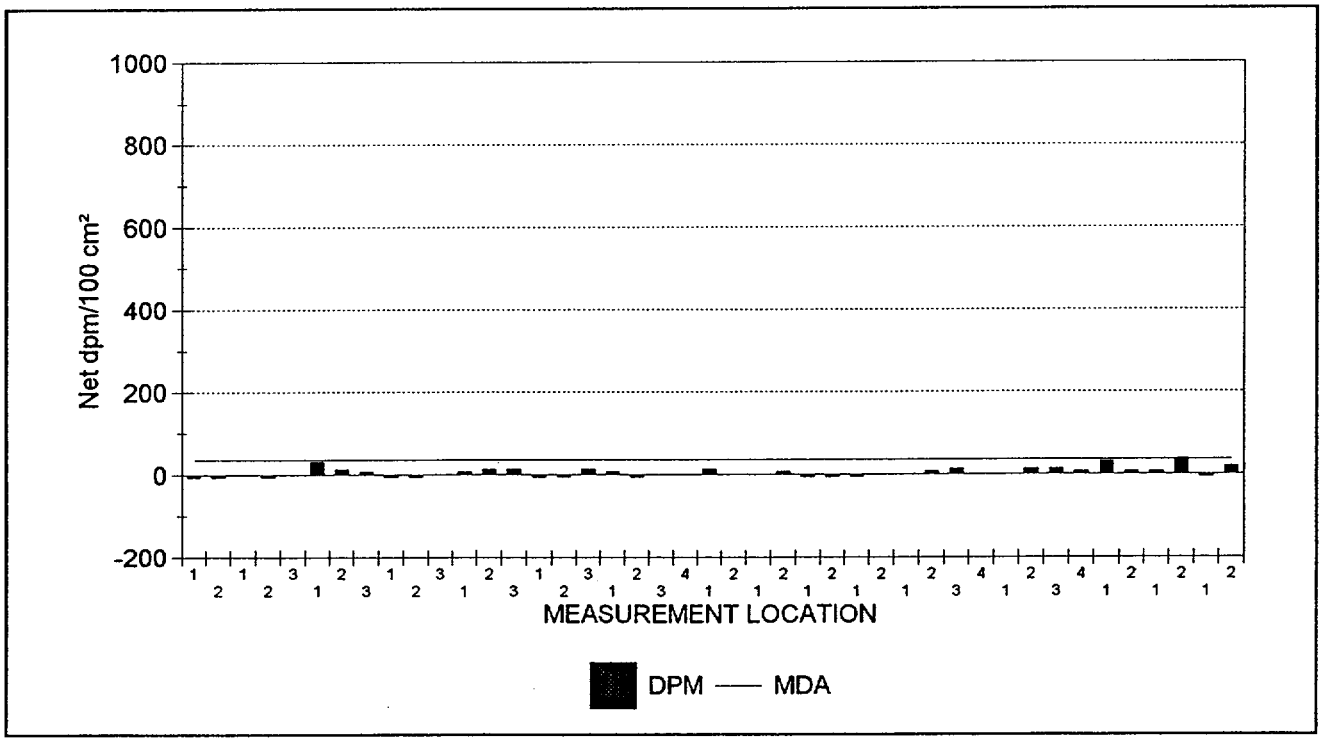
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	5.2
Maximum	38.0
Minimum	-5.5
Standard Deviation	10.7
MDA	36.2

Samples Reported	43
Samples Prescribed	46

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	1



43 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Removable Contamination - Gross Alpha Activity

Survey Package D1900 SYSTEMS

Component Cooling Water

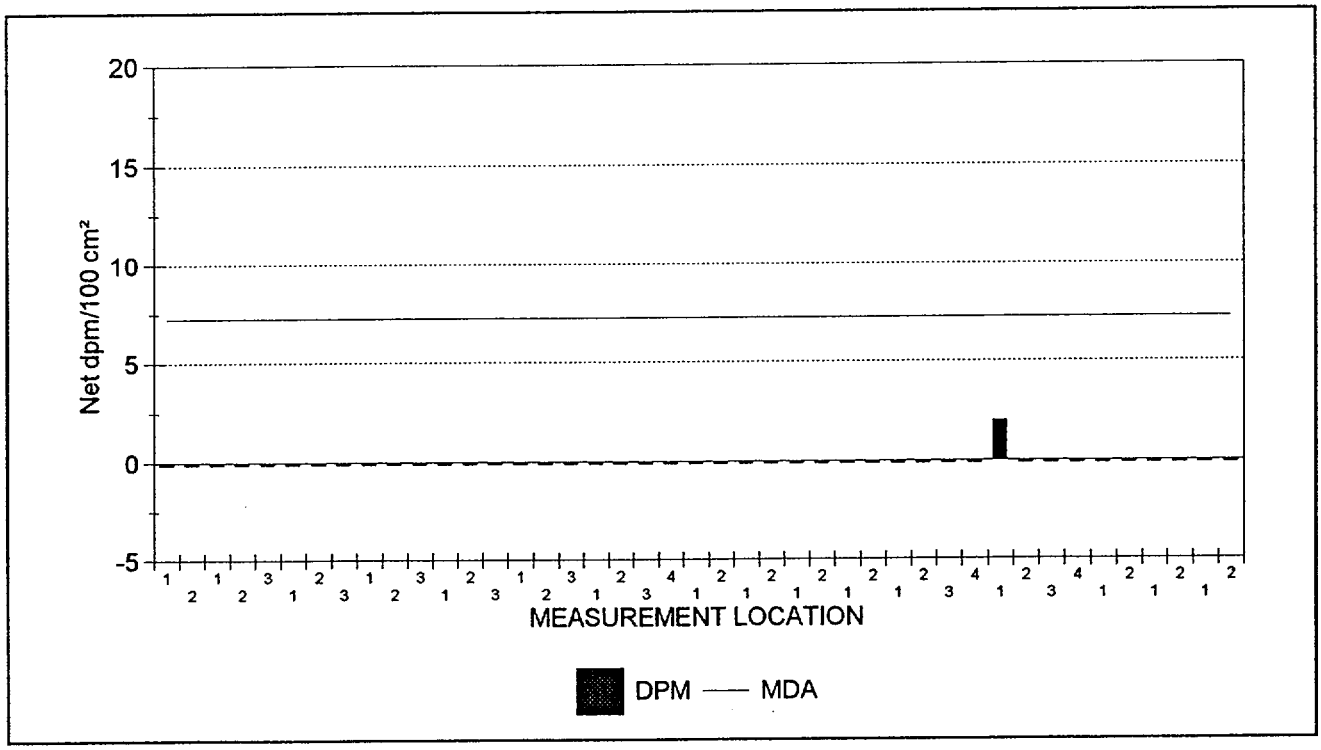
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.1
Maximum	2.0
Minimum	-0.1
Standard Deviation	0.3
MDA	7.2

Samples Reported	43
Samples Prescribed	46

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



43 RESULTS ARE GRAPHED

03/29/98 Removable Contamination

Survey Package : D1900 SYSTEMS

Component Cooling Water

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1E051.XLS	06	P03	C01	2	-0.1	19.4
SME1E051.XLS	06	P03	C01	1	-0.1	-5.5
SME1E051.XLS	06	P02	C01	2	-0.1	38.0
SME1E051.XLS	06	P02	C01	1	-0.1	6.9
SME1E051.XLS	06	P01	C01	2	-0.1	6.9
SME1E051.XLS	06	P01	C01	1	-0.1	31.8
SME1E051.XLS	05	H02	C01	4	-0.1	6.9
SME1E051.XLS	05	H02	C01	3	-0.1	13.2
SME1E051.XLS	05	H02	C01	2	-0.1	13.2
SME1E051.XLS	05	H02	C01	1	2.0	0.7
SME1E051.XLS	03	T02	C01	4	-0.1	0.7
SME1E051.XLS	03	T02	C01	3	-0.1	13.2
SME1E051.XLS	03	T02	C01	2	-0.1	6.9
SME1E051.XLS	03	T02	C01	1	-0.1	0.7
SME1E051.XLS	02	H02	C01	2	-0.1	0.7
SME1E051.XLS	02	H02	C01	1	-0.1	-5.5
SME1E051.XLS	02	H01	C01	2	-0.1	-5.5
SME1E051.XLS	02	H01	C01	1	-0.1	-5.5
SME1E051.XLS	01	S03	C01	2	-0.1	6.9
SME1E051.XLS	01	S03	C01	1	-0.1	0.7
SME1E051.XLS	01	S02	C01	2	-0.1	0.7

REMAINING RESULTS PRINTED ON NEXT PAGE

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).

03/29/98 Removable Contamination

Survey Package : D1900 SYSTEMS

Component Cooling Water

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1E051.XLS	01	S02	C01	1	-0.1	13.2
SME1E051.XLS	01	S01	C01	4	-0.1	0.7
SME1E051.XLS	01	S01	C01	3	-0.1	0.7
SME1E051.XLS	01	S01	C01	2	-0.1	-5.5
SME1E051.XLS	01	S01	C01	1	-0.1	6.9
SME1E051.XLS	01	P05	C01	3	-0.1	13.2
SME1E051.XLS	01	P05	C01	2	-0.1	-5.5
SME1E051.XLS	01	P05	C01	1	-0.1	-5.5
SME1E051.XLS	01	P04	C01	3	-0.1	13.2
SME1E051.XLS	01	P04	C01	2	-0.1	13.2
SME1E051.XLS	01	P04	C01	1	-0.1	6.9
SME1E051.XLS	01	P03	C01	3	-0.1	0.7
SME1E051.XLS	01	P03	C01	2	-0.1	-5.5
SME1E051.XLS	01	P03	C01	1	-0.1	-5.5
SME1E051.XLS	01	P01	C01	3	-0.1	6.9
SME1E051.XLS	01	P01	C01	2	-0.1	13.2
SME1E051.XLS	01	P01	C01	1	-0.1	31.8
SME1E051.XLS	01	H02	C01	3	-0.1	0.7
SME1E051.XLS	01	H02	C01	2	-0.1	-5.5
SME1E051.XLS	01	H02	C01	1	-0.1	0.7
SME1E051.XLS	01	H01	C01	2	-0.1	-5.5
SME1E051.XLS	01	H01	C01	1	-0.1	-5.5

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
43 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/29/98 Removable Contamination

Survey Package : D1900 SYSTEMS

Component Cooling Water

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
3/5/98	SME1E051.XLS	1	15632	8/5/98	JWD
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/29/98 Removable Contamination - Tritium Activity

Survey Package : D1900 SYSTEMS

Component Cooling Water

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
D10	Hoppes patch	01	H01	C01	00001	38.4	***116.7***
D11	Hoppes patch	01	S01	C01	00001	38.4	8.7
D8	Hoppes patch	01	S02	C01	00001	38.4	**27.9**
D9	Hoppes patch	03	T02	C01	00001	38.4	-10.0

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/29/98 Removable Contamination - Tritium Activity

Survey Package : D1900 SYSTEMS

Component Cooling Water

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/29/98

Exposure Rate Measurements

Survey Package D1900 SYSTEMS

Component Cooling Water

STATISTICAL SUMMARY

	µR/hr
Mean	10.1
Maximum	12.8
Minimum	6.8
Standard Deviation	2.0

Samples Reported	9
Samples Prescribed	9

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES

9 RESULTS ARE GRAPHED

03/29/98 Exposure Rate Measurements

Survey Package: D1900 SYSTEMS

Component Cooling Water

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	RESULT
480 (2)	01	H01	G0031	C01	60.00	00001	9.8
480 (2)	01	H01	G0031	C01	60.00	00001	7.8
480 (2)	01	H01	G0031	C01	60.00	00002	12.2
480 (2)	01	H01	G0031	C01	60.00	00002	8.8
480 (2)	01	H01	G0031	C01	60.00	00003	12.8
480 (2)	01	H01	G0031	C01	60.00	00003	10.7
480 (2)	01	H01	G0031	C01	60.00	00004	11.7
480 (2)	01	H01	G0031	C01	60.00	00004	10.5
458 (2)	03	T02	G0031	C01	60.00	00001	6.8

NOTES: Exposure rates reported in net µR/hr. Count times are reported in seconds.
Underlined results did not meet the minimum required count time.
Bold values exceed 15 µR/hr.
9 results are listed.

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/29/98 Exposure Rate Measurements

Survey Package : D1900 SYSTEMS

Component Cooling Water

SURVEY DATE	FILE #	M2350 INST S/N	M2350 CAL DUE	DETECTOR MODEL	DETECTOR S/N	DETECTOR CAL DUE	TECHNICIAN
1/21/98	458 (2)	126182	3/22/98	44-2	128338	4/19/98	DRL7343
						CALIBRATION DATES VERIFIED AS ACCEPTABLE	
1/26/98	480 (2)	095348	3/20/98	44-2	PR091091	4/19/98	LKW7727
						CALIBRATION DATES VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/29/98

OUTPUT BATCH SN = 323

Survey Package D1900 SYSTEMS

Component Cooling Water

UNIT : 03 SURFACE : T02 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Tank
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD44	PET00022	0.9	1800	Co-57	< 41.6	41.6	0.0
				Co-60	< 55.1	55.1	0.0
				Cs-134	< 63.7	63.7	0.0
				Cs-137	< 73.8	73.8	0.0
				K-40	< 550.0	550.0	0.0
				Mn-54	< 53.3	53.3	0.0

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D2000

SYSTEMS

PACKAGE DESCRIPTION

Vacuum Priming and Ar Removal System

SURVEY AREA DESCRIPTION

Vacuum Priming and Air Removal System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Vacuum Priming and Air Removal System assisted the Circulating Water Pumps in developing sufficient discharge head to fill all the Main Condenser tubes and supply sufficient circulating water flow. It also removed air from the piping in the Circulating Water and Service Water Systems and established and maintained condenser vacuum by removal of air and noncondensible gases from the condenser shell.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 40 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 40 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 40 survey locations as for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 2 survey measurement locations indicated on the results listing report.

No exposure rate measurements were collected.

Collected 1 material sample (e.g., sludge, sediment, rust, etc.) from a valve for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

- o There was 1 direct measurement for total beta activity above MDA (Maximum MDA was 1256 dpm/100cm^2) and no results greater than 2000 dpm/100cm^2.
- o There were no measurements for removable beta activity above MDA (18 dpm/100cm^2).
- o There were no measurements for removable alpha activity above MDA (7 dpm/100cm^2).
- o There were no measurements for removable tritium activity above MDA (38.4 dpm/100cm^2).
- o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

REFERENCES (Documents, Interviews)

Maine Yankee Drawing 1150 - FM - 79 A
Operator System Training Manual, Chapter 49

SUMMARY OF SURVEY UNIT(S)

03/27/98

OUTPUT BATCH SN = 203

PACKAGE D2000 SYSTEMS

Vacuum Priming and Ar Removal System

UNIT(S)	SURFACE(S)
01 - 21' Turbine Building Components	D01 (Sight glass at AR-101 (crane bay, west wall)) D02 (Sight glass at AR-117 (crane bay, west wall)) M01 (6" collector at AR-149 (EJ-1A, crane bay)) M02 (6" collector at AR-150 (EJ-1B, crane bay)) P01 (Drain tap off separator at AR-100 (above CARDOX unit)) P02 (Separator at AR-114 (above CARDOX unit)) P03 (5" line at pump P-28A (north side)) P04 (5" line at pump P-28B (north side)) V01 (8" check valve AR-2 (north side, pump P-28A suction)) V02 (8" check valve AR-4 (north side, pump P-28B suction))
02 - 39' Turbine Building Components	M01 (8" vacuum breaker at AR-92) P01 (1" line at filter 1801A flow indicator (northeast, above air ejectors)) P02 (1" line at filter 1801B flow indicator (northeast, above air ejectors)) P03 (3" line at relief valve AR-S-93 (near air ejector EJ-1A)) P04 (3" line at relief valve AR-S-107 (near air ejector EJ-1B)) V01 (8" valve AR-125 (EJ-1A hogger suction)) V02 (8" valve AR-126 (EJ-1B hogger suction))
03 - 61' Turbine Building Components	M01 (Separator downstream of silencer SE (northeast corner)) P01 (Line at ARP-11 (west side)) T01 (Vacuum priming tank TK-23 (west side))

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package D2000 SYSTEMS

Vacuum Priming and Ar Removal System

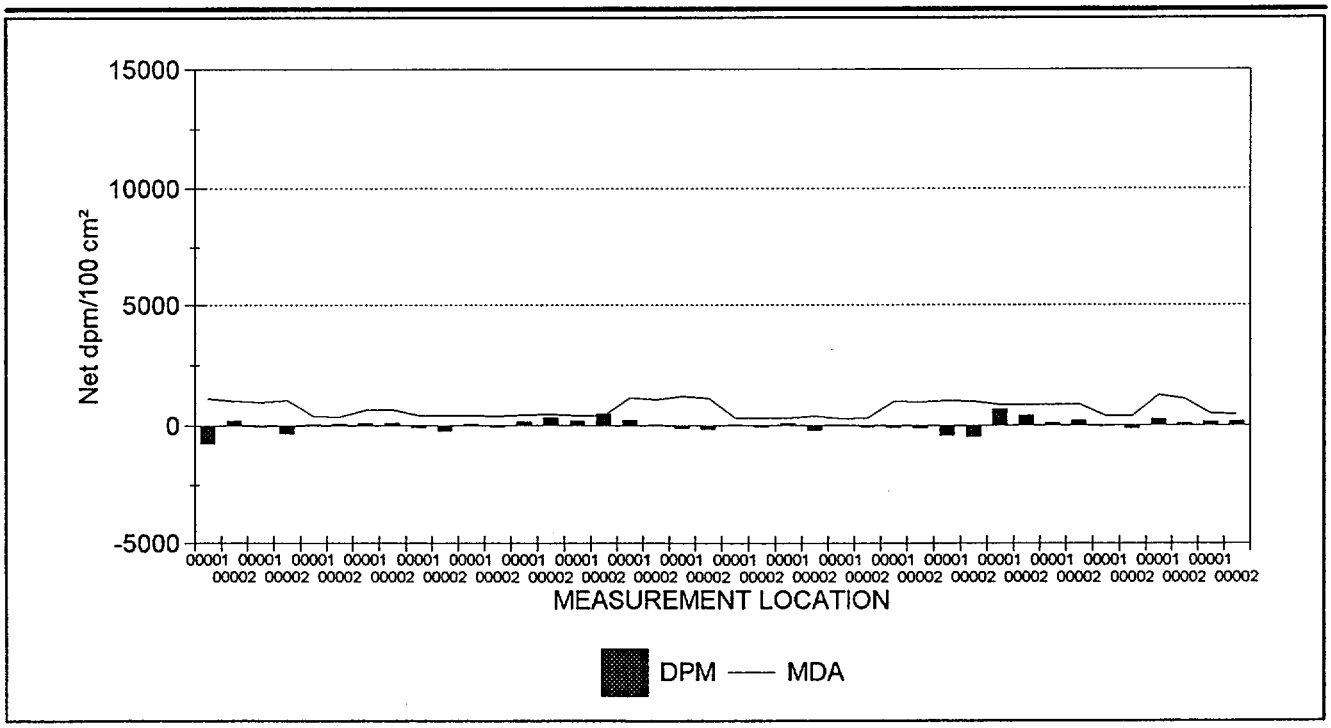
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	24.8
Maximum	672.1
Minimum	-749.6
Standard Deviation	257.8
MDA	1,255.5

Samples Reported	40
Samples Prescribed	40

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	YES
Results above 2000 net dpm/100 cm²	0
Number of results above MDA	1



40 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D2000 SYSTEMS

Vacuum Priming and Ar Removal System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
369 (2)	01	D01	B0031	C01	120	00001	1,118.6	-749.6
369 (2)	01	D01	B0031	C01	120	00002	1,009.4	206.8
369 (2)	01	D02	B0031	C01	120	00001	962.0	-25.8
369 (2)	01	D02	B0031	C01	120	00002	1,047.1	-336.0
382 (2)	01	M01	B0031	C01	300	00001	380.8	56.7
382 (2)	01	M01	B0031	C01	300	00002	373.1	81.0
399 (2)	01	M02	B0031	C01	300	00001	663.1	95.4
399 (2)	01	M02	B0031	C01	300	00002	644.1	115.9
382 (2)	01	P01	B0031	C01	300	00001	405.5	-89.1
382 (2)	01	P01	B0031	C01	300	00002	422.7	-230.9
382 (2)	01	P02	B0031	C01	300	00001	412.2	48.6
382 (2)	01	P02	B0031	C01	300	00002	401.4	-48.6
382 (2)	01	P03	B0031	C01	300	00001	433.7	166.1
382 (2)	01	P03	B0031	C01	300	00002	462.2	328.2
395 (2)	01	P04	B0031	C01	300	00001	424.3	198.1
395 (2)	01	P04	B0031	C01	300	00002	418.4	490.9
383 (2)	01	V01	B0031	C01	120	00001	1,148.9	231.9
383 (2)	01	V01	B0031	C01	120	00002	1,060.3	29.0
383 (2)	01	V02	B0031	C01	120	00001	1,190.5	-115.9
383 (2)	01	V02	B0031	C01	120	00002	1,131.7	-144.9
382 (2)	02	M01	B0031	C01	300	00001	309.0	32.4
382 (2)	02	M01	B0031	C01	300	00002	309.6	-44.6
419 (2)	02	P01	B0031	C01	180	00001	308.4	88.4
419 (2)	02	P01	B0031	C01	180	00002	384.7	-204.0
419 (2)	02	P02	B0031	C01	180	00001	296.1	20.4
419 (2)	02	P02	B0031	C01	180	00002	301.5	-54.4
403 (2)	02	P03	B0031	C01	300	00001	983.7	-72.4
403 (2)	02	P03	B0031	C01	300	00002	954.1	-103.5
403 (2)	02	P04	B0031	C01	300	00001	1,011.2	-413.9
403 (2)	02	P04	B0031	C01	300	00002	993.4	-476.0
369 (2)	02	V01	B0031	C01	120	00001	849.5	672.1
369 (2)	02	V01	B0031	C01	120	00002	849.5	413.6
369 (2)	02	V02	B0031	C01	120	00001	867.8	103.4
369 (2)	02	V02	B0031	C01	120	00002	849.5	206.8
382 (2)	03	M01	B0031	C01	300	00001	395.5	-16.2
382 (2)	03	M01	B0031	C01	300	00002	380.8	-141.8
420 (2)	03	P01	B0031	C01	120	00001	1,255.5	264.4
420 (2)	03	P01	B0031	C01	120	00002	1,102.6	88.1
393 (2)	03	T01	B0031	C01	20	00001	494.7	148.7
393 (2)	03	T01	B0031	C01	20	00002	472.6	173.4

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
40 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

04/01/98 Direct Measurements For Total Beta Activity

Survey Package : D2000 SYSTEMS

Vacuum Priming and Ar Removal System

SURVEY		M2350		DETECTOR			PRE	
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	EFF	TECHNICIAN
1/12/98	369 (2)	126198	3/22/98	44-40	PR091089	3/23/98	.12	KFS5185
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/13/98	382 (2)	117573	4/14/98	SP-175-3M	PR024349	5/4/98	.11	KFS5185
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/13/98	383 (2)	126182	3/22/98	44-40	PR095101	3/23/98	.11	KFS5185
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/14/98	393 (2)	126197	3/22/98	43-68	PR075064	3/30/98	.19	MAP5535
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/14/98	395 (2)	117573	4/14/98	SP-175-3M	PR024349	5/4/98	.10	KFS5185
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/15/98	399 (2)	095349	4/15/98	SP-175-3M	096135	4/28/98	.06	KFS5185
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/15/98	403 (2)	126195	5/7/98	43-98	117961	6/10/98	.02	LCF0451
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/16/98	419 (2)	129429	5/5/98	43-94	PR119461	5/5/98	.05	MAP5535
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		
1/16/98	420 (2)	126185	3/20/98	44-40	PR121903	3/22/98	.11	KFS5185
						CALIBRATION DATES VERIFIED AS ACCEPTABLE		

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Beta Activity

Survey Package D2000 SYSTEMS

Vacuum Priming and Ar Removal System

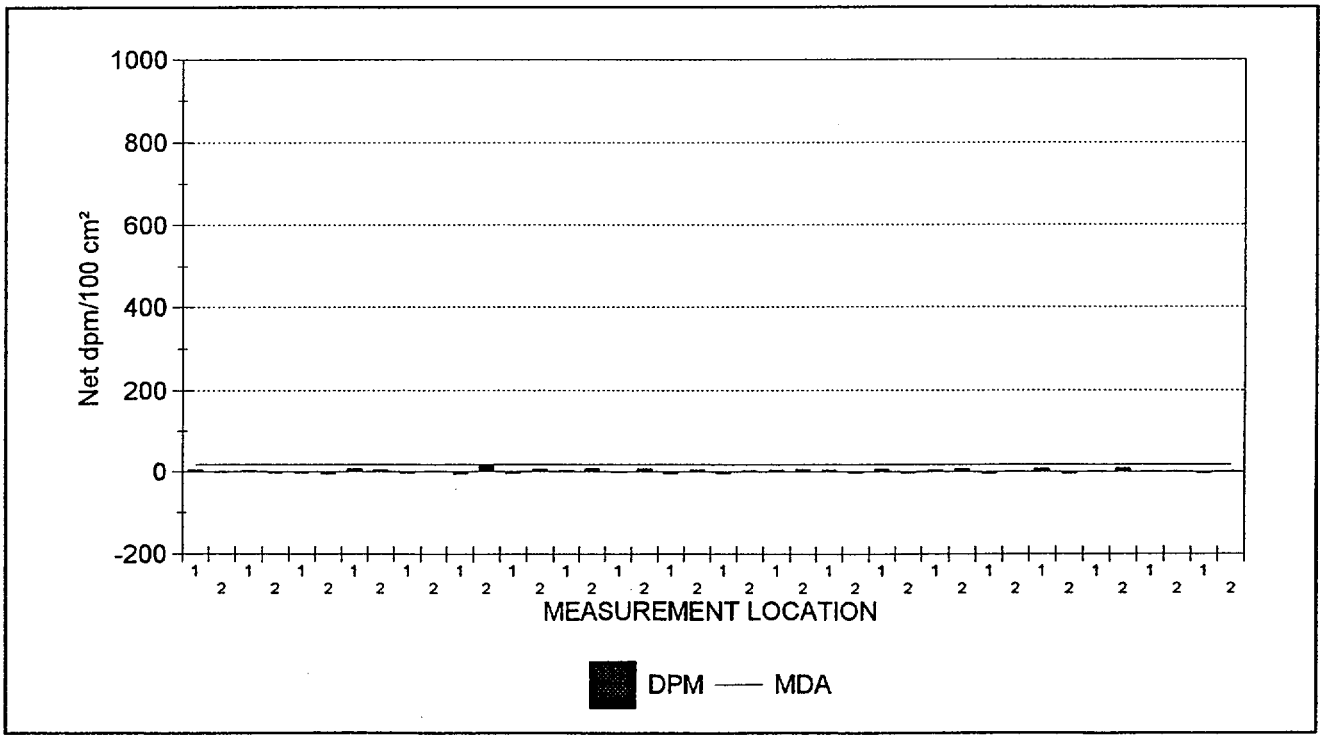
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	1.6
Maximum	14.2
Minimum	-5.9
Standard Deviation	4.8
MDA	18.0

Samples Reported	40
Samples Prescribed	42

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	0



40 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Alpha Activity

Survey Package D2000 SYSTEMS

Vacuum Priming and Ar Removal System

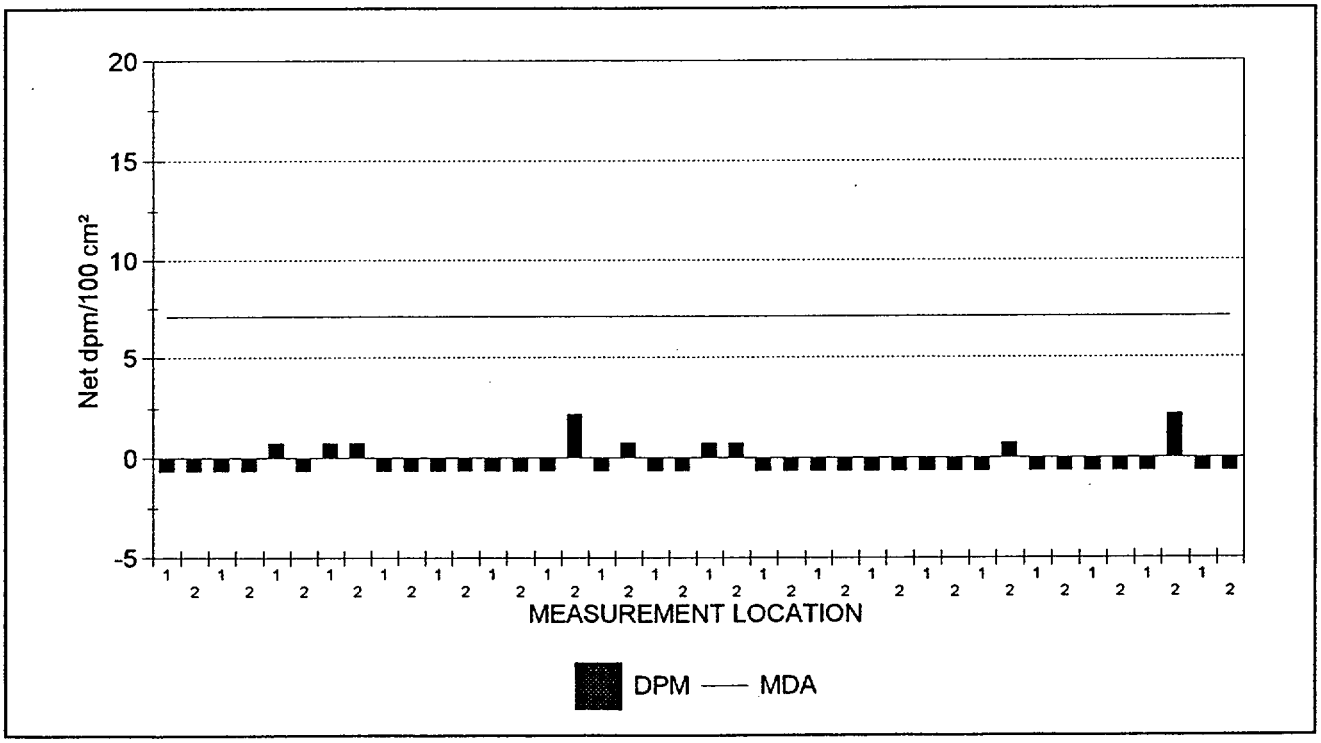
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	-0.3
Maximum	2.2
Minimum	-0.7
Standard Deviation	0.8
MDA	7.1

Samples Reported	40
Samples Prescribed	42

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



40 RESULTS ARE GRAPHED

03/27/98 Removable Contamination

Survey Package : D2000 SYSTEMS

Vacuum Priming and Ar Removal System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D049.XLS	03	T01	C01	2	-0.7	0.8
SME1D049.XLS	03	T01	C01	1	-0.7	-2.6
SME1D049.XLS	03	P01	C01	2	2.2	0.8
SME1D049.XLS	03	P01	C01	1	-0.7	0.8
SME1D049.XLS	03	M01	C01	2	-0.7	9.2
SME1D049.XLS	03	M01	C01	1	-0.7	0.8
SME1D049.XLS	02	V02	C01	2	-0.7	-4.3
SME1D049.XLS	02	V02	C01	1	-0.7	7.5
SME1D049.XLS	02	V01	C01	2	0.8	0.8
SME1D049.XLS	02	V01	C01	1	-0.7	-4.3
SME1D049.XLS	02	P04	C01	2	-0.7	7.5
SME1D049.XLS	02	P04	C01	1	-0.7	4.1
SME1D049.XLS	02	P03	C01	2	-0.7	-2.6
SME1D049.XLS	02	P03	C01	1	-0.7	5.8
SME1D049.XLS	02	P02	C01	2	-0.7	-2.6
SME1D049.XLS	02	P02	C01	1	-0.7	4.1
SME1D049.XLS	02	P01	C01	2	-0.7	5.8
SME1D049.XLS	02	P01	C01	1	-0.7	4.1
SME1D049.XLS	02	M01	C01	2	0.8	2.5
SME1D049.XLS	02	M01	C01	1	0.8	-4.3
SME1D049.XLS	01	V02	C01	2	-0.7	4.1
SME1D049.XLS	01	V02	C01	1	-0.7	-4.3
SME1D049.XLS	01	V01	C01	2	0.8	7.5
SME1D049.XLS	01	V01	C01	1	-0.7	-0.9
SME1D049.XLS	01	P04	C01	2	2.2	7.5
SME1D049.XLS	01	P04	C01	1	-0.7	2.5
SME1D049.XLS	01	P03	C01	2	-0.7	5.8
SME1D049.XLS	01	P03	C01	1	-0.7	-4.3
SME1D049.XLS	01	P02	C01	2	-0.7	14.2
SME1D049.XLS	01	P02	C01	1	-0.7	-5.9
SME1D049.XLS	01	P01	C01	2	-0.7	0.8
SME1D049.XLS	01	P01	C01	1	-0.7	-2.6
SME1D049.XLS	01	M02	C01	2	0.8	4.1
SME1D049.XLS	01	M02	C01	1	0.8	7.5
SME1D049.XLS	01	M01	C01	2	-0.7	-5.9
SME1D049.XLS	01	M01	C01	1	0.8	-2.6
SME1D049.XLS	01	D02	C01	2	-0.7	-2.6
SME1D049.XLS	01	D02	C01	1	-0.7	2.5
SME1D049.XLS	01	D01	C01	2	-0.7	-0.9
SME1D049.XLS	01	D01	C01	1	-0.7	4.1

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
40 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/27/98 Removable Contamination

Survey Package : D2000 SYSTEMS

Vacuum Priming and Ar Removal System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/19/98	SME1D049.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D2000 SYSTEMS

Vacuum Priming and Ar Removal System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
D12	Hoppes patch	03	T01	C01	00001	38.4	10.3
H061	Whatman smear	02	V02	C01	00001	7.8	15.2

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

DURATEK

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/27/98

Removable Contamination - Tritium Activity

Survey Package : D2000 SYSTEMS

Vacuum Priming and Ar Removal System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/28/98 OUTPUT BATCH SN = 219

Survey Package D2000 SYSTEMS

Vacuum Priming and Ar Removal System

UNIT : 02 SURFACE : V02 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Valve
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYD53	PET00027	1.5	1800	Co-57	< 25.7	25.7	0.0
				Co-60	< 38.1	38.1	0.0
				Cs-134	< 39.8	39.8	0.0
				Cs-137	< 32.1	32.1	0.0
				K-40	< 439.0	439.0	0.0
				Mn-54	< 44.1	44.1	0.0

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D2100

SYSTEMS

PACKAGE DESCRIPTION

Amertap System

SURVEY AREA DESCRIPTION

Amertap System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

There are two separate Amertap Systems. One cleaned the Main Condenser and one the Component Cooling Water Heat Exchangers. The Circulating Water Amertap System cleaned the circulating water side of the Main Condenser tubes. The Component Cooling Water Amertap system cleaned the service water side of the Primary and Secondary Component Cooling Heat Exchangers.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 32 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 32 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 32 survey location for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 2 survey measurement locations indicated on the results listing report.

Collected 2 material samples (e.g., sludge, sediment, rust, etc.) from the sumps, drains for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

- o There were 2 direct measurements for total beta activity above MDA (Maximum MDA was 1200 dpm/100cm²) and no results greater than 2000 dpm/100cm². The maximum measurement result was 1,880 dpm/100cm².
- o There were no measurements for removable beta activity above MDA (18 dpm/100cm²).
- o There were no measurements for removable alpha activity above MDA (7 dpm/100cm²).
- o There was 1 measurement for removable tritium activity above MDA (8 dpm/100cm²). The maximum measurement result was 17.7 dpm/100cm².
- o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

REFERENCES (Documents, Interviews)

Maine Yankee Drawing 1150 - FM - 77 A, B
Operator System Training Manual, Chapter 47

SUMMARY OF SURVEY UNIT(S)

03/27/98 OUTPUT BATCH SN = 297

PACKAGE D2100 SYSTEMS

Amertap System

UNIT(S)	SURFACE(S)
01 - 21' Turbine Building Components	M01 (Circ water Amertap ball collector basket AMT-1 (west of condenser)) M02 (Circ water Amertap ball collector basket AMT-2 (west of condenser)) M03 (Circ water Amertap ball collector basket AMT-3 (west of condenser)) M04 (Circ water Amertap ball collector basket AMT-4 (west of condenser)) M05 (Service water Amertap ball collector basket AMT-5 (west of condenser)) P01 (3" spoolpiece downstream of valve AT-10 (east side, crane bay area)) P02 (3" line at valve AT-4 (west of condenser)) P03 (3" spoolpiece at valve AT-20 (east side, crane bay area)) P04 (3" line at valve AT-14 (west of condenser)) P05 (3" spoolpiece downstream of valve AT-30 (east side, crane bay area)) P06 (3" line at valve AT-24 (west of condenser)) P07 (3" spoolpiece downstream of valve AT-40 (east side, crane bay area)) P08 (3" line at valve AT-34 (west of condenser)) P09 (3" line at service water ball distributer (above E4-A)) P10 (3" line at valve SW-175 (below E-4A outlet)) P11 (3" line at valve SW-176 (below E-5B outlet))

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0
B0051	Material code not located	0.0

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Direct Measurements For Total Beta Activity

Survey Package D2100 SYSTEMS

Amertap System

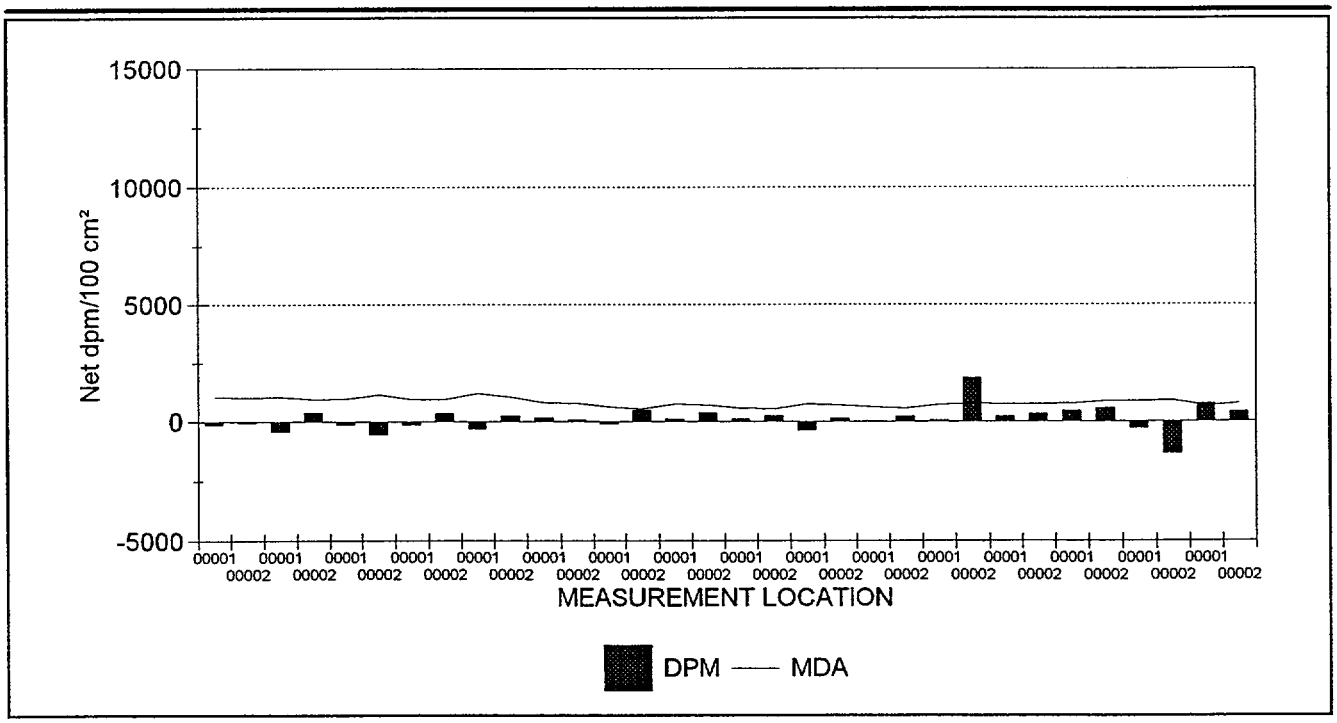
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	107.5
Maximum	1,880.2
Minimum	-1,347.6
Standard Deviation	507.5
MDA	1,199.8

Samples Reported	32
Samples Prescribed	32

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	YES
Results above 2000 net dpm/100 cm²	0
Number of results above MDA	2



32 RESULTS ARE GRAPHED

03/27/98

Direct Measurements For Total Beta Activity

Survey Package: D2100 SYSTEMS

Amertap System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
154 (2)	01	M01	B0031	C01	120	00001	1,051.6	-141.3
154 (2)	01	M01	B0031	C01	120	00002	1,015.4	-56.5
154 (2)	01	M02	B0031	C01	120	00001	1,051.6	-423.8
154 (2)	01	M02	B0031	C01	120	00002	928.6	367.3
154 (2)	01	M03	B0031	C01	120	00001	968.2	-141.3
154 (2)	01	M03	B0031	C01	120	00002	1,152.7	-536.9
154 (2)	01	M04	B0031	C01	120	00001	928.6	-141.3
154 (2)	01	M04	B0031	C01	120	00002	928.6	339.1
154 (2)	01	M05	B0031	C01	120	00001	1,199.8	-310.8
154 (2)	01	M05	B0031	C01	120	00002	1,051.6	226.0
171 (2)	01	P01	B0031	C01	300	00001	786.5	144.6
171 (2)	01	P01	B0031	C01	300	00002	752.2	82.6
178 (2)	01	P02	B0051	C01	300	00001	587.7	-109.0
178 (2)	01	P02	B0051	C01	300	00002	519.1	455.8
171 (2)	01	P03	B0031	C01	300	00001	721.2	93.0
171 (2)	01	P03	B0031	C01	300	00002	683.5	361.6
178 (2)	01	P04	B0051	C01	300	00001	556.5	99.1
178 (2)	01	P04	B0051	C01	300	00002	529.8	227.9
171 (2)	01	P05	B0031	C01	300	00001	739.3	-371.9
171 (2)	01	P05	B0031	C01	300	00002	688.8	134.3
178 (2)	01	P06	B0051	C01	300	00001	595.3	29.7
178 (2)	01	P06	B0051	C01	300	00002	558.5	198.2
171 (2)	01	P07	B0031	C01	300	00001	707.8	41.3
171 (2)	01	P07	B0031	C01	300	00002	753.8	1,880.2
171 (2)	01	P08	B0051	C01	300	00001	737.7	206.6
171 (2)	01	P08	B0051	C01	300	00002	724.5	299.6
178 (2)	01	P09	B0051	C01	300	00001	763.1	445.9
178 (2)	01	P09	B0051	C01	300	00002	846.4	554.9
178 (2)	01	P10	B0051	C01	300	00001	863.1	-297.3
178 (2)	01	P10	B0051	C01	300	00002	891.8	-1,347.6
178 (2)	01	P11	B0051	C01	300	00001	653.9	743.2
178 (2)	01	P11	B0051	C01	300	00002	750.0	386.4

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
32 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DOWNLOAD FILE & SURVEY INSTRUMENTATION CALIBRATION SUMMARY

03/27/98 Direct Measurements For Total Beta Activity

Survey Package : D2100 SYSTEMS

Amertap System

SURVEY		M2350		DETECTOR			PRE	
DATE	FILE #	INST S/N	CAL DUE	MODEL	S/N	CAL DUE	EFF	TECHNICIAN
12/16/97	154 (2)	095348	3/20/98	44-40	PR119456	3/22/98	.11	DRL7343
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/17/97	171 (2)	095349	4/15/98	SP-113-3M	PR241133	5/4/98	.10	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	
12/18/97	178 (2)	095349	4/15/98	SP-113-3M	PR241133	5/4/98	.10	LCF0451
							CALIBRATION DATES VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Beta Activity

Survey Package D2100 SYSTEMS

Amertap System

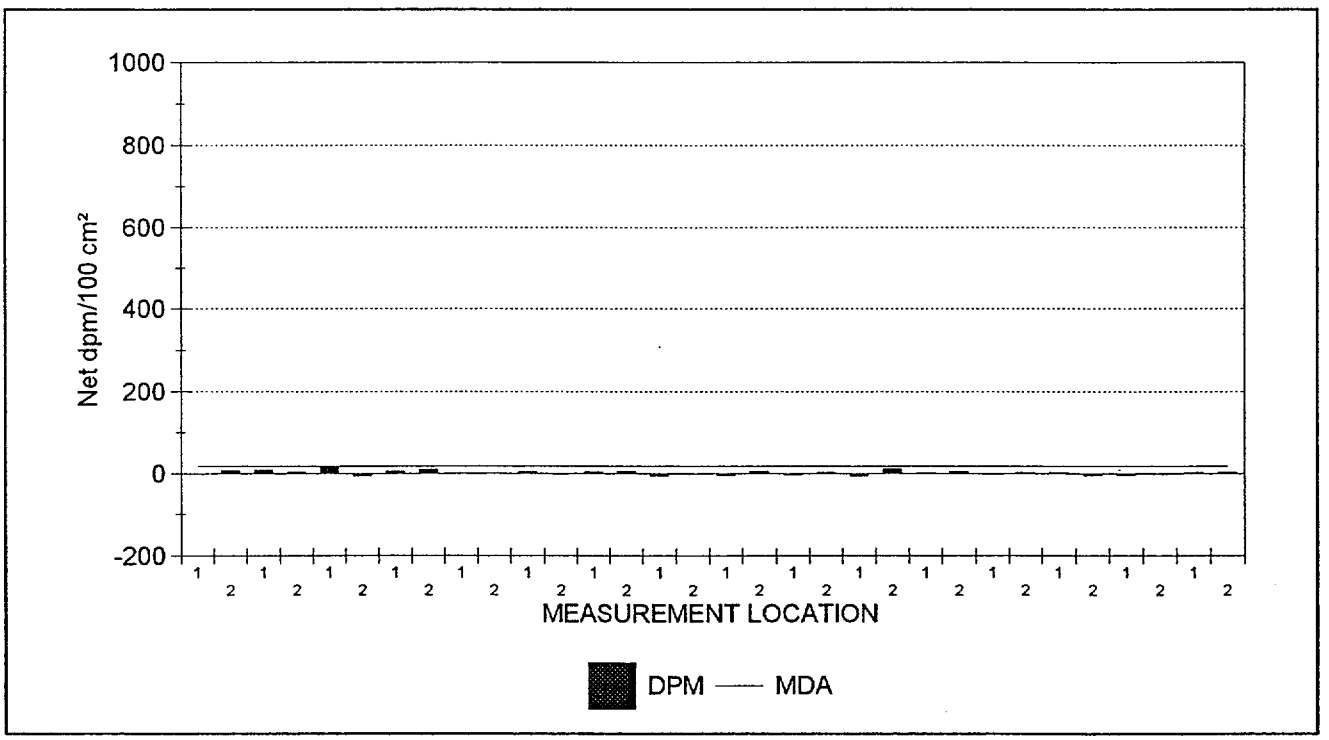
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	2.2
Maximum	15.9
Minimum	-5.9
Standard Deviation	5.4
MDA	18.0

Samples Reported	32
Samples Prescribed	34

TESTS PERFORMED

MDA <100 net dpm/100 cm²	YES
Results above 100 net dpm/100 cm²	0
Number of results above MDA	0



32 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

03/27/98

Removable Contamination - Gross Alpha Activity

Survey Package D2100 SYSTEMS

Amertap System

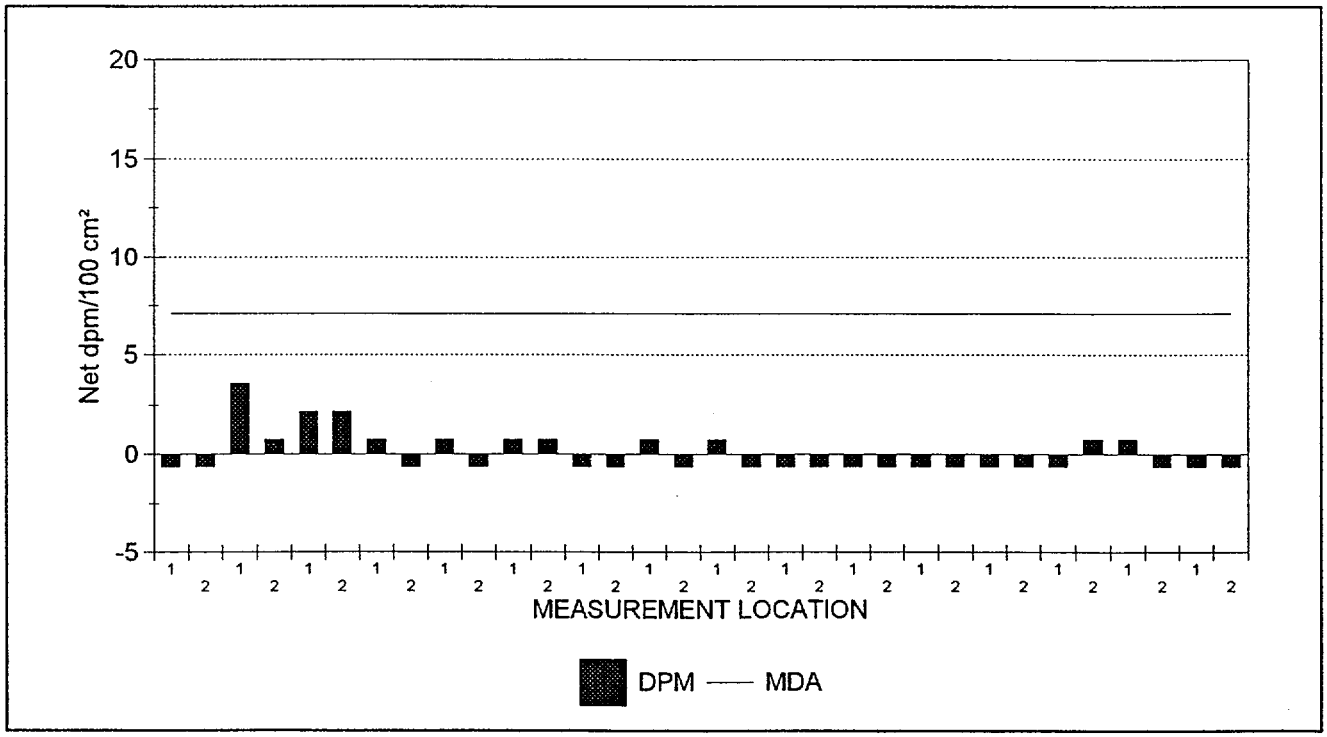
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	0.1
Maximum	3.6
Minimum	-0.7
Standard Deviation	1.1
MDA	7.1

Samples Reported	32
Samples Prescribed	34

TESTS PERFORMED

MDA <10 net dpm/100 cm²	YES
Results above 20 net dpm/100 cm²	0
Number of results above MDA	0



32 RESULTS ARE GRAPHED

03/27/98 Removable Contamination

Survey Package: D2100 SYSTEMS

Amertap System

RESULTS LISTING - SORTED BY SURFACE CODE

XLS FILE	UNIT	SURFACE	REASON	MSRMNT LOCATION	ALPHA	BETA
SME1D050.XLS	01	P11	C01	2	-0.7	2.5
SME1D050.XLS	01	P11	C01	1	-0.7	2.5
SME1D050.XLS	01	P10	C01	2	-0.7	-0.9
SME1D050.XLS	01	P10	C01	1	0.8	-4.3
SME1D050.XLS	01	P09	C01	2	0.8	-4.3
SME1D050.XLS	01	P09	C01	1	-0.7	2.5
SME1D050.XLS	01	P08	C01	2	-0.7	2.5
SME1D050.XLS	01	P08	C01	1	-0.7	-0.9
SME1D050.XLS	01	P07	C01	2	-0.7	5.8
SME1D050.XLS	01	P07	C01	1	-0.7	0.8
SME1D050.XLS	01	P06	C01	2	-0.7	12.6
SME1D050.XLS	01	P06	C01	1	-0.7	-5.9
SME1D050.XLS	01	P05	C01	2	-0.7	2.5
SME1D050.XLS	01	P05	C01	1	-0.7	-2.6
SME1D050.XLS	01	P04	C01	2	-0.7	5.8
SME1D050.XLS	01	P04	C01	1	0.8	-4.3
SME1D050.XLS	01	P03	C01	2	-0.7	-0.9
SME1D050.XLS	01	P03	C01	1	0.8	-5.9
SME1D050.XLS	01	P02	C01	2	-0.7	5.8
SME1D050.XLS	01	P02	C01	1	-0.7	4.1
SME1D050.XLS	01	P01	C01	2	0.8	-0.9
SME1D050.XLS	01	P01	C01	1	0.8	4.1
SME1D050.XLS	01	M05	C01	2	-0.7	0.8
SME1D050.XLS	01	M05	C01	1	0.8	0.8
SME1D050.XLS	01	M04	C01	2	-0.7	10.9
SME1D050.XLS	01	M04	C01	1	0.8	5.8
SME1D050.XLS	01	M03	C01	2	2.2	-5.9
SME1D050.XLS	01	M03	C01	1	2.2	15.9
SME1D050.XLS	01	M02	C01	2	0.8	4.1
SME1D050.XLS	01	M02	C01	1	3.6	9.2
SME1D050.XLS	01	M01	C01	2	-0.7	7.5
SME1D050.XLS	01	M01	C01	1	-0.7	-0.9

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 100.00 dpm/100 cm² (beta activity) and/or 20.00 dpm/100 cm² (alpha activity).
32 results are listed.

Maine Yankee Atomic Power Plant Site Characterization

DATAFILE & TENNELEC CALIBRATION SUMMARY

03/27/98

Removable Contamination

Survey Package : D2100 SYSTEMS

Amertap System

SURVEYDATE	XLS FILE	INST ID	S/N	CAL DUE	LAB TECHNICIAN
2/19/98	SME1D050.XLS	1	14131	8/7/98	SMM
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

03/27/98 Removable Contamination - Tritium Activity

Survey Package: D2100 SYSTEMS

Amertap System

RESULTS LISTING - SORTED BY SURFACE CODE

SAMPLE ID	SAMPLE TYPE	UNIT	SURF	REASN	MSRMNT LOCATION	MDA	TRITIUM ACTIVITY
H062	Whatman smear	01	P06	C01	00001	7.8	17.7
H063	Whatman smear	01	P11	C01	00001	7.8	2.7

NOTES: Activity reported in net dpm/100 cm².
Underlined values exceed the associated MDA.
Bold values exceed 25 dpm/100 cm²,
Italic values exceed 100 dpm/100 cm².

Maine Yankee Atomic Power Plant Site Characterization

LIQUID SCINTILLATION COUNTER CALIBRATION SUMMARY

03/27/98 Removable Contamination - Tritium Activity

Survey Package : D2100 SYSTEMS

Amertap System

SURVEYDATE	INSTRUMENT	MODEL	S/N	CAL DUE	LAB TECHNICIAN
2/1/98	Packard	2750	416221	6/16/98	LDT
				CALIBRATION DATE VERIFIED AS ACCEPTABLE	

Maine Yankee Atomic Power Plant Site Characterization

GAMMA SPECTRAL ANALYSIS RESULTS LISTING

03/28/98 OUTPUT BATCH SN = 220

Survey Package D2100 SYSTEMS

Amertap System

UNIT : 01 SURFACE : M01 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Misc component
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYX03	BIO00015	295.0	1200	Co-57	< .1	0.1	0.0
				Co-60	< .1	0.1	0.0
				Cs-134	< .1	0.1	0.0
				Cs-137	< .1	0.1	0.0
				K-40	< 1.1	1.1	0.0
				Mn-54	< .1	0.1	0.0

UNIT : 01 SURFACE : M05 REASON : C01

SAMPLE TYPE OR SURFACE SAMPLED: Misc component
SAMPLE LOCATOR: 00001

LAB ID	SPECTRUM	MASS (grams)	COUNT TIME (seconds)	NUCLIDE	ACTIVITY (pCi/g)	MDA (pCi/g)	ERROR (± pCi/g)
MYX02	BIO00016	475.0	1200	Co-57	< .1	0.1	0.0
				Co-60	< .1	0.1	0.0
				Cs-134	< .1	0.1	0.0
				Cs-137	< .1	0.1	0.0
				K-40	< 1.3	1.3	0.0
				Mn-54	< .1	0.1	0.0

04/01/98

CHARACTERIZATION SUMMARY

SURVEY PACKAGE NUMBER :D2200

SYSTEMS

PACKAGE DESCRIPTION

Secondary Plant Sealing System

SURVEY AREA DESCRIPTION

Secondary Plant Sealing System

GENERAL HISTORICAL INFORMATION (Operational history, etc.)

The Secondary Plant Sealing System supplied seal water to shaft seals on various secondary plant pumps and stem seals on nonreturn valves in the extraction steam and heater drain systems.

In December of 1990, a leak from Steam Generator E-1-1 caused the plant to shut down. The leak rate, at the time of the shut down, was approximately 60 gallons per hour. The leak had existed for several months.

SUMMARY OF CHARACTERIZATION ACTIVITIES

Survey units were established for the areas as shown in the following Summary of Survey Units. System diagrams with the survey measurement locations for this package are included in Appendix B, Unaffected Systems Diagrams.

Performed a scan of accessible surfaces up to a maximum area of one square meter at 31 survey measurement locations indicated on the appropriate survey diagram(s).

Collected direct measurements for total beta activity at 31 survey measurement locations at the highest location identified in the scan. If an elevated location was not observed, the measurement was collected at an arbitrary location, selected by the technician, within the scanned area.

Collected smear samples to analyze for removable alpha and beta activity at the same 31 survey locations as for direct measurements for total beta activity.

Collected smear samples to analyze for removable tritium activity at 3 survey measurement locations indicated on the results listing report.

Collected 1 material sample (e.g., sludge, sediment, rust, etc.) from the tank for gamma spectral analysis.

The survey result statistical summaries, graphs and results listings are shown in the following individual reports including calibration summaries for the instruments used for each measurement type.

CHARACTERIZATION SURVEY RESULTS

- o There were no direct measurements for total beta activity above MDA (Maximum MDA was 1067 dpm/100cm^2).
- o There were no measurements for removable beta activity above MDA (18 dpm/100cm^2).
- o There were no measurements for removable alpha activity above MDA (7 dpm/100cm^2).
- o There was 1 measurement for removable tritium activity above MDA (8 dpm/100cm^2) and no result greater than 100 dpm/100cm^2. The maximum measurement result was 8.7 dpm/100cm^2.
- o The sample(s) gamma spectral analysis results indicated no plant-derived radionuclide activity above MDA.

REFERENCES (Documents, Interviews)

Maine Yankee Drawing 1150 - FM - 85 A

Operator System Training Manual, Chapter 50

SUMMARY OF SURVEY UNIT(S)

03/27/98

OUTPUT BATCH SN = 204

PACKAGE D2200 SYSTEMS

Secondary Plant Sealing System

UNIT(S)	SURFACE(S)
01 - Turbine Building 21'	P01 (1" line at SSL-156 (electric S/G feed pump P-2A inboard vent)) P02 (1" line at FW-45 (electric S/G feed pump P-2A outboard vent)) P03 (4" line at valve SSL-76 at seal water return pump P-76) P04 (3" line at valve SSL-A-79) P05 (3" line at check valve SSL-1 (condensate pit)) P06 (3" line at check valve SSL-3 (condensate pit)) P07 (2" line at valves SSL-119 & 120 (southeast by stairs)) P08 (1" line at valve SSL-52 (southeast corner on platform)) S01 (Supply filter FL-46A) S02 (Supply filter FL-46B) S03 (Strainer STR-13 (north of southwest stairs by P-62A)) S04 (Strainer STR-14 (north of southwest stairs by P-62A)) T01 (Seal water receiver TK-35 (middle area column T8)) V01 (Check valve SSL-77 (next to tank TK-35))
02 - Turbine Building 39'	P01 (1" line at check valve SSL-55 (southwest stairs, 2nd platform, over handrail))

REASON(S) CHARACTERIZATION SURVEY (C01)

MATERIALS

MAT'L CODE	MATERIAL DESCRIPTION	BETA BKGD (dpm/100 cm²)
B0031	METAL - BARE	0.0

Radiological Engineering & Field Services

DURATEK

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package D2200 SYSTEMS

Secondary Plant Sealing System

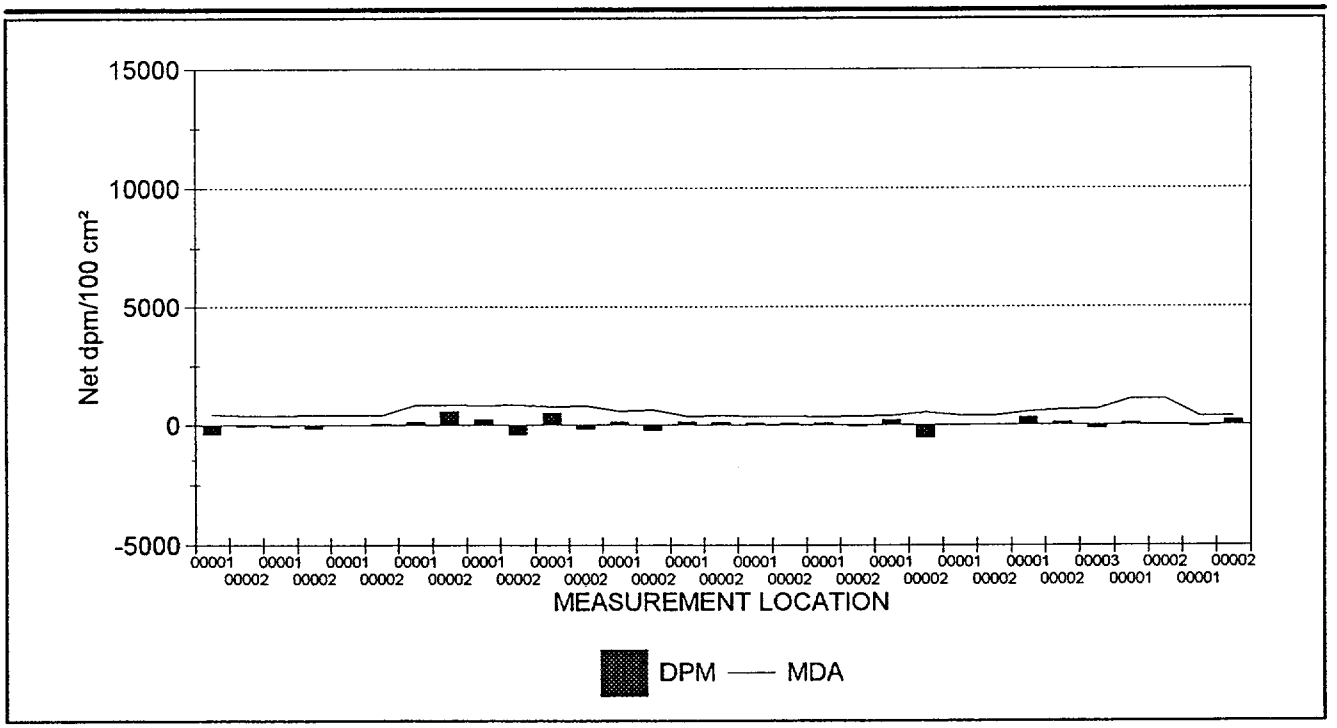
STATISTICAL SUMMARY

	Net dpm/100 cm²
Mean	23.3
Maximum	582.0
Minimum	-556.4
Standard Deviation	237.8
MDA	1,067.3

Samples Reported	31
Samples Prescribed	31

TESTS PERFORMED

Samples reported satisfy samples prescribed	YES
MDA <2000 net dpm/100 cm²	YES
Results above 2000 net dpm/100 cm²	0
Number of results above MDA	0



31 RESULTS ARE GRAPHED

Maine Yankee Atomic Power Plant Site Characterization

04/01/98

Direct Measurements For Total Beta Activity

Survey Package : D2200 SYSTEMS

Secondary Plant Sealing System

RESULTS LISTING - SORTED BY SURFACE CODE

FILE #	UNIT	SURFACE	MATERIAL	REASON	COUNT TIME	MSRMNT LOCATION	MDA	RESULT
278 (2)	01	P01	B0031	C01	180	00001	437.4	-380.3
278 (2)	01	P01	B0031	C01	180	00002	397.0	-49.3
278 (2)	01	P02	B0031	C01	180	00001	394.1	-84.5
278 (2)	01	P02	B0031	C01	180	00002	410.9	-147.9
293 (2)	01	P03	B0031	C01	300	00001	427.1	0.0
293 (2)	01	P03	B0031	C01	300	00002	427.6	62.8
287 (2)	01	P04	B0031	C01	600	00001	829.8	129.9
287 (2)	01	P04	B0031	C01	600	00002	830.5	582.0
287 (2)	01	P05	B0031	C01	600	00001	800.9	233.9
287 (2)	01	P05	B0031	C01	600	00002	820.4	-405.3
287 (2)	01	P06	B0031	C01	600	00001	761.7	504.1
287 (2)	01	P06	B0031	C01	600	00002	787.8	-171.5
298 (2)	01	P07	B0031	C01	180	00001	571.4	141.5
298 (2)	01	P07	B0031	C01	180	00002	628.3	-238.3
278 (2)	01	P08	B0031	C01	180	00001	358.0	133.8
278 (2)	01	P08	B0031	C01	180	00002	378.0	105.6
293 (2)	01	S01	B0031	C01	300	00001	358.5	87.9
293 (2)	01	S01	B0031	C01	300	00002	375.6	67.0
293 (2)	01	S02	B0031	C01	300	00001	344.6	87.9
293 (2)	01	S02	B0031	C01	300	00002	373.0	-62.8
278 (2)	01	S03	B0031	C01	180	00001	379.5	204.2
278 (2)	01	S03	B0031	C01	180	00002	517.1	-556.4
278 (2)	01	S04	B0031	C01	180	00001	392.7	-14.1
278 (2)	01	S04	B0031	C01	180	00002	394.1	-7.0
296 (2)	01	T01	B0031	C01	15	00001	559.2	321.0
296 (2)	01	T01	B0031	C01	15	00002	628.0	107.0
296 (2)	01	T01	B0031	C01	15	00003	640.7	-152.9
297 (2)	01	V01	B0031	C01	120	00001	1,067.3	82.6
297 (2)	01	V01	B0031	C01	120	00002	1,067.3	0.0
278 (2)	02	P01	B0031	C01	180	00001	370.5	-70.4
278 (2)	02	P01	B0031	C01	180	00002	376.5	211.3

NOTES: Activity reported in net dpm/100 cm². Count times are reported in seconds.
Underlined values exceed the MDA.
Bold values exceed 2000 dpm/100 cm².
31 results are listed.