MILLSTONE POINT SITE

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

ANNUAL ENVIRONMENTAL OPERATING REPORT

PART B

PERIOD JANUARY 1, 1984 - DECEMBER 31, 1984

MILLSTONE UNIT 1, DOCKET NO. 50-245
MILLSTONE UNIT 2, DOCKET NO. 50-336

PREPARED FOR THE

NORTHEAST NUCLEAR ENERGY COMPANY
HARTFORD, CONNECTICUT

BY THE

NORTHEAST UTILITIES SERVICE COMPANY
BERLIN, CONNECTICUT

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TABLE OF CONTENTS

1.0 SUMMARY

The radiological environmental monitoring program for the Millstone Nuclear Power Station was continued for the period January through December 1984, in compliance with the Environmental Technical Specification, Section 3.2. This annual report was prepared for the Northeast Nuclear Energy Company (NNECO) by the Radiological Assessment Branch of the Northeast Utilities Service Company (NUSCO). Gamma exposure measurements were performed by NUSCO and tritium analyses were performed by Teledyne Isotopes, Inc. All the remaining analyses were performed by Chemical Waste Management of Massachusetts, Inc. Yankee Atomic Electric Company was used as an independent check on the primary contractors' laboratories as part of the overall quality assurance program.

Sampling and radiological analyses were performed with gamma exposure measuring devices and on air particulates and iodine, soil, milk, pasture grass, well water, fruits, vegetables, seawater, bottom sediment, aquatic flora, finfish, mussels, oysters, clams, scallops, lobsters, and crabs. In evaluating the results of these analyses it is necessary to consider the variability of radionuclide uptake in environmental media. This variability is dependent on many factors, including plant release rates, seasonal variability of fallout, locational variability of fallout, soil characteristics, farming practices, and feed type. Significant variations in measured levels of radioactivity could be caused by any one of these factors. Therefore, these factors need to be considered in order to properly explain any variations.

The predominant radioactivity, indicated by the results, was from nonplant sources such as fallout from nuclear weapons tests and from naturally occurring radionuclides. In the case of the terrestrial media, plant related radioactivity above the minimum detectable levels, was observed in gamma exposure measurements at some of the onsite locations and in some of the goat milk samples. The gamma exposure measurements indicate an effect from Unit I via the direct dose pathway (i.e., scattered radiation, "skyshine", from nitrogen-16 in the turbine building; unique to Boiling Water Reactors). This effect is seen by the decrease in the thermoluminescent dosimeter (TLD) values for the months of May and June, the period when Unit I was shut down for refueling. This direct dose pathway decreases rapidly with distance, to levels that are undetectable at the offsite locations. The gaseous releases have been reduced such that they are no longer detectable by TLD's at any onsite or offsite location. Gaseous releases of iodine, however, are still detectable in milk at the nearest offsite goat location.

Monitoring of the aquatic environment in the area of the discharge indicated the presence of the following plant related radionuclides: cobalt-58 and cobalt-60 in aquatic flora; cesium-134, cesium-137, and cobalt-60 in eels; cobalt-60, zinc-65, and silver-110m in oysters; cobalt-60 in clams; cobalt-60 and silver-110m in crabs; and cobalt-60 and silver-110m in lobsters. Except for cobalt-60 in

aquatic flora, the levels of these radionuclides were similar to the levels observed for the last five years. Increased levels of Co-60 in aquatic flora have been observed for the past two years. All activity levels were below those of the higher discharge period of 1974-1975 (before the augumented liquid radwaste treatment system).

As usual, cesium-137 and strontium-90 were measured in both cow and goat milk. These levels are a result of nuclear weapons testing in the 1960's and not a result of plant operation. This can be concluded based on the facts that: insufficient quantities (at least 1000 times less) of these isotopes have been released by the plant to account for the measured concentrations, plant related strontium-89 which is chemically similar to Sr-90 and released in about equal or larger quantities from the plants can not be detected and comparable levels of cesium-137 and strontium-90 were detected prior to initial station operation.

The radiation dose to the general public from the station's discharges has been evaluated by two methods. One method utilizes the measured station's discharges and conservative transport models and the other utilizes the measured concentrations of radioactivity in the environmental media. The maximum whole body dose (at the station boundary) that could occur to a member of the general public as a result of the station operation was 1.5 millirem. This includes a contribution of 1.3 millirem from "skyshine" and 0.2 millirem from station effluents. The average whole body dose to an individual residing within 50 miles of the station was 0.00086 millirem. These doses are 6.0 percent and 0.0034 percent of the standards as set by the U.S. Environmental Protection Agency on the maximum allowable dose to an individual of the general public. These standards are a small fraction (20 percent) of the 125 mrem per year normal background radiation and are designed to be inconsequential in regard to public health and safety. Plant related doses are even a smaller fraction of the natural background; they are less than 10 percent of the variation in natural background in Connecticut. Therefore, for the above stated reasons the plant related doses have insignificant public health consequences.

2.0 PROGRAM DESCRIPTION

2.1 Sampling Schedule and Locations

The sample locations and the sample types and frequency of analysis are given in Table 2-1 and 2-2 and Figures 2.1, 2.2 and 2.3. The program as described here is that which is required by Environmental Technical Specification 3.2.

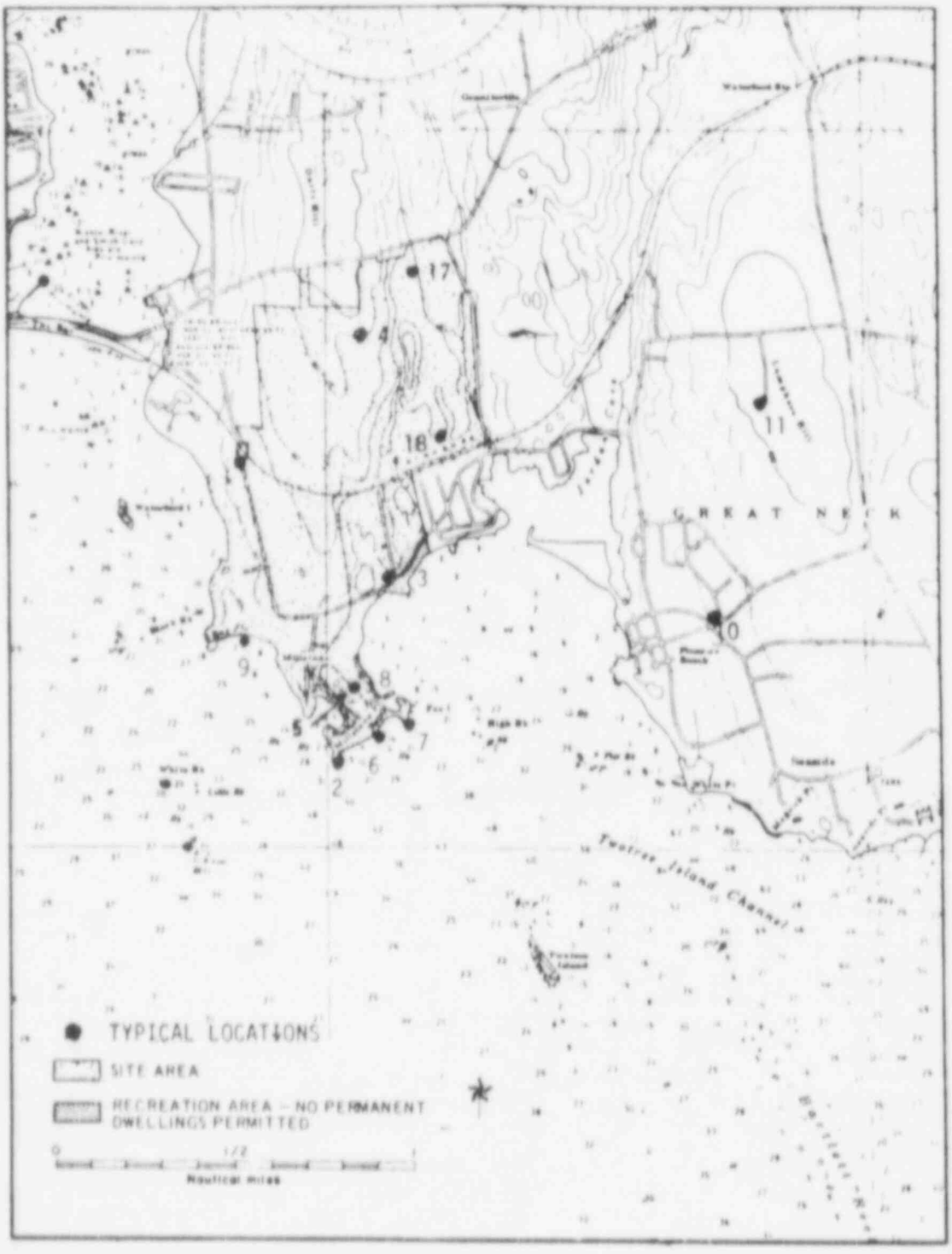

FIGURE 2.1
Inner Terrestrial Monitoring Stations
Millstone Nuclear Power Station

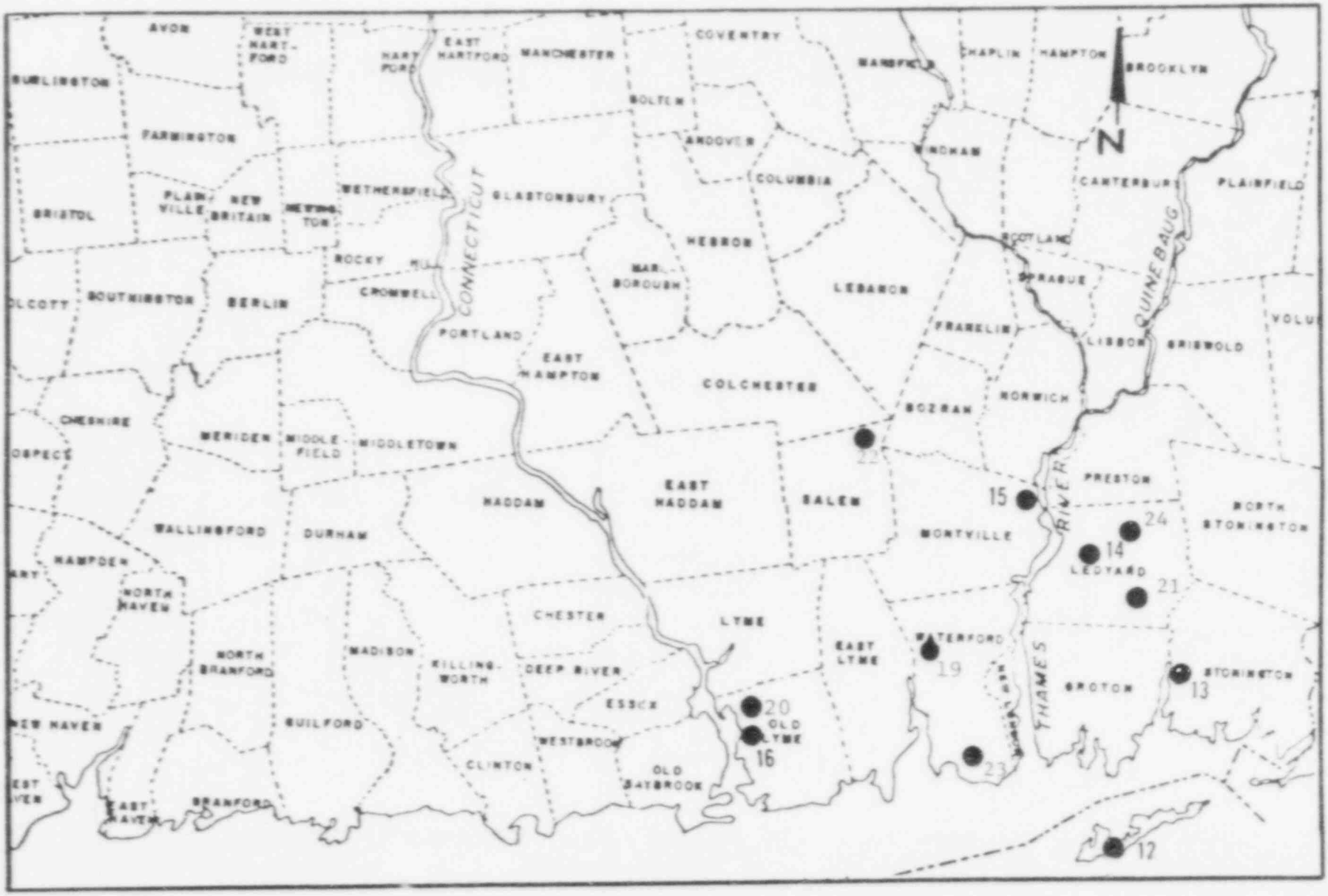

FIGURE 2.2
Outer Terrestrial Monitoring Stations
Millstone Nuclear Power Station
Scale: 1.5 inch = 10 miles

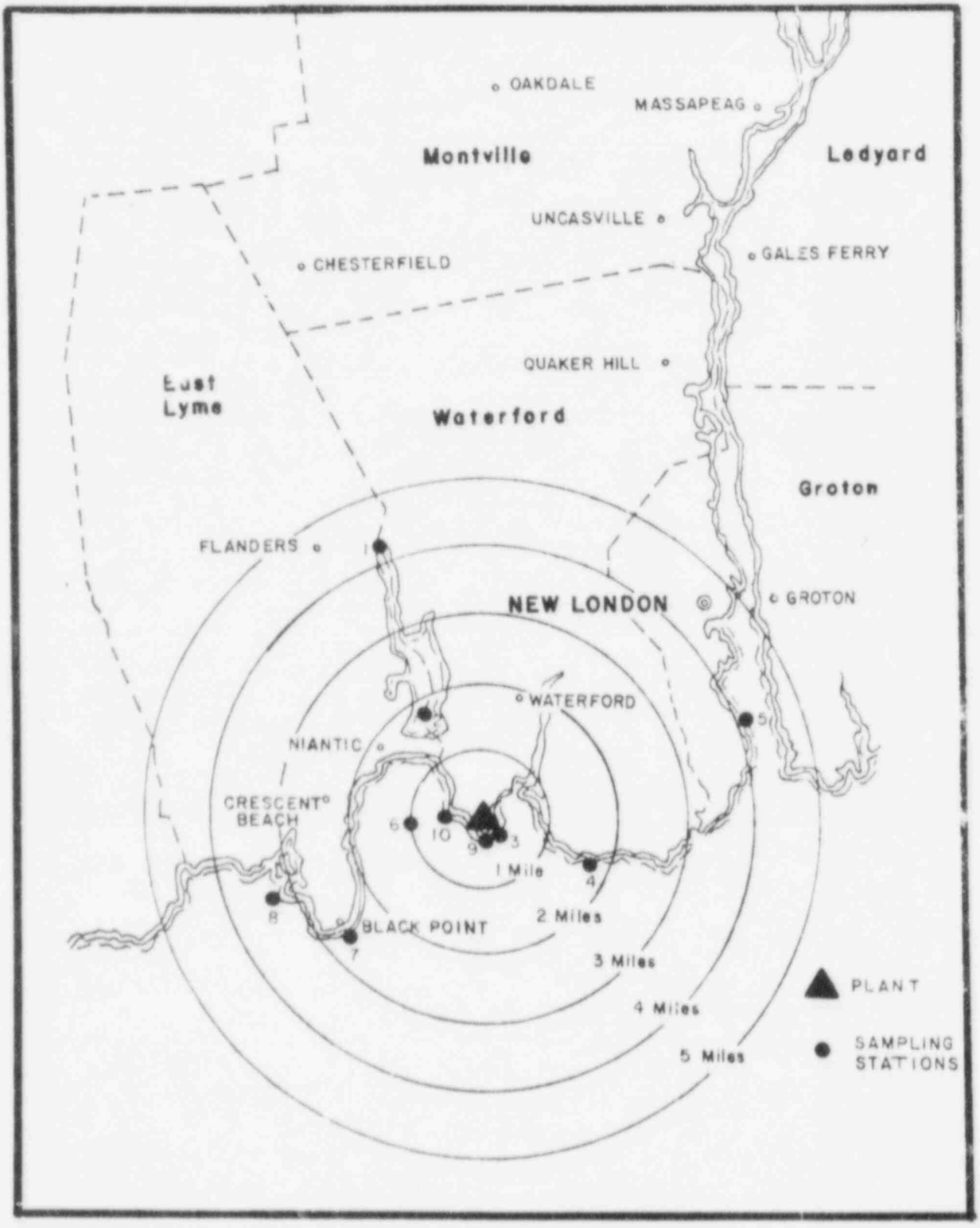

Figure 2.3

AQUATIC SAMPLING STATIONS
Millstone Nuclear Power Station

Table 2-1
Millstone Radiological Environmental
Monitoring Program--Terrestrial Stations

	Locations	Distance and Direction[a]	Sample Type[b] and Analysis[c] Gamma Dose	Air Particulate[e](1)	Soil	Milk[d, g]	Groundwater	Fruit	Vegetables
1.	Onsite--Old Millstone Road	0.6 miles NNW	M	W1 - M2 - Q5	--				
2.	Onsite--Weather Shack	0.3 miles S	M	W1 - M2 - Q5	--				
3.	Onsite--Bird Sanctuary	0.3 miles NE	M	W1 - M2 - Q5(f)	A2,5				
4.	Onsite--Albacore Drive	1.0 miles N	M	W1 - M2 - Q5(f)	A2,5				
5.	Onsite--Navy Laboratory	0.2 miles SSE	M	--	--				
6.	Onsite--Quarry Discharge Canal Fence	0.3 miles SSE	M	--	--				
7.	Onsite--Fox Island	0.3 miles SE	M	--	--				
8.	Onsite--Millstone Environmental Lab.	0.3 miles SE	M	--	--				
9.	Onsite--Bay Point Beach (Information Center)	0.2 miles S	M	--	--				
10.	Pleasure Beach	1.2 miles E	M	W1 - M2 - Q5	A2,5				
11.	New London Country Club	1.6 miles ENE	M	W1 - M2 - Q5(f)	A2,5				
12.	Fisher's Island, New York *	8.7 miles ESE	M	W1 - M2 - Q5	--				
13.	Mystic, Connecticut *	11.5 miles ENE	M	W1 - M2 - Q5	--				
14.	Ledyard, Connecticut *	11.5 miles NE	M	W1 - M2 - Q5(f)	A2,5				
15.	Montville, Connecticut *	14.0 miles N	M	W1 - M2 - Q5	A2,5				
16.	Old Lyme, Connecticut *	9.0 miles W	M	W1 - M2 - Q5	--				
17.	Well No. 1	1.5 miles				--	SA1,2,4,5	--	--
18.	Well No. 2	1.0 miles				--	SA1,2,4,5	--	--
19.	Dairy Farm No. 1	6.0 miles N				M3,5	--	--	--
20.	Dairy Farm No. 2	9.5 miles WNW				M3,5	--	--	--
21.	Dairy Farm No. 3	11.0 miles NE				M3,5	--	--	--
22.	Dairy Farm No. 4 *	15.0 miles NNW				M3,5	--	--	--
23.	Goat Farm No. 1	2.0 miles ENE				TM3-M5 (composite)	--	--	--
24.	Goat Farm No. 2 *	14.0 miles NE				TM3-M5 (composite)	--	--	--
25.	Fruit and Vegetables	--				--	--	SA2,5(h)	SA2,5(h)

a. From Millstone Unit 1 (stack) to nearest half mile
b. W = weekly, TM = twice a month, M= monthly, Q = quarterly, SA = semiannual, A = annual
c. 1 = gross beta; 2 = gamma spectrum; 3 = I-131; 4 = H-3; 5 = Sr-89, Sr 90, Cs-137.
d. During the period April through October and once in February.
e. Analyses are done on monthly and quarterly composites of the weekly air particulate samples collected at each station.
f. Includes a charcoal filter to be analyzed weekly for I-131 at inhalation dose levels.
g. Grass is substituted if milk is not available.
h. To be collected at the middle and end of the harvest season when available from representative commercial farms.
i. Comparisons between inner stations (within 1.5 miles) and outer stations (greater than 1.5 miles) will be made instead of using a control station concept.
* Control Station

Table 2-2
Millstone Radiological Environmental
Monitoring Program--Aquatic Stations

	Locations	Distance and Direction[a]	Type, Frequency[b] and Analysis[c]						
			Bottom Sediment	Flora	Mussels	Oysters or Clams[e]	Lobster[e]	Fin Fish[d,e]	Water
1.	Golden Spur*	4.7 miles NNW	SA2,3	--	Q2,3,5	Q2,3,5	--	--	--
2.	Niantic Shoals	1.8 miles NW	SA2,3	SA2,3	Q2,3,5	Q2,3,5	--	--	--
3.	Within 500 Feet of Discharge Canal	---	SA2,3	SA2,3	Q2,3,5	Q2,3,5	Q2,3,5	Q2,3,5	Q1,2,3,4
4.	Seaside Point	1.6 miles ESE	SA2,3	SA2,3	--	--	--	--	Q1,2,3,4
5.	Thames River (Yacht Club)	4.0 miles ENE	SA2,3	SA2,3	--	Q2,3,5	--	--	--
6.	Niantic Bay	0.3 miles WNW	--	--	--	--	Q2,3,5	Q2,3,5	Q1,2,3,4
7.	Black Point	2.6 miles WSW	SA2,3	SA2,3	--	Q2,3,5	--	--	--
8.	Giants Neck*	3.5 miles W	SA2,3	SA2,3	--	Q2,3,5	Q2,3,5	--	Q1,2,3,4
9.	Commercial Shellfish Bed #316	0.1 miles S	--	--	--	Q2,3,5	--	--	--
10.	Waterford Shell fish Bed #1	0.5 miles WNW	--	--	--	Q2,3,5	--	--	--

a. From Discharge Quarry to nearest half mile.
b. Q = quarterly, SA = semi-annual
c. 1 = gross beta, 2 = gamma spectrum, 3 = Sr-89, Sr-90, Cs-137, Co-60, 4 = H-3, 5 = I-131
d. Flounder and one other type of edible fin fish.
e. Sampling of crustacea, mollusk and fin fish to be staggered for each month of the quarter.
* Control Stations

2.2 Samples Collected During Report Period

The following table summarizes the number of required samples of each type collected during the present reporting period:

Sample Type	Number of Samples
Gamma Exposure (TLD)	192
Air Particulates	576
Air Iodine	211
Soil	6
Dairy Milk	32
Goat Milk	28
Well Water	4
Fruit and Vegetables	8
Sea Water	16
Bottom Sediment	14
Aquatic Flora	12
Fish	12
Mussels	12
Oysters/Clams	27
Lobster	12
Total All Types	1,166

3.0 RADIOCHEMICAL RESULTS

3.1 Summary Table

In accordance with Environmental Technical Specification 5.6.1a., Table 5.6-1, a summary table of the radiochemical results has been prepared and is presented in Table 3-1.

In the determination of the mean the data was handled as recommended by Health and Safety Laboratory, Idaho: all valid data, including negative values and zeroes were used in the determination of the mean (see part 3.2).

A more detailed analysis of the data is given in section 4.0 where a discussion of the variations in the data brings to light many aspects that are not evident in the summary table because of the basic limitation of such an approach.

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS Mean	(b) (Range)	LOCATION WITH HIGHEST ANNUAL MEAN NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	CONTROL LOCATIONS Mean	(b) (Range)	# OF NRMs (c)
Gamma Dose (uR/hr)	132,60(d)	1.5	9.6	(5.8 - 14.2)	Weather Shack 0.3 Miles S	13.4	(12.5 - 14.2)	9.1	(7.3 - 12.0)	0
Air Particulate and Iodine (pCi/m^3)	316,260 Beta	0.01(e)	0.021	(0.008 - 0.042)	New London Country Club 1.6 Miles ENE	0.021	(0.008 - 0.042)	0.019	(0.006 - 0.056)	0
	NaI 158,53 I-131	0.04	0.013	(-0.03 - 0.05)	Albacore Drive 1.0 Miles N	0.018	(-0.02 - 0.04)	0.017	(-0.04 - 0.06)	0
	Ge(Li) 72,60 Cs-137	0.025(f)	0.000	(0.000 - 0.004)	New London Country Club - 1.6 Miles ENE	0.0003	(0.000 - 0.004)	0.000		0
	Cs-134	0.02(f)	0.000		N/A(h)		N/A	0.000		0
	Ru-103	--	0.0001	(0.000 - 0.005)	Bird Sanctuary 0.3 Miles NE	0.0004	(0.000 - 0.005)	0.0001	(0.000 - 0.004)	0
	Zr-95	--	0.000	(0.000 - 0.008)	Bird Sanctuary 0.3 Miles NE	0.0007	(0.000 - 0.008)	0.000		0
	Nb-95	--	0.0001	(0.000 - 0.005)	New London Country Club and Montville 1.6 Miles ENE and 14 Miles N	0.0004 0.0004	(0.000 - 0.005) (0 [illegible] 0.004)	0.0001	(0.000 - 0.004)	0
	Cs 24,20 Cs	0.001(e)(g)	0.00018	(0.00001 - 0.0006)	New London Country Club - 1.6 Miles ENE	0.00033	([illegible] - 0.00[illegible])	0.00014	(0.0000 - 0.00069)	0

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			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	Sr 24,20 / Sr-89	0.002(e)(g)	0.00013	(-0.0007 - C.002)	Pleasure Beach 1.2 Miles E	0.0006	(0.0000 - 0.002)	-0.00002	(-0.0006 - 0.0004)	0
	Sr-90	0.001(e)(g)	0.00016	(0.0000 - 0.0006)	Bird Sanctuary 0.3 Miles NE	0.00027	(0.0001 - 0.0006)	0.00013	(0.00004 - 0.0003)	0
Soil (pCi/g)	Sr 4,2 / Sr-89	0.072	0.012	(0.00 - 0.03)	Ledyard 11.5 Miles NE	0.06	N/A	0.032	(0.00 - 0.06)	0
	Sr-90	0.036	0.21	(0.09 - 0.38)	Ledyard 11.5 Miles NE	0.62	N/A	0.34	(0.05 - 0.62)	0
	Ge(Li) 4,2 / Cs-137	0.07	0.59	(0.22 - 0.81)	Ledyard 11.5 Miles NE	1.01	N/A	0.65	(0.29 - 1.01)	0
	Cs-134	0.06	0.00		N/A		N/A	0.00		0
	Mn-54	--	0.00		N/A		N/A	0.00		0
	Co-58	--	0.00		N/A		N/A	0.00		0
	Co-60	--	0.00		N/A		N/A	0.00		0
	Zr-95	--	0.00		N/A		N/A	0.00		0

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			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	Nb-95	--	0.00		Ledyard and Montville - 11.5 Miles NE and 14 Miles N	0.04	N/A	0.04	(0.00 - 0.04)	0
	K-40	--	6.2	(4.1 - 9.8)	Pleasure Beach 1.2 Miles E	9.8	N/A	5.2	(5.1 - 5.2)	0
	Ra-226	--	0.49	(0.30 - 0.74)	Pleasure Beach 1.2 Miles E	0.74	N/A	0.48	(0.48 - 0.48)	0
Milk (Dairy) (pCi/l)	Iodine 36,12 I-131	0.5	0.13	(0.0 - 0.3)	Dairy Farm #1 6 Miles N	0.15	(0.0 - 0.2)	0.11	(0.0 - 0.2)	0
	Sr 36,12 Sr-89	2	0.19	(-2.0 - 2.0)	Dairy Farm #1 6 Miles N	0.52	(-1.3 - 1.4)	0.13	(-1.0 - 1.1)	0
	Sr-90	1	6.3	(2.8 - 13.7)	Dairy Farm #3 11 Miles NE	8.7	(5.4 - 13.7)	4.2	(2.6 - 5.4)	0
	Ge(Li) 36,12 Cs-137	6	11.3	(1 - 41)	Dairy Farm #1 6 Miles N	15.6	(9 - 33)	4.2	(0 - 8)	0
	Cs-134	6	0		N/A		N/A	0		0
Goat Milk (pCi/l)	Iodine 19,17 I-131	0.5	0.28	(0.0 - 1.2)	Goat Farm #1 2 Miles ENE	0.28	(0.0 - 1.2)	0.22	(0.0 - 0.7)	0
	Sr 19,17 Sr-89	2	0.52	(-3.0 - 3.0)	Goat Farm #1 2 Miles ENE	0.52	(-3.0 - 3.0)	0.23	(-0.6 - 1.3)	0

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			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	Sr-90	1	19.4	(8.0 - 30.8)	Goat Farm #1 2 Miles ENE	19.4	(8.0 - 30.8)	4.6	(2.7 - 7.0)	0
	Ge(Li) 19,17 Cs-137	6	103	(31 - 181)	Goat Farm #1 2 Miles ENE	103	(31 - 181)	4.7	(2 - 9)	0
	Cs-134	6	0		N/A		N/A	0		0
Groundwater (pCi/l)	Sr 4 Sr-89	2	0.22	(-0.2 - 0.5)	Well #1 1.5 Miles NNE	0.35	(0.2 - 0.5)		N/A	0
	Sr-90	1	0.46	(0.3 - 0.8)	Well #2 1.0 Miles NNE	0.52	(0.3 - 0.8)		N/A	0
	Ge(Li) 4 Cs-137	6	0		N/A		N/A		N/A	0
	I-131	30**	0		N/A		N/A		N/A	0
	Cs-134	6	0		N/A		N/A		N/A	0
	Co-58	6	0		N/A		N/A		N/A	0
	Co-60	6	0		N/A		N/A		N/A	0
	Mn-54	6	0		N/A		N/A		N/A	0

**at time of counting

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			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	Tritium 4 / H-3	60	128	(0 - 210)	Well #2 1 Mile NNE	190	(170 - 210)		N/A	0
	Beta 4 / B	1	4.2	(1.1 - 7.0)	Well #1 1.5 Miles NNE	5.4	(3.7 - 7.0)		N/A	0
Fruits and Vegetables (pCi/g)	Sr 4,4 / Sr-89	0.018	0.004	(0.000 - 0.008)	Within 10 Miles	0.004	(0.000 - 0.008)	-0.002	(-0.016 - 0.007)	0
	Sr-90	0.009	0.015	(0.004 - 0.031)	Beyond 10 Miles	0.029	(0.012 - 0.038)	0.029	(0.012 - 0.038)	0
	Ge(Li) 4,4 / Cs-137	0.034	0.00		N/A		N/A	0.00		0
	I-131	0.05	0.00		N/A		N/A	0.00		0
	Cs-134	0.025	0.00		N/A		N/A	0.00		0
	Mn-54	--	0.00		N/A		N/A	0.00		0
	Co-58	--	0.00		N/A		N/A	0.00		0
	Co-60	--	0.00		N/A		N/A	0.00		0

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			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	K-40	--	3.0	(1.1 - 5.5)	Within 10 Miles	3.0	(1.1 - 5.5)	2.3	(0.9 - 4.5)	0
	Ra-226	--	0.00		N/A		N/A	0.00		0
	Th-228	--	0.03	(0.00 - 0.09)	Within 10 Miles	0.03	(0.00 - 0.09)	0.00		0
Seawater (pCi/l)	Sr 12,4 / Sr-89	2	-0.12	(-0.7 - 0.5)	Seaside Point 1.6 Miles ESE	0.05	(-0.6 - 0.5)	-0.10	(-0.7 - 0.6)	0
	Sr-90	1	0.5	(0.3 - 0.9)	Within 500 feet of Discharge and Niantic Bay 0.3 Miles WNW	0.5 0.5	(0.3 - 0.9) (0.3 - 0.7)	0.4	(0.1 - 0.7)	0
	Ge(Li) 12,4 / Cs-137	6	0		N/A		N/A	0		0
	I-131	--	0		N/A		N/A	0		0
	Cs-134	13	0		N/A		N/A	0		0
	Mn-54	13	0		N/A		N/A	0		0
	Co-58	13	0.3	(0 - 3)	Within 500 feet of Discharge	1	(0 - 3)	0		0
	Co-60	13	0		N/A		N/A	0		0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS		LOCATION WITH HIGHEST ANNUAL MEAN			CONTROL LOCATIONS		# OF NRMs (c)
			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	Tritium 12,4 H-3	60	68	(0 - 210)	Niantic Bay 0.3 Miles WNW	93	(0 - 190)	28	(0 - 110)	0
	Nb-95	13	0		N/A		N/A	0		0
	K-40	--	290	(200 - 410)	Seaside Point 1.6 Miles ESE	313	(240 - 410)	288	(150 - 380)	0
	Beta 12,4 Fraction I	1.7	0.02	(-0.2 - 0.4)	Within 500 feet of Discharge	0.07	(-0.1 - 0.2)	0.03	(-0.2 - 0.3)	0
	Beta Fraction II	1.7	3.0	(1.1 - 7.6)	Within 500 feet of Discharge	3.4	(1.2 - 7.6)	3.3	(1.8 - 5.4)	0
	Beta Fraction III	1.7	0.52	(0.2 - 0.9)	Giant's Neck 3.5 Miles W	1.07	(0.3 - 2.7)	1.07	(0.3 - 2.7)	0
	Beta Fraction IV	1.7	6.5	(3.5 - 11.9)	Niantic Bay 0.3 Miles WNW	7.8	(5.2 - 11.1)	5.3	(3.1 - 7.2)	0
Bottom Sediment (pCi/g)	Sr 10,4 Sr-89	0.072	0.001	(-0.004 - 0.01)	Golden Spur 4.7 Miles NNW	0.02	(-0.002 - 0.04)	0.01	(-0.002 - 0.04)	0
	Sr-90	0.036	0.005	(0.00 - 0.002)	Thames River Yacht Club 4.0 Miles ENE	0.013	(0.011 - 0.014)	0.004	(0.003 - 0.006)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS Mean	(b) (Range)	LOCATION WITH HIGHEST ANNUAL MEAN NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	CONTROL LOCATIONS Mean	(b) (Range)	# OF NRMs (c)
	Ge(Li) 10,4 Cs-137	0.064	0.03	(0.00 - 0.22)	Niantic Shoals 1.8 Miles NW	0.11	(0.00 - 0.22)	0.01	(0.00 - 0.06)	0
	I-131	--	0.00		N/A		N/A	0.00		0
	Cs-134	0.06	0.00		N/A		N/A	0.00		0
	Mn-54	--	0.00		N/A		N/A	0.00		0
	Co-58	--	0.00		N/A		N/A	0.00		0
	Co-60	--	0.00		N/A		N/A	0.00		0
	Zr-95	--	0.00		Golden Spur 4.7 Miles NNW	0.02	(0.00 - 0.05)	0.01	(0.00 - 0.05)	0
	Nb-95	--	0.00		N/A		N/A	0.00		0
	K-40	--	11.1	(7.7 - 14.6)	Thames River Yacht Club 4 Miles ENE	13.6	(12.5 - 14.6)	11.9	(10.5 - 13.5)	0
Aquatic Flora (pCi/g)	Sr 10,2 Sr-89	0.01	0.00	(-0.08 - 0.03)	Niantic Shoals 1.8 Miles NW	0.013	(0.004 - 0.022)	0.00	(-0.002 - 0.00)	0

TABLE 3-I
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS		LOCATION WITH HIGHEST ANNUAL MEAN			CONTROL LOCATIONS		# OF NRMs (c)
			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	Sr-90	0.009	0.01	(0.004 - 0.04)	Thames River Yacht Club 4 Miles ENE	0.025	(0.010 - 0.04)	0.01	(0.003 - 0.012)	0
	Ge(Li) 10,2 Cs-137	0.034	0.00		N/A		N/A	0.00		0
	I-131	0.05	0.00		N/A		N/A	0.00		0
	Cs-134	0.025	0.00		N/A		N/A	0.00		0
	Mn-54	0.05	0.00		N/A		N/A	0.00		0
	Co-58	0.05	0.01	(0.00 - 0.07)	Within 500 feet of Discharge	0.03	(0.00 - 0.07)	0.00		0
	Co-60	0.05	0.09	(0.00 - 0.65)	Within 500 feet of Discharge	0.40	(0.16 - 0.65)	0.00		1
	Zr-95	--	0.00		N/A		N/A	0.00		0
	Nb-95	--	0.00		N/A		N/A	0.00		0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS Mean	(b) (Range)	LOCATION WITH HIGHEST ANNUAL MEAN NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	CONTROL LOCATIONS Mean	(b) (Range)	# OF NRMs (c)
	Ag-110m	--	0.00		N/A		N/A	0.00		0
Fish-Flounder (pCi/g)	Sr 8 / Sr-89	0.018	0.002	(0.00 - 0.005)	Within 500 feet of Discharge	0.003	(0.001 - 0.005)		N/A	0
	Sr-90	0.009	0.004	(0.001 - 0.012)	Niantic Bay 0.3 Miles WNW	0.005	(0.002 - 0.012)		N/A	0
	Ge(L.) 8 / Cs-137	0.056	0.01	(0.00 - 0.03)	Within 500 feet of Discharge	0.01	(0.00 - 0.02)		N/A	0
	I-131	--	0.00		N/A		N/A		N/A	0
	Cs-134	0.05	0.00		N/A		N/A		N/A	0
	Mn-54	0.05	0.00		N/A		N/A		N/A	0
	Co-58	0.05	0.00		N/A		N/A		N/A	0
	Co-60	0.05	0.00		N/A		N/A		N/A	0
	Zr-95	--	0.00		N/A		N/A		N/A	0
	Nb-95	--	0.00		N/A		N/A		N/A	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS Mean	(b) (Range)	LOCATION WITH HIGHEST ANNUAL MEAN NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	CONTROL LOCATIONS Mean	(b) (Range)	# OF NRMs (c)
	K-40	--	3.2	(2.4 - 5.0)	Within 500 feet of Discharge	3.4	(2.5 - 5.0)		N/A	0
Fish-Other (pCi/g)	Sr 8 / Sr-89	0.018	0.001	(-0.005 - 0.003)	Within 500 feet of Discharge	0.002	(0.000 - 0.003)		N/A	0
	Sr-90	0.0[illegible]	0.004	(0.000 - 0.008)	Within 500 feet of Discharge	0.004	(0.000 - 0.008)		N/A	0
	Ge(Li) 8 / Cs-137	0.056	0.00		N/A		N/A		N/A	0
	I-131	--	0.00		N/A		N/A		N/A	0
	Cs-134	0.05	0.00		N/A		N/A		N/A	0
	Mn-54	0.05	0.00		N/A		N/A		N/A	0
	Co-58	0.05	0.00		N/A		N/A		N/A	0
	Co-60	0.05	0.00		N/A		N/A		N/A	0
	Zr-95	--	0.00		N/A		N/A		N/A	0
	Nb-95	--	0.00		N/A		N/A		N/A	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS		LOCATION WITH HIGHEST ANNUAL MEAN			CONTROL LOCATIONS		# OF NRMs (c)
			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	K-40	--	2.6	(1.7 - 3.3)	Within 500 feet of Discharge	2.7	(2.1 - 3.3)	N/A		0
Mussels (pCi/g)	Sr 8,4 / Sr-89	0.018	0.001	(-0.004 - 0.007)	Golden Spur 4.7 Miles NNW	0.003	(-0.002 - 0.010)	0.003	(-0.002 - 0.010)	0
	Sr-90	0.009	0.003	(0.002 - 0.005)	Golden Spur 4.7 Miles NNW	0.004	(0.003 - 0.007)	0.004	(0.003 - 0.007)	0
	Ge(Li) 8,4 / Cs-137	0.056	0.00		N/A		N/A	0.00		0
	I-131	--	0.00		N/A		N/A	0.00		0
	Cs-134	0.05	0.00		N/A		N/A	0.00		0
	Mn-54	0.05	0.00		N/A		N/A	0.00		0
	Co-58	0.05	0.00		N/A		N/A	0.00		0
	Co-60	0.05	0.00		N/A		N/A	0.00		0
	Zr-95	--	0.00		N/A		N/A	0.00		0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS		LOCATION WITH HIGHEST ANNUAL MEAN			CONTROL LOCATIONS		# OF NRMs (c)
			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	Nb-95	--	0.00		Golden Spur 4.7 Miles NNW	0.005	(0.00 - 0.022)	0.005	(0.00 - 0.022)	0
	K-40	--	1.4	(1.0 - 1.6)	Within 500 feet of Discharge	1.5	(1.3 - 1.6)	1.0	(0.7 - 1.3)	0
Oysters/Clams (pCi/g)	Sr 19,8 / Sr-89	0.018	0.000	(-0.005 - 0.008)	Giant's Neck 3.5 Miles W	0.005	(-0.001 - 0.011)	0.00	(-0.005 - 0.011)	0
	Sr-90	0.009	0.003	(-0.002 - 0.011)	Golden Spur #1 4.7 Miles NNW	0.006	(0.004 - 0.012)	0.006	(0.002 - 0.012)	0
	Ge(Li) 19,8 / Cs-137	0.056	0.00		N/A		N/A	0.00		0
	I-131	--	0.00		N/A		N/A	0.00		0
	Mn-54	0.05	0.00		N/A		N/A	0.00		0
	Co-58	0.05	0.00		N/A		N/A	0.00		0
	Co-60	0.05	0.02	(0.00 - 0.23)	Within 500 feet of Discharge	0.10	(0.00 - 0.23)	0.00		0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS		LOCATION WITH HIGHEST ANNUAL MEAN			CONTROL LOCATIONS		# OF NRMs (c)
			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	Zn-65	0.11	0.00		N/A		N/A	0.00		0
	Zr-95	--	0.00	(0.00 - 0.04)	Within 500 feet of Discharge	0.01	(0.00 - 0.04)	0.00		0
	Ag-110m	--	0.03	(0.00 - 0.25)	Within 500 feet of Discharge	0.12	(0.00 - 0.25)	0.00		1
	K-40	--	1.3	(0.9 - 2.6)	Thames River Yacht Club 4 Miles ENE	1.6	(1.0 - 2.6)	1.1	(0.6 - 1.4)	0
Lobsters (pCi/g)	Sr 8,4 Sr-89	0.018	0.00	(-0.002 - 0.01)	Within 500 feet of Discharge	0.004	(0.00 - 0.01)	0.00	(-0.01 - 0.001)	0
	Sr-90	0.009	0.008	(0.003 -0.015)	Giant's Neck 3.5 Miles W	0.011	(0.006 - 0.015)	0.01	(0.004 - 0.020)	0
	Ge(Li) 8,4 Cs-137	0.056	0.00		N/A		N/A	0.00		0
	I-131	--	0.00		N/A		N/A	0.00		0
	Cs-134	0.05	0.00		N/A		N/A	0.00		0
	Mn-54	0.05	0.00		N/A		N/A	0.00		0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1 and 2
DOCKET 50-245 and 50-336
JANUARY - DECEMBER 1984

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	MINIMUM DETECTABLE LEVELS (MDL's)(a)	ALL INDICATOR LOCATIONS		LOCATION WITH HIGHEST ANNUAL MEAN			CONTROL LOCATIONS		# OF NRMs (c)
			Mean	(b) (Range)	NAME, DISTANCE AND DIRECTION	Mean	(b) (Range)	Mean	(b) (Range)	
	Co-58	0.05	0.00		N/A		N/A	0.00		0
	Co-60	0.05	0.01	(0.00 - 0.07)	Within 500 feet of Discharge	0.03	(0.00 - 0.07)	0.00		0
	Zr-95	--	0.00		N/A		N/A	0.00		0
	Nb-95	--	0.00		N/A		N/A	0.00		0
	Ag-110m	--	0.005	(0.00 - 0.04)	Niantic Bay 0.3 Miles WNW	0.01	(0.00 - 0.04)	0.00		0

FOOTNOTES

a. For Ge(Li) measurements the MDL's $\cong 2 \times \sqrt{2B}$ where B = background. For all others, MDL = 2 x σ background. These MDL's are based on the absence of large amounts of interfering activity (excluding naturally occurring radionuclides). Deviations by about factors of 3 to 4 can occur, excluding Technical Specification Items.

b. Anlytical results are handled as recommended by HASL ("Reporting of Analytical Results from HASL," letter by Leo B. Higginbotham). Negative values were used in the determination of mean.

c. Nonroutine reported measurements (NRM's) are defined in Section 5.6.2b of the Technical Specifications. These occur when a measurement is ten times the value for the control location(s) (actually this turns out to be ten times the statistical error in determining the background since the background level is often zero). This results in reports when low levels of radioactivity are detected in the environment since background is measured with such a high degree of accuracy. The dose consequences are insignificant; see Section 5.0 for the discussion of these consequences.

d. First number is the number of indicator measurements, the second is the number of control measurements.

e. Assuming 270 m^3/paper.

f. Assuming 1080 m^3.

g. Quarterly composites.

h. N/A--Not Applicable.

3.2 Data Tables

The data reported in this section are strictly counting statistics. The reported error is two times the standard deviation of the net activity. Unless otherwise noted, the overall error (counting, sample size, chemistry, errors, etc.) is estimated to be 2 to 5 times that listed.

Because of counting statistics, negative values, zeroes and numbers below the Minimum Detectable Level (MDL) are statistically valid pieces of data. For the purposes of this report, in order to indicate any background biases, all the valid data are presented. In instances where zeroes are listed after significant digits, this is an artifact of the computer data handling program.

Data are given according to sample type as indicated below.

1. Gamma Exposure Rate
2. Air Particulates, Gross Beta Radioactivity
3. Air Particulates, Weekly I-131
4. Air Particulates, Monthly Quantitative Gamma Spectra
5. Air Particulates, Quarterly Strontium and Cesium
6. Soil**
7. Milk - Dairy Farms
8. Milk - Goat Farms
9. Pasture Grass*
10. Well Water
11. Reservoir Water
12. Fruits & Vegetables*
13. Meat, Poultry and Eggs*
14. Seawater
15. Bottom Sediment**
16. Aquatic Flora*
17. Fin Fish*
18. Mussels*
19. Oysters*
20. Clams*
21. Scallop (and crabs)*
22. Lobster (and crabs)*

There was no commercially available meat, poultry, or eggs for which the feed was grown within 10 miles of the site.

*For these sample types, the results are reported as pCi/g wet weight.

**For these, the results are reported as pCi/g dry weight.

LOCATION KEY FOR DATA TABLES

Data Table Location #		Section 2.0 Location #
01	Old Millstone Rd. - NNW, 0.6 miles	1
02	Weather Shack - S, 0.3 miles	2
03	Bird Sanctuary - NE, 0.3 miles	3
04	Albacore Drive - N, 1 mile	4
05	Navy Laboratory - SSE, 0.2 miles	5
06	Quarry Discharge Canal Fence - SSE, 0.3 miles	6
07	Fox Island - SE, 0.3 miles	7
08	Millstone Environmental Lab - SE, 0.3 miles	8
09	Bay Point Beach - W, 0.2 miles	9
10	Pleasure Beach - E, 1.2 mile	10
11	New London Country Club - ENE, 1.6 miles	11
12A,B	Fisher's Island, New York - ESE, 8.7 miles	12
13A	Mystic, Conn. - ENE, 11.5 miles	13
14A	Ledyard, Conn. - NE, 11.5 miles	14
15A	Montville, Conn. - N, 14 miles	15
16A	Old Lyme, Conn. W, 9 miles	16
17	Well #1 - NNE, 1.5 miles	17
18	Well #2 - NNE, 1 mile	18
19	Dairy Farm #1 - N, 6 miles	19
20	Dairy Farm #2 - WNW, 9.5 miles	20
21	Dairy Farm #3 - NE, 11 miles	21
22A	Dairy Farm #4 - NNW, 15 miles	22
23	Goat Farm #1 - ENE, 2 miles	23
24	Goat Farm #2 - NE, 14 miles	24
25	Within 10 miles of Plant	-
26A	Beyond 10 miles of Plant	-
30A	Golden Spur - NNW, 4.7 miles	1
31	Niantic Shoals - NW, 1.8 miles	2
32	Within 500' of Discharge	3
33	Seaside Point - ESE, 1.6 miles	4
34	Thames River Yacht Club - ENE, 4.0 miles	5
35	Niantic Bay - WNW, 0.3 mile	6
36	Black Point - WSW, 2.6 miles	7
37A	Giant's Neck - W, 3.5 miles	8
38	Waterford Shellfish Bed #1 - WNW, 0.5 miles	10
39B	Jordan Cove - NNE, 0.2 miles	-
40B	Discharge Quarry	-
50B	Myrock Avenue - ENE, 3.2 miles	-
51B	Groton Reservoir - ENE, 7.5 miles	-
52B	Lake Konomoc - NNW, 7.5 miles	-
53B	Niantic (CL&P) - WNW, 1.7 miles	-
54B	Billow Road - WSW, 2.4 miles	-
55B	Black Point - SW, 2.6 miles	-

A - Control Stations
B - Site not required by ETS

MILLSTONE POINT

TABLE 1A
MONTHLY
GAMMA EXPOSURE RATE(UR/HR)

PERIOD ENDING	LOCATIONS 01	02	03	04	05	06	07	08	09	10	11
1/31/84(a)	7.9(b)	12.5	7.7	7.9	7.2	8.2	9.9	9.8	10.1	8.2	7.5
2/28/84	8.7	13.5	8.4	8.8	7.6	9.3	10.9	10.7	10.8	8.6	7.6
3/31/84	8.9	13.6	8.4	8.9	7.7	8.9	10.9	11.1	11.4	8.9	8.1
4/30/84	9.1	13.7	8.5	9.2	6.8	9.3	10.8	10.9	11.1	9.0	8.1
5/31/84	8.4	12.6	8.0	8.3	5.8	8.2	9.7	9.4	9.8	8.4	7.8
6/30/84	9.2	13.5	8.6	8.9	6.6	9.2	10.6	10.6	10.6	8.8	8.0
7/31/84	8.4	13.0	7.9	8.2	7.1	6.5	10.3	10.1	10.8	8.2	7.8
8/31/84	9.3	13.5	8.7	9.2	7.8	9.4	11.2	11.2	11.4	8.9	8.4
9/30/84	8.7	13.1	8.2	8.6	7.5	8.6	10.5	10.7	11.2	8.9	8.3
10/31/84	9.7	14.2	9.2	9.5	8.6	9.9	11.9	11.8	12.1	9.6	9.0
11/30/84	9.5	14.0	8.8	9.2	8.1	9.2	11.3	11.2	11.4	8.9	8.8
12/31/84	9.5	13.8	9.1	9.2	8.0	9.8	11.4	11.2	11.5	9.1	8.7

	12A	13A	14A	15A	16A	50B	53B	54B	55B
1/31/84	7.9	7.9	10.1	7.8	7.3	7.5	7.5	7.8	6.9
2/28/84	8.1	9.3	11.2	8.9	8.0	8.9	8.7	9.0	7.5
3/31/84	8.6	9.1	11.3	8.6	8.3	8.4	8.3	8.8	7.8
4/30/84	7.9	9.7	11.6	9.5	8.4	9.2	9.0	9.2	8.1
5/31/84	8.6	8.1	10.4	7.8	7.8	8.0	7.7	8.2	7.4
6/30/84	7.5	9.7	11.5	9.4	8.3	9.0	8.9	9.1	8.0
7/31/84	8.1	8.6	11.0	8.3	7.8	8.1	7.6	8.1	7.2
8/31/84	8.0	9.4	10.9	9.1	8.3	9.0	8.8	9.3	8.0
9/30/84	8.5	9.1	11.5	8.8	7.9	8.2	8.0	8.5	7.6
10/31/84	8.6	10.2	12.0	9.8	8.7	9.4	9.3	10.1	8.2
11/30/84	8.7	9.0	11.5	8.9	8.4	8.8	8.7	9.1	8.2
12/31/84	8.7	9.8	11.5	9.4	8.3	8.9	9.2	9.7	8.2

TABLE 1B
SEMIANNUAL
GAMMA EXPOSURE RATE(UR/HR)

PERIOD ENDING	LOCATIONS 01	02	03	04	05	06	07	08	09	10	11
6/30/84	8.7	13.2	8.3	8.7	6.9	8.8	10.5	10.4	10.6	8.6	7.8
12/31/84	9.2	13.6	8.6	9.0	7.8	9.2	11.1	11.0	11.4	8.9	8.5

	12A	13A	14A	15A	16A	50B	53B	54B	55B
6/30/84	8.1	9.0	11.0	8.7	8.0	8.5	8.3	8.7	7.6
12/31/84	8.4	9.3	11.4	9.0	8.2	8.7	8.6	9.1	7.9

(a) Not actual dates. TLD's are changed near the end of each month.
(b) Results are +/- 10%.

TABLE 2
AIR PARTICULATES
GROSS BETA RADIOACTIVITY
(PCI/M3)

PERIOD ENDING	LOCATIONS 01	02	03	04	10	11	12A	13A	14A	15A	16A	53B
1/ 4/84(a)	0.029(b)	0.029	0.026	0.029	0.029	0.026	0.025	0.031	0.026	0.029	0.030	0.031
1/10/84	0.030	0.035	0.031	0.029	0.031	0.035	0.017	0.032	0.028	0.033	0.031	0.030
1/17/84	0.027	0.026	0.028	0.029	0.029	0.029	0.035	0.025	0.029	0.022	0.029	0.030
1/24/84	0.035	0.036	0.034	0.038	0.040	0.042	0.029	0.037	0.039	0.034	0.037	0.039
1/31/84	0.023	0.021	0.020	0.022	0.024	0.019	0.020	0.027	0.022	0.028	0.021	0.009
2/ 7/84	0.020	0.017	0.020	0.021	0.018	0.022	0.017	0.017	0.016	0.019	0.018	0.012
2/14/84	0.024	0.023	0.027	0.023	0.023	0.021	0.025	0.020	0.022	0.030(c)	0.022	0.015
2/22/84	0.015	0.012	0.013	0.014	0.014	0.015	0.011	0.012	0.015	0.013	0.013	0.007
2/28/84	0.020	0.020	0.022	0.019	0.019	0.024	0.012	0.018	0.016	0.018	0.019	0.015
3/ 6/84	0.013	0.014	0.012	0.013	0.013	0.013	0.010	0.011	0.012	0.012	0.014	0.011
3/13/84	0.027	0.017	0.026	0.028	0.027	0.028	0.020	0.023	0.023	0.024	0.026	0.017
3/20/84	0.012	0.011	0.013	0.009	0.010	0.014	0.010	0.012	0.013	0.013	0.010	0.008
3/27/84	0.015	0.014	0.019	0.015	0.012	0.016	0.013	0.011	0.015	0.012	0.016	0.011
4/ 3/84	0.010	0.010	0.010	0.010	0.009	0.011	0.006	0.010	0.010	0.012	0.010	0.007
4/10/84	0.009	0.011	0.013	0.010	0.014	0.012	0.009	0.012	0.012	0.012	0.012	0.008
4/17/84	0.012	0.011	0.009	0.010	0.008	0.011	0.010	0.010	0.011	0.010	0.010	0.009
4/24/84	0.013	0.013	0.017	0.015	0.016	0.014	0.011	0.012	0.014	0.014	0.013	0.008
5/ 1/84	0.015	0.013	0.011	0.014	0.012	0.017	0.009	0.012	0.011	0.013	0.012	0.006
5/ 8/84	0.017	0.018	0.020	0.019	0.016	0.020	0.010	0.016	0.019	0.018	0.018	0.022
5/15/84	0.015	0.015	0.016	0.015	0.017	0.020	0.010	0.015	0.013	0.015	0.013	0.017
5/22/84	0.015	0.016	0.017	0.015	0.016	0.017	0.010	0.010	0.023	0.013	0.014	0.020
5/30/84	0.013	0.014	0.012	0.009	0.009	0.008	0.010(d)	0.011	0.015	0.009	0.014	0.007
6/ 5/84	0.013	0.015	0.012	0.015	0.015	0.014	0.015	0.014	0.009	0.014	0.012	0.013
6/12/84	0.034	0.039	0.033	0.035	0.035	0.037	0.021	0.033	0.036	0.035	0.032	0.036
6/19/84	0.013	0.020	0.018	0.013	0.014	0.013	0.015	0.015	0.014	0.017	0.014	0.021
6/26/84	0.017	0.018	0.017	0.018	0.016	0.016	0.010	0.014	0.014	0.016	0.018	0.017

(a) Sample dates may vary by a couple of days.
(b) Errors are approximately 0.004 or 10%, whichever is greater.
(c) Low volume, power outage.
(d) 28 day sample -4/29-5/27

TABLE 2
AIR PARTICULATES
GROSS BETA RADIOACTIVITY
(PCI/M3)

PERIOD ENDING	LOCATIONS 01	02	03	04	10	11	12A	13A	14A	15A	16A	53B
7/ 3/84	0.015	0.014	0.013	0.019	0.014	0.018	0.009	0.014	0.018	0.016	0.013	0.015
7/10/84	0.015	0.015	0.015	0.016	0.013	0.015	0.009	0.013	0.016	0.014	0.015	0.017
7/17/84	0.023	0.024	0.024	0.022	0.022	0.022	0.014	0.021	0.021	0.022	0.020	0.022
7/24/84	0.016	0.015	0.015	0.014	0.017	0.016	0.011	0.013	0.013	0.015	0.013	0.019
7/30/84	0.014	0.014	0.011	0.013	0.012	0.012	0.009	0.010	0.009	0.012	0.009	0.012
8/ 7/84	0.029	0.034	0.026	0.029	0.030	0.030	0.016	0.024	0.025	0.028	0.030	0.031
8/14/84	0.018	0.019	0.020	0.019	0.017	0.020	0.017	0.020(a)	0.027	0.023	0.019	0.018
8/21/84	0.017	0.019	0.014	0.016	0.015	0.018	0.012	0.015	0.015	0.017	0.016	0.017
8/28/84	0.014	0.018	0.017	0.015	0.016	0.016	0.012	0.015	0.014	0.013	0.015	0.016
9/ 5/84	0.018	0.019	0.019	0.019	0.018	0.020	0.015	0.020	0.018	0.021	0.019	0.019
9/11/84	0.014	0.019	0.019	0.018	0.018	0.024	0.011	0.015	0.019	0.017	0.018	0.017
9/18/84	0.016	0.017	0.014	0.016	0.011	0.022	0.011	0.015	0.015	0.015	0.014	0.019
9/25/84	0.026	0.029	0.029	0.031	0.029	0.031	0.018	0.023	0.021	0.023	0.027	0.030
10/ 2/84	0.025	0.022	0.031	0.023	0.021	0.025	0.018	0.024	0.025	0.027	0.022	0.027
10/10/84	0.023	0.024	0.022	0.022	0.023	0.024	0.017	0.019	0.024	0.022	0.019	0.022
10/16/84	0.027	0.027	0.040(a)	0.030	0.030	0.026	0.017	0.026	0.025	0.028	0.023	0.032
10/23/84	0.026	0.027	0.0 (a)	0.026	0.024	0.026	0.017(b)	0.026	0.025	0.029	0.026	0.025
10/30/84	0.025	0.022	0.023	0.024	0.021	0.026	0.021(c)	0.023	0.021	0.021	0.022	0.027
11/ 6/84	0.019	0.018	0.019	0.017	0.019	0.020	0.016	0.018	0.022	0.022	0.018	0.023
11/14/84	0.014	0.015	0.016	0.016	0.013	0.017	0.015	0.016	0.019	0.018	0.016	0.017
11/20/84	0.023	0.022	0.023	0.023	0.023	0.023	0.015	0.019	0.020	0.020	0.021	0.028
11/27/84	0.024	0.024	0.025	0.026	0.023	0.027	0.019	0.020	0.019	0.020	0.022	0.031
12/ 4/84	0.026	0.024	0.026	0.026	0.023	0.028	0.032	0.034	0.030	0.036	0.025	0.030
12/11/84	0.027	0.026	0.033	0.027	0.028	0.027	0.020	0.022	0.023	0.024	0.026	0.026
12/18/84	0.030	0.028	0.031	0.034	0.029	0.030	0.026	0.029	0.031	0.030	0.028	0.029
12/24/84	0.031	0.028	0.033	0.035	0.035	0.031	0.019	0.029	0.031	0.025	0.027	0.034
12/31/84	0.024	0.024	0.022	0.023	0.0 (d)	0.025	0.015	0.025	0.025	0.027	0.022	0.025

(a) Low volume, power outage, primary line fuse blown.
(b) 18 day sample - 10/1-10/19
(c) 10 day sample - 10/19-10/29
(d) Low volume, power outage.

TABLE 3
AIR PARTICULATES
I-131 (PCI/M3)

MP

PERIOD ENDING	LOCATIONS 03	(+/-)	04	(+/-)	11	(+/-)	14A	(+/-)	15B	(+/-)	53B	(+/-)
1/ 4/84(a)	0.01	0.02	0.02	0.01	0.01	0.02	0.0	0.02	-0.01	0.02	0.0	0.02
1/10/84	0.01	0.02	0.02	0.02	0.05	0.02	0.01	0.02	0.01	0.02	-0.01	0.03
1/17/84	0.03	0.02	0.01	0.02	0.05	0.03	0.02	0.02	0.02	0.02	0.05	0.03
1/24/84	0.01	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.02	0.03
1/31/84	0.01	0.02	0.01	0.01	0.05	0.02	0.02	0.02	0.0	0.02	0.01	0.02
2/ 7/84	0.05	0.03	-0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.02	0.02
2/14/84	0.01	0.02	0.01	0.02	0.01	0.02	0.0	0.02	0.20	0.20	(b) 0.0	0.02
2/22/84	0.02	0.02	0.01	0.02	-0.01	0.02	0.0	0.02	0.01	0.02	0.01	0.01
2/28/84	-0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.0	0.02
3/ 6/84	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.02	-0.01	0.02	-0.01	0.02
3/13/84	0.03	0.03	0.03	0.02	0.03	0.03	-0.01	0.03	-0.01	0.03	0.01	0.02
3/20/84	0.01	0.02	0.0	0.02	0.03	0.02	-0.01	0.02	0.01	0.02	0.0	0.02
3/27/84	0.0	0.02	0.03	0.02	0.02	0.03	0.01	0.03	0.01	0.03	-0.01	0.02
4/ 3/84	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	-0.01	0.02
4/10/84	0.0	0.02	0.03	0.02	0.03	0.02	0.0	0.02	0.0	0.02	0.0	0.02
4/17/84	-0.01	0.02	0.02	0.02	0.03	0.02	0.0	0.02	0.0	0.02	-0.01	0.02
4/24/84	0.0	0.02	0.01	0.02	0.02	0.02	0.02	0.03	0.01	0.03	-0.01	0.02
5/ 1/84	0.01	0.02	0.03	0.02	0.02	0.02	0.03	0.02	0.01	0.02	0.0	0.02
5/ 8/84	0.0	0.02	0.0	0.02	0.0	0.02	0.03	0.02	0.0	0.02	-0.02	0.03
5/15/84	0.01	0.02	0.04	0.02	-0.01	0.03	0.02	0.02	0.03	0.02	-0.01	0.03
5/22/84	0.0	0.02	0.02	0.01	-0.01	0.02	0.02	0.02	0.0	0.02	0.0	0.03
5/30/84	-0.01	0.02	0.01	0.01	0.01	0.02	-0.04	0.02	-0.01	0.02	0.02	0.02
6/ 5/84	0.0	0.02	0.04	0.02	0.01	0.03	0.02	0.02	0.02	0.02	0.02	0.03
6/12/84	0.01	0.02	0.02	0.02	-0.01	0.03	0.02	0.02	0.02	0.02	-0.01	0.03
6/19/84	0.0	0.02	0.03	0.02	0.01	0.03	0.04	0.02	0.03	0.02	0.0	0.03
6/26/84	0.0	0.02	0.02	0.02	0.0	0.02	0.01	0.02	0.01	0.01	-0.02	0.03

(a) Sample dates may vary by a day.
(b) Low volume, power outage.

TABLE 3
AIR PARTICULATES
I-131 (PCI/M3)

PERIOD ENDING	LOCATIONS 03	(+/-)	04	(+/-)	11	(+/-)	14A	(+/-)	15B	(+/-)	53B	(+/-)
7/ 3/84	0.0	0.02	-0.00	0.01	0.01	0.02	0.0	0.02	0.02	0.02	0.02	0.03
7/10/84	0.01	0.02	0.01	0.02	-0.01	0.02	0.0	0.02	0.01	0.02	0.0	0.03
7/17/84	0.02	0.02	0.01	0.02	-0.01	0.02	0.02	0.02	0.01	0.02	0.0	0.03
7/24/84	0.01	0.02	0.0	0.02	-0.01	0.02	0.01	0.02	0.02	0.02	0.0	0.03
7/30/84	-0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.0	0.02
8/ 7/84	0.02	0.02	0.01	0.02	0.0	0.02	0.01	0.02	0.02	0.02	-0.02	0.02
8/14/84	0.02	0.02	0.01	0.02	0.0	0.03	0.04	0.03	0.03	0.02	0.02	0.03
8/21/84	0.01	0.02	0.03	0.02	0.01	0.02	0.02	0.01	0.01	0.02	0.0	0.03
8/28/84	0.0	0.02	0.01	0.02	0.0	0.02	0.01	0.02	0.01	0.02	-0.01	0.02
9/ 5/84	0.01	0.02	0.01	0.02	0.0	0.02	0.0	0.02	0.02	0.02	0.0	0.03
9/11/84	0.0	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.03	0.02	0.0	0.03
9/18/84	0.01	0.02	0.03	0.02	0.01	0.02	0.02	0.02	0.01	0.02	0.03	0.02
9/25/84	0.01	0.02	0.01	0.02	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.03
10/ 2/84	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.04	0.02	-0.01	0.03
10/10/84	0.03	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.04	0.02	0.01	0.02
10/16/84	0.0	0.14(a)	0.03	0.02	0.01	0.03	0.04	0.02	0.02	0.02	0.05	0.02
10/23/84	0.0	0.0 (a)	0.02	0.02	0.0	0.02	0.01	0.02	0.04	0.02	0.03	0.03
10/30/84	0.02	0.02	0.01	0.02	0.0	0.02	0.02	0.02	0.04	0.02	0.0	0.03
11/ 6/84	0.03	0.02	0.03	0.02	-0.02	0.03	0.05	0.02	0.02	0.02	-0.01	0.03
11/14/84	0.04	0.02	0.04	0.02	-0.03	0.03	0.04	0.02	0.03	0.02	0.0	0.03
11/20/84	0.02	0.02	0.02	0.02	0.0	0.02	0.0	0.02	0.04	0.02	0.0	0.03
11/27/84	0.0	0.02	0.04	0.02	0.0	0.02	0.02	0.02	0.04	0.02	0.02	0.03
12/ 4/84	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.04	0.02	0.01	0.03
12/11/84	0.01	0.02	0.01	0.02	-0.01	0.02	0.01	0.02	0.03	0.02	-0.01	0.03
12/18/84	0.02	0.02	0.02	0.02	0.0	0.02	0.03	0.02	0.04	0.02	-0.02	0.03
12/24/84	0.0	0.03	0.03	0.02	0.01	0.03	0.06	0.02	0.04	0.02	0.03	0.04
12/31/84	0.02	0.02	0.03	0.01	0.02	0.02	0.05	0.03	0.06	0.02	0.03	0.03

(a) Low volume, power outage, primary line fuse blown.

TABLE 4A
AIR PARTICULATES
GAMMA SPECTRA - JAN
(FCI/M3)

MP

LOCATION	CS-137	(+/-)	CS-134	(+/-)	RU-103	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	K-40	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)
									A N A L Y S E S									
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.004	0.100	0.030	0.0	0.004
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.003	0.0	0.012	0.0	0.014	0.0	0.004	0.070	0.020	0.0	0.003
3	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.007	0.0	0.020	0.0	0.030	0.0	0.006	0.090	0.040	0.0	0.006
4	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.005	0.100	0.030	0.0	0.004
10	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.110	0.030	0.0	0.005
11	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.008	0.0	0.030	0.0	0.040	0.0	0.006	0.090	0.040	0.0	0.006
12A	0.0	0.001	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.010	0.030	0.030	0.0	0.003	0.080	0.020	0.0	0.002
13A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.070	0.030	0.0	0.004
14A	0.0	0.003	0.0	0.003	0.0	0.006	0.0	0.007	0.0	0.020	0.0	0.030	0.0	0.006	0.080	0.040	0.0	0.006
15A	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.020	0.0	0.030	0.0	0.006	0.100	0.030	0.0	0.005
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.004	0.080	0.030	0.0	0.004
53B	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.008	0.0	0.020	0.0	0.030	0.006	0.006	0.090	0.040	0.0	0.006

TABLE 4B
AIR PARTICULATES
GAMMA SPECTRA - FEB
(FCI/M3)

LOCATION	CS-137	(+/-)	CS-134	(+/-)	RU-103	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	K-40	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)
									A N A L Y S E S									
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.004	0.050	0.020	0.0	0.003
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.014	0.0	0.002	0.0	0.005	0.090	0.020	0.0	0.003
3	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.009	0.0	0.030	0.0	0.040	0.0	0.009	0.100	0.040	0.0	0.006
4	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.020	0.060	0.050	0.0	0.008	0.080	0.030	0.0	0.004
10	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.090	0.030	0.0	0.003
11	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.008	0.0	0.030	0.0	0.040	0.0	0.010	0.100	0.040	0.0	0.005
12A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.090	0.030	0.0	0.003
13A	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.090	0.030	0.003	0.003
14A	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.008	0.0	0.030	0.0	0.030	0.0	0.008	0.080	0.040	0.0	0.006
15A	0.0	0.004	0.0	0.004	0.0	0.006	0.0	0.009	0.0	0.030	0.0	0.040	0.0	0.009	0.140	0.040	0.0	0.005
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.004	0.080	0.020	0.0	0.003
53B	0.0	0.003	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.006	0.060	0.030	0.0	0.003

TABLE 4C
AIR PARTICULATES
GAMMA SPECTRA - MAR
(PCI/M3)

MP

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.090	0.030	0.0	0.003
2	0.0	0.002	0.0	0.002	0.0	0.003	0.004	0.003	0.0	0.020	0.0	0.020	0.0	0.004	0.090	0.020	0.0	0.003
3	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.008	0.0	0.030	0.0	0.040	0.0	0.009	0.070	0.040	0.0	0.006
4	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.006	0.0	0.030	0.0	0.040	0.0	0.007	0.060	0.030	0.0	0.004
10	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.006	0.100	0.030	0.0	0.003
11	0.0	0.003	0.0	0.003	0.0	0.006	0.0	0.008	0.0	0.040	0.0	0.030	0.0	0.007	0.100	0.040	0.0	0.006
12A	0.0	0.002	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.014	0.0	0.020	0.0	0.004	0.050	0.020	0.0	0.003
13A	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.006	0.100	0.030	0.0	0.004
14A	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.007	0.0	0.030	0.0	0.030	0.0	0.007	0.080	0.040	0.0	0.005
15A	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.020	0.0	0.030	0.0	0.008	0.060	0.030	0.0	0.004
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.004	0.080	0.030	0.0	0.003
53B	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.006	0.0	0.020	0.0	0.020	0.0	0.006	0.040	0.030	0.0	0.004

TABLE 4D
AIR PARTICULATES
GAMMA SPECTRA - APR
(PCI/M3)

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.003	0.040	0.020	0.0	0.003
2	0.0	0.002	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.013	0.0	0.015	0.0	0.004	0.060	0.020	0.0	0.003
3	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.006	0.0	0.020	0.0	0.030	0.0	0.006	0.030	0.030	0.0	0.004
4	0.0	0.003	0.0	0.002	0.0	0.004	0.0	0.006	0.0	0.020	0.0	0.020	0.0	0.006	0.050	0.030	0.0	0.004
10	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.004	0.060	0.020	0.0	0.004
11	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.005	0.060	0.030	0.0	0.004
12A	0.0	0.002	0.0	0.001	0.0	0.003	0.0	0.003	0.0	0.012	0.0	0.009	0.0	0.003	0.040	0.020	0.0	0.002
13A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.003	0.0	0.015	0.0	0.020	0.0	0.004	0.070	0.020	0.0	0.002
14A	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.020	0.0	0.030	0.0	0.007	0.080	0.030	0.0	0.004
15A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.040	0.040	0.0	0.005	0.060	0.020	0.0	0.003
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.003	0.0	0.015	0.0	0.020	0.0	0.004	0.040	0.020	0.0	0.003
53B	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.030	0.020	0.0	0.004

TABLE 4E
AIR PARTICULATES
GAMMA SPECTRA - MAY
(PCI/M3)

MP

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.100	0.030	0.0	0.003
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.110	0.030	0.0	0.003
3	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.006	0.0	0.030	0.0	0.030	0.0	0.008	0.100	0.040	0.0	0.004
4	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.020	0.0	0.030	0.010	0.007	0.110	0.030	0.0	0.005
10	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.002	0.0	0.005	0.080	0.030	0.0	0.003
11	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.007	0.0	0.030	0.0	0.030	0.0	0.008	0.110	0.040	0.0	0.005
12A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.015	0.0	0.015	0.0	0.004	0.060	0.020	0.0	0.003
13A	0.0	0.002	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.004	0.080	0.020	0.0	0.003
14A	0.0	0.003	0.0	0.004	0.0	0.005	0.0	0.008	0.0	0.030	0.0	0.030	0.0	0.007	0.090	0.040	0.0	0.005
15A	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.006	0.110	0.030	0.0	0.004
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.004	0.110	0.030	0.0	0.003
53B	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.008	0.0	0.030	0.0	0.004	0.0	0.009	0.070	0.040	0.0	0.005

TABLE 4F
AIR PARTICULATES
GAMMA SPECTRA - JUN
(PCI/M3)

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.100	0.030	0.0	0.004
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.150	0.030	0.0	0.003
3	0.0	0.003	0.0	0.004	0.0	0.005	0.008	0.007	0.0	0.030	0.0	0.030	0.0	0.009	0.120	0.040	0.0	0.005
4	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.006	0.0	0.030	0.090	0.050	0.0	0.006	0.120	0.040	0.0	0.004
10	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.006	0.0	0.020	0.0	0.030	0.0	0.005	0.110	0.030	0.0	0.004
11	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.006	0.0	0.030	0.0	0.030	0.0	0.008	0.160	0.050	0.0	0.006
12A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.090	0.030	0.0	0.003
13A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.040	0.040	0.0	0.005	0.150	0.030	0.0	0.003
14A	0.0	0.003	0.0	0.004	0.0	0.005	0.0	0.007	0.0	0.030	0.0	0.040	0.010	0.008	0.160	0.050	0.0	0.005
15A	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.030	0.0	0.040	0.0	0.007	0.140	0.040	0.0	0.004
16A	0.0	0.002	0.0	0.003	0.004	0.004	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.006	0.120	0.030	0.0	0.004
53B	0.0	0.004	0.0	0.004	0.0	0.006	0.0	0.007	0.0	0.030	0.0	0.005	0.0	0.009	0.140	0.050	0.0	0.005

TABLE 4G
AIR PARTICULATES
GAMMA SPECTRA - JUL
(PCI/M3)

MP

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.004	0.0	0.014	0.030	0.030	0.0	0.005	0.060	0.020	0.0	0.004
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.014	0.0	0.013	0.0	0.004	0.090	0.030	0.0	0.003
3	0.0	0.002	0.0	0.003	0.005	0.004	0.0	0.006	0.0	0.030	0.060	0.050	0.0	0.007	0.050	0.030	0.0	0.005
4	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.006	0.060	0.030	0.0	0.004
10	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.060	0.030	0.0	0.003
11	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.005	0.0	0.030	0.0	0.030	0.0	0.006	0.090	0.040	0.005	0.005
12A	0.0	0.001	0.0	0.001	0.0	0.003	0.0	0.004	0.0	0.014	0.0	0.020	0.0	0.003	0.040	0.020	0.0	0.003
13A	0.0	0.002	0.0	0.001	0.0	0.003	0.0	0.003	0.0	0.012	0.0	0.020	0.0	0.003	0.070	0.020	0.0	0.003
14A	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.006	0.0	0.020	0.0	0.030	0.006	0.006	0.070	0.030	0.0	0.006
15A	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.002	0.0	0.005	0.100	0.030	0.004	0.004
16A	0.0	0.001	0.0	0.002	0.0	0.004	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.060	0.030	0.0	0.003
53B	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.007	0.0	0.020	0.0	0.030	0.0	0.007	0.080	0.030	0.0	0.005

TABLE 4H
AIR PARTICULATES
GAMMA SPECTRA - AUG
(PCI/M3)

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.002	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.070	0.020	0.0	0.003
2	0.0	[illegible]	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.030	0.0	0.006	0.110	0.030	0.0	0.004
3	0.0	[illegible]	0.0	0.004	0.0	0.004	0.0	0.008	0.0	0.030	0.0	0.030	0.0	0.008	0.090	0.040	0.0	0.005
4	0.0	[illegible]	0.0	0.003	0.0	0.005	0.0	0.007	0.0	0.020	0.0	0.040	0.0	0.007	0.130	0.040	0.0	0.005
10	0.0	[illegible]	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.006	0.090	0.030	0.0	0.004
11	0.0	[illegible]	0.0	0.004	0.0	0.006	0.0	0.006	0.0	0.030	0.0	0.030	0.0	0.009	0.090	0.040	0.0	0.006
12A	0.0	[illegible]	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.004	0.0	0.020	0.0	0.004
13A	0.0	[illegible]	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.020	0.0	0.030	0.0	0.006	0.080	0.030	0.0	0.004
14A	0.0	0.003	0.0	0.004	0.0	0.005	0.0	0.007	0.0	0.030	0.0	0.040	0.0	0.008	0.080	0.040	0.0	0.006
15A	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.006	0.110	0.030	0.0	0.004
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.006	0.080	0.030	0.0	0.004
53B	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.009	0.0	0.030	0.0	0.040	0.0	0.007	0.090	0.040	0.0	0.006

TABLE 4I
AIR PARTICULATES
GAMMA SPECTRA - SEP
(PCI/M3)

MP

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.070	0.030	0.0	0.003
2	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.130	0.030	0.0	0.003
3	0.0	0.003	0.0	0.004	0.0	0.005	0.0	0.008	0.0	0.030	0.060	0.050	0.0	0.006	0.110	0.040	0.0	0.005
4	0.0	0.003	0.0	0.003	0.0	0.006	0.0	0.006	0.0	0.020	0.0	0.030	0.0	0.009	0.100	0.040	0.0	0.005
10	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.006	0.090	0.030	0.0	0.004
11	0.0	0.003	0.0	0.003	0.0	0.006	0.0	0.006	0.0	0.040	0.0	0.040	0.0	0.008	0.0	0.030	0.0	0.004
12A	0.0	0.002	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.020	0.0	0.014	0.0	0.004	0.080	0.020	0.0	0.003
13A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.040	0.030	0.0	0.005	0.120	0.030	0.0	0.003
14A	0.0	0.003	0.0	0.003	0.0	0.005	0.0	0.008	0.0	0.030	0.0	0.030	0.0	0.009	0.090	0.040	0.0	0.005
15A	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.006	0.130	0.030	0.0	0.003
16A	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.110	0.030	0.0	0.003
53B	0.0	0.004	0.0	0.004	0.0	0.007	0.0	0.008	0.0	0.030	0.0	0.040	0.0	0.009	0.0	0.040	0.0	0.006

TABLE 4J
AIR PARTICULATES
GAMMA SPECTRA - OCT
(PCI/M3)

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0	0.002	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.011	0.0	0.020	0.0	0.003	0.060	0.020	0.0	0.003
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.014	0.0	0.020	0.0	0.004	0.080	0.020	0.0	0.003
3	0.0	0.005	0.0	0.005	0.0	0.008	0.0	0.012	0.0	0.040	0.0	0.040	0.0	0.010	0.040	0.040	0.0	0.007
4	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.030	0.0	0.005	0.070	0.020	0.0	0.004
10	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.004	0.080	0.030	0.0	0.003
11	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.030	0.090	0.050	0.0	0.007	0.090	0.030	0.0	0.004
12A	0.0	0.001	0.0	0.001	0.0	0.003	0.0	0.004	0.0	0.013	0.0	0.020	0.0	0.004	0.040	0.020	0.0	0.003
13A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.003	0.0	0.014	0.0	0.020	0.0	0.005	0.050	0.020	0.0	0.002
14A	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.007	0.0	0.020	0.0	0.030	0.0	0.007	0.090	0.030	0.0	0.005
15A	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.060	0.020	0.0	0.003
16A	0.0	0.002	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.005	0.080	0.020	0.0	0.003
53B	0.0	0.003	0.0	0.003	0.0	0.007	0.0	0.008	0.0	0.030	0.0	0.030	0.0	0.009	0.070	0.040	0.0	0.006

TABLE 4K
AIR PARTICULATES
GAMMA SPECTRA - NOV
(PCI/M3)

MP

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
	A N A L Y S E S																	
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.003	0.0	0.014	0.0	0.020	0.0	0.004	0.070	0.030	0.0	0.003
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.014	0.0	0.020	0.0	0.004	0.090	0.020	0.0	0.003
3	0.0	0.003	0.0	0.003	0.0	0.006	0.0	0.007	0.0	0.020	0.0	0.040	0.0	0.007	0.100	0.040	0.0	0.005
4	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.006	0.0	0.020	0.070	0.050	0.0	0.005	0.090	0.040	0.0	0.004
10	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.060	0.030	0.0	0.004
11	0.004	0.003	0.0	0.003	0.0	0.005	0.0	0.007	0.0	0.020	0.0	0.040	0.0	0.007	0.100	0.040	0.0	0.005
12A	0.0	0.002	0.0	0.001	0.0	0.003	0.0	0.004	0.0	0.014	0.0	0.020	0.0	0.003	0.070	0.020	0.0	0.003
13A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.003	0.0	0.020	0.0	0.020	0.0	0.004	0.080	0.030	0.0	0.003
14A	0.0	0.003	0.0	0.003	0.0	0.006	0.0	0.007	0.0	0.030	0.0	0.030	0.0	0.007	0.060	0.040	0.0	0.005
15A	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.020	0.0	0.005	0.070	0.030	0.0	0.005
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.004	0.090	0.030	0.0	0.003
53B	0.0	0.002	0.0	0.003	0.0	0.006	0.0	0.008	0.0	0.030	0.0	0.040	0.0	0.007	0.090	0.040	0.0	0.006

TABLE 4L
AIR PARTICULATES
GAMMA SPECTRA - DEC
(PCI/M3)

LOCATION	CS-137		CS-134		RU-103		ZR-95		RU(RH)-106		K-40		TH-228		BE-7		NB-95	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
	A N A L Y S E S																	
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.020	0.0	0.004	0.100	0.030	0.0	0.003
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.015	0.0	0.020	0.0	0.005	0.090	0.030	0.0	0.003
3	0.0	0.004	0.0	0.004	0.0	0.005	0.0	0.009	0.0	0.040	0.0	0.040	0.0	0.008	0.130	0.040	0.0	0.006
4	0.0	0.003	0.0	0.003	0.0	0.012	0.0	0.012	0.0	0.030	0.110	0.060	0.0	0.008	0.120	0.070	0.0	0.015
10	0.0	0.004	0.0	0.004	0.0	0.005	0.0	0.008	0.0	0.030	0.0	0.040	0.0	0.009	0.090	0.040	0.0	0.005
11	0.0	0.003	0.0	0.003	0.0	0.006	0.0	0.007	0.0	0.030	0.0	0.040	0.0	0.008	0.060	0.040	0.0	0.005
12A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.003	0.0	0.020	0.0	0.020	0.0	0.005	0.080	0.020	0.0	0.002
13A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.060	0.040	0.0	0.005	0.090	0.030	0.0	0.003
14A	0.0	0.004	0.0	0.004	0.0	0.005	0.0	0.009	0.0	0.030	0.0	0.040	0.0	0.010	0.090	0.040	0.0	0.005
15A	0.0	0.003	0.0	0.003	0.0	0.012	0.0	0.011	0.0	0.030	0.0	0.030	0.0	0.007	0.090	0.060	0.0	0.013
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.003	0.0	0.020	0.0	0.020	0.0	0.006	0.110	0.030	0.003	0.003
53B	0.0	0.003	0.0	0.004	0.0	0.006	0.0	0.007	0.0	0.030	0.080	0.070	0.0	0.009	0.100	0.040	0.0	0.006

TABLE 5
AIR PARTICULATES
QUARTERLY SR & CS
(PCI/M3)*10E+2 (a)

MP

LOCATION	STRONTIUM-89 1ST QTR	(+/-)	2ND QTR	(+/-)	3RD QTR	(+/-)	4TH QTR	(+/-)	STRONTIUM-90 1ST QTR	(+/-)	2ND QTR	(+/-)	3RD QTR	(+/-)	4TH QTR	(+/-)
1	-0.030	0.040	0.060	0.060	0.0	0.080	-0.020	0.030	0.012	0.006	0.004	0.009	0.014	0.012	0.005	0.002
2	0.030	0.050	0.010	0.020	0.110	0.110	0.030	0.040	0.007	0.009	0.006	0.004	0.020	0.020	0.014	0.007
3	0.0	0.060	0.0	0.040	-0.070	0.130	0.0	0.020	0.020	0.012	0.010	0.009	0.060	0.020	0.019	0.012
4	0.0	0.050	-0.010	0.040	-0.030	0.120	-0.040	0.050	0.013	0.010	0.015	0.007	0.050	0.020	0.030	0.007
10	0.010	0.050	0.030	0.030	0.200	0.300	0.0	0.040	0.011	0.010	0.0	0.011	0.010	0.050	0.009	0.006
11	0.040	0.090	0.0	0.060	-0.020	0.070	0.0	0.060	0.0	0.020	0.018	0.011	0.015	0.012	0.020	0.010
12A	0.0	0.040	-0.020	0.030	-0.020	0.060	0.040	0.050	0.012	0.008	0.014	0.005	0.015	0.012	0.016	0.008
13A	-0.040	0.030	0.0	0.030	-0.060	0.070	0.0	0.040	0.016	0.007	0.008	0.006	0.030	0.020	0.010	0.005
14A	0.0	0.070	0.010	0.060	0.020	0.050	0.020	0.060	0.004	0.014	0.012	0.013	0.020	0.020	0.014	0.009
15A	0.030	0.080	0.010	0.040	0.020	0.020	0.010	0.040	0.025	0.015	0.008	0.007	0.011	0.008	0.010	0.006
16A	-0.030	0.050	0.0	0.030	-0.030	0.100	0.0	0.030	0.018	0.010	0.009	0.007	0.010	0.020	0.007	0.004
53B	-0.020	0.050	0.040	0.050	-0.050	0.050	-0.030	0.060	0.025	0.011	0.004	0.009	0.020	0.009	0.015	0.010

LOCATION	CESIUM-137 1ST QTR	(+/-)	2ND QTR	(+/-)	3RD QTR	(+/-)	4TH QTR	(+/-)
1	0.008	0.005	0.015	0.006	0.023	0.008	0.011	0.007
2	0.039	0.006	0.013	0.005	0.011	0.007	0.006	0.004
3	0.040	0.008	0.001	0.008	0.017	0.010	0.005	0.003
4	0.016	0.008	0.008	0.007	0.023	0.010	0.004	0.006
10	0.019	0.005	0.005	0.006	0.020	0.030	0.004	0.005
11	0.045	0.009	0.015	0.009	0.060	0.040	0.013	0.008
12A	0.049	0.005	0.002	0.005	0.006	0.005	0.001	0.004
13A	0.014	0.004	0.016	0.014	0.005	0.005	0.003	0.003
14A	0.069	0.010	0.012	0.010	0.015	0.008	0.007	0.005
15A	0.011	0.007	0.006	0.008	0.004	0.005	0.012	0.005
16A	0.009	0.005	0.004	0.005	0.020	0.020	0.005	0.009
53B	0.019	0.005	0.020	0.020	0.020	0.020	0.018	0.014

(a) *10E+2 indicates that all values in this table have been multiplied by 100.

TABLE 6
SOIL
(PCI/G)

MP

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
3	5/ 9/84	0.020	0.020	0.159	0.006	0.61	0.05	0.0	0.08	0.0	0.03	0.0	0.02	0.0	0.02
4	5/ 9/84	0.030	0.020	0.212	0.007	0.71	0.05	0.0	0.08	0.0	0.03	0.0	0.02	0.0	0.02
10	5/ 9/84	0.0	0.020	0.089	0.005	0.22	0.04	0.0	0.10	0.0	0.03	0.0	0.03	0.0	0.03
11	5/ 9/84	0.0	0.020	0.375	0.008	0.81	0.06	0.0	0.08	0.0	0.03	0.0	0.02	0.0	0.02
14A	5/ 9/84	0.060	0.030	0.622	0.012	1.01	0.08	0.0	0.10	0.0	0.03	0.0	0.03	0.0	0.03
15A	5/ 9/84	0.004	0.009	0.052	0.003	0.29	0.03	0.0	0.07	0.0	0.02	0.0	0.02	0.0	0.02

LOCATION	COLLECTION DATE	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
3	5/ 9/84	0.0	0.02	0.0	0.07	0.0	0.06	0.0	0.04	0.0	0.20	0.0	0.30	5.40	0.50
4	5/ 9/84	0.0	0.02	0.0	0.06	0.0	0.06	0.0	0.05	0.0	0.20	0.0	0.30	5.50	0.50
10	5/ 9/84	0.0	0.03	0.0	0.08	0.0	0.09	0.0	0.05	0.0	0.30	0.0	0.30	9.80	0.70
11	5/ 9/84	0.0	0.03	0.0	0.06	0.0	0.06	0.0	0.04	0.0	0.20	0.0	0.30	4.10	0.40
14A	5/ 9/84	0.0	0.03	0.0	0.07	0.0	0.09	0.0	0.05	0.0	0.30	0.0	0.30	5.10	0.60
15A	5/ 9/84	0.0	0.02	0.0	0.05	0.0	0.05	0.0	0.04	0.0	0.20	0.0	0.20	5.20	0.40

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)
3	5/ 9/84	0.30	0.06	0.53	0.09	0.0	0.20	0.0	0.03
4	5/ 9/84	0.49	0.07	0.70	0.10	0.0	0.30	0.0	0.03
10	5/ 9/84	0.74	0.08	1.06	0.12	0.30	0.30	0.0	0.04
11	5/ 9/84	0.44	0.07	0.57	0.09	0.50	0.20	0.0	0.03
14A	5/ 9/84	0.48	0.08	0.57	0.12	0.0	0.30	0.04	0.03
15A	5/ 9/84	0.48	0.04	0.54	0.08	0.20	0.20	0.04	0.02

TABLE 7
DAIRY MILK
(PCI/L)

MP

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	BA-140	(+/-)	LA-140	(+/-)
19	1/ 9/84	-0.1	0.7	5.7	0.3	11.0	4.0	0.0	0.2	0.0	4.0	0.0	20.0	0.0	4.00
19	2/ 6/84	0.7	1.0	4.8	0.2	10.0	4.0	0.1	0.1	0.0	4.0	0.0	20.0	0.0	8.00
19	3/ 5/84	0.8	1.2	4.5	0.5	9.0	3.0	0.2	0.2	0.0	4.0	0.0	13.0	0.0	4.00
19	4/ 2/84	1.4	1.4	6.0	0.3	9.0	4.0	0.1	0.1	0.0	4.0	0.0	20.0	0.0	5.00
19	5/ 8/84	1.4	1.0	5.2	0.3	13.0	4.0	0.2	0.2	0.0	4.0	0.0	20.0	0.0	4.00
19	6/ 5/84	0.8	1.1	6.2	0.4	18.0	4.0	0.2	0.4	0.0	4.0	0.0	20.0	0.0	4.00
19	7/10/84	1.2	1.1	5.5	0.3	23.0	4.0	0.2	0.2	0.0	4.0	0.0	20.0	0.0	6.00
19	8/ 6/84	-1.3	1.4	6.2	0.6	33.0	4.0	0.2	0.2 (a)	0.0	4.0	0.0	13.0	0.0	4.00
19	9/11/84	-0.9	1.2	6.0	0.3	29.0	4.0	0.2	0.1	0.0	4.0	0.0	20.0	0.0	5.00
19	10/ 9/84	0.5	1.4	6.0	0.4	12.0	3.0	0.1	0.1	0.0	3.0	0.0	9.0	0.0	3.00
19	11/ 6/84	0.7	0.2	5.2	0.3	11.0	3.0	0.2	0.1	0.0	3.0	0.0	11.0	0.0	3.00
19	12/10/84	1.0	2.0	5.3	0.4	9.0	3.0	0.1	0.1	0.0	2.0	0.0	13.0	0.0	4.00
20	1/ 9/84	-1.0	1.0	3.2	0.3	1.0	3.0	0.1	0.1	0.0	4.0	0.0	20.0	0.0	5.00
20	2/ 6/84	0.5	1.3	6.2	0.3	3.0	3.0	0.2	0.2	0.0	4.0	0.0	20.0	0.0	7.00
20	3/ 5/84	-0.5	0.8	2.8	0.3	4.0	3.0	0.2	0.1	0.0	4.0	0.0	13.0	0.0	4.00
20	4/ 2/84	0.2	1.0	3.7	0.3	7.0	3.0	0.2	0.1	0.0	4.0	0.0	20.0	0.0	4.00
20	5/ 8/84	0.0	0.8	3.7	0.3	2.0	3.0	0.0	0.2	0.0	4.0	0.0	15.0	0.0	4.00
20	6/ 5/84	-0.3	0.9	4.9	0.3	3.0	4.0	0.1	0.2	0.0	4.0	0.0	15.0	0.0	4.00
20	7/ 9/84	0.3	1.3	4.4	0.4	2.0	3.0	0.0	0.3	0.0	4.0	0.0	20.0	0.0	5.00
20	8/ 6/84	1.0	1.0	3.7	0.4	6.0	3.0	0.1	0.2	0.0	4.0	0.0	13.0	0.0	4.00
20	9/10/84	0.6	0.9	3.5	0.2	4.0	3.0	0.2	0.1	0.0	4.0	0.0	20.0	0.0	5.00
20	10/ 9/84	0.0	1.5	8.3	0.5	2.0	3.0	0.1	0.1	0.0	3.0	0.0	12.0	0.0	3.00
20	11/ 6/84	0.0	1.0	3.2	0.3	4.0	3.0	0.1	0.1	0.0	3.0	0.0	13.0	0.0	3.00
20	12/10/84	-0.7	1.2	3.5	0.4	2.0	3.0	0.1	0.1	0.0	2.0	0.0	11.0	0.0	3.00
21	1/ 9/84	-1.2	0.9	7.6	0.4	13.0	4.0	0.0	0.1	0.0	4.0	0.0	20.0	0.0	5.00
21	2/ 6/84	-0.5	0.9	8.1	0.4	9.0	4.0	0.1	0.2	0.0	4.0	0.0	20.0	0.0	4.00
21	3/ 5/84	-0.3	0.8	6.5	0.4	12.0	4.0	0.2	0.2	0.0	4.0	0.0	13.0	0.0	4.00
21	4/ 2/84	0.1	0.9	6.5	0.4	4.0	3.0	0.1	0.1	0.0	4.0	0.0	20.0	0.0	5.00
21	5/ 8/84	0.3	0.9	7.0	0.3	10.0	4.0	0.2	0.2	0.0	4.0	0.0	20.0	0.0	4.00
21	6/ 5/84	-0.5	1.1	11.4	0.5	23.0	4.0	0.1	0.2	0.0	4.0	0.0	20.0	0.0	4.00
21	7/10/84	2.0	2.0	13.7	0.6	41.0	5.0	0.0	0.2	0.0	4.0	0.0	20.0	0.0	6.00
21	8/ 6/84	-0.4	1.2	11.2	0.4	27.0	4.0	0.3	0.2 (a)	0.0	4.0	0.0	12.0	0.0	4.00
21	9/11/84	0.0	2.0	10.5	0.5	13.0	4.0	0.1	0.1	0.0	4.0	0.0	20.0	0.0	5.00
21	10/ 9/84	1.2	1.3	9.3	0.4	10.0	3.0	0.1	0.1	0.0	3.0	0.0	12.0	0.0	4.00
21	11/ 6/84	2.0	2.0	6.8	0.4	10.0	3.0	0.2	0.1	0.0	3.0	0.0	13.0	0.0	4.00
21	12/10/84	-2.0	1.0	5.4	0.3	9.0	3.0	0.1	0.2	0.0	2.0	0.0	13.0	0.0	4.00
22A	1/ 9/84	-0.5	0.8	5.1	0.4	3.0	3.0	0.0	0.2	0.0	4.0	0.0	20.0	0.0	4.00
22A	2/ 6/84	0.0	1.0	4.4	0.4	4.0	3.0	0.0	0.1	0.0	4.0	0.0	13.0	0.0	4.00
22A	3/ 5/84	0.6	0.8	2.6	0.3	5.0	3.0	0.2	0.2	0.0	4.0	0.0	12.0	0.0	4.00
22A	4/ 2/84	0.7	0.7	3.4	0.3	0.0	3.0	0.2	0.1	0.0	4.0	0.0	20.0	0.0	5.00
22A	5/ 8/84	-0.3	0.7	4.1	0.3	2.0	3.0	0.2	0.2	0.0	4.0	0.0	15.0	0.0	4.00
22A	6/ 5/84	-0.1	0.7	5.0	0.2	5.0	3.0	0.1	0.2	0.0	4.0	0.0	15.0	0.0	4.00
22A	7/10/84	0.0	1.0	5.2	0.3	5.0	3.0	0.0	0.2	0.0	4.0	0.0	20.0	0.0	6.00
22A	8/ 6/84	1.0	2.0	5.4	0.5	8.0	3.0	0.1	0.2 (a)	0.0	4.0	0.0	12.0	0.0	3.00
22A	9/11/84	0.7	1.1	4.7	0.3	8.0	4.0	0.2	0.1	0.0	4.0	0.0	20.0	0.0	5.00
22A	10/ 9/84	1.1	1.2	4.3	0.4	5.0	3.0	0.1	0.1	0.0	3.0	0.0	9.0	0.0	3.00
22A	11/ 6/84	-1.0	2.0	3.4	0.3	0.0	3.0	0.1	0.1	0.0	3.0	0.0	10.0	0.0	3.00
22A	12/10/84	-0.7	0.8	3.1	0.3	5.0	3.0	0.1	0.1	0.0	2.0	0.0	11.0	0.0	3.00

(a) Longer count time was necessary to meet required sensitivity; time between sample collection and sample analysis was greater than the E.T.S. requirement of 8 days.

TABLE 8
GOAT MILK
(PCI/L)

MP

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	BA-140	(+/-)	LA-140	(+/-)
23	2/ 7/84 (a)														
23	3/ 7/84	-0.6	1.3	15.7	0.5	60.0	5.0	0.0	0.1	0.0	4.0	0.0	12.0	0.0	3.00
23	3/20/84	0.5	1.3	14.5	0.5	47.0	5.0	0.2	0.2	0.0	4.0	0.0	13.0	0.0	4.00
23	4/ 2/84	0.2	1.0	10.5	0.4	52.0	5.0	0.2	0.2	0.0	4.0	0.0	12.0	0.0	3.00
23	4/17/84	-0.4	1.4	8.0	0.4	38.0	5.0	0.2	0.2	0.0	4.0	0.0	12.0	0.0	3.00
23	5/ 8/84	0.9	1.1	9.4	0.4	31.0	4.0	0.3	0.2	0.0	4.0	0.0	12.0	0.0	3.00
23	5/22/84	2.7	1.2	22.3	0.4	92.0	6.0	0.2	0.1	0.0	4.0	0.0	20.0	0.0	4.00
23	6/ 5/84	-0.3	1.3	11.4	0.6	67.0	5.0	0.2	0.2	0.0	4.0	0.0	11.0	0.0	3.00
23	6/19/84	1.8	1.4	17.6	0.5	181.0	8.0	0.4	0.2	0.0	4.0	0.0	20.0	0.0	4.00
23	7/10/84	-1.0	2.0	30.8	0.7	133.0	7.0	0.0	0.2	0.0	4.0	0.0	30.0	0.0	7.00
23	7/24/84	-3.0	2.0	30.5	0.7	132.0	7.0	0.7	0.4	0.0	4.0	0.0	20.0	0.0	4.00
23	8/ 6/84	2.0	2.0	22.6	0.7	139.0	7.0	0.3	0.3	0.0	4.0	0.0	13.0	0.0	3.00
23	8/21/84	0.0	4.0	30.0	1.0	163.0	7.0	0.3	0.2	0.0	4.0	0.0	15.0	0.0	4.00
23	9/11/84	0.0	3.0	21.3	0.6	137.0	7.0	0.3	0.2	0.0	4.0	0.0	13.0	0.0	4.00
23	9/25/84	2.0	2.0	13.6	0.5	89.0	6.0	0.2	0.2	0.0	4.0	0.0	12.0	0.0	3.00
23	10/ 9/84	1.0	2.0	14.9	0.5	58.0	5.0	0.0	0.1	0.0	3.0	0.0	12.0	0.0	3.00
23	10/23/84	3.0	2.0	24.2	0.6	145.0	6.0	0.1	0.1	0.0	3.0	0.0	10.0	0.0	3.00
23	11/ 6/84	-2.0	2.0	28.5	0.8	134.0	6.0	0.2	0.1	0.0	3.0	0.0	10.0	0.0	3.00
23	11/20/84	2.0	3.0	19.6	0.6	101.0	7.0	1.2	0.4	0.0	4.0	0.0	20.0	6.00	5.00
23	12/10/84	1.0	4.0	23.2	0.8	146.0	8.0	0.3	0.3	0.0	3.0	0.0	20.0	0.0	6.00
24A	2/ 2/84 (a)														
24A	4/ 2/84	0.4	0.8	4.8	0.3	2.0	4.0	0.2	0.3	0.0	4.0	0.0	13.0	0.0	4.00
24A	4/16/84	-0.1	0.6	2.7	0.2	3.0	3.0	0.2	0.2	0.0	4.0	0.0	12.0	0.0	4.00
24A	5/ 8/84	0.6	1.1	5.8	0.4	6.0	3.0	0.2	0.2	0.0	4.0	0.0	20.0	0.0	7.00
24A	5/21/84	-0.6	0.8	4.5	0.4	2.0	3.0	0.2	0.2	0.0	4.0	0.0	20.0	0.0	5.00
24A	6/ 5/84	1.3	1.0	4.5	0.4	7.0	3.0	0.1	0.2	0.0	4.0	0.0	11.0	0.0	3.00
24A	6/18/84	0.2	0.8	5.7	0.3	5.0	3.0	0.3	0.2	0.0	4.0	0.0	15.0	0.0	5.00
24A	7/10/84	-0.3	0.7	4.9	0.3	3.0	4.0	0.0	0.2	0.0	4.0	0.0	30.0	0.0	8.00
24A	7/24/84	0.8	0.9	3.9	0.3	4.0	3.0	0.4	0.2	0.0	4.0	0.0	14.0	0.0	4.00
24A	8/ 6/84	0.1	1.4	7.0	0.4	5.0	3.0	0.0	0.2(b)	0.0	4.0	0.0	20.0	0.0	4.00
24A	8/20/84	0.8	0.9	4.9	0.3	5.0	3.0	0.2	0.2	0.0	4.0	0.0	13.0	0.0	4.00
24A	9/11/84	1.0	2.0	4.5	0.4	5.0	3.0	0.2	0.2	0.0	4.0	0.0	11.0	0.0	3.00
24A	9/25/84	0.0	2.0	3.3	0.4	5.0	4.0	0.4	0.3	0.0	4.0	0.0	12.0	0.0	3.00
24A	10/ 9/84	0.0	2.0	5.1	0.5	9.0	3.0	0.1	0.1	0.0	3.0	0.0	11.0	0.0	3.00
24A	10/23/84	-0.3	1.1	3.4	0.3	9.0	3.0	0.1	0.2	0.0	4.0	0.0	10.0	0.0	3.00
24A	11/ 6/84	0.0	2.0	3.4	0.4	2.0	3.0	0.3	0.1	0.0	3.0	0.0	11.0	0.0	3.00
24A	11/20/84	0.0	2.0	3.7	0.3	5.0	3.0	0.7	0.2	0.0	4.0	0.0	20.0	0.0	4.00
24A	12/10/84	0.0	2.0	6.9	0.4	3.0	3.0	0.1	0.2	0.0	3.0	0.0	20.0	0.0	5.00

(a) Milk was not available in February at these locations.
(b) Longer count time was necessary to meet required sensitivity; time between sample collection and sample analysis was greater than the E.T.S. requirement of 8 days.

TABLE 9
PASTURE GRASS (a)
(PCI/G)

MP

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
39B (b)	6/12/84	0.0	3.000	0.305	0.007	0.025	0.010	0.0	0.02	0.0	0.01	0.0	0.01	0.0	0.01
39B	9/19/84	0.060	0.060	0.627	0.006	0.0	0.013	0.0	0.02	0.0	0.01	0.0	0.01	0.0	0.01
11 (b)	6/12/84	0.027	0.013	0.361	0.004	0.060	0.020	0.0	0.03	0.0	0.02	0.0	0.01	0.0	0.01
11	9/19/84	0.030	0.020	0.180	0.004	0.051	0.015	0.0	0.02	0.0	0.01	0.0	0.01	0.0	0.01

LOCATION	COLLECTION DATE	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
39B	6/12/84	0.0	0.01	0.0	0.03	0.0	0.03	0.0	0.02	0.0	0.09	0.0	0.08	6.20	0.30
39B	9/19/84	0.0	0.01	0.0	0.03	0.0	0.03	0.0	0.02	0.11	0.11	0.0	0.09	3.80	0.30
11	6/12/84	0.0	0.01	0.0	0.04	0.0	0.03	0.0	0.02	0.0	0.13	0.0	0.11	6.00	0.40
11	9/19/84	0.0	0.01	0.0	0.03	0.0	0.03	0.0	0.02	0.0	0.12	0.0	0.10	4.00	0.30

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)
39B	6/12/84	0.04	0.02	0.0	0.03	0.91	0.11	0.0	0.01
39B	9/19/84	0.0	0.02	0.08	0.03	0.54	0.12	0.0	0.01
11	6/12/84	0.0	0.02	0.0	0.04	1.50	0.20	0.0	0.02
11	9/19/84	0.0	0.02	0.05	0.03	0.86	0.13	0.0	0.01

(a) Pasture grass was not available during February at locations (23) and (24).
(b) Broad leaf vegetation samples.

TABLE 10
WELL WATER
(PCI/L)

MP

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
17	6/12/84	0.5	0.4	0.5	0.1	0.0	3.0	0.	6.	0.	4.	0.	3.	0.	3.
17	9/19/84	0.2	0.4	0.3	0.2	0.0	3.0	0.	9.	0.	4.	0.	3.	0.	3.
18	6/12/84	0.4	0.4	0.3	0.1	0.0	3.0	0.	6.	0.	3.	0.	3.	0.	3.
18	9/19/84	-0.2	0.6	0.8	0.2	0.0	3.0	0.	8.	0.	3.	0.	3.	0.	3.

		CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
17	6/12/84	0.	3.	0.	7.	0.	8.	0.	5.	0.	30.	0.	30.	0.	30.
17	9/19/84	0.	3.	0.	8.	0.	8.	0.	6.	0.	30.	0.	30.	0.	30.
18	6/12/84	0.	3.	0.	7.	0.	7.	0.	5.	0.	30.	0.	30.	0.	30.
18	9/19/84	0.	3.	0.	8.	0.	7.	0.	6.	0.	30.	0.	30.	0.	30.

		RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)	H-3	(+/-)	GROSS BETA	(+/-)
17	6/12/84	52.	7.	0.	8.	0.	0.	0.	3.	130.	100.	3.7	0.6
17	9/19/84	86.	6.	0.	9.	0.	0.	0.	3.	0.	60.	7.0	0.8
18	6/12/84	17.	6.	0.	8.	0.	0.	0.	3.	170.	120.	1.1	0.4
18	9/19/84	0.	6.	0.	8.	0.	0.	0.	3.	210.	60.	5.0	0.6

TABLE 11
RESERVOIR WATER
(PCI/L)

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)

CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)

RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)	H-3	(+/-)	GROSS BETA	(+/-)

These samples are not required.

TABLE 12
FRUITS & VEGETABLES
(PCI/G)

MP

LOCATION	COLLECTION DATE	TYPE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)
25	6/20/84	STRAWBERRIES	0.005	0.005	0.011	0.002	0.0	0.009	0.0	0.020	0.0	0.012	0.0	0.011
25	6/21/84	LETTUCE	0.008	0.005	0.031	0.002	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020
25	9/18/84	APPLES	0.001	0.004	0.004	0.001	0.0	0.006	0.0	0.020	0.0	0.006	0.0	0.006
25	9/19/84	SWISSCHARD	0.0	0.019	0.014	0.006	0.0	0.006	0.0	0.700 (a)	0.0	0.007	0.0	0.007
26A	6/20/84	STRAWBERRIES	-0.016	0.005	0.036	0.002	0.0	0.010	0.0	0.014	0.0	0.012	0.0	0.010
26A	6/21/84	LETTUCE	0.0	0.005	0.030	0.002	0.0	0.014	0.0	0.020	0.0	0.020	0.0	0.013
26A	9/17/84	APPLES	0.007	0.012	0.012	0.003	0.0	0.005	0.0	0.011	0.0	0.006	0.0	0.006
26A	9/18/84	CABBAGE	0.003	0.011	0.038	0.003	0.0	0.007	0.0	0.009	0.0	0.007	0.0	0.007

LOCATION	COLLECTION DATE	TYPE	CO-58	(+/-)	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)
25	6/20/84	STRAWBERRIES	0.0	0.009	0.0	0.012	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.100
25	6/21/84	LETTUCE	0.0	0.020	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.200
25	9/18/84	APPLES	0.0	0.006	0.0	0.006	0.0	0.020	0.0	0.014	0.0	0.010	0.0	0.050
25	9/19/84	SWISSCHARD	0.0	0.010	0.0	0.007	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.060
26A	6/20/84	STRAWBERRIES	0.0	0.009	0.0	0.010	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.100
26A	6/21/84	LETTUCE	0.0	0.013	0.0	0.015	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.120
26A	9/17/84	APPLES	0.0	0.006	0.0	0.005	0.0	0.013	0.0	0.013	0.0	0.009	0.0	0.050
26A	9/18/84	CABBAGE	0.0	0.006	0.0	0.008	0.0	0.020	0.0	0.020	0.0	0.011	0.0	0.060

LOCATION	COLLECTION DATE	TYPE	CR-51	(+/-)	K-40	(+/-)	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)
25	6/20/84	STRAWBERRIES	0.0	0.080	1.500	0.300	0.0	0.020	0.0	0.030	0.0	0.090	0.0	0.010
25	6/21/84	LETTUCE	0.0	0.120	5.500	0.500	0.0	0.030	0.090	0.040	0.250	0.140	0.0	0.020
25	9/18/84	APPLES	0.0	0.050	1.060	0.140	0.0	0.010	0.0	0.015	0.0	0.050	0.0	0.006
25	9/19/84	SWISSCHARD	0.0	0.200	4.000	0.200	0.0	0.011	0.020	0.020	0.0	0.014	0.009	0.008
26A	6/20/84	STRAWBERRIES	0.0	0.080	0.900	0.200	0.0	0.020	0.0	0.030	0.0	0.080	0.0	0.010
26A	6/21/84	LETTUCE	0.0	0.100	3.000	0.400	0.0	0.020	0.0	0.040	0.140	0.110	0.0	0.014
26A	9/17/84	APPLES	0.0	0.050	0.920	0.130	0.0	0.010	0.0	0.014	0.0	0.050	0.0	0.006
26A	9/18/84	CABBAGE	0.0	0.050	4.500	0.200	0.0	0.012	0.0	0.020	0.0	0.050	0.0	0.007

(a) The E.T.S. MDL requirement of 0.05 was not met due to contractor mis-scheduling counting of sample.

TABLE 13
MEAT, POULTRY & EGGS (a)
(PCI/G)

MP

LOCATION	COLLECTION DATE	TYPE	SR-89	SR-90	CS-137	I-131	CS-134	MN-54
			(+/-)	(+/-)	(+/-)	(+/-)	(+/-)	(+/-)
			CO-58	CO-60	FE-59	ZN-65	ZR-95	RU(RH)-106
			(+/-)	(+/-)	(+/-)	(+/-)	(+/-)	(+/-)
			CR-51	K-40	RA-226	TH-228	BE-7	NB-95
			(+/-)	(+/-)	(+/-)	(+/-)	(+/-)	(+/-)

(a) Commercial samples for which feed was grown within 10 miles of the station were not available in 1984.

TABLE 14
SEA WATER
(PCI/L)

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
32	1/21/84	-0.70	0.80	0.90	0.30	0.0	3.00	0.	50.	0.	4.	0.	3.	0.	4.
32	4/28/84	0.0	0.60	0.40	0.30	0.0	3.00	0.	30.	0.	4.	0.	3.	0.	4.
32	7/27/84	-0.40	0.30	0.30	0.20	0.0	3.00	0.	60.	0.	4.	0.	3.	0.	4.
32	10/27/84	0.0	0.70	0.30	0.20	0.0	3.00	0.	20.	0.	3.	0.	3.	3.	3.
33	1/21/84	0.50	0.80	0.50	0.30	0.0	3.00	0.	50.	0.	4.	0.	3.	0.	4.
33	4/28/84	0.30	0.50	0.30	0.30	0.0	3.00	0.	50.	0.	3.	0.	3.	0.	4.
33	7/27/84	-0.60	0.40	0.60	0.20	0.0	3.00	0.	60.	0.	4.	0.	3.	0.	4.
33	10/27/84	0.0	0.80	0.30	0.20	0.0	3.00	0.	40.	0.	2.	0.	3.	0.	3
35	1/21/84	-0.70	0.70	0.70	0.30	0.0	3.00	0.	60.	0.	4.	0.	3.	0.	4.
35	4/28/84	-0.10	0.50	0.60	0.30	0.0	3.00	0.	50.	0.	4.	0.	3.	0.	4.
35	7/27/84	0.20	0.50	0.30	0.30	0.0	3.00	0.	90.	0.	4.	0.	3.	0.	4.
35	10/27/84	0.0	0.70	0.30	0.20	0.0	3.00	0.	60.	0.	2.	0.	3.	0.	3.
37A	1/21/84	-0.70	0.80	0.70	0.30	0.0	3.00	0.	60.	0.	3.	0.	3.	0.	4.
37A	4/28/84	-0.10	0.50	0.60	0.20	0.0	3.00	0.	50.	0.	3.	0.	3.	0.	4.
37A	7/27/84	0.60	0.50	0.10	0.20	0.0	3.00	0.	100.	0.	3.	0.	3.	0.	4.
37A	10/27/84	-0.20	0.50	0.27	0.13	0.0	3.00	0.	50.	0.	2.	0.	3.	0.	4.

		CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
32	1/21/84	0.	3.	0.	12.	0.	8.	0.	7.	0.	30.	0.	50.	310.	70.
32	4/28/84	0.	3.	0.	9.	0.	7.	0.	7.	30.	30.	0.	40.	200.	60.
32	7/27/84	0.	3.	0.	11.	0.	8.	0.	7.	0.	30.	0.	50.	360.	70.
32	10/27/84	0.	3.	0.	8.	0.	6.	0.	5.	0.	30.	0.	40.	290.	60.
33	1/21/84	0.	3.	0.	11.	0.	7.	0.	7.	0.	30.	0.	50.	240.	70.
33	4/28/84	0.	3.	0.	10.	0.	8.	0.	7.	0.	30.	0.	50.	260.	70.
33	7/27/84	0.	3.	0.	11.	0.	8.	0.	7.	0.	30.	0.	50.	410.	70.
33	10/27/84	0.	3.	0.	9.	0.	7.	0.	5.	0.	30.	0.	30.	340.	60.
35	1/21/84	0.	3.	0.	11.	0.	7.	0.	7.	0.	30.	0.	50.	250.	70.
35	4/28/84	0.	3.	0.	11.	0.	8.	0.	7.	0.	30.	0.	50.	320.	70.
35	7/27/84	0.	3.	0.	12.	0.	7.	0.	7.	0.	30.	0.	60.	250.	70.
35	10/27/84	0.	3.	0.	10.	0.	7.	0.	6.	0.	30.	0.	50.	250.	60.
37A	1/21/84	0.	3.	0.	12.	0.	8.	0.	7.	0.	30.	0.	50.	300.	70.
37A	4/28/84	0.	3.	0.	10.	0.	7.	0.	7.	0.	30.	0.	50.	150.	60.
37A	7/27/84	0.	3.	0.	12.	0.	8.	0.	8.	0.	30.	0.	60.	260.	70.
37A	10/27/84	0.	3.	0.	9.	0.	7.	0.	6.	0.	30.	0.	40.	360.	60.

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	MN-95	(+/-)	H-3	(+/-)	BETA FR I	(+/-)	BETA FR II	(+/-)
32	1/21/84	0.	6.	0.	9.	0.	0.	0.	5.	210.	80.	0.1	0.2	1.2	0.4
32	4/28/84	0.	6.	0.	8.	0.	0.	0.	5.	90.	70.	-0.1	0.1	2.7	0.6
32	7/27/84	0.	6.	0.	8.	0.	0.	0.	5.	0.	60.	0.1	0.4	7.6	0.4
32	10/27/84	0.	5.	0.	7.	0.	0.	0.	4.	0.	60.	0.2	0.2	2.1	0.8
33	1/21/84	0.	6.	0.	8.	0.	0.	0.	5.	80.	70.	0.2	0.2	2.4	0.4
33	4/28/84	0.	6.	10.	9.	0.	0.	0.	5.	70.	60.	-0.0	0.1	1.1	0.4
33	7/27/84	0.	6.	0.	8.	0.	0.	0.	6.	0.	60.	-0.2	0.3	6.6	0.4
33	10/27/84	0.	5.	0.	7.	0.	0.	0.	5.	0.	60.	-0.1	0.2	2.3	0.7
35	1/21/84	0.	6.	0.	8.	0.	0.	0.	5.	180.	70.	0.4	0.2	2.2	0.4
35	4/28/84	0.	6.	0.	8.	0.	0.	0.	5.	0.	60.	-0.2	0.1	4.6	0.6
35	7/27/84	0.	6.	0.	8.	0.	0.	0.	6.	190.	70.	0.0	0.3	1.5	0.2
35	10/27/84	0.	5.	11.	7.	0.	0.	0.	5.	0.	60.	-0.1	0.2	2.2	0.7
37A	1/21/84	0.	6.	0.	8.	0.	0.	0.	6.	110.	60.	0.3	0.2	2.1	0.4
37A	4/28/84	0.	6.	0.	8.	0.	0.	0.	5.	0.	60.	0.0	0.0	5.4	0.6
37A	7/27/84	0.	6.	0.	9.	0.	0.	0.	6.	0.	60.	-0.2	0.3	3.9	0.3
37A	10/27/84	0.	5.	0.	7.	0.	0.	0.	5.	0.	60.	0.0	0.2	1.6	0.7

LOCATION	COLLECTION DATE	BETA FR III	(+/-)	BETA FR IV	(+/-)	AG-110M	(+/-)
32	1/21/84	0.4	0.3	11.9	0.8	0.0	0.0
32	4/28/84	0.5	0.2	3.9	0.7	0.0	0.0
32	7/27/84	0.9	0.2	4.2	0.3	0.0	0.0
32	10/27/84	0.4	0.6	5.1	0.7	0.0	0.0
33	1/21/84	0.5	0.3	6.3	0.6	0.0	0.0
33	4/28/84	0.4	0.2	3.5	0.6	0.0	0.0
33	7/27/84	0.6	0.2	5.3	0.4	0.0	0.0
33	10/27/84	0.6	0.4	6.5	0.8	0.0	0.0
35	1/21/84	0.2	0.2	6.7	0.6	0.0	0.0
35	4/28/84	0.5	0.2	11.1	1.2	0.0	0.0
35	7/27/84	0.6	0.2	8.0	0.4	0.0	0.0
35	10/27/84	0.7	0.4	5.2	0.9	0.0	0.0
37A	1/21/84	0.3	0.2	4.5	0.5	0.0	0.0
37A	4/28/84	0.8	0.2	3.1	0.6	0.0	0.0
37A	7/27/84	0.5	0.2	7.2	0.4	0.0	0.0
37A	10/27/84	2.7	0.4	6.2	1.0	0.0	0.0

TABLE 15
BOTTOM SEDIMENT
(PCI/G)

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
30A	4/ 9/84	-0.002	0.012	0.006	0.004	0.060	0.030	0.0	0.070	0.0	0.030	0.0	0.030	0.0	0.030
30A	10/16/84	0.040	0.020	0.003	0.003	0.0	0.030	0.0	0.050	0.0	0.030	0.0	0.030	0.0	0.030
31	4/ 9/84	0.002	0.008	0.003	0.003	0.0	0.050	0.0	0.130	0.0	0.050	0.0	0.040	0.0	0.040
31	10/15/84	-0.003	0.011	0.003	0.003	0.220	0.050	0.0	0.070	0.0	0.040	0.0	0.040	0.0	0.040
32	4/ 9/84	-0.004	0.010	-0.002	0.004	0.0	0.020	0.0	0.070	0.0	0.030	0.0	0.030	0.0	0.020
32	10/15/84	-0.001	0.014	0.004	0.004	0.0	0.030	0.0	0.060	0.0	0.030	0.0	0.030	0.0	0.030
33	4/ 9/84	0.0	0.007	0.002	0.003	0.0	0.020	0.0	0.070	0.0	0.030	0.0	0.020	0.0	0.030
33	10/16/84	0.001	0.008	0.003	0.002	0.040	0.030	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.030
34	4/ 9/84	0.0	0.020	0.014	0.007	0.0	0.020	0.0	0.060	0.0	0.030	0.0	0.030	0.0	0.030
34	10/15/84	0.010	0.030	0.011	0.011	0.0	0.020	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.020
36	4/ 9/84	-0.001	0.007	0.004	0.003	0.030	0.030	0.0	0.080	0.0	0.030	0.0	0.030	0.0	0.030
36	10/15/84	0.010	0.020	0.007	0.005	0.0	0.030	0.0	0.050	0.0	0.030	0.0	0.030	0.0	0.030
37A	4/ 9/84	0.004	0.012	0.004	0.004	0.0	0.030	0.0	0.070	0.0	0.030	0.0	0.030	0.0	0.030
37A	10/15/84	0.0	0.020	0.003	0.005	0.0	0.020	0.0	0.040	0.0	0.020	0.0	0.020	0.0	0.020

LOCATION	COLLECTION DATE	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
30A	4/ 9/84	0.0	0.030	0.0	0.080	0.0	0.080	0.0	0.050	0.0	0.300	0.0	0.300	12.500	0.800
30A	10/16/84	0.0	0.030	0.0	0.070	0.0	0.080	0.050	0.040	0.0	0.300	0.0	0.200	13.500	0.800
31	4/ 9/84	0.0	0.040	0.0	0.100	0.0	0.100	0.0	0.080	0.0	0.400	0.0	0.500	10.100	0.700
31	10/15/84	0.0	0.040	0.0	0.090	0.0	0.100	0.0	0.070	0.0	0.300	0.0	0.300	11.800	0.900
32	4/ 9/84	0.0	0.030	0.0	0.070	0.0	0.070	0.0	0.040	0.0	0.200	0.0	0.200	7.700	0.600
32	10/15/84	0.0	0.030	0.0	0.070	0.0	0.070	0.0	0.050	0.0	0.300	0.0	0.300	8.400	0.600
33	4/ 9/84	0.0	0.030	0.0	0.070	0.0	0.070	0.0	0.040	0.0	0.200	0.0	0.200	10.600	0.700
33	10/16/84	0.0	0.030	0.0	0.070	0.0	0.080	0.0	0.040	0.0	0.300	0.0	0.200	13.200	0.800
34	4/ 9/84	0.0	0.030	0.0	0.090	0.0	0.080	0.0	0.050	0.0	0.200	0.0	0.200	12.500	0.800
34	10/15/84	0.0	0.030	0.0	0.070	0.0	0.070	0.0	0.050	0.0	0.200	0.0	0.200	14.600	0.800
36	4/ 9/84	0.0	0.030	0.0	0.080	0.0	0.080	0.0	0.060	0.0	0.300	0.0	0.300	9.900	0.700
36	10/15/84	0.0	0.030	0.0	0.070	0.0	0.090	0.0	0.050	0.0	0.300	0.0	0.200	12.100	0.800
37A	4/ 9/84	0.0	0.030	0.0	0.080	0.0	0.080	0.0	0.050	0.0	0.200	0.0	0.300	10.500	0.700
37A	10/15/84	0.0	0.030	0.0	0.060	0.0	0.070	0.0	0.040	0.0	0.200	0.0	0.200	11.200	0.700

TABLE 15
BOTTOM SEDIMENT
(PCI/G)

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)
30A	4/ 9/84	0.320	0.060	0.390	0.090	0.300	0.200	0.0	0.030
30A	10/16/84	0.230	0.060	0.670	0.100	0.300	0.200	0.0	0.030
31	4/ 9/84	0.620	0.100	3.400	0.200	0.500	0.400	0.0	0.050
31	10/15/84	0.410	0.080	1.010	0.150	0.0	0.300	0.0	0.040
32	4/ 9/84	0.120	0.050	0.290	0.080	0.0	0.200	0.0	0.030
32	10/15/84	0.450	0.070	1.060	0.120	0.0	0.300	0.0	0.030
33	4/ 9/84	0.140	0.050	0.160	0.070	0.0	0.200	0.0	0.030
33	10/16/84	0.230	0.060	0.200	0.070	0.0	0.200	0.0	0.030
34	4/ 9/84	0.110	0.050	0.140	0.060	0.0	0.200	0.0	0.030
34	10/15/84	0.150	0.050	0.140	0.070	0.0	0.200	0.0	0.020
36	4/ 9/84	0.240	0.060	0.570	0.100	0.0	0.300	0.0	0.030
36	10/15/84	0.300	0.060	0.620	0.100	0.0	0.200	0.0	0.030
37A	4/ 9/84	0.160	0.050	0.320	0.090	0.300	0.200	0.0	0.030
37A	10/15/84	0.200	0.050	0.250	0.070	0.0	0.200	0.0	0.020

TABLE 16
AQUATIC FLORA
(PCI/G)

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
10B	4/27/84	0.003	0.010	0.006	0.004	0.0	0.030	0.0	0.070	0.0	0.030	0.0	0.030	0.0	0.030
10B	10/19/84	0.001	0.005	0.003	0.001	0.0	0.030	0.0	0.080	0.0	0.040	0.0	0.030	0.0	0.040
31	4/ 9/84	0.004	0.007	0.004	0.003	0.0	0.030	0.0	0.100	0.0	0.040	0.0	0.040	0.0	0.030
31	10/15/84	0.002	0.012	0.006	0.003	0.0	0.030	0.0	0.050	0.0	0.030	0.0	0.030	0.0	0.030
32	4/ 9/84	-0.002	0.010	0.014	0.006	0.0	0.040	0.0	0.100	0.0	0.040	0.0	0.040	0.070	0.040
32	10/16/84	-0.030	0.060	0.017	0.008	0.0	0.030	0.0	0.050	0.0	0.030	0.0	0.030	0.0	0.030
33	4/ 9/84	0.004	0.013	0.010	0.005	0.0	0.020	0.0	0.080	0.0	0.030	0.0	0.030	0.0	0.030
33	10/16/84	0.020	0.030	0.022	0.019	0.0	0.030	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.030
34	4/ 9/84	-0.005	0.008	0.039	0.004	0.0	0.020	0.0	0.100	0.0	0.030	0.0	0.030	0.0	0.030
34	10/15/84	0.030	0.040	0.010	0.006	0.0	0.030	0.0	0.050	0.0	0.030	0.0	0.030	0.0	0.030
36	4/ 9/84	0.005	0.012	0.007	0.005	0.0	0.020	0.0	0.090	0.0	0.030	0.0	0.030	0.0	0.030
36	10/15/84	0.0	0.020	0.016	0.007	0.0	0.020	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.020
37A	4/ 9/84	-0.002	0.014	0.012	0.006	0.0	0.020	0.0	0.080	0.0	0.030	0.0	0.020	0.0	0.030
37A	10/15/84	0.0	0.020	0.003	0.003	0.0	0.030	0.0	0.050	0.0	0.030	0.0	0.030	0.0	0.030

LOCATION	COLLECTION DATE	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
10B	4/27/84	0.0	0.030	0.0	0.090	0.0	0.080	0.0	0.050	0.0	0.300	0.0	0.200	15.700	1.300
10B	10/19/84	0.0	0.040	0.0	0.100	0.090	0.090	0.0	0.060	0.0	0.300	0.0	0.300	12.900	1.300
31	4/ 9/84	0.050	0.040	0.0	0.100	0.0	0.100	0.0	0.070	0.0	0.300	0.0	0.300	8.400	1.200
31	10/15/84	0.0	0.030	0.0	0.070	0.0	0.060	0.0	0.050	0.0	0.200	0.0	0.200	7.200	1.000
32	4/ 9/84	0.650	0.090	(a)0.0	0.090	0.0	0.080	0.0	0.060	0.0	0.300	0.0	0.300	5.000	0.800
32	10/16/84	0.160	0.050	0.0	0.080	0.0	0.080	0.0	0.050	0.0	0.300	0.0	0.200	8.200	1.000
33	4/ 9/84	0.0	0.030	0.0	0.070	0.0	0.060	0.0	0.050	0.0	0.200	0.0	0.200	3.900	0.700
33	10/16/84	0.0	0.030	0.0	0.060	0.0	0.070	0.0	0.040	0.0	0.200	0.0	0.200	8.500	0.900
34	4/ 9/84	0.0	0.030	0.0	0.090	0.0	0.070	0.0	0.050	0.0	0.300	0.0	0.300	6.400	0.900
34	10/15/84	0.0	0.040	0.0	0.070	0.0	0.080	0.0	0.050	0.0	0.300	0.0	0.200	7.500	1.000
36	4/ 9/84	0.0	0.030	0.0	0.070	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	5.000	0.800
36	10/15/84	0.0	0.030	0.0	0.060	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	6.800	0.900
37A	4/ 9/84	0.0	0.030	0.0	0.070	0.0	0.050	0.0	0.040	0.0	0.200	0.0	0.200	3.900	0.700
37A	10/15/84	0.0	0.030	0.0	0.080	0.0	0.080	0.0	0.050	0.0	0.300	0.0	0.200	7.400	1.000

(a) Reported as an anomalous measurement per E.T.S. requirement.

TABLE 16
AQUATIC FLORA
(PCI/G)

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)	AG-110M	(+/-)
12B	4/27/84	0.0	0.050	0.0	0.070	0.0	0.300	0.0	0.030	0.0	0.040
12B	10/19/84	0.0	0.050	0.0	0.080	0.0	0.300	0.0	0.040	0.0	0.040
31	4/ 9/84	0.0	0.060	0.0	0.080	0.0	0.300	0.0	0.040	0.0	0.050
31	10/15/84	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.030	0.0	0.040
32	4/ 9/84	0.0	0.060	0.0	0.090	0.0	0.300	0.0	0.040	0.0	0.050
32	10/16/84	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.030	0.0	0.040
33	4/ 9/84	0.0	0.050	0.0	0.070	0.200	0.200	0.0	0.030	0.0	0.030
33	10/16/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020	0.0	0.040
34	4/ 9/84	0.0	0.050	0.0	0.080	0.0	0.200	0.0	0.030	0.0	0.030
34	10/15/84	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.030	0.0	0.030
36	4/ 9/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.030	0.0	0.030
36	10/15/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020	0.0	0.030
37A	4/ 9/84	0.0	0.040	0.0	0.060	0.300	0.200	0.0	0.030	0.0	0.030
37A	10/15/84	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.020	0.0	0.040

TABLE 17A
FISH-FLOUNDER
(PCI/G)

MP

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
12B	4/27/84	-0.002	0.003	0.004	0.001	0.0	0.030	0.0	0.060	0.0	0.030	0.0	0.030	0.0	0.030
12B	10/19/84	0.0	0.007	0.003	0.002	0.0	0.020	0.0	0.060	0.0	0.020	0.0	0.020	0.0	0.020
32	1/12/84	0.001	0.004	0.003	0.001	0.020	0.020	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.020
32	4/17/84	0.003	0.003	0.001	0.001	0.020	0.020	0.0	0.040	0.0	0.020	0.0	0.020	0.0	0.020
32	7/ 9/84	0.005	0.005	0.002	0.001	0.0	0.020	0.0	0.070	0.0	0.030	0.0	0.030	0.0	0.020
32	10/15/84	0.002	0.004	0.002	0.001	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.015	0.0	0.020
35	1/12/84	0.004	0.011	0.012	0.004	0.030	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
35	4/17/84	0.0	0.003	0.002	0.001	0.0	0.020	0.0	0.050	0.0	0.030	0.0	0.030	0.0	0.020
35	7/ 9/84	0.0	0.006	0.005	0.001	0.0	0.020	0.0	0.060	0.0	0.030	0.0	0.030	0.0	0.030
35	10/15/84	0.0	0.008	0.002	0.002	0.0	0.020	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.020

LOCATION	COLLECTION DATE	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(PH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
12B	4/27/84	0.0	0.030	0.0	0.070	0.0	0.060	0.0	0.050	0.0	0.200	0.0	0.300	3.200	0.700
12B	10/19/84	0.0	0.020	0.0	0.070	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	3.400	0.700
32	1/12/84	0.0	0.030	0.0	0.050	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	2.900	0.700
32	4/17/84	0.0	0.020	0.0	0.050	0.0	0.050	0.0	0.040	0.0	0.200	0.0	0.200	3.100	0.500
32	7/ 9/84	0.0	0.030	0.0	0.070	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	5.000	0.800
32	10/15/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.150	0.0	0.120	2.500	0.500
35	1/12/84	0.0	0.020	0.0	0.050	0.0	0.050	0.0	0.030	0.0	0.200	0.0	0.140	2.400	0.500
35	4/17/84	0.0	0.030	0.0	0.070	0.0	0.030	0.0	0.050	0.0	0.200	0.0	0.200	2.800	0.700
35	7/ 9/84	0.0	0.030	0.0	0.070	0.0	0.060	0.0	0.050	0.0	0.200	0.0	0.200	3.500	0.700
35	10/15/84	0.0	0.030	0.0	0.060	0.0	0.070	0.0	0.040	0.0	0.200	0.0	0.200	3.200	0.700

TABLE 17A
FISH-FLOUNDER
(PCI/G)

MP

LOCATION	COLLECTION DATE	RA-226		TH-228		BE-7		NB-95		AG-110M	
			(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
12B	4/27/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.030	0.0	0.030
12B	10/19/84	0.050	0.040	0.0	0.060	0.0	0.200	0.0	0.030	0.0	0.030
32	1/12/84	0.040	0.040	0.0	0.060	0.0	0.200	0.0	0.020	0.0	0.030
32	4/17/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020	0.0	0.030
32	7/ 9/84	0.0	0.040	0.0	0.070	0.0	0.200	0.0	0.030	0.0	0.030
32	10/15/84	0.0	0.030	0.0	0.050	0.0	0.120	0.0	0.020	0.0	0.020
35	1/12/84	0.050	0.040	0.0	0.050	0.0	0.150	0.0	0.020	0.0	0.020
35	4/17/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.030	0.0	0.030
35	7/ 9/84	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.030	0.0	0.030
35	10/15/84	0.0	0.050	0.0	0.060	0.0	0.200	0.0	0.020	0.0	0.030

TABLE 17B
FISH-OTHER
(PCI/G)

MP

LOCATION	COLLECTION DATE	TYPE		SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)
32	1/13/84	SKATE		0.002	0.006	0.007	0.002	0.0	0.020	0.0	0.030	0.0	0.030	0.0	0.020
32	4/18/84	SKATE		0.003	0.003	0.000	0.001	0.0	0.030	0.0	0.050	0.0	0.020	0.0	0.020
32	7/10/84	BLACKFISH	(a)	0.002	0.005	0.002	0.001	0.0	0.020	0.0	0.050	0.0	0.020	0.0	0.020
32	10/16/84	SKATE	(a)	0.0	0.009	0.008	0.003	0.0	0.020	0.0	0.040	0.0	0.020	0.0	0.030
35	1/13/84	SKATE	(b)	-0.001	0.005	0.003	0.001	0.0	0.030	0.0	0.050	0.0	0.030	0.0	0.020
35	4/18/84	SKATE		0.003	0.005	0.003	0.002	0.0	0.030	0.0	0.060	0.0	0.030	0.0	0.030
35	7/10/84	SKATE	(a)	-0.005	0.005	0.005	0.002	0.0	0.020	0.0	0.060	0.0	0.020	0.0	0.020
35	10/16/84	SKATE	(c)	0.003	0.006	0.002	0.002	0.0	0.020	0.0	0.040	0.0	0.030	0.0	0.020
40B	4/ 9/84	EELS	(d)	0.002	0.003	0.002	0.001	0.080	0.020	0.0	0.080	0.050	0.030	0.0	0.020
40B	10/29/84	OTHER	(e)	-0.004	0.006	0.004	0.002	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020

LOCATION	COLLECTION DATE	TYPE	CO-58	(+/-)	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(PH)-106	(+/-)
32	1/13/84	SKATE	0.0	0.020	0.0	0.030	0.0	0.050	0.0	0.050	0.0	0.040	0.0	0.200
32	4/18/84	SKATE	0.0	0.020	0.0	0.030	0.0	0.070	0.0	0.000	0.0	0.050	0.0	0.200
32	7/10/84	BLACKFISH	0.0	0.020	0.0	0.020	0.0	0.050	0.0	0.040	0.0	0.030	0.0	0.200
32	10/16/84	SKATE	0.0	0.020	0.0	0.020	0.0	0.060	0.0	0.050	0.0	0.040	0.0	0.200
35	1/13/84	SKATE	0.0	0.030	0.0	0.030	0.0	0.060	0.0	0.060	0.0	0.040	0.0	0.200
35	4/18/84	SKATE	0.0	0.030	0.0	0.030	0.0	0.070	0.0	0.070	0.0	0.050	0.0	0.300
35	7/10/84	SKATE	0.0	0.020	0.0	0.020	0.0	0.050	0.0	0.050	0.0	0.040	0.0	0.200
35	10/16/84	SKATE	0.0	0.020	0.0	0.030	0.0	0.060	0.0	0.060	0.0	0.040	0.0	0.200
40B	4/ 9/84	EELS	0.0	0.020	0.080	0.030	0.0	0.050	0.0	0.050	0.0	0.040	0.0	0.200
40B	10/29/84	OTHER	0.0	0.020	0.0	0.020	0.0	0.050	0.0	0.050	0.040	0.030	0.0	0.200

(a) Skate and blackfish.
(b) Skate and toadfish.
(c) Skate and sand dad.
(d) Eels, flounder, and porgies.
(e) Needlefish and butterfish.

TABLE 17B
FISH-OTHER
(PCI/G)

MP

LOCATION	COLLECTION DATE	TYPE	CR-51		K-40		RA-226		TH-228		BE-7		NB-95	
				(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
32	1/13/84	SKATE	0.0	0.200	2.100	0.600	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020
32	4/18/84	SKATE	0.0	0.200	2.400	0.700	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.030
32	7/10/84	BLACKFISH	0.0	0.200	3.100	0.500	0.0	0.030	0.0	0.040	0.0	0.200	0.0	0.020
32	10/16/84	SKATE	0.0	0.200	3.300	0.700	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.030
35	1/13/84	SKATE	0.0	0.200	1.700	0.700	0.0	0.050	0.0	0.060	0.0	0.200	0.0	0.020
35	4/18/84	SKATE	0.0	0.200	2.400	0.700	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.030
35	7/10/84	SKATE	0.0	0.200	3.000	0.600	0.0	0.040	0.0	0.050	0.0	0.200	0.0	0.020
35	10/16/84	SKATE	0.0	0.200	2.900	0.700	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020
40B	4/ 9/84	EELS	0.0	0.200	3.900	0.600	0.0	0.040	0.0	0.050	0.0	0.200	0.0	0.030
40B	10/29/84	OTHER	0.0	0.200	4.100	0.600	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020

TABLE 18
MUSSELS
(PCI/G)

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
12B	4/27/84	0.004	0.004	0.002	0.002	0.0	0.012	0.0	0.030	0.0	0.014	0.0	0.013	0.0	0.012
12B	10/19/84	0.0	0.010	0.003	0.002	0.0	0.013	0.0	0.060	0.0	0.014	0.0	0.015	0.0	0.014
30A	2/13/84	-0.002	0.003	0.003	0.001	0.0	0.012	0.0	0.020	0.0	0.014	0.0	0.013	0.0	0.013
30A	5/ 9/84	0.002	0.004	0.003	0.001	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
30A	8/16/84	0.010	0.020	0.007	0.005	0.0	0.020	0.0	0.040	0.0	0.020	0.0	0.020	0.0	0.020
30A	11/14/84	0.003	0.007	0.003	0.002	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
31	2/13/84	0.002	0.004	0.002	0.001	0.0	0.014	0.0	0.020	0.0	0.015	0.0	0.014	0.0	0.014
31	5/16/84	-0.004	0.005	0.004	0.002	0.0	0.013	0.0	0.020	0.0	0.014	0.0	0.013	0.0	0.012
31	8/ 8/84	0.002	0.005	0.003	0.002	0.0	0.011	0.0	0.020	0.0	0.014	0.0	0.013	0.0	0.012
31	11/20/84	0.0	0.006	0.002	0.002	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
32	2/17/84	0.0	0.003	0.002	0.001	0.0	0.014	0.0	0.020	0.0	0.020	0.0	0.014	0.0	0.013
32	5/15/84	-0.001	0.006	0.002	0.002	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
32	8/ 7/84	0.006	0.005	0.002	0.002	0.0	0.014	0.0	0.020	0.0	0.015	0.0	0.013	0.0	0.015
32	11/14/84	0.007	0.007	0.005	0.002	0.0	0.020	0.0	0.040	0.0	0.020	0.0	0.020	0.0	0.020

LOCATION	COLLECTION DATE	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
12B	4/27/84	0.0	0.012	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.110	0.0	0.100	1.100	0.200
12B	10/19/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.130	0.0	0.140	1.200	0.200
30A	2/13/84	0.0	0.013	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.110	0.0	0.100	1.100	0.200
30A	5/ 9/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.120	0.700	0.200
30A	8/16/84	0.0	0.020	0.0	0.050	0.0	0.050	0.0	0.030	0.0	0.200	0.0	0.200	0.800	0.300
30A	11/14/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.140	1.300	0.300
31	2/13/84	0.0	0.014	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.120	0.0	0.100	1.200	0.200
31	5/16/84	0.0	0.014	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.120	0.0	0.100	1.000	0.200
31	8/ 8/84	0.0	0.014	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.120	0.0	0.090	1.400	0.200
31	11/20/84	0.0	0.020	0.0	0.040	0.0	0.050	0.0	0.030	0.0	0.200	0.0	0.140	1.400	0.300
32	2/17/84	0.0	0.020	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.140	0.0	0.110	1.300	0.200
32	5/15/84	0.0	0.020	0.0	0.050	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.150	1.600	0.300
32	8/ 7/84	0.0	0.014	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.120	0.0	0.110	1.300	0.200
32	11/14/84	0.0	0.020	0.0	0.050	0.0	0.050	0.0	0.040	0.0	0.200	0.0	0.200	1.600	0.300

TABLE 18
MUSSELS
(PCI/G)

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	MN-95	(+/-)	AG-1.0M	(+/-)
12B	4/27/84	0.0	0.020	0.0	0.030	0.0	0.100	0.0	0.012	0.0	0.014
12B	10/19/84	0.0	0.030	0.0	0.030	0.0	0.120	0.0	0.020	[illegible]	0.020
30A	2/13/84	0.0	0.020	0.0	0.030	0.150	0.100	0.022	0.013	0.0	0.020
30A	5/ 9/84	0.0	0.030	0.0	0.040	0.0	0.120	0.0	0.014	0.0	0.020
30A	8/16/84	0.0	0.030	0.0	0.050	0.0	0.150	0.0	0.020	0.0	0.020
30A	11/14/84	0.0	0.030	0.0	0.050	0.0	0.200	0.0	0.020	0.0	0.020
31	2/13/84	0.0	0.020	0.0	0.040	0.160	0.110	0.0	0.014	0.0	0.020
31	5/16/84	0.0	0.020	0.0	0.030	0.0	0.100	0.0	0.011	0.0	0.020
31	8/ 8/84	0.0	0.020	0.0	0.030	0.0	0.100	0.0	0.013	0.0	0.020
31	11/20/84	0.0	0.030	0.0	0.050	0.0	0.200	0.0	0.020	0.0	0.020
32	2/17/84	0.0	0.030	0.0	0.040	0.0	0.110	0.0	0.013	0.0	0.020
32	5/15/84	0.0	0.030	0.0	0.050	0.0	0.110	0.0	0.030	0.0	0.020
32	8/ 7/84	0.0	0.020	0.0	0.030	0.0	0.110	0.0	0.013	0.0	0.015
32	11/14/84	0.0	0.040	0.0	0.050	0.0	0.200	0.0	0.020	0.0	0.030

TABLE 19
OYSTERS
(PCI/G)

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
30A	2/13/84	-0.001	0.004	0.004	0.002	0.0	0.012	0.0	0.020	0.0	0.013	0.0	0.013	0.0	0.012
30A	5/ 9/84	-0.005	0.003	0.004	0.002	0.0	0.013	0.0	0.020	0.0	0.015	0.0	0.014	0.0	0.012
30A	8/16/84	-0.003	0.006	0.005	0.002	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
30A	11/14/84	-0.004	0.015	0.012	0.005	0.0	0.013	0.0	0.020	0.0	0.014	0.0	0.013	0.0	0.012
31	2/13/84	-0.001	0.004	0.004	0.001	0.0	0.012	0.0	0.013	0.0	0.012	0.0	0.011	0.0	0.011
31	5/14/84	-0.003	0.003	0.004	0.002	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.014	0.0	0.020
31	8/16/84	-0.003	0.010	0.004	0.003	0.0	0.020	0.0	0.040	0.0	0.020	0.0	0.020	0.0	0.020
31	11/14/84	-0.001	0.003	0.003	0.001	0.0	0.014	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020
32	2/13/84	0.002	0.002	-0.002	0.004	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020
32	5/14/84	0.002	0.005	0.003	0.002	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.014	0.0	0.014
32	8/16/84	0.002	0.005	0.002	0.002	0.0	0.030	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.020
32	11/14/84	0.003	0.003	0.001	0.001	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
34	2/13/84	-0.001	0.005	0.003	0.002	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020
34	5/14/84	-0.005	0.008	0.008	0.003	0.0	0.013	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.014
34	8/16/84	0.0	0.004	0.002	0.001	0.0	0.020	0.0	0.050	0.0	0.030	0.0	0.020	0.0	0.020
34	11/14/84	0.002	0.004	0.002	0.001	0.0	0.013	0.0	0.020	0.0	0.020	0.0	0.014	0.0	0.012
36	2/17/84	-0.004	0.004	0.003	0.002	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020
36	5/15/84	0.005	0.008	0.003	0.003	0.0	0.014	0.0	0.020	0.0	0.014	0.0	0.013	0.0	0.013
36	8/ 7/84	-0.005	0.004	0.004	0.002	0.0	0.012	0.0	0.020	0.0	0.014	0.0	0.013	0.0	0.012
(a)															
37A	2/13/84	-0.001	0.004	0.002	0.001	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020
37A	5/14/84	0.001	0.004	0.003	0.002	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
37A	8/16/84	0.010	0.016	0.003	0.003	0.0	0.040	0.0	0.040	0.0	0.050	0.0	0.050	0.0	0.050
37A	11/14/84	0.011	0.013	0.010	0.005	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.014
40B	2/13/84	-0.003	0.003	0.002	0.001	0.0	0.030	0.0	0.050	0.0	0.030	0.0	0.030	0.0	0.030
40B	5/16/84	0.0	0.005	0.002	0.002	0.0	0.030	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.030
40B	8/ 8/84	0.003	0.004	0.003	0.002	0.0	0.050	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.020
40B	11/15/84	0.004	0.005	0.001	0.002	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020

(a) Fourth quarter oyster tray was destroyed by surf action.

TABLE 19
OYSTERS
(PCI/G)

LOCATION	COLLECTION DATE	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
30A	2/13/84	0.0	0.013	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.110	0.0	0.090	1.200	0.200
30A	5/ 9/84	0.0	0.014	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.110	0.0	0.110	0.600	0.200
30A	8/16/84	0.0	0.020	0.0	0.040	0.0	0.050	0.0	0.030	0.0	0.200	0.0	0.200	1.000	0.300
30A	11/14/84	0.0	0.012	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.120	0.0	0.100	1.000	0.200
31	2/13/84	0.0	0.012	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.100	0.0	0.090	1.200	0.200
31	5/14/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.130	0.0	0.130	1.100	0.300
31	8/16/84	0.0	0.020	0.0	0.050	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.200	1.300	0.300
31	11/14/84	0.0	0.020	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.130	0.0	0.110	1.200	0.300
32	2/13/84	0.070	0.020	0.0	0.030	0.0	0.030	0.0	0.030	0.0	0.200	0.0	0.120	1.300	0.300
32	5/14/84	0.090	0.020	0.0	0.030	0.0	0.030	0.0	0.030	0.0	0.130	0.0	0.110	1.000	0.200
32	8/16/84	0.230	0.040	0.0	0.050	0.0	0.050	0.0	0.040	0.0	0.200	0.0	0.200	0.900	0.300
32	11/14/84	0.0	0.020	0.0	0.040	0.0	0.050	0.040	0.040	0.0	0.200	0.0	0.200	0.900	0.300
34	2/13/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.130	1.500	0.300
34	5/14/84	0.0	0.016	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.150	0.0	0.100	1.100	0.300
34	8/16/84	0.0	0.020	0.0	0.060	0.0	0.050	0.0	0.040	0.0	0.200	0.0	0.200	2.600	0.500
34	11/14/84	0.0	0.013	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.130	0.0	0.110	1.000	0.300
36	2/17/84	0.0	0.020	0.0	0.050	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.130	1.500	0.300
36	5/15/84	0.0	0.012	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.120	0.0	0.100	1.200	0.200
36	8/ 7/84	0.0	0.014	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.120	0.0	0.100	1.400	0.200
37A	2/13/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.140	1.000	0.300
37A	5/14/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.140	1.400	0.300
37A	8/16/84	0.0	0.040	0.0	0.130	0.0	0.090	0.0	0.080	0.0	0.400	0.0	0.700	1.200	0.600
37A	11/14/84	0.0	0.014	0.0	0.030	0.0	0.040	0.0	0.020	0.0	0.140	0.0	0.110	1.300	0.300
40B	2/13/84	0.300	0.040	0.0	0.060	0.150	0.060	0.0	0.060	0.300	0.300	0.0	0.200	1.000	0.300
40B	5/16/84	0.300	0.040	0.0	0.050	0.0	0.050	0.0	0.060	0.0	0.300	0.0	0.200	1.300	0.300
40B	8/ 8/84	0.170	0.030	0.0	0.050	0.0	0.050	0.0	0.040	0.0	0.200	0.0	0.200	1.000	0.200
40B	11/15/84	0.0	0.020	0.0	0.040	0.0	0.050	0.0	0.040	0.0	0.200	0.0	0.200	1.600	0.300

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)	AG-110M	(+/-)
30A	2/13/84	0.0	0.020	0.0	0.030	0.0	0.100	0.0	0.012	0.0	0.013
30A	5/ 9/84	0.0	0.020	0.0	0.030	0.0	0.110	0.0	0.013	0.0	0.020
30A	8/16/84	0.0	0.030	0.0	0.050	0.0	0.200	0.0	0.020	0.0	0.020
30A	11/14/84	0.0	0.020	0.0	0.030	0.0	0.100	0.0	0.011	0.0	0.020
31	2/13/84	0.0	0.020	0.0	0.030	0.0	0.100	0.0	0.010	0.0	0.014
31	5/14/84	0.0	0.030	0.0	0.040	0.0	0.120	0.0	0.020	0.0	0.020
31	8/16/84	0.0	0.030	0.0	0.040	0.0	0.150	0.0	0.020	0.0	0.030
31	11/14/84	0.0	0.020	0.0	0.040	0.0	0.130	0.0	0.013	0.0	0.020
32	2/13/84	0.030	0.030	0.0	0.040	0.0	0.140	0.0	0.020	0.250	0.030 (a)
32	5/14/84	0.0	0.030	0.0	0.040	0.0	0.110	0.0	0.020	0.060	0.020
32	8/16/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020	0.160	0.040
32	11/14/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020	0.0	0.030
34	2/13/84	0.0	0.030	0.0	0.050	0.0	0.140	0.0	0.020	0.0	0.020
34	5/14/84	0.0	0.020	0.0	0.030	0.0	0.100	0.0	0.014	0.0	0.020
34	8/16/84	0.0	0.040	0.0	0.050	0.0	0.200	0.0	0.020	0.0	0.030
34	11/14/84	0.0	0.020	0.0	0.040	0.0	0.110	0.0	0.013	0.0	0.020
36	2/17/84	0.0	0.030	0.0	0.040	0.0	0.150	0.0	0.020	0.0	0.020
36	5/15/84	0.0	0.020	0.0	0.030	0.0	0.100	0.0	0.013	0.0	0.020
36	8/ 7/84	0.0	0.020	0.0	0.040	0.0	0.110	0.0	0.014	0.0	0.020
37A	2/13/84	0.0	0.030	0.040	0.040	0.0	0.140	0.0	0.020	0.0	0.020
37A	5/14/84	0.0	0.030	0.0	0.040	0.0	0.150	0.0	0.020	0.0	0.020
37A	8/16/84	0.0	0.070	0.0	0.110	0.0	0.400	0.0	0.070	0.0	0.060
37A	11/14/84	0.0	0.030	0.0	0.030	0.0	0.130	0.0	0.014	0.0	0.020
40B	2/13/84	0.0	0.060	0.0	0.080	0.0	0.300	0.0	0.040	1.210	0.080
40B	5/16/84	0.0	0.050	0.0	0.080	0.0	0.300	0.0	0.030	0.930	0.070
40B	8/ 8/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.030	0.490	0.050
40B	11/15/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020	0.510	0.050

(a) Reported as an anomalous measurement per E.T.S. requirement.

TABLE 20
CLAMS (a)
(PCI/G)

MP

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
38	2/13/84	-0.003	0.004	0.003	0.001	0.0	0.014	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.014
38	5/16/84	0.008	0.005	0.002	0.001	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020
38	8/ 8/84	0.0	0.030	0.011	0.003	0.0	0.014	0.0	0.020	0.0	0.020	0.0	0.015	0.0	0.020
38	11/26/84	0.008	0.013	0.006	0.004	0.0	0.015	0.0	0.020	0.0	0.020	0.0	0.014	0.0	0.015
39	2/17/84	0.0	0.004	0.002	0.002	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
39	5/15/84	-0.010	0.006	0.013	0.003	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
39	8/ 7/84	0.006	0.006	0.001	0.001	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
39	11/15/84	0.010	0.050	0.013	0.007	0.0	0.020	0.0	0.020	0.0	0.020	0.020	0.020	0.0	0.020

LOCATION	COLLECTION DATE	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
38	2/13/84	0.030	0.020	0.0	0.030	0.0	0.030	0.0	0.030	0.0	0.130	0.0	0.120	1.600	0.300
38	5/16/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.120	1.200	0.300
38	8/ 8/84	0.0	0.020	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.140	0.0	0.120	1.600	0.300
38	11/26/84	0.040	0.020	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.130	0.0	0.110	1.500	0.300
39	2/17/84	0.0	0.020	0.0	0.040	0.0	0.050	0.0	0.030	0.0	0.200	0.0	0.200	1.100	0.300
39	5/15/84	0.0	0.020	0.0	0.050	0.0	0.040	0.0	0.040	0.0	0.200	0.0	0.200	1.400	0.300
39	8/ 7/84	0.060	0.030	0.0	0.060	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	1.400	0.300
39	11/15/84	0.020	0.020	0.0	0.040	0.0	0.050	0.0	0.030	0.180	0.150	0.0	0.150	0.900	0.300

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)	AG-110M	(+/-)
38	2/13/84	0.0	0.030	0.0	0.040	0.0	0.110	0.0	0.014	0.020	0.020
38	5/16/84	0.0	0.030	0.0	0.040	0.0	0.130	0.0	0.020	0.0	0.020
38	8/ 8/84	0.0	0.030	0.0	0.040	0.0	0.130	0.0	0.020	0.0	0.020
38	11/26/84	0.0	0.030	0.0	0.040	0.0	0.110	0.0	0.020	0.0	0.020
39	2/17/84	0.0	0.040	0.0	0.050	0.0	0.200	0.0	0.020	0.0	0.020
39	5/15/84	0.0	0.040	0.0	0.050	0.0	0.200	0.0	0.020	0.0	0.020
39	8/ 7/84	0.0	0.040	0.050	0.050	0.0	0.200	0.0	0.020	0.0	0.020
39	11/15/84	0.0	0.030	0.0	0.050	0.0	0.130	0.0	0.020	0.0	0.020

(a) No samples have been obtained from commercial shellfish bed #316. It has not been commercially used for more than seven years. The water is deep at this location and samples can only be obtained with commercial gear.

TABLE 21
SCALLOPS
(PCI/G)

MP

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
31B	2/15/84	0.0	0.003	0.001	0.001	0.0	0.013	0.0	0.020	0.0	0.014	0.0	0.013	0.0	0.013
31B	5/16/84	-0.014	0.010	0.014	0.004	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.014
31B	8/ 8/84	0.0	0.005	0.002	0.002	0.0	0.020	0.0	0.030	0.0	0.020	0.0	0.020	0.0	0.020
31B	11/15/84	0.003	0.007	0.002	0.002	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020	0.0	0.020
40B *	1/24/84	-0.003	0.011	0.021	0.005	0.0	0.040	0.0	0.040	0.0	0.050	0.0	0.040	0.0	0.040
40B *	7/25/84	0.0	0.020	0.257	0.008(a)	0.0	0.030	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.020

LOCATION	COLLECTION DATE	CO-60	(+/-)	FE-59	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	CR-51	(+/-)	K-40	(+/-)
31B	2/15/84	0.0	0.014	0.0	0.030	0.0	0.030	0.0	0.020	0.0	0.120	0.0	0.100	1.300	0.200
31B	5/16/84	0.020	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.150	0.0	0.120	1.500	0.300
31B	8/ 8/84	0.0	0.020	0.0	0.050	0.0	0.040	0.0	0.030	0.0	0.200	0.0	0.130	1.200	0.300
31B	11/15/84	0.0	0.020	0.0	0.040	0.0	0.040	0.0	0.030	0.0	0.140	0.0	0.130	1.200	0.300
40B	1/24/84	0.260	0.070	0.0	0.090	0.0	0.090	0.0	0.070	0.400	0.400	0.0	0.300	1.300	0.500
40B	7/25/84	0.070	0.030	0.0	0.050	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	2.000	0.500

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)	AG-110M	(+/-)
31B	2/15/84	0.0	0.020	0.0	0.030	0.0	0.110	0.0	0.012	0.0	0.020
31B	5/16/84	0.0	0.030	0.0	0.040	0.0	0.130	0.0	0.014	0.0	0.020
31B	8/ 8/84	0.0	0.030	0.0	0.050	0.0	0.140	0.0	0.020	0.0	0.020
31B	11/15/84	0.0	0.030	0.0	0.040	0.0	0.110	0.0	0.014	0.0	0.020
40B	1/24/84	0.0	0.080	0.0	0.110	0.0	0.300	0.0	0.040	0.0	0.050
40B	7/25/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.020	0.060	0.030

* Crab samples.

(a) Abnormally high result, this nuclide has never been seen at such levels before in any aquatic samples. Reanalysis results show: Sr-89 = -.03 $\pm$ .04 , Sr-90 = 0.006 $\pm$ .002 .

TABLE 22
LOBSTER
(PCI/G)

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	CS-137	(+/-)	I-131	(+/-)	CS-134	(+/-)	MN-54	(+/-)	CO-58	(+/-)
12B	4/27/84	-0.004	0.003	0.007	0.001	0.0	0.030	0.0	0.080	0.0	0.040	0.0	0.030	0.0	0.030
12B*	4/28/84	-0.001	0.007	0.011	0.001	0.0	0.040	0.0	0.080	0.0	0.030	0.0	0.040	0.0	0.040
12B	10/19/84	-0.004	0.006	0.007	0.001	0.0	0.020	0.0	0.070	0.0	0.030	0.0	0.020	0.0	0.020
12B*	10/20/84	0.010	0.020	0.012	0.005	0.0	0.020	0.0	0.070	0.0	0.030	0.0	0.020	0.0	0.020
32	3/15/84	0.0	0.003	0.006	0.001	0.0	0.040	0.0	0.080	0.0	0.040	0.0	0.030	0.0	0.030
32	6/14/84	0.010	0.020	0.005	0.003	0.0	0.030	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.020
32	9/25/84	0.005	0.006	0.008	0.002	0.0	0.030	0.0	0.040	0.0	0.030	0.0	0.020	0.0	0.020
32	12/12/84	0.0	0.002	0.003	0.001	0.0	0.030	0.0	0.011	0.0	0.020	0.0	0.030	0.0	0.030
35	3/15/84	0.0	0.006	0.006	0.002	0.0	0.030	0.0	0.070	0.0	0.030	0.0	0.030	0.0	0.030
35	6/14/84	-0.002	0.011	0.015	0.004	0.0	0.030	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.030
35	9/25/84	0.005	0.006	0.007	0.001	0.0	0.030	0.0	0.030	0.0	0.030	0.0	0.030	0.0	0.030
35	12/12/84	0.004	0.008	0.010	0.002	0.0	0.030	0.0	0.090	0.0	0.020	0.0	0.020	0.0	0.020
37A	3/15/84	-0.010	0.010	0.012	0.002	0.0	0.030	0.0	0.060	0.0	0.030	0.0	0.030	0.0	0.030
37A	6/13/84	0.001	0.009	0.020	0.003	0.0	0.030	0.0	0.040	0.0	0.030	0.0	0.030	0.0	0.020
37A	9/25/84	0.0	0.005	0.006	0.001	0.0	0.030	0.0	0.030	0.0	0.030	0.0	0.030	0.0	0.030
37A	12/12/84	-0.001	0.003	0.004	0.001	0.0	0.020	0.0	0.090	0.0	0.020	0.0	0.020	0.0	0.020

* Crabs, taken on the same date as the lobster.

TABLE 22
LOBSTER
(PCI/G)

LOCATION	COLLECTION DATE	CO-60		FE-59		ZN-65		ZR-95		RU(RH)-106		CR-51		K-40	
			(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
12B	4/27/84	0.0	0.030	0.0	0.080	0.0	0.090	0.0	0.060	0.0	0.300	0.0	0.300	2.500	0.800
12B	4/28/84	0.0	0.030	0.0	0.070	0.0	0.070	0.0	0.060	0.0	0.300	0.0	0.300	3.000	0.800
12B	10/19/84	0.0	0.030	0.0	0.060	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	2.300	0.600
12B	10/20/84	0.0	0.030	0.0	0.060	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	2.100	0.600
32	3/15/84	0.070	0.040	0.0	0.080	0.0	0.080	0.0	0.070	0.0	0.300	0.0	0.300	3.100	0.800
32	6/14/84	0.040	0.030	0.0	0.060	0.0	0.060	0.0	0.050	0.0	0.300	0.0	0.200	1.900	0.700
32	9/25/84	0.0	0.030	0.0	0.060	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	2.100	0.600
32	12/12/84	0.0	0.030	0.0	0.070	0.0	0.060	0.0	0.040	0.0	0.300	0.0	0.300	1.600	0.600
35	3/15/84	0.0	0.030	0.0	0.080	0.0	0.080	0.0	0.060	0.0	0.300	0.0	0.200	2.700	0.800
35	6/14/84	0.0	0.030	0.0	0.070	0.0	0.070	0.0	0.050	0.0	0.200	0.0	0.200	1.500	0.600
35	9/25/84	0.0	0.030	0.0	0.060	0.0	0.060	0.0	0.040	0.0	0.300	0.0	0.200	2.600	0.700
35	12/12/84	0.0	0.020	0.0	0.070	0.0	0.060	0.0	0.050	0.0	0.200	0.0	0.300	1.600	0.600
37A	3/15/84	0.0	0.030	0.0	0.080	0.0	0.060	0.0	0.050	0.0	0.300	0.0	0.200	2.600	0.700
37A	6/13/84	0.0	0.030	0.0	0.070	0.0	0.070	0.0	0.050	0.0	0.300	0.0	0.200	2.000	0.700
37A	9/25/84	0.0	0.030	0.0	0.060	0.0	0.080	0.0	0.040	0.0	0.200	0.0	0.200	2.200	0.700
37A	12/12/84	0.0	0.020	0.0	0.060	0.0	0.060	0.0	0.040	0.0	0.200	0.0	0.200	2.400	0.500

TABLE 22
LOBSTER
(PCI/G)

LOCATION	COLLECTION DATE	RA-226	(+/-)	TH-228	(+/-)	BE-7	(+/-)	MN-95	(+/-)	AG-110M	(+/-)
12B	4/27/84	0.0	0.060	0.0	0.090	0.0	0.300	0.0	0.040	0.040	0.030
12B	4/28/84	0.090	0.060	0.0	0.090	0.0	0.300	0.0	0.030	0.0	0.040
12B	10/19/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.030	0.0	0.030
12B	10/20/84	0.0	0.040	0.080	0.060	0.0	0.200	0.0	0.030	0.0	0.030
32	3/15/84	0.0	0.060	0.0	0.080	0.0	0.300	0.0	0.040	0.0	0.040
32	6/14/84	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.030	0.0	0.030
32	9/25/84	0.0	0.040	0.0	0.070	0.0	0.200	0.0	0.020	0.0	0.030
32	12/12/84	0.080	0.050	0.0	0.080	0.0	0.200	0.0	0.030	0.0	0.030
35	3/15/84	0.060	0.050	0.0	0.080	0.0	0.300	0.0	0.030	0.0	0.040
35	6/14/84	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.030	0.040	0.030
35	9/25/84	0.050	0.050	0.0	0.070	0.0	0.200	0.0	0.030	0.0	0.030
35	12/12/84	0.060	0.040	0.0	0.060	0.0	0.200	0.0	0.030	0.0	0.030
37A	3/15/84	0.0	0.050	0.0	0.070	0.0	0.200	0.0	0.030	0.0	0.040
37A	6/13/84	0.0	0.060	0.0	0.080	0.0	0.200	0.0	0.030	0.0	0.040
37A	9/25/84	0.0	0.050	0.080	0.070	0.200	0.200	0.0	0.020	0.0	0.040
37A	12/12/84	0.0	0.040	0.0	0.060	0.0	0.200	0.0	0.030	0.0	0.030

4.0 DISCUSSION OF RADIOCHEMICAL RESULTS

Gamma Exposure Rate (Table 1)

The gamma exposure rate is determined from the integrated exposure measured over a time period of approximately one month using $CaF_2(Mn)$ thermoluminescent dosimeters. These glass bulb dosimeters are subject to inherent self-irradiation which has been experimentally measured for each dosimeter. Consequently, the results shown in Table 1 have been adjusted for self-irradiation effects. The range of this correction is 0.3 uR/hr to 1.7 uR/hr with a mean of approximately 1 uR/hr.

The exposure rate measurements demonstrate the general variations in natural background radiation between the various on-site and off-site locations. These measurements exhibit the same trends as those since 1978 and include gamma exposure from all sources including cosmic, terrestrial, and artificial radioactivity. In particular, the Weather Shack (location 02) experiences higher exposure rates due to its proximity to granite beds while the Ledyard location (location 14A) experiences relatively higher background exposure rates than the other control locations at Mystic, Montville, and Old Lyme (locations 13A, 15A, and 16A).

Further evaluation of the monthly data reveals a decrease in background during January of 1984, most probably caused by the extraordinary large snowfall during this month and its resultant shielding effect. Another decrease at some of the on-site locations only, is noted during the months of May and June. The data during this time frame indicates exposure levels slightly lower at some of the on-site locations (Weather Shack (02), Navy Laboratory (05), Fox Island (07), Millstone Environmental Laboratory (08), and Bay Point Beach (09)). This effect is attributable to Unit 1 being shutdown for refueling and is consistent with data of past years. During Unit 1 operation, a small increase in exposure rates is caused by the direct exposure pathway of "skyshine" (i.e., scattered radiation from nitrogen-16 decay in the turbine; this pathway is unique to boiling water reactors). This direct exposure pathway decreases rapidly with distance from the turbine building, to levels that are virtually undetectable at the off-site locations. Special surveys performed during 1980 with a high pressure ion chamber support this premise. The maximum off-site direct exposure due to Unit 1 was determined to be 0.2 uR/hr. The dose consequence attributable to the direct dose is discussed in Section 5.0.

Increased exposure rate levels occurred during the 4th quarter of 1984. The increases are caused by the use of a new TLD reader to measure the exposure of the TLD bulbs. Over the last five years, a trend of decreased exposure rates have been observed (see Figure 4-1) due to photomultiplier tube aging. In October, the new TLD reader was placed into service and measured exposure rates have increased to the magnitude of rates of years past.

With the installation of the augmented off-gas treatment system in May of 1978, the plant effluents have decreased significantly to

levels that are essentially undetectable by TLD's, even at the onsite monitoring stations. The only appreciable effect, aside from that of skyshine, seen in the TLD data is that attributable to the variation in the background radiation which has been noted as being consistent with previous years.

Air Particulates and Iodine (Tables 2, 3, 4A-L and 5)

Air is continuously sampled at seven inner ring and five outer ring locations by passing it through glass fiber particulate filters. The filters are collected weekly and analyzed for gross beta activity. Results are shown in Figure 4-2 and Table 2. Gross beta activity remained at levels similar to those seen in 1982-1983. It failed to show the typical increase in gross beta activity in the spring and summer due to atmospheric nuclear testing in the northern hemisphere as seen in 1981 and years prior to 1979 when above ground weapons testing had taken place. Also noted in Figure 4-2, there was only a slight variation between the activity measured at the inner and outer monitoring stations and as such, it is concluded that the plant contribution is negligible.

Charcoal cartridges are included at six of the air particulate stations for the selective collection of atmospheric iodine. These cartridges are analyzed on a weekly basis for I-131. Data in Table 3 shows seven samples where I-131 was detected above its MDL and many other numerous positive values. However, these occur at both indicator and control locations and are, therefore, attributable to statistical fluctuations in counting rather than actual I-131. This premise is supported by the absence of I-131 in any of the cow milk samples. Milk from cows are much more sensitive indicators of environmental I-131.

The air particulate samples that are utilized for the weekly gross beta analyses are composited monthly and analyzed for gamma emitting isotopes. The results, as shown in Tables 4A-4L, indicate the presence of naturally occurring Be-7, which is produced by cosmic processes. All other positive results are attributable to statistical fluctuations in counting. These analyses indicate the lack of plant effects.

For the measurement of Sr-89, Sr-90 and total cesium (Cs), the air particulate filters are composited quarterly and analyzed by radiochemical separation and appropriate counting techniques. The results presented in Table 5 are much more sensitive indicators of environmental radioactivity than gamma spectrum analyses, because of the larger sample volume as a result of compositing and the higher efficiency of beta counting. However, this higher sensitivity suffers from the drawback that it does not allow the separation of Cs-137 and Cs-134. Therefore, the results presented in Table 5 include total cesium along with Sr-89 and Sr-90. The cesium levels, as usual, followed the same trend as the gross beta results. Indicator (inner ring) and control (outer ring) locations had comparable results, thus indicating that the total cesium is a result of fallout from weapons testing.

The Sr-90 results exhibit the same trends as the gross beta and Cs-137 results, remaining at low levels throughout 1984. As usual, with the absence of fresh fallout, there were no detectable levels of Sr-89 observed. Since there was no difference in measured levels of Sr-90 between indicator and control locations and no measurable Sr-89, there are no indications of any plant effects.

Soil (Table 6)

Soil samples are collected annually at six of the air particulate monitoring locations. These samples are analyzed for strontium and gamma emitting radionuclides. Detectable activity in soil samples consisted of the fallout related nuclides of Sr-90 and Cs-137 and the naturally occurring radionuclides, K-40, Ra-226 and Th-228. The similarity of Sr-90 and Cs-137 levels to those observed for the past ten years and the absence of the short lived nuclide of Sr-89 once again indicate that these two nuclides result from weapons testing and not from plant releases.

Cow Milk (Table 7)

The most sensitive indicator of fission product existence in the terrestrial environment is usually the analysis of milk samples. Airborne releases will typically be detected first in this media. This in combination with the fact that milk is a widely consumed food results in this pathway being the most critical. This pathway also shows significant amounts of weapons testing fallout. Therefore, this media should be carefully evaluated when trying to decipher what are the actual plant effects.

Sr-90 and Cs-137 were routinely observed at levels similar to those of the past. The three indicator locations exhibited higher values than the control location. The range of results were 2.6 to 13.7 pCi/l and 0 to 41 pCi/l for Sr-90 and Cs-137, respectively. Detailed analysis of this data has concluded that these levels are from weapons testing and are not plant related (see Section 6.0 for details to this argument). Sr-89 was not detected above the random fluctuations in counting statistics. This is one indication that the presence of Sr-90 is the result of weapons testing. Sr-89 has only been seen in these samples during episodes of fresh fallout from weapons testing.

Prior to 1982, Cs-137 for these samples was determined by cesium chemistry and represented as total cesium. Analyses for the past few years by gamma spectrometry have confirmed the cesium to be Cs-137. Cesium chemistry allows a higher degree of sensitivity but suffers the problem of possible interferences from other nuclides, specifically Cs-134. In order to maintain "state-of-the-art" techniques, the gamma spectrometry has been improved and cesium chemistry discontinued. The only other nuclide detected by gamma spectrometry was K-40.

No samples showed I-131 detectable at levels greater than the MDL of 0.5 pCi/l. These results are consistent with previous years'

results. Only during periods immediately following atmospheric testing of nuclear weapons is I-131 usually detected.

Goat Milk (Table 8)

Goat milk samples can be a more sensitive indicator of fission products in the terrestrial environment than cow milk samples. This is dependent on a number of parameters, including: metabolism of these animals, feeding habits, and feed type. Samples taken during weapons testing periods have demonstrated higher uptake of fresh fallout nuclides (Sr-89 and I-131) at the indicator goat location. This reason helps to explain the usual, higher than normal Sr-90 and Cs-137 concentrations at the indicator location as compared to the control location. One Sr-89 value exists above the MDL but is due to statistical fluctuations in counting (confirmed by the fact that a couple of large negative values also appear). The absence of detectable Sr-89 seems to indicate the lack of any plant effects. Therefore the levels of Sr-90 and Cs-137, consistent with those of cow milk, are due to the influence of previous fallout. For a complete discussion of the variability of these nuclides, see Section 6.0.

Two samples had an I-131 concentration above its MDL. Other positive values were detected below the MDL. These levels are probably plant related and as such the dose consequence is discussed in Section 5.0.

Pasture Grass (Table 9)

When the routine milk samples are unavailable, samples of pasture grass are required as a replacement. These samples may also be taken to further investigate the levels of radioactivity in milk. In February, these samples were not available as a replacement at either goat location. The data listed in this table are actually the results for samples of broad leaf vegetation. Two samples were collected in June and September as part of a new program. The presence of Sr-90 and Cs-137 in these samples is consistent with values seen in pasture grass samples of past years. Their presence is most probably due to fallout. Because of the lack of Sr-89 and Cs-134 in these samples, it is concluded that no plant effects are seen in this media.

Well Water (Table 10)

The only detectable activity above the respective MDL's in well water samples was that of H-3 and gross beta. Sr-90 was measured in all samples, in all cases below its MDL. All were detected at levels similar to those of the past eight years; comparable to background concentrations shown at other locations (e.g., see Haddam Neck Station Radiological Environmental Monitoring Program). There was no station related activity measured in this media.

Reservoir Water (Table 11)

Reservoir water samples are special samples not required by the Environmental Technical Specifications. Previous data has shown the lack of detectable station activity in this media. This fact and the extremely unlikely possibility of observing routine plant effluents in this media has resulted in discontinuing these samples. In the event of widespread plant contamination, these samples would be collected.

Fruits and Vegetables (Table 12)

Consistent with past years, this media did not show any plant effects. Concentrations of Sr-90 and Cs-137 remained at levels similar to those observed for the past eight years. The absence of detectable Sr-89 indicates that the Sr-90 is from weapons fallout. The only other activity detected was naturally occurring K-40.

Meat, Poultry, and Eggs (Table 13)

The Environmental Technical Specifications require that these samples be collected on an annual basis if they are available and if their feed is grown within 10 miles of the station. However, no such samples were available, therefore, none were obtained.

Sea Water (Table 14)

These quarterly composites of weekly grab samples show similar results to that of the previous seven years. The only detectable activities observed above the respective MDL's are for K-40, H-3, Beta Fraction II and Beta Fraction IV. Sr-90 was detected, below its MDL, at positive levels relatively consistent among locations, suggesting that these levels are due solely to fallout. Typical background levels of H-3 are shown in all samples. This is unlike 1981 and 1983 when some plant related activity was detected. Values for Beta Fraction II were consistent among locations while that for Beta Fraction IV was higher at two of the indicator locations. The variability is within detection limits, therefore, no plant effects are observed.

Bottom Sediment (Table 15)

Similar to previous years, most bottom sediment samples exhibited the presence of the naturally occurring radionuclides of K-40, Ra-226 and Th-228. Cosmic produced Be-7 was also observed in a few samples near its detection limits. Some of the samples exhibited positive values of Sr-90 at levels below its MDL. No detectable Sr-89 was observed. Cs-137 was detected at a level above the MDL at an indicator location. However, the dose consequence of such a level is much lower than those discussed in Section 5.0 and, therefore, is considered insignificant. Traces of Cs-137 were detected in a few other samples, however, its values do not increase with proximity to the plant. Therefore these values seem fallout related.

Aquatic Flora (Table 16)

Consistent with previous observations, the naturally occurring radionuclide, K-40, was observed in all of the aquatic flora samples. Sr-90 was also observed in all samples at positive levels, usually below the MDL. Due to its consistency and the absence of detectable Sr-89, it is believed to be a result of weapons fallout and not plant related. Like the samples from 1983, there was no I-131 seen in these samples. However, there were other indications of plant effluents in this media. Co-58 and Co-60 were observed at levels near those of 1983. These levels are well below those seen in 1975-1976. Sampling of this media provides useful information because it is very sensitive to plant discharges. However, since seaweed in this area is not consumed, other media are utilized in the determination of dose consequences (e.g., see shellfish and fish results).

Fish Flounder (Table 17A)

The activity in this media is the same as that for the past eight years. The Sr-90 data consistently showed positive values, usually at levels below its MDL. The only other radionuclide detected above the MDL was naturally occurring K-40. Therefore, it is concluded that plant effects for this sampling media are insignificant at all locations.

Fish - Other (Table 17B)

Except for the quarry location, these fish samples exhibited data similar to the flounder samples. For the off-site samples, the only detectable activity seen above the MDL was K-40. However, as in previous years some traces of plant related activity (Cs-137, Cs-134, and Co-60) were detected in one of the quarry samples (i.e., location 40B). The quarry location is not accessible to members of the general public and with the dilution of the Long Island Sound, the levels of radioactivity become undetectable in these samples outside of the quarry. However, using the concentrations measured in the quarry and diluting them by the appropriate near field dilution factor for quarry discharges into the Sound, doses to the maximum individual can be calculated. See Section 5.0 for these results.

Mussels (Table 18)

As in previous years, positive values of Sr-89 and Sr-90 were observed in many of the samples at levels below their respective MDLs. The only other radioactivity observed in mussels consisted of naturally occurring K-40 and cosmic produced Be-7. Therefore, it is concluded that plant effects for this sampling media are insignificant at all locations.

Oysters (Table 19)

Native oysters are sampled at the Golden Spur (Location 30A) and Quarry Discharge (Location 40B) locations; the latter being an extra

location. The remaining locations utilize stocked oysters; trays are kept at these sampling areas to guarantee samples and facilitate sample collection. However, during the fourth quarter, the tray at Black Point (Location 36) was destroyed by surf action.

The primary activity in most samples continued to be K-40. Low positive values of Sr-90 were observed at random levels at all locations. Two samples show the level of Sr-90 just above the MDL. However, both levels occur at control locations, too distant from the plant for the radioactivity to be plant related. Therefore, all levels of Sr-90 are probably just traces of fallout. Further confirmation of this is shown by the lack of detectable Sr-89.

Plant related activity is shown at two locations, the area within 500 feet of the discharge (Location 32) and the quarry discharge (Location 40B). This activity included Co-60, Zn-65, Ag-110m, and possible traces of Zr-95 and Ru-106. These locations are within the plant discharge area, the one within 500 feet is actually at the end of the quarry. Therefore, these samples tend to show higher levels of activity than the mussel, clam, and lobster samples. The levels of Co-60 and Ag-110m observed are similar to those seen for the past six years. Since these two sample locations are onsite and not available for public use, the actual concentration of radionuclides in oysters available for public consumption is much less. The dose consequence of radioactivity via this pathway is discussed in Section 5.0.

Clams (Table 20)

The predominant activity in clams was naturally occurring K-40. Similar to the 1980 and unlike the 1981-1983 samples, plant related Co-60 was apparent in this sampling media. These samples further demonstrate that the activity seen in the oyster samples decreases rapidly with distance from the station.

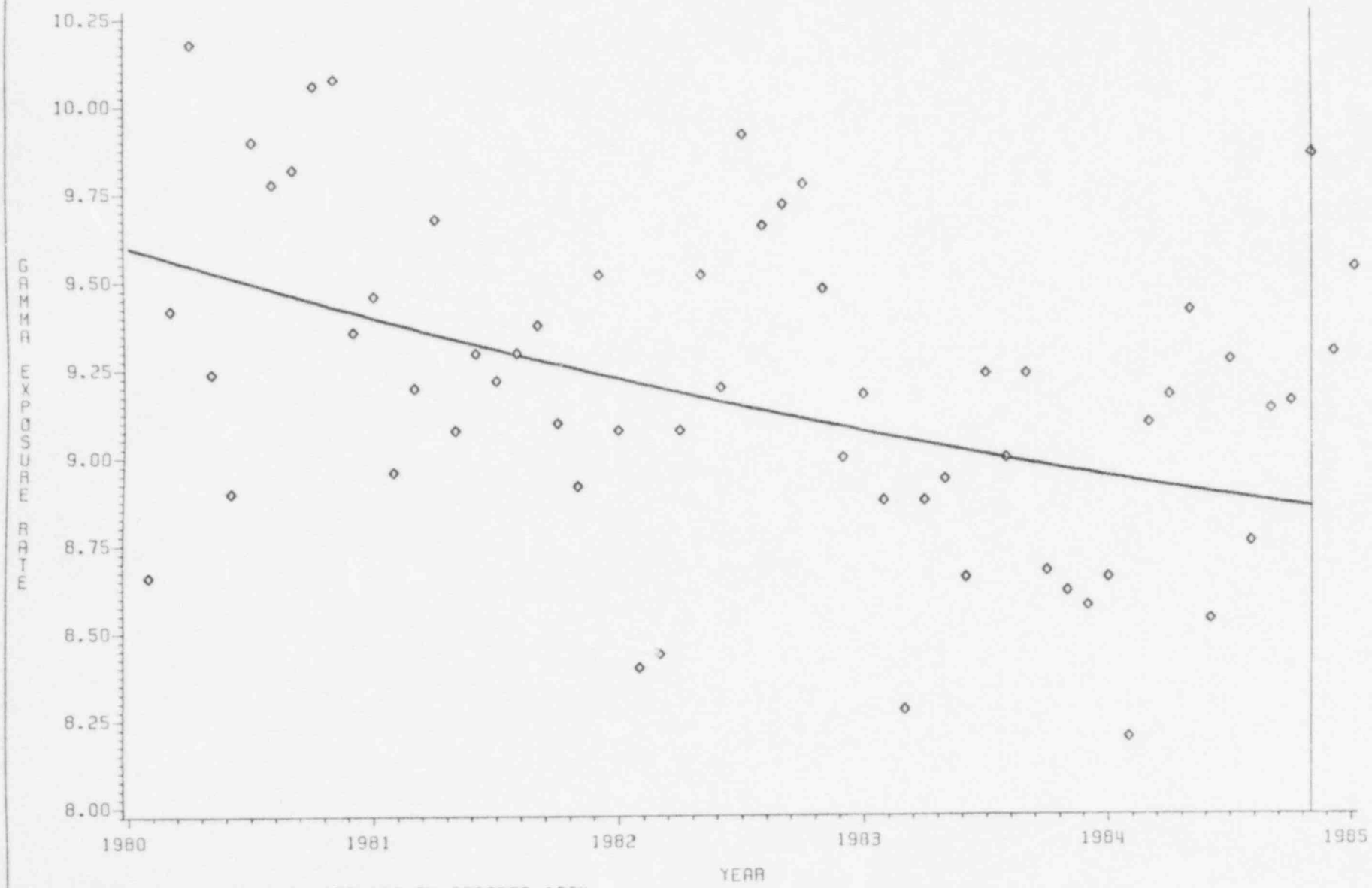
Scallops (Table 21)

Samples for location 31B (Niantic Shoals) are scallops while for location 40B (Quarry Discharge) they are crabs. Neither of these species are required by the Environment Technical Specifications. The only detectable activity seen in the scallop samples was naturally occurring K-40. Sr-90 was observed at positive levels usually below the MDL, but these levels are probably fallout produced. Two samples listed as being from location 40B (Discharge Quarry) are actually crab samples taken from the quarry. The crab samples showed plant related concentrations of Co-60, Ag-110m and possible traces of Ru-106. As mentioned above, these samples are within the plant discharge, and as such, concentrations in food that the public consumes would be much less. See Section 5.0 for a discussion of the dose consequences.

Lobsters (and crabs) (Table 22)

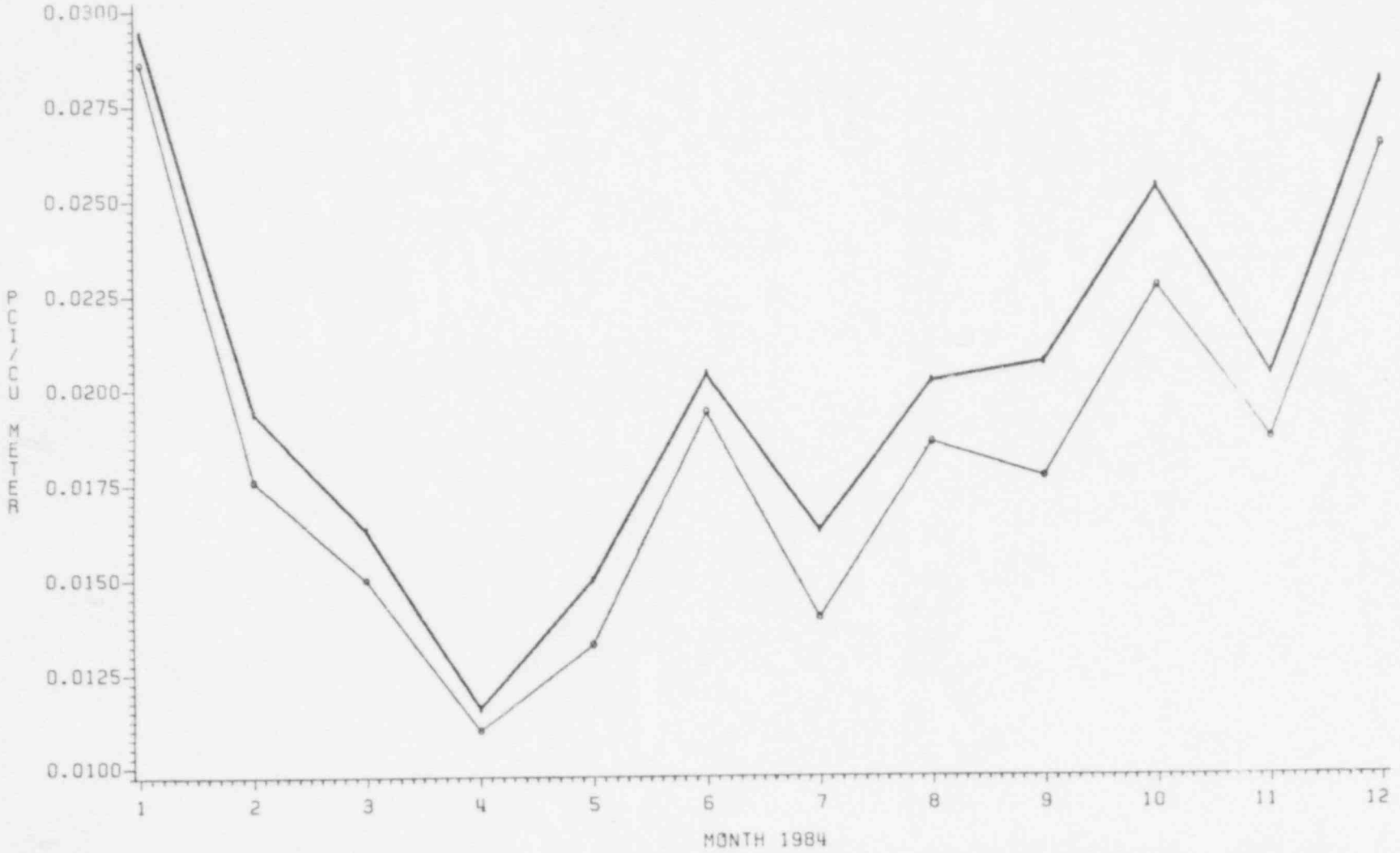
Strontium analyses indicated the presence of Sr-90 in many of the samples, near and above the MDL, and Sr-89 below its MDL in all samples. The Sr-90 levels were, on the average, similar to past data. Due to the absence of detectable Sr-89, the Sr-90 is concluded to be fallout related and not a result of plant effluents. Aside from naturally occurring K-40, there were traces of plant related Co-60 and Ag-110m seen here. These levels were similar to past data.

FIGURE 4-1
MILLSTONE POINT
AVERAGE TLD EXPOSURE RATE PER MONTH
(UR/HR)



NEW READER WAS PLACED INTO SERVICE ON OCTOBER 1984
GAMMA EXPOSURE RATES ARE AN AVERAGE OF ALL CONTROL LOCATION EXPOSURES PER MONTH

FIGURE 4-2
COMPARITIVE MONTHLY VALUES OF
AIR PARTICULATE GROSS BETA RADIOACTIVITY
1984



1 = INNER STATIONS
0 = OUTER STATIONS
THE ERROR IN THESE VALUES IS APPROXIMATELY 0.004

5.0 OFFSITE DOSE CONSEQUENCES

The off-site dose consequences of the stations' radioactive liquid and airborne effluents have been evaluated using two methods.

The first method utilizes the stations' measured radioactive discharges as input parameters into conservative models to simulate the transport mechanism through the environment to man. This results in the calculation of the maximum dose consequences to individuals and the 0 to 50 mile population dose commitment. The results of these computations have been submitted to the NRC in the Semiannual Radioactive Effluent Release Reports written in accordance with Environmental Technical Specification 5.6.1b. This method, which is usually conservative (i.e., computes higher doses than that which actually occur), has the advantage of approximating an upper bound to the dose consequences. This is important in those cases where the actual dose consequence cannot be measured because they are so small as to be well below the capabilities of conventional monitoring techniques.

The second method utilizes the actual measurements of the concentrations of radioactivity in various environmental media (e.g., milk, fish) and then computes the dose consequences resulting from the consumption of these foods.

The results of both methods are compared in Table 5.1 for those pathways where a potential dose consequence exists and a comparison is possible. The doses presented in this table are the maximum doses to an individual. That is, the dose is calculated at the location of maximum effect from the plant effluents for that pathway and for the critical age group. For example, the external gamma dose is calculated for the site boundary location which is not only the nearest but also has the greatest directional wind frequency and fish and shellfish doses are calculated assuming they are from an area within 500 feet of the station discharge.

As indicated by Table 5.1, there is also a direct gamma dose attributable to the operation of Unit I. This direct dose is inherent to BWR's (Boiling Water Reactors) and is due to direct and scattered radiation (skyshine) of Nitrogen-16 high energy gamma rays from radioactive steam in the turbine. It should be noted that the indicated dose due to direct radiation is to the maximum individual and is corrected for periods when Unit I is not operating (i.e., there is no direct dose when steam is not generated). Summarizing the data in Table 5.1, the maximum total doses to an individual are: 1.5 mrem whole body to an adult, 3.2 mrem to an child's thyroid, and 0.05 mrem to an adult's GI (LLI) (gastrointestinal tract-lower large intestine).

Since the maximum dose consequence to an individial is at the location of highest dose consequence, doses will be less for all other locations. The average dose to an individual within 50 miles from the site cannot be calculated using the second method. However, the first method yields the following results for the period January-December 1984 for the average individual:

ANNUAL WHOLE BODY DOSE DUE TO AIRBORNE EFFLUENTS = 0.00076 mrem

ANNUAL WHOLE BODY DOSE DUE TO LIQUID EFFLUENTS = 0.000098 mrem

Thus, it can be seen that the average dose to an individual is much less than the maximum dose to an individual.

In order to provide perspective on the doses in Table 5.1, the standards for 1984 on the allowable maximum dose to an individual of the general public are given in 40CFR190 as 25 mrem whole body, 75 mrem thyroid, and 25 mrem any other organ. These standards are a fraction of the normal background radiation dose of 125 mrem per year and are designed to be inconsequential in regard to public health and safety. Since plant related doses are even a smaller fraction of natural background, they have insignificant public health consequences. In fact, the plant related doses to the maximum individual are less than of the variation in natural background in Connecticut.

TABLE 5.1

COMPARISON OF DOSE CALCULATION METHODS
MILLSTONE NUCLEAR POWER STATION

JANUARY-DECEMBER 1984

PATHWAY	ORGAN	ANNUAL DOSE* (MILLIREM) METHOD 1[1] Unit 1 (BWR)	Unit 2 (PWR)	Total	METHOD 2[1]
AIRBORNE EFFLUENTS					
1. External Gamma Dose	[2] Max. Ind.-Whole Body	0.036	0.110	0.15	0.07[5]
2. a. Inhalation	Max. Ind.-Thyroid	0.0015	0.129	0.13	ND,[3] <0.6
b. Vegetables	Max. Ind.-Thyroid	0.0080	1.54	1.55	ND
c. Goat's Milk	Max. Ind.-Thyroid	0.065	1.43	1.50	1.1
LIQUID EFFLUENTS					
1. Fish	Max. Ind.-Whole Body	0.00010	0.0150	0.015	0.025
	Max. Ind.-GI(LLI)[4]	0.00032	0.0149	0.015	0.010
	Max. Ind.-Liver	0.00014	0.0201	0.020	0.034
2. Shellfish	Max. Ind.-Whole Body	0.00009	0.0049	0.0050	0.0009[8]
	Max. Ind.-GI(LLI)	0.00064	0.0287	0.029	0.040[8]
DIRECT DOSE					
1. Skyshine	Max. Ind.-Whole Body	1.3[7]	N/A[6]	1.3	1.3[9]

Table 5.1 (continued)

(1) Method 1 uses measured station discharges and meteorological data as input parameters into conservative transport to man models. Method 2 uses the actual measured concentrations in environmental media.
(2) Maximum individual - The maximum individual dose is the dose to the most critical age group (child for inhalation, infant for milk, child for vegetables, and adult for the remaining), at the location of maximum concentration of plant related activity. These locations are: external gamma dose-780m NE, goats milk-3200m ENE, skyshine-1000m NNW. The doses for inhalation and vegetable consumption assume that the individual resides at the point of maximum quarterly dose. Therefore, his residence is subject to variation for conservatism.
(3) ND - Not detectable - No plant related activity could be detected above natural background or above the minimum detectable level (MDL). The value reported is the dose corresponding to the MDL.
(4) GI(LLI) - Gastro Intestinal Tract - Lower Large Intestine - the organ receiving the maximum dose via the fish and shellfish pathways.
(5) Based on measurements taken with a high pressure ion chamber.
(6) Not applicable.
(7) Based on calculations performed utilizing the computer code, SKYSHINE, developed by Oak Ridge National Laboratories.
(8) Based on measured levels in oysters. Doses due to consumption of clams would be approximately the same.
(9) Based on prior measurements performed with a high pressure ion chamber.

6.0 DISCUSSION

The evaluation of the effects of station operation on the environment requires the careful consideration of many factors. Those factors depend upon the media being effected. They include station release rates, effluent dispersion, occurrence of nuclear weapons tests, seasonal variability of fallout, local environment, and locational variability of fallout. Additional factors affecting the uptake of radionuclides in milk include soil conditions (mineral content, pH, etc.), quality of fertilization, quality of land management (e.g., irrigation), pasturing habits of animals, and type of pasturage. Any of these factors could cause significant variations in the measured radioactivity. A failure to consider these factors could cause erroneous conclusions.

Consider, for example, the problem of deciphering the effect of station releases on the radioactivity measured in milk samples. This is an important problem because this product is widely consumed and fission products readily concentrate in this media. Some of these fission products, such as I-131 and Sr-89 are relatively short-lived. Therefore they result from either plant effluents or from recent nuclear weapons tests. Sr-89's lifetime is longer than I-131's, therefore it must be remembered that it will remain around for much longer periods of time. Problems are caused by the long-lived fission products, Sr-90 and Cs-137. These isotopes are still remaining from the high weapons testing era of the 1960's. This results in significant amounts of Sr-90 and Cs-137 appearing in milk samples. Distinguishing between this "background" of fallout activity and plant effects is a difficult problem.

In reviewing the Sr-90 and Cs-137 measured in cow and goat milk in the areas around the Millstone and Haddam Neck stations, a casual observer could notice that in some cases the levels of these isotopes are higher at farms closer to the station than at those further away from the stations. The stations effluents might at first appear to be responsible. However, the investigation of the following facts prove this conclusion wrong.

1. The stations accurately measure many fission products, including Sr-90 and Cs-137 in their releases. Based on these measurements and proven models developed by the Nuclear Regulatory Commission, concentrations in the environment can be calculated. These calculations (generally conservative, see Section 5.0) show that insufficient quantities (by more than a factor of 1000) of Sr-90 and Cs-137 have been released from the stations to yield the measured concentrations in milk.

2. Based on the ratio of Sr-89 to Sr-90 in the measured releases from the stations and on the similar chemical properties of the two nuclides, plant-related Sr-90 cannot be detected in milk without also detecting plant related Sr-89. During 1981 (and a few other occassions), Sr-89 has been detected in many of the milk samples. To investigate the source of Sr-89, air particulate data has been evaluated. Evaluation shows that airborne Sr-89

is generally uniform at all the indicator and control locations for both the Millstone and Haddam Neck stations. Therefore it can be concluded that the Sr-89 seen in milk is from recent fallout. Similarly, the levels of airborne Sr-90 (and total Cesium) are also generally uniform at all the air sampling locations. However, with the longer half lives of these isotopes, the same conclusion cannot be made. But, plant related Sr-89 has never been detected in milk, therefore levels of Sr-90 observed must be attributable to nuclear weapon's testing.

3. Similar to Sr-89, Cs-134 can be used as an indication of plant related Cs-137. Although not as conclusive as Sr-89, the lack of any measurable Cs-134 in any of the milk samples suggests that the Cs-137 is not plant related. This is further confirmed by the evaluation of the air particulate data.

4. Since dairy milk sampling began in the 1960's, years prior to plant operation, the immediate station areas have always shown higher levels of weapons fallout related Sr-90 and Cs-137 (see Figures 6-1 and 6-2). The ratio of activity between the locations has not changed with plant operation. All areas show the same significant decrease in radioactivity since the 1964 Nuclear Test Ban Treaty.

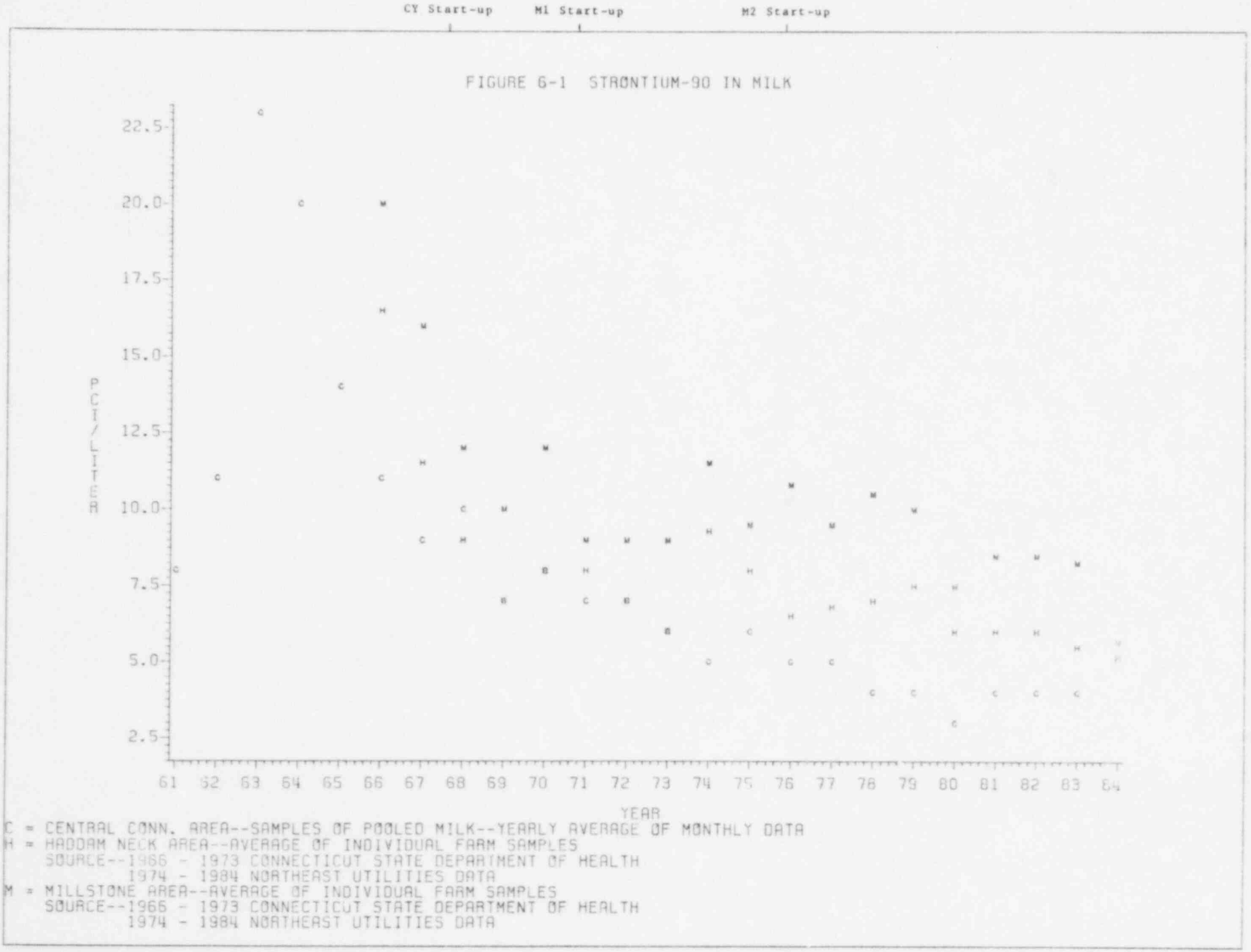
5. Local variability of Sr-90 and Cs-137 in milk is common throughout the United States. Due to the variability in soil conditions, pasturing methods, rainfall, etc., it is the rule rather than the exception. Therefore, it is not surprising that certain farms have higher levels of radioactivity than other farms. In fact, there are some cases where the farms further from the station have higher Sr-90 and Cs-137 values than the farms that are closer to the station (e.g., see Haddam Neck Goat Milk data.)

6. The goat farm with the highest levels of Sr-90 and Cs-137 has also experienced the highest levels of short-lived activity from the 1976 and 1977 Chinese Tests. This indicates that for some unknown reason this farm has the ability for higher reconcentration. Special studies performed at this and other farms failed to find any link to the plant.

Based on these facts, the observation that the station effluents are responsible is obviously false. The cause must be one or more of the other variables.

Northeast Utilities has carefully examined the data throughout the year and has presented in this report all cases where plant related radioactivity can be detected. An analysis of the potential exposure to the population from any plant related activity has been performed and shows that in all cases the exposure is insignificant.

As in previous years, this data is being submitted to, and will be reviewed by the appropriate regulatory bodies such as the Nuclear Regulatory Commission, Environmental Protection Agency and Connecticut Department of Environmental Protection.


CY Start-up
M1 Start-up
M2 Start-up
FIGURE 6-1 STRONTIUM-90 IN MILK
PCI/LITER
22.5
20.0
17.5
15.0
12.5
10.0
7.5
5.0
2.5
61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84
YEAR
C = CENTRAL CONN. AREA--SAMPLES OF POOLED MILK--YEARLY AVERAGE OF MONTHLY DATA
H = HADDAM NECK AREA--AVERAGE OF INDIVIDUAL FARM SAMPLES
SOURCE--1966 - 1973 CONNECTICUT STATE DEPARTMENT OF HEALTH
1974 - 1984 NORTHEAST UTILITIES DATA
M = MILLSTONE AREA--AVERAGE OF INDIVIDUAL FARM SAMPLES
SOURCE--1966 - 1973 CONNECTICUT STATE DEPARTMENT OF HEALTH
1974 - 1984 NORTHEAST UTILITIES DATA

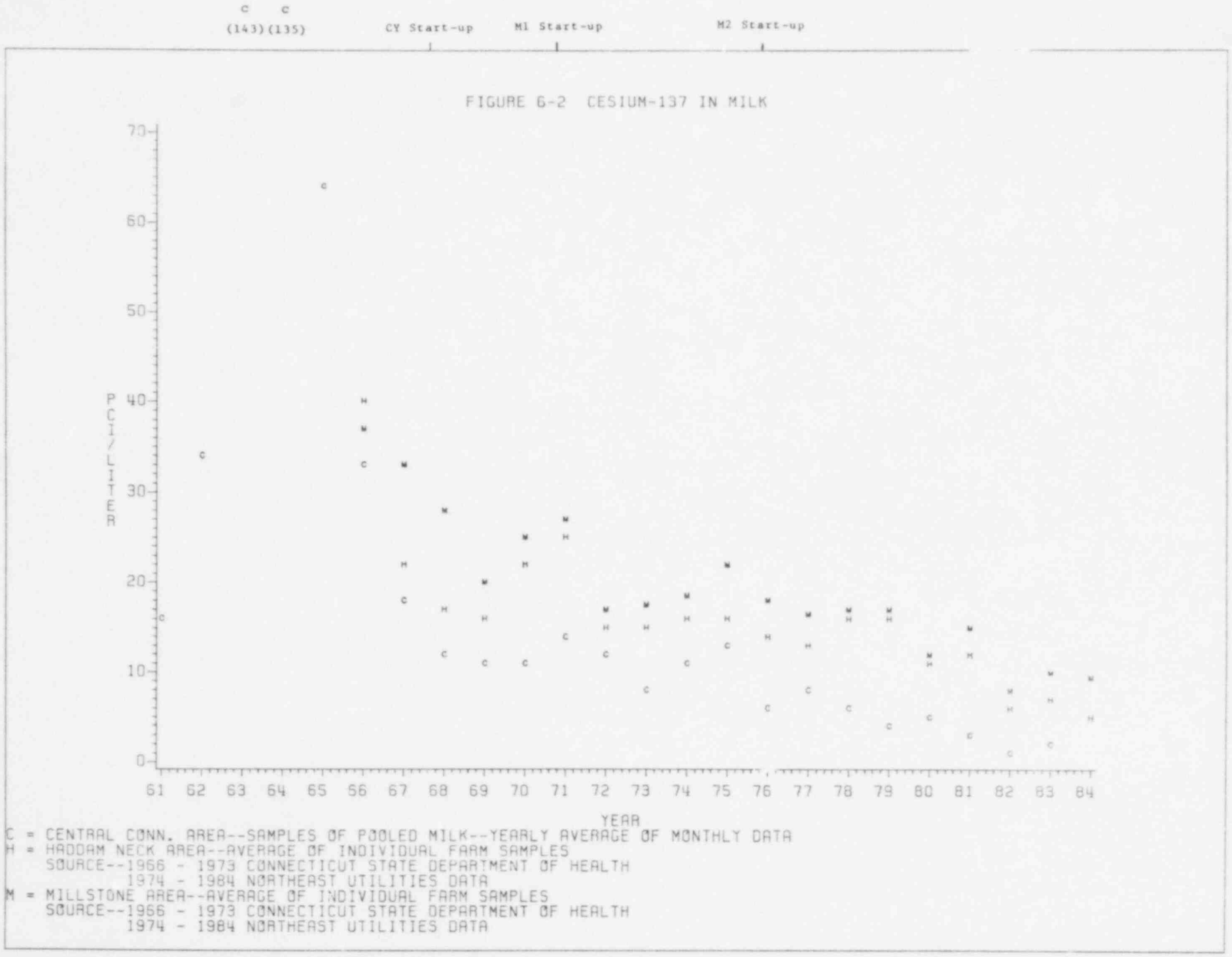


FIGURE 6-2 CESIUM-137 IN MILK

C = CENTRAL CONN. AREA--SAMPLES OF POOLED MILK--YEARLY AVERAGE OF MONTHLY DATA
H = HADDAM NECK AREA--AVERAGE OF INDIVIDUAL FARM SAMPLES
SOURCE--1966 - 1973 CONNECTICUT STATE DEPARTMENT OF HEALTH
1974 - 1984 NORTHEAST UTILITIES DATA
M = MILLSTONE AREA--AVERAGE OF INDIVIDUAL FARM SAMPLES
SOURCE--1966 - 1973 CONNECTICUT STATE DEPARTMENT OF HEALTH
1974 - 1984 NORTHEAST UTILITIES DATA

APPENDIX A

Cow and Goat Census for 1984

DAIRY COWS WITHIN 15 MILES OF MILLSTONE POINT

AS OF APRIL 1984

DIRECTION	DISTANCE	NAME AND ADDRESS	NO. OF COWS
N	6 M.	S. Douglas Morgan 16 Douglas Lane Waterford, CT 06385	7
N	12.5 M.	Conrad Nelson 486 Fitch Hill Rd. Uncasville, CT 06382 - Montville -	108
N	12.5 M.	Leo Wrobel 290 Fitch Hill Rd. Uncasville, CT 06382 - Montville -	39
N	14 M.	Wauwecus Farm Dairy RFD #2, Wauwecus Hill Rd. Norwich, CT 06360 - Bozrah -	40
NNE	13 M.	Geer Hill Farm 947 Co. Ledyard Hwy. Ledyard, CT 06339	41
NE	11 M.	Doris Lamb 99 Lambtown Rd. Ledyard, CT 06339	6
NE	13.5 M.	Henry Morgan RFD #7, Box 1114 Ledyard, CT 06339	58
NE	14 M.	Robert Cote 48 Town Farm Rd. Ledyard, CT 06339	2
ENE	13 M.	Charles Perkins RFD #1 Stonington, CT 06378	28
ENE	14 M.	Stone Acres Farm, Inc. E. Piver, Mgr. Box 222 Stonington, CT 06378	31
WNW	9.5 M.	J. Ely Harding Ashlawn Farm Old Lyme, CT 06371 - Lyme -	60

DAIRY COWS WITHIN 15 MILES OF MILLSTONE POINT

AS OF APRIL 1984

DIRECTION	DISTANCE	NAME AND ADDRESS	NO. OF COWS
WNW	11 M.	Tiffany Farms Sterling City Rd. Old Lyme, CT 06371 - Lyme -	70
NNW	8 M.	Raymond Muschinsky Grassy Hill Rd. East Lyme, CT 06333	27
NNW	11.5 M.	Valley View Farm Eugene Wiczewski Darling Rd. Salem, CT 06415	24
NNW	12 M.	Robin & William Houser Salem 4 Corners Salem, CT 06415	24
NNW	13 M.	Stuart Gadbois Route 82 Salem, CT 06415	225
NNW	13 M.	Garry Vaill Forsythe Rd. Salem, CT 06415	34

DAIRY GOATS WITHIN 20 MILES OF MILLSTONE POINT

AS OF MAY 1984

DIRECTION	DISTANCE	NAME AND ADDRESS	NO. OF GOATS
N	2 M.	Mary Mingo 69 Spithead Rd. Waterford, CT 06385	3
N	16 M.	Henry Rianhard Scott Hill Rd. Bozrah, CT 06334	1
NNE	1.8 M.	Allen Moran 204 Rope Ferry Rd. Waterford, CT 06385	2
NE	13.5 M.	Robert Cote Town Farm Rd. Ledyard, CT 06339	2
NE	14 M.	Robert Ruest 15 Mathewson Mill Rd. Ledyard, CT 06339	8
ENE	2 M.	Bertram Smith 9 Braman Rd. Waterford, CT 06385	2
W	16.5 M.	Victor Trudeau 174 Horse Hill Rd. Westbrook, CT 06498	5
WNW	8 M.	Peter LaPolla Town Woods Rd. Old Lyme, CT 06371	2
WNW	17.5 M.	David Recchia RFD #1 Deep River, CT 06417	1
WNW	19.5 M.	Chris Harris 218 Reservoir Rd. Killingworth, CT 06417	2

DAIRY GOATS WITHIN 20 MILES OF MILLSTONE POINT

AS OF MAY 1984

DIRECTION	DISTANCE	NAME AND ADDRESS	NO. OF GOATS
WNW	20 M.	Vicki Fonteneau 312 Old Deep River Tkpe. Killingworth, CT 06417	2
NW	5 M.	Ron Birchall 339 Boston Post Rd. East Lyme, CT 06333	6
NW	5 M.	George Scacciaferro 338 Boston Post Rd. East Lyme, CT 06333	13
NW	7 M.	Tina Korineck 233 Upper Pattagansett Rd. East Lyme, CT 06333	6
NW	14 M.	Burton Tucker A.P. Gates Rd. East Haddam, CT 06423	2
NNW	13.5 M.	Joseph DeVito 1494 Old Colchester Rd. Oakdale, CT 06370	5
NW	18 M.	MaryAnn Halpin Town St. East Haddam, CT 06423	3

APPENDIX B

Quality Control

Introduction

Northeast Utilities Service Company (NUSCO), acting as the agent for both the Northeast Nuclear Energy Company (NNECO) and the Connecticut Yankee Atomic Power Company (CYAPCO), maintains a quality assurance (QA) program of its primary contractor of radiological analyses, Chemical Waste Management of Massachusetts, Inc., (Teledyne for H-3 in water samples). This is accomplished by the use of the three quality control methods that are specified in Radioassay Procedures for Environmental Samples, U.S. Department of Health, Education, and Welfare (January 1967).

These three quality control methods are:

a) Duplicate analyses of actual surveillance samples with one laboratory. This type of quality control allows an evaluation of the contractor's precision or reproducibility of results.

b) Cross-check analyses of actual surveillance samples with more than one laboratory. This intercomparison allows the determination of what agreement the primary contractor has with another laboratory.

c) Analyses of "spiked" samples. This type of quality control allows a check on the contractor's accuracy of results.

Additional QA programs are performed, these include: 1) Chemical Waste Management's internal QA program, 2) Chemical Waste Management's participation in EPA's Environmental Radioactivity Laboratory Intercomparison Studies Program, and 3) Nuclear Regulatory Commission - State of Connecticut Independent Verification Program.

Method

The number and type of QA samples are given in Table 1. In general, the objective was to obtain between 10 and 20 percent of the samples as QA samples. The results of the program are shown in Tables 2, 3, and 4. These three tables correspond to the above methods of quality control.

For I-131 spikes in milk, the acceptance criteria is based on the requirement that the measured value be within 30 percent of the spike. The acceptance criteria for the remaining QA samples is based on the standard deviation in counting statistics (1 sigma, σ) only. The standard deviation is divided into the difference between the two measurements (Δ). The result then should satisfy the acceptance criteria as developed from the above-mentioned U.S. Department of Health, Education, and Welfare document. For all GeLi analyses the acceptance criteria is that Δ/σ be less than or equal to 3. For chemistry and beta counting, where the overall error is expected to be higher than the calculated error based on counting statistics only, the acceptance criteria is that Δ/σ be less than or equal to 4.

Results

For Precision (Table 2), the requirement is that the unacceptable results be less than 10 percent of the number of measurements for that type of

measurement as shown for the totals. General statistics indicate that this value should be approximately 2.5 percent for counting statistics, but other non-counting statistical errors exist such as sample volume, sampling, etc. Hence, 10 percent has been found to be reasonable criteria. From the totals at the bottom of Table 2 this requirement is satisfied for Ge(Li) and H-3 analyses. However, 11.1 percent of the Sr-90 analyses were unacceptable. All four sets of unacceptable measurements were compared with the results of the secondary contractor. Comparison indicated that the primary contractor's first analysis was correct, and three of the four unacceptable measurements were conservative.

For Interlaboratory Comparisons (Table 3) the requirement is less stringent than both Precision and Accuracy, that is the unacceptable results be less than 20 percent of the number of measurements for that type of measurement. As indicated by the totals on the bottom of Table 3, the results are acceptable.

For the case of Accuracy, only the primary contractor need satisfy the acceptance criteria. The secondary contractor receives only a small number of samples thus making the evaluation of the secondary contractor difficult. The requirement that need be satisfied by the primary contractor here is the same as that for Precision, that the unacceptable results be less than 10 percent of the number of measurements for that type of measurement. From the totals at the bottom of Table 4 this requirement is satisfied for H-3 and I-131 (in air) analyses. This requirement is just exceeded for Sr-89 and Ge(Li) analyses (14 and 13 percent, respectively).

Investigations were performed for the other analyses that did not meet the acceptance criteria. For the I-131 in milk analyses, problems of previous years have remained. The switch from CuI to PdI carrier has improved the results. Of the 6 unacceptable results, 5 occurred for low spikes. All five of these yielded conservative results, therefore, it can be concluded that the data presented in this report for this type of analysis, is conservative. The increased spiked I-131 in milk program will continue.

For the Sr-90 and Sr-89 spikes in milk, the only unacceptable results occurred in the same sample. The first Sr-90 result was ~ 55 percent low. Reanalysis indicated a value that was ~ 36 percent low. The first Sr-89 result was high (by ~ 300 percent), indicating interference from Sr-90. Reanalysis for Sr-89 was acceptable. For the three unacceptable Sr-90 and two unacceptable Sr-89 results in water, five samples were involved. Four of these were reanalyzed. The original Sr-90 results were ~ 30 percent low. Reanalyses indicated acceptable results for these three samples. The original Sr-89 results were only ~ 20 percent low. Reanalysis of one of these indicated acceptable results.

Two fish spikes had Sr-90 results that were unacceptable. One sample was reanalyzed; the Sr-90, however, remained unacceptable. This media often presents a problem because of calcium interferences and nonuniformity of spikes. Therefore, no further investigation was deemed necessary. For the two unacceptable Sr-90 results in air particulates, results were

~ 60 percent low. Reanalysis of this media is not possible since the whole sample is destructively analyzed.

Air particulate Cs (chemistry) spikes had only two of eight spikes meeting the acceptance criteria. However, all of these were within ~ 30 percent, except for one which was 80 percent low.

For the GeLi results, the calibration factors were at fault and these have been corrected.

The gross beta results, although only 3 of 13 results were acceptable, has no analysis problem. The problem is related to the geometry of spiking the filter paper. Corrective actions are being taken.

Conclusion

Based on the results discussed above, it is concluded that the results of the routine measurements presented in the report are valid. The results of primary contractor's participation in the EPA QA program confirms this conclusion.

Table 1
Number of Quality Control* Samples

Sample Type	Number of QC Samples	Number of Routine Required Samples[a,b]
Milk	51	112
Well Water[c]	17	28
Sea Water[c]	2	16
River Water[c]	7	8
Soil	3	16
Bottom Sediment	4	26
Aquatic Flora	4	12
Fish	12	40
Shellfish	4	52
Lobster	0	12
Fruits and Vegetables	0	16
Air Particulate - Gross Beta	13	1113
- Iodine	11	424
- Geli	24	252
- Chemistry	8	84

*An additional program is performed by the contractor
a - Total for both Millstone and Connecticut Yankee
b - Depends on availability
c - QC breakdown does not include H-3 analysis; total number of tritium QC samples was 31.

Table 2

Precision

Media	Analysis	Acceptance Criteria	Number of Acceptable	Measurements Unacceptable
Milk	Sr^{90}	$\Delta/\sigma \leqq 4$*	25	3
	Sr^{89}	$\Delta/\sigma \leqq 4$	27	1
	Cs^{137} (Geli)	$\Delta/\sigma \leqq 3$	27	1
Water	H-3	$\Delta/\sigma \leqq 4$	8	0
Soil & Bottom Sediment	Geli's	$\Delta/\sigma \leqq 3$	3	0
	Sr^{90}	$\Delta/\sigma \leqq 4$	2	1
Aquatic Life	Geli's	$\Delta/\sigma \leqq 3$	5	0
	Sr^{90}	$\Delta/\sigma \leqq 4$	5	0
Total	Sr^{90}	$\Delta/\sigma \leqq 4$	32	4
	Geli	$\Delta/\sigma \leqq 3$	35	1
	H-3	$\Delta/\sigma \leqq 4$	8	0

*Δ = difference between the two values
σ = standard deviation

Table 3

Interlaboratory Comparisons

Media	Analysis	Acceptance Criteria	Number of Acceptable	Measurements Unacceptable
Milk	Sr^{90}	$\Delta/\sigma \leq 4$*	11	0
	Sr^{89}	$\Delta/\sigma \leq 4$	11	0
	Cs^{137} (Geli)	$\Delta/\sigma \leq 3$	11	0
Water	Sr^{90}	$\Delta/\sigma \leq 4$	7	0
	H-3	$\Delta/\sigma \leq 4$	11	1
Soil & Bottom Sediment	Geli's	$\Delta/\sigma \leq 3$	4	0
	Sr^{90}	$\Delta/\sigma \leq 4$	4	0
Aquatic Life	Geli's	$\Delta/\sigma \leq 3$	10	0
	Sr^{90}	$\Delta/\sigma \leq 4$	9	1
Total	Sr^{90}	$\Delta/\sigma \leq 4$	31	1
	H-3	$\Delta/\sigma \leq 4$	11	1
	Geli	$\Delta/\sigma \leq 3$	25	0

*Δ = difference between the two values
σ = standard deviation

Table 4

Accuracy

(Results of Spikes)

Media	Analysis	Acceptance Criteria	Number of Measurements: Acceptable – Primary Contractor	Acceptable – Secondary Contractor	Unacceptable – Primary Contractor	Unacceptable – Secondary Contractor
Milk	I^{131}	$\Delta \leq 30\%$	18	6	6	0
	Sr^{90}	$\Delta/\sigma \leq 4$	7	4	1	0
	Sr^{89}	$\Delta/\sigma \leq 4$	7	4	1	0
	Cs^{137}	$\Delta/\sigma \leq 3$	8	4	0	0
	Cs^{134}	$\Delta/\sigma \leq 3$	7	4	1	0
Water	Geli	$\Delta/\sigma \leq 3$	11	6	1	0
	Sr^{90}	$\Delta/\sigma \leq 4$	9	6	3	0
	Sr^{89}	$\Delta/\sigma \leq 4$	10	6	2	0
	H-3	$\Delta/\sigma \leq 4$	8	4	0	0
Aquatic Food and Flora	Geli	$\Delta/\sigma \leq 3$	0	1	2	1
	Sr^{90}	$\Delta/\sigma \leq 4$	0	2	2	0
	Sr^{89}	$\Delta/\sigma \leq 4$	2	2	0	0
Air Particulate	Gross β	$\Delta/\sigma \leq 4$	3	-	10	-
	Geli	$\Delta/\sigma \leq 3$	21	-	3	-
	Cs (chemistry)	$\Delta/\sigma \leq 4$	2	-	6	-
	Sr^{90}	$\Delta/\sigma \leq 4$	6	-	2	-
	I^{131}	$\Delta/\sigma \leq 4$	11	-	0	-
Total	I^{131} (milk)	$\Delta \leq 30\%$	18	6	6	0
	Sr^{90}	$\Delta/\sigma \leq 4$	22	12	8	0
	Sr^{89}	$\Delta/\sigma \leq 4$	19	12	3	0
	Cs (chemistry)	$\Delta/\sigma \leq 4$	2	-	6	-
	Geli	$\Delta/\sigma \leq 3$	40	11	6	1
	H-3	$\Delta/\sigma \leq 4$	8	4	0	0
	I^{131} (air)	$\Delta/\sigma \leq 4$	11	-	0	-
	Gross β (air)	$\Delta/\sigma \leq 4$	3	-	10	-

* Δ = difference between the two values
  σ = standard deviation

APPENDIX C

1983 Report Errata Sheet

In collating copies of the Millstone 1983 Annual Environmental Operating Report, a page was mistakenly left out of some distributed copies. Attached is the missing page.

TABLE 4A
AIR PARTICULATES
GAMMA SPECTRA - JAN
(PCI/M3)

MP

LOCATION	CS-137	(+/-)	CS-134	(+/-)	RU-103	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	K-40	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)
								ANALYSES										
1	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.004	0.0	0.020	0.0	0.02	0.0	0.006	0.07	0.03	0.0	0.003
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.013	0.0	0.02	0.0	0.004	0.06	0.02	0.0	0.003
3	0.0	0.004	0.0	0.003	0.0	0.006	0.0	0.008	0.0	0.030	0.0	0.03	0.0	0.010	0.07	0.04	0.0	0.007
4	0.0	0.004	0.0	0.004	0.0	0.006	0.0	0.008	0.0	0.030	0.0	0.03	0.0	0.008	0.04	0.04	0.0	0.007
10	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.02	0.0	0.006	0.04	0.03	0.0	0.004
11	0.0	0.003	0.0	0.004	0.0	0.007	0.0	0.010	0.0	0.030	0.0	0.04	0.0	0.008	0.07	0.04	0.0	0.007
12A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.014	0.0	0.02	0.0	0.004	0.05	0.02	0.0	0.003
13A	0.0	0.002	0.0	0.002	0.0	0.004	0.0	0.005	0.0	0.020	0.0	0.03	0.0	0.005	0.05	0.03	0.0	0.004
14A	0.0	0.003	0.0	0.003	0.0	0.006	0.0	0.008	0.0	0.020	0.0	0.03	0.0	0.008	0.03	0.03	0.0	0.005
15A	0.0	0.004	0.0	0.004	0.0	0.007	0.0	0.008	0.0	0.030	0.0	0.04	0.0	0.010	0.0	0.04	0.0	0.007
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.015	0.0	0.02	0.0	0.004	0.05	0.02	0.0	0.003
53B	0.0	0.004	0.0	0.003	0.0	0.006	0.0	0.008	0.0	0.030	0.0	0.05	0.0	0.008	0.05	0.04	0.0	0.005

TABLE 4B
AIR PARTICULATES
GAMMA SPECTRA - FEB
(PCI/M3)

LOCATION	CS-137	(+/-)	CS-134	(+/-)	RU-103	(+/-)	ZR-95	(+/-)	RU(RH)-106	(+/-)	K-40	(+/-)	TH-228	(+/-)	BE-7	(+/-)	NB-95	(+/-)
								ANALYSES										
1	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.02	0.0	0.005	0.08	0.02	0.0	0.002
2	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.02	0.0	0.004	0.10	0.02	0.0	0.002
3	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.007	0.0	0.030	0.0	0.04	0.0	0.009	0.10	0.04	0.0	0.005
4	0.0	0.004	0.0	0.004	0.0	0.006	0.0	0.008	0.0	0.040	0.0	0.05	0.0	0.009	0.14	0.05	0.0	0.005
10	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.03	0.0	0.005	0.09	0.03	0.0	0.003
11	0.0	0.004	0.0	0.004	0.0	0.006	0.0	0.007	0.0	0.040	0.0	0.04	0.0	0.010	0.12	0.04	0.005	0.005
12A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.004	0.0	0.020	0.0	0.02	0.0	0.005	0.09	0.02	0.0	0.002
13A	0.0	0.002	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.020	0.0	0.02	0.0	0.005	0.08	0.02	0.0	0.002
14A	0.0	0.004	0.0	0.003	0.0	0.005	0.0	0.006	0.0	0.030	0.0	0.05	0.0	0.008	0.08	0.04	0.0	0.005
15A	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.007	0.0	0.030	0.0	0.04	0.0	0.007	0.09	0.03	0.0	0.004
16A	0.0	0.002	0.0	0.002	0.0	0.003	0.0	0.005	0.0	0.020	0.0	0.02	0.005	0.005	0.09	0.03	0.0	0.003
53B	0.0	0.003	0.0	0.003	0.0	0.004	0.0	0.007	0.0	0.030	0.0	0.04	0.0	0.008	0.09	0.04	0.0	0.004

NORTHEAST UTILITIES

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March 27, 1985
Docket No. 50-245
50-336
B11501

Dr. T. E. Murley
Regional Administrator
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Dear Dr. Murley:

MILLSTONE NUCLEAR POWER STATION, UNIT 1 AND UNIT 2
ANNUAL ENVIRONMENTAL OPERATING REPORTS, PART B: RADIOLOGICAL

In accordance with the requirements of Appendix B to the operating licenses of Units 1 and 2 Environmental Technical Specification 5.6.1.a, two (2) copies of the Annual Environmental Operating Report, Part B: Radiological, are herewith submitted. Copies of this report are being distributed in accordance with Regulatory Guide 10.1.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

W. G. Counsil
Senior Vice President

c: J. R. Miller
J. A. Zwolinski