Northeast
Nuclear Energy

Rope Ferry Rd. (Route 156), Waterford, CT 06385

Millstone Nuclear Power Station
Northeast Nuclear Energy Company
P.O. Box 128
Waterford, CT 06385-0128
(860) 447-1791
Fax (860) 444-4277

The Northeast Utilities System

April 30, 1997

Docket Nos. 50-245
50-336
50-423

B16425

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3
Annual Radiological Environmental Operating Report

In accordance with the requirements of the Millstone Nuclear Power Station Radiological Effluent Monitoring Manual, an implementing document of the Millstone Unit Nos. 1, 2, and 3 Technical Specifications, two (2) copies of the Annual Radiological Environmental Operating Report are herewith submitted. Copies of this report are being distributed in accordance with 10CFR50.4 (b) (1).

A001

If you have any additional questions concerning this submittal, please contact Mr. Michael D. Ehredt at (860) 440-2142.

Very truly yours,
NORTHEAST NUCLEAR ENERGY COMPANY

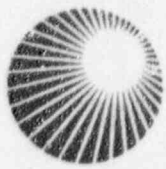
FOR: J. K. Thayer
Vice President, Nuclear Engineering
and Support

BY: _____
S. E. Scace
Director, Engineering Programs Overview

9705020156 961231
PDR ADOCK 05000245
R PDR

Attachment

cc: Dr. W. D. Travers, Director, Special Projects Office
H. J. Miller, Region I Administrator
P. F. McKee, Deputy Director of Licensing, Special Projects Office
W. D. Lanning, Deputy Director for Inspections
S. Dembek, NRC Project Manager, Millstone Unit No. 1
D. G. McDonald, Jr., NRC Project Manager, Millstone Unit No. 2
J. W. Andersen, NRC Project Manager, Millstone Unit No. 3
T. A. Easlick, Senior Resident Inspector, Millstone Unit No. 1
D. P. Beaulieu, Senior Resident Inspector, Millstone Unit No. 2
A. C. Cerne, Senior Resident Inspector, Millstone Unit No. 3



Northeast
Utilities

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

MILLSTONE NUCLEAR POWER STATION

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

JANUARY 1, 1996 - DECEMBER 31, 1996

MILLSTONE UNIT 1, DOCKET NO. 50-245
MILLSTONE UNIT 2, DOCKET NO. 50-336
MILLSTONE UNIT 3, DOCKET NO. 50-423

Prepared for the

NORTHEAST NUCLEAR ENERGY COMPANY
Hartford, Connecticut

By the

NORTHEAST UTILITIES SERVICE COMPANY
New Britain, Connecticut

TABLE OF CONTENTS

1. SUMMARY

The radiological environmental monitoring program for the Millstone Nuclear Power Station was continued for the period January through December 1996, in compliance with the Radiological Effluent Monitoring and Offsite Dose Calculation Manual. This annual report was prepared for the Northeast Nuclear Energy Company (NNECO) by the Radiological Assessment Branch of the Northeast Utilities Service Company (NUSCO). All sample collections and preparations are performed by the Production Operations Services Laboratory. Gamma exposure measurements were performed by the Production Operations Services Laboratory. All remaining laboratory analyses were performed by the Yankee Atomic Environmental Laboratory.

Sampling and radiological analyses were performed with gamma exposure measuring devices and on air particulates and iodine, milk, pasture grass, broad leaf vegetation, fruits, vegetables, seawater, bottom sediment, aquatic flora, fin fish, mussels, oysters, clams, and lobsters. 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.

Due to the shutdown of all three Millstone nuclear units in 1996 the corresponding capacity factors for 1996 are representatively low: Unit 1 - 0.0%; Unit 2 - 13.7%; Unit 3 -24.8%. Due to the non-operational state of Millstone for much of 1996, the related radioactive releases of gaseous effluents were greatly reduced. Radioactive releases in the liquid effluents are comparable to past years. Even though the plants were not operating, maintenance and routine activities generated liquid effluents that were discharged in 1996.

The predominant radioactivity,except for a few aquatic sample results, was that from non-plant (not Millstone) sources, such as fallout from nuclear weapons tests and naturally occurring radionuclides. No plant effects were detected in terrestrial media. The effect from Unit 1 via the direct dose pathway (i.e., scattered radiation, "skyshine", from nitrogen-16 in the turbine building; unique to Boiling Water Reactors) was absent due to Unit 1 being shutdown for all of 1996.

Monitoring of the aquatic environment in the area of the discharge indicated the presence of the following plant related radionuclides: manganese-54, cobalt-58, cobalt-60, zinc-65 and silver-110m in aquatic flora; manganese-54, cobalt-58, cobalt-60, zinc-65 and silver-110m in oysters; and cobalt-60 in lobsters. The levels of these radionuclides are comparable to those observed since 1987. Doses from the 1996 measured levels are well below those required by each Unit's Safety Technical Specifications (10CFR50 Appendix I, Design Guidelines).

As usual, cesium-137 and strontium-90 were measured in goat milk. These levels are a result of nuclear weapons testing in the 1960's and not the result of plant operation. This can be concluded based on the facts that: insufficient quantities of these isotopes have been released by the plant to account for the measured concentrations, chemically similar and plant related cesium-134 and strontium-89 have not been detected and higher levels of cesium-137 and strontium-90 were detected prior to initial plant operation.

The radiation dose (dose equivalent commitment) to the general public from the plant'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 (station boundary) that could occur to a member of the general public as a result of station operation was 0.39 millirem. The average dose to a member of the public residing within 50 miles of the plant is 0.00028 millirem. These doses are 1.6 percent and 0.0011 percent of the standards as set by the Environmental Protection Agency on the maximum allowable dose to an individual of the general public. These standards are a small fraction (less than 10 percent) of the 284 mrem per year normal Connecticut resident background radiation (NCRP94) 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. 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 through 2.3. The program as described here includes both required samples as specified in the Radiological Effluent Monitoring and Offsite Dose Calculation Manual and any extra samples.

Table 2-1 Environmental Monitoring Program Sampling Types and Locations

Location Number[†]	Location Name	Direction & Distance From Release Point[‡]	Sample Types
1-I	On-site - Old Millstone Rd.	0.6 Mi, NNW	TLD, Air Particulate, Iodine, Vegetation
2-I	On-site - Weather Shack	0.3 Mi, S	TLD, Air Particulate, Iodine
3-I	On-site - Bird Sanctuary	0.3 Mi, NE	TLD, Air Particulate, Iodine
4-I	On-site - Albacore Drive	1.0 Mi, N	TLD, Air Particulate, Iodine
5-I	MP3 Discharge	0.1 Mi, SSE	TLD
6-I	Quarry Discharge	0.3 Mi, SSE	TLD
7-I	Env. Lab Dock	0.3 Mi, SE	TLD
8-I	Environmental Lab	0.3 Mi, SE	TLD
9-I	Bay Point Beach	0.4 Mi, W	TLD
10-I	Pleasure Beach	1.2 Mi, E	TLD, Air Particulate, Iodine
11-I	New London Country Club	1.6 Mi, ENE	TLD, Air Particulate, Iodine
12-C	Fisher's Island, NY	8.7 Mi, ESE	TLD
12-X	Fisher's Island, NY	8.7 Mi, ESE	Air Particulate
13-C	Mystic, CT	11.5 Mi, ENE	TLD
14-C	Ledyard, CT	12.0 Mi, NE	TLD
15-C	Norwich, CT	14.0 Mi, N	TLD, Air Particulate, Iodine
16-C	Old Lyme, CT	8.8 Mi, W	TLD
17-I	Site Boundary	0.5 Mi, NE	Vegetation
18-I	Pleasure Beach	1.2 Mi, E	Vegetation
21-I	Goat Location #1	2.0 Mi, N	Milk
22-I	Goat Location #2	5.2 Mi, NNE	Milk
23-I	Goat Location #3	2.0 Mi, ENE	Milk
24-C	Goat Location #4	23.0 Mi, N	Milk
25-I	Fruits & Vegetables	Within 10 Miles	Vegetation
26-C	Fruits & Vegetables	Beyond 10 Miles	Vegetation
27-I	Niantic	1.7 Mi, WNW	TLD, Air Particulate, Iodine
28-I	Two Tree Island	0.8 Mi, SSE	Mussels
29-I	West Jordan Cove	0.4 Mi, NNE	Clams
29-X	West Jordan Cove	0.4 Mi, NNE	Fucus
30-X	Golden Spur	4.7 Mi, NNW	Bottom Sediment
31-I	Niantic Shoals	1.8 Mi, NW 1.5 Mi, NNW	Bottom Sediment, Oysters Mussels
31-X	Niantic Shoals	1.8 Mi, NW	Fucus, Scallops
32-I	Vicinity of Discharge	----------	Botton Sediment, Oysters, Lobster, Fish, Seawater
32-X	Vicinity of Discharge	----------	Fucus, Mussels
33-I	Seaside Point	1.8 Mi, ESE	Bottom Sediment
33-X	Seaside Point	1.8 Mi, ESE	Fucus
34-I	Thames River Yacht Club	4.0 Mi, ENE	Bottom Sediment
34-X	Thames River Yacht club	4.0 Mi, ENE	Oysters
35-I	Niantic Bay	0.3 Mi, WNW	Lobster, Fish
36-I	Black Point	3.0 Mi, WSW	Oysters
36-X	Black Point	3.0 Mi, WSW	Bottom Sediment, Fucus

[†] Key: I - Indicator C - Control X - Extra - sample not required

[‡] The release points are the MP1 stack for terrestrial locations and the quarry cut for aquatic locations.

Location Number*	Location Name	Direction & Distance From Release Point‡	Sample Types
37-C	Giant's Neck	3.5 Mi, WSW	Bottom Sediment, Oysters, Seawater
37-X	Giant's Neck	3.5 Mi, WSW	Fucus, Lobster
38-I	Waterford Shellfish Bed #1	1.0 Mi, NW	Clams
39-X	Jordon Cove Bar	0.8 Mi, NE	Clams
40-X	Quarry	----------	Fish, Oysters, Crabs, Seawater
41-X	Upper Jordon Cove	1.2 Mi, NE	Mussels
50-X	Myrock Avenue	3.2 Mi, ENE	TLD
54-X	Billow Road	2.4 Mi, WSW	TLD
55-X	Black Point	2.6 Mi, SW	TLD
98-X	Ion Chamber Shack	0.5 Mi, NE	TLD
99-X	Schoolhouse	0.1 Mi, NNE	TLD

*Key: I - Indicator C - Control X - Extra - sample not required

‡The release points are the MP1 stack for terrestrial locations and the quarry cut for aquatic locations.

Table 2-2 Sampling Frequency & Type of Analysis

	Exposure Pathway and/or Sample	Number of Locations	Sampling & Collection Frequency	Type of Analysis
1a.	Gamma Dose - Environmental TLD	17	Monthly	Gamma Dose
1b.	Gamma Dose - Accident TLD	22	Quarterly [§]	N/A
2.	Airborne Particulate	8	Continuous sampler - weekly filter change	Gross Beta - Weekly Gamma Spectrum - Quarterly on composite (by location), & on individual sample if gross beta is greater than 10 times the mean of the weekly control stations gross beta results
3.	Airborne Iodine	8	Continuous sampler - weekly canister change	I-131
4.	Vegetation	5	One sample near middle & one near end of growing season	Gamma Isotopic on each sample
5.	Milk	4	Monthly	Gamma Isotopic and I-131 on each sample, Sr-89 & Sr-90 on quarterly composites
5a.	Pasture Grass	4	Sample as necessary to substitute for unavailable milk	Gamma Isotopic and I-131
6.	Seawater	2	Quarterly - Composite of 6 Weekly Grab Samples	Gamma Isotopic and Tritium on each composite
7.	Bottom Sediment	5	Semiannual	Gamma Isotopic on each sample
8.	Fin Fish-Flounder and one other type of edible fin fish	2	Quarterly	Gamma Isotopic on each sample
9.	Mussels	2	Quarterly	Gamma Isotopic on each sample
10.	Oysters	4	Quarterly	Gamma Isotopic on each sample
11.	Clams	2	Quarterly	Gamma Isotopic on each sample
12.	Lobster	2	Quarterly	Gamma Isotopic on each sample

[§] Accident monitoring TLDs to be dedosed at least quarterly

Figure 2.1 Millstone Inner Air Particulate and Vegetation Monitoring Stations

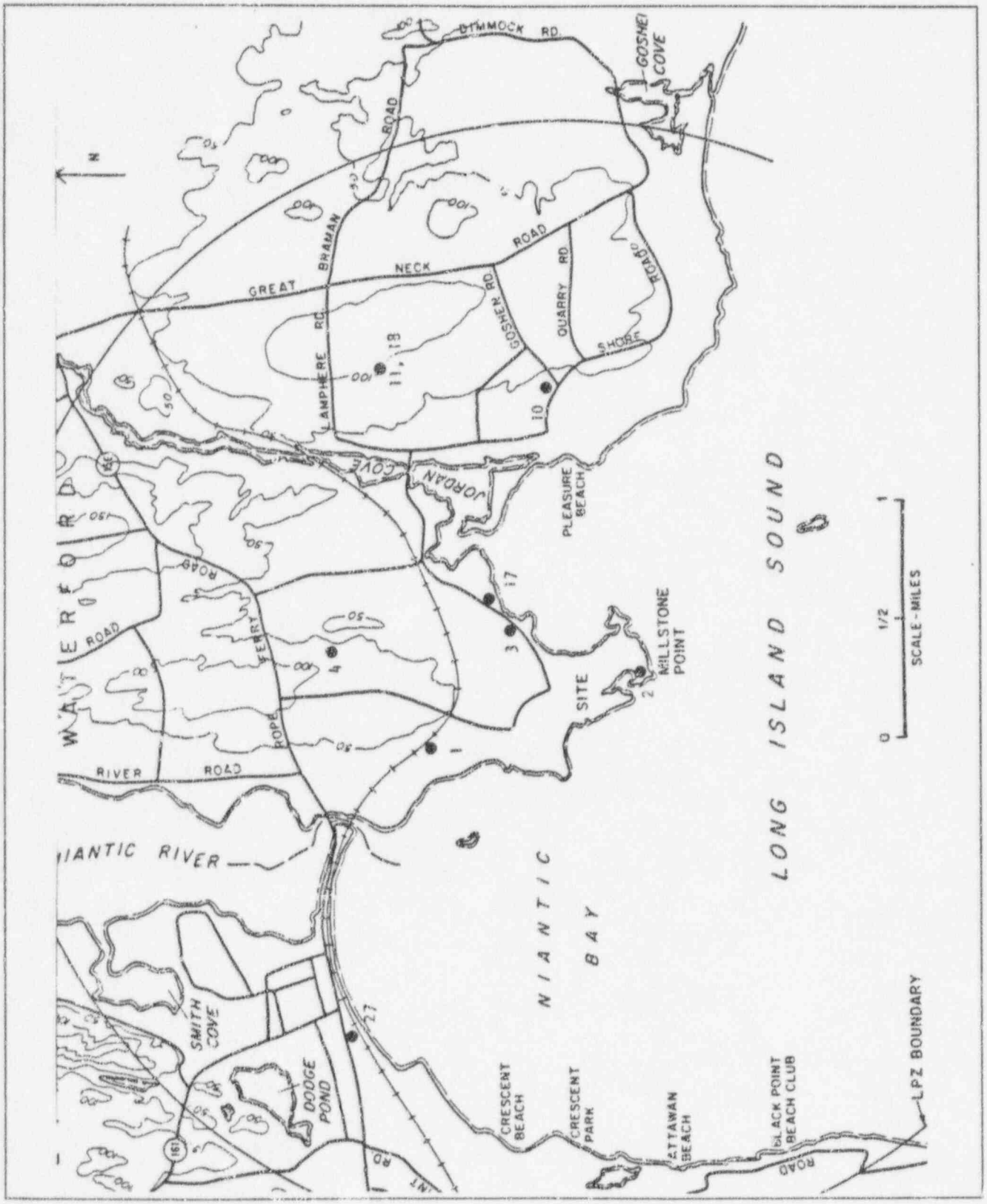


Figure 2.2 Millstone Outer Terrestrial Monitoring Stations

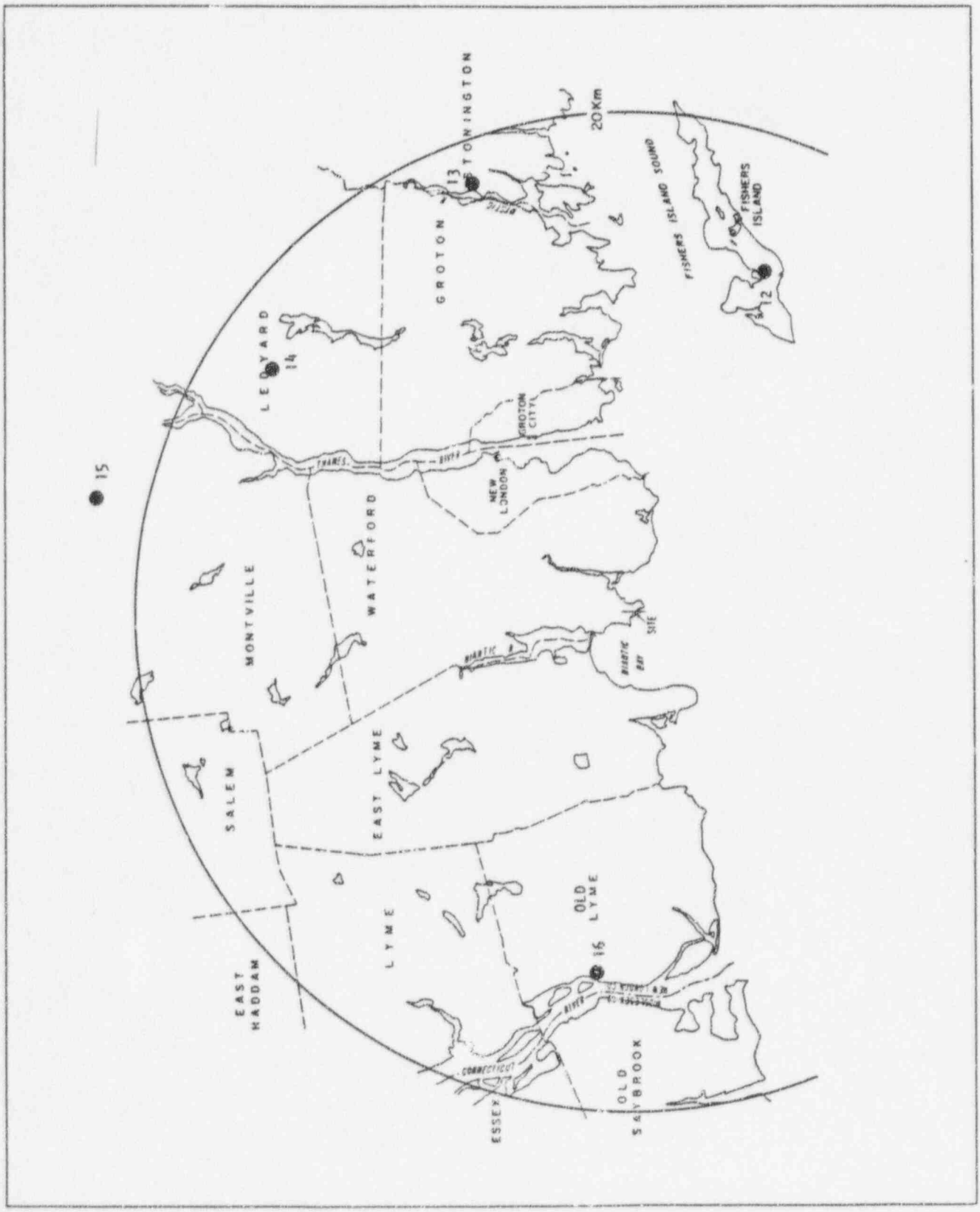
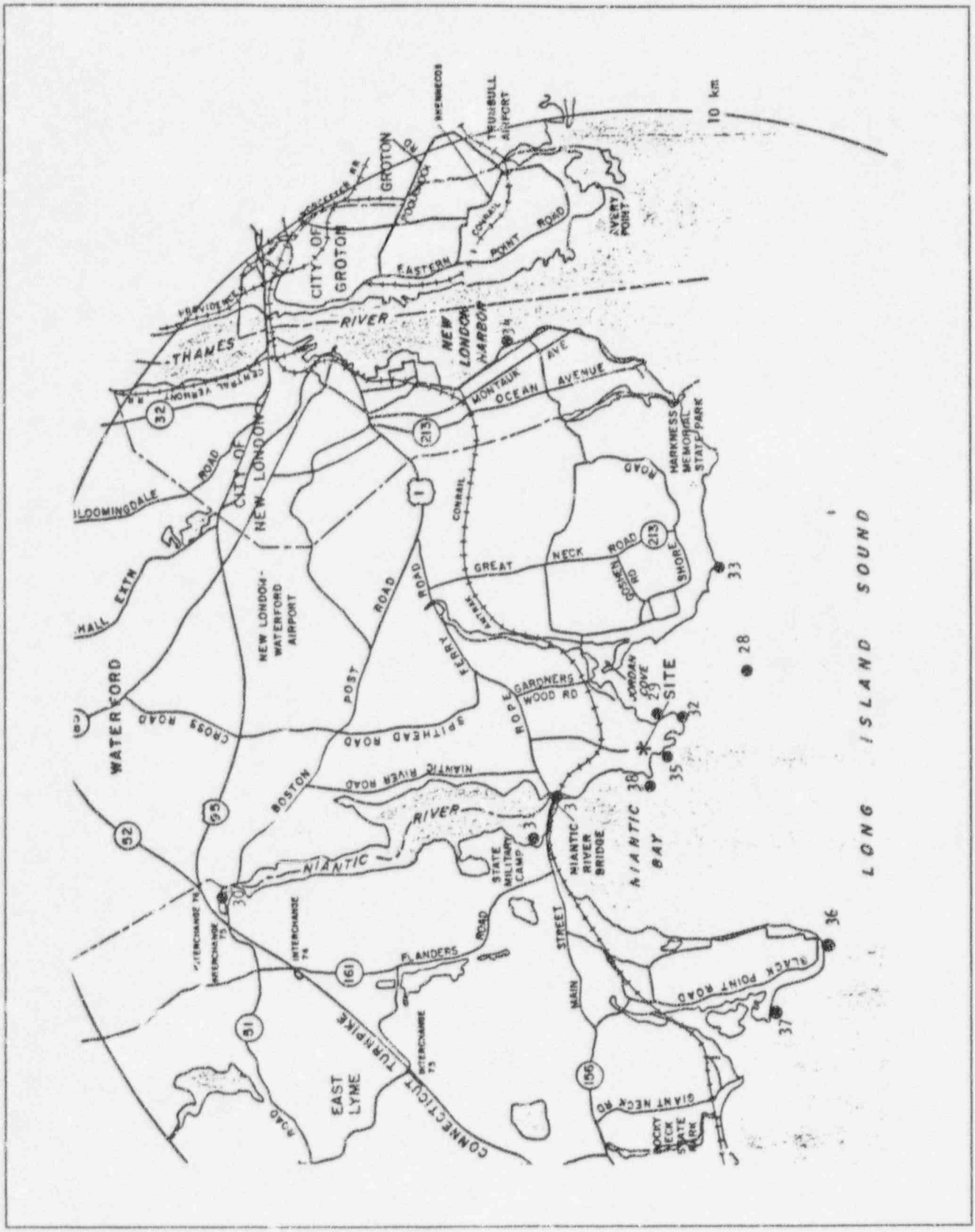


Figure 2.3 Millstone Aquatic Sampling Stations



2.2. Samples Collected During Report Period

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

Sample Type	Number of Technical Specification Required Samples	Number of Technical Specification Required Samples Analyzed	Number of Extra Samples Analyzed
Gamma Exposure (TLD)	204	204	60
Air Particulates	416	416	49
Air Iodine	416	416	0
Goat Milk	48	22	0
Pasture Grass	**	11	0
Fruit & Vegetables	8	8	0
Broad Leaf Vegetation	6	6	14
Seawater	8	8	0
Bottom Sediment	10	10	4
Aquatic Flora	0	0	6
Fish	16	14	3
Mussels	8	8	0
Oysters	16	16	8
Clams	8	8	4
Lobster	8	8	4
Total All Types	**1,172**	**1,155**	**152**

** Sample as necessary to substitute for unavailable milk.

3. RADIOCHEMICAL RESULTS

3.1. Summary Table

In accordance with the Radiological Effluent Monitoring Manual (REMM), Section F.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 the Health and Safety Laboratory, Idaho and NUREG/CR-4007 (Sept. 1984): all valid data, including negative values and zeros 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 explains many aspects that are not evident in the Summary Table because of the basic limitation of data summaries.

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
GAMMA DOSE (UR/HR)	144, 60 (D)	1.5	9.4 (5.7 - 13.9)	LOC # 8 0.3 MILES SE	12.6 (11.5 - 13.9)	9.0 (6.8 - 11.8)	0
AIR PARTICULATE AND IODINE (PCI/M3)	364, 52 BETA	0.01 (E)	0.018 (0.005 - 0.033)	LOC # 15C 14 MILES N	0.019 (0.009 - 0.034)	0.019 (0.009 - 0.034)	0
	GE(LI) 364,52 I-131	0.07	0.000 (-0.025 - 0.022)	LOC # 1 0.6 MILES NNW	0.001 (-0.015 - 0.018)	-0.000 (-0.021 - 0.020)	0
	GE(LI) 28, 4 BE-7	--	0.100 (0.057 - 0.131)	LOC # 15C 14 MILES N	0.113 (0.102 - 0.130)	0.113 (0.102 - 0.130)	0
	CO-60	--	0.000 (0.000 - 0.000)	LOC # 11 1.6 MILES ENE	0.000 (0.000 - 0.000)	0.000 (0.000 - 0.000)	0
	ZR-95	--	0.000 (-0.001 - 0.002)	LOC # 10 1.2 MILES E	0.001 (0.000 - 0.002)	0.000 (0.000 - 0.001)	0
	NB-95	--	0.000 (-0.002 - 0.002)	LOC # 2 0.3 MILES S	0.001 (0.000 - 0.002)	0.000 (-0.002 - 0.002)	0
	RU-103	--	0.000 (-0.002 - 0.001)	LOC # 2 0.3 MILES S	0.001 (0.000 - 0.001)	0.000 (-0.001 - 0.001)	0
	CS-134	0.05 (F)	0.000 (0.000 - 0.000)	LOC # 15C 14 MILES N	0.000 (0.000 - 0.000)	0.000 (0.000 - 0.000)	0
	CS-137	0.06	0.000 (0.000 - 0.000)	LOC # 1 0.6 MILES NNW	0.000 (0.000 - 0.000)	0.000 (0.000 - 0.000)	0
GOAT MILK (PCI/L)	SR 5, 3 SR-89	--	0.6 (-2.9 - 8.0)	LOC # 22 5.2 MILES NNE	2.2 (-2.9 - 8.0)	-0.1 (-1.5 - 2.1)	0
	SR-90	--	9.7 (2.8 - 22.0)	LOC # 22 5.2 MILES NNE	14.3 (6.4 - 22.0)	0.9 (0.8 - 0.9)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	IODINE 13, 9 I-131	1	0.03 (-0.03 - 0.19)	LOC # 22 5.2 MILES NNE	0.04 (-0.01 - 0.19)	0.01 (-0.07 - 0.09)	0
	GE(LI) 13, 9 CS-134	15	0.3 (-3.4 - 6.9)	LOC # 21 2 MILES N	1.7 (-0.4 - 6.9)	0.8 (-1.0 - 4.2)	0
	CS-137	18	13.5 (4.1 - 35.4)	LOC # 22 5.2 MILES NNE	17.0 (4.6 - 35.4)	3.4 (0.2 - 9.9)	0
	BA-140	70	-0 (-6 - 4)	LOC # 21 2 MILES N	1 (-1 - 4)	-2 (-6 - 1)	0
	LA-140	25	-0.1 (-6.3 - 4.5)	LOC # 21 2 MILES N	0.6 (-0.7 - 4.5)	-1.9 (-6.4 - 0.6)	0
PASTURE GRASS (PCI/G)	SR 9, 2 SR-89	--	. (. - .)	LOC # 21 2 MILES N	. (. - .)	. (. - .)	0
	SR-90	--	. (. - .)	LOC # 21 2 MILES N	. (. - .)	. (. - .)	0
	GE(LI) 9, 2 I-131	0.06	0.000 (-0.004 - 0.004)	LOC # 23 2 MILES ENE	0.001 (-0.003 - 0.004)	-0.000 (-0.000 - 0.000)	0
	CS-134	0.06	-0.001 (-0.008 - 0.014)	LOC # 23 2 MILES ENE	-0.000 (-0.008 - 0.014)	-0.003 (-0.004 - -0.002)	0
	CS-137	0.08	0.003 (-0.011 - 0.032)	LOC # 21 2 MILES N	0.023 (0.014 - 0.032)	0.003 (0.000 - 0.007)	0
	BA-140	--	-0.007 (-0.028 - 0.005)	LOC # 23 2 MILES ENE	-0.005 (-0.028 - 0.005)	-0.018 (-0.024 - -0.013)	0
	LA-140	--	-0.008 (-0.032 - 0.006)	LOC # 23 2 MILES ENE	-0.006 (-0.032 - 0.006)	-0.021 (-0.027 - -0.015)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
FRUITS AND VEGETABLES (PCI/G)	GE(LI) 4, 4 BE-7	--	0.06 (0.01 - 0.08)	LOC # 25 <10 MILES	0.06 (0.01 - 0.08)	0.00 (-0.01 - 0.02)	0
	K-40	--	1.90 (0.61 - 2.66)	LOC # 25 <10 MILES	1.90 (0.61 - 2.66)	1.56 (0.72 - 2.42)	0
	MN-54	--	-0.000 (-0.005 - 0.002)	LOC # 25 <10 MILES	-0.000 (-0.005 - 0.002)	-0.002 (-0.014 - 0.010)	0
	CO-58	--	-0.004 (-0.014 - 0.010)	LOC # 26C >10 MILES	0.000 (-0.008 - 0.005)	0.000 (-0.008 - 0.005)	0
	CO-60	--	-0.004 (-0.018 - 0.008)	LOC # 26C >10 MILES	0.005 (-0.005 - 0.012)	0.005 (-0.005 - 0.012)	0
	ZR-95	--	-0.002 (-0.011 - 0.004)	LOC # 25 <10 MILES	-0.002 (-0.011 - 0.004)	-0.005 (-0.011 - 0.001)	0
	NB-95	--	0.001 (-0.005 - 0.010)	LOC # 25 <10 MILES	0.001 (-0.005 - 0.010)	0.001 (-0.003 - 0.006)	0
	RU-103	--	-0.002 (-0.006 - 0.005)	LOC # 26C >10 MILES	-0.002 (-0.009 - 0.005)	-0.002 (-0.009 - 0.005)	0
	I-131	0.06 (G)	0.003 (-0.006 - 0.010)	LOC # 25 <10 MILES	0.003 (-0.006 - 0.010)	-0.001 (-0.020 - 0.025)	0
	CS-134	0.06	-0.002 (-0.007 - 0.002)	LOC # 26C >10 MILES	0.001 (-0.012 - 0.010)	0.001 (-0.012 - 0.010)	0
	CS-137	0.08	-0.004 (-0.010 - 0.002)	LOC # 26C >10 MILES	0.004 (-0.007 - 0.019)	0.004 (-0.007 - 0.019)	0
	RA-226	--	0.114 (-0.318 - 0.769)	LOC # 25 <10 MILES	0.114 (-0.318 - 0.769)	-0.013 (-0.310 - 0.418)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	TH-228	--	0.011 (-0.008 - 0.038)	LOC # 26C >10 MILES	0.022 (0.005 - 0.035)	0.022 (0.005 - 0.035)	0
BROADLEAF VEGETATION (PCI/G)	GE(LI) 20, . BE-7	--	0.66 (0.02 - 2.00)	LOC # 17 0.5 MILES NE	0.88 (0.06 - 2.00)	. (. - .)	0
	K-40	--	3.25 (0.99 - 5.59)	LOC # 10 1.2 MILES E	4.01 (2.98 - 5.40)	. (. - .)	0
	MN-54	--	0.002 (-0.007 - 0.016)	LOC # 17 0.5 MILES NE	0.004 (-0.002 - 0.016)	. (. - .)	0
	CO-58	--	-0.001 (-0.014 - 0.018)	LOC # 1 0.6 MILES NNW	0.001 (-0.014 - 0.018)	. (. - .)	0
	CO-60	--	0.005 (-0.008 - 0.017)	LOC # 1 0.6 MILES NNW	0.006 (0.000 - 0.010)	. (. - .)	0
	ZR-95	--	-0.002 (-0.023 - 0.012)	LOC # 10 1.2 MILES E	0.001 (-0.010 - 0.012)	. (. - .)	0
	NB-95	--	-0.000 (-0.020 - 0.015)	LOC # 10 1.2 MILES E	0.001 (-0.008 - 0.005)	. (. - .)	0
	RU-103	--	0.001 (-0.007 - 0.010)	LOC # 10 1.2 MILES E	0.002 (-0.004 - 0.008)	. (. - .)	0
	I-131	0.06	0.004 (-0.014 - 0.020)	LOC # 10 1.2 MILES E	0.007 (-0.006 - 0.020)	. (. - .)	0
	CS-134	0.06	-0.001 (-0.021 - 0.025)	LOC # 1 0.6 MILES NNW	0.004 (-0.010 - 0.025)	. (. - .)	0
	CS-137	0.08	0.012 (-0.007 - 0.046)	LOC # 1 0.6 MILES NNW	0.019 (-0.007 - 0.046)	. (. - .)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	RA-226	--	0.017 (-0.207 - 0.348)	LOC # 17 0.5 MILES NE	0.077 (-0.141 - 0.348)	. (. - .)	0
	TH-228	--	0.018 (-0.052 - 0.068)	LOC # 10 1.2 MILES E	0.032 (0.012 - 0.062)	. (. - .)	0
SEAWATER (PCI/L)	GE(LI) 4, 4 K-40	--	288 (276 - 297)	LOC # 32 0 MILES N/A	288 (276 - 297)	254 (234 - 282)	0
	MN-54	30	-0.4 (-0.7 - -0.1)	LOC # 37C 3.5 MILES WSW	0.0 (-0.4 - 0.5)	0.0 (-0.4 - 0.5)	0
	CO-58	30	-0.2 (-0.9 - 0.2)	LOC # 37C 3.5 MILES WSW	0.4 (-0.5 - 1.7)	0.4 (-0.5 - 1.7)	0
	CO-60	30	0.4 (-0.1 - 1.2)	LOC # 32 0 MILES N/A	0.4 (-0.1 - 1.2)	-0.3 (-1.5 - 0.3)	0
	I-131	--	4 (-52 - 85)	LOC # 32 0 MILES N/A	4 (-52 - 85)	0 (-6 - 6)	0
	CS-134	30	-0.1 (-0.5 - 0.3)	LOC # 37C 3.5 MILES WSW	0.4 (-0.5 - 2.2)	0.4 (-0.5 - 2.2)	0
	CS-137	40	-0.1 (-0.3 - 0.2)	LOC # 32 0 MILES N/A	-0.1 (-0.3 - 0.2)	-0.3 (-0.7 - 0.2)	0
	BA-140	120 (H)	-0 (-4 - 4)	LOC # 37C 3.5 MILES WSW	2 (-2 - 8)	2 (-2 - 8)	0
	LA-140	30 (H)	-0 (-4 - 5)	LOC # 37C 3.5 MILES WSW	3 (-2 - 9)	3 (-2 - 9)	0
	TRITIUM 4, 4 H-3	2000	204 (-149 - 412)	LOC # 32 0 MILES N/A	204 (-149 - 412)	3 (-253 - 130)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
BOTTOM SEDIMENT (PCI/G)	GE(LI) 8, 2	--					
	K-40		13.2 (10.3 - 18.0)	LOC # 34 4 MILES ENE	15.4 (13.9 - 16.9)	14.7 (14.3 - 15.1)	0
	MN-54	--	-0.00 (-0.03 - 0.04)	LOC # 32 0 MILES N/A	0.02 (-0.00 - 0.04)	0.01 (0.00 - 0.02)	0
	CO-58	--	0.01 (-0.02 - 0.06)	LOC # 31 1.8 MILES NW	0.02 (-0.0. 0.06)	-0.01 (-0.02 - -0.00)	0
	CO-60	--	-0.00 (-0.03 - 0.03)	LOC # 31 1.8 MILES NW	0.02 (0.00 - 0.03)	-0.00 (-0.01 - 0.00)	0
	ZR-95	--	0.02 (-0.11 - 0.10)	LOC # 34 4 MILES ENE	0.07 (0.05 - 0.10)	0.03 (0.02 - 0.03)	0
	NB-95	--	0.00 (-0.04 - 0.04)	LOC # 32 0 MILES N/A	0.01 (-0.00 - 0.03)	-0.03 (-0.06 - -0.00)	0
	I-131	--	0.03 (-0.06 - 0.16)	LOC # 33 1.8 MILES ESE	0.09 (0.03 - 0.16)	-0.00 (-0.05 - 0.04)	0
	CS-134	0.15	0.00 (-0.02 - 0.02)	LOC # 32 0 MILES N/A	0.01 (0.00 - 0.01)	-0.00 (-0.01 - 0.01)	0
	CS-137	0.18	0.02 (0.01 - 0.04)	LOC # 31 1.8 MILES NW	0.02 (0.01 - 0.04)	-0.01 (-0.01 - -0.01)	0
	RA-226	--	0.58 (0.21 - 1.09)	LOC # 31 1.8 MILES NW	0.79 (0.50 - 1.09)	0.28 (-0.05 - 0.62)	0
	TH-228	--	0.97 (0.06 - 3.63)	LOC # 31 1.8 MILES NW	3.24 (2.85 - 3.63)	0.12 (0.05 - 0.20)	0
FISH (ALL TYPES) (PCI/G)	GE(LI) 14, .	--					
	BE-7		-0.03 (-0.23 - 0.19)	LOC # 32 0 MILES N/A	-0.02 (-0.13 - 0.04)	. (. - .)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	K-40	--	2.6 (1.2 - 4.1)	LOC # 35 0.3 MILES WNW	2.8 (1.2 - 4.1)	. (. - .)	0
	CR-51	--	-0.03 (-0.16 - 0.18)	LOC # 32 0 MILES N/A	-0.02 (-0.15 - 0.08)	. (. - .)	0
	MN-54	0.13	0.00 (-0.02 - 0.02)	LOC # 32 0 MILES N/A	0.00 (-0.01 - 0.02)	. (. - .)	0
	CO-58	0.13	0.00 (-0.02 - 0.03)	LOC # 32 0 MILES N/A	0.01 (-0.01 - 0.03)	. (. - .)	0
	FE-59	0.26	0.01 (-0.06 - 0.08)	LOC # 35 0.3 MILES WNW	0.02 (-0.06 - 0.08)	. (. - .)	0
	CO-60	0.13	0.00 (-0.02 - 0.02)	LOC # 32 0 MILES N/A	0.00 (-0.02 - 0.02)	. (. - .)	0
	ZN-65	0.26	-0.01 (-0.06 - 0.09)	LOC # 32 0 MILES N/A	0.00 (-0.04 - 0.09)	. (. - .)	0
	ZR-95	--	-0.00 (-0.03 - 0.04)	LOC # 35 0.3 MILES WNW	-0.00 (-0.03 - 0.04)	. (. - .)	0
	NB-95	--	-0.01 (-0.03 - 0.03)	LOC # 35 0.3 MILES WNW	0.00 (-0.03 - 0.03)	. (. - .)	0
	RU-103	--	0.00 (-0.01 - 0.02)	LOC # 35 0.3 MILES WNW	0.00 (-0.01 - 0.01)	. (. - .)	0
	RU-106	--	0.01 (-0.32 - 0.17)	LOC # 32 0 MILES N/A	0.02 (-0.11 - 0.13)	. (. - .)	0
	AG-110M	--	0.00 (-0.03 - 0.05)	LOC # 35 0.3 MILES WNW	0.01 (-0.03 - 0.05)	. (. - .)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	I-131	--	-0.00 (-0.04 - 0.02)	LOC # 32 0 MILES N/A	0.00 (-0.03 - 0.02)	. (. - .)	0
	CS-134	0.13	0.00 (-0.02 - 0.02)	LOC # 35 0.3 MILES WNW	0.00 (-0.02 - 0.02)	. (. - .)	0
	CS-137	0.15	0.01 (-0.02 - 0.04)	LOC # 32 0 MILES N/A	0.01 (-0.00 - 0.02)	. (. - .)	0
	RA-226	--	0.19 (-0.50 - 0.98)	LOC # 32 0 MILES N/A	0.26 (-0.50 - 0.98)	. (. - .)	0
	TH-228	--	0.02 (-0.09 - 0.09)	LOC # 35 0.3 MILES WNW	0.05 (0.00 - 0.09)	. (. - .)	0
MUSSELS (PCI/G)	GE(LI) 8, . BE-7	--	0.07 (-0.15 - 0.18)	LOC # 31 1.5 MILES NW	0.10 (0.02 - 0.18)	. (. - .)	0
	K-40	--	1.6 (1.2 - 2.3)	LOC # 31 1.5 MILES NW	1.7 (1.2 - 2.3)	. (. - .)	0
	CR-51	--	0.02 (-0.18 - 0.19)	LOC # 31 1.5 MILES NW	0.04 (-0.07 - 0.19)	. (. - .)	0
	MN-54	0.13	-0.00 (-0.01 - 0.01)	LOC # 28 0.8 MILES SSE	-0.00 (-0.01 - 0.01)	. (. - .)	0
	CO-58	0.13	0.00 (-0.02 - 0.02)	LOC # 31 1.5 MILES NW	0.01 (-0.02 - 0.02)	. (. - .)	0
	FE-59	0.26	0.01 (-0.04 - 0.06)	LOC # 28 0.8 MILES SSE	0.03 (-0.01 - 0.06)	. (. - .)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	CO-60	0.13	-0.00 (-0.02 - 0.03)	LOC # 28 0.8 MILES SSE	0.01 (-0.00 - 0.03)	. (. - .)	0
	ZN-65	0.26	-0.00 (-0.05 - 0.03)	LOC # 31 1.5 MILES NW	0.02 (-0.01 - 0.03)	. (. - .)	0
	ZR-95	--	-0.02 (-0.05 - 0.02)	LOC # 28 0.8 MILES SSE	-0.01 (-0.03 - 0.02)	. (. - .)	0
	NB-95	--	0.01 (-0.00 - 0.02)	LOC # 28 0.8 MILES SSE	0.02 (0.01 - 0.02)	. (. - .)	0
	RU-103	--	-0.01 (-0.03 - 0.01)	LOC # 28 0.8 MILES SSE	0.00 (-0.00 - 0.01)	. (. - .)	0
	RU-106	--	-0.03 (-0.18 - 0.21)	LOC # 28 0.8 MILES SSE	-0.01 (-0.11 - 0.21)	. (. - .)	0
	AG-110M	--	0.00 (-0.03 - 0.02)	LOC # 28 0.8 MILES SSE	0.01 (0.00 - 0.02)	. (. - .)	0
	I-131	--	-0.02 (-0.16 - 0.07)	LOC # 28 0.8 MILES SSE	0.02 (-0.05 - 0.07)	. (. - .)	0
	CS-134	0.13	-0.01 (-0.03 - 0.01)	LOC # 28 0.8 MILES SSE	-0.00 (-0.01 - 0.01)	. (. - .)	0
	CS-137	0.15	0.00 (-0.02 - 0.02)	LOC # 31 1.5 MILES NW	0.01 (0.00 - 0.02)	. (. - .)	0
	RA-226	--	0.08 (-0.35 - 0.60)	LOC # 31 1.5 MILES NW	0.11 (-0.28 - 0.60)	. (. - .)	0
	TH-228	--	0.03 (-0.07 - 0.08)	LOC # 31 1.5 MILES NW	0.03 (-0.07 - 0.08)	. (. - .)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
OYSTERS (PCI/G)	GE(LI) 12, 6	--					
	BE-7		0.01 (-0.31 - 0.17)	LOC # 37C 3.5 MILES WSW	0.13 (-0.06 - 0.41)	0.13 (-0.06 - 0.41)	0
	K-40	--	1.5 (0.5 - 2.0)	LOC # 31 1.8 MILES NW	1.7 (1.4 - 2.0)	1.6 (1.2 - 2.0)	0
	CR-51	--	0.03 (-0.17 - 0.18)	LOC # 36 3 MILES WSW	0.12 (0.06 - 0.18)	-0.04 (-0.09 - 0.02)	0
	MN-54	0.13	0.00 (-0.02 - 0.02)	LOC # 32 0 MILES N/A	0.00 (-0.01 - 0.02)	-0.01 (-0.03 - 0.01)	0
	CO-58	0.13	0.01 (-0.02 - 0.07)	LOC # 32 0 MILES N/A	0.04 (0.02 - 0.07)	-0.01 (-0.03 - 0.01)	0
	FE-59	0.26	-0.01 (-0.05 - 0.02)	LOC # 32 0 MILES N/A	0.01 (-0.01 - 0.02)	-0.01 (-0.04 - 0.04)	0
	CO-60	0.13	0.01 (-0.02 - 0.05)	LOC # 32 0 MILES N/A	0.03 (0.01 - 0.05)	-0.01 (-0.01 - 0.01)	0
	ZN-65	0.26	0.09 (-0.04 - 0.48)	LOC # 32 0 MILES N/A	0.27 (0.08 - 0.48)	0.01 (-0.01 - 0.05)	0
	ZR-95	--	0.01 (-0.02 - 0.04)	LOC # 36 3 MILES WSW	0.02 (0.00 - 0.04)	0.00 (-0.04 - 0.03)	0
	NB-95	--	0.00 (-0.02 - 0.02)	LOC # 31 1.8 MILES NW	0.00 (-0.00 - 0.01)	-0.00 (-0.02 - 0.01)	0
	RU-103	--	-0.00 (-0.03 - 0.02)	LOC # 36 3 MILES WSW	0.00 (-0.01 - 0.02)	0.00 (-0.01 - 0.00)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	RU-106	--	-0.04 (-0.26 - 0.10)	LOC # 37C 3.5 MILES WSW	0.06 (-0.11 - 0.29)	0.06 (-0.11 - 0.29)	0
	AG-110M	--	0.05 (-0.03 - 0.31)	LOC # 32 0 MILES N/A	0.16 (0.04 - 0.31)	-0.00 (-0.02 - 0.02)	0
	I-131	--	-0.00 (-0.03 - 0.02)	LOC # 36 3 MILES WSW	0.01 (-0.01 - 0.02)	-0.03 (-0.11 - 0.02)	0
	CS-134	0.13	-0.00 (-0.03 - 0.02)	LOC # 32 0 MILES N/A	0.00 (-0.01 - 0.02)	-0.01 (-0.04 - 0.01)	0
	CS-137	0.15	-0.00 (-0.02 - 0.03)	LOC # 36 3 MILES WSW	0.01 (-0.00 - 0.03)	-0.01 (-0.03 - 0.00)	0
	RA-226	--	-0.05 (-0.54 - 0.35)	LOC # 32 0 MILES N/A	0.07 (-0.05 - 0.35)	-0.00 (-0.21 - 0.28)	0
	TH-228	--	-0.00 (-0.08 - 0.07)	LOC # 37C 3.5 MILES WSW	0.01 (-0.05 - 0.07)	0.01 (-0.05 - 0.07)	0
CLAMS (PCI/G)	GE(LI) 8, . BE-7	--	-0.08 (-0.16 - 0.04)	LOC # 38 1 MILES NW	-0.08 (-0.16 - 0.04)	. (. - .)	0
	K-40	--	1.4 (1.1 - 1.9)	LOC # 38 1 MILES NW	1.6 (1.3 - 1.9)	. (. - .)	0
	CR-51	--	0.07 (-0.10 - 0.34)	LOC # 29 0.4 MILES NNE	0.11 (-0.10 - 0.34)	. (. - .)	0
	MN-54	0.13	0.00 (-0.00 - 0.02)	LOC # 38 1 MILES NW	0.00 (-0.00 - 0.01)	. (. - .)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	CO-58	0.13	0.01 (-0.01 - 0.03)	LOC # 29 0.4 MILES NNE	0.02 (0.01 - 0.03)	(. - .)	0
	FE-59	0.26	0.01 (-0.05 - 0.04)	LOC # 38 1 MILES NW	0.02 (-0.05 - 0.04)	(. - .)	0
	CO-60	0.13	0.01 (-0.01 - 0.04)	LOC # 38 1 MILES NW	0.01 (0.00 - 0.04)	(. - .)	0
	ZN-65	0.26	-0.02 (-0.07 - 0.04)	LOC # 29 0.4 MILES NNE	-0.01 (-0.07 - 0.04)	(. - .)	0
	ZR-95	--	-0.01 (-0.07 - 0.03)	LOC # 29 0.4 MILES NNE	0.01 (-0.02 - 0.03)	(. - .)	0
	NB-95	--	-0.01 (-0.04 - 0.03)	LOC # 38 1 MILES NW	0.01 (-0.01 - 0.03)	(. - .)	0
	RU-103	--	0.00 (-0.02 - 0.02)	LOC # 29 0.4 MILES NNE	0.00 (-0.01 - 0.01)	(. - .)	0
	RU-106	--	0.04 (-0.19 - 0.24)	LOC # 29 0.4 MILES NNE	0.13 (0.03 - 0.24)	(. - .)	0
	AG-110M	--	0.00 (-0.03 - 0.04)	LOC # 38 1 MILES NW	0.02 (0.00 - 0.04)	(. - .)	0
	I-131	--	-0.03 (-0.06 - 0.01)	LOC # 29 0.4 MILES NNE	-0.02 (-0.05 - 0.01)	(. - .)	0
	CS-134	0.13	0.00 (-0.02 - 0.02)	LOC # 29 0.4 MILES NNE	0.00 (-0.02 - 0.02)	(. - .)	0
	CS-137	0.15	0.00 (-0.02 - 0.02)	LOC # 29 0.4 MILES NNE	0.01 (0.00 - 0.02)	(. - .)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	RA-226	--	0.22 (-0.30 - 0.63)	LOC # 38 1 MILES NW	0.37 (-0.02 - 0.63)	(. - .)	0
	TH-228	--	0.00 (-0.08 - 0.13)	LOC # 29 0.4 MILES NNE	0.00 (-0.06 - 0.07)	(. - .)	0
LOBSTER (PCI/G)	GE(LI) 8, . BE-7	--	-0.00 (-0.10 - 0.26)	LOC # 32 0 MILES N/A	0.03 (-0.10 - 0.26)	(. - .)	0
	K-40	--	2.0 (1.1 - 2.7)	LOC # 32 0 MILES N/A	2.0 (1.1 - 2.7)	(. - .)	0
	CR-51	--	-0.02 (-0.32 - 0.47)	LOC # 32 0 MILES N/A	-0.02 (-0.29 - 0.47)	(. - .)	0
	MN-54	0.13	-0.00 (-0.02 - 0.01)	LOC # 32 0 MILES N/A	0.00 (-0.00 - 0.01)	(. - .)	0
	CO-58	0.13	-0.00 (-0.03 - 0.02)	LOC # 35 0.3 MILES WNW	0.00 (-0.01 - 0.01)	(. - .)	0
	FE-59	0.26	0.00 (-0.05 - 0.03)	LOC # 35 0.3 MILES WNW	0.01 (0.00 - 0.02)	(. - .)	0
	CO-60	0.13	0.0[illegible] (-0.03 - 0.04)	LOC # 35 0.3 MILES WNW	0.02 (-0.00 - 0.04)	(. - .)	0
	ZN-65	0.26	-0.01 (-0.08 - 0.08)	LOC # 32 0 MILES N/A	0.00 (-0.08 - 0.08)	(. - .)	0
	ZR-95	--	0.01 (-0.03 - 0.06)	LOC # 35 0.3 MILES WNW	0.02 (0.01 - 0.06)	(. - .)	0

TABLE 3-1
ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY
MILLSTONE NUCLEAR POWER STATION, UNITS 1, 2 AND 3
DOCKETS 50-245, 50-336 AND 50-423
JANUARY - DECEMBER 1996

MEDIUM OR PATHWAY SAMPLED	ANALYSIS AND TOTAL NUMBER OF ANALYSES PERFORMED	LOWER LIMIT OF DETECTION (LLD) (A)	ALL INDICATOR LOCATIONS MEAN (RANGE)(B)	LOCATION WITH HIGHEST ANNUAL MEAN LOCATION #, DISTANCE AND DIRECTION	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (RANGE)(B)	CONTROL LOCATIONS MEAN (RANGE)(B)	# OF NRM (C)
	NB-95	--	-0.00 (-0.03 - 0.02)	LOC # 32 0 MILES N/A	0.01 (-0.01 - 0.02)	. (. - .)	0
	RU-103	--	0.00 (-0.04 - 0.02)	LOC # 32 0 MILES N/A	0.01 (-0.00 - 0.02)	. (. - .)	0
	RU-106	--	0.04 (-0.14 - 0.44)	LOC # 32 0 MILES N/A	0.12 (-0.08 - 0.44)	. (. - .)	0
	AG-110M	--	0.01 (-0.00 - 0.05)	LOC # 32 0 MILES N/A	0.02 (0.00 - 0.05)	. (. - .)	0
	I-131	--	-0.03 (-0.11 - 0.01)	LOC # 35 0.3 MILES WNW	-0.02 (-0.05 - 0.01)	. (. - .)	0
	CS-134	0.13	0.01 (-0.01 - 0.03)	LOC # 32 0 MILES N/A	0.01 (-0.00 - 0.01)	. (. - .)	0
	CS-137	0.15	-0.00 (-0.03 - 0.03)	LOC # 35 0.3 MILES WNW	0.00 (-0.02 - 0.03)	. (. - .)	0
	RA-226	--	0.25 (-0.38 - 1.47)	LOC # 35 0.3 MILES WNW	0 [illegible] (-0.38 - ..47)	. (. - .)	0
	TH-228	--	0.04 (0.01 - 0.08)	LOC # 32 0 MILES N/A	0.06 (0.04 - 0.08)	. (. - .)	0

NOTES FOR TABLE 3-1

A. For Ge(Li) measurements the MDL's $\simeq$ LLD ÷ 2.33. 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.

The LLD is the smallest concentration of radioactive material in a sample that will be detected with 95% probability with a 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system (which may include radiochemical separation):

$$LLD = \frac{4.66\ S_b}{E * V * 2.22 * Y * \exp(-\lambda \Delta t)}$$

where

LLD	is the lower limit of detection as defined above (as pCi per unit mass or volume)
S_b	is the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate (as counts per minute)
E	is the counting efficiency (as counts per transformation)
V	is the sample size (in units of mass or volume)
2.22	is the number of transformation per minute per picocurie
Y	is the fractional radiochemical yield (when applicable)
λ	is the radioactive decay constant for the particular radionuclide
Δt	is the elapsed time between sample collection (or end of the sample collection period) and time of counting

It should be recognized that LLD is a defined *a priori* (before the fact) limit representing the capability of a measurement system and not an *a posteriori* (after the fact) limit for a particular measurement.

Analyses shall be performed in such a manner that the stated LLDs will be achieved under routine conditions. Occasionally background fluctuations, unavoidably small sample sizes, the presence of interfering nuclides, or other uncontrollable circumstances may render these *a priori* LLDs unachievable. In such cases, the contributing factors will be identified and described in the *Annual Radiological Environmental Operating Report.*

B. Analytical results are handled as recommended by HASL *("Reporting of Analytical Results from HASL,"* letter by Leo B. Higginbotham) and NUREG/CR-4007 (Sept. 1984). Negative values were used in the determination of mean.

C. Nonroutine reported measurements (NRM's). These are results of samples that exceed the report levels of Table E-2 of the *Radiological Effluent Monitoring Manual.*

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. LLD for leafy vegetables.

H. LLD from the end of the sample period.

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, zeros 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 zeros 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, Quantitative Gamma Spectra
5. Air Particulates, Quarterly Strontium*
6. Soil*
7. Milk - Dairy Farms*
8. Milk - Goat Farms
9. Pasture Grass
10. Well Water*
11. Reservoir Water*
12. Fruits & Vegetables
13. Broad Leaf Vegetation
14. Seawater
15. Bottom Sediment
16. Aquatic Flora
17. Fin Fish
18. Mussels
19. Oysters
20. Clams
21. Scallops*
22. Lobster (and Crabs)

* This type of sampling or analysis was not performed, therefore there is no table.

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

LOCATIONS

PERIOD	1	2	3	4	5	6	7	8	9	10	11
JAN 96 A	8.8 .2	9.9 .0	8.0 .4	8.1 .1	9.7 .2	9.8 .0	6.6 .2	11.5 .2	9.2 .2	8.5 .0	7.8 .2
FEB 96	9.1 .1	10.6 .4	8.6 .2	8.9 .4	10.2 .2	9.8 .3	7.2 .3	12.3 .3	9.9 .1	8.8 .0	7.8 .2
MAR 96	9.3 .2	10.6 .1	8.2 .4	8.8 .2	10.4 .1	9.8 .2	6.8 .1	12.2 .0	10.0 .5	8.9 .0	8.1 .1
APR 96	9.6 .2	10.8 .3	8.8 .2	9.1 .3	10.5 .1	10.2 .1	6.6 .2	12.6 .5	10.1 .1	8.9 .0	8.0 .3
MAY 96	9.5 .2	10.8 .1	8.5 .1	9.1 .0	10.8 .0	10.0 .2	6.6 .1	12.6 .1	10.3 .4	8.9 .1	8.2 .0
JUN 96	9.8 .1	11.1 .1	8.7 .2	9.1 .0	10.8 .2	10.2 .1	6.5 .0	12.7 .2	10.6 .2	8.9 .0	8.1 .5
JUL 96	9.4 .1	11.0 .0	8.2 .1	8.9 .2	11.1 .0	9.9 .1	6.3 .0	12.8 .0	10.4 .5	9.0 .1	8.3 .1
AUG 96	9.7 .1	11.1 .2	8.7 .2	9.2 .2	10.9 .3	10.0 .1	6.8 .2	12.6 .4	10.5 .1	8.8 .3	8.3 .3
SEP 96	9.6 .1	11.0 .1	8.4 .1	9.3 .2	11.0 .1	10.0 .4	5.7 .2	13.9 1 B	10.4 .1	8.9 .1	8.3 .4
OCT 96	9.6 .1	11.1 .2	8.7 .2	9.1 .1	10.8 .1	10.1 .1	6.5 .3	12.6 .6	10.4 .1	8.8 .2	8.3 .3
NOV 96	9.3 .2	10.7 .1	8.4 .1	8.8 .1	10.7 .2	9.8 .0	6.2 .1	12.4 .3	10.1 .3	8.7 .1	8.1 .1
DEC 96	9.2 .1	10.9 .1	8.5 .1	9.2 .1	10.6 .1	10.1 .3	6.7 .1	12.5 .4	10.2 .2	8.8 .0	8.0 .3

PERIOD	12C	13C	14C	15C	16C	27	50X	54X	55X	98X	99X
JAN 96	8.0 .2	8.3 .1	9.3 .1	8.0 .3	6.8 .2	7.6 .1	7.7 .2	7.9 .2	7.1 .0	9.4 .0	9.5 .2
FEB 96	8.0 .1	8.7 .0	11.1 .1	8.9 .3	7.6 .3	8.0 .4	8.1 .1	8.9 .0	7.6 .1	9.5 .1	10.4 .4
MAR 96	8.4 .2	9.0 .0	11.3 .0	8.6 .0	7.2 .2	8.6 .0	8.2 .0	8.9 .0	7.6 .0	9.7 .1	10.2 .2
APR 96	7.7 .0	9.0 .0	11.5 .1	9.3 .2	7.6 .1	8.4 .4	8.4 .0	9.4 .1	8.0 .3	9.9 .0	10.4 .1
MAY 96	8.5 .0	9.2 .0	11.5 .0	8.8 .0	7.5 .3	8.7 .0	8.2 .1	9.2 .1	7.8 .1	10.1 .0	10.4 .5
JUN 96	8.1 .0	9.2 .1	11.7 .1	9.5 .5	7.9 .3	8.3 .1	8.3 .1	8.8 .7	7.9 .3	10.0 .2	10.5 .2
JUL 96	8.5 .1	9.2 .1	11.5 .1	9.0 .0	7.6 .3	8.4 .0	8.2 .1	9.0 .0	7.9 .0	9.9 .2	10.4 .0
AUG 96	8.3 .0	9.1 .1	11.8 .1	9.4 .5	7.9 .2	8.2 .1	8.2 .1	9.4 .1	7.8 .0	9.9 .0	10.8 .1
SEP 96	8.5 .0	9.3 .0	11.6 .0	9.0 .1	7.7 .1	8.6 .1	8.3 .0	9.3 .0	7.9 .0	10.0 .2	10.4 .1
OCT 96	8.1 .0	9.1 .2	11.6 .1	9.3 .2	7.7 .2	8.3 .1	8.2 .1	9.4 .0	8.0 .1	9.8 .2	10.8 .5
NOV 96	8.5 .3	9.2 .1	11.7 .1	8.8 .1	7.4 .2	8.5 .1	8.1 .1	8.8 .0	7.7 .0	9.8 .2	10.1 .2
DEC 96	8.0 .1	9.0 .2	11.3 .0	9.3 .4	7.7 .3	8.3 .2	8.0 .0	9.2 .0	7.6 .3	9.7 .2	10.5 .1

* Values listed are the average of two TLDs.
Errors listed are 1 sigma.
A: Low exposures in January are due to substantial snow cover and its resulting shielding effect.
B: Actual error = 1.11

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

PERIOD ENDING	LOCATIONS 1	(+/-)	2	(+/-)	3	(+/-)	4	(+/-)	10	(+/-)	11	(+/-)	12X	(+/-)	15C	(+/-)	27	(+/-)
JAN09	0.029	0.004	0.030	0.004	0.033	0.004	0.032	0.004	0.031	0.004	0.028	0.004	0.010	0.002	0.028	0.004	0.033	0.004
JAN15	0.032	0.004	0.033	0.004	0.027	0.004	0.030	0.004	0.030	0.004	0.023	0.004	0.029	0.004	0.027	0.004	0.029	0.004
JAN22	0.014	0.003	0.013	0.003	0.010	0.003	0.012	0.003	0.009	0.003	0.010	0.003	0.013	0.003	0.014	0.003	0.012	0.003
JAN30	0.013	0.003	0.017	0.003	0.013	0.003	0.012	0.003	0.011	0.003	0.014	0.003	0.015	0.003	0.016	0.003	0.011	0.003
FEB05	0.028	0.004	0.024	0.004	0.021	0.004	0.020	0.004	0.026	0.004	0.023	0.004	.	.	0.021	0.004	0.026	0.004
FEB12	0.025	0.004	0.028	0.004	0.016	0.003	0.025	0.004	0.020	0.003	0.023	0.003	0.028	0.002A	0.031	0.004	0.031	0.004
FEB20	0.018	0.003	0.019	0.003	0.018	0.003	0.020	0.003	0.019	0.003	0.018	0.003	0.019	0.003	0.017	0.003	0.018	0.003
FEB26	0.009	0.003	0.011	0.003	0.013	0.003	0.012	0.003	0.013	0.003	0.012	0.003	0.014	0.003	0.013	0.003	0.012	0.003
MAR04	0.024	0.004	0.022	0.003	0.022	0.003	0.021	0.003	0.020	0.003	0.020	0.003	.	.	0.019	0.003	0.023	0.003
MAR11	0.017	0.003	0.017	0.003	0.018	0.003	0.018	0.004	0.020	0.004	0.018	0.003	.	.	0.018	0.004	0.019	0.003
MAR18	0.027	0.004	0.026	0.003	0.025	0.003	0.028	0.004	0.027	0.003	0.027	0.003	0.019	0.001A	0.024	0.003	0.024	0.003
MAR25	0.012	0.003	0.014	0.003	0.011	0.003	0.012	0.003	0.010	0.003	0.013	0.003	0.015	0.003	0.010	0.003	0.011	0.003
APR01	0.030	0.004	0.032	0.004	0.024	0.003	0.031	0.004	0.031	0.004	0.031	0.004	0.023	0.003	0.027	0.004	0.027	0.004
APR08	0.016	0.003	0.018	0.003	0.021	0.003	0.020	0.003	0.018	0.003	0.018	0.003	0.013	0.003	0.021	0.003	0.019	0.003
APR15	0.017	0.003	0.017	0.003	0.015	0.003	0.017	0.003	0.014	0.003	0.014	0.003	0.012	0.003	0.015	0.003	0.014	0.003
APR22	0.013	0.003	0.015	0.003	0.009	0.003	0.014	0.003	0.011	0.003	0.015	0.003	0.016	0.003	0.016	0.003	0.012	0.003
APR29	0.014	0.003	0.021	0.003	0.011	0.003	0.013	0.003	0.013	0.002	0.018	0.003	0.000	0.002	0.018	0.003	0.014	0.003
MAY06	0.008	0.003	0.015	0.003	0.010	0.003	0.015	0.003	0.011	0.003	0.014	0.003	0.015	0.003	0.018	0.003	0.010	0.003
MAY14	0.009	0.003	0.011	0.003	0.006	0.003	0.011	0.003	0.008	0.003	0.011	0.003	0.012	0.003	0.009	0.003	0.011	0.003
MAY20	0.009	0.003	0.016	0.004	0.012	0.003	0.017	0.004	0.013	0.003	0.011	0.003	0.016	0.002A	0.013	0.004	0.011	0.003
MAY28	0.019	0.003	0.018	0.003	0.020	0.003	0.019	0.003	0.017	0.003	0.018	0.003	0.011	0.004B	0.018	0.003	0.020	0.003
JUN03	0.012	0.003	0.013	0.003	0.011	0.003	0.012	0.003	0.014	0.003	0.015	0.003	0.013	0.003	0.017	0.004	0.014	0.003
JUN10	0.005	0.003	0.010	0.003	0.008	0.003	0.011	0.003	0.013	0.003	0.009	0.003	0.011	0.003	0.012	0.003	0.008	0.003
JUN17	0.011	0.003	0.014	0.003	0.015	0.003	0.014	0.003	0.015	0.003	0.015	0.003	0.016	0.003	0.013	0.003	0.013	0.003
JUN24	0.013	0.003	0.015	0.003	0.018	0.003	0.013	0.003	0.013	0.003	0.013	0.003	0.011	0.003	0.015	0.003	0.012	0.003

Sample dates may vary by a couple of days.
A: Collection period greater than 8 days.
B: Collection period less than 4 days, minimum collection of 9600 cubic feet was not obtained.

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

LOCATIONS

PERIOD ENDING	1	(+/-)	2	(+/-)	3	(+/-)	4	(+/-)	10	(+/-)	11	(+/-)	12R	(+/-)	15C	(+/-)	27	(+/-)
JUL01	0.013	0.003	0.013	0.003	0.012	0.003	0.013	0.003	0.012	0.003	0.012	0.003	0.009	0.003	0.014	0.003	0.010	0.003
JUL08	0.014	0.003	0.016	0.003	0.014	0.003	0.016	0.003	0.016	0.003	0.015	0.003	0.015	0.003	0.016	0.003	0.014	0.003
JUL15	0.009	0.003	0.009	0.003	0.016	0.003	0.011	0.003	0.010	0.003	0.010	0.003	0.009	0.003	0.016	0.003	0.008	0.003
JUL22	0.020	0.003	0.021	0.003	0.017	0.003	0.019	0.003	0.016	0.003	0.019	0.003	0.023	0.003	0.019	0.003	0.019	0.003
JUL29	0.010	0.003	0.011	0.003	0.010	0.003	0.012	0.003	0.014	0.003	0.011	0.003	0.014	0.003	0.011	0.003	0.011	0.003
AUG05	0.013	0.003	0.016	0.003	0.016	0.003	0.014	0.003	0.017	0.003	0.015	0.003	0.014	0.003	0.015	0.003	0.015	0.003
AUG12	0.028	0.003	0.023	0.003	0.025	0.004	0.028	0.003	0.025	0.003	0.025	0.004	0.015	0.003	0.025	0.004	0.025	0.004
AUG19	0.020	0.003	0.013	0.003	0.019	0.003	0.021	0.003	0.020	0.003	0.019	0.003	0.027	0.004	0.021	0.003	0.020	0.003
AUG26	0.026	0.003	0.025	0.003	0.026	0.004	0.026	0.003	0.029	0.003	0.024	0.003	0.025	0.003	0.027	0.004	0.026	0.003
SEP03	0.028	0.003	0.025	0.003	0.026	0.003	0.028	0.003	0.032	0.003	0.028	0.003	0.029	0.003	0.027	0.003	0.031	0.003
SEP09	0.027	0.004	0.029	0.004	0.031	0.004	0.028	0.004	0.032	0.004	0.030	0.004	0.028	0.003	0.034	0.004	0.029	0.004
SEP16	0.015	0.003	0.013	0.003	0.017	0.003	0.016	0.003	0.015	0.003	0.017	0.003	0.015	0.003	0.014	0.003	0.016	0.003
SEP23	0.030	0.004	0.029	0.004	0.028	0.004	0.029	0.004	0.028	0.004	0.027	0.003	0.029	0.004	0.025	0.004	0.028	0.004
SEP30	0.012	0.003	0.016	0.003	0.017	0.003	0.017	0.003	0.017	0.003	0.018	0.003	0.015	0.003	0.015	0.003	0.017	0.003
OCT07	0.017	0.003	0.016	0.003	0.017	0.003	0.016	0.003	0.017	0.003	0.018	0.003	0.011	0.002A	0.018	0.003	0.017	0.003
OCT15	0.018	0.003	0.016	0.003	0.015	0.003	0.015	0.003	0.015	0.003	0.014	0.003	0.028	0.003	0.016	0.003	0.018	0.003
OCT21	0.022	0.004	0.029	0.004	0.018	0.004	0.019	0.004	0.017	0.003	0.021	0.004	0.014	0.004B	0.024	0.004	0.022	0.004
OCT28	0.019	0.004	0.020	0.003	0.018	0.003	0.016	0.003	0.020	0.004	0.019	0.003	0.025	0.004	0.022	0.004	0.019	0.003
NOV04	0.025	0.004	0.020	0.004	0.023	0.004	0.024	0.004	0.021	0.004	0.025	0.004	0.021	0.004	0.021	0.004	0.024	0.004
NOV12	0.014	0.003	0.016	0.003	0.013	0.003	0.013	0.003	0.011	0.003	0.014	0.003	0.016	0.004	0.018	0.004	0.010	0.003
NOV18	0.014	0.005	0.015	0.005	0.014	0.005	0.011	0.005	0.012	0.004	0.010	0.004	0.013	0.004	0.013	0.004	0.015	0.005
NOV25	0.019	0.004	0.020	0.004	0.022	0.004	0.018	0.004	0.017	0.004	0.015	0.004	0.016	0.003	0.018	0.004	0.016	0.004
DEC02	0.010	0.003	0.015	0.003	0.010	0.003	0.013	0.003	0.011	0.003	0.011	0.003	0.017	0.003	0.015	0.003	0.011	0.003
DEC09	0.024	0.003	0.024	0.003	0.022	0.003	0.024	0.003	0.025	0.003	0.020	0.003	0.022	0.003	0.024	0.003	0.026	0.003
DEC16	0.013	0.004	0.015	0.004	0.014	0.004	0.014	0.004	0.009	0.003	0.014	0.004	0.017	0.004	0.014	0.004	0.014	0.004
DEC23	0.022	0.003	0.020	0.003	0.024	0.004	0.025	0.004	0.024	0.003	0.023	0.003	0.026	0.003	0.023	0.004	0.022	0.003
DEC30	0.023	0.004	0.028	0.004	0.021	0.004	0.026	0.004	0.021	0.004	0.025	0.004	0.036	0.004	0.031	0.004	0.028	0.004

Sample dates may vary by a couple of days.
A: Collection period greater than 8 days.
B: Collection period less than 6 days, minimum collection of 9600 cubic feet was not obtained.

TABLE 3
AIRBORNE IODINE
I-131 (PCI/M3)

LOCATIONS

PERIOD ENDING	1	(+/-)	2	(+/-)	3	(+/-)	4	(+/-)	10	(+/-)	11	(+/-)	15C	(+/-)	27	(+/-)
JAN 09	0.003	0.017	0.003	0.018	0.008	0.016	-.003	0.014	-.007	0.018	-.017	0.016	0.001	0.016	-.002	0.016
JAN 15	-.015	0.023	0.015	0.020	0.015	0.022	-.007	0.024	0.011	0.022	-.015	0.019	-.001	0.020	0.022	0.022
JAN 22	-.001	0.017	-.004	0.018	0.008	0.016	-.011	0.021	0.010	0.017	0.002	0.016	-.001	0.017	-.015	0.018
JAN 30	-.012	0.015	0.000	0.012	-.006	0.014	0.004	0.016	-.004	0.012	0.005	0.012	-.008	0.013	0.001	0.015
FEB 05	-.007	0.018	0.001	0.019	-.001	0.019	0.021	0.021	-.006	0.017	0.002	0.019	0.000	0.021	0.010	0.017
FEB 12	0.000	0.020	0.009	0.017	0.003	0.014	0.000	0.020	-.006	0.018	0.004	0.016	-.005	0.016	-.001	0.018
FEB 20	-.009	0.018	-.008	0.016	-.006	0.015	0.000	0.015	0.005	0.016	-.002	0.014	0.005	0.015	0.015	0.015
FEB 26	-.013	0.021	0.016	0.019	0.007	0.019	0.013	0.019	0.003	0.019	-.004	0.022	0.003	0.022	0.000	0.020
MAR 04	0.003	0.018	0.015	0.026	-.018	0.017	-.006	0.022	0.000	0.024	-.006	0.017	0.004	0.016	0.011	0.017
MAR 11	0.014	0.017	0.001	0.017	0.003	0.015	-.007	0.017	-.001	0.017	-.012	0.014	0.009	0.016	0.003	0.016
MAR 18	0.011	0.021	0.006	0.020	0.004	0.016	-.008	0.021	0.009	0.019	0.009	0.018	-.004	0.018	0.000	0.020
MAR 25	0.002	0.015	-.002	0.022	0.008	0.020	-.020	0.020	0.005	0.018	0.011	0.018	-.021	0.023	0.004	0.018
APR 01	-.001	0.016	0.003	0.017	0.004	0.013	0.008	0.016	0.010	0.014	-.001	0.018	0.012	0.016	0.004	0.015
APR 08	0.018	0.017	-.008	0.019	-.001	0.019	0.006	0.020	0.002	0.016	0.015	0.017	0.003	0.016	-.007	0.018
APR 15	0.005	0.022	-.011	0.020	-.010	0.018	0.002	0.022	0.005	0.022	0.013	0.019	-.010	0.021	-.008	0.017
APR 22	0.005	0.018	0.002	0.015	0.005	0.020	-.025	0.019	-.014	0.016	0.006	0.017	-.001	0.019	-.010	0.016
APR 29	0.008	0.016	0.004	0.014	0.006	0.013	-.005	0.015	-.001	0.011	0.005	0.016	-.001	0.018	-.007	0.016
MAY 06	0.005	0.016	-.015	0.017	0.003	0.017	0.002	0.016	-.005	0.019	0.008	0.016	0.015	0.018	-.010	0.016
MAY 14	-.002	0.017	0.015	0.018	0.002	0.016	0.002	0.016	0.006	0.012	0.002	0.017	0.002	0.020	-.003	0.017
MAY 20	0.006	0.019	0.014	0.021	0.003	0.020	-.007	0.016	-.005	0.020	0.012	0.021	-.020	0.020	-.008	0.022
MAY 28	-.005	0.012	0.000	0.011	-.001	0.018	-.010	0.016	-.005	0.016	-.019	0.016	-.011	0.020	0.002	0.016
JUN 03	-.001	0.020	0.001	0.018	0.012	0.015	0.015	0.018	0.002	0.017	0.016	0.016	-.008	0.019	0.008	0.018
JUN 10	.003	0.015	0.001	0.019	-.011	0.015	-.013	0.013	-.005	0.019	0.011	0.016	0.002	0.016	-.004	0.018
JUN 17	-.005	0.015	-.002	0.015	0.003	0.015	-.011	0.015	0.000	0.013	-.002	0.017	-.004	0.016	0.009	0.015
JUN 24	-.005	0.014	0.002	0.014	-.003	0.018	-.002	0.018	0.009	0.014	0.003	0.018	-.003	0.017	-.013	0.018

Sample dates may vary by a couple of days.

TABLE 3
AIRBORNE IODINE
I-131 (PCI/M3)

LOCATIONS

PERIOD ENDING	1	(+/-)	2	(+/-)	3	(+/-)	4	(+/-)	10	(+/-)	11	(+/-)	15C	(+/-)	27	(+/-)
JUL 01	0.013	0.018	0.002	0.016	0.010	0.015	-.005	0.020	-.017	0.018	-.004	0.019	-.002	0.017	0.016	0.018
JUL 08	0.004	0.020	-.008	0.018	0.004	0.018	-.001	0.018	-.008	0.021	0.009	0.020	-.009	0.021	-.007	0.017
JUL 15	0.006	0.016	-.004	0.015	-.006	0.020	0.004	0.018	0.011	0.016	-.002	0.013	0.010	0.018	-.008	0.016
JUL 22	-.007	0.016	-.003	0.017	0.007	0.017	0.002	0.020	0.008	0.014	0.002	0.017	0.008	0.020	0.008	0.016
JUL 29	0.014	0.016	0.000	0.020	0.015	0.018	0.006	0.017	-.003	0.015	0.005	0.016	0.005	0.021	0.002	0.019
AUG 05	0.002	0.018	-.002	0.012	-.001	0.019	0.000	0.016	-.002	0.017	-.002	0.017	0.014	0.019	0.007	0.018
AUG 12	0.015	0.016	0.000	0.017	-.002	0.018	0.002	0.014	0.002	0.015	0.010	0.016	-.007	0.019	0.007	0.017
AUG 19	-.005	0.015	-.002	0.015	0.000	0.017	-.009	0.018	0.004	0.016	0.010	0.014	0.001	0.019	-.015	0.017
AUG 26	-.002	0.017	-.005	0.014	-.003	0.020	-.001	0.014	-.004	0.015	-.010	0.015	-.003	0.014	0.013	0.015
SEP 03	0.000	0.017	0.007	0.016	-.013	0.017	0.006	0.015	0.009	0.013	0.008	0.018	0.001	0.014	-.001	0.017
SEP 09	-.002	0.020	0.006	0.016	-.017	0.019	-.017	0.019	0.013	0.018	-.009	0.019	0.000	0.021	0.005	0.016
SEP 16	-.006	0.017	-.006	0.014	-.009	0.015	0.010	0.015	-.007	0.016	0.005	0.016	0.000	0.017	0.005	0.017
SEP 23	0.002	0.015	-.001	0.017	-.009	0.017	0.003	0.015	-.006	0.016	-.004	0.017	0.005	0.019	-.001	0.019
SEP 30	-.001	0.017	0.004	0.017	0.000	0.020	-.003	0.017	-.020	0.017	0.004	0.014	-.003	0.016	0.002	0.017
OCT 07	0.010	0.021	0.011	0.018	-.010	0.016	0.008	0.017	0.000	0.021	0.016	0.018	0.010	0.018	0.012	0.017
OCT 15	0.000	0.011	0.005	0.016	-.005	0.017	-.020	0.016	0.022	0.019	-.001	0.017	-.020	0.022	0.002	0.021
OCT 21	-.001	0.020	0.010	0.017	-.006	0.018	-.005	0.017	-.003	0.014	0.002	0.016	0.003	0.018	0.000	0.017
OCT 28	0.007	0.018	-.003	0.019	-.008	0.016	-.015	0.018	0.002	0.018	0.000	0.014	-.011	0.016	-.001	0.016
NOV 04	0.001	0.016	-.004	0.016	-.003	0.012	-.008	0.019	-.016	0.014	-.016	0.013	0.010	0.016	-.005	0.016
NOV 12	0.000	0.018	-.007	0.014	-.001	0.016	0.005	0.015	0.006	0.018	-.006	0.016	-.004	0.018	0.003	0.015
NOV 18	-.002	0.022	0.007	0.018	-.005	0.023	0.011	0.022	-.005	0.022	-.006	0.023	-.010	0.021	-.010	0.021
NOV 25	-.006	0.024	0.002	0.018	0.014	0.024	-.008	0.020	0.012	0.018	0.002	0.017	0.005	0.018	0.001	0.016
DEC 02	0.017	0.019	0.007	0.014	-.009	0.016	0.005	0.017	0.002	0.017	0.001	0.017	0.013	0.017	0.000	0.017
DEC 09	-.004	0.016	-.010	0.017	0.007	0.016	0.018	0.018	0.005	0.017	0.005	0.017	0.017	0.017	0.002	0.017
DEC 16	-.012	0.015	-.001	0.018	0.011	0.018	-.003	0.018	-.015	0.015	-.013	0.017	0.020	0.017	-.013	0.019
DEC 23	-.004	0.016	-.005	0.015	-.012	0.018	0.001	0.013	0.001	0.016	-.009	0.016	-.007	0.017	-.006	0.018
DEC 30	0.010	0.018	-.009	0.020	0.000	0.020	-.003	0.020	-.008	0.020	-.006	0.021	-.005	0.019	0.003	0.020

Sample dates may vary by a couple of days.

TABLE 4A
AIR PARTICULATES
GAMMA SPECTRA - QTR 1
(PCI/M3)

A N A L Y S E S

LOCATION	BE-7		CO-60		ZR-95		NB-95		RU-103	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.106	0.026	0.0003	0.0009	0.0004	0.0018	-0.0010	0.0020	0.0005	0.0015
2	0.106	0.024	0.0004	0.0008	0.0000	0.0025	0.0019	0.0018	0.0000	0.0013
3	0.109	0.023	0.0002	0.0009	-0.0010	0.0019	0.0000	0.0014	0.0005	0.0012
4	0.113	0.024	0.0001	0.0010	0.0017	0.0022	0.0000	0.0017	-0.0020	0.0016
10	0.111	0.022	0.0000	0.0008	0.0009	0.0020	0.0001	0.0018	0.0006	0.0016
11	0.123	0.023	0.0003	0.0009	0.0001	0.0016	0.0000	0.0017	0.0007	0.0014
12X	0.108	0.025	0.0000	0.0003	0.0008	0.0021	0.0000	0.0017	0.0000	0.0014
15C	0.115	0.026	0.0004	0.0009	0.0000	0.0017	-0.0020	0.0021	0.0000	0.0019
27	0.111	0.023	0.0003	0.0004	0.0000	0.0022	0.0007	0.0020	0.0000	0.0013

LOCATION	RU-106		CS-134		CS-137		BA-140		CE-141	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0017	0.0065	0.0001	0.0006	0.0000	0.0005	0.0065	0.0092	-0.0010	0.0015
2	0.0000	0.0052	0.0000	0.0005	0.0000	0.0006	0.0004	0.0078	0.0000	0.0013
3	0.0000	0.0060	0.0002	0.0005	0.0000	0.0006	-0.0120	0.0110	0.0000	0.0014
4	-0.0010	0.0055	0.0003	0.0006	0.0002	0.0006	0.0106	0.0094	0.0000	0.0013
10	-0.0020	0.0062	0.0000	0.0007	0.0000	0.0006	0.0084	0.0084	0.0004	0.0015
11	0.0019	0.0069	0.0000	0.0006	0.0001	0.0006	0.0049	0.0074	0.0000	0.0015
12X	0.0007	0.0046	0.0000	0.0007	0.0000	0.0006	-0.0080	0.0094	0.0013	0.0014
15C	0.0018	0.0060	0.0005	0.0007	0.0000	0.0006	-0.0010	0.0087	0.0000	0.0014
27	-0.0020	0.0060	0.0001	0.0007	0.0001	0.0005	-0.0010	0.0137	0.0000	0.0013

TABLE 4B
AIR PARTICULATES
GAMMA SPECTRA - QTR 2
(PCI/M3)

A N A L Y S E S

LOCATION	BE-7		CO-60		ZR-95		NB-95		RU-103	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.077	0.020	0.0002	0.0007	0.0000	0.0019	0.0004	0.0015	0.0000	0.0015
2	0.131	0.025	0.0000	0.0009	0.0001	0.0017	0.0010	0.0021	0.0000	0.0016
3	0.112	0.024	0.0000	0.0004	0.0002	0.0020	0.0000	0.0020	0.0001	0.0015
4	0.088	0.022	0.0000	0.0009	0.0006	0.0021	0.0007	0.0023	0.0000	0.0013
10	0.096	0.021	0.0004	0.0006	0.0004	0.0026	0.0019	0.0017	0.0000	0.0012
11	0.112	0.026	0.0004	0.0006	0.0000	0.0019	0.0006	0.0015	0.0002	0.0014
15C	0.105	0.025	0.0000	0.0007	0.0011	0.0018	0.0007	0.0014	0.0012	0.0014
27	0.093	0.024	0.0000	0.0007	0.0006	0.0019	-0.0010	0.0017	0.0003	0.0012
12X	0.105	0.020	0.0002	0.0007	0.0016	0.0020	-0.0010	0.0017	0.0000	0.0011

LOCATION	RU-106		CS-134		CS-137		BA-140		CE-141	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0007	0.0066	0.0000	0.0007	0.0004	0.0006	-0.0010	0.0071	0.0002	0.0014
2	0.0000	0.0054	0.0001	0.0006	0.0002	0.0007	-0.0030	0.0079	-0.0010	0.0013
3	0.0000	0.0056	0.0000	0.0004	0.0004	0.0005	0.0020	0.0114	0.0000	0.0015
4	0.0001	0.0054	0.0000	0.0006	0.0000	0.0007	0.0031	0.0093	0.0009	0.0015
10	-0.0040	0.0064	0.0003	0.0006	0.0000	0.0003	0.0047	0.0083	0.0000	0.0015
11	-0.0010	0.0056	0.0000	0.0006	0.0000	0.0007	-0.0090	0.0105	0.0007	0.0014
15C	0.0000	0.0052	0.0000	0.0006	0.0002	0.0006	0.0028	0.0099	0.0005	0.0016
27	0.0007	0.0047	0.0000	0.0007	0.0000	0.0006	-0.0060	0.0093	0.0000	0.0014
12X	0.0011	0.0047	0.0000	0.0005	0.0000	0.0005	0.0017	0.0033	0.0000	0.0011

TABLE 4C
AIR PARTICULATES
GAMMA SPECTRA - QTR 3
(PCI/M3)

A N A L Y S E S

LOCATION	BE-7		CO-60		ZR-95		NB-95		RU-103	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.090	0.022	0.0000	0.0009	0.0007	0.0018	0.0000	0.0020	0.0000	0.0016
2	0.115	0.025	0.0000	0.0008	-0.0010	0.0016	0.0003	0.0022	0.0013	0.0014
3	0.128	0.027	0.0000	0.0007	-0.0010	0.0020	0.0000	0.0027	0.0001	0.0017
4	0.129	0.025	0.0000	0.0009	0.0001	0.0023	0.0000	0.0022	0.0001	0.0015
10	0.096	0.022	0.0000	0.0006	0.0019	0.0018	0.0002	0.0016	0.0003	0.0015
11	0.096	0.022	0.0000	0.0010	0.0013	0.0019	0.0000	0.0020	0.0000	0.0018
15C	0.130	0.025	0.0001	0.0007	0.0000	0.0029	0.0000	0.0021	0.0006	0.0017
27	0.104	0.022	0.0000	0.0008	0.0000	0.0021	-0.0020	0.0022	0.0006	0.0017
12X	0.101	0.022	0.0001	0.0007	-0.0010	0.0021	0.0000	0.0019	0.0000	0.0012

LOCATION	RU-106		CS-134		CS-137		BA-140		CE-141	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.0000	0.0057	0.0000	0.0007	0.0001	0.0006	-0.0100	0.0121	0.0000	0.0015
2	0.0006	0.0058	0.0000	0.0007	0.0004	0.0007	0.0040	0.0104	0.0007	0.0016
3	0.0032	0.0066	0.0000	0.0007	0.0000	0.0006	-0.0090	0.0124	0.0000	0.0019
4	0.0018	0.0055	0.0000	0.0006	0.0000	0.0005	0.0044	0.0165	0.0003	0.0015
10	0.0033	0.0056	0.0001	0.0005	0.0000	0.0005	0.0083	0.0134	0.0000	0.0017
11	0.0000	0.0060	0.0000	0.0006	0.0000	0.0005	-0.0090	0.0143	0.0007	0.0020
15C	0.0025	0.0057	0.0002	0.0006	0.0001	0.0006	0.0028	0.0056	0.0001	0.0016
27	0.0024	0.0054	0.0003	0.0006	0.0000	0.0005	-0.0040	0.0142	0.0000	0.0015
12X	0.0006	0.0049	0.0003	0.0008	0.0000	0.0005	-0.0050	0.0128	0.0009	0.0015

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

A N A L Y S E S

LOCATION	BE-7		CO-60		ZR-95		NB-95		RU-103	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	0.089	0.021	0.0001	0.0007	0.0000	0.0016	-0.0010	0.0018	0.0000	0.0012
2	0.081	0.019	0.0001	0.0008	0.0006	0.0019	0.0004	0.0015	0.0012	0.0012
3	0.071	0.019	0.0000	0.0005	0.0006	0.0016	0.0000	0.0016	0.0003	0.0014
4	0.095	0.021	0.0002	0.0005	0.0006	0.0017	0.0000	0.0016	0.0002	0.0014
10	0.081	0.019	0.0002	0.0005	0.0000	0.0017	0.0000	0.0014	0.0000	0.0013
11	0.057	0.017	0.0003	0.0006	0.0003	0.0013	-0.0010	0.0019	0.0000	0.0014
15C	0.102	0.020	0.0002	0.0007	0.0008	0.0013	0.0019	0.0020	-0.0010	0.0014
27	0.084	0.019	0.0004	0.0005	0.0000	0.0015	0.0000	0.0016	0.0008	0.0013
12X	0.067	0.016	0.0000	0.0006	0.0000	0.0015	0.0012	0.0017	0.0000	0.0011

LOCATION	RU-106		CS-134		CS-137		BA-140		CE-141	
		(+/-)		(+/-)		(+/-)		(+/-)		(+/-)
1	-0.0020	0.0043	0.0000	0.0006	0.0002	0.0004	0.0040	0.0079	0.0000	0.0014
2	-0.0020	0.0045	0.0000	0.0006	0.0001	0.0004	-0.0030	0.0072	-0.0010	0.0014
3	0.0005	0.0044	0.0000	0.0005	0.0000	0.0004	-0.0010	0.0083	0.0000	0.0012
4	0.0010	0.0042	0.0000	0.0007	0.0000	0.0005	0.0048	0.0122	0.0010	0.0015
10	-0.0010	0.0048	0.0000	0.0005	0.0000	0.0005	0.0023	0.0107	0.0001	0.0012
11	0.0000	0.0047	0.0001	0.0006	0.0000	0.0005	0.0071	0.0087	0.0000	0.0013
15C	0.0005	0.0049	0.0000	0.0004	0.0000	0.0006	0.0071	0.0109	0.0000	0.0014
27	-0.0020	0.0039	0.0000	0.0005	0.0000	0.0005	-0.0030	0.0111	0.0000	0.0014
12X	0.0000	0.0041	0.0001	0.0004	0.0000	0.0004	0.0000	0.0144	-0.0010	0.0012

This page left blank intentionally.

TABLE B
GOAT'S MILK
(PCI/L)

LOCATION	COLLECTION DATE	SR-89	(+/-)	SR-90	(+/-)	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	BA-140	(+/-)	LA-140	(+/-)
21	05/20/96	.	.	.	.	0.04	0.15	-0.2	5.2	5.4	2.6	-0	4	-0.5	4.4
21	06/12/96	-1.9	7.2	3.1	1.1	-0.03	0.10	1.9	3.4	7.5	5.2	1	7	0.6	7.6
21	07/10/96	.	.	.	.	0.07	0.17	0.3	2.1	14.9	4.2	-1	4	-0.7	5.0
21	08/07/96	.	.	.	.	-0.01	0.13	-0.4	1.9	7.4	2.8	-1	4	-0.6	4.5
21	09/10/96	-1.9	4.6	2.8	0.9	0.03	0.12	6.9	7.1	4.1	3.2	4	5	4.5	5.4
22	04/09/96	8.0	10.0	22.0	3.0	0.19	0.24	0.4	4.4	4.6	5.2	-1	7	-1.3	8.1
22	05/07/96	.	.	.	.	0.00	0.09	-3.4	6.9	10.0	5.1	2	6	2.3	7.4
22	06/12/96	1.5	6.8	6.4	1.3	0.07	0.14	1.0	2.4	21.0	4.3	3	5	3.8	5.4
22	07/10/96	.	.	.	.	0.01	0.11	-1.5	2.2	35.4	5.0	-6	4	-6.3	4.4
22	08/07/96	.	.	.	.	-0.01	0.09	-0.1	2.1	20.7	4.1	-2	4	-2.7	4.3
22	09/10/96	-2.9	5.0	14.4	1.9	-0.01	0.09	0.2	2.1	15.4	4.4	-0	3	-0.2	4.0
22	10/08/96	.	.	.	.	0.07	0.14	-0.3	2.4	14.2	4.3	0	4	0.4	4.2
22	11/06/96	8.0	10.0	22.0	3.0	-0.00	0.09	-1.3	1.8	14.5	3.7	-1	3	-0.8	3.5
24C	01/10/96	.	.	.	.	-0.02	0.16	4.0	2.8	0.2	2.9	-0	6	-0.4	7.0
24C	02/07/96	.	.	.	.	0.02	0.17	0.7	6.5	0.3	3.3	-4	4	-4.8	5.1
24C	03/12/96	2.1	3.0	0.9	0.6	-0.07	0.10	-1.0	4.6	0.5	2.3	-1	4	-1.7	4.8
24C	04/09/96	.	.	.	.	-0.03	0.09	-0.9	4.0	9.9	3.8	-2	5	-2.6	5.4
24C	05/07/96	.	.	.	.	-0.01	0.09	4.2	7.2	6.0	4.7	-0	5	-0.3	5.5
24C	06/12/96	-1.5	7.0	0.8	1.0	0.04	0.12	1.0	4.5	3.7	2.7	-6	5	-6.4	5.9
24C	07/10/96	.	.	.	.	0.04	0.15	-0.1	2.1	2.6	2.3	-1	3	-0.9	4.0
24C	08/07/96	.	.	.	.	0.06	0.13	-0.2	2.1	0.8	2.6	1	4	0.6	4.1
24C	09/10/96	-1.0	4.0	0.9	1.0	0.09	0.12	-1.0	2.4	6.8	4.6	-1	4	-1.0	4.6

Samples were unavailable: Jan. - Apr. at locations 21 and 23, Jan. - Mar. at location 22.
Neither goat milk nor pasture grass were available in December at locations 21, 22, 23 and 24.
Goat milk samples were unavailable in October and November at locations 21 and 24.

TABLE 9
PASTURE GRASS *
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
21	10/08/96	1.44	0.16	6.83	0.42	-0.11	0.08	0.000	0.008	-0.004	0.009	0.005	0.033
21	11/06/96	1.58	0.31	6.70	0.77	0.08	0.13	0.005	0.015	-0.003	0.017	0.010	0.052
23	05/07/96	0.23	0.14	4.67	0.51	0.04	0.08	0.001	0.009	-0.007	0.011	0.016	0.041
23	06/12/96	0.31	0.14	3.86	0.60	0.06	0.08	0.000	0.010	-0.006	0.012	0.007	0.035
23	07/10/96	0.43	0.15	5.38	0.49	0.04	0.08	-0.002	0.010	0.007	0.010	0.025	0.039
23	08/07/96	0.88	0.35	4.12	0.85	-0.04	0.14	0.008	0.022	0.002	0.012	0.024	0.056
23	09/10/96	0.76	0.36	6.49	1.20	0.11	0.15	0.006	0.017	0.008	0.022	0.044	0.075
23	10/08/96	1.59	0.25	13.05	0.73	-0.04	0.14	-0.012	0.014	-0.001	0.015	-0.008	0.054
23	11/06/96	4.36	0.24	6.15	0.42	0.04	0.08	0.007	0.009	-0.004	0.009	-0.005	0.033
24C	10/08/96	1.61	0.17	6.34	0.45	0.04	0.07	-0.003	0.008	0.004	0.009	0.011	0.033
24C	11/06/96	3.45	0.31	6.43	0.62	-0.04	0.11	0.005	0.012	-0.012	0.013	0.007	0.042

LOCATION	COLLECTION DATE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
21	10/08/96	0.011	0.011	0.034	0.049	0.002	0.016	0.003	0.011	0.003	0.009	0.030	0.078
21	11/06/96	-0.020	0.023	0.047	0.077	0.002	0.030	-0.007	0.016	0.009	0.016	0.019	0.146
23	05/07/96	0.001	0.015	-0.039	0.030	-0.003	0.016	-0.002	0.011	-0.008	0.009	0.018	0.106
23	06/12/96	0.005	0.013	0.013	0.064	0.015	0.018	-0.002	0.012	0.000	0.011	0.043	0.084
23	07/10/96	0.015	0.014	-0.026	0.028	-0.013	0.017	-0.014	0.011	-0.002	0.009	0.014	0.097
23	08/07/96	0.000	0.027	-0.012	0.048	0.023	0.029	-0.004	0.019	-0.001	0.013	-0.019	0.187
23	09/10/96	0.000	0.027	-0.002	0.065	-0.018	0.038	-0.009	0.028	-0.006	0.018	-0.024	0.145
23	10/08/96	0.016	0.019	-0.015	0.038	-0.009	0.027	-0.006	0.019	-0.009	0.015	-0.102	0.139
23	11/06/96	0.000	0.012	-0.024	0.027	0.005	0.016	-0.005	0.011	-0.001	0.009	0.020	0.085
24C	10/08/96	-0.003	0.009	0.023	0.023	0.002	0.015	0.002	0.009	0.002	0.008	-0.011	0.067
24C	11/06/96	-0.001	0.017	-0.025	0.034	0.010	0.021	-0.003	0.014	0.007	0.012	-0.061	0.120

* Samples taken as a substitute for unavailable goat milk.

TABLE 9
PASTURE GRASS *
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	BA-140	(+/-)	LA-140	(+/-)	CE-141	(+/-)
21	10/08/96	0.003	0.010	-0.001	0.019	0.014	0.010	-0.013	0.022	-0.015	0.025	-0.006	0.011
21	11/06/96	-0.004	0.003	-0.005	0.015	0.032	0.020	-0.011	0.026	-0.012	0.030	-0.009	0.016
23	05/07/96	0.000	0.003	-0.001	0.021	-0.003	0.011	-0.014	0.020	-0.016	0.022	0.012	0.011
23	06/12/96	0.002	0.003	-0.004	0.023	-0.005	0.013	0.005	0.012	0.006	0.013	0 000	0.010
23	07/10/96	0.001	0.004	-0.001	0.009	0.001	0.011	-0.004	0.015	-0.005	0.018	0.005	0.010
23	08/07/96	-0.003	0.006	-0.003	0.019	0.007	0.015	-0.028	0.033	-0.032	0.037	0.014	0.017
23	09/10/96	0.000	0.003	0.014	0.019	-0.005	0.023	0.004	0.024	0.004	0.027	0.005	0.022
23	10/08/96	0.004	0.008	-0.008	0.013	-0.011	0.017	-0.003	0.035	-0.004	0.040	0.010	0.017
23	11/06/96	0.000	0.008	0.001	0.010	-0.003	0.010	0.003	0.016	0.003	0.018	-0.003	0.010
24C	10/08/96	-0 000	0.010	-0.004	0.007	0.000	0.008	-0.024	0.017	0.027	0.020	-0.004	0.009
24C	11/06/96	0.000	0.006	-0.002	0.012	0.007	0.014	-0.013	0.020	-0.015	0.023	-0.012	0.013

LOCATION	COLLECTION DATE	CE-144	(+/-)	RA-226	(+/-)	TH-228	(+/-)
21	10/08/96	-0.016	0.032	0.195	0.235	0.020	0.045
21	11/06/96	0.006	0.058	0.110	0.425	0.093	0.091
23	05/07/96	-0.010	0.038	-0.077	0.186	-0.021	0.045
23	06/12/96	0.025	0.041	0.082	0.205	0.007	0.052
23	07/10/96	0.021	0.036	-0.065	0.177	-0.027	0.048
23	08/07/96	-0.069	0.060	-0.090	0.312	0.002	0.070
23	09/10/96	0.008	0.081	-0.383	0.369	0.026	0.091
23	10/08/96	0.004	0.053	0.088	0.410	-0.008	0.073
23	11/06/96	-0.013	0.036	-0.051	0.269	0.006	0.053
24C	10/08/96	-0.008	0.028	0.083	0.193	0.017	0.044
24C	11/06/96	0.018	0.050	0.189	0.336	0.080	0.087

* Samples taken as a substitute for unavailable goat milk.

TABLE 12
FRUITS & VEGETABLES
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	TYPE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
25	06/25/96	LETTUCE	0.08	0.15	2.21	0.63	-0.03	0.17	0.001	0.018	-0.014	0.020	0.051	0.046
25	06/25/96	STRAWBERRIES	0.03	0.16	2.10	0.70	0.07	0.16	-0.005	0.014	0.010	0.019	-0.019	0.065
25	09/18/96	APPLES	0.01	0.09	0.61	0.32	-0.02	0.09	0.030	0.011	-0.004	0.010	-0.011	0.036
25	09/18/96	CABBAGE	0.05	0.07	2.66	0.32	0.04	0.08	0.002	0.008	-0.008	0.009	0.033	0.031
26C	06/23/96	LETTUCE	-0.01	0.11	2.42	0.48	-0.03	0.14	0.010	0.014	0.004	0.013	0.007	0.040
26C	06/25/96	STRAWBERRIES	-0.01	0.16	1.09	0.57	0.02	0.16	-0.002	0.019	-0.008	0.018	0.004	0.040
26C	09/18/96	APPLES	-0.01	0.10	0.72	0.32	0.02	0.12	0.000	0.013	0.000	0.014	0.002	0.036
26C	09/18/96	CABBAGE	0.02	0.11	2.02	0.49	-0.04	0.12	-0.014	0.011	0.005	0.010	0.033	0.039

LOCATION	COLLECTION DATE	TYPE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
25	06/25/96	LETTUCE	-0.018	0.022	-0.024	0.048	0.001	0.033	0.010	0.044	-0.003	0.018	0.080	0.234
25	06/25/96	STRAWBERRIES	0.008	0.025	0.006	0.048	-0.002	0.032	-0.005	0.023	-0.006	0.019	-0.041	0.175
25	09/18/96	APPLES	-0.011	0.011	0.025	0.028	-0.011	0.021	-0.002	0.012	-0.005	0.011	-0.082	0.107
25	09/18/96	CABBAGE	0.003	0.011	0.001	0.021	0.004	0.015	0.000	0.009	0.005	0.008	-0.025	0.082
26C	06/23/96	LETTUCE	0.012	0.017	-0.025	0.034	-0.002	0.026	-0.003	0.017	-0.009	0.013	-0.074	0.142
26C	06/25/96	STRAWBERRIES	0.012	0.024	0.012	0.046	-0.008	0.036	0.003	0.022	0.005	0.022	0.034	0.194
26C	09/18/96	APPLES	0.000	0.014	-0.021	0.030	0.001	0.021	0.006	0.013	0.004	0.014	0.053	0.115
26C	09/18/96	CABBAGE	-0.005	0.018	0.009	0.035	-0.011	0.024	-0.003	0.013	-0.007	0.014	-0.061	0.136

TABLE 12
FRUITS & VEGETABLES
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	TYPE	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	BA-140	(+/-)	LA-140	(+/-)	CE-141	(+/-)
25	06/25/96	LETTUCE	0.001	0.029	-0.007	0.022	-0.005	0.021	-0.003	0.031	-0.003	0.036	0.006	0.027
25	06/25/96	STRAWBERRIES	0.008	0.029	0.002	0.020	-0.010	0.014	0.008	0.024	0.009	0.027	-0.004	0.021
25	09/18/96	APPLES	0.010	0.022	-0.001	0.011	0.002	0.012	0.000	0.013	0.000	0.015	0.001	0.013
25	09/18/96	CABBAGE	-0.006	0.016	-0.002	0.008	-0.002	0.010	-0.002	0.015	-0.002	0.018	0.002	0.010
26C	06/23/96	LETTUCE	0.025	0.026	0.006	0.017	0.006	0.017	0.003	0.020	0.003	0.024	0.000	0.018
26C	06/25/96	STRAWBERRIES	0.008	0.032	0.010	0.023	0.019	0.021	-0.022	0.024	-0.025	0.028	0.004	0.025
26C	09/18/96	APPLES	-0.029	0.025	-0.001	0.013	-0.003	0.012	0.012	0.021	0.014	0.024	0.003	0.017
26C	09/18/96	CABBAGE	-0.015	0.026	-0.012	0.015	-0.007	0.014	-0.015	0.020	-0.017	0.023	0.010	0.018

LOCATION	COLLECTION DATE	TYPE	CE-144	(+/-)	RA-226	(+/-)	TH-228	(+/-)	SR-89	(+/-)	SR-90	(+/-)
25	06/25/96	LETTUCE	0.005	0.099	0.769	0.456	0.015	0.081	-0.050	0.170	0.017	0.032
25	06/25/96	STRAWBERRIES	0.052	0.086	-0.318	0.430	0.000	0.088	-0.010	0.130	0.031	0.036
25	09/18/96	APPLES	-0.002	0.048	-0.044	0.304	0.038	0.053	0.043	0.116	0.031	0.028
25	09/18/96	CABBAGE	0.006	0.036	0.051	0.229	-0.008	0.039	-0.031	0.120	0.026	0.032
26C	06/23/96	LETTUCE	-0.026	0.070	-0.310	0.491	0.031	0.067	0.030	0.160	-0.017	0.028
26C	06/25/96	STRAWBERRIES	-0.045	0.094	0.418	0.458	0.035	0.084	0.010	0.140	0.004	0.040
26C	09/18/96	APPLES	-0.003	0.059	-0.049	0.421	0.016	0.068	0.053	0.120	-0.017	0.038
26C	09/18/96	CABBAGE	-0.012	0.064	-0.113	0.399	0.005	0.064	-0.017	0.094	0.012	0.024

TABLE 13
BROADLEAF VEGETATION
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
1	04/24/96	0.02	0.18	3.34	0.69	0.03	0.16	0.011	0.018	0.018	0.022	0.017	0.062
1	05/17/96	0.10	0.11	4.56	0.32	-0.01	0.07	0.005	0.008	0.000	0.008	-0.010	0.028
1	06/25/96	0.68	0.08	2.90	0.21	0.01	0.04	0.000	0.005	0.000	0.005	-0.001	0.017
1	07/23/96	1.29	0.21	2.17	0.35	-0.01	0.10	-0.007	0.010	-0.005	0.011	0.030	0.035
1	08/16/96	0.89	0.14	2.48	0.27	0.05	0.08	-0.006	0.008	0.003	0.008	0.005	0.025
1	09/19/96	0.68	0.15	3.17	0.34	-0.06	0.10	0.002	0.010	0.008	0.010	0.002	0.030
1	10/11/96	0.76	0.21	1.53	0.36	-0.11	0.12	-0.001	0.012	-0.014	0.013	0.010	0.035
10	04/24/96	0.14	0.15	3.56	0.63	0.09	0.15	0.010	0.017	-0.013	0.015	-0.020	0.064
10	05/17/96	0.21	0.11	4.22	0.50	0.01	0.11	0.002	0.012	-0.010	0.011	-0.016	0.046
10	06/25/96	0.53	0.08	4.02	0.21	-0.03	0.04	-0.001	0.004	-0.002	0.004	0.001	0.014
10	07/23/96	0.41	0.14	4.30	0.38	0.07	0.09	-0.004	0.010	-0.004	0.010	-0.003	0.028
10	08/16/96	0.35	0.12	3.58	0.30	-0.04	0.09	-0.001	0.009	-0.006	0.010	0.011	0.028
10	09/19/96	1.50	0.22	5.40	0.47	0.11	0.12	0.004	0.013	-0.001	0.013	-0.006	0.034
10	10/11/96	0.28	0.15	2.98	0.32	-0.04	0.10	0.000	0.009	0.002	0.009	0.000	0.029
17	05/17/96	0.06	0.12	5.59	0.56	-0.06	0.13	0.016	0.015	0.003	0.014	-0.023	0.041
17	06/25/96	0.56	0.09	2.86	0.20	-0.01	0.04	0.000	0.005	-0.002	0.005	0.004	0.014
17	07/23/96	0.62	0.15	2.38	0.31	0.02	0.09	0.001	0.010	0.000	0.010	0.007	0.028
17	08/16/96	1.27	0.17	2.29	0.29	0.11	0.10	0.006	0.009	0.006	0.010	0.007	0.030
17	09/19/96	2.00	0.24	2.66	0.43	0.00	0.12	-0.002	0.014	-0.010	0.013	0.006	0.040
17	10/11/96	0.78	0.18	0.99	0.30	-0.11	0.10	0.002	0.010	-0.002	0.010	-0.010	0.029

TABLE 13
BROADLEAF VEGETATION
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
1	04/24/96	0.010	0.023	0.021	0.050	-0.023	0.05.	-0.020	0.021	-0.003	0.020	-0.127	0.179
1	05/17/96	0.005	0.010	-0.010	0.022	-0.011	0.015	0.006	0.010	0.002	0.009	-0.010	0.086
1	06/25/96	0.000	0.007	-0.013	0.012	0.006	0.009	0.002	0.005	-0.001	0.005	0.022	0.045
1	07/23/96	0.008	0.013	0.013	0.027	-0.005	0.020	0.015	0.014	-0.001	0.011	-0.047	0.109
1	08/16/96	0.008	0.010	-0.007	0.019	0.003	0.015	-0.001	0.010	-0.003	0.008	-0.015	0.078
1	09/19/96	0.010	0.012	-0.019	0.025	0.009	0.019	0.003	0.012	0.001	0.011	0.096	0.099
1	10/11/96	0.003	0.013	0.029	0.064	0.006	0.020	-0.007	0.016	0.008	0.013	-0.085	0.128
10	04/24/96	0.017	0.018	0.024	0.037	0.001	0.029	0.005	0.021	0.000	0.014	-0.078	0.181
10	05/17/96	0.005	0.014	-0.018	0.035	-0.004	0.023	0.001	0.014	0.008	0.013	-0.075	0.131
10	06/25/96	0.001	0.005	-0.007	0.012	-0.002	0.008	0.002	0.005	0.000	0.004	-0.008	0.047
10	07/23/96	0.002	0.012	-0.027	0.024	0.012	0.017	0.000	0.011	0.003	0.010	-0.108	0.096
10	08/16/96	0.003	0.010	-0.009	0.022	0.004	0.018	0.004	0.011	0.000	0.010	0.013	0.094
10	09/19/96	0.004	0.014	-0.011	0.032	0.007	0.023	0.003	0.014	0.006	0.013	-0.003	0.132
10	10/11/96	0.004	0.009	0.000	0.022	-0.010	0.017	-0.008	0.012	-0.004	0.010	0.041	0.090
17	05/17/96	0.005	0.017	-0.019	0.035	-0.013	0.026	-0.005	0.016	0.010	0.014	0.015	0.136
17	06/25/96	0.006	0.006	-0.004	0.012	0.005	0.009	-0.001	0.005	-0.001	0.005	-0.022	0.044
17	07/23/96	0.005	0.011	-0.005	0.025	-0.008	0.018	0.000	0.011	-0.007	0.010	0.009	0.102
17	08/16/96	0.010	0.011	0.009	0.023	-0.002	0.018	-0.010	0.011	-0.003	0.010	-0.026	0.096
17	09/19/96	0.003	0.016	-0.020	0.036	-0.011	0.025	0.008	0.015	-0.002	0.013	-0.166	0.144
17	10/11/96	-0.008	0.012	-0.007	0.026	-0.010	(020	0.000	0.011	-0.001	0.012	0.011	0.118

TABLE 13
BROADLEAF VEGETATION
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	BA-140	(+/-)	LA-140	(+/-)	CE-141	(+/-)
1	04/24/96	0.005	0.031	0.025	0.033	0.025	0.028	-0.014	0.031	-0.016	0.035	0.027	0.025
1	05/17/96	-0.006	0.014	0.002	0.010	0.002	0.010	-0.002	[illegible]	-0.003	0.015	-0.006	0.011
1	06/25/96	0.002	0.011	-0.004	0.005	0.042	0.009	-0.002	[illegible]	-0.002	0.009	0.007	0.006
1	07/23/96	0.002	0.021	-0.010	0.011	-0.007	0.013	-0.022	0.018	-0.025	0.020	-0.012	0.014
1	08/16/96	-0.004	0.022	0.000	0.010	0.015	0.010	0.009	0.018	0.010	0.021	0.001	0.011
1	09/19/96	0.000	0.019	0.005	0.012	0.046	0.020	-0.013	0.015	-0.015	0.018	-0.015	0.013
1	10/11/96	0.012	0.031	0.007	0.012	0.011	0.014	-0.006	0.021	-0.007	0.024	0.012	0.017
10	04/24/96	0.011	0.028	-0.021	0.022	-0.003	0.015	0.003	0.028	0.004	0.032	0.000	0.019
10	05/17/96	0.005	0.024	0.010	0.030	0.027	0.022	-0.007	0.017	-0.008	0.020	0.016	0.016
10	06/25/96	0.004	0.009	-0.001	0.005	0.012	0.008	-0.003	0.007	-0.003	0.008	0.003	0.006
10	07/23/96	0.020	0.017	0.001	0.010	0.013	0.011	0.000	0.016	0.000	0.018	0.006	0.012
10	08/16/96	0.006	0.027	0.003	0.021	0.003	0.010	-0.015	0.018	-0.017	0.020	-0.002	0.014
10	09/19/96	0.011	0.022	-0.006	0.015	0.000	0.016	-0.025	0.017	-0.028	0.019	-0.015	0.017
10	10/11/96	-0.006	0.027	-0.002	0.010	-0.002	0.011	-0.012	0.018	-0.014	0.020	0.013	0.013
17	05/17/96	-0.014	0.027	-0.019	0.033	-0.002	0.014	-0.009	0.020	-0.010	0.023	-0.023	0.019
17	06/25/96	0.007	0.010	-0.001	0.005	0.006	0.006	-0.004	0.008	-0.004	0.009	0.003	0.006
17	07/23/96	0.002	0.019	0.005	0.013	0.007	0.012	-0.009	0.014	-0.011	0.016	-0.008	0.014
17	08/16/96	0.013	0.024	-0.003	0.010	0.014	0.011	-0.013	0.019	-0.015	0.022	-0.009	0.012
17	09/19/96	-0.003	0.022	-0.007	0.014	0.026	0.018	-0.005	0.017	-0.006	0.020	0.004	0.016
17	10/11/96	0.008	0.025	0.000	0.011	0.007	0.011	0.009	0.019	0.010	0.021	-0.002	0.015

TABLE 13
BROADLEAF VEGETATION
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	CE-144	(+/-)	RA-226	(+/-)	TH-228	(+/-)	SR-89	(+/-)	SR-90	(+/-)
1	04/24/96	0.012	0.089	-0.207	0.478	-0.052	0.090	-0.010	0.130	0.337	0.050
1	05/17/96	-0.003	0.041	-0.155	0.240	0.002	0.045	0.015	0.030	0.013	0.038
1	06/25/96	-0.002	0.021	0.120	0.148	0.000	0.022	0.140	0.170	0.265	0.054
1	07/23/96	-0.019	0.051	0.153	0.360	0.011	0.051	0.070	0.130	0.058	0.030
1	08/16/96	0.000	0.036	0.094	0.248	0.006	0.043	-0.120	0.200	0.281	0.070
1	09/19/96	0.001	0.051	-0.162	0.359	0.019	0.064	-0.048	0.112	0.061	0.036
1	10/11/96	0.038	0.056	0.033	0.366	0.026	0.067	-0.011	0.132	0.163	0.042
10	04/24/96	-0.042	0.074	0.077	0.360	0.015	0.073	0.051	0.086	0.070	0.026
10	05/17/96	0.012	0.059	0.032	0.339	0.018	0.067	0.050	0.130	0.110	0.038
10	06/25/96	-0.013	0.022	0.016	0.140	0.012	0.024	0.070	0.170	0.116	0.046
10	07/23/96	0.012	0.045	-0.082	0.321	0.033	0.061	0.030	0.130	0.134	0.038
10	08/16/96	-0.004	0.044	-0.081	0.310	0.059	0.051	-0.130	0.280	0.219	0.082
10	09/19/96	0.008	0.064	0.079	0.492	0.062	0.051	-0.009	0.124	0.134	0.036
10	10/11/96	-0.003	0.045	-0.048	0.304	0.027	0.049	-0.016	0.108	0.061	0.030
17	05/17/96	-0.014	0.070	-0.141	0.386	-0.020	0.056	0.040	0.130	0.240	0.046
17	06/25/96	0.000	0.021	-0.058	0.148	0.068	0.024	0.070	0.170	0.116	0.046
17	07/23/96	0.018	0.050	0.039	0.325	0.013	0.055	0.090	0.160	0.109	0.044
17	08/16/96	0.010	0.043	0.280	0.295	0.034	0.052	-0.089	0.186	0.185	0.060
17	09/19/96	0.011	0.063	0.348	0.441	-0.004	0.064	0.131	0.134	0.079	0.042
17	10/11/96	0.013	0.049	-0.006	0.318	0.022	0.044	-0.038	0.116	0.190	0.042

TABLE 14
SEA WATER
(PCI/L)

LOCATION	COLLECTION DATE	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)	CO-60	(+/-)
32	02/05/96	286	27	14	27	-0.4	1.0	-0.9	1.3	-2.8	6.5	0.1	1.1
32	05/06/96	276	20	-6	21	-0.7	0.7	0.2	1.0	1.1	4.2	1.2	0.9
32	08/05/96	294	21	-6	18	-0.1	0.6	0.2	0.9	-1.8	3.4	-0.1	0.7
32	11/04/96	297	20	-7	17	-0.3	0.6	-0.3	0.9	-0.5	3.2	0.5	0.7
37C	02/02/96	242	26	-8	17	0.5	1.0	0.8	1.2	-0.5	4.6	0.1	1.3
37C	05/02/96	234	18	-7	12	-0.4	0.8	-0.5	0.8	0.6	2.6	0.3	0.7
37C	08/02/96	282	66	-9	34	0.4	1.9	1.7	2.5	4.6	8.3	-1.5	2.2
37C	10/22/96	257	22	2	13	-0.4	0.7	-0.4	0.9	1.8	2.8	0.0	0.7

LOCATION	COLLECTION DATE	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)	I-131	(+/-)
32	02/05/96	-2.1	2.7	-1.3	2.6	2.2	2.5	-2.2	2.2	-0	10	85	75
32	05/06/96	0.3	1.7	0.4	1.9	0.1	1.7	-1.4	1.7	4	7	-5	60
32	08/05/96	0.2	1.5	1.0	1.6	1.3	1.6	-2.0	1.4	-0	6	-10	49
32	11/04/96	-0.6	1.6	0.4	1.7	0.2	1.5	-0.9	1.4	3	7	-52	43
37C	02/02/96	0.3	2.3	-1.0	2.1	-0.5	1.7	-0.6	1.5	-9	10	-6	15
37C	05/02/96	1.1	3.0	0.1	1.4	-0.2	1.2	-0.2	1.4	-3	7	-3	7
37C	08/02/96	0.3	5.3	0.8	5.0	-3.0	3.6	0.3	3.4	-8	18	6	23
37C	10/22/96	4.3	3.5	1.0	1.5	-0.9	1.2	-0.2	1.2	-2	7	3	11

TABLE 14
SEA WATER
(PCI/L)

LOCATION	COLLECTION DATE	CS-134	(+/-)	CS-137	(+/-)	BA-140	(+/-)	LA-140	(+/-)	RA-226	(+/-)	TH-228	(+/-)
32	02/05/96	-0.2	1.9	-0.3	1.0	-4	17	-4	19	-19.4	27.8	2.6	4.6
32	05/06/96	-0.5	1.4	0.2	0.8	1	12	1	14	14.3	21.6	3.8	2.6
32	08/05/96	-0.0	0.6	-0.3	0.6	-2	10	-3	11	0.4	23.0	-1.3	2.5
32	11/04/96	0.3	0.6	0.0	0.7	4	8	5	10	6.9	23.3	5.3	3.1
37C	02/02/96	-0.5	1.0	-0.6	1.0	3	6	3	7	-15.5	24.7	-4.7	4.3
37C	05/02/96	2.2	1.6	0.1	0.8	1	3	1	3	-16.9	26.4	3.1	2.7
37C	08/02/96	0.2	2.0	0.2	2.3	8	12	9	14	-28.0	71.8	-3.2	9.1
37C	10/22/96	-0.2	0.7	-0.7	0.8	-2	4	-2	5	-18.3	27.3	1.6	2.7

LOCATION	COLLECTION DATE	H-3	(+/-)
32	02/05/96	412	522
32	05/06/96	317	504
32	08/05/96	-149	447
32	11/04/96	235	491
37C	02/02/96	90	218
37C	05/02/96	46	496
37C	08/02/96	130	500
37C	10/22/96	-253	468

TABLE 15
BOTTOM SEDIMENT
(PCI/G DRY WT.)

LOCATION	COLLECTION DATE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
30X	04/23/96	-0.06	0.23	17.0	1.3	0.03	0.25	-0.00	0.03	0.00	0.03	0.01	0.09
30X	10/04/96	0.25	0.41	14.7	2.2	0.10	0.51	0.00	0.05	-0.02	0.05	-0.07	0.13
31	04/23/96	0.14	0.38	11.1	1.3	-0.07	0.42	0.00	0.04	-0.02	0.03	-0.05	0.12
31	10/04/96	-0.29	0.48	11.0	2.1	0.34	0.72	-0.03	0.06	0.06	0.07	-0.12	0.15
32	04/23/96	0.06	0.18	10.3	1.1	0.02	0.18	-0.00	0.02	0.01	0.02	0.02	0.09
32	10/04/96	-0.26	0.48	11.7	2.7	0.24	0.58	0.04	0.06	0.01	0.07	-0.04	0.08
33	04/23/96	-0.25	0.21	12.4	1.3	-0.17	0.22	-0.01	0.02	-0.01	0.02	-0.05	0.09
33	10/04/96	0.20	0.56	18.0	3.5	0.21	0.47	-0.03	0.05	0.00	0.08	0.06	0.20
34	04/23/96	0.21	0.17	13.9	1.3	-0.06	0.21	-0.00	0.02	0.01	0.02	-0.07	0.08
34	10/04/96	-0.01	0.27	16.9	3.2	0.31	0.45	0.02	0.04	0.02	0.07	0.03	0.15
36X	04/23/96	0.02	0.25	14.7	1.6	0.06	0.25	0.01	0.03	0.00	0.03	-0.06	0.08
36X	10/04/96	0.14	0.29	13.1	2.4	-0.09	0.44	0.03	0.04	-0.01	0.04	0.11	0.12
37C	04/23/96	0.13	0.20	15.1	1.5	0.15	0.23	0.00	0.02	-0.00	0.02	-0.00	0.09
37C	10/04/96	-0.07	0.25	14.3	2.3	0.11	0.39	0.02	0.04	-0.02	0.05	0.11	0.16

TABLE 15
BOTTOM SEDIMENT
(PCI/G DRY WT.)

LOCATION	COLLECTION DATE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
30X	04/23/96	0.00	0.05	0.08	0.14	0.02	0.05	-0.01	0.03	-0.00	0.02	-0.21	0.26
30X	10/04/96	-0.01	0.05	-0.09	0.08	-0.03	0.07	-0.01	0.05	0.02	0.05	-0.09	0.48
31	04/23/96	0.00	0.05	0.04	0.19	0.10	0.09	0.04	0.06	-0.03	0.05	-0.08	0.43
31	10/04/96	0.03	0.06	-0.02	0.32	-0.03	0.12	-0.04	0.09	-0.02	0.06	-0.05	0.64
32	04/23/96	0.01	0.02	-0.04	0.07	-0.03	0.03	-0.00	0.02	0.02	0.02	0.08	0.19
32	10/04/96	0.00	0.07	-0.02	0.11	-0.11	0.12	0.03	0.06	-0.00	0.05	0.27	0.36
33	04/23/96	-0.02	0.03	-0.06	0.08	0.02	0.04	0.02	0.03	0.01	0.02	-0.09	0.20
33	10/04/96	-0.03	0.06	-0.02	0.18	0.02	0.09	-0.01	0.09	-0.01	0.05	0.09	0.57
34	04/23/96	0.01	0.02	0.00	0.14	0.05	0.05	-0.04	0.03	0.02	0.02	-0.01	0.20
34	10/04/96	-0.03	0.07	-0.06	0.16	0.10	0.10	0.00	0.06	0.03	0.05	0.08	0.34
36X	04/23/96	-0.00	0.04	-0.06	0.07	-0.04	0.05	-0.00	0.03	-0.00	0.03	0.13	0.26
36X	10/04/96	-0.05	0.05	-0.05	0.13	-0.02	0.08	-0.06	0.07	0.03	0.04	-0.23	0.40
37C	04/23/96	0.00	0.03	0.04	0.07	0.02	0.05	-0.00	0.03	0.00	0.02	0.23	0.21
37C	10/04/96	-0.01	0.06	-0.03	0.11	0.03	0.08	-0.06	0.05	-0.00	0.05	-0.23	0.25

TABLE 15
BOTTOM SEDIMENT
(PCI/G DRY WT.)

LOCATION	COLLECTION DATE	AG-110M	(+/-)	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	RA-226	(+/-)	TH-228	(+/-)
30X	04/23/96	0.01	0.03	0.00	0.05	-0.02	0.02	0.05	0.04	0.98	0.57	0.74	0.12
30X	10/04/96	0.02	0.06	0.10	0.19	0.02	0.03	0.16	0.10	1.07	1.74	0.71	0.23
31	04/23/96	-0.01	0.05	0.02	0.10	0.02	0.04	0.01	0.05	1.09	1.20	3.63	0.22
31	10/04/96	0.04	0.07	-0.06	0.22	-0.00	0.05	0.04	0.07	0.50	1.34	2.85	0.39
32	04/23/96	0.01	0.03	-0.04	0.04	0.00	0.02	0.02	0.02	0.38	0.61	0.34	0.10
32	10/04/96	-0.01	0.04	0.06	0.19	0.01	0.04	0.01	0.03	0.75	1.07	0.36	0.33
33	04/23/96	0.03	0.04	0.03	0.06	0.02	0.07	0.01	0.02	0.21	0.48	0.28	0.13
33	10/04/96	0.01	0.07	0.16	0.18	0.00	0.04	0.01	0.05	0.53	1.04	0.07	0.27
34	04/23/96	0.00	0.03	-0.01	0.05	-0.02	0.03	0.02	0.03	0.56	0.64	0.06	0.10
34	10/04/96	0.04	0.07	0.10	0.18	-0.02	0.04	0.02	0.04	0.65	0.89	0.16	0.24
36X	04/23/96	-0.00	0.04	0.07	0.06	0.01	0.03	0.02	0.03	0.91	0.55	0.41	0.13
36X	10/04/96	-0.03	0.06	0.01	0.13	0.01	0.04	0.06	0.05	0.61	1.00	0.28	0.24
37C	04/23/96	-0.00	0.04	0.04	0.05	0.01	0.03	-0.01	0.03	0.62	0.42	0.20	0.11
37C	10/04/96	0.01	0.03	-0.05	0.14	-0.01	0.03	-0.01	0.04	-0.05	0.66	0.05	0.14

TABLE 16
AQUATIC FLORA-FUCUS
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
32X	04/23/96	0.052	0.065	3.6	0.4	0.055	0.076	0.009	0.008	0.051	0.016	0.021	0.028
32X	10/04/96	0.010	0.029	5.7	0.2	0.024	0.035	0.012	0.006	0.013	0.006	0.006	0.014
33X	04/23/96	0.105	0.090	5.1	0.6	0.147	0.115	0.006	0.012	-.001	0.011	0.007	0.049
33X	10/04/96	-.051	0.111	5.5	1.2	-.089	0.233	0.001	0.011	0.015	0.021	0.024	0.082
36X	04/23/96	0.197	0.106	4.1	0.4	-.014	0.078	-.001	0.008	0.000	0.008	0.021	0.031
36X	10/04/96	0.067	0.142	3.6	0.9	0.072	0.152	-.003	0.006	-.004	0.004	0.018	0.054

LOCATION	COLLECTION DATE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
32X	04/23/96	0.016	0.008	0.009	0.024	-.003	0.012	0.012	0.010	-.003	0.008	0.023	0.066
32X	10/04/96	0.020	0.005	0.115	0.020	0.000	0.007	0.001	0.005	0.001	0.004	0.014	0.031
33X	04/23/96	0.006	0.012	0.010	0.032	-.003	0.021	0.011	0.012	-.006	0.011	0.074	0.094
33X	10/04/96	-.017	0.032	-.064	0.065	-.037	0.038	-.016	0.031	0.006	0.020	-.032	0.238
36X	04/23/96	0.007	0.009	-.008	0.021	0.005	0.015	-.002	0.010	0.005	0.009	-.011	0.069
36X	10/04/96	0.000	0.015	-.040	0.036	-.009	0.023	-.019	0.025	0.009	0.019	-.084	0.149

TABLE 16
AQUATIC FLORA-FUCUS
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	AG-110M	(+/-)	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	RA-226	(+/-)	TH-228	(+/-)
32X	04/23/96	0.017	0.009	-.006	0.031	-.001	0.008	0.008	0.012	0.022	0.125	0.015	0.034
32X	10/04/96	0.000	0.005	-.007	0.018	0.000	0.003	0.000	0.004	0.043	0.088	0.032	0.017
33X	04/23/96	0.012	0.015	-.007	0.049	-.007	0.017	0.008	0.009	0.112	0.218	-.003	0.053
33X	10/04/96	0.005	0.021	-.068	0.081	-.012	0.018	-.007	0.015	-.183	0.277	0.087	0.090
36X	04/23/96	0.002	0.012	-.038	0.038	0.001	0.008	0.005	0.009	0.058	0.143	0.027	0.038
36X	10/04/96	-.006	0.017	0.008	0.066	-.002	0.016	0.003	0.017	0.091	0.266	0.053	0.089

TABLE 17A
FISH-FLOUNDER
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
32	01/22/96	-.007	0.158	1.5	0.6	-.147	0.177	0.008	0.022	-.004	0.019	0.018	0.093
32	04/04/96	-.046	0.220	2.0	0.9	0.000	0.262	0.004	0.033	-.001	0.025	0.041	0.115
32	07/23/96	-.129	0.207	3.4	1.0	-.044	0.191	0.009	0.017	-.001	0.026	-.014	0.084
32	10/01/96	0.042	0.246	2.3	1.0	0.083	0.269	-.010	0.029	0.021	0.031	-.022	0.095
35	04/18/96 A	-.023	0.222	4.1	1.0	0.182	0.271	0.013	0.025	-.024	0.027	0.007	0.089
35	07/23/96	-.143	0.211	3.1	1.0	0.061	0.178	-.016	0.021	0.000	0.027	-.064	0.073
35	10/01/96	-.235	0.182	2.7	0.7	-.161	0.223	0.000	0.020	-.001	0.020	0.019	0.074

LOCATION	COLLECTION DATE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
32	01/22/96	-.016	0.021	0.034	0.050	0.038	0.041	-.016	0.022	0.013	0.024	0.028	0.216
32	04/04/96	-.012	0.026	-.026	0.082	-.021	0.043	-.026	0.036	0.011	0.031	0.128	0.333
32	07/23/96	0.017	0.037	-.044	0.064	-.017	0.038	-.019	0.027	0.002	0.018	-.115	0.232
32	10/01/96	-.007	0.026	-.032	0.073	-.004	0.053	-.027	0.041	0.019	0.041	0.034	0.284
35	04/18/96 A	-.003	0.031	0.000	0.075	-.024	0.042	-.008	0.027	0.012	0.027	-.322	0.311
35	07/23/96	-.010	0.031	-.012	0.074	0.012	0.043	0.009	0.023	0.003	0.020	0.167	0.262
35	10/01/96	0.013	0.021	-.031	0.062	-.020	0.033	0.008	0.031	-.003	0.024	0.000	0.211

A: First quarter sample from the Niantic Bay location (35) was unavailable.

TABLE 17A
FISH-FLOUNDER
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	AG-110M	(+/-)	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	RA-226	(+/-)	TH-228	(+/-)
32	01/22/96	-.007	0.029	-.001	0.045	-.015	0.048	0.005	0.021	0.346	0.387	-.010	0.094
32	04/04/96	-.007	0.033	0.006	0.076	0.023	0.036	-.005	0.019	0.108	0.826	0.016	0.123
32	07/23/96	0.004	0.034	0.018	0.028	-.016	0.029	0.007	0.036	0.981	0.520	0.036	0.108
32	10/01/96	-.003	0.021	0.009	0.112	0.007	0.027	0.022	0.031	0.686	0.555	0.038	0.127
35	04/18/96 A	-.035	0.036	0.017	0.070	-.005	0.059	0.011	0.033	0.005	0.549	0.087	0.126
35	07/23/96	0.001	0.036	0.007	0.026	0.011	0.032	-.006	0.021	0.211	0.666	0.073	0.117
35	10/01/96	0.000	0.025	0.022	0.087	0.007	0.021	0.006	0.021	-.156	0.440	0.000	0.084

A: First quarter sample from the Niantic Bay location (35) was unavailable.

TABLE 17B
FISH-OTHER
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	TYPE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
32	04/04/96 A	SKATE	0.04	0.19	2.28	0.80	-0.03	0.26	-0.004	0.025	0.030	0.030	0.034	0.069
32	07/23/96	SKATE	-0.06	0.15	2.31	0.80	0.07	0.20	0.021	0.029	-0.007	0.026	0.031	0.063
32	10/01/96	SKATE	0.01	0.20	3.07	0.79	-0.08	0.26	-0.001	0.023	0.005	0.019	-0.017	0.077
35	01/09/96	SKATE	-0.21	0.27	1.18	0.77	-0.12	0.30	-0.002	0.030	0.002	0.024	0.073	0.094
35	04/04/96	SKATE	0.19	0.25	1.78	0.82	-0.07	0.23	-0.005	0.030	0.028	0.027	0.078	0.102
35	07/23/96	SAND DAD	0.06	0.13	2.96	0.87	-0.10	0.17	-0.018	0.020	-0.012	0.019	-0.033	0.081
35	10/01/96	SAND DAD	0.07	0.27	3.78	1.28	-0.12	0.27	0.023	0.036	-0.013	0.032	0.053	0.112
40X	02/08/96 B	BASS	-0.07	0.25	3.41	0.93	-0.04	0.28	0.006	0.027	0.020	0.022	-0.023	0.093
40X	07/10/96	BLACKFISH	-0.01	0.17	3.30	0.94	0.07	0.23	0.003	0.024	0.029	0.030	-0.019	0.075
40X	11/18/96 C	OTHER	0.18	0.30	5.39	1.51	0.03	0.32	0.012	0.033	-0.008	0.022	-0.068	0.078

LOCATION	COLLECTION DATE	TYPE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
32	04/04/96 A	SKATE	0.011	0.015	-0.018	0.069	-0.023	0.050	-0.021	0.026	-0.006	0.029	0.019	0.256
32	07/23/96	SKATE	0.022	0.024	0.010	0.065	0.000	0.035	-0.004	0.025	-0.013	0.021	0.125	0.229
32	10/01/96	SKATE	0.003	0.024	0.093	0.126	-0.001	0.046	-0.014	0.029	-0.015	0.028	-0.076	0.209
35	01/09/96	SKATE	0.018	0.038	0.018	0.079	-0.027	0.046	0.020	0.027	0.003	0.030	-0.056	0.301
35	04/04/96	SKATE	-0.008	0.041	-0.027	0.080	0.000	0.054	-0.033	0.031	-0.007	0.024	0.067	0.178
35	07/23/96	SAND DAD	0.010	0.028	-0.005	0.035	0.006	0.038	0.006	0.021	0.004	0.019	-0.025	0.222
35	10/01/96	SAND DAD	-0.006	0.035	-0.062	0.086	0.041	0.071	0.028	0.043	0.012	0.039	0.152	0.276
40X	02/08/96 B	BASS	-0.003	0.034	-0.017	0.071	-0.009	0.059	0.000	0.031	0.002	0.028	0.297	0.286
40X	07/10/96	BLACKFISH	-0.015	0.028	0.066	0.059	-0.013	0.038	0.000	0.027	-0.011	0.024	-0.082	0.199
40X	11/18/96 C	OTHER	0.038	0.044	0.026	0.090	-0.037	0.057	0.013	0.041	0.005	0.028	-0.192	0.305

A: First quarter sample from the Vicinity of Discharge was unavailable.
B: Second quarter sample from the Quarry was unavailable.
C: Flounder.

TABLE 17B
FISH-OTHER
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	TYPE	AG-110M	(+/-)	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	RA-226	(+/-)	TH-228	(+/-)
32	04/04/96 A	SKATE	-0.010	0.042	-0.032	0.068	0.003	0.032	0.000	0.033	-0.208	0.532	-0.087	0.135
32	07/23/96	SKATE	0.002	0.033	0.006	0.029	0.010	0.028	0.003	0.026	0.400	0.538	-0.047	0.101
32	10/01/96	SKATE	-0.016	0.024	-0.002	0.093	-0.008	0.022	0.013	0.028	-0.500	0.574	-0.008	0.094
35	01/09/96	SKATE	0.021	0.047	-0.008	0.079	0.022	0.055	-0.022	0.029	0.400	0.779	0.068	0.124
35	04/04/96	SKATE	0.031	0.033	-0.039	0.057	0.004	0.029	0.012	0.032	0.301	0.450	0.082	0.139
35	07/23/96	SAND DAD	-0.010	0.025	-0.005	0.025	-0.010	0.023	-0.012	0.025	0.055	0.578	0.022	0.109
35	10/01/96	SAND DAD	0.046	0.050	-0.044	0.129	-0.020	0.032	0.035	0.041	0.062	0.712	0.015	0.120
40X	02/08/96 B	BASS	0.050	0.043	0.050	0.096	0.001	0.029	-0.016	0.033	0.044	0.610	-0.122	0.108
40X	07/10/96	BLACKFISH	-0.011	0.030	-0.030	0.062	-0.004	0.021	-0.003	0.022	0.186	0.469	0.037	0.129
40X	11/18/96 C	OTHER	-0.011	0.051	0.004	0.090	-0.009	0.029	0.002	0.032	-0.034	0.659	0.058	0.141

A: First quarter sample from the Vicinity of Discharge was unavailable.
B: Second quarter sample from the Quarry was unavailable.
C: Flounder.

TABLE 18
MUSSELS
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
28	02/27/96	0.064	0.142	1.4	0.5	-.031	0.173	-.007	0.016	0.003	0.017	-.015	0.046
28	05/03/96	0.134	0.304	1.8	0.8	0.026	0.354	-.007	0.030	0.006	0.034	0.047	0.094
28	08/20/96	-.146	0.299	2.0	1.2	0.185	0.352	-.003	0.039	0.011	0.031	0.057	0.111
28	11/25/96	0.057	0.314	1.2	0.9	-.177	0.260	0.012	0.032	-.017	0.032	0.019	0.057
31	02/27/96	0.157	0.217	1.7	0.7	0.000	0.180	0.003	0.022	0.012	0.024	-.008	0.083
31	05/03/96	0.176	0.241	2.3	0.9	0.186	0.330	-.003	0.026	0.018	0.029	0.003	0.078
31	08/20/96	0.016	0.237	1.2	0.8	-.074	0.295	-.006	0.026	0.022	0.034	-.043	0.070
31	11/14/96	0.067	0.220	1.5	1.0	0.036	0.359	-.007	0.026	-.025	0.035	0.020	0.060

LOCATION	COLLECTION DATE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
28	02/27/96	0.000	0.021	-.030	0.041	0.015	0.029	0.011	0.019	-.003	0.015	-.056	0.166
28	05/03/96	-.002	0.034	-.049	0.076	-.017	0.058	0.011	0.043	0.003	0.033	-.089	0.315
28	08/20/96	0.032	0.047	0.000	0.050	0.006	0.046	0.017	0.043	-.002	0.029	-.112	0.354
28	11/25/96	0.000	0.040	-.017	0.032	-.026	0.063	0.024	0.031	0.010	0.033	0.207	0.328
31	02/27/96	-.002	0.037	-.007	0.062	-.051	0.044	0.003	0.022	-.004	0.022	0.011	0.222
31	05/03/96	-.017	0.028	0.035	0.055	-.015	0.052	-.004	0.032	-.026	0.029	-.181	0.312
31	08/20/96	-.006	0.012	0.020	0.077	-.018	0.044	0.006	0.029	-.030	0.030	-.036	0.218
31	11/14/96	-.017	0.036	0.029	0.063	-.015	0.068	0.004	0.047	-.005	0.034	-.021	0.243

TABLE 18
MUSSELS
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	AG-110M	(+/-)	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	RA-226	(+/-)	TH-228	(+/-)
28	02/27/96	0.020	0.026	0.031	0.033	-.001	0.040	0.019	0.018	-.181	0.402	0.001	0.068
28	05/03/96	0.000	0.038	0.066	0.100	-.008	0.041	-.020	0.031	0.592	1.006	0.028	0.130
28	08/20/96	0.023	0.039	0.014	0.077	-.006	0.033	-.013	0.038	-.348	0.698	0.054	0.165
28	11/25/96	0.010	0.048	-.050	0.059	0.007	0.022	-.006	0.021	0.166	0.679	-.009	0.105
31	02/27/96	-.004	0.028	0.010	0.036	-.017	0.024	0.004	0.028	0.232	0.438	-.067	0.096
31	05/03/96	-.026	0.038	-.031	0.102	-.015	0.068	0.007	0.027	-.125	0.704	0.079	0.135
31	08/20/96	-.019	0.032	-.007	0.056	-.014	0.026	0.017	0.034	-.279	0.722	0.056	0.127
31	11/14/96	0.011	0.029	-.158	0.137	-.027	0.032	0.000	0.036	0.605	0.573	0.063	0.135

TABLE 19
OYSTERS
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
31	02/15/96	-.106	0.176	1.8	0.8	0.108	0.233	0.012	0.024	-.009	0.022	-.006	0.078
31	05/08/96	0.165	0.195	2.0	0.8	0.038	0.249	0.003	0.026	-.018	0.027	-.023	0.091
31	08/14/96	0.164	0.311	1.4	0.9	0.034	0.298	0.006	0.029	-.010	0.025	-.055	0.089
31	11/14/96	0.108	0.226	1.7	1.0	-.168	0.287	-.017	0.032	0.020	0.038	-.042	0.094
32	02/15/96	-.035	0.104	1.2	0.3	-.002	0.106	0.006	0.011	0.058	0.013	0.010	0.033
32	05/08/96	0.110	0.106	1.7	0.4	-.007	0.115	-.002	0.011	0.017	0.015	0.017	0.040
32	08/14/96	-.001	0.074	1.5	0.2	-.108	0.086	0.020	0.010	0.072	0.015	-.010	0.024
32	11/14/96	-.058	0.126	1.2	0.4	-.038	0.131	-.006	0.014	0.015	0.018	0.024	0.042
34X	02/15/96	0.098	0.217	1.4	0.7	0.138	0.202	-.006	0.021	0.018	0.023	0.046	0.072
34X	05/08/96	0.045	0.191	1.6	0.8	-.204	0.259	0.008	0.020	0.003	0.025	0.000	0.070
34X	08/14/96	0.010	0.207	1.2	0.7	0.141	0.272	0.006	0.023	0.012	0.024	0.056	0.114
34X	11/14/96	-.073	0.287	1.1	0.8	0.077	0.258	-.004	0.029	-.024	0.029	-.026	0.050
36	02/27/96	-.314	0.282	1.7	0.7	0.157	0.290	-.012	0.030	-.017	0.025	-.006	0.081
36	05/03/96	0.087	0.227	1.9	0.8	0.086	0.286	0.007	0.028	0.006	0.025	0.013	0.088
36	08/20/96	-.097	0.270	1.7	0.9	0.048	0.251	-.009	0.032	0.013	0.028	-.027	0.097
36	11/25/96	0.115	0.242	0.5	0.7	0.179	0.290	-.005	0.024	0.001	0.032	-.036	0.081
37C	02/15/96	-.060	0.215	1.6	0.6	-.077	0.204	0.013	0.025	-.024	0.027	0.009	0.057
37C	05/08/96	0.069	0.179	1.6	0.7	0.004	0.191	-.021	0.033	0.005	0.019	0.036	0.087
37C	08/14/96	0.112	0.296	1.2	1.1	-.092	0.301	-.026	0.032	-.027	0.042	-.032	0.061
37C	11/14/96	0.409	0.308	2.0	1.9	0.021	0.315	-.001	0.023	0.014	0.037	-.043	0.097
40X	02/08/96	-.059	0.160	1.6	0.2	0.042	0.168	-.001	0.014	0.129	0.022	0.023	0.040
40X	05/20/96	0.067	0.109	1.9	0.2	-.086	0.096	0.008	0.010	0.022	0.011	0.007	0.026
40X	08/19/96	0.043	0.102	1.0	0.2	-.077	0.100	0.017	0.011	0.123	0.017	-.017	0.025
40X	11/18/96	-.059	0.165	1.4	0.3	0.095	0.175	0.008	0.019	0.044	0.023	-.017	0.043

TABLE 19
OYSTERS
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
31	02/15/96	0.001	0.024	0.008	0.065	0.015	0.036	0.001	0.031	-.004	0.026	0.034	0.217
31	05/08/96	0.039	0.035	0.029	0.064	-.019	0.046	-.003	0.031	-.029	0.030	0.043	0.290
31	08/14/96	0.000	0.037	0.013	0.057	-.007	0.048	0.004	0.028	-.016	0.024	-.040	0.212
31	11/14/96	0.007	0.039	-.005	0.085	0.000	0.053	0.009	0.038	0.023	0.035	-.261	0.316
32	02/15/96	0.027	0.011	0.080	0.028	0.015	0.021	-.019	0.025	-.013	0.013	-.035	0.119
32	05/08/96	0.012	0.018	0.075	0.040	0.014	0.021	0.014	0.022	0.006	0.013	-.011	0.131
32	08/14/96	0.046	0.010	0.454	0.042	0.002	0.015	0.008	0.020	-.005	0.010	0.043	0.083
32	11/14/96	0.037	0.015	0.485	0.088	0.019	0.029	0.008	0.020	-.006	0.015	0.066	0.126
34X	02/15/96	-.014	0.038	-.024	0.064	0.021	0.039	0.000	0.023	-.007	0.020	0.093	0.247
34X	05/08/96	0.012	0.037	-.051	0.072	-.040	0.060	-.005	0.029	0.014	0.029	0.124	0.296
34X	08/14/96	0.012	0.034	-.041	0.070	-.011	0.065	-.019	0.038	0.017	0.025	0.064	0.158
34X	11/14/96	0.009	0.031	0.006	0.072	0.045	0.066	0.001	0.042	-.004	0.037	-.071	0.224
36	02/27/96	-.004	0.042	0.027	0.060	0.039	0.058	0.013	0.034	0.006	0.028	-.178	0.313
36	05/03/96	0.002	0.031	0.000	0.049	0.039	0.050	0.015	0.031	-.021	0.025	0.097	0.283
36	08/20/96	-.020	0.035	-.003	0.088	0.015	0.041	-.007	0.043	0.017	0.033	-.142	0.319
36	11/25/96	-.017	0.042	-.040	0.061	0.000	0.027	-.014	0.033	0.004	0.024	-.045	0.091
37C	02/15/96	-.012	0.028	-.015	0.055	-.040	0.035	-.006	0.024	0.002	0.021	0.105	0.208
37C	05/08/96	0.009	0.023	-.002	0.047	0.025	0.051	0.007	0.028	-.006	0.022	-.033	0.234
37C	08/14/96	-.011	0.039	0.000	0.054	0.029	0.057	-.016	0.042	0.005	0.037	0.293	0.397
37C	11/14/96	-.008	0.018	0.051	0.080	-.011	0.020	0.002	0.041	0.004	0.020	-.110	0.197
40X	02/08/96	0.065	0.014	1.820	0.087	0.007	0.029	0.015	0.049	-.014	0.020	-.072	0.257
40X	05/20/96	0.042	0.011	1.497	0.066	-.001	0.020	0.000	0.029	0.003	0.013	-.058	0.167
40X	08/19/96	0.061	0.012	0.675	0.056	-.011	0.019	-.015	0.030	-.012	0.012	0.061	0.120
40X	11/18/96	0.111	0.020	2.860	0.151	-.016	0.034	0.019	0.053	0.011	0.020	0.198	0.188

TABLE 19
OYSTERS
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	AG-110M	(+/-)	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	RA-226	(+/-)	TH-228	(+/-)
31	02/15/96	-.014	0.034	-.009	0.041	-.007	0.028	-.021	0.031	0.105	0.516	-.048	0.106
31	05/08/96	0.000	0.027	-.005	0.037	-.019	0.039	0.013	0.033	-.542	0.522	0.072	0.119
31	08/14/96	0.022	0.038	-.029	0.103	0.007	0.026	0.000	0.033	0.029	0.649	0.026	0.098
31	11/14/96	-.023	0.034	0.006	0.123	-.026	0.028	0.015	0.025	-.050	0.729	-.038	0.131
32	02/15/96	0.314	0.018	-.001	0.026	0.008	0.029	-.013	0.041	0.020	0.279	0.017	0.044
32	05/08/96	0.085	0.017	-.001	0.021	-.009	0.015	0.000	0.035	-.051	0.290	-.008	0.058
32	08/14/96	0.188	0.012	-.022	0.031	-.001	0.009	-.016	0.025	-.042	0.224	-.001	0.041
32	11/14/96	0.042	0.019	-.012	0.056	0.016	0.016	-.010	0.033	0.353	0.224	0.025	0.060
34X	02/15/96	0.024	0.033	0.014	0.050	-.008	0.028	-.005	0.025	0.144	0.504	0.049	0.099
34X	05/08/96	0.024	0.029	0.012	0.049	-.026	0.035	-.004	0.028	-.309	0.665	-.009	0.121
34X	08/14/96	-.003	0.024	0.018	0.089	-.015	0.020	0.000	0.019	0.478	0.456	-.006	0.104
34X	11/14/96	-.013	0.045	0.015	0.128	0.011	0.034	0.011	0.027	0.465	0.557	-.034	0.132
36	02/27/96	-.031	0.044	0.015	0.055	0.003	0.032	0.008	0.031	0.083	0.659	-.081	0.144
36	05/03/96	-.003	0.040	0.024	0.064	-.005	0.038	-.005	0.032	0.098	0.820	-.030	0.125
36	08/20/96	-.006	0.033	-.014	0.057	-.003	0.037	0.026	0.040	-.320	0.659	0.037	0.132
36	11/25/96	0.000	0.045	0.002	0.053	0.000	0.031	-.005	0.024	-.251	0.612	-.002	0.120
37C	02/15/96	0.000	0.044	0.021	0.056	-.019	0.028	0.001	0.029	-.081	0.438	-.047	0.100
37C	05/08/96	-.021	0.040	0.024	0.046	-.041	0.031	-.004	0.030	0.277	0.575	0.071	0.102
37C	08/14/96	-.011	0.019	-.043	0.155	0.011	0.032	-.014	0.034	-.215	0.787	-.035	0.124
37C	11/14/96	0.022	0.040	-.109	0.129	0.011	0.029	-.033	0.038	0.000	0.665	0.068	0.136
40X	02/08/96	1.859	0.032	-.003	0.062	-.009	0.019	-.109	0.073	-.038	0.248	0.047	0.055
40X	05/20/96	1.419	0.024	0.000	0.017	-.001	0.014	-.061	0.055	0.021	0.200	0.016	0.045
40X	08/19/96	0.784	0.023	0.002	0.029	-.002	0.011	-.052	0.051	0.269	0.266	0.006	0.037
40X	11/18/96	0.862	0.036	-.002	0.058	-.007	0.018	0.017	0.078	-.099	0.295	-.050	0.067

TABLE 20
CLAMS
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
29	02/27/96	-.037	0.157	1.1	0.6	0.079	0.158	0.002	0.019	0.006	0.022	0.013	0.075
29	05/03/96	-.138	0.228	1.2	0.8	-.096	0.305	0.016	0.034	0.033	0.036	0.044	0.105
29	08/20/96	-.062	0.293	1.2	0.9	0.341	0.401	-.001	0.023	0.024	0.036	-.023	0.077
29	11/25/96	-.071	0.213	1.2	0.9	0.135	0.246	-.001	0.024	0.010	0.026	-.041	0.059
38	02/27/96	-.121	0.217	1.8	0.7	-.065	0.246	0.012	0.025	-.005	0.026	0.035	0.063
38	05/03/96	-.059	0.194	1.5	0.8	0.063	0.227	-.005	0.025	0.000	0.020	0.040	0.046
38	08/20/96	-.163	0.224	1.3	1.0	-.079	0.282	0.004	0.028	-.001	0.026	0.044	0.076
38	11/14/96	0.036	0.250	1.9	1.0	0.177	0.332	0.007	0.033	-.010	0.039	-.046	0.066
39X	02/27/96	-.089	0.178	2.1	0.8	-.032	0.262	0.004	0.025	-.015	0.023	0.014	0.078
39X	05/03/96	0.033	0.197	1.2	0.6	0.012	0.219	0.009	0.024	-.010	0.028	0.013	0.071
39X	08/20/96	0.096	0.309	2.3	1.1	0.005	0.297	0.026	0.031	-.007	0.035	0.026	0.076
39X	11/25/96	0.029	0.164	1.9	1.0	0.073	0.206	-.023	0.030	-.001	0.023	0.045	0.089

LOCATION	COLLECTION DATE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
29	02/27/96	0.003	0.030	-.072	0.079	0.016	0.036	-.025	0.025	-.011	0.021	0.034	0.224
29	05/03/96	0.007	0.021	-.010	0.093	-.022	0.044	-.040	0.032	0.004	0.026	0.241	0.250
29	08/20/96	0.020	0.047	0.044	0.099	0.033	0.064	0.026	0.034	0.011	0.038	0.146	0.400
29	11/25/96	-.009	0.049	0.007	0.073	0.000	0.059	-.044	0.035	0.000	0.034	0.117	0.268
38	02/27/96	0.007	0.027	-.033	0.059	-.012	0.037	0.007	0.028	0.020	0.020	-.136	0.214
38	05/03/96	0.043	0.039	-.068	0.072	0.006	0.043	0.026	0.030	0.020	0.022	-.190	0.241
38	08/20/96	0.008	0.043	-.041	0.066	-.070	0.059	-.007	0.030	-.018	0.038	0.050	0.363
38	11/14/96	0.000	0.043	0.017	0.099	-.014	0.038	0.006	0.049	-.024	0.038	0.046	0.161
39X	02/27/96	0.005	0.035	0.005	0.128	-.059	0.040	-.011	0.031	-.002	0.029	-.233	0.233
39X	05/03/96	0.004	0.030	0.066	0.113	0.012	0.044	-.008	0.028	0.002	0.021	-.006	0.224
39X	08/20/96	-.008	0.038	0.011	0.033	0.028	0.047	0.001	0.038	-.021	0.032	-.045	0.351
39X	11/25/96	0.000	0.042	0.020	0.063	0.031	0.045	-.012	0.023	-.003	0.020	0.143	0.269

TABLE 20
CLAMS
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	AG-110M	(+/-)	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	RA-226	(+/-)	TH-228	(+/-)
29	02/27/96	-.004	0.039	0.014	0.036	-.016	0.022	0.001	0.026	0.052	0.486	-.023	0.095
29	05/03/96	-.030	0.036	-.013	0.087	0.023	0.048	0.001	0.025	0.606	0.554	-.062	0.140
29	08/20/96	-.015	0.039	-.055	0.084	0.005	0.020	0.008	0.034	-.296	0.858	0.074	0.170
29	11/25/96	-.009	0.044	-.018	0.049	0.005	0.028	0.017	0.035	-.107	0.679	0.017	0.138
38	02/27/96	0.018	0.036	-.011	0.044	0.004	0.031	0.012	0.022	0.627	0.459	0.126	0.127
38	05/03/96	0.005	0.035	-.023	0.060	-.014	0.049	0.012	0.027	0.612	0.483	-.042	0.105
38	08/20/96	0.042	0.050	-.056	0.079	0.005	0.032	-.018	0.040	0.276	0.903	-.009	0.134
38	11/14/96	0.026	0.050	-.065	0.165	0.010	0.031	0.000	0.038	-.016	0.639	-.078	0.115
39X	02/27/96	-.020	0.035	0.019	0.051	0.041	0.069	-.016	0.027	0.694	0.535	0.014	0.106
39X	05/03/96	0.018	0.037	-.021	0.066	-.008	0.030	0.000	0.026	-.062	0.617	0.027	0.111
39X	08/20/96	-.016	0.030	0.054	0.082	-.011	0.031	-.021	0.048	0.249	0.696	-.016	0.137
39X	11/25/96	-.029	0.035	0.009	0.069	-.014	0.034	-.016	0.024	0.000	0.596	.005	0.123

TABLE 22
LOBSTER
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	BE-7	(+/-)	K-40	(+/-)	CR-51	(+/-)	MN-54	(+/-)	CO-58	(+/-)	FE-59	(+/-)
32	03/14/96	0.046	0.160	1.8	0.4	-.052	0.202	-.002	0.016	0.000	0.018	0.000	0.053
32	06/25/96	-.096	0.182	2.4	0.9	-.198	0.266	0.012	0.023	0.015	0.023	0.008	0.078
32	09/06/96	-.103	0.254	2.7	1.0	-.290	0.214	-.003	0.028	-.006	0.030	0.027	0.097
32	12/10/96	0.259	0.319	1.1	0.8	0.472	0.431	-.004	0.028	-.026	0.034	-.046	0.094
35	03/14/96	0.018	0.089	1.6	0.3	-.081	0.116	0.004	0.009	-.006	0.011	0.002	0.035
35	06/25/96	-.049	0.177	2.1	0.7	0.149	0.177	-.006	0.021	0.005	0.020	0.009	0.075
35	09/06/96	-.033	0.286	1.7	1.1	0.147	0.233	0.007	0.024	-.003	0.022	0.000	0.074
35	12/10/96	-.050	0.303	2.3	1.1	-.318	0.412	-.021	0.040	0.004	0.037	0.023	0.093
37X	03/14/96	-.143	0.129	1.6	0.4	0.006	0.179	0.000	0.012	0.008	0.016	0.007	0.055
37X	06/25/96	0.017	0.151	2.7	0.8	0.000	0.116	0.000	0.017	0.008	0.016	0.001	0.027
37X	09/06/96	-.009	0.297	1.8	1.1	0.061	0.420	-.012	0.028	0.025	0.049	-.029	0.056
37X	12/10/96	0.132	0.313	2.4	1.0	-.179	0.405	-.009	0.039	0.015	0.035	0.010	0.103

LOCATION	COLLECTION DATE	CO-60	(+/-)	ZN-65	(+/-)	ZR-95	(+/-)	NB-95	(+/-)	RU-103	(+/-)	RU-106	(+/-)
32	03/14/96	0.018	0.019	0.034	0.054	-.017	0.029	0.000	0.021	0.008	0.021	-.083	0.147
32	06/25/96	-.015	0.037	-.078	0.062	-.008	0.056	0.024	0.027	-.003	0.024	0.179	0.280
32	09/06/96	-.027	0.036	0.084	0.089	-.026	0.043	-.006	0.030	0.013	0.032	-.040	0.241
32	12/10/96	0.007	0.037	-.038	0.086	0.041	0.063	0.006	0.049	0.021	0.041	0.435	0.356
35	03/14/96	-.003	0.010	-.023	0.024	0.007	0.021	0.001	0.014	0.005	0.012	0.009	0.092
35	06/25/96	0.045	0.030	-.008	0.049	0.005	0.036	0.008	0.028	-.002	0.019	-.049	0.139
35	09/06/96	0.008	0.024	0.002	0.070	0.060	0.075	-.026	0.032	0.010	0.032	-.014	0.324
35	12/10/96	0.029	0.040	-.036	0.090	0.019	0.051	-.030	0.046	-.039	0.037	-.140	0.397
37X	03/14/96	0.013	0.017	0.026	0.047	0.020	0.027	-.002	0.019	0.006	0.018	0.025	0.149
37X	06/25/96	-.012	0.025	0.011	0.066	0.011	0.029	0.003	0.019	0.002	0.018	0.088	0.164
37X	09/06/96	0.040	0.068	-.033	0.093	0.000	0.054	-.004	0.047	-.015	0.041	0.263	0.525
37X	12/10/96	0.017	0.029	-.004	0.064	0.020	0.067	0.009	0.054	0.002	0.044	-.118	0.301

TABLE 22
LOBSTER
(PCI/G WET WT.)

LOCATION	COLLECTION DATE	AG-110M	(+/-)	I-131	(+/-)	CS-134	(+/-)	CS-137	(+/-)	RA-226	(+/-)	TH-228	(+/-)
32	03/14/96	0.009	0.020	-.025	0.096	-.002	0.021	0.000	0.017	-.250	0.517	0.081	0.059
32	06/25/96	0.048	0.041	-.008	0.034	0.015	0.034	0.011	0.034	0.995	0.714	0.040	0.120
32	09/06/96	0.000	0.020	-.003	0.051	0.010	0.030	-.028	0.043	-.071	0.652	.	.
32	12/10/96	0.010	0.041	-.108	0.154	0.010	0.033	-.033	0.034	0.084	0.925	.	.
35	03/14/96	-.004	0.016	-.034	0.051	-.009	0.012	-.001	0.011	-.029	0.276	0.036	0.041
35	06/25/96	-.001	0.033	0.008	0.030	-.004	0.025	0.012	0.019	1.474	0.607	0.006	0.089
35	09/06/96	0.016	0.051	-.012	0.064	0.000	0.041	0.027	0.033	0.181	0.719	.	.
35	12/10/96	-.004	0.045	-.052	0.137	0.035	0.039	-.018	0.047	-.383	0.916	.	.
37X	03/14/96	0.001	0.023	0.018	0.080	0.017	0.031	-.009	0.016	-.092	0.408	0.013	0.064
37X	06/25/96	-.016	0.021	-.021	0.024	-.008	0.020	-.015	0.018	0.355	0.318	0.057	0.077
37X	09/06/96	0.022	0.064	-.008	0.085	-.031	0.053	0.008	0.047	-1.01	1.199	.	.
37X	12/10/96	0.010	0.040	0.026	0.186	0.000	0.033	0.013	0.039	1.711	0.810	.	.

4. DISCUSSION OF RESULTS

This section summarizes the results of the analyses of environmental media sampled. NUSCO has carefully examined the data throughout the year and has presented in this section all cases where plant related radioactivity could be detected and compared the results with previous environmental surveillance data. Few impacts of the plant operation on the environment were observed. Sub-sections contain a description of each particular media or potential exposure pathway.

Naturally occurring nuclides such as Be-7, K-40, Ra-226 and Th-228 were detected in numerous samples. Be-7, which is produced by cosmic processes, was observed predominantly in airborne and vegetation samples. Ra-226 and Th-228 results were variable and are generally at levels higher than plant related radionuclides.

Cs-137 and Sr-90 were observed at levels similar to those of past years. In general, the detectable levels of Cs-137 and Sr-90 were the result of atmospheric nuclear weapons testing of years past.

4.1. 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 0.4 μR/hr to 2.8 μR/hr, with a mean of approximately 1 μR/hr.

The exposure rate measurements exhibit the same trends as those of past years. These measurements demonstrate the general variations in natural background radiation between the various on-site and off-site locations and include gamma exposure from all sources including cosmic, terrestrial, and artificial radioactivity. For example, the Weather Shack (location 02) and Environmental Laboratory (location 08) experience higher exposure rates due to their proximity to granite beds while the Ledyard location (location 14C) experiences relatively higher background exposure rates than the other control locations at Mystic, Norwich, and Old Lyme (locations 13C, 15C, and 16C).

Evaluation of the data reveals a decrease in background at all locations in the month of January. This is caused by the large snowfall experienced and its resultant shielding effect..

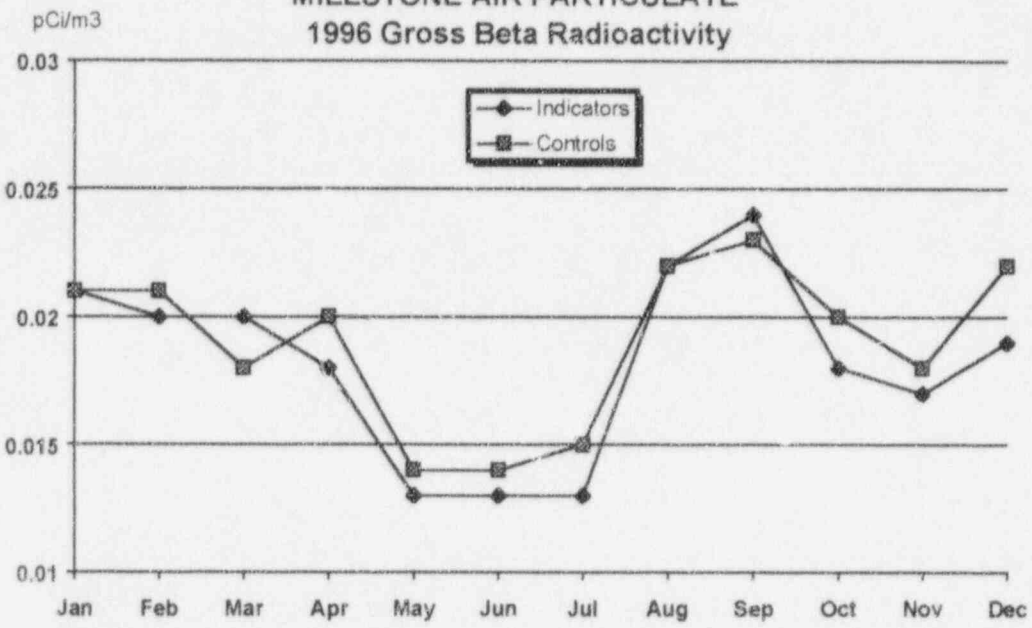
With the installation of the augmented off-gas treatment system in May of 1978, the plant gaseous effluents decreased significantly to levels that are essentially undetectable by TLD's, even at the on-site monitoring stations. The only appreciable effect seen in the TLD data is that attributable to the variation in the background radiation which has been noted as being consistent with previous years.

4.2. Air Particulate Gross Beta Radioactivity (Table 2)

Air is continuously sampled at seven inner ring and two outer ring locations by passing it through glass fiber particulate filters. These are collected weekly and analyzed for gross beta radioactivity. Results are shown on Figure 4-1 and Table 2. Gross beta activity remained at levels similar to that seen over the last decade. Inner and outer ring

monitoring locations showed no significant variation in measured activities. This indicates that any plant contribution is not measurable.

Figure 4-1
MILLSTONE AIR PARTICULATE
1996 Gross Beta Radioactivity



4.3. Airborne Iodine (Table 3)

Charcoal cartridges are included at all of the Radiological Effluent Monitoring Manual (REMM) required air particulate stations for the collection of atmospheric iodine. These cartridges are analyzed on a weekly basis for I-131. No detectable levels of I-131 were seen in the 1996 charcoal samples. This is confirmed by the absence of I-131 in any of the milk samples. Milk from goats is a much more sensitive indicator of I-131 presence in the environment.

4.4. Air Particulate Gamma Spectra (Table 4A-D)

The air particulate samples that are utilized for the weekly gross beta analyses are composited and analyzed quarterly for gamma emitting isotopes. The results, as shown in Tables 4A-4D, indicate the presence of naturally occurring Be-7, which is produced by cosmic processes. No other positive results were seen. These analyses indicate the lack of plant effects.

4.5. Air Particulate Strontium (Table 5)

Table 5 in past years was used to report the measurement of Sr-89 and Sr-90 in quarterly composited air particulate filters. These measurements are not required by the Radiological Effluent Monitoring Manual (REMM) and have been discontinued. Previous data has shown the lack of detectable station activity in this media. This fact, and the fact that milk samples are a much more sensitive indicator of fission product existence in the environment, prompted the decision for discontinuation. In the event of widespread plant

related contamination or special events such as the Chernobyl incident, these measurements may be made.

4.6. Soil (Table 6)

Soil samples are special samples not required by the REMM. Previous data has shown the lack of detectable station activity in this media resulting in the discontinuation of these samples in 1985. In the event of widespread plant related contamination or special studies, these samples would be collected.

4.7. Cow Milk (Table 7)

The most sensitive indicator of fission product existence in the terrestrial environment is usually milk samples. This, in combination with the fact that milk is a widely consumed food, results in this pathway being the most critical. Unfortunately, early in the year the last available dairy farm close enough to Millstone to be considered an indicator location went out of business. Therefore, the sampling of cow milk has stopped until such time that a new dairy farm goes into business. Each year a Land Use Census is used to identify locations of milk animals that should be included in the monitoring program. It is performed annually and is maintained by observations, door-to-door surveys and consulting with local agriculture authorities. The 1996 census can be seen in Appendix A. If and when a new dairy farm business starts within a distance to be considered an indicator location to measure levels of plant radioactivity, the collection of cow milk will resume.

4.8. 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 (23). This trend helps to explain the usual, higher than normal Sr-90 and Cs-137 concentrations observed at this location in the past and at indicator location (22) this year. Unfortunately, milk samples from location (23) were never available all year, pasture grass samples were taken instead when available. Positive indications of Sr-89 and Cs-134 were not observed in any goat milk samples. Therefore, detailed analysis of the data has concluded that the Sr-90 and Cs-137 levels are from weapons testing fallout (see Section 6.0 for more details).

No plant related I-131 was seen in this media. For the last ten years, no detectable levels of I-131 have been seen in goat milk samples except for the period immediately following the Chernobyl accident.

Previous data over many years has shown the lack of station related strontium activity in this media. Therefore, the strontium analysis frequency has been reduced from monthly to quarterly. The monthly samples collected within each quarter from each sample location are composited and analyzed at the end of each quarter.

4.9. 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. From January - March, all replacement samples including two in the month of April for locations (21 and 23) were not available due to insufficient growth. Pasture grass was again unavailable in December as a replacement. No plant effects are seen in this media.

In 1994, the REMM was revised to eliminate the need to analyze pasture grass for strontium. In the event of widespread plant related contamination or special studies, this analysis could be resumed.

4.10. Well Water (Table 10)

Well water samples are not required by the REMM. Data from 1973-1985 has shown the lack of detectable station activity in this media. Therefore, the sampling of well water was discontinued in 1985. In the event of widespread plant related contamination, these samples may be collected.

4.11. Reservoir Water (Table 11)

Reservoir water samples are special samples not required by the REMM. 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 related contamination, these samples may be collected.

4.12. Fruits and Vegetables (Table 12)

Consistent with past years, this media did not show any plant effects. Concentrations of Sr-90 in these samples existed at levels comparable to those observed for nearly the past two decades. Naturally occurring K-40 was detected in all samples. Since there was no fresh fallout, no other nuclides were detected.

Starting in 1997 the analysis of this media for strontium will be discontinued. Data from past years has shown the lack of station related strontium activity in this media. In the event of widespread plant related contamination or special studies, this analysis could be resumed.

4.13. Broad Leaf Vegetation (Table 13)

Consistent with past years, this media did not show any plant effects. Concentrations of Sr-90 and Cs-137 in these samples are at levels comparable to past years and are due to fallout.

In the past, this media has shown early indication of I-131 release from the plant from both unplanned releases and normal operations. Therefore, to enhance program monitoring effectiveness, samples of broadleaf vegetation are collected monthly during the growing season, April - October, even though requirements are to collect twice a year.

Starting in 1997 the analysis of this media for strontium will be discontinued. Data from past years has shown the lack of station related strontium activity in this media. In the

event of widespread plant related contamination or special studies, this analysis could be resumed.

4.14. Seawater (Table 14)

These samples are quarterly composites. Samples from the vicinity of discharge (32) are continuous samples; samples from Giants Neck (37C) are composites of weekly grab samples. No indications of plant related activity were observed.

4.15. Bottom Sediment (Table 15)

Cs-137 was detected in one sample from Golden Spur (30X). This is consistent with previous data. The absence of detectable Cs-134 and the relative distance and direction indicate that this Cs-137 is not plant related. The Golden Spur area is a fresh water area and the levels of Cs-137 at this location are comparable to those observed in river water sediments (see Connecticut Yankee Annual Radiological Environmental Operating Report). No indications of plant related activity were observed.

4.16. Aquatic Flora (Table 16)

Indications of plant releases were observed. Detectable levels of Mn-54, Co-58, Co-60, Zn-65 and Ag-110m were apparent. The detection of these nuclides throughout the year, as witnessed by positives detected in other aquatic media, correspond to increased system discharges due to the prolonged shutdown at the three Millstone Units.

Sampling of this media provides useful information because it is very sensitive to plant discharges. However, since seaweed is not consumed, other media are utilized in the determination of dose consequences (e.g., see Shellfish and Fish results).

4.17. Fish (Tables 17A and 17B)

4.17.1. Flounder (Table 17A)

The activity in Flounder is the same as that seen for the past decade. No activity was observed except for the naturally occurring radionuclides.

4.17.2. Fish - Other (Table 17B)

Normally plant related activity is detected in quarry samples (location 40X). No positive indications were observed in any of the finfish samples taken in 1996.

4.18. Mussels (Table 18)

The plant effects for this sampling media are insignificant at all locations.

4.19. Oysters (Table 19)

All locations, except for the quarry discharge, utilize stocked oysters. Trays are kept at these sampling areas to guarantee samples and facilitate sample collection. Native oysters are sampled at the quarry discharge (location 40X) which is an extra location.

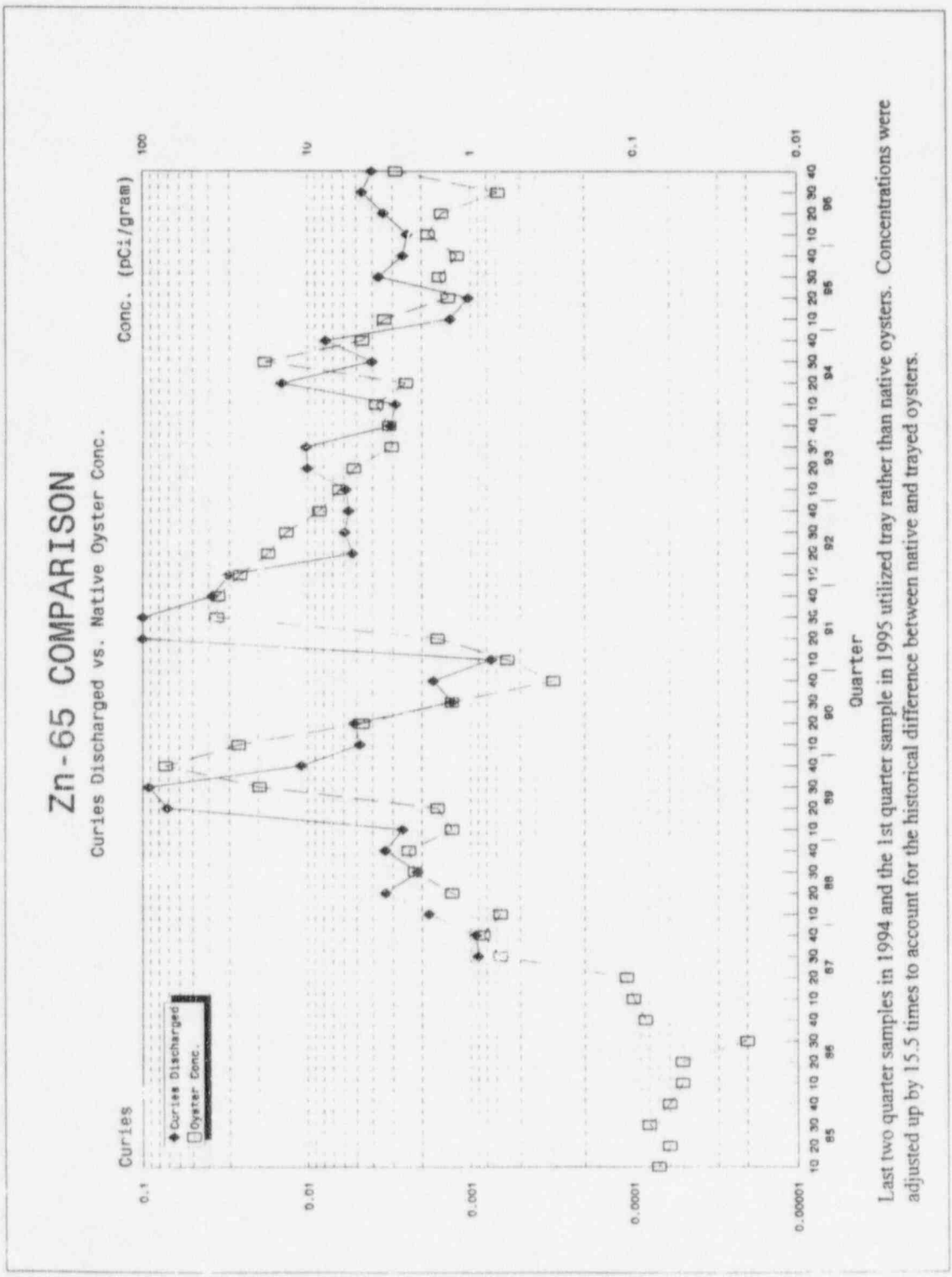
Plant related activity was observed in all samples from within the plant discharge area (locations 32 and 40X). This activity included Mn-54, Co-58, Co-60, Zn-65 and Ag-110m. In general, the quarry oysters show the highest Zn-65 levels, all other activity detected is comparable between the two locations. Although location 32 is labelled as vicinity of the discharge, it is actually at the end of the quarry. No plant related activity was observed in samples from beyond the plant discharge area.

The 1996 Zn-65 levels are comparable to those measured for the past five years. Zn-65 is unique to Unit 1. Since 1987 zinc has been injected into the reactor coolant to reduce the plateout of Co-60 on piping walls to reduce radiation worker exposure.

The high levels of Zn-65 observed in oysters is caused by their distinct capacity to accumulate zinc. Studies have shown that oysters can accumulate as much as 50 times or more the amount of zinc compared to most other seafoods (Wolfe, 1979). As Figure 4.2 shows, Zn-65 concentration in quarry oysters has closely followed the amount of curies of Zn-65 discharged in Unit 1 liquid effluents. Except for the last two quarters in 1994 and the first quarter in 1995 when native oysters could not be obtained, a remarkable dependency has existed between the amount of Zn-65 discharged into the environment and the Zn-65 concentration measured in the native quarry oysters. All efforts are being made to sample native oysters within the quarry.

Because no plant activity was observed at locations beyond the plant discharge area and since the two locations in the quarry are on-site and not available for public use, the actual concentration of radionuclides in oysters available for public consumption is much less. The dose consequence of the plant related radioactivity via this pathway is discussed in Section 5.0.

Figure 4-2 Zn-65 Concentration in Quarry Oysters



Last two quarter samples in 1994 and the 1st quarter sample in 1995 utilized tray rather than native oysters. Concentrations were adjusted up by 15.5 times to account for the historical difference between native and trayed oysters.

4.20. Clams (Table 20)

Occassionally this media indicates the presence of plant related radioactivity. No positive indications were observed in any of the clam samples taken in 1996.

4.21. Scallops (Table 21)

Scallops are not required by the REMM. However, this media is sampled to confirm plant effects because scallops are available for public consumption. Unfortunately, in recent years the population of scallops has decreased in the Long Island Sound in the vicinity of the station and local bays due to years of overharvesting by the public and businesses. Efforts throughout the year to harvest enough scallops to provide sufficient sample volume failed with every attempt. Those harvested were returned to the environment.

4.22. Lobsters (and Crabs) (Table 22)

Plant related Co-60 was detected in the second quarter sample. The level observed is comparable to that detected in other aquatic media in 1996 and to levels observed in past years. The dose consequence of radioactivity via this pathway is discussed in Section 5.0.

5. OFFSITE DOSE EQUIVALENT COMMITMENTS

The off-site dose consequences (dose equivalent commitments) 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 Annual Radioactive Effluent Report written in accordance with the Radiological Effluent Monitoring Manual, Section F.2. 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 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 from gaseous effluents 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 no direct gamma dose attributable to the operation of Unit I in 1996, (i.e., this dose is caused by high energy gamma rays from Nitrogen-16 in BWR radioactive steam which circulates through the turbine). 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: 0.39 mrem whole body to an adult, 0.0043 mrem to a teen's thyroid, and 0.87 mrem to an adult's Liver.

Since the maximum dose consequence to an individual 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 1996 for the average individual:

ANNUAL AVERAGE WHOLE BODY DOSE :

- DUE TO AIRBORNE EFFLUENTS = 0.000011 mrem
- DUE TO LIQUID EFFLUENTS = 0.00027 mrem

Thus, it can be seen that the average whole body dose to an individual is much less than the maximum whole body dose to an individual as shown in Table 5.1.

In order to provide perspective on the doses in Table 5.1, the standards for 1996 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 to any other organ. These standards are a fraction of the normal background radiation dose of 284 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 10% of the variation in natural background in Connecticut.

TABLE 5.1

COMPARISON OF DOSE CALCULATION METHODS

MILLSTONE NUCLEAR POWER STATION

1996 Annual Dose (millirem)

Pathway	Individual	Organ	Method 1 [1]				Method 2 [1]
			Unit 1 (BWR)	Unit 2 (PWR)	Unit 3 (PWR)	Station Total	
Airborne Effluents							
1. External Gamma Dose [2]	Max. Ind.	Whole Body	0.00044	0.00003	0.00023	0.0007	ND[5]
2. a. Inhalation	Adult	Thyroid	0.0	0.000013	0.0042	0.0042	ND[3],<0.6
	* Teen	"	0.0	0.000013	0.0043	0.0043	
	Child	"	0.0	0.000011	0.0038	0.0038	
	Infant	"	0.0	0.000006	0.0023	0.0023	
b. Vegetables	Adult	Thyroid	0.0	0.0	0.00004	0.00004	ND
	Teen	"	0.0	0.0	0.00004	0.00004	
	* Child	"	0.0	0.0	0.00006	0.00006	
c. Goat's Milk	Adult	Thyroid	0.0	0.0	0.0	0.0	ND,<1.8
	Teen	"	0.0	0.0	0.0	0.0	
	Child	"	0.0	0.0	0.0	0.0	
	* Infant	"	0.0	0.0	0.0	0.0	

TABLE 5.1 (Cont.)

COMPARISON OF DOSE CALCULATION METHODS

MILLSTONE NUCLEAR POWER STATION

Pathway	Individual	Organ	Method 1 [1]				Method 2 [1]
			Unit 1 (BWR)	Unit 2 (PWR)	Unit 3 (PWR)	Station Total	
Liquid Effluents							
1. Fish	* Adult	Whole Body	0.0034	0.0015	0.0035	0.0084	ND, <0.090
	Teen	"	0.0034	0.0014	0.0026	0.0074	<0.050
	Child	"	0.0035	0.0016	0.0029	0.0071	<0.019
	* Adult	GI(LLI)[4]	0.0063	0.0108	0.019	0.036	ND, <0.003
	Teen	"	0.0042	0.0077	0.014	0.026	<0.002
	Child	"	0.0014	0.0028	0.005	0.009	<0.0008
	Adult	Liver	0.0073	0.0034	0.0069	0.018	ND, <0.14
	* Teen	"	0.0073	0.0036	0.0072	0.018	<0.14
	Child	"	0.0058	0.0034	0.0066	0.016	<0.13
2. Shellfish	Adult	Whole Body	0.375	0.0066	0.0023	0.38	0.021[6]
	Teen	"	0.383	0.0067	0.0022	0.39	0.021
	* Child	"	0.416	0.0076	0.0026	0.43	0.023
	* Adult	GI(LLI)	0.529	0.040	0.023	0.59	0.16[6]
	Teen	"	0.351	0.028	0.016	0.40	0.11
	Child	"	0.119	0.010	0.006	0.14	0.04
	* Adult	Liver	0.829	0.014	0.0055	0.85	0.045[6]
	Teen	"	0.819	0.014	0.0059	0.84	0.044
	Child	"	0.668	0.013	0.0058	0.69	0.036

Notes:

1. Method 1 uses measured station discharges and meteorological data as input parameters to conservative transport to man models. Method 2 uses actual measured concentrations in environmental media.
2. Maximum individual - The maximum individual dose is the dose to the most critical age group (denoted by an asterisk ' * ' in the Individual column of Table 5-1), at the location of maximum concentration of plant related activity. The dose to the average individual is much less than the maximum individual dose. 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) - Gastrointestinal Tract - Lower Large Intestine.
5. ND - Not Detectable - High pressure ion chamber measurements for 1996 show no detectable plant related acitivity. TLD's cannot detect levels which are such a small fraction of natural background. Effluent calculations at actual high pressure ion chamber location result in $<10^{-4}$ mrem.
6. Based on measured levels in quarry native oysters. A measured near field dilution factor of 3 was used to adjust for the fact that quarry oysters are on-site and unaccessible to the public. This factor adjusts the measured on-site concentration to that which could occur to a public accessible off-site location after dilution of the effluent by the Long Island Sound.

6. 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, nuclear weapons tests or nuclear incidents (e.g. Chernobyl). 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 measurable 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 of Sr-90 and Cs-137 have been released from the stations to yield the measured concentrations in milk.

(2) Over the many years of plant operation, Sr-89 has often been released in comparable quantity to Sr-90. Since they are chemically similar, comparable levels should have been detected in milk if the Sr-90 was plant related. No plant related Sr-89 has been detected in milk samples.

(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. The only occurrences of detectable Cs-134 in milk resulted from the Chernobyl incident.

(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 pre-1984 Haddam Neck Goat Milk data.)

(6) The Millstone 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 and the 1986 Chernobyl accident. 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.

Throughout the year, the Connecticut Department of Environmental Protection performs a parallel environmental program under contract with the Nuclear Regulatory Commission. On a regular basis, the results of their analyses are compared to the results from this program's analyses. The comparisons are tracked and used as a cross-reference to verify measured plant activity. During 1996, both programs showed similar results.

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.

Figure 6-1 Strontium-90 in Milk

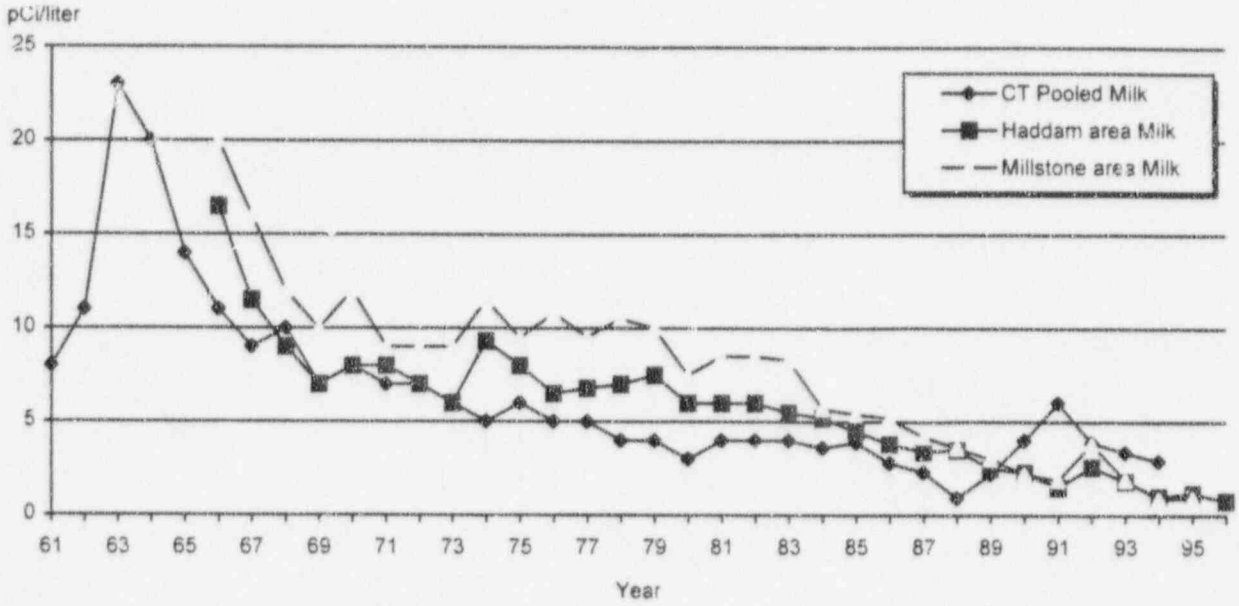
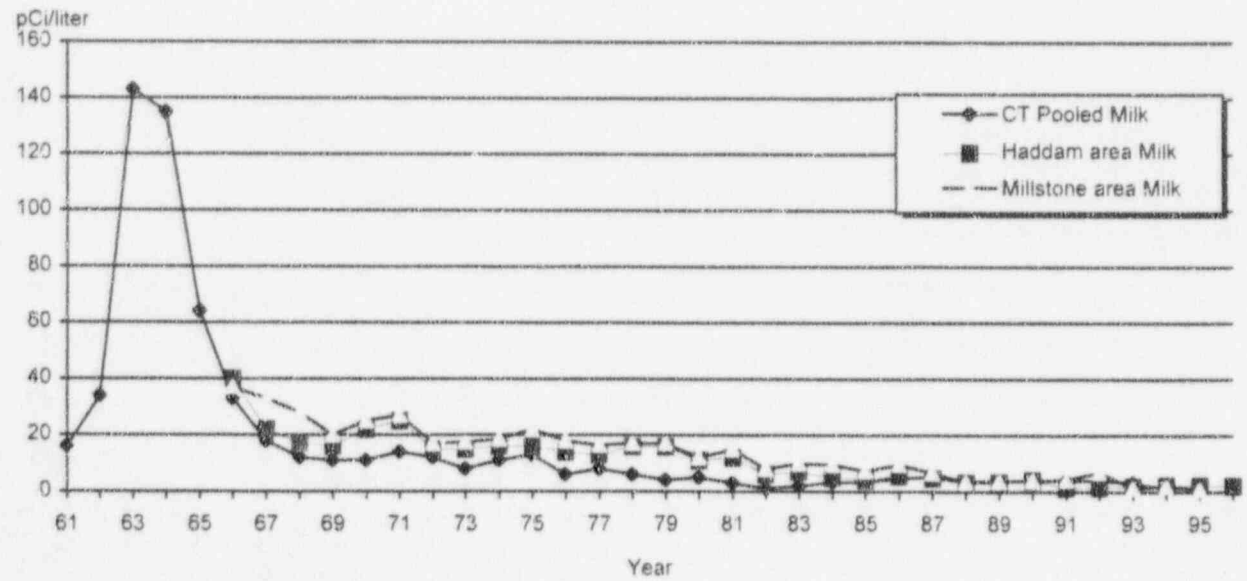


Figure 6-2 Cesium-137 in Milk



Dairy milk is no longer available in the Millstone area and CT Pooled milk has not been collected by the State of CT since 1994.

CY Start-up occurred: July 24, 1967
MP1 Start-up occurred: October 26, 1970
MP2 Start-up occurred: October 17, 1975
MP3 Start-up occurred: January 23, 1986

APPENDIX A

COW AND GOAT CENSUS FOR 1996

Dairy Cows Within 15 Miles of Millstone Point

December 1996

Direction	Distance	Name and Address	# of Cows
N	14 M	Wauwecus Farm Diary RFD #2, 236 Wauwecus Hill Rd. Norwich, CT 06360	35
NE	13.5 M	Richard H. Morgan RFD #7, Box 1114 536 Shewville Rd. Ledyard, CT 06339	60
WNW	11 M	Tiffany Farms 156 Sterling City Rd. Old Lyme, CT 06371	74
NNW	11.5 M	Salem Valley Farms Dairy Eugene Wilczewski 200 Darling Rd. Salem, CT 06415	46
NNW	13 M	Stuart & Judith Gadbois RT 82 / 95 Old Colchester Rd. Salem, CT 06415	200

Dairy Goats Within 20 Miles of Millstone Point

December 1996

Direction	Distance	Name and Address	No. of Goats
N	2 M	Mrs. John Mingo 69 Spithead Road Waterford, CT 06385	9
N/NNE	5.2 M	Allen Moran 122 Dayton Road Waterford, CT 06385	7
ENE	2 M	Bertram Smith 9 Braman Road Waterford, CT 06385	6
W	16.5 M	Victor Trudeau 174 Horse Hill Road Westbrook, CT 06498	5
WNW	13.4 M	Laura Parker 95 Plains Road Essex, CT 06426	5
WNW	7 M	Roger Kinderman 217 Boston Post Road Old Lyme, CT 06371	3
NW	5 M	George Scacciaferro 338 Boston Post Road East Lyme, CT 06333	2
NNW	14 M	Anne B. Henrici Round Hill Road Salem, CT 06415	0

APPENDIX B

NORTHEAST UTILITIES QA PROGRAM

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 as part of the radiological environmental monitoring program (REMP). The QA program consists of contractor appraisals and quality control samples.

NUSCO QA PROGRAM

Appraisals are conducted of the primary (Yankee Atomic) radioanalysis contractor, of the Production Operations Support Laboratory (POSL), and of the NUSCO Radiological Engineering Section (RES). A REMP evaluation form is completed for each appraisal and discrepancies are tracked on a separate form until corrective action is taken. The primary contractor, POSL, and RES are also audited by other organizations; the contractor by other customers and POSL and RES by Northeast Utilities Quality Assessment Services.

There are two types of NUSCO QA Program quality control samples. They are:

- Analyses of "spiked" samples and TLDs. This type of quality control allows a check on the accuracy of results for contractor's sample radioanalyses and for POSL's TLD readings.

- Duplicate analyses of Millstone Quarry oysters and of TLDs. The oyster samples allow an evaluation of the contractor's precision or reproducibility of results. QA TLDs, of a different design from the REMP TLDs, are co-located with REMP TLDs at eight locations and processed at the NUSCO Personal Dosimetry Laboratory to verify the reliability of POSL's REMP TLD readings.

The number and type of NUSCO QA Program quality control samples are given in Table 1. The results of POSL's TLD readouts and the radioanalysis contractor's analyses of NUSCO quality control samples should satisfy acceptance criteria in NUSCO Radiological Assessment Branch Procedure RAB B-2, "Quality Control of the Environmental TLD Monitoring Program," and in Procedure RAB B-3, "Quality Control of Radiological Environmental Monitoring Program Sample Analyses." An investigation is conducted on any result or trend which does not satisfy acceptance criteria.

OTHER QA PROGRAMS

The NUSCO QA Program is not the only QA Program which monitors performance of REMP radioanalyses. Other programs include:

1. Yankee Atomic's internal QA program. In addition to the NUSCO quality control samples the radioanalysis contractor has it's own quality control samples. In total between 10 and 20 percent of the contractor's sample analyses include quality control samples.

2. Yankee Atomic's participation in EPA's Environmental Radioactivity Laboratory Intercomparison Studies Program. Results of the EPA Intercomparison Studies Program are contained in Appendix C.

3. Yankee Atomic's interlabortary comparison program with an independent third party, Analytics, Inc. Results of the Analytics intercomparison are contained in Appendix C. Primary contractor participation in an interlabortary comparison program is required by plant technical specifications. The Analytics comparison satisfies this requirement and is supplemented by the EPA Intercomparison Studies Program.

4. For REMP TLDs the Nuclear Regulatory Commission-State of Connecticut Independent Verification Program also provides a quality control check of TLD measurements independent of the NUSCO QA Program.

CONCLUSION OF NUSCO QA PROGRAM

The NUSCO QA Program indicated that the Yankee Atomic environmental radiological analysis program and the NUSCO TLD program were adequate in 1996. Of 119 analysis results on QA samples, 108 passed criteria. This is a 91% success rate. All 22 analysis results on TLDs passed criteria.

DISCUSSION OF SAMPLES FAILING CRITERIA

There were three water gamma analyses which exceeded their criteria of being within 20% of the spiked value - an I-131 sample at -25%, a Ce-144 sample at -61%, and a Zn-65 sample at 28%. For the I-131 and Ce-144 samples four other nuclide spikes in the same water sample passed criteria and the next QC samples with I-131 and Ce-144 passed criteria for those nuclides. The Zn-65 sample failed criteria because the standard source had aged beyond its recommended use life. A new source is to be ordered.

There were four oyster gamma analyses which exceeded their criteria of not being within the two sigma error range of the average for the two blind duplicate oyster samples. These failures occurred in two of the four sets of blind duplicates submitted in 1996. For the February sample set the Ag-110m analysis failed criteria and for the November sample set the Co-60, Zn-65, and Ag-110m analyses failed criteria. Investigation has not revealed anything in sample collection and preparation which could be the cause of these failures. Additional investigation in 1997 will look at sample analysis. The cause of the failures may be discrete particle activity which would make it very difficult to successfully compare duplicate sample results. The suitability of oysters as a QC duplicate sample will be evaluated in 1997.

There was one air iodine analysis which exceeded its criteria of being within 20% of the spiked value. The cause of this error was probably due to the small volume of the standard spike. Any error in the volume of the standard spike would have a greater effect on the total spike activity delivered to the sample because of the small volume. To avoid this possible error in the future, the spike solution will be diluted to allow sufficient volume to be used.

There were three air particulate gamma analyses which exceeded their criteria of being within 20% of the spiked value - two Mn-54 samples at 24% and 26% and a Cs-137 sample at 24%. For all these samples other nuclide spikes in the same filter sample passed criteria and subsequent results for Mn-54 and Cs-137 passed criteria.

TABLE 1

NUMBER OF QUALITY CONTROL SAMPLES
1996

SAMPLE TYPE			NUMBER OF QC SAMPLES	NUMBER OF ROUTINE ANALYSES [1]
TLDs	-	Field Comparison	11 [2]	528
	-	Spike	11 [3]	528
Milk - Strontium			2	30
Milk - Iodine			6	89
Water - Gamma			12 [4]	113 [5]
Water - Tritium			4	24
Fish/Invertebrate - Gamma			4	86
Vegetation/Aquatic Flora/Sediment - Gamma			0	53
Air Particulate	-	Gross Beta	6	780
	-	Iodine	4	780
	-	Gamma	4 [4]	60

FOOTNOTES

(1) Total for both Millstone and Connecticut Yankee

(2) Each TLD field comparison sample is comprised of a set of 8 TLDs.

(3) Each TLD spike sample is comprised of a set of 4 TLDs.

(4) Each water and air particulate gamma QC sample includes 4 or 5 nuclides.

(5) Includes gamma in milk analyses. Gamma in water QA spikes are treated as milk surrogates.

TABLE 2

RESULTS OF QUALITY CONTROL SAMPLE ANALYSES
1996

SAMPLE TYPE			NUMBER PASS CRITERIA	NUMBER FAIL CRITERIA
TLDs	-	Field Comparison	11	0
	-	Spike	11	0
Milk - Strontium			3 [1]	0
Milk - Iodine			6	0
Water - Gamma [2]			55	3
Water - Tritium			4	0
Oysters - Gamma [2]			14	4
Air Particulate	-	Gross Beta	6	0
	-	Iodine	3	1
	-	Gamma [2]	17	3
		TOTALS	TLDs: 22 Samples: 108	TLDs: 0 Samples: 11

FOOTNOTES

(1) One milk strontium had two associated analyses - Sr-89 and Sr-90.

(2) Each sample has analysis results for 3 to 6 nuclides and each nuclide result is required to pass criteria. Therefore each sample has 3 to 6 total comparisons passing or failing criteria.

APPENDIX C

SUMMARY OF INTERLABORATORY COMPARISONS

ANALYTICS INTERCOMPARISON PROGRAM 1996

QUARTER	MEDIA	NUCLIDE	KNOWN	ANALYSIS	RATIO
1st	Milk	Sr-89	31 pCi/L	35 pCi/L	1.13
		Sr-90	16	17	1.06
		Cr-51	858	875	1.02
		Mn-54	84	88	1.05
		Co-58	128	132	1.03
		Co-60	204	207	1.01
		Fe-59	223	235	1.05
		Zn-65	260	267	1.03
		I-131	13	11	0.85
		I-131 (LL)	13	11.8	0.91
		Cs-134	154	155	1.01
		Cs-137	170	170	1.00
		Ce-141	234	237	1.01
1st	Water	Beta	107 pCi/L	118 pCi/L	1.03
		Cr-51	322	328	1.02
		Mn-54	31	30	0.97
		Co-58	48	48	1.00
		Co-60	76	73	0.96
		Fe-59	83	85	1.02
		Zn-65	97	90	0.93
		I-131	36	34	0.94
		Cs-134	58	55	0.95
		Cs-137	64	63	0.98
		Ce-141	88	88	1.00
		Ra-226	70	68	0.97
		Ra-228	49	49	1.00
2nd	Air Filter	Beta	179 pCi/filter	185 pCi/filter	1.03
		Sr-89	44	<MDA	-
		Sr-90	64	57	0.89
		Cr-51	953	1071	1.12
		Mn-54	508	597	1.18
		Co-58	157	176	1.12
		Co-60	142	153	1.08
		Fe-59	131	151	1.15
		Zn-65	98	110	1.12
		Cs-134	282	281	1.00
		Cs-137	694	797	1.15
		Ce-141	363	380	1.05
2nd	Water	H-3	4915 pCi/L	4580 pCi/L	0.93

ANALYTICS INTERCOMPARISON PROGRAM 1996

QUARTER	MEDIA	NUCLIDE	KNOWN	ANALYSIS	RATIO
2nd	Milk	K-40	1269 pCi/L	1350 pCi/L	1.06
		Cr-51	563	581	1.03
		Mn-54	300	311	1.04
		Co-58	93	93	1.00
		Co-60	84	84	1.00
		Fe-59	77	82	1.06
		Zn-65	58	53	0.91
		I-131	15	16	1.07
		Cs-134	166	167	1.01
		Cs-137	410	409	1.00
		Ce-141	215	219	1.02
3rd	Milk	Sr-89	50 pCi/L	54 pCi/L	1.08
		Sr-90	22	22	1.00
		Cr-51	486	514	1.06
		Mn-54	180	189	1.05
		Co-58	131	132	1.01
		Co-60	114	118	1.04
		Fe-59	37	40.8	1.10
		Zn-65	70	73	1.04
		I-131	24	24.5	1.02
		Cs-134	222	226	1.02
		Cs-137	169	176	1.04
		Ce-141	318	325	1.02
3rd	Water	Sr-89	40 pCi/L	47 pCi/L	1.18
		Sr-90	35	36	1.03
		Beta	70	77	1.10
		Cr-51	646	650	1.01
		Mn-54	239	248	1.04
		Co-58	174	172	0.99
		Co-60	151	155	1.03
		Fe-59	50	51	1.02
		Zn-65	93	98	1.05
		I-131	50	49	0.98
		Cs-134	295	299	1.01
		Cs-137	225	226	1.00
		Ce-141	423	420	0.99

ANALYTICS INTERCOMPARISON PROGRAM 1996

QUARTER	MEDIA	NUCLIDE	KNOWN	ANALYSIS	RATIO
4th	Milk	Cr-51	214 pCi/L	202 pCi/L	0.94
		Mn-54	206	217	1.05
		Co-58	121	120	0.99
		Co-60	110	113	1.03
		Fe-59	49	52	1.06
		Zn-65	93	94	1.01
		I-131	59	65	1.10
		I-131 (LL)	59	56	0.95
		Cs-134	175	168	0.96
		Cs-137	195	194	0.99
		Ce-141	277	278	1.00
4th	Air Filter	Beta	170 pCi/filter	199 pCi/filter	1.17
		Sr-89	96	102	1.06
		Sr-90	77	72	0.94
4th	Water	H-3	2686 pCi/L	2440 pCi/L	0.91

U.S. EPA INTERLABORATORY COMPARISON STUDIES PROGRAM 1996

DATE	MEDIA	NUCLIDE	EPA(a)	YANKEE ATOMIC(b)
1/23/96	Water	Sr-89	73.0 ± 2.9	79.2 ± 1.7
		Sr-90	5.0 ± 2.9	4.7 ± 0.3
3/8/96	Water	H-3	22002 ± 1270	23680 ± 470
4/16/96	Water	Sr-89	43.0 ± 2.9	45.4 ± 0.6
		Sr-90	16.0 ± 2.9	14.6 ± 0.3
		Co-60	31.0 ± 2.9	31.8 ± 1.1
		Cs-134	46.0 ± 2.9	43.4 ± 1.5
		Cs-137	50.0 ± 2.9	48.6 ± 1.7
		Ra-226	3.0 ± 0.3	3.6 ± 0.2
		Ra-228	5.0 ± 0.8	4.9 ± 1.4
6/7/96	Water	Co-60	99.0 ± 2.9	95.4 ± 2.6
		Zn-65	300.0 ± 17.3	301.8 ± 7.6
		Cs-134	79.0 ± 2.9	75.4 ± 2.1
		Cs-137	197.0 ± 5.8	196.1 ± 1.8
		Ba-133	745.0 ± 43.2	731.9 ± 8.3
		Ra-226	4.9 ± 0.4	5.3 ± 0.3
		Ra-228	9.0 ± 1.3	8.0 ± 1.3
7/12/96	Water	Sr-89	25.0 ± 2.9	23.5 ± 0.3
		Sr-90	12.0 ± 2.9	12.0 ± 1.3
7/19/96	Water	Beta	44.8 ± 2.9(d)	20.7 ± 0.2(d)
8/9/96	Water	H-3	10879 ± 628	10203 ± 494

U.S. EPA INTERLABORATORY COMPARISON STUDIES PROGRAM 1996

DATE	MEDIA	NUCLIDE	EPA(a)	YANKEE ATOMIC(b)
10/15/96	Water	Sr-89	10.0 ± 2.9	12.0 ± 1.0
		Sr-90	25.0 ± 2.9	22.9 ± 0.1
		Co-60	15.0 ± 2.9	13.8 ± 0.4
		Cs-134	20.0 ± 2.9	18.8 ± 1.6
		Cs-137	30.0 ± 2.9	29.6 ± 0.6
		Ra-226	9.9 ± 0.9	8.9 ± 0.3
		Ra-228	5.1 ± 0.8	6.3 ± 0.2
10/25/96	Water	Beta	34.6 ± 2.9	35.7 ± 1.3
11/8/96	Water	Co-60	44.0 ± 2.9	43.7 ± 0.4
		Zn-65	35.0 ± 2.9	34.5 ± 1.9
		Cs-134	11.0 ± 2.9	10.7 ± 0.2
		Cs-137	19.0 ± 2.9	19.7 ± 0.8
		Ba-133	64.0 ± 3.5	60.9 ± 2.4

FOOTNOTES

Units are pCi/liter for water and milk. Air particulate filters are in units of total pCi.

(a) EPA known value ± normalized standard deviation. [The error in the EPA number is not the "expected precision" used in EPA's report but the normalized standard deviation. It is derived by dividing the expected precision by the square root of the number of analyses to be performed, which is 3. This provides a much more direct comparison of the EPA known to the results of the analyses.]

(b) Average of three analyses ± one standard deviation of the three analytical results. If the average value is not within the EPA known value ± three times the normalized standard deviation it is outside of EPA control limits.