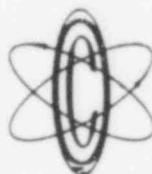




Jersey Central Power & Light Company
is a Member of the
General Public Utilities System

OYSTER CREEK NUCLEAR GENERATING STATION



SEMIANNUAL REPORT NO. 79-1

PROVISIONAL OPERATING LICENSE NO. DPR-16

RADIOACTIVE EFFLUENT RELEASES

JANUARY 1, 1979 THROUGH JUNE 30, 1979

930058

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I. INTRODUCTION

I. INTRODUCTION

This report is submitted in accordance with section 6.9.3 of the Technical Specifications of the Oyster Creek Unit No. 1 Provisional Operating License, DPR-16.

The following is a brief summary of plant operations during the reporting period.

Operations Summary

November 30, 1978	Reactor Shutdown - Refueling Outage
December 5, 1978	Reactor Startup
December 8, 1978	Plant Generator on Line
December 13, 1978	Reactor Shutdown
December 18, 1978	Reactor Startup
December 31, 1978	Operating at approximately 100% rated power
January 15, 1979	Reactor Scram
January 18, 1979	Reactor Startup
January 19, 1979	Plant Generator on Line
January 31, 1979	Operating at approximately 97% rated power
February 6, 1979	Reactor Scram
	Reactor Startup
February 7, 1979	Plant Generator on Line
February 15, 1979	Operating at approximately 97% rated power
February 28, 1979	Operating at approximately 97% rated power
March 15, 1979	Operating at approximately 97% rated power
March 26, 1979	Reactor Shutdown
April 7, 1979	Reactor Startup
April 8, 1979	Plant Generator on Line
April 15, 1979	Operating at approximately 98% rated power
April 30, 1979	Operating at approximately 91% rated power
May 2, 1979	Reactor Scram
May 31, 1979	Reactor Startup
	Reactor Scram
	Reactor Startup
	Reactor Scram
June 1, 1979	Reactor Startup
	Plant Generator on Line
June 15, 1979	Operating at approximately 95% rated power
June 30, 1979	Operating at approximately 95% rated power

930103

II. EFFLUENT AND WASTE DISPOSAL SUMMARY

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II EFFLUENT AND WASTE DISPOSAL SUMMARY

A. Gaseous Effluents

During the reporting period, January 1, 1979, through June 30, 1979, a total of 5.06×10^5 curies of fission and activation gases, 4.63 curies of non-particulate halogens with half-lives greater than eight days, 3.38×10^{-1} curies of particulate activity with half lives greater than eight days, and 1.91×10^1 curies of tritium were released. The maximum hourly release rate of gross activity was 4.69×10^4 microcuries per second at approximately 1100 on January 4, 1979.

The airborne releases are summarized in Table II-1A.

B. Liquid Effluents

A total of 1.40×10^7 liters of water was processed through the radwaste system. Of this, 6.40×10^4 liters containing 1.42 curies of activity were released to the environment. During the reporting period, two abnormal liquid releases occurred. The first abnormal release occurred on January 26, 1979, when 7.57×10^2 liters of unprocessed flush water containing a total of 5.64×10^{-4} curies of activity were discharged to the environment. The second abnormal release occurred on June 29, 1979, when 1.14×10^3 liters of processed water containing a total of 2.79×10^{-2} curies of activity were discharged to the environment through a leaking valve. This leakage path was subsequently blanked off to prevent a recurrence.

The liquid release data are summarized in Table II-2A.

C. Solid

During the reporting period, a total volume of 5.37×10^2 cubic meters of solid waste containing 6.61 curies of activity was shipped off site in 69 shipments. No irradiated material was shipped off site during this period.

The waste shipment data are summarized in Table III-3.

D. Meteorological Data

During the reporting period, onsite meteorological conditions were monitored and recorded. Greater than 90 percent data recovery was achieved for this period. Joint frequency distribution of wind speed and wind direction per atmosphere stability class per quarter tables summarize the data.

The meteorological data are summarized in Tables II-4A.

930105

EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT

SUPPLEMENTAL INFORMATION

FACILITY - Oyster Creek Nuclear Generating Station

LICENSEE - Jersey Central Power & Light Company

1. Regulatory Limits

- a. Fission and Activation Gases:
Technical Specification 3.6.A.1

$$Q = \frac{0.21}{E} \text{ Ci/sec}$$

- b. Iodines:
Technical Specification 3.6.A.2

$$4 \text{ uCi/Sec}$$

- c. Particulates, half-lives > 8 days:
Technical Specification 3.6.A.2

$$4 \text{ uCi/sec}$$

- d. Liquid Effluents:
Technical Specification 3.6.B.1
Maximum permissible concentrations,
Appendix B, Table II, Column 2,
of 10 CFR 20 and notes 1 through 5 thereto.

2. Maximum Permissible Concentrations

- a. Fission and Activation Gasses:
Technical Specification 3.6.A.1

- b. Iodines:
Technical Specification 3.6.A.2

- c. Particulates:
Technical Specification 3.6.A.2

- d. Liquid Effluents:

From Appendix B, Table II, Column 2,
of 10 CFR 20 and notes 1 through 5 thereto:

(NOTE: MPC's for isotopes detected listed below)
Unit - $\mu\text{Ci/ml}$

H-3	3 E-3	Tc-99m	6 E-3
Na-24	2 E-4	I-131	3 E-7
Cr-51	2 E-3	I-133	1 E-6
Mn-54	1 E-4	Xe-133	3 E-6
Co-57	5 E-4	I-135	4 E-6
Co-60	5 E-5	Xe-135	3 E-6
Sr-89	3 E-6	Cs-137	2 E-5
Sr-90	3 E-7	La-140	2 E-5
Zr-95	6 E-5	Ce-141	9 E-5
Nb-95	1 E-4	Np-239	1 E-4

3. Average Energy

- a. First Quarter - 8.16 E-1 mev
- b. Second Quarter - 8.05 E-1 mev

4. Measurements and Approximation of Total Radioactivity

- a. Fission and Activation Gases:
The incorporation of a weekly grab sample analysis using gamma ray spectrometry with a GeLi Detector, a conversion factor, and the continuous recording of the stack effluent on a continuous activity monitor.
- b. Iodines:
Semi-weekly sample analysis - gamma ray spectrometry with a GeLi Detector, low background beta counter, internal proportional beta counter, and a single channel gamma counter.
- c. Particulates:
semi-weekly sample analysis - gamma ray spectrometry with a GeLi Detector, low background beta counter, internal proportional beta counter, and single channel gamma counter.
- d. Liquid Effluents:
Analysis per batch release - gamma ray spectrometry with a GeLi Detector, a low background beta counter, and a liquid scintillation counter.

5. Batch Releases

a. Liquid

1. Number of batch releases:
 - a. First quarter - 2 releases
 - b. Second quarter - 1 release
2. Total time period for batch releases:
 - a. First quarter - 1675 minutes
 - b. Second quarter - 20 minutes
3. Maximum time period for a batch release:
 - a. First quarter - 1673 minutes
 - b. Second quarter - - minutes
4. Average time period for a batch release:
 - a. First quarter - 838 minutes
 - b. Second quarter - 20 minutes
5. Minimum time period for a batch release:
 - a. First quarter - 2 minutes
 - b. Second quarter - - minutes
6. Average stream flow during periods of release of effluent in a flowing stream
 - a. First quarter - 3.71 E6 liter/minute
 - b. Second quarter - 3.71 E6 liters/minute

b. Gaseous

Not applicable (batch releases)

6. Abnormal Releases

a. Liquid

1. Number of releases:
2 releases
2. Total activity released:
2.85 E -2 Curies

b. Gaseous

1. Number of releases:
None
2. Total activity released:
Not Applicable

930108

TABLE II-1A
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1979-1
GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES

	Unit	First Quarter	Second Quarter	Est. Total Error %
--	------	------------------	-------------------	-----------------------

A. Fission & activation gases

1. Total release	Ci	3.32 E 5	1.74 E 5	3.0 E 1
2. Average release rate for period	μCi/sec	4.75 E 4	3.66 E 4	
3. Percent of Tech Spec limit	%	1.84 E 1	1.40 E 1	

B. Iodines

1. Total iodine-131	Ci	2.97	1.66	2.5 E 1
2. Average release rate for period	μCi/sec	3.82 E-1	2.12 E-1	
3. Percent of Tech Spec limit	%	9.55	5.30	

C. Particulates

1. Particulates with half-lives >8 days	Ci	2.69 E-1	6.85 E-2	2.5 E 1
2. Average release rate for period	μCi/sec	3.46 E-2	8.73 E-3	
3. Percent of Tech Spec limit	%	8.65 E-1	2.18 E-1	
4. Gross alpha radioactivity	Ci	1.01 E-4	8.62 E-5	

D. Tritium

1. Total release	Ci	1.68 E 1	2.34	4.0 E 1
2. Average release rate for period	μCi/sec	2.16	2.98 E-1	

TABLE II - 1B
EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 1979-1
GASEOUS EFFLUENTS-ELEVATED RELEASE

CONTINUOUS MODE

Nuclides Released	Unit	First Quarter	Second Quarter		MDL
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1. Fission gases

krypton-85m	Ci	1.71 E 4	6.75 E 3		2.04 E-9
krypton-87	Ci	4.63 E 4	2.55 E 4		7.13 E-9
krypton-88	Ci	4.63 E 4	2.31 E 4		5.96 E-9
xenon-133	Ci	9.61 E 3	5.46 E 3		1.82 E-9
xenon-135	Ci	7.18 E 4	3.89 E 4		1.70 E-9
xenon-135m	Ci	3.19 E 4	1.69 E 4		5.85 E-9
xenon-138	Ci	1.09 E 5	5.69 E 4		7.26 E-9
others					
krypton-89	Ci	1.07 E 1	5.42		4.58 E-8
xenon-133m	Ci	<MDL	<MDL		1.47 E-8
xenon-137	Ci	2.10 E 2	1.12 E 2		5.04 E-8
Total for period	Ci	3.32 E 5	1.74 E 5		

2. Iodines

Iodine-131	Ci	2.97	1.66		1.27 E-10
Iodine-133	Ci	8.25	6.88		1.42 E-10
Iodine-135	Ci	8.47	1.05 E 1		8.24 E-10
Total for period	Ci	1.97 E 1	1.90 E 1		

TABLE II-1C

Effluent and Waste Disposal Semi-annual Report 1979-1
Gaseous Effluents - Summation of all Releases

Nuclides Released	Unit	First Quarter	Second Quarter		MDL
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3. Particulates

Strontium-89	Ci	4.18 E-2	1.07 E-2		2.62 E-10
Strontium-90	Ci	3.08 E-4	2.55 E-4		2.00 E-10
Cesium-134	Ci	<MDL	1.04 E-4		7.73 E-11
Cesium-137	Ci	1.29 E-3	5.55 E-4		8.86 E-11
Barium-140	Ci	1.67 E-1	4.49 E-2		3.64 E-10
Lanthanum-140	Ci	1.52 E-1	3.94 E-2		1.33 E-10
Others					
Sodium-24	Ci	1.21 E-4	<MDL		1.23 E-10
Chromium-51	Ci	5.48 E-3	7.73 E-4		3.87 E-10
Manganese-54	Ci	9.51 E-4	9.17 E-4		1.02 E-10
Cobalt-57	Ci	1.24 E-4	<MDL		6.00 E-11
Cobalt-58	Ci	1.58 E-3	1.67 E-3		2.09 E-10
Cobalt-60	Ci	5.95 E-3	5.15 E-3		2.00 E-10
Zinc-65	Ci	1.62 E-4	<MDL		1.68 E-10
Strontium-91	Ci	1.28	4.79 E-1		2.93 E-10
Zirconium-95	Ci	2.62 E-4	<MDL		1.54 E-10
Niobium-95	Ci	4.25 E-4	6.20 E-5		1.50 E-10
Molybdenum-99	Ci	6.94 E-2	2.65 E-3		5.25 E-10
Technetium-99m	Ci	1.21	1.13 E-1		6.89 E-11
Ruthenium-103	Ci	1.42 E-4	<MDL		6.51 E-11
Antimony-124	Ci	7.50 E-5	<MDL		9.10 E-11
Iodine-131	Ci	3.91 E-2	3.28 E-3		8.00 E-11
Iodine-133	Ci	4.76 E-1	9.73 E-2		8.94 E-11
Iodine-135	Ci	9.59 E-1	3.21 E-1		4.70 E-10
Cerium-141	Ci	2.35 E-3	1.10 E-4		1.62 E-10
Cerium-143	Ci	<MDL	3.66 E-4		7.33 E-11
Cerium-144	Ci	1.83 E-3	<MDL		4.68 E-9
Neptunium-239	Ci	1.70 E-1	5.27 E-4		1.68 E-10
Total		4.59	1.12		

TABLE II-2A
EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT 1979-1
LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES

	Unit	First Quarter	Second Quarter	Est. Total Error %
--	------	------------------	-------------------	-----------------------

A. Fission and activation products

1. Total releases (not including tritium, ceses, alpha)	Ci	4.32 E-3	2.21 E-3	3.0 E 1
2. Average diluted concentration during period	μCi/ml	3.67 E-11	2.08 E-11	
3. Percent of applicable limit	%	3.70 E-4	9.40 E-4	

B. Tritium

1. Total release	Ci	1.36	2.51 E-2	3.0 E 1
2. Average diluted concentration during period	μCi/ml	1.16 E-8	2.36 E-10	
3. Percent of applicable limit	%	3.84 E-4	7.86 E-6	

C. Dissolved and entrained gases

1. Total release	Ci	2.37 E-2	6.29 E-4	3.0 E 1
2. Average diluted concentration during period	μCi/ml	2.02 E-10	5.91 E-12	
3. Percent of applicable limit	%	6.72 E-3	1.97 E-4	

D. Gross alpha radioactivity

1. Total release	Ci	<MDL	<MDL	3.0 E 1
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E. Volume of waste released (prior to dilution)	liters	6.36 E 4	1.14 E 3	1.0 E 1
---	--------	----------	----------	---------

F. Volume of dilution water used during period	liters	4.42 E 11	4.00 E 11	1.0 E 1
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Table II-2B

Liquid Effluents

Batch Release

Nuclide	Unit	First Quarter	Second Quarter		MDL
Strontium-89	Ci	1.40 E-5	1.00 E-6		6.06 E-11
Strontium-90	Ci	3.00 E-6	<MDL		4.48 E-11
Iodine-131	Ci	6.40 E-5	7.20 E-5		4.46 E-10
Cesium-137	Ci	6.89 E-4	<MDL		8.72 E-10
Chromium-51	Ci	2.51 E-3	8.40 E-5		3.69 E-9
Manganese-54	Ci	<MDL	6.40 E-5		7.35 E-10
Cobalt-60	Ci	1.35 E-4	1.78 E-4		1.09 E-9
Zirconium-95	Ci	<MDL	7.00 E-6		8.84 E-10
Niobium-95	Ci	<MDL	6.00 E-6		7.37 E-10
Technetium-99m	Ci	<MDL	3.69 E-4		3.19 E-10
Lanthanum-140	Ci	5.95 E-4	1.20 E-5		8.33 E-10
Cerium-141	Ci	1.74 E-4	<MDL		1.76 E-9
Sodium-24	Ci	<MDL	2.30 E-5		9.11 E-10
Cobalt-57	Ci	<MDL	4.00 E-6		1.21 E-10
Iodine-133	Ci	1.38 E-4	5.99 E-4		7.22 E-10
Iodine-135	Ci	<MDL	6.13 E-4		3.01 E-9
Neptunium-239	Ci	<MDL	1.76 E-4		4.58 E-10
Total (above)	Ci	4.32 E-3	2.21 E-3		
Xenon-133	Ci	1.06 E-2	7.30 E-5		5.88 E-10
Xenon-135	Ci	1.31 E-2	5.36 E-4		5.52 E-10
Total	Ci	2.37 E-2	6.29 E-4		

TABLE II-3
EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT 1979-1
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. Solid waste shipped offsite for burial or disposal (not irradiated fuel)

1. Type of waste	Unit	6-month period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator bottoms, etc.	m ³	2.86 E 2	
	Ci	6.52 E 2	5.0 E 1
b. Dry compressible waste contaminated equip., etc.	m ³	2.51 E 2	
	Ci	9.24	5.0 E 1
c. Irradiated components, control rods, etc.	m ³	None	-
	Ci		
d. Other (describe	m ³	None	-
	Ci		

2. Estimate of major nuclide composition (by type of waste)	Percentage	Activity (Ci)	MDL (Ci)
a. Sr-89	37.9	2.47 E 2	100 E-12
Co-60	27.0	1.76 E 2	1.64 E-9
Mn-54	8.9	5.80 E 1	1.64 E-9
Cs-137	8.9	5.80 E 1	9.18 E-10
Cs-134	4.0	2.60 E 1	8.47 E-10
b.			
c.			
d.			

3. Solid Waste Disposition Number of Shipments	Mode of Transportation	Destination
69	Motor vehicle	Barnwell, SC

B. Irradiated Fuel Shipments (Disposition)

Number of Shipments	Mode of Transportation	Destination
NONE		

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD:	January 1, 1979 through March 31, 1979
STABILITY CLASS:	Extremely unstable
ELEVATION:	116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ - 3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	1	0	0	1
NE	0	0	0	1	0	0	1
ENE	0	0	0	0	0	0	0
E	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	1	1	1	3
W	0	0	0	0	5	1	6
WNW	0	0	0	7	6	6	19
NW	0	0	1	3	1	3	8
NNW	0	0	1	0	1	2	4
VARIABLE	-	-	-	-	-	-	0
TOTAL	0	0	4	13	14	13	44 *

*Total does not include variable period

PERIOD OF CALM (HOURS):	0
-------------------------	---

HOURS OF MISSING DATA:	100
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TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD:	January 1, 1979 through March 31, 1979
STABILITY CLASS:	Moderately unstable
ELEVATION:	116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	2	0	0	2
NNE	0	0	1	0	1	0	2
NE	0	0	1	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	1	1	0	0	0	2
SE	0	0	1	1	0	0	2
SSE	0	0	0	0	0	0	0
S	0	0	0	0	1	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	2	0	0	2
W	0	0	1	1	4	2	8
WNW	0	0	0	3	2	11	16
NW	0	0	3	3	4	1	11
NNW	0	0	1	1	1	1	4
VARIABLE	-	-	-	-	-	-	0
TOTAL	0	1	9	13	13	15	51 *

*Total does not include variable period

PERIOD OF CALM (HOURS):	0
-------------------------	---

HOURS OF MISSING DATA:	100
------------------------	-----

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD:	January 1, 1979 through March 31, 1979
STABILITY CLASS:	Slightly unstable
ELEVATION:	116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	1	1	0	2
NNE	0	0	2	0	0	0	2
NE	0	0	2	2	0	0	4
ENE	0	0	1	0	0	0	1
E	0	1	3	0	0	0	4
ESE	0	0	2	0	0	0	2
SE	0	0	2	1	0	0	3
SSE	0	0	0	7	4	0	11
S	0	0	0	4	2	0	6
SSW	0	0	0	2	0	1	3
SW	0	0	1	0	0	0	1
WSW	0	0	1	2	1	0	4
W	0	1	3	5	7	0	16
WNW	0	0	2	8	6	9	25
NW	0	1	1	5	1	1	9
NNW	0	0	2	1	6	0	9
VARIABLE	-	-	-	-	-	-	0
TOTAL	0	3	22	38	28	11	102 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 100

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 1, 1979 through March 31, 1979

STABILITY CLASS: Neutral

ELEVATION: 116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	2	14	7	0	2	25
NNE	1	1	14	2	5	11	34
NE	0	3	15	12	5	23	58
ENE	0	3	2	0	1	5	11
E	1	5	2	1	0	3	12
ESE	1	4	4	6	0	2	17
SE	1	3	7	1	0	8	20
SSE	1	3	7	11	5	1	28
S	1	0	3	12	14	18	48
SSW	0	0	3	5	9	16	33
SW	0	1	2	0	2	5	10
WSW	0	0	5	0	6	4	23
W	0	7	3	1	23	36	84
WNW	0	5	9	31	56	94	195
NW	0	5	12	22	14	16	69
NNW	0	7	8	6	6	2	29
VARIABLE	-	-	-	-	-	-	1
TOTAL	6	49	110	139	146	246	696 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 100

930118

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 1, 1979 through March 31, 1979

STABILITY CLASS: Slightly stable

ELEVATION: 116 Meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	1	5	8	16	3	0	33
NNE	0	3	3	9	6	1	22
NE	0	2	13	10	6	5	36
ENE	2	2	5	8	6	7	30
E	1	3	11	3	8	16	42
ESE	2	2	1	2	5	7	19
SE	3	5	6	1	3	27	45
SSE	1	3	7	2	7	32	52
S	0	2	6	6	22	28	64
SSW	0	2	8	4	9	14	37
SW	1	1	4	10	4	2	22
WSW	1	2	5	6	11	2	27
W	3	3	1	18	25	4	54
WNW	1	2	4	25	50	21	103
NW	1	3	6	16	30	15	71
NNW	0	1	6	9	6	8	30
VARIABLE	-	-	-	-	-	-	4
TOTAL	17	41	94	145	201	189	687 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 100

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 1, 1979 through March 31, 1979

STABILITY CLASS: Moderately stable

ELEVATION: 116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	1	1	4	11	1	18
NNE	0	0	1	2	0	0	3
NE	0	1	0	2	3	0	6
ENE	0	0	4	2	1	0	7
E	0	0	3	1	0	2	6
ESE	0	0	1	1	0	0	2
SE	0	0	0	2	0	1	3
SSE	0	0	2	0	0	0	2
S	0	1	4	0	3	0	8
SSW	0	3	2	1	5	2	13
SW	0	4	1	4	5	6	20
WSW	0	1	4	9	2	6	22
W	0	1	5	10	8	2	26
WNW	0	0	4	6	20	9	39
NW	1	2	6	10	13	5	37
NNW	0	2	2	21	17	9	51
VARIABLE	-	-	-	-	-	-	0
TOTAL	1	16	40	75	88	43	263 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 100

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 1, 1979 through March 31, 1979

STABILITY CLASS: Extremely stable

ELEVATION: 116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	2	2	0	1	3	0	8
NNE	0	1	1	1	0	0	3
NE	0	0	0	1	0	0	1
ENE	1	1	0	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	1	0	0	1
SSW	1	2	4	4	6	2	19
SW	0	5	4	0	2	2	13
WSW	1	2	3	1	2	1	10
W	0	0	6	6	2	1	15
WNW	1	1	0	3	2	3	10
NW	0	0	8	2	0	0	10
NNW	2	0	5	6	5	0	18
VARIABLE	-	-	-	-	-	-	2
TOTAL	8	14	31	26	22	9	110 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 100

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: April 1, 1979 through June 30, 1979

STABILITY CLASS: Extremely unstable

ELEVATION: 116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	2	4	0	0	6
ENE	0	0	0	3	0	0	3
E	0	0	2	0	0	0	2
ESE	0	0	2	0	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	1	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	2	4	0	0	6
W	0	0	4	3	0	0	7
WNW	0	0	0	6	3	5	14
NW	0	0	0	4	4	4	12
NNW	0	0	0	3	6	0	9
VARIABLE	-	-	-	-	-	-	0
TOTAL	0	0	12	27	14	9	62*

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 158

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: April 1, 1979 through June 30, 1979

STABILITY CLASS: Moderately unstable

ELEVATION: 116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	1	0	0	0	1
NNE	0	0	0	2	0	0	2
NE	0	0	1	4	0	0	5
ENE	0	0	2	4	0	0	6
E	0	0	5	1	0	0	6
ESE	0	1	1	0	0	0	2
SE	0	0	2	1	0	0	3
SSE	0	0	2	0	0	0	2
S	0	0	0	2	0	0	2
SSW	0	0	0	1	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	1	1	4	0	0	6
W	0	0	5	2	0	0	7
WNW	0	0	2	3	2	1	8
NW	0	0	1	3	3	1	8
NNW	0	0	0	2	2	0	4
VARIABLE	-	-	-	-	-	-	0
TOTAL	0	2	23	29	7	2	63 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 158

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: April 1, 1979 through June 30, 1979

STABILITY CLASS: Slightly unstable

ELEVATION: 116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	2	2	0	0	4
NNE	0	0	0	3	0	0	3
NE	0	0	1	2	1	0	4
ENE	0	0	1	1	1	0	3
E	0	0	7	4	0	1	12
ESE	0	0	7	1	0	0	8
SE	0	2	3	2	1	0	8
SSE	0	0	2	10	0	0	12
S	0	0	3	8	3	1	15
SSW	0	1	3	2	2	0	8
SW	0	2	1	2	0	0	5
WSW	0	0	3	3	0	0	6
W	0	1	3	6	0	1	11
WNW	0	1	5	1	0	2	9
NW	0	0	4	3	0	3	10
NNW	0	0	3	4	1	0	8
VARIABLE	-	-	-	-	-	-	0
TOTAL	0	7	48	54	9	8	126 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 158

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: April 1, 1979 through June 30, 1979

STABILITY CLASS: Neutral

ELEVATION: 116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	3	7	3	0	0	13
NNE	3	4	7	7	1	0	22
NE	0	12	8	9	2	0	31
ENE	0	4	16	12	12	17	61
E	0	5	12	4	7	6	34
ESE	1	7	14	1	0	0	23
SE	1	4	24	2	0	2	33
SSE	2	6	25	18	5	1	57
S	1	6	34	44	11	5	101
SSW	2	7	21	36	39	11	116
SW	0	7	9	12	2	2	32
WSW	0	5	6	8	5	0	24
W	0	-	3	3	0	2	9
WNW	0	0	12	12	4	11	39
NW	1	6	6	18	5	3	39
NNW	0	4	8	7	3	1	23
VARIABLE	-	-	-	-	-	-	2
TOTAL	11	81	212	196	96	61	657 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 158

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: April 1, 1979 through June 30, 1979

STABILITY CLASS: Slightly stable

ELEVATION: 116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	10	12	10	6	0	38
NNE	2	6	4	7	0	0	19
NE	3	7	24	11	12	1	58
ENE	2	9	20	15	24	4	74
E	1	7	17	5	0	4	34
ESE	0	7	4	0	0	0	11
SE	1	7	10	1	0	3	22
SSE	1	7	14	5	1	3	31
S	3	7	21	59	8	6	104
SSW	2	5	20	33	24	9	93
SW	2	3	16	22	22	5	70
WSW	0	4	10	9	20	2	45
W	3	4	6	7	1	0	21
WNW	0	6	11	7	13	8	45
NW	1	5	14	21	18	2	61
NNW	3	3	11	15	18	0	50
VARIABLE	-	-	-	-	-	-	4
TOTAL	24	97	214	227	167	47	776 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 158

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: April 1, 1979 through June 30, 1979

STABILITY CLASS: Moderately stable

ELEVATION: 116 meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	0	2	4	9	1	16
NNE	0	1	2	1	0	0	4
NE	1	0	2	0	0	0	3
ENE	0	1	0	1	0	0	2
E	0	0	2	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	3	1	0	0	0	4
SSE	0	0	0	0	0	0	0
S	0	1	4	8	1	0	14
SSW	0	0	2	13	9	0	24
SW	0	1	6	10	7	4	28
WSW	0	2	3	4	8	8	25
W	1	1	3	8	4	1	18
WNW	0	0	3	4	2	3	12
NW	1	2	2	8	10	1	24
NNW	0	1	4	7	23	3	38
VARIABLE	-	-	-	-	-	-	2
TOTAL	3	13	36	68	73	21	214 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 158

TABLE II-4A

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: April 1, 1979 through June 30, 1979

STABILITY CLASS: Extremely stable

ELEVATION: 116 Meters

WIND SPEED (MPH)

WIND DIRECTION	Calm+ -3	4-7	8-12	13-18	19-24	>24	TOTAL
N	0	5	2	3	1	0	11
NNE	0	1	4	1	0	0	6
NE	0	2	4	1	0	0	7
ENE	0	1	1	3	0	0	5
E	0	0	0	1	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	8	0	0	0	8
SSW	0	0	3	0	0	0	3
SW	1	2	7	0	3	1	14
WSW	0	0	3	5	4	9	21
W	0	1	1	1	5	1	9
WNW	0	1	3	3	1	0	8
NW	0	2	2	2	1	0	7
NNW	0	3	10	3	2	1	19
VARIABLE	-	-	-	-	-	-	0
TOTAL	1	18	48	23	17	12	119 *

*Total does not include variable period

PERIOD OF CALM (HOURS): 0

HOURS OF MISSING DATA: 158

III. ENVIRONMENTAL SUMMARY

III. ENVIRONMENTAL MONITORING

The environmental monitoring program was conducted during the reporting period in accordance with Technical Specification 4.6.B.3. The program included five general types of monitoring. These were (1) atmospheric radiation, (2) fallout, (3) domestic water, (4) surface water, and (5) marine life. This monitoring was accomplished by analyzing film badges for exposure and air particulate filters, rain water, vegetation, soil, crops, well water, surface water, silt, and clams for radioactivity. The analyses results from these samples are found on the forthcoming tables. The time period covered by this monitoring extended from December 1978 through May 1979 instead of January 1979 through June 1979, due to normal delay in sample analysis and reporting by the vendor. The sampling locations are listed in Table III-A and are depicted in Figure III-1.

1. Atmospheric Radiation monitoring results, consisting of radiogas (film badges) and air particulate radioactivity measurements, are listed in Tables III-B, III-C, III-D, III-E, III-H, and Table III-J. These tables cover the collection period from December 1978 through May 1979, with the exception of Table III-B which includes collection dates from December 1978 through February 1979 and Table III-C, which covers collection dates from March 1979 through May 1979.

Included in Table III-D, in addition to the indicator monitoring stations 2 through 17, are stations 1 and T1, which are located on site at the meteorological tower, and three background stations which are located at Allenhurst (A), Cookstown (C), and Hammonton (H), New Jersey.

During the reporting period, several special programs were conducted and are listed below.

- A. TLD evaluation - This program has continued intact since the last period on a monthly basis. All exposures for this reporting period are seen in Table III-F.
- B. Isotopic analyses were performed on all air particulate filters. The results can be found in Table III-H.
- C. Iodine 131 analyses were run on all the charcoal filters. The results are shown in Table III-J.

2. Fallout monitoring, consisting of rainwater radioactivity measurements, is listed in Tables III-B, III-C and Table III-E. Background rainwater from stations A, C and H results are in Table III-H.
3. Domestic Water monitoring, consisting of well water sample analyses, is listed in Tables III-B, III-C, and III-E.
4. Surface Water monitoring, consisting of water and silt analyses from Barnegat Bay, Forked River, and Oyster Creek, is listed in Tables III-B, III-C, and III-E. The background station for surface water and silt is station number 31 and these results can be seen in Table III-J.

Isotopic analyses were performed on the silt samples from the bay and discharge canal. The results can be seen in Table III-K.
5. Marine Life monitoring consisting of clam samples, is listed in Table III-B, III-C & III-E. The background station results are listed in Table III-J.
6. In addition to these analyses, vegetation, soil, and crop samples were analyzed. The results are shown in Tables III-B, III-C, and III-E.
7. Environmental samples were collected following a reactor shutdown in May 1979. The analysis results are listed in Table III-L.

TABLE III-A
OYSTER CREEK STATION
ENVIRONMENTAL MONITORING STATIONS
LOCATION AND TYPE SAMPLE COLLECTED

<u>STATION NUMBER</u>		<u>SAMPLE COLLECTED</u>
1	Forked River, N.J. - Oyster Creek Meteorological Tower	AP, RG, RW, WW, V, E
T1	Forked River, N.J. - Oyster Creek Meteorological Tower	RG
2	Pinewald, N.J. - Route #9 at JCP&L Company Pinewald Substation north of Forked River, N.J.	AP, RG, RW, V, E
3	Island Beach State Park, N.J. - Near old Coast Guard Station	AP, RG, RW, V, E
4	Barnegat, N.J. - Route #534, Windward at Barnegat, first road West of Parkway Exit	AP, RG, RW, V, E
5	Forked River, N.J. - Garden State Parkway North-bound Entrance to Holiday House	AP, RG, RW, V, E
6	Forked River, N.J. - Lane Place, behind St. Pius X Catholic Church	RG
7	Waretown, N.J. - Compass Road, second pole North of Bay Parkway	RG
8	Waretown, N.J. - Route #9 at the Waretown Substation	RG
9	Waretown, N.J. - Route #532, North side of road at Parkway	RG
10	Toms River, N.J. - Route 37 East, adjacent to "Eastern Off Road Supplies"	RG
11	Harvey Cedars, N.J. - Long Beach Blvd. and East 70th street, Long Beach Island	RG
12	Parkertown, N.J. - Route #9, East of Assembly of God Church	RG
13	South Toms River, N.J. - Dover Road, next to last pole traveling West on North side.	RG
14	Lakewood, N.J. - Larrabee Substation, just off Route #547 on Randolph Road	RG
15	New Egypt, N.J. - Route #539, last pole on South side, adjacent to "Bomark" Site	RG

TABLE III-A (Con't)
OYSTER CREEK STATION
ENVIRONMENTAL MONITORING STATIONS
LOCATION AND TYPE SAMPLE COLLECTED

<u>STATION NUMBER</u>		<u>SAMPLE COLLECTED</u>
16	Intersection of Route #563 and Route #72, two poles South	RG
17	New Gretna, N.J. - Route #563, 2 miles North, next to High Voltage Line	RG
18	Forked River, N.J. - Lacey Road, Captain Richie's Marina	WW
19	Forked River, N.J. - 1015 Inland Road, Forked River Beach	WW
20	Forked River, N.J. - Finninger Farm at Environmental Lab	WW
21	Waretown, N.J. - 215 Dock Avenue, Sands Point Harbor	WW
22	Waretown, N.J. - 1014 Long John Silver Way, Skippers Cove	WW
23	Barnegat Bay - Off Stouts Creek, approximately 400 yards SE (150°) of FL "1" (Heading on BWN "D")	SW, AQS, AQL
24	Barnegat Bay - Approximately 250 yards SE (180°) of FL "3" (Heading on N "66")	SW, AQS, AQL
25	Barnegat Bay - Off Holiday Harbor; approximately 200 yards SE (140°) of the Lagoon Mouth	SW, AQS, AQL
26	Forked River, N.J. - South Branch of Forked River, North of Bridge to Visitor Center	SW, AQS
27	Forked River, N.J. - Downstream of Oyster Creek Fire Pond, approximately 10 yards	SW, AQS
28	Forked River, N.J. - Lacey Road and the Garden State Parkway	FPV
29	Barnegat, N.J. - Route #534 and the Garden State Parkway	FPV
30	Forked River, N.J. - Finninger Farm along Fence	FPV

TABLE III-A (Con't)
OYSTER CREEK STATION
ENVIRONMENTAL MONITORING STATIONS
LOCATION AND TYPE SAMPLE COLLECTED

<u>STATION NUMBER</u>		<u>SAMPLE COLLECTED</u>
31	Manahawkin Bay - Approximately 25 yards SE (140°) of C "23" and N "24"	SW, AQS, AQL
32	Oyster Creek - Mouth of Creek midway between Bulkhead on North Shore and South Shore of Creek	SW, AQS
33	Oyster Creek - Approximately 1200 yards East of Route #9 Bridge, in middle of channel, directly South of Bulkhead running perpendicular to North Shore	SW, AQS
A	Allenhurst, N.J. - JCP&L Company District Headquarters, on Roof	RG, AP, RW
C	Cookstown, N.J. - Route #528 Spur, at JCP&L Companys District Dispatcher	RG, AP, RW
H	Hammonton, N.J. - Egg Harbor Road, at the Atlantic City Electric District Dispatcher	RG, AP, RW

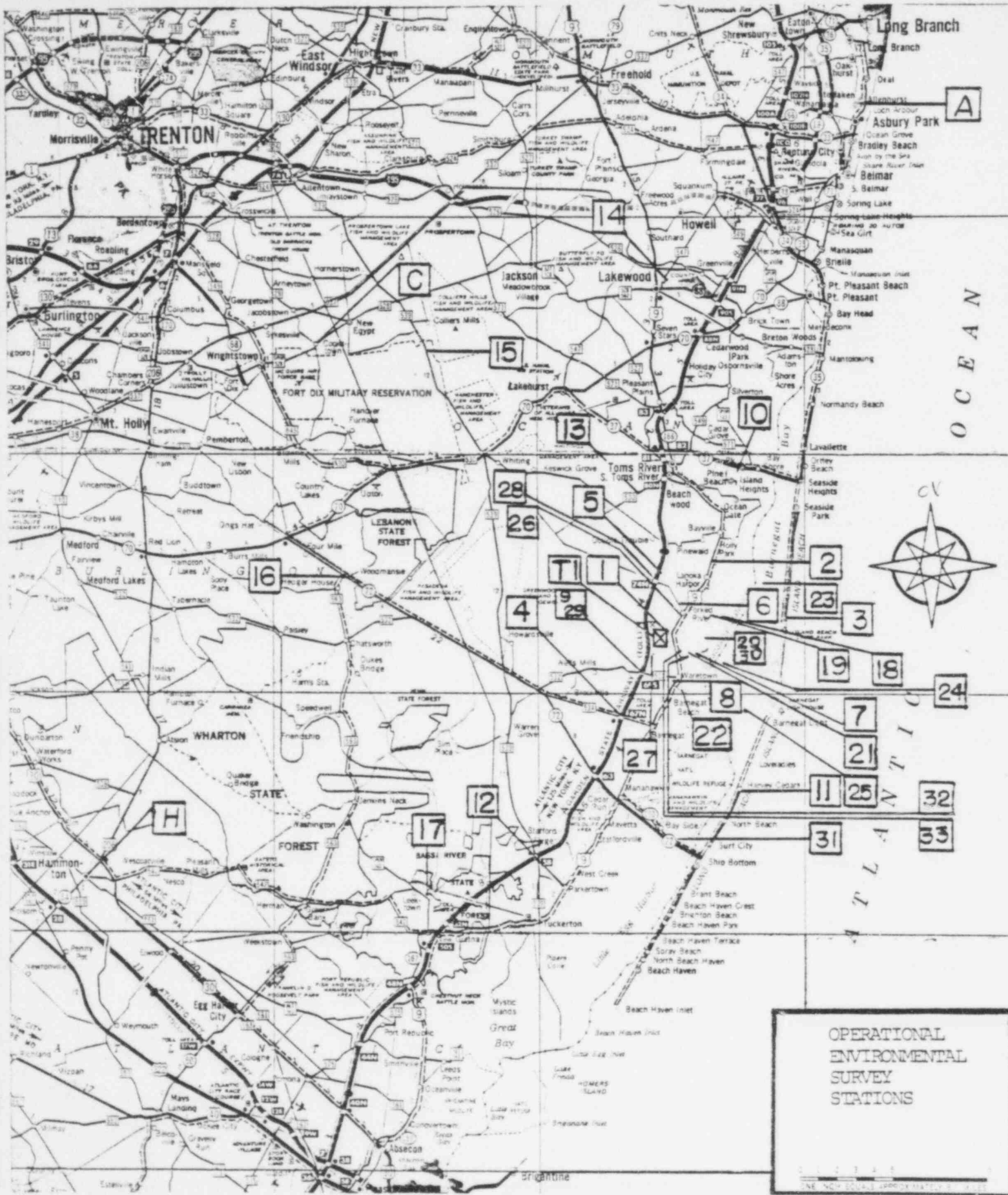


FIGURE III-1

POOR ORIGINAL

Analysis of the Data

During the reporting period, several environmental media samples did exhibit higher than normally observed levels of radioactivity. Attempts to correlate facility releases with the elevated environmental activities were made. A discussion of the findings follows:

December 1978: Silt and Sediment, Station 31, Thorium 232.

The silt and sediment sample collected from Station 31 on Dec. 12, 1978, had a Thorium 232 activity concentration higher than that normally observed. Station 31 is the background station located in Manahawkin Bay. Thorium 232 is a naturally occurring isotope. It is unlikely that the Th 232 activity observed was related to plant operations.

February 1979: Well Water, Station 20, Radium 226 and Potassium 40.

The well water sample collected from Station 20 on February 9, 1979, had Radium 226 and Potassium 40 concentrations higher than those normally observed. Both Radium 226 and Potassium 40 are naturally occurring isotopes. Since there were no recent liquid releases from the facility containing these isotopes, it is unlikely that the activities observed are the results of plant operations.

March 1979: Earth, Station 4, Gross Beta

At 13.4 ± 1.3 pCi/gram, the soil sample collected at Station 4 on March 5, 1979, had a slightly higher than normally observed gross beta activity concentration. The analyses conducted on other environmental samples collected from this and other stations did not indicate the occurrence of a fall out incident. Furthermore, there were no unusual atmospheric releases from the facility. It is unlikely that the activity observed was the result of plant operations.

May 1979: Well Water, Stations 1, 19, 20, 21, 22, Gross Beta (soluble)
Well Water, Station 21, Gross Beta (insoluble)
Well Water, Station 20, Potassium 40

The gross beta activities observed at Stations 1, 19, 20, 21, and 22 were two to three times higher than those normally observed. An unusually high potassium 40 activity concentration was also observed in the Station 20 sample.

A probable cause for these observations does exist, however, during the Spring there were two ongoing projects that could have significantly effected the ground water quality. Dredging efforts were being conducted on the discharge canal with the dredging spoils being deposited in the vicinity of the Station 20 well. The seepage of salt water from the spoils into the ground would account for the Potassium 40 and beta activities observed. Furthermore, massive dewatering efforts were also subsequent intrusion of salt water into the wells would account for the activities observed. It is unlikely that the well water activities observed were related to plant operations.

RADIOLOGICAL IMPACT ON MAN

Environmental monitoring results for the period 12/78 - 5/79 indicate that intakes of Oyster Creek effluent isotopes did not exceed 1% of the intakes equivalent to exposure at 10 CFR 20, Appendix B, Table II concentrations.

During winter and spring months inhalation is the only intake pathway for gaseous effluent isotopes. The pathways available for liquid effluent isotopes are fish and shellfish consumption.

Concentrations of most isotopes in most samples were below minimum detectable levels, but concentrations of some isotopes exceeded minimum detectable levels slightly in air and clam samples. The only isotopes detected were Cs-137 in two samples and Sb-125 in one sample. Concentrations reported exceeded lower limits of detection by such a slight margin that the isotopes may not have been present. However, for purposes of establishing upper limit intakes through the inhalation pathway, it was assumed they were present.

Cobalt-60 was the only isotope measured in clams. Concentrations of Co-60 in clams exceeded minimal detectable levels only by a slight margin at indicator stations but did not exceed minimum detectable levels at a monitoring point beyond the influence of plant releases.

The low level of observed concentrations permitted the simplification of the analyses by conservatively assuming that all measured environmental radioactivity resulted from Oyster Creek operations. Intakes from inhalation, fish ingestion, and shellfish ingestion were estimated from air and clam sample results. (Fish concentrations were estimated from clam measurements). Calculated intakes were less than 1% of intakes equivalent to exposure to concentrations in 10 CFR 20, Appendix B, Table II.

The following code is to be used to identify sample types in the following Tables.

RG	-	Radiogas (film)
AP	-	Air Particulate
RW	-	Rain Water
V	-	Vegetation
E	-	Soil
WW	-	Well Water
SW	-	Surface Water
AQS	-	Silt & Sediment
AQL	-	Clam
FPV	-	Crop

During the reporting period, the following special projects were initiated or continued:

1. A contractor, Ecological Analysts, has continued a program to assess the environmental impact of the facility on Barnegat Bay Biological Life.
2. Environmental sample analysis data is being computerized to quickly and accurately assess plant impact. This will increase program efficiency.
3. A Quality Assurance/control program has remained intact within the environmental sampling and analysis program. "Blind" duplicate samples are being collected quarterly by station personnel and sent for analysis to the primary analyses contractor, as independent analyses vendor, and the NJ Department of Environmental Protection.
4. Environmental samples were collected following a reactor shutdown in May 1979. Split samples were provided to the Nuclear Regulatory Commission.

Table III-B
Environmental Monitoring - Quarterly Summary
Scheduled Collection Period
December 1, 1978 through February 28, 1979

Medium	Analysis	Sample Locations	Unit	Number of Samples	Quarterly Average	LLD
RG	Exposure	1 thru 17, T1,A,C,H	Millirem	- -	Table V-D	—
AP	Gross α	1, 2, 3, 4, 5	pCi/m ³	5	1.61 E-3	2.11 E-4
AP	Gross β	1, 2, 3, 4, 5	pCi/m ³	30	3.76 E-2	2.04 E-3
RW	Gross Insoluble	1, 2, 3, 4, 5	nCi/m ²	15	<2.7 E-1	2.2 E-1
RW	Gross Soluble	1, 2, 3, 4, 5	nCi/m ²	15	<4.5 E-1	1.3 E-1
V	Gross β	1, 2, 3, 4, 5	pCi/gram - wet	15	2.73	1.35 E-2
E	Gross β	1, 2, 3, 4, 5	pCi/gram - dry	15	5.67	1.02
FPV	Gross β	28, 29, 30	pCi/gram	3	5.77	1.98 E-2
FPV	Sr - 90	29, 29, 30	pCi/gram	3	6.18 E-1	3.39 E-2
FPV	Total Calcium	28, 29, 30	m gram/gram	3	6.05	5.43 E-3
AQS	Gross α	23,24,25,26,27,32,33	pCi/gram	6	9.26 E-1	4.81 E-1
AQS	Gross β	23,24,25,26,27,32,33	pCi/gram	6	6.01	1.21
AQL	Gross α	23, 24, 25	pCi/gram	8	<5.01 E-2	4.54 E-2
AQL	Gross β	23, 24, 25	pCi/gram	8	1.10	1.71 E-2
AQL	K - 40	23, 24, 25	pCi/gram	2	1.0	1.3 E-1
AQL	Co - 58	23, 24, 25	pCi/gram	2	<8.6 E-3	8.6 E-3
AQL	Co - 60	23, 24, 25	pCi/gram	2	2.6 E-2	1.1 E-2
AQL	Zn - 65	23, 24, 25	pCi/gram	2	<1.4 E-2	1.4 E-2
AQL	Sr - 90	23, 24, 25	pCi/gram	2	<7.46 E-3	7.46 E-3
AQL	I - 131	23, 24, 25	pCi/gram	2	<5.5 E-3	5.5 E-3
AQL	Cs - 137	23, 24, 25	pCi/gram	2	<7.8 E-3	7.8 E-3
AQL	Total Calcium	23, 24, 25	m gram/gram	2	1.51	4.10 E-3
WW	Gross α Insoluble	1,18,19,20,21,22	pCi/liter	18	<1.06 E-1	9.95 E-2
WW	Gross α Soluble	1,18,19,20,21,22	pCi/liter	18	<2.06	1.50
WW	Gross β Insoluble	1,18,19,20,21,22	pCi/liter	18	<4.63 E-1	4.66 E-1

The lower limit of detection values are nominal. Absolute LLD's may vary due to sample type, counting statistics, interferences, etc.

Table III- B
Environmental Monitoring - Quarterly Summary
Scheduled Collection Period
December 1, 1978 through February 28, 1979

Medium	Analysis	Sample Locations	Unit	Number of Samples	Quarterly Average	LID
WW	Gross β Soluble	1,18,19,20,21,22	pCi/liter	18	<3.71	5.87 E-1
WW	H-3	1,18,19,20,21,22	pCi/liter	6	<2.65 E 2	2.65 E 2
WW	K-40	1,18,19,20,21,22	pCi/liter	6	<5.15	8.60 E-1
WW	Ra-226	1,18,19,20,21,22	pCi/liter	6	<8.85 E-1	1.28 E-1
WW	Ra-228	1,18,19,20,21,22	pCi/liter	6	<4.93 E-1	4.82 E-1
WW	U	1,18,19,20,21,22	pCi/liter	6	<2.62 E-1	1.11 E-1
SW	Gross α Insoluble	23,24,25,26,27,32,33	pCi/liter	20	<3.05 E-1	2.97 E-1
SW	Gross α Soluble	23,24,25,26,27,32,33	pCi/liter	20	<2.24	5.68 E-1
SW	Gross β Insoluble	23,24,25,26,27,32,33	pCi/liter	20	<4.93 E-1	4.88 E-1
SW	Gross β Soluble	23,24,25,26,27,32,33	pCi/liter	20	<1.31 E-2	5.14
SW	H-3	23,24,25,26,27,32,33	pCi/liter	20	<2.00 E 2	2.00 E 2
SW	K-40	23,24,25,26,27,32,33	pCi/liter	20	<1.48 E 2	7.98 E 1
SW	Co-58	23,24,25,26,27,32,33	pCi/liter	20	<6.7	6.7
SW	Co-60	23,24,25,26,27,32,33	pCi/liter	20	<6.8	6.8
SW	Zn-65	23,24,25,26,27,32,33	pCi/liter	20	<1.2 E 1	1.2 E 1
SW	Sr-90	23,24,25,26,27,32,33	pCi/liter	20	<4.86 E-1	4.87 E-1
SW	I-131	23,24,25,26,27,32,33	pCi/liter	20	<6.6	6.6
SW	Cs-137	23,24,25,26,27,32,33	pCi/liter	20	<5.7	5.7
SW	Ra-226	23,24,25,26,27,32,33	pCi/liter	20	<3.14 E-1	1.07 E-1
SW	Ra-228	23,24,25,26,27,32,33	pCi/liter	20	<9.42 E-1	7.73 E-1
SW	U	23,24,25,26,27,32,33	pCi/liter	20	<1.99	4.51 E-1
SW	Total Calcium	23,24,25,26,27,32,33	gm/liter	6	3.71 E-1	2.60 E-4

Surface Water (SW) and Silt & Sediment (AQS) Results include data from both salt and fresh water stations.

Table III- C
Environmental Monitoring - Quarterly Summary
Scheduled Collection Period
March 1, 1979 through May 31, 1979

Medium	Analysis	Sample Locations	Unit	Number of Samples	Quarterly Average	LLD
RG	Exposure	1 thru 17, TL,A,C,H	Millirem	-	Table V-D	-
AP	Gross α	1, 2, 3, 4, 5	pCi/m ³	8	<1.64 E-3	6.39 E-4
AP	Gross β	1, 2, 3, 4, 5	pCi/m ³	38	3.24 E-2	3.33 E-3
RW	Gross Insoluble	1, 2, 3, 4, 5	nCi/m ²	20	<1.9 E-1	1.9 E-1
RW	Gross Soluble	1, 2, 3, 4, 5	nCi/m ²	20	4.3 E-1	1.8 E-1
V	Gross β	1, 2, 3, 4, 5	pCi/gram - wet	20	3.41	2.46 E-2
E	Gross β	1, 2, 3, 4, 5	pCi/gram - dry	20	6.20	1.16
FPV	Gross β	28, 29, 30	pCi/gram	2	8.01	3.33 E-2
FPV	Sr - 90	29, 29, 30	pCi/gram	3	5.23 E-1	3.42 E-2
FPV	Total Calcium	28, 29, 30	m gram/gram	2	4.18	7.60 E-3
AQS	Gross α	23,24,25,26,27,32,33	pCi/gram	7	<3.73	3.21
AQS	Gross β	23,24,25,26,27,32,33	pCi/gram	7	5.86	1.10
AQL	Gross α	23, 24, 25	pCi/gram	12	<7.50 E-2	5.48 E-2
AQL	Gross β	23, 24, 25	pCi/gram	12	1.33	1.94 E-2
AQL	K - 40	23, 24, 25	pCi/gram	3	1.1	1.5 E-1
AQL	Co - 58	23, 24, 25	pCi/gram	3	<1.4 E-2	1.4 E-2
AQL	Co - 60	23, 24, 25	pCi/gram	3	<1.4 E-2	1.3 E-2
AQL	Zn - 65	23, 24, 25	pCi/gram	3	<2.3 E-2	2.3 E-2
AQL	Sr - 90	23, 24, 25	pCi/gram	3	<6.26 E-3	6.26 E-3
AQL	I - 131	23, 24, 25	pCi/gram	3	<1.2 E-1	1.2 E-1
AQL	Cs - 137	23, 24, 25	pCi/gram	3	<9.2 E-3	9.2 E-3
AQL	Total Calcium	23, 24, 25	m gram/gram	3	2.16	4.07 E-3
WW	Gross α Insoluble	1,18,19,20,21,22	pCi/liter	24	<1.49 E-1	1.50 E-1
WW	Gross β Soluble	1,18,19,20,21,22	pCi/liter	*24	<3.76	2.52
WW	Gross β Insoluble	1,18,19,20,21,22	pCi/liter	24	<5.54 E-1	5.17 E-1

The lower limit of detection values are nominal. Absolute LLD's may vary due to sample type, counting statistics, interferences, etc.

Table III- C
Environmental Monitoring - Quarterly Summary
Scheduled Collection Period
March 1, 1979 through May 31, 1979

Medium	Analysis	Sample Locations	Unit	Number of Samples	Quarterly Average	LLD
WW	Gross β Soluble	1,18,19,20,21,22	pCi/liter	24	<7.35	1.26
WW	H-3	1,18,19,20,21,22	pCi/liter	6	<2.58 E 2	2.58 E 2
WW	K-40	1,18,19,20,21,22	pCi/liter	6	4.32	8.60 E-1
WW	Ra-226	1,18,19,20,21,22	pCi/liter	6	<5.95 E-1	1.17 E-1
WW	Ra-228	1,18,19,20,21,22	pCi/liter	6	6.44 E-1	6.28 E-1
WW	U	1,18,19,20,21,22	pCi/liter	6	<8.68 E-2	8.68 E-2
SW	Gross α Insoluble	23,24,25,26,27,32,33	pCi/liter	28	<2.33 E-1	1.88 E-1
SW	Gross α Soluble	23,24,25,26,27,32,33	pCi/liter	28	<1.04	4.82 E-1
SW	Gross β Insoluble	23,24,25,26,27,32,33	pCi/liter	28	<6.56 E-1	5.55 E-1
SW	Gross β Soluble	23,24,25,26,27,32,33	pCi/liter	28	9.23 E 1	4.73
SW	H-3	23,24,25,26,27,32,33	pCi/liter	28	<2.41 E 2	2.41 E 2
SW	K-40	23,24,25,26,27,32,33	pCi/liter	28	<1.35 E 2	8.46 E 1
SW	Co-58	23,24,25,26,27,32,33	pCi/liter	28	<8.4	8.4
SW	Co-60	23,24,25,26,27,32,33	pCi/liter	28	<7.4	7.4
SW	Zn-65	23,24,25,26,27,32,33	pCi/liter	28	<1.3 E 1	1.3 E 1
SW	Sr-90	23,24,25,26,27,32,33	pCi/liter	28	<4.23 E-1	4.44 E-1
SW	I-131	23,24,25,26,27,32,33	pCi/liter	28	<3.0 E 1	3.0 E 1
SW	Cs-137	23,24,25,26,27,32,33	pCi/liter	28	<6.3	6.3
SW	Ra-226	23,24,25,26,27,32,33	pCi/liter	28	<2.09 E-1	1.08 E-1
SW	Ra-228	23,24,25,26,27,32,33	pCi/liter	28	<1.04	1.03
SW	U	23,24,25,26,27,32,33	pCi/liter	28	<9.04 E-1	3.58 E-1
SW	Total Calcium	23,24,25,26,27,32,33	gm/liter	7	2.17 E-1	2.60 E-4

Surface water (SW) and silt and sediment (AQS) results include data from both salt and fresh water stations.

Table III-D
 Radiogas Film Badges
 Scheduled Collection Period
 December 1, 1979 through May 31, 1979

Collection Date	Station	Unit	12-11-78	1-8-79	2-5-79	Three Month Total	3-5-79	4-2-79	4-30-79	5-29-79	Three Month Total	Six Month Total
	1	Millirem	0	0	0	0	0	0	10	0	10	10
	T1	Millirem	5	0	0	5	0	0	5	0	5	10
	2	Millirem	0	0	0	0	0	0	0	0	0	0
	3	Millirem	0	0	0	0	0	0	5	0	5	5
	4	Millirem	0	0	0	0	0	0	0	0	0	0
	5	Millirem	5	0	0	5	0	0	0	0	0	5
	6	Millirem	5	0	0	5	0	0	5	0	5	10
	7	Millirem	0	0	0	0	0	0	0	0	0	0
	8	Millirem	0	0	0	0	0	0	0	0	0	0
	9	Millirem	Lost	0	0	0	0	0	5	0	5	5
	10	Millirem	0	0	0	0	0	0	0	0	0	0
	11	Millirem	0	0	0	0	0	0	5	0	5	5
	12	Millirem	0	0	0	0	0	0	5	0	5	5
	13	Millirem	5	0	0	5	0	0	0	0	0	5
	14	Millirem	5	0	0	5	0	0	0	0	0	5
	15	Millirem	0	0	0	0	0	0	0	0	0	0
	16	Millirem	0	0	0	0	0	0	0	0	0	0
	17	Millirem	0	0	0	0	0	0	Lost	0	0	0
	A	Millirem	0	0	0	0	0	0	0	0	0	0
	C	Millirem	0	0	0	0	0	0	0	0	0	0
	H	Millirem	0	0	0	0	0	0	0	0	0	0

Table III-E
Environmental Monitoring - Semi-annual Summary
Scheduled Collection Period
December 1, 1978 through May 31, 1979

Medium	Analysis	Unit	Location with Highest Average	Number of Samples	Maximum	Average	Minimum
RG	Exposure	Millirem	1,T1&6	7	10	1.4	0
AP	Gross α	pCi/m ³	H	2	2.90 E-3	2.44 E-3	1.97 E-3
AP	Gross β	pCi/m ³	5	14	7.59 E-2	4.09 E-2	2.53 E-2
AP	I-131 Charcoal	pCi/m ³	5	14	<5.87 E-2	<2.50 E-2	<1.47 E-2
RW	Gross β Insoluble	nCi/m ²	4	7	<4.0 E-1	<2.5 E-1	<1.0 E-1
RW	Gross β Soluble	nCi/m ²	C	7	4.5	9.1 E-1	2.0 E-1
V	Gross β	pCi/gram-wet	3	7	9.77	5.21	2.47
E	Gross β	pCi/gram-dry	4	7	1.34 E 1	8.70	4.28
FPV	Gross β	pCi/gram	28	2	8.14	6.59	5.54
FPV	Sr-90	pCi/gram	29	2	8.34 E-1	7.63 E-1	6.92 E-1
FPV	Total Calcium	mgram/gram	29	1	-	6.45	-
AQS	Gross α	pCi/gram	31	1	-	4.48	-
AQS	Gross β	pCi/gram	31	1	-	1.42 E 1	-
AQL	Gross α	pCi/gram	25	7	1.08 E-1	<7.77 E-2	<4.07 E-2
AQL	Gross β	pCi/gram	31	5	1.96	1.57	1.33
AQL	K-40	pCi/gram	25	2	1.5	1.3	1.1
AQL	Co-58	pCi/gram	23	1	-	<2.1 E-2	-
AQL	Co-60	pCi/gram	25	2	4.2 E-2	<2.7 E-2	<1.1 E-2
AQL	Zn-65	pCi/gram	23	1	-	<3.4 E-2	-
AQL	Sr-90	pCi/gram	25	2	<9.96 E-3	<9.87 E-3	<9.78 E-3
AQL	I-131	pCi/gram	23	1	-	<1.8 E-1	-
AQL	Cs-137	pCi/gram	23	1	-	<1.2 E-2	-
AQL	Total Calcium	mgram/gram	25	2	2.70	2.14	1.58
WW	Gross α Insoluble	pCi/liter	19	7	<2.11 E-1	<1.37 E-1	<6.00 E-2
WW	Gross α Soluble	pCi/liter	21	7	1.55 E 1	5.64	1.81

Table III-E Continued
Environmental Monitoring - Semi-annual Summary
Scheduled Collection Period
December 1, 1978 through May 31, 1979

Medium	Analysis	Unit	Location with Highest Average	Number of Samples	Maximum	Average	Minimum
WW	Gross β Insoluble	pCi/liter	21	7	1.37	<6.20 E-1	<3.72 E-1
WW	Gross β Soluble	pCi/liter	20	7	3.72 E 1	1.59 E 1	2.03
WW	H-3	pCi/liter	1,18,19,20&21	2	<2.76 E 2	<2.74 E-2	<2.72 E 2
WW	K-40	pCi/liter	20	2	2.33 E 1	2.00 E 1	1.67 E 1
WW	Ra-226	pCi/liter	20	2	2.96	1.66	3.51 E-1
WW	Ra-228	pCi/liter	22	2	<1.13	<8.53 E-1	<5.75 E-1
WW	U	pCi/liter	20	2	7.60 E-1	<4.30 E-1	<1.00 E-1
SW	Gross α Insoluble	pCi/liter	25	7	<4.46 E-1	<3.17 E-1	2.26 E-1
SW	Gross α Soluble	pCi/liter	33	7	5.09	2.28	3.61 E-1
SW	Gross β Insoluble	pCi/liter	25	7	1.15	<6.43 E-1	<3.59 E-1
SW	Gross β Soluble	pCi/liter	24	7	2.52 E 2	1.67 E 2	2.61 E 1
SW	H-3	pCi/liter	24, 25 & 26	7	<2.86 E 2	<2.32 E 2	<1.39 E 2
SW	K-40	pCi/liter	24	7	2.6 E 2	1.9 E 2	6.5 E 1
SW	Co-58	pCi/liter	32 & 33	7	<1.0 E 1	<8.0	<5.0
SW	Co-60	pCi/liter	24	7	<9.4	<7.6	<6.0
SW	Zn-65	pCi/liter	24 & 33	7	<1.5 E 1	<1.3 E 1	<9.0
SW	Sr-90	pCi/liter	23	6	<5.85 E-1	<5.04 E-1	3.51 E-1
SW	I-131	pCi/liter	31	5	<7.9 E 1	<2.7 E 1	<5.0
SW	Cs-137	pCi/liter	31	5	<7.8	<6.6	<5.0
SW	Ra-226	pCi/liter	26	7	6.42 E-1	4.11 E-1	1.90 E-1
SW	Ra-228	pCi/liter	33	7	<2.63	<1.52	<3.10 E-1
SW	U	pCi/liter	33	7	4.19	<2.06	<3.52 E-1
SW	Total Calcium	gm/liter	24	2	6.13 E-1	4.60 E-1	3.07 E-1

Table III-F
Thermoluminescent Dosimeters
Scheduled Collection Period

December 1, 1978 through May 31, 1979

Collection Date		12-11-78	1-8-79	2-5-79	Three Month Total	3-5-79	4-2-79	4-30-79	5-6-79	5-29-79	Three Month Total	Six Month Total
Station	Unit											
1	Millirem	5.86	10.44	6.41	22.71	9.60	6.59	8.26	-	4.55	29.00	51.71
T1	Millirem	5.77	10.39	6.52	22.68	9.58	6.52	7.54	-	5.97	29.61	52.29
2	Millirem	4.91	5.91	3.80	14.62	5.43	3.96	3.80	1.72	2.93	17.84	32.46
3	Millirem	5.35	5.71	3.69	14.75	4.60	3.62	3.60	-	4.24	16.06	30.80
4	Millirem	4.77	5.32	4.04	14.13	4.08	4.04	2.96	-	4.87	15.95	30.08
5	Millirem	4.50	5.73	4.77	15.00	4.40	4.40	3.53	-	4.22	16.55	31.55
6	Millirem	4.56	5.40	3.93	13.89	4.47	4.10	3.94	1.74	2.51	16.76	30.65
7	Millirem	4.05	6.80	5.82	16.67	4.32	4.31	4.14	2.00	2.85	17.62	34.29
8	Millirem	4.90	5.42	3.68	14.00	3.86	3.73	3.08	1.97	2.59	15.23	29.23
9	Millirem	Lost	5.61	3.61	9.22	4.95	3.65	3.11	2.22	3.12	17.05	26.27
10	Millirem	4.83	5.56	3.56	13.95	4.09	3.84	3.10	2.14	3.12	16.29	30.24
11	Millirem	4.24	4.85	3.29	12.38	3.22	3.12	2.87	-	3.97	13.18	25.56
12	Millirem	4.26	5.48	3.46	13.20	4.02	3.86	2.67	-	4.25	14.80	28.00
13	Millirem	4.20	5.01	3.21	12.42	4.44	3.24	3.23	1.62	2.88	15.41	27.83
14	Millirem	5.38	5.16	4.64	15.18	5.32	4.47	3.74	-	5.27	18.80	33.98
15	Millirem	4.40	4.47	4.06	12.93	3.87	3.47	3.56	-	4.26	15.16	28.09
16	Millirem	4.20	4.30	4.25	12.75	3.44	3.28	3.47	-	3.87	14.06	26.81
17	Millirem	4.19	4.64	4.15	12.98	3.97	3.06	Lost	-	4.10	11.13	24.11
A	Millirem	5.14	6.35	4.25	15.74	4.98	4.82	4.43	-	4.77	19.00	34.74
C	Millirem	4.62	5.17	4.33	14.12	4.51	3.67	3.89	-	4.80	16.87	30.99
H	Millirem	4.28	4.42	3.76	12.46	4.22	3.19	3.37	-	3.81	14.59	27.05

Table III-G
Charcoal Filter Analysis from Air Sampling Stations
Scheduled Collection Period
December 1, 1978 through May 31, 1979

Station	Unit	Number of Samples	Maximum	Average	Minimum
1	pCi/m ³	13	<4.67 E-2	<1.76 E-2	<7.56 E-3
2	pCi/m ³	14	<4.10 E-2	<1.98 E-2	<7.19 E-3
3	pCi/m ³	13	<2.80 E-2	<1.50 E-2	<6.76 E-3
4	pCi/m ³	14	<4.39 E-2	<2.03 E-2	<6.79 E-3
5	pCi/m ³	14	<5.87 E-2	<2.50 E-2	<1.47 E-2

TABLE III-H

Air Particulate Isotopic Analysis (pCi/m³)

Scheduled Collection Period - December 1, 1978 through May 31, 1979

Station #	Nuclide	Number of		Maximum	Average	Minimum
		Times Detected				
1	Be-7	7		1.3 E-1	9.8 E-2	5.1 E-2
2	Be-7	4		2.0 E-1	1.3 E-1	6.8 E-2
	Cs-137	1		-	9.4 E-3	-
3	Be-7	8		1.2 E-1	8.5 E-2	5.5 E-2
	Sb-125	1		-	1.7 E-2	-
	Cs-137	1		-	6.9 E-3	-
	Th-232	1		-	3.0 E-2	-
4	Be-7	8		1.7 E-1	1.1 E-1	6.4 E-2
5	Be-7	7		2.2 E-1	1.3 E-1	7.1 E-2
A	Be-7	4		1.4 E-1	9.7 E-2	7.9 E-2
(Background)						
C	Be-7	11		1.6 E-1	1.1 E-1	5.5 E-2
(Background)						
H	Be-7	6		1.1 E-1	8.6 E-2	4.6 E-2
(Background)						

Table III-J
Background Station Analyses
Scheduled Collection Period
December 1, 1978 through May 31, 1979

Medium	Station	Analysis	Unit	Number of Samples	Maximum	Average	Minimum
AP	A	Gross α	pCi/m ³	2	1.73 E-3	1.20 E-3	6.61 E-4
AP	A	Gross β	pCi/m ³	12	4.54 E-2	3.20 E-2	2.29 E-2
AP	A	I-131	pCi/m ³	12	<3.50 E-2	<1.76 E-2	<7.93 E-3
AP	C	Gross α	pCi/m ³	2	2.19 E-3	2.18 E-3	2.16 E-3
AP	C	Gross β	pCi/m ³	13	7.32 E-2	3.64 E-2	1.63 E-2
AP	C	I-131	pCi/m ³	13	<2.67 E-2	<1.79 E-2	<1.36 E-2
AP	H	Gross α	pCi/m ³	2	2.90 E-3	2.44 E-3	1.97 E-3
AP	H	Gross β	pCi/m ³	13	4.84 E-2	2.97 E-2	1.74 E-2
AP	H	I-131	pCi/m ³	13	<2.78 E-2	<1.78 E-2	<1.38 E-2
RW	A	Gross β Insoluble	nCi/m ²	7	<4.0 E-1	<1.6 E-1	<2.0 E-2
RW	A	Gross β Soluble	nCi/m ²	7	9.2 E-1	3.4 E-1	9.4 E-2
RW	C	Gross β Insoluble	nCi/m ²	7	<3.0 E-1	<1.9 E-1	5.2 E-2
RW	C	Gross β Soluble	nCi/m ²	7	4.5	9.1 E-1	5.5 E-2
RW	H	Gross β Insoluble	nCi/m ²	7	<3.0 E-1	<2.1 E-1	1.3 E-2
RW	H	Gross β Soluble	nCi/m ²	7	4.6 E-1	3.4 E-1	1.2 E-1
AQS	31	Gross α	pCi/gram	1	-	4.48	-
AQS	31	Gross β	pCi/gram	1	-	1.42 E 1	-
AQL	31	Gross α	pCi/gram	5	<9.68 E-2	<6.81 E-2	<3.38 E-2
AQL	31	Gross β	pCi/gram	5	1.96	1.57	1.33
AQL	31	K-40	pCi/gram	1	-	1.2	-
AQL	31	Co-58	pCi/gram	1	-	<1.3 E-2	-
AQL	31	Co-60	pCi/gram	1	-	<9.4 E-3	-
AQL	31	Zn-65	pCi/gram	1	-	<1.7 E-2	-
AQL	31	S-90	pCi/gram	1	-	<3.77 E-3	-
AQL	31	I-131	pCi/gram	1	-	<1.0 E 1	-

Table III-J Continued
Background Station Analyses
Scheduled Collection Period
December 1, 1978 through May 31, 1979

Medium	Station	Analysis	Unit	Number of Samples	Maximum	Average	Minimum
AQL	31	Cs-137	pCi/gram	1	-	<7.8 E-3	-
AQL	31	Total Calcium	mgm/gram	1	-	1.91	-
SW	31	Gross α Insoluble	pCi/liter	5	<3.42 E-1	<3.05 E-1	<2.54 E-1
SW	31	Gross α Soluble	pCi/liter	5	2.68	<1.60	4.19 E-1
SW	31	Gross β Insoluble	pCi/liter	5	<5.89 E-1	<5.16 E-1	<3.59 E-1
SW	31	Gross β Soluble	pCi/liter	5	2.11 E 2	1.47 E 2	7.38 E 1
SW	31	H-3	pCi/liter	5	<2.71 E 2	<2.11 E 2	<1.59 E 2
SW	31	K-40	pCi/liter	5	2.2 E 2	1.7 E 2	1.1 E 2
SW	31	Co-58	pCi/liter	5	<1.0 E 1	<7.8	<5.0
SW	31	Co-60	pCi/liter	5	<7.8	<6.9	<5.0
SW	31	Zn-65	pCi/liter	5	<1.4 E 1	<1.2 E 1	<8.0
SW	31	Sr-90	pCi/liter	5	<5.25 E-1	<4.48 E-1	3.03 E-1
SW	31	I-131	pCi/liter	5	<7.9 E 1	<2.7 E 1	<5.0
SW	31	Cs-137	pCi/liter	5	<7.8	<6.6	<5.0
SW	31	Ra-226	pCi/liter	5	<1.92 E-1	<1.52 E-1	<8.28 E-2
SW	31	Ra-228	pCi/liter	5	<1.82	<8.81 E-1	4.06 E-1
SW	31	U	pCi/liter	5	2.40	<1.24	<3.70 E-1
SW	31	Total Calcium	gm/liter	1	-	3.10 E-1	-

TABLE III-K

Isotopic Silt Analysis

Scheduled Collection Period - December 1, 1978 through May 31, 1979

Station #	Nuclide	Times Detected	Maximum	Average	Minimum
23	Be-7	2	1.8 E-1	1.7 E-1	1.5 E-1
	K-40	6	4.3	2.1	4.7 E-1
	Co-60	3	6.7 E-2	4.9 E-2	2.8 E-2
	Cs-137	4	3.9 E-2	2.5 E-2	1.0 E-2
	Ce-144	2	1.0 E-1	9.2 E-2	8.4 E-2
	Ra-226	6	4.8 E-1	3.4 E-1	1.1 E-1
	Th-232	6	3.9 E-1	2.3 E-1	4.9 E-2
24	Be-7	1	-	3.0 E-1	-
	K-40	5	1.5 E 1	7.0	3.3 E-1
	Co-60	4	2.0 E-1	8.3 E-2	2.0 E-2
	Sb-125	1	-	6.2 E-2	-
	Cs-137	4	1.0 E-1	6.1 E-2	2.1 E-2
	Ce-141	1	-	3.7 E-2	-
	Ce-144	1	-	1.8 E-1	-
	Ra-226	7	4.5 E-1	3.1 E-1	1.6 E-1
	Th-232	7	7.4 E-1	3.5 E-1	1.1 E-1

TABLE III-K (cont.)

Isotopic Silt Analysis

Scheduled Collection Period - December 1, 1978 through May 31, 1979

Station #	Nuclide	Times Detected	Maximum	Average	Minimum
25	Be-7	1	-	1.3 E-1	-
	K-40	7	1.7 E 1	4.1	9.1 E-1
	Mn-54	1	-	2.3 E-2	-
	Co-60	5	2.4 E-1	7.8 E-2	3.2 E-2
	Cs-137	6	7.0 E-2	3.4 E-2	1.2 E-2
	Ce-141	1	-	1.1 E-2	-
	Ce-144	4	1.2 E-1	1.0 E-1	8.1 E-2
	Ra-226	7	4.3 E-1	3.7 E-1	3.0 E-1
	Th-232	7	7.8 E-1	3.2 E-1	2.0 E-1
31 (Background)	K-40	3	1.1 E 1	4.6	8.9 E-1
	Cs-137	2	3.7 E-1	2.4 E-1	1.0 E-1
	Ce-141	1	-	4.3 E-2	-
	Ra-226	5	5.4 E-1	3.1 E-1	1.6 E-1
	Th-232	5	1.0	4.4 E-1	9.5 E-2
32	Be-7	2	5.5 E-1	3.9 E-1	2.3 E-1
	K-40	7	9.0	4.9	1.0
	Mn-54	1	-	5.7 E-2	-
	Co-60	6	3.7 E-1	1.1 E-1	2.7 E-2
	Nb-95	1	-	4.0 E-2	-
	Ru-106	1	-	5.1 E-1	-
	Sb-125	1	-	5.9 E-2	-
	Cs-137	5	1.9 E-1	7.6 E-2	1.7 E-2
	Ce-141	1	-	4.2 E-2	-
	Ce-144	2	4.9 E-1	3.5 E-1	2.0 E-1
	Ra-226	7	4.4 E-1	3.2 E-1	8.5 E-2
	Th-232	7	4.1 E-1	2.8 E-1	8.4 E-2

TABLE III-K (cont.)

Isotopic Silt Analysis

Scheduled Collection Period - December 1, 1978 through May 31, 1979

Station #	Nuclide	Times Detected	Maximum	Average	Minimum
33	Be-7	4	5.7 E-1	4.0 E-1	2.2 E-1
	K-40	7	1.5 E 1	6.9	2.9
	Mn-54	3	1.0 E-1	6.2 E-2	2.5 E-2
	Co-60	7	7.7 E-1	3.7 E-1	8.3 E-2
	Nb-95	1	-	1.2 E-1	-
	Ru-106	2	6.2 E-1	4.7 E-1	3.1 E-1
	Cs-137	7	3.8 E-1	1.5 E-1	4.0 E-2
	Ce-141	2	4.8 E-2	3.2 E-2	1.6 E-2
	Ce-144	3	1.4	6.4 E-1	8.3 E-2
	Ra-226	7	6.3 E-1	4.4 E-1	3.6 E-1
	Th-232	7	7.3 E-1	4.6 E-1	3.1 E-1

Table III-L
May 1979 Shutdown
Environmental Sampling Results

<u>Sample Type and Collection Date</u>	<u>Distance and Location from Plant</u>	<u>Analysis</u>	<u>Result</u>
Vegetation 5/5/79	0.5 mile ESE	Gross Beta Sr-90 GeLi Scan Ca	7.95 pCi/gm-wet 1.71 E-2 pCi/gm-wet None Detected 3.47 mgm/gm-wet
Vegetation 5/5/79	1 mile ESE	Gross Beta Sr-90 GeLi Scan Ca	8.46 pCi/gm-wet 5.49 E-1 pCi/gm-wet None detected 1.51 E 1 mgm/gm-wet
Vegetation 5/5/79	0.8 mile South	Gross beta Sr-90 GeLi Ca	2.72 pCi/gm-wet 4.06 E-2 pCi/gm-wet None detected 1.26 E 1 mgm/gm-wet
Vegetation 5/5/79	0.7 mile North	Gross Beta Sr-90 GeLi Ca	3.28 pCi/gm-wet 3.76 E-2 pCi/gm-wet None detected 2.39 mgm/gm-wet
Vegetation 5/5/79	1 mile NNE	Gross Beta Sr-90 GeLi Ca	2.35 E 1 pCi/gm-wet 5.49 E-2 pCi/gm-wet None detected 1.50 mgm/gm-wet
Earth 5/5/79	0.5 mile ESE	Gross Beta <u>GeLi Scan</u> K-40 Cs-137 Ra-226 Th-232	6.40 pCi/gm-dry 1.4 pCi/gm-wet 1.3 E-1 pCi/gm-wet 3.1 E-1 pCi/gm-wet 3.2 E-1 pCi/gm-wet
Earth 5/5/79	1 mile ESE	Gross Beta <u>GeLi Scan</u> Cs-137	3.77 pCi/gm-dry 1.9 E-1 pCi/gm-wet
Earth 5/5/79	0.8 mile South	Gross Beta <u>GeLi Scan</u> Ra-226	3.21 pCi/gm-dry 2.5 E-1 pCi/gm-wet
Earth 5/5/79	0.7 mile North	Gross Beta <u>GeLi Scan</u> K-40 Cs-137 Ra-226 Th-232	2.56 pCi/gm-dry 2.7 pCi/gm-wet 7.0 E-2 pCi/gm-wet 1.8 E-1 pCi/gm-wet 2.4 E-1 pCi/gm-wet

TABLE III-L (cont.)

Earth 5/5/79	1 mile NNE	Gross Beta <u>GeLi Scan</u>	1.97 pCi/gm-dry None detected
Standing Water 5/5/79	0.7 mile North	Gross Alpha - sus Gross Alpha - dis Gross Beta - sus Gross Beta - dis H-3 GeLi Scan Ca	4.52 pCi/liter <6.30 pCi/liter 1.35 pCi/liter 1.44 E 1 pCi/liter <2.69 E 2 pCi/liter None detected 2.67 E-1 gm/liter
Running Water 5/5/79	0.7 mile North	GeLi Scan	None detected
Air Particulate 5/2/79 to 5/6/79	5 miles NE	Gross Alpha Gross Beta GeLi Scan I-131	1.64 E-3 pCi/m ³ 7.26 E-2 pCi/m ³ None Detected <3.91 E-2 pCi/m ³
Air Particulate 4/30/79 to 5/5/79	5 miles SSW	Gross Alpha Gross Beta GeLi Scan I-131	1.67 E-3 pCi/m ³ 3.98 E-3 pCi/m ³ None detected <2.44 E-2 pCi/m ³
Air Particulate 5/3/79 to 5/6/79	3.5 miles NNW	Gross Alpha Gross Beta GeLi Scan I-131	<1.66 E-3 pCi/m ³ 7.59 E-2 pCi/m ³ None detected <5.87 E-2 pCi/m ³
Direct 5/2/79 to 5/6/79	5 miles NE	TLD	1.72 mRad
Direct 5/2/79 to 5/6/79	2 miles NE	TLD	1.47 mRad
Direct 5/2/79 to 5/6/79	1.5 miles SE	TLD	2.00 mRad
Direct 4/30/79 to 5/6/79	2.5 miles SSE	TLD	1.97 mRad
Direct 4/30/79 to 5/6/79	2 miles SW	TLD	2.22 mRad
Direct 5/1/79 to 5/6/79	17 miles NE	TLD	2.14 mRad
Direct 5/1/79 to 5/6/79	8 miles North	TLD	1.62 mRad